

# SOUTHWESTERN MONUMENTS

## MONTHLY REPORT OCTOBER 1934

LAST YEAR we had 195,392 visitors

BUT we could give educational and information service to only 109,091 of them.

THE OTHER 86,000 got no information and many of our monuments where they visited got no protection.

TRANSLATE these figures into letters and they spell; M-O-R-E- P-E-R-S-C-N-V-E-L.

U.S. DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
WASHINGTON, D. C.

DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE



of

+



o

at

SOUTHWESTERN MONUMENTS  
REPORT FOR OCTOBER

INDEX

SOUTHWESTERN MONUMENTS GENERAL

Introduction-----	153
Travel and Weather-----	153
Construction-----	153
ECM Camp Activities-----	154
Personal-----	154
Field Trips-----	155
Park Service Officials-----	155
Museum and Education Summary-----	156
Closing-----	156

REPORTS FROM THE MEN IN THE FIELD

Ajupitki-----	Dying Trees at Cipulhu-----	156
Chiricahua-----	Canyon de Chelly-----	167
White Sands-----	Canco Canyon-----	167
Gran Quivira-----	Tonto Cliff Dwellings-----	168
Aztec Ruins-----	Bandelier-----	169
Nauvajo-----	Pipe Spring-----	172
Tuzacacori-----	Natural Bridges-----	173
Walnut Canyon-----	Report of Engineer Atwell-----	174
Capulim Mountain-----	Chiricagua ECM Progress-----	176
Montezuma Castle-----	Casa Grande-----	177

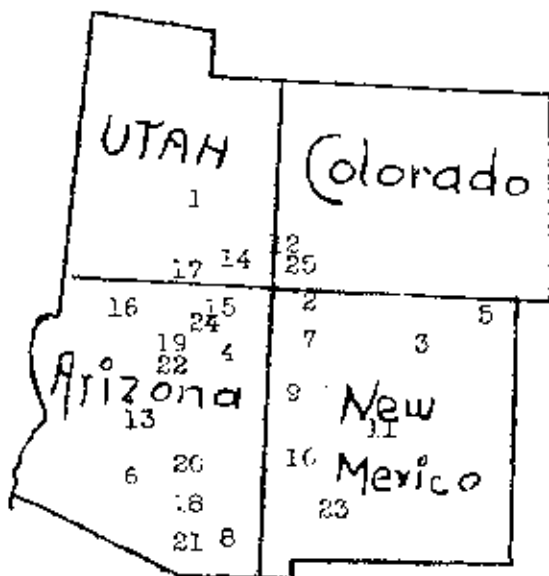
THE SUPPLEMENT

Another Chapter on Bandelier Museum, by Acting Assistant Superintendent Robert Ross-----		187
"Desert Associations--The Mesquite", reprinted from the "Masterkey", July, 1934-----		191
Something About a Thousand Parties at Casa Grande National Monument, by the Foss-----		196
Casa Grande Outcater Trip Chart-----		199
Statistics on 1,014 Guided Trips-----		200, 201
Groups of 1,014 Guided Trips-----		202, 203
How a Thousand Parties Come and Go, by the Foss-----		204
Analysis of October Trip Chart-----		207
Letters of Alfred Peterson-----		208
Ruins of Tsankawi, by Gustafson: EARL JACKSON-----		213
Petroglyphs from Tsankawi-----		215
The Ruins of Montezco, by Gustafson: EARL JACKSON-----		216
Petroglyphs from Tschitoge-----		217

LOCATION AND PERSONNEL OF SOUTHWESTERN MONUMENTS.

HEADQUARTERS.---Southwestern National Monuments Office, Coolidge, Arizona. Frank Pinkley, Superintendent. Robert H. Rose, Acting Assistant Sup't. Dale King, Junior Park Naturalist. Hugh M. Miller, Chief Clerk.

1. Arches ---Moab, Utah. J.J.Turnbow, Custodian.
2. Aztec Ruins.---Aztec, New Mexico, Johnwill Faris, Custodian.
3. Bandelier,---Box 869, Santa Fe, New Mex. Earl Jackson, Cust.
4. Canyon de Chelly,---Chin Lee, Arizona. Robert R. Budlong, Cust.
5. Capulin Mountain,---Capulin, New Mexico. Homer J. Farr, Cust.
6. Casa Grande,---Coolidge, Arizona. Hilding F. Palmer, Cust.  
Louis R. Caywood, Park Ranger.
7. Chaco Canyon,---Crown Point, New Mexico. Thomas C. Miller, Cust.
8. Chiricahua,---Wilcox, Ariz. Charles E. Powell, Temp. Ranger.
9. El Morro,---Ramah, New Mexico. E.Z.Vest, Custodian.
10. Gila Cliff Dwellings,---Cliff, New Mex. No Custodian.
11. Gran Quivira,---Gran Quivira, New Mex. V. H. Smith, Cust.
12. Heavenweep,---Cortez, Colorado. No Custodian.
13. Montezuma Castle,---Camp Verde, Ariz. Martin L. Jackson, Cust.
14. Natural Bridges,---Blanding, Utah. Zeke Johnson, Custodian.
15. Nevajo,---Kayenta, Arizona. John Wetherill, Custodian.  
Milton Wetherill, Acting Temp. Ranger.
16. Pipe Spring,---Moccasin, Arizona. Leonard Heaton, Acting Cust.
17. Rainbow Bridge,---Kayenta, Arizona. No Custodian.
18. Saguaro,---Tucson, Arizona. No Custodian.
19. Sunset Crater,---Flagstaff, Arizona. James Brewer, Temp. Ranger.
20. Tonto Cliff Dwellings,---Roosevelt, Arizona. Charlie R. Steen,  
Temporary Ranger.
21. Tumacacori,---Box 2225, Tucson, Arizona, George L. Boundey, Cust.  
Martin C. Evenstad, Park Ranger.
22. Walnut Canyon, ---Flagstaff, Ariz. Paul Beaubien, Temp. Ranger.
23. White Sands,---Alamogordo, New Mexico. Tom Charles, Custodian.
24. wupatki,---Flagstaff, Arizona. James Brewer, Temp. Ranger.
25. Yucca House,---Cortex, Colorado. No Custodian.



\*  
RUTEL STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
SOUTHWESTERN DIVISION  
Coolidge, Arizona,  
November 7, 1934

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

Dear Mr. Director:

As I come to the office this morning after having to assemble our October <sup>Report</sup> and in looking about, it seems the merry-makers have passed us by. This report will be divided into (1) Southwestern Monuments General; (2) Reports from the Men in the Field; and (3) The Supplement.

SOUTHWESTERN MONUMENTS GENERAL

TRAVEL AND WEATHER

The general impression gained from the individual reports coming from all sections of the Southwest is that thus far the customary cold weather has not yet come. Rainfall reports generally denote that there has been no considerable precipitation. Unless a marked change comes very soon, we shall be entering into a second winter of almost unprecedented mildness and lack of precipitation. Surface water is scarce, springs and seeps are running low or have vanished and the great storage reservoirs are low. It is not encouraging to have to look forward to such open winter as passed in 1933-1934.

Travel for October over the whole district shows the usual decrease compared with last month. The gain in southern monuments is a little more than offset by the decline in northern monuments. However, the significant fact on travel is that October 1934 shows a substantial gain over the same month of 1933. Improved road conditions and some temporary ranger assistance at others, accounts for some of the increase. Travel increase for monuments reporting last year is doubtless due largely to the heavier travel on the road this year compared with last.

CONSTRUCTION

Engineer Atwell's report (see index) carries notice of the completion of projects at Montezuma's Castle. The list of completed projects follows:

Revetment along Beaver Creek	Ruins Trail and Walk
Garage and equipment shed	Walks among ruins
Septic Tank and Sewer Line	Reconditioning Entrance Road

SUNSTERN GENERAL CONTIN:

We are also able to report the completion of the grading of the Entrance Road at Gran Quivira National Monument.

ECW CAMP ACTIVITIES:

ECW Camps have been in operation during the month at Chiricahua and Bandelier National Monuments. At Chiricahua the camp is being entrenched into more adequate winter quarters. We will follow with the list of work accomplished by these camps.

Chiricahua

- Telephone lines to Massai Point via Rhyolite Canyon
- Telephone line to Sugarloaf Mountain for fire lookout
- Rhyolite Canyon horse trails
- Continuation of some items of cleanup

Bandielier

- Digging of flood control ditches to protect ruins and trails
- Start of work on two foot bridges
- Vehicle bridge, administration site to campground, 75% complete
- Grading of new parking area well started
- Rock quarrying for curbs
- Trailside cleanup finished
- Planting of trees and shrubs
- Cattleguard under construction
- Range fence around detached section Bandelier, 95% complete

Under the reports from Bandelier and Chiricahua, and from EGM Landscape Architect Sims' report, these projects are described more fully. All in all, some most beneficial work is being accomplished by our CCC Corps. The engineering crews under Assoe. Engineer Attwell have been getting maps and plans, needed for years, into shape. Upon completion of surveys relating to immediate needs, we will begin to have something upon which to base plans, estimates, justifications, etc.

At Tumacacori the construction work on walls, gates and other physical improvements was completed. Custodian Brandy reports that there is a great improvement in the matter of visitor interest and handling of guided parties now that these facilities give more effective control.

At Aztec the Reconstruction of the Great Kiva is nearing completion. Contract time is running on the new Administration and Exhibit Building. Mr. Paris reports that within about a week the clean-up work should be completed.

PERSONNEL:

### PERSONNEL CHANGES:

The following changes in status of personnel in Southwestern Monuments have occurred during the month or have not been previously reported:

1. The appointment of Louis R. Cogwood to the position of Ranger, Casa Grande National Monument, received Presidential Approval and became effective October 7th.

As a matter of introduction, Louis comes to us with the M. A. Degree in Archaeology from the University of Arizona and will be remembered as one of the two archaeologists in charge of the Tuzigoot excavations conducted under CIA near Clarkdale. His rating with the Civil Service was made through the recent Junior Park Naturalist examinations. He was seasonal ranger at Casa Verde immediately prior to coming with us.

2. Charlie R. Steen's full time temporary appointment terminated October 30 at Tonto.
3. Ranger Charlie Powell's ranger status came to a close at Chiricahua on September 30th.
4. Ranger Paul B. Rubin's full time service at Walnut closed October 31.
5. Ranger Jimmie Becker, still at Walnutki, came to the end of his service period at Walnutki on October 31.
6. FTA Foreman Harry Brown and Howard Leslie ended their FTA service during the month and are now assisting on the engineering work of Asst. Engineer Attwell (see index).

### FIELD TRIPS BY HEADQUARTERS PERSONNEL:

A field trip to Chiricahua by the Boss and Chief Clerk Hugh Miller in connection with CCC Camp clerical and project business were the only field trips made by headquarters personnel during the month. Engineer Attwell outlines his field trips in his section (see index).

### PARK SERVICE OFFICIALS:

Engineer Burney, Assistant Chief Engineer of Field Headquarters, San Francisco, Mrs. Burney and her mother, Mrs. Sellers, were headquarters visitors early in the month. Asst. Engineer Attwell accompanied him on an inspection trip to some northern monuments of the district. Casa Grande, Chiricahua, Tumacacori, White Sands and De Chelly were among some of the monuments Mr. Burney included in his itinerary.

S' EASTER GEN'L. CONTD.:

Reports from several of the custodians and rangers about the district indicate that Mr. Paul Wilkerson, a Park Service cameraman, has been working in some parts of the Southwest during the month.

MUSEUM AND EDUCATION SUMMARY:

During the month the usual scheduled field trips and museum talks have been a part of the educational services offered the public. Personally conducted field trips were given at (1) Aztec Ruins; (2) Hondo; (3) Canyon de Chelly; (4) Casa Grande; (5) Capitol Canyon; (6) Chiricahua; (7) Grand Quivira; (8) Montezuma Castle; (9) Navajo; (10) Pine Springs; (11) Pinta Cliff Dwellings; (12) Walnut Canyon; and (13) Tumacacori; and (14) Wupatki. Geobotanical parties were conducted at El Morro, Natural Bridges, White Sands and Capulin Mountain. Field trip services at 14 out of 25 monuments about to still have great opportunities in Southwestern Monuments for contacts. To be must remember that at Chiricahua, Pinta, Walnut Canyon and Wupatki, we as yet have only seasonal ranger positions.

Casa Grande is the only monument having a structure built primarily for museum purposes. Contract time is running on a new structure at Aztec. Some of the other monuments have excellent collections in crowded quarters consisting of one corner of a store or in dark ruins rooms. Concern with the great need, the surface has not yet been scratched as to museum and administration facilities.

The completion of a restoration model of a Hohokam Pit House made by Junior Naturalist Dale S. King for the Casa Grande Museum has been previously reported. The Hohokam Gradation Burial Models made in the Berkeley Laboratories and the enclosing of these horizontal exhibit section museum cases and arrangement of exhibits in them, comprise other noteworthy improvements made in recent months at Casa Grande.

Junior Naturalist Dale S. King has been circularizing monuments custodians for lists of plants, trees, shrubs and flowers. After getting these lists he has consolidated them submitting them to the Berkeley Field Headquarters where the approved metal labels are being stamped. Upon receipt of these labels, Dale will distribute them to the custodians for use along their natural and archeological trails.

Ranger Louis R. Guyer and Junior Naturalist Dale King have been compiling tabulations on birds, plants, reptiles, etc., observed about headquarters and the monument. The bird and plant lists especially, are getting quite complete. Plans for a bird banding station at Casa Grande are worked out.

Actg. Asst. Sup't. Bob Ross gave an illustrated talk on "Arizona's National Monuments" to a fine audience of about 80 people at the Heard

Museum in Phoenix on the evening of October 31.

Thus concludes a good busy month of October in Southwestern Monuments.

RHR/.

C. H. Kelly, FRANK PINNILEY, Sup't.



---

REPORTS FROM THE MEN IN THE FIELD

WUPATKI NATIONAL MONUMENT

By James Brewer, Ranger

This is the first report we've mailed dated later than the 25th and I hurry to explain the reason. Sal and I came in last night intending to get this off to you then, but the whole town was in such a stew over the circus we just couldn't pass it up. We know that if this was mailed this morning you would have it in time--and--well, it was a dandy circus.

October, as you know, is our last month on salary at Wupatki and here's some real good news for all of us: Dr. Colton has some museum preparatory and research work that Sal and I can do at Wupatki! That really simplified a lot of things. We won't need to move off the Monument to earn a living, so we'll be here for protection during the pot-hunting season; and part of the work, as outlined by Mr. Lyndon L. Hargrave, will give us a chance to make accurate observations on the bird and animal life of the monument. We are tickled pinker than the lemonade we drank last night.

Dr. Colton, Mr. Hargrave, and Mr. and Mrs. Gordon came out on the 24th to discuss plans for trails and preservation. We were putting up an "Ancient Ruins" notice when they arrived. The "we" is not editorial--it means that a friend of mine who happens to come from Hawaii was helping me. Dr. Colton, remembering the day he came out and found Dave Truscott mixing cement, remarked that fellows were crossing both oceans to help out at Wupatki!

Speaking of Dave, reminds me that we got a nice long letter from him early this month. We also heard from some Berkeley people who visited us in September; they inclosed a few snapshots of Wupatki and us and said they were enjoying the memory of their visit very much.

Travel to the Monument was noticeably less during October; a larger percentage of visitors were local people. Mr. Miller and Mr. Oldham of the Forest Service have been in the vicinity at different times checking up on range conditions. On the 24th Mr. John McGregor brought his Archaeology class from A.S.T.C. out on a field trip. The field lecture for this party of 16 had to be revised considerably because John had not reached Pueblo III study in his classroom. He explained that the premature trip was made because snow might make it impossible at a later date.

This was the largest single party to visit the Monument during the month. Exclusive of this party we had an even hundred guests.

The register at Citadel records 57 visitors, 40 of which are duplicated on the Wupatki book. Total for the month is 141 visitors.

For the 23rd of October there are two names on the Wupatki register--Donald and Peter--no surnames given and "home" was personally indicated by a wave of the hand northward--so we're supplementing the scanty written record. Donald

and Peter are two Navajo boys who appeared at the pueblo about noon, accompanied by a dog who ran at sight of us. The boys were completely uncommunicative for almost an hour--then Donald said they wanted to "look over the house". They were as interested in our gasoline cooking stove as in the more ancient parts of the ruin and continued their observations of us and our tools when we went down to the lab to do some sign-painting. Evidently they had made the trip especially to see Wupatki and us and they belonged to none of the nearby hogans that we knew of, so dinner and blankets for the night were in order.

We were absent from the Monument for three days the middle of the month when we visited headquarters at Casa Grande. We had a grand time and gained a lot of encouragement from talking things over with you and finding again what darned good friends everybody at headquarters is with these Service people scattered over the Southwest.

During the last two weeks I have been doing a little work on biology and ornithology; prepared the skeleton of a Western Red Tail hawk found dead near Wupatki and made a skin mount of a bat (wing spread 13 inches) found in the tank just off the Monument. I also prepared some birds taken near Flagstaff by the Museum of Northern Arizona, and all of these specimens were delivered to the Museum.

I had a very harrowing experience a couple of days ago. Sallie sent me down to the dining hall-lab to bring up some sweet potatoes, so I went down and stuffed my pockets full of spuds in school-boy fashion and grabbed three for each hand and hiked up to Room 36. Right here I'd better stop my story and tell you that since you have seen Wupatki ten feet of talus has been removed from what was once our front porch and now our only access is a ten-foot ladder. Well, I negotiated the ladder to the top rung in my very best Hopi style, and I stepped across to the wall--turned to say something to Howie who was standing below--and lost my balance. In "drowning man grasping straws" desperation I let go of the tubers and got off a real purty swan dive. Howie says it was quite a sight to see arms and legs in the air and then the three point landing in a shower of potatoes!

And now I must stop reporting and get back to help out with the surveying. The Gordons and the HARRISes and Howard Leslie moved out yesterday--which makes a family community of Wupatki for the first time in several hundred years.

P. S. (Primary Supplement) Since the 7th of October, when a register was put up at Sunset, 107 people have registered at Sunset Crater National Monument.

\* \* \*

CHIRICAHUA NATIONAL MONUMENT

By C. E. Powell, Ranger

At this time I feel embarrassed, as I have lingered after saying "goodby" until it is now time for another report. But who can be blamed for staying at Chiricahua as long as is possible!

One very interesting bit of information which my prolonged stay has caused

me to notice, is that more visitors have registered since the Dedication than were registered before.

Deer hunting and a "Home Coming Fiesta" at Douglas caused a very slight drop in the number registered Sunday, October 21, but the week just ending shows that we are having more visitors from distant points, as out-of-state people are now patronizing the Monument in equal numbers with those from Arizona.

Mr. W. A. McDowell of the U. S. Forest Service who shows pictures at the CCC camps made a slight mistake last night. Among other pictures he happened to show some balanced rocks, and our boys did not hesitate to tell him that he did not have pictures of any real scenery of that particular variety. He has just left the ranger station after completing preliminary arrangements, which will probably result in some slides for his program, showing Chiricahua scenery.

Although the frost has turned the leaves of our trees and has destroyed our flowers, we are gradually making progress in the work of identifying our trees and plants. Next year we will have most of the trees and a large number of the flowers and plants tagged with metal tags, to help students who wish to use our trails for nature study. In this work we will have the assistance of Dr. Wyatt T. Jones, of the Phelps Dodge Corporation, who will check up with us to avoid errors. Dr. Jones is known locally as the "Snake Doctor", I am told. Also, we expect to consult Dr. J. J. Thornber, of the University of Arizona.

We have been trying to find a cure for bashfulness. We have lost two of our best assistants because of excessive modesty. This malady appears to be extremely painful to the victim, although to everyone else, well, judge for yourself. David Thurman (Pinky) was the first to show symptoms. He was sent to the camp grounds to assist a party of visitors who wanted to visit the Big Balanced Rock. Two young ladies complained later that he was tongue tied had made no effort to entertain them, and had been such a good boy that he was rather uninteresting. The result was that we lost an excellent guide.

More recently we had some blonde visitors from Minnesota. Mr. Bonham (Whimpy) happened to be up on Massai Point, when he was approached by a gentleman with the request that he, Whimpy, show his daughter around. Whimpy said, "That fellow over there will," and believe it or not, Whimpy took to the hills and failed to show up in camp until after dark. What can be done with fellows like that?

I wish something could be done for our deer. Most of the deer we have are now widows. Have not seen a set of horns since the season opened, but plenty of does.

Mr. H. Langley, Landscape Architect, from San Francisco, has recommended some improvements on Massai Point, which are being carried out. We expect that nature will assist a great deal with improving the appearance of the parking areas, during the next year.

Dick Sias, Jr. Landscape Architect, has announced that he will start

November first in a supervisory position at Randolph Park in Tucson. Mr. A. E. Clark, the engineer who started the topography of this area under the Forest Service, arrived today as an employee of the National Park Service to finish the job. Welcome, Mr. Clark!

Have recently enjoyed visits from several friends in the Immigration and Customs Services, and expect to see more of the boys, together with their families, over in the cacti.

\* \* \*

## WHITE SANDS NATIONAL MONUMENT

By Tom Charles, Custodian

The White Sands have certainly had the "brooks" in publicity the past month. The El Paso Chamber of Commerce is doing a lot of advertising in eastern magazines and is advertising the White Sands alongside the Carlsbad Caverns as one of their chief attractions. Today the Albuquerque Journal gave us a paragraph on the editorial page. The Alamogordo Chamber of Commerce recently displayed a White Sands booth at the state fair at Roswell, viewed by an estimated 50,000 persons. At this booth Mr. Jack Voyde, the local specialist in plastic art, cooked White Sand, mixed it into a creamy mass and moulded it into attractive souvenirs for free distribution. Reports from Roswell said that Mr. Voyde stole the show. Best of all is the description of the White Sands in one of the Southwest's "best sellers", Rev. Ross Calvin's new book, "Sky Determines." Following his description, Rev. Calvin says, "If a bit of the desert is ever preserved in a museum of paradise, it will be lifted from the virginal White Sands."

Our visitor's list for October carries the names of such distinguished persons as Ass't. Chief Engineer and Mrs. Barney and Mrs. Barney's mother, Mrs. Sellers, all of San Francisco; Associate Engineer Walter Attwell and Mrs. Attwell; Paul Wilkerson, Park Service movie man from Washington, and family; Frederick F. Frankle, a well known X-ray specialist from New York City; Dr. J. B. Lawrence, African missionary and movie photographer; Mrs. Lockhart from Japan and many others. We are also promised a visit from George B. Grant, chief photographer of the Park Service, within a few days.

Our four days of making motion pictures with Paul Wilkerson were thrillers. Fred Goodeau, master mechanic of the local Ford agency, did the stunt driving. He took those big White Sand bolls in his V-8 at 70 mph. Like the bicycle riders in the racing bowls he kept creeping higher and higher, the car tipping more and more onto its side, centrifugal force holding it to the sand until it bounded out over the top of the ridge. A dive down a 60 foot, almost perpendicular bluff, was just play for him.

It is interesting to study the many uses to which the White Sand is put by different people in various parts of the country. When the first Anglo-Americans came to this valley, they found that the native settlers were plastering their adobe houses with White Sand, giving them a beautiful alabaster finish. When Alamogordo was founded 35 years ago, Chas. E. Thomas, then private secretary for one of the founders of the town, built a White Sand house. Mr.

Thomas is now cashier of the local bank and still lives in the same house. Twenty-five years ago, Wm. Fetz of Alamogordo, had a factory at the White Sands and shipped as high as 60,000 pounds of White Sand at a time to San Francisco. It was used in making statuary. A well known stockman at Fort Sumner, N. M., has for years kept a supply of White Sand in which to pack his "undies" and other woollens, he recommends them highly. A Carlsted firm shipped White Sand to that city by the carload to clean wool before it went to market. A prominent cleaner in Oklahoma keeps a supply of White Sand to clean the best furs which come to his establishment. White Sand is used freely as a fertilizer in all parts of the country where soil is short of lime or strong in alkali. The leading hotels of New Mexico use it in their lobby cuspidors, around potted plants and for window decoration.

A prominent sheep man of this county boasts that he uses White Sand to clean his teeth. Baron Auricema, the well-known Salvation Army singer, has recently published a long treatise on how to cure rheumatism by taking White Sand baths. Jack Voyde of Alamogordo has established an enviable reputation for the beautiful work he has done in plastic art with White Sand, while a Kansas City firm is said to use it for grit in making soap. Women in local communities use the sand for a sweeping powder on the floors and the garages and filling stations use it to clean up the oil on the runways of their business establishments.

Children at the New Mexico school for the blind use the White Sand for their play tables and thousands of people enjoyed the New Mexico building at the Century of Progress which was carpeted with White Sand. The latest use of which we have heard is that a bootlegger sends down here for White Sand to fill his pipes as he bends them for his still. The sand keeps them round. However, we are not making any personal recommendations.

\* \* \*

Tom probably thinks the gates of Heaven will be swinging from White Sand posts. Somebody remarked that a little sand on the stairs might not be out of place in Tom's case just as a bit of insurance.

\* \* \* \*

#### GRAN QUIVIRA NATIONAL MONUMENT

By Wm. H. Smith, Custodian

My register shows 288 visitors entering the Monument in 69 vehicles, representing 12 states. Among this number we find Mr. W. G. Attwell, Associate Engineer. Mr. Attwell came by on his way to Bendolier. While here he went over the road of approach, giving it an inspection and giving a few final orders relative to its completion. We also find Dr. Floyd V. Studer, Archaeologist and head of a school at Canyon City, Texas. Mr. Studer's visit was enjoyed and while here he advanced some practical ideas concerning the future development of our Monument and museum collection. Mr. Studer was accompanied by Mr. W. S. Izzard, Managing Editor of the Amarillo News-Globe.

Weather conditions for the month have been fine with the temperature standing above normal for this section. We haven't had a killing frost yet, which

puts it about 30 days late according to previous years. We have had fair days all month, with the exception of October 11 and 12, which were cloudy with some rainfall.

The road of approach is practically completed and is in good shape. The lower portion of the road is finished on a 6% grade with a crown cap of 4" gravel placed on a 6" base of caliche clay, making a very firm and substantial road bed. The last three hundred feet of road before topping the hill are finished likewise, but the 6% grade goes into 7%. There is left uncompleted at present but one grate of steel for the stockguard which will be placed as soon as the welding is completed.

I am glad to say Mr. Leslie has given us most satisfactory work here and has accomplished the maximum with the money appropriated for this job.

\* \* \*

## AZTEC RUINS NATIONAL MONUMENT

By John Will Earis, Custodian

Our new travel year is starting out with a bang and October shows 645 visitors as compared with 528 last October. While this number exceeds that of last year, it doesn't seem that we have been snowed under. Mark Norton was on the forefront of the month, and I have taken care of visitors of late. Many of our visitors, of course, are from local points and drive in to see the Great Kiva as it is nearing completion. This project now awaits only the finishing touches and we have made arrangements for the painting as soon as all plaster is properly dried. We can hardly wait for the finished product with the red and white interior and with the enthusiasm and interest that the structure as it exists is creating we are anticipating a great reception from the general public. This is the only public works project that has taken any of our time during October.

We are in the process of a general clean-up, which will be completed by the end of the week. In regard to this clean-up, we are moving the entire debris and rock from the court and the north and west sides of the Ruin proper. The rock on the east side we are more or less placing in wind rows and leaving them separate from the wall about thirty feet. While I am not enthusiastic over this, the result is not going to be any more displeasing than to increase our stock pile to the extent this addition would bring about. This general clean-up program is bringing to our minds forcibly the drastic need of an adequate tool and implement shed. Much of our material is too good to discard entirely and consequently necessitates a storage problem which we have not solved to my satisfaction, but which must be considered a temporary arrangement.

The museum contract project is moving along in a very satisfactory manner; the adobe bricks are all made and in the process of drying. The rock is being shaped and the foundations are all laid. Actual construction of the wall proper started this week and while neither Chuck Richey nor myself are all pleased with the contrast of our rock colors we are unable to suggest an adequate

solution. Much of the rock is being obtained from the very source of our ruin rock proper, but having been spared the weathering and exposure of an exterior wall, it is quite contrasting when placed side by side.

We certainly want to express our appreciation of the Landscaping and Engineering Divisions for their splendid cooperation in our behalf. In lieu of an inspector which was promised us, but has not arrived, Mr. Kittredge's office authorized Jim Hamilton to come down and supervise all form work. Jim was down and spent two days with us getting me acquainted with what he desires on the balance of form work and that part is now completed in most every detail. Mr. Richey's timely arrival straightened out many problems and correspondence from the Landscape Division relieved me of several features of importance. Mr. Richey has always given us his utmost cooperation and we attribute much of our progress to this same cooperation from our colleagues in other points.

We were quite interested in the future museum plans for Bandelier and Earl is certainly to be congratulated for the time and attention that this outline proves he has given his subject. I am very much interested in the development of this feature and trust that it is more in accordance with the desires of our Headquarters than our Aztec plans for a museum. With a building of the type Earl recommends, I have no doubt but that his plan will provide the maximum information that he is hoping for. While I am still of the opinion that Aztec has the best situation for a museum in the Southwest in our Great Kiva, I am very much opposed to the development of a museum of the type which we are apparently going to get.

Mr. Vogt's record of the names taken from the El Morro rock and the fact that he has spent the last several weeks in Aztec in almost constant praise of El Morro makes one realize why we get so many good reports of the reception received at Inscription Rock. If all we Custodians had the enthusiasm and interest of our Monument at heart as does Mr. Vogt, I am sure any reports of mediocre enthusiasm on the part of the personnel would cease and that our efficiency would be much greater as a result. Anyway, our hats off to Mr. Vogt and his Monument.

We are apparently going into another open winter. The last few days have been rather chilly but no disagreeable weather has been encountered all Fall. With every good wish to your personnel and a hint to Hugh Miller that he can expect more errors from Aztec vouchers, etc., now that Mrs. Turner is not with us, I had better ring off for this particular report. By the way, speaking of Mrs. Turner, I can certainly recommend her most highly to anyone who might have any office work of any nature. She was with us on C.M.A., received an appointment under P.W.A. and her work has been consistently good.

\* \* \*

NAVAJO NATIONAL MONUMENT

By John Wetherill, Custodian

Typewriter busted so I'll be unable to get out a report this month. Hilton has not sent out his report on the number of visitors. Hoping you can

get some action on our trail work. With best wishes to all, I am, Hosteen John.  
\* \* \*

## MONTEZUMA CASTLE NATIONAL MONUMENT

By Martin Jackson, Custodian

October, the first month of our new travel year, has come and gone. It has been a delightful month with us at this Monument. Our register book shows that we have had 1,080 visitors, which is 58 less than we had for October, 1933. Even so we had more actual visitors than last year as the Pioneers of the Verde Valley, who have been holding their annual picnic here for several years, picnicked at Montezuma Well this year instead of here. They had 317 in attendance last year. Taking 317 from the 1,138 that we had last year leaves only 821 for last year not counting the Pioneers.

Superintendent Tilletson of the Grand Canyon National Park and Mr. Gable from the Washington office of the National Park Service were with us for a couple of hours during the latter part of the month. Mr. Tilletson had been in before but this was Mr. Gable's first trip. We thoroughly enjoyed their short visit. Paul Wilkerson, Park Service photographer, made some movies of the Castle and grounds this month. We hope he got some good shots. Landscape Architect Harry Langley made his monthly inspection trip.

I still maintain that visitors at Montezuma Castle get super-service with a smile. I mentioned in last month's report about Ranger Fish being invited to call on a colored gentleman any time he might be in Los Angeles and that the gentleman usually hung out at the county jail. This month we have one that is even better. One Sunday during the month we had a very attractive young lady, who in company with relatives, went through the Castle and museum. While going through the museum she remarked that she was very curious to see a wild rattlesnake and that the only ones she had ever seen were in shows or in the zoo. I immediately assured her that she did not stand one chance in a thousand of seeing one near here and that while the Southwest was supposed to be the home of the rattlesnake, we seldom see more than three or four during the season; and we had already seen that number this year. Imagine my astonishment on looking out toward their cars they were preparing to leave and seeing Ranger Fish standing some ten feet away with a six-foot piece of iron pipe over his shoulder. On going out to see what it was all about, I found that Mr. Fish was herding a very fine specimen of a Mountain Rattlesnake with nine rattles. Needless to say that the snake being too close to paths traversed by visitors was killed and that the rattles were presented to the young lady as a souvenir of her trip and the service she received. Her name and address is available if there are any doubting readers.

We are having the usual fine weather that we have learned to expect here during the fall of the year; and it makes us wonder why everyone doesn't spend the fall and winter in Arizona.

\* \* \*



---

REPORTS FROM THE MEN IN THE FIELD

TUMACACORI NATIONAL MONUMENT

By George Bounley, Custodian

Our visitor list for October shows that 1,155 persons visited this Monument. Many local people have come this month to see our new gates. So many people have heretofore had the impression that they could see from the highway all there is to see at Tumacacori, but with the new walls these people are coming inside to look around.

Our PERA project will end this month due to lack of funds. The Nogales office is very anxious to have us go on with the work as they say this is the only project where there has never been a complaint from any worker in regard to time and money earned or quality of work furnished.

The crack which developed in the east pillar of the arch which supports the dome over the sanctuary, still continues to widen and a new crack has developed in the dome. The crack in the pillar has been reported previously.

By this time last year we had several killing frosts, but there has been no frost so far this year.

During my absence last Saturday, Mr. Langley of the Landscape Division visited Tumacacori. Major Kinney said he seemed quite pleased with the new gates and wall construction.

Owing to colder weather farther north, quite a few of the winter visitors are already using our southern route. The Monument has had a thorough Fall clean-up and we are ready for the busy season which usually starts about the first of November.

\* \* \*

WALNUT CANYON NATIONAL MONUMENT

By Paul Bonubien, Ranger

I will be able to remember October as the Engineers' month. Mr. and Mrs. Gene Gordon, Mr. and Mrs. Robert Harris and Mr. Knox Borden spent most of the month here. They had me eating real food without cost to myself, besides leaving a supply of wood that will cause them to be remembered for a long time. Mr. Borden has been transferred to Death Valley National Monument but Mr. Howard Leslie arrived a few days ago to take his place.

While here, the engineers assembled data for approach roads, parking areas, trails, camp grounds, etc., for both Walnut Canyon and Sunset Crater National Monuments. But it all sounds too good to be true. I will become excited when their plans are approved and the work started. They were mean enough to measure the depth of Walnut Canyon. They say it is 380 feet deep, while I would like to tell visitors that it is at least 400 feet.

The only excitement of the month occurred recently when a woman got lost about one mile southeast of the Monument. CCC boys and the native citizenry hunted for three days before she came home riding an old white horse. The ruins on both sides of the Canyon received many new initials during the search.

Registrations totaled 499 for October. This is a decrease of almost fifty per cent. from September.

\* \* \*

## CAPULIN MOUNTAIN NATIONAL MONUMENT

By Homer J. Farr, Custodian

I have the following report to make as to the activities at Capulin Mountain for the month of October:

Visitors: We have had approximately one thousand visitors this month, from about fifteen different states and some from Cuba.

Weather: The weather has been rather nice and warm during the day with very cool nights. Only about one-fourth inch of rain last week and no snow so far this season.

General: Cattle and sheep have been practically moved out of this country for the winter, most of them having been sold to the Government and some shipped or driven to grass a few hundred miles east into Oklahoma and Texas. Grass and feed crops failed to grow because of insufficient moisture, hence the moving of livestock. Very few cattle and sheep will be held over here this winter. Mr. Littell was here about the middle of the month and made a pleasant but brief call.

Capulin Mountain is losing quite a number of its highly valued trees this Fall. There seems to be an attack of pine beetles or sap borers entering through the bark to the sap and then eating a ring around the tree just under the bark. At first it was presumed that the dry weather was responsible for the trees dying, but the Custodian, upon a close examination, finds that the damage is being done by the beetle. A special report is being submitted to the Superintendent and we will see what can be done about it.

VERA Work: I have been very busy during the past week and this on our roads and trails. Our project was closed September 20th for the want of funds, but the Custodian was given an extension of two weeks beginning October 12th and ending October 25th. Much has been accomplished on the roads and trails and parking area.

\* \* \*

## REPORT OF DYING TREES ON CAPULIN MOUNTAIN

By Homer J. Farr, Custodian

For the past three months, I have noted trees dying on the Monument and presumed that the dry weather was the cause, feeling sure that nothing could be done about it. However, upon close inspection, I found evidence of a pine beetle, or sap borer, which in my opinion is the sole cause of the trees dying. I am much alarmed over the condition, as I find approximately 150 trees totally dead from what I believe to be this bug.

Something must be done if there is any way to prevent the spread of the pest. It bores a small hole through the bark about the size of the lead in

a pencil, then encompasses the trunk just under the bark, cuts off the sap flow, and the tree dies. We are not blessed with any too many trees on Capulin at the moment and 'tis serious to lose very many.

I have a plan which I wish to submit herewith and while it will not completely control this pest, it will be the first step necessary to its eradication. While this step is being taken the proper solution possibly can be worked out. I suggest that all dead trees recently killed by the bug be removed from the Monument and given to the County Relief Administration to be divided among the poverty stricken for fuel together with what other dead wood appears to be necessary to be removed to prevent a fire hazard. The removal of course would be under the direct supervision of the Custodian that no vandalism might occur while removing the trees, and that the road might be fully protected from rock and gravel.

\* \* \*

## CANYON DE CHELLY NATIONAL MONUMENT

By Robert R. Badlong, Custodian

Visitors to this Monument for the month of October totaled 129. Of these, 78 drove to the rim, and 51 entered the canyons by car. Of the 78 who drove to the rim, 18 descended the trail to White House.

Work on the trail is progressing in a satisfactory manner, approximately 3,419 feet being completed, with 361 feet remaining to be finished up to the lower portal of the upper tunnel. Work on the upper tunnel was commenced Monday morning, September 24th, and the tunnel will probably break through the rim within the next two days.

Assistant Engineer J. B. Hamilton and Mrs. Hamilton visited the Monument during the month, as did Mr. Charles A. Richey, Resident Landscape Architect.

Soil Erosion work near White House has progressed rapidly, and that particular section of the work should soon be finished. The Soil Erosion Service held a barbecue nearby on the 6th, with a good attendance. Quite a number of those participating in it paid the Monument a visit, fifty-seven people registering on the 6th and 7th.

Weather has been cool, the nights cold. On the afternoon of the 23rd we had a brief shower of rain, which turned to hail with a light flurry of snow on the canyon rims.

\* \* \*

## CHACO CANYON NATIONAL MONUMENT

By Thomas C. Miller, Custodian

The activities in the Chaco Canyon National Monument for the month of October are:

General: The approach roads to the north have been getting some much needed maintenance since October 13. The State Highway Department has had a crew

of men with a heavy cat and grader working continually. They have been repairing the washouts, cutting better drainage ditches, grading, and in general the road to the north that connects with State road 55 is in much better shape than I have ever seen it. The approach road to the south is still very rough. It is hoped that in the near future the State will do some maintenance work on that road.

Weather: The weather has been ideal for visitors with clear warm days and cold nights. A tabulation of the weather follows: The maximum for the month was 78 on the first and the minimum was 24 on the 22nd with 24 clear days & partly cloudy days and two cloudy days.

Travel: The travel has shown a noticeable increase. I believe this is due to fine weather and better roads. Eight hundred and twenty-six persons entered the Monument in 244 cars coming from 15 states, the District of Columbia and one foreign country. France was represented by a party of four people on the 18th. Travel for the same period last year was 532 showing an increase of 294.

Excavations: All excavations ceased on the 7th. The School of American Research locked their buildings, took down their sign, and moved in to Santa Fe for the winter. A full report of their accomplishments for the year will be mailed to your office at an early date.

Special Visitors: Mr. Lewis T. McKinney of the Forest Service visited the Monument on September 26th, Mr. McKinney is formerly of the Park Service having worked at Carlsbad Caverns several years as Seasonal Ranger. Mr. and Mrs. C. A. Wall, Mesa Verde National Park, were also here on the 29th. Assistant Forester and Mrs. W. H. Wirt of the National Park Service at Berkeley were Monument visitors on October 2nd. Professor Stanley J. Milford of Santa Fe, visited the Monument on the 7th. Professor Milford's visit was much enjoyed by the Custodian and family as he was a summer Ranger at Carlsbad Caverns during my tenure in that Park several years ago. Mrs. Frank Fish of Montezuma Castle and party were here on the 19th. Mr. Chester R. Markley, Park Ranger and photographer at Mesa Verde, has been a visitor at this Monument several times during the month.

\* \* \*

#### TOMHO NATIONAL MONUMENT

By Charlie Steen, Ranger

Except for two days of clouds and cool winds, the weather for the past month has been nearly perfect. Of 259 visitors during the month, 165 made the trip to the lower ruin and five to the upper.

The only Park Service visitor during the month was Paul Wilkerson, photographer, who with his wife and son, spent the morning of the eleventh taking "shots" of the Monument. I served as local color for the pictures but lacked the inspiration which would have improved the pictures. Last Sunday a party of four Sioux from South Dakota spent an hour and a half looking over

the ruins.

Allow me to correct an error in your article on "Contacts" in the last Report. So far, more than half my visitors have made the climb to the ruins and all have been in to see the small exhibit I have. I keep the registration book in the room with the exhibit case and while the party is signing up I get them looking at the exhibits. So far, I have estimated that a group which goes to the lower ruin spends from one to two hours on the Monument. Those who merely look at the exhibit spend on the average a half hour.

Of the seven wild honey combs on the cliff, one had a foul brood this summer; two more were abandoned, and the rest of the bees are about starved out. The poor devils have had a hard time this year. The few remaining cattle are also in very bad shape and have been eating cactus for some time and their mouths are as prickly as a porcupine.

\* \* \*

#### BANDELIER NATIONAL MONUMENT

By Earl Jackson, Custodian

Following is the report for Bandelier National Monument for the month of October:

VISITORS. The winter slump in travel has definitely begun. Travel for this month reached 808, as against 340 visitors for October of last year. Visitors came in 280 cars and two motorcycles, from 26 states, the District of Columbia, and four foreign countries (Austria, Sweden, China and British Columbia). The six highest states in order were: New Mexico, 132; Colorado, 17; Texas, 16; Kansas, 11; California, 10 and Oklahoma, 5.

WEATHER CONDITIONS AND ROADS. Rainfall has been negligible in this vicinity. Snow has capped the higher mountains on two occasions, but has remained only a day or two. Roads are exceedingly dusty, but in fair condition. Daytime weather has been fine, with clear, cold nights. The sun now sets in Frijoles Canyon at 2:30 in the afternoon.

SPECIAL VISITORS. On October 4, Mr. and Mrs. W. H. Wirt came in, in company with Walt Attwell. The Wirts left on October 7, after his inspection and valuable suggestions on continued forestry protection activities. Mr. Attwell left on October 11. Mr. Attwell was in again with the Mrs. on October 19, and on October 20 Mr. Burney and family came in, on an acquaintance reconnaissance. The Burneys left the next day and on the 22nd the Watsells departed.

Chuck Richey arrived on October 13, departing on the 16th. I believe he was favorably impressed by landscape developments. September 30 Harry Strong and family, of Albuquerque, visited the Monument. The Strongs are one of the first families to play an important part in the development of New Mexico. On October 4 Kay Scott, Director of the Denver Art Museum, was an interested visitor. On October 7 Paul S. Fox, State Sanitary Engineer and John Bingham, State Bank Examiner, were visitors. On October 14 Mrs. A. N. Carter,

founder of the Hollywood Bowl, was very enthusiastic about Bandelier. Judge and Mrs. O'Tera, of Santa Fe, stayed a short while. Mr. and Mrs. B. G. Phillips of Taos spent a half-day. Mr. Phillips has a considerable reputation for his ability at portrayal of Indian life. On October 21, Governor A. W. Hockenull and party were out from Santa Fe. He was enthusiastic about the possibility of a short-cut road from Santa Fe past this point.

IMPROVEMENTS. C.C.C. work is continuing nicely. Over a mile of flood control ditches were finished on the canyon rim to protect cliff ruins. Two foot bridges were started on the upper canyon trail. Construction on the vehicle bridge connecting the campground with the new administration area is 75% done. Grading of the new parking area is well started, and considerable curbin rock has been quarried. Trailside cleanup on canyon trails is finished. About 70 trees and shrubs have been planted. One cattle guard is under construction. The range fence around the detached section of the Monument is 95% complete.

FIRES. The fire season seems definitely over. One would think it peculiar that September, a rainy month, should have produced two fires, while the dry month of October should have had none. This is because most of the fires occurring in this district are lightning caused. With the ground dry as it is now, and covered with dead leaves and needles, it is a mighty comforting thought to know C.C.C. help is available in case of need.

NATURE NOTES. After a recent check-up made by Forestry Foreman James Fulton on types of plant growth occurring in Frijoles Canyon, I was able to identify some of the plants on the basis of their use by Indians. Following is a partial list:

- White Fir (*Abies concolor*). The resin is frequently used in the treatment of cuts.
- Box Elder (*Acer negundo*). Pipestems are made from the twigs of this tree.
- Rocky Mountain Alder (*Alnus tenuifolia*). Indians make a red dye from the boiled bark.
- Juniper-one seeded (*Juniperus monosperma*). The so-called cedar. Some tribes use the berries for medicine.
- Pinon Pine (*Pinus edulis*). The nuts are valuable for food. The resin is used to seal baskets.
- Quaking Aspen (*Populus tremuloides*). Medicine is made by boiling the leaves.
- Mountain Mahogany (*Cercocarpus parvifolius*). The leaves, pounded, salted, and moistened with water, make a laxative.
- Apache Plume (*Fallugia Paradoxa*). The San Ildefonso women wash their hair in the residue from boiled leaves, to make it grow.
- Choke Cherry (*Prunus melanocarpa*). Bows are made from the limbs, while the cherries are used for food.
- Sumac (*Rhus Cismontana*). Dried leaves are used in Indian cigarettes.
- New Mexican Locust (*Robinia Neo-mexicana*). This tough hardwood is used for bows.

- Rocky Mountain Blue Plant-Goose (*Penstemon serrulatus*). A black pottery paint is made from the boiled essence.
- Four O'clock (*Quamoclidion multiflorum*). A medicine for use in dropsical conditions is made from the ground roots.
- Can Cactus (*Opuntia arborescens*). This cactus, sometimes called Holy Cross, closely resembles the Cholla of Southern Arizona. The punctate stalks make ornamental cones.
- Rabbit Brush (*Chrysothamnus bigelovii*). The flowers are used to make a yellow dye for woolen yarn.
- Datura Lily (*Datura meteloides*). The West Coast Indians are known to use the powder from this dried plant for a narcotic.

GENERAL. Insofar as the Custodian can perceive, things are going very nicely here. Development work is going ahead, unimpeded by weather. Visitor travel still holds up the high quality of interest which it did this summer. Bandelier's first formally open winter season looks encouragingly in prospect.

The prospect, mentioned in last month's report, for a relocation of State Road No. 4, so that it will run by a short-cut directly past Bandelier National Monument on its route to Colorado, appears bright in the attitudes expressed by State officials. Santa Fe cannot fail to realize what it will mean to have Bandelier only 82 miles away. It would be hard to conjecture the number of people who would lengthen their stay in this district if they were sure they could reach this point in a thirty minute drive from town.

This prospect of a short-cut road brings more emphatically to the front than ever before the necessity for considering development in the detached portion of this Monument. The ruins which occupy that portion are all worthy of protection; however, considering relative merits of other ruins areas and scenic points, I cannot help feeling that we should have more territory in the reserve. The great ruin of Tshirege, which lies less than two miles from the detached section, on the Ramon Vigil Grant, is undoubtedly one of the largest ruins in the country.

On a recent trip to Albuquerque with Mr. Attrell to see Mr. Frank Bond, one of the owners of the Ramon Vigil Grant, I learned that this property is undergoing negotiations which will result in it belonging to the Indian Service. From the Indian Service this 35,000 acre area will be sold to the San Ildefonso Indian Reservation. If this ruin of Tshirege, and sufficient land around it, could be obtained by the National Park Service from the Indian Service before the Grant land becomes a tribal property, Tshirege could become a part of the detached portion of Bandelier National Monument. What do you think of this idea?

Will close with a comforting remark made by a visitor recently. I took this gentleman and his wife through the ruins, and they seemed quite interested. After the trip was over, a C.O.S. boy thought he recognized this fellow, and asked him "Didn't you used to be a Ranger over here?"

Arrihillo?" The apparently innocent answer was: "No, I've never been a Ranger. I've always been a working man."

\* \* \*

PIPE SPRING NATIONAL MONUMENT

By Leonard Heaton, Acting  
Custodian

Our weather is slowly getting colder. Two or three times I thought we were in for a storm but it passed us by and the earth is still quite dry and getting dryer as the wind keeps blowing from the Southwest. The stockmen surely are going to feel the need of relief this winter if they save many of their animals. We have several men driving cattle to central Arizona for the winter and others selling or trying to sell most of theirs. I was down in the flats the other day and for the life of me I can't see what the cattle are eating to keep them alive. There is no grass at all and what little brouse there is has been eaten almost to the stocks. Well, it's death to a lot of cattle, sheep and horses this year if there is any snow at all.

Among the visitors this month we have had Mr. & Mrs. Miller Bradley, of Grand Canyon north rim; Mr. & Mrs. Harlan B. Stephenson of Zion; Messrs. Nichol, Harrison and Gunies of Tucson, working under the University of Arizona in getting a map of the vegetation of the Strip; Mr. J. M. Branson (known as Shorty) who was the first man to drive a car over the road from Kanab, Utah to Hurricane, Utah by way of Pipe Spring. The car was a model T Ford of about 1912 or 1913 vintage. Mr. Borgardon of the Department of Justice was also a visitor.

Our travel for the month is as follows:

<u>Visitors and Tourists</u>		<u>Local Travel</u>	
California	12	Cars, trucks,	
Arizona	21	horsesmen	361
Utah	18	Visitors	59
Illinois	2	Total	420
Connecticut	1	Last month	1,131
Texas	1	Decrease	711 or 269.3%
U.S.N.P.S.	4		
Total.....	59		

In October, 1933, we had 578 visitors as compared with 420 this year or a decrease of 13.7%. This shows that our travel is about the same.

As soon as I can get the time, I am going to get some small cedar and pine trees which I intend to set up on the Monument to help take away the barrenness of the land that has been farmed on the east side. I also intend to gather some cacti and help nature to bring back the plant life on the Monument as there were very few plants that matured their seeds this year.

\* \* \*



---

REPORTS FROM THE MEN IN THE FIELD

NATURAL BRIDGES NATIONAL MONUMENT

By Zeke Johnson, Custodian

Weather has been ideal and just cool enough to be comfortable. My son, Junior, and I started work making a new trail mostly down the hillside just north of Agusta. I had an excellent trail down there but about two-thirds of the way down there was a very fine view of the Bridge and I found that a lot of the visitors, when I was not with them, called that good enough and turned back, never realizing, of course, that they had not seen anything. The Bridge cannot be seen until one is directly under the arch. Therefore, I decided to make another trail down a steep ridge, directly south of the southern end of the Bridge. I made it zig-zag down so it would not be too steep and put a very good sign saying "Down". Now they cannot see the Bridge until they are under it. Then I put a sign saying "Up" to direct them back on the old trail. So now I don't believe I will ever have anyone coming back without seeing all there is to be seen. I made several bigger and better ladders and greatly reduced the grades in many places. There will be a larger number of visitors here this Fall than I estimated. There has hardly been a day since I reported last that some one has not been out.

There have been a large number of prominent visitors during the past month including William W. Wagner of Palo Alto, and the Department of Agriculture; Dr. and Mrs. K. D. Swan, U. S. National Forest Supervisor from Washington; Honorable Joseph H. Wolf, judge of the Supreme Court; and others.

On Sunday, the 14th, in the evening, I took a stroll due West of my camp about one mile and found a fine little cave with a lot of rooms. All had their roofs caved or fallen in, but the walls were just fine and some of the masonry was the best I have ever seen. The kids had decorated them by punching their little fingers in the fresh mud and then pinching in small white bits of sandstone in the fresh red mortar. Some of the walls are beautiful. I am quite thrilled over my find, because for many years I have thought of going over there but just never have before. By the amount of pottery chips all around, it looks as though they had lived there for many years. I find that somebody had been there before, nearly 20 years ago, as I found three almost decayed cans, a tobacco can and a small milk can and one other, but no digging had ever been done. Now next season I will cut or mark a trail over to it and it will be very interesting for a two hour evening walk and should prove attractive to visitors.

Another thing I wish to mention is that the hunting season is now on and I have discovered that there are large numbers of deer hiding on or near the Monument. I believe I am safe in saying that there are 150 and possibly 200 deer within two miles of the Edwin Bridge.

\* \* \*

---

## REPORTS FROM THE MEN IN THE FIELD

### ASSOCIATE ENGINEER'S REPORT

By Walter G. Attwell, Assoc. Engineer

My engineering activities during the month of October have consisted of being engineer in charge of two C. C. C. camps and several small construction projects as well as making field surveys for future work.

Construction work in my territory shows several projects completed this month. At Montezuma Castle National Monument, we have completed six projects. All of the work at this Monument was directly under the supervision of foreman Harry Brown, who was transferred from the engineering crew some time ago. With the completion of this construction work I have transferred him back to the engineering crew. The Revetment along Beaver Creek is the largest and first of Montezuma's projects. The completion of this project affords protection to the Castle trail and road and prevents floods from eating into the prehistoric ruins under the castle. The garage and equipment shed, the second project, furnishes the much needed room for storage and shelter for several cars and a work shop. This building represents a good example of cobble-stone masonry. The sewer disposal system consisting of a septic tank and a vitrified tile line was the third project in this Monument to be completed. This sewage disposal plant has been so located and constructed that it will accommodate all future construction of buildings. The fourth project was the Ruins trail. This walk led through the various rooms opened up under the C. W. A. program. It blends so completely with the ruins and the face of the cliff that the walk is not distinguishable at a hundred feet distance. Project five consisted of several series of steps to the ruins under the cliff. These steps are a part of the ruins trail. Project six was the reconditioning of the entrance road. This last project is complete as far as the appropriation went, but is far from being a complete job. Many stations are yet to be relocated and graded. The entire road bed and parking area will need a surface. The completed project was on a small section only.

The completion of these six projects does not answer Montezuma's needs. They serve only enough to permit the Custodian to "carry-on" until allotments become available for such urgent needs as: Administration and museum building, educational projects, paving entrance road and parking area, stabilization of Castle, repair to ruins, irrigation and planting, water supply, employees residence, electric system, and fences.

At Gran Quivira National Monument the grading of the entrance road is also a completed project. This project was started under C. W. A. and completed by Mr. Leslie under the P. W. A. The project consisted of grading 3,800 feet of the entrance road and the parking area, plating each with caliche and surfacing with six inches of gravel. Drainage facilities and cattle guards were installed. This Monument, like Montezuma Castle, is in dire need of physical improvements. It is

embarrassing to have to continually apologize to the traveling public for the lack of any comfort station facilities. To date the Monument has been unable to secure funds to complete the water system which lacks but 150 feet of reaching water. No comfort stations have been constructed because there is no water. No sewer system has been installed for the same reason although the materials are on the site. The plumbing has been installed in the Custodian's residence but never connected for lack of water. The Monument has no drinking water nor funds to purchase such water as it is sold by the barrel at Ora Quivira; nor has it any car to haul it in if the funds were available for its purchase. This Monument, as many others, is just marking time until the public can be taken care of. It not only needs water, but sewers, comfort stations, administration and museum buildings, ranger's residence, garage and storage, repairs to ruins, walks, paving and fences.

During the month I made field trips to all of the monuments where work is being done. At some monuments I made two or three trips of inspection. On October 16 accompanied by Assistant Chief Engineer Burney, we inspected Casa Grande, Sagueno, San Xavier, Turquoise, Chiricahua, White Sands, Ora Quivira and Bandelier. Mr. Burney visited Canyon de Chelly which I did not.

Assistant Engineer Gene Gordon spent the first part of the month at Walnut Canyon, where his crew made a detailed study of the ruins stabilization, the trails, entrance road, water, boundary survey and other future developments. Part of the month was spent at Sunset Crater where he made a preliminary location of the entrance road from Flagstaff, made two topographic maps at the proposed headquarters areas, located a trail to the summit of the Crater and other work. He is now at Wupatki making a reconnaissance of the entrance road, walks location, water development and ruins stabilization.

Mr. Knox Barden of Mr. Gordon's crew was transferred to Death Valley National Monument on October 12. We regretted to lose Mr. Barden, but our loss was Engineer Goodwin's gain.

Redman Brown who was transferred from engineering to be in charge of construction work at Montezuma Castle has been transferred back to the engineering crew. His next assignment will be on the reconnaissance of the proposed cut-off road between Bandelier National Monument and Santa Fe, New Mexico, after which he will be with Mr. Gordon's crew.

Howard Leslie, who was transferred from engineering to construction to complete the Ora Quivira work, has been returned to the engineers after the completion of road work at that Monument.

Topographer Andrew Clark reported for duty on October 22 at Chiricahua National Monument. He has been assigned to complete the topographic map of that Monument which he started several months ago.

---

## REPORTS FROM THE MEN IN THE FIELD

### CHIRICAHUA MOUNTAIN PROGRESS REPORT

By Richard Sims, ECU L.S. Architect

TELEPHONE LINES. The telephone line to Massai Point via Rhyolite Canyon is 95% completed. Little more remains to be done than to establish the telephones at both ends of the line.

The telephone line to Sugar Leaf Mountain is about 20% completed, some of the line having been laid but not yet stretched. It has been found expedient to make a change in the running of this line. Exploration of the original route up through Echo Canyon revealed a route so rough and inaccessible that all the man hours allowed for all telephone work in the fourth period would have been consumed in the construction of this one line, not to mention the costly difficulty of subsequent maintenance. A line at once shorter and more practical has been decided upon from a point just below Massai Point.

Although possibly a little premature, this line is being run at this time inasmuch as the men and equipment for telephone line work were all available and other factors were especially propitious at this time. This line will no doubt be very useful during the construction of the Lookout House on this Mountain, which is one of the early and important projects on the present program. It has previously been approved as a project we have been advised.

HORSE TRAILS. Work continues on the Rhyolite Trail, which is now some 7,800 feet from the mouth of the canyon, or rather the head of the trail is. We still feel that a second compressor is badly needed for trail work on the Monument. It has been suggested that we might even have to resort to all hand work for the drilling. If such should ever prove to be the case, in view of the already small number of men available for the park projects we might about as well forget the trail work altogether!

TOPOGRAPHIC SURVEYS. The topographic map of parking area No. 3, requested by the Branch of Engineering, is about completed and is awaiting only certain elevation data from the Colledge Office. Mr. Clark has returned to complete the survey of the Monument and it is hoped that this project can be completed.

\* \* \*

CLOSING NOTE BY SUPERINTENDENT:- WITHOUT EXCEPTION the monthly reports from the boys in the field came into the headquarters office prepared in accordance with the office order issued about the middle of the month asking that report material be double-spaced, margins allowed, etc. This hearty compliance certainly helped on our end of the line;-our appreciative thanks to all custodians and rangers who submitted reports in October. Please remember to follow the same practice in preparing future monthly reports; it is but little, if any, harder for you and certainly speeds up our handling of scores of pages of such material in our assembling.

---

(END OF REGULAR REPORT SECTION FOR OCTOBER)

REPORTS FROM THE MAN IN THE MIDDLE

CASA GRANDE NATIONAL MONUMENT

By Hilding F. Palmer, Custodian

Dear Mr. Pinkley: With the beginning of the winter season we have had this month 1825 visitors which is an increase of over 4% above that of the same month last year. These visitors came in 607 cars from 40 states, England, Canada, Mexico, Denmark & Ireland. Arizona visitors numbered 973, California 349, Texas 92, Oklahoma 53 and Illinois 38. These 1825 visitors were personally contacted on 331 museum and ruins trips through out the month. Besides this number there were 384 who used the picnic grounds or some of the other facilities of the monument, but who required no personal service. This made a total of 2209 visitors for the month. Other statistics compiled by the personnel regarding visitors, length of stay, number in party, etc., will be found in the supplement.

The weather for the month has been somewhat variable with a mean maximum of 51 degrees, a mean minimum of 30 degrees and a mean temperature of 70 degrees. The maximum for the month was 104 on the 1st and 30 and the minimum 30 on the 23rd and 24th. There were 28 clear days and 3 cloudy days during the month.

A. J. Burney, Assistant Chief Engineer from field headquarters at San Francisco spent a day and a night here on an inspection trip. He left in company with Mr. Atwell to visit other monuments in Arizona and New Mexico. Harry E. Wiley was also a visitor. Besides Park Service visitors of importance there were a few tourist visitors of interest. Miss Kybi Lummis, cousin of the late Charles Lummis who traveled over most of the South west in the last part of the 19th century, spent an enjoyable morning with us. Ken Fisher, formerly a newspaper correspondent at the Grand Canyon, arrived here with his wife to visit the ruins and museum. Mr. and Mrs. J. J. Wera of the Laboratory of Anthropology at Santa Fe visited here after being to see the diggings of the Gila Pueblo at Flagstaff.

Ranger Caywood's appointment received presidential approval and was effective on October 1. He moves into his apartment in the old quarters on Compound A on November 10 after it has been remodeled into two apartments to accommodate Junior Naturalist King and Ranger Caywood.

Work has been going forward on the cataloging of the artifacts in the museum, but very slowly because of the increased tourist traffic. A new clay figurine was found and sent to the museum by Leonard Spruell. It stands about four inches high, represents some female deity probably and is complete. It has applied incised eyebrows, prominent nose and was made without arms. No record of a similar find is known in this valley.

A great number of new bird visitors are noted. They are the usual winter visitors in this region at this time of the year. This probably makes the feeding problem of the native birds more difficult. New birds noted were the Eastern Lark Sparrow, the Gray Phoebe, the Black Phoebe, the Robin and a flock of nine Red-wings winged their way from one body of water to another.

---

AD LIB AND ET CETERA

Lest you note that the Report this month ends on page 177 and the Supplement opens on page 187 and write in to us complaining that you have been gyped out of ten pages of good paper, we had better explain that we have, for office reasons, changed the manner of paging this monthly Report. If the page numbers ran continuously from front to back, we could not start the monthly report until the field reports began to come in about the 27th of the month and with our small office crew, that means a jam of work over the end of the month, for it seems to us that everybody in the Government Service who wants a report from us picks on the first of the month as the one time when we will have nothing in the world to do. To take this report out of the monthly jam, we have decided to allot a certain number of pages to the report section and then begin the Supplement with an arbitrary number. This month we allotted up to page 186 to the report and began the Supplement with page 187. By this device we were able to work on the Supplement during the odd hours of the month and had it practically complete, printed and ready to bind by the time the field reports started to roll in.

The fly in this ointment, of course, is that we have no way of telling precisely how many pages of reports the field men are going to turn in and this month we over-estimated ten pages. These are the ten pages you don't get, between 177 and 187. So, such as it is, it is all here.

\* \* \*

And now, just to ad. lib. to the bottom of this page so it won't look like we were in a hurry and purposely left a blank spot, I might repeat the best thing we picked up this Month:

Dale King, while showing a party through the museum, was explaining that wonderful set of turquoise mosaic work, the finest thing of its kind which has ever turned up in the United States, when one of the men said: "See, these people came from Egypt!" Dale naturally fumbled that one for a moment and the man produced his evidence: "Well, you said this was mosaic work, didn't you, and Moses was in Egypt!"

Will the Educational Division please tell us how they would handle that one?

\* \* \*

# THE SUPPLEMENT FOR THE OCTOBER REPORT

IN WHICH WILL BE FOUND VARIOUS BITS OF SHOP TALK, GOSSIP AND INTERESTING THINGS ABOUT THIS AND THAT: THE WHOLE CONTAINING SOME INFORMATION AND NOT MUCH MISINFORMATION ABOUT WHAT GOES ON AMONG THE SOUTHWESTERN MONUMENTS.

## ANOTHER CHAPTER ON THE BANDELIER MUSEUM

At the risk of some repetition, and in order to get all the information into the record where we all can see it and draw our own conclusions, we put in at this point a letter which Bob Rose wrote this month to the Berkeley Office in which he gives a summary of the Bandelier museum ideas up to the present time.

We here at the Coolidge Office are thoroughly sold with the importance of a museum at Bandelier as soon as possible. This is the first of what we think of as the contact monuments which the eastern visitor sees as he comes into the Southwest and upon the greeting which he gets here will depend his visit to many of our other units. It behooves us, therefore, to greet him here with a story well worth his time and make his visit so interesting and instructive that he will feel that he cannot afford to miss any national monument to which we may direct him.

The letter follows:

Several letters exchanged between us recently have had to do with museum planning. General agreement seems to have been reached on the importance of preliminary planning even though it was recognized that many smaller details are very difficult to plan definitely in advance. However, it does appear that preliminary studies are much worthwhile if they yield good ideas on (1) the number of subjects to be covered; (2) approximately the extent to which each subject should be emphasized in any particular museum; and (3) the methods of visitor circulation desired.

Beginning on page 142 of the enclosed September Monthly Report you will find a detailed discussion of the museum problem at Bandelier National Monument. On the occasion of my field trip to Bandelier in the latter part of September, Custodian Jackson and I had a long discussion on the subject of the proposed museum. Upon my request Mr. Jackson enlarged on earlier discussion which he and Mr. Schellbach had and which was published in our August report so as to include additional ideas and conclusions resulting from our discussion. Additional points which we

---

seemed to reach a more or less definite understanding upon arc:

1. The number of rooms the proposed structure should contain.
2. The approximate dimensions of these rooms.
3. The order in which the visitors should enter these rooms.
4. The subject matter of the installations in each room.
5. The relationship between the Lobby and the First Museum Room.

It might be well to set down some approximate dimensions for these rooms in order to get discussion started:

#### LOBBY

This is a place of visitor entrance, registration, general orientation and relaxation and comfort. This room should be large and spacious. A suggested minimum dimensions would be 25 by 35 feet.

#### FIRST MUSEUM ROOM

This room would contain charts and orientation material introducing people to the next room in the series, or to the general field of Archaeology. It would be highly desirable to have this room accessible readily from the Lobby so that visitors could be brought from the Lobby into this room and receive their introductory talk about Indians; their origin; routes of migration; sources of food plants; division of the Southwest into culture areas and what is meant by culture areas; and such other introductory material as would build up the visitors' background. This would lead to deeper interest and greater enjoyment of the visitor in his field trip. It should be here stated that in this room we would begin to get into the "meat" of Archaeology to a greater degree than would be advisable in the simple, attractive displays in the Lobby. Have this First Museum Room arranged so it is the first room visited after people are collected in the Lobby. People would be taken from the Lobby into the First Museum Room; on the Field Trip; back to either the First Museum Room or the Second Museum Room, depending on whether the ranger guide thought it necessary; then on to the Third Museum Room; the Fourth Museum Room; and the Fifth Museum Room.

Dimensions of 15 by 25 feet suggested for First Museum Room.

#### SECOND MUSEUM ROOM

Here the actual exhibits of Bendallier artifacts start. This would be the most important room of the series. Artifacts, local maps, relief models, house types, etc., would form the subject matter to be taken up here.

Dimensions of 25 by 35 to 40 feet suggested for Second Museum Room.



---

### THIRD MUSEUM ROOM

Deals chiefly with cultures of living Indians of the region. Possibilities are quite great along these lines. Bandelier would be the logical place to emphasize exhibits on the several important neighboring groups of Indians in that general region.

Dimensions of 20 by 30 feet, suggested minimum.

### FOURTH MUSEUM ROOM

Geology Room. The spectacular geology of that region is too important and interesting to overlook. This room would take up climate, human geography, and other factors entering into the valley as a place of human habitation. Geological exhibits, etc., would be in this room.

Proposed minimum dimensions, 15 by 20-25 feet.

### FIFTH MUSEUM ROOM

Flora and Fauna Room; on two rooms of about equal size and each half the area as a single undivided room for both flora and fauna would be.

Bandelier has an interesting and varied flora and fauna. People should be able to see habitat groups, dioramas, illustrations of the Life Zones, etc. This would be a most interesting and delightful room to visitors.

Suggested minimum dimensions:

One large room of 25 by 35 feet, or,

Preferably, two smaller rooms of equal size and about 15 by 18 feet each.

### STORE ROOM

This room would house prepared exhibits, surplus artifacts, and other material, and would be very orderly and open frequently to people whose interest, background, and training merited it. It might contain exhibits along a little more technical line than the average visitor would be interested in.

Proposed dimensions, 15 by 25 feet.

### LABORATORY

A fairly large room for paints, glues, clays, modeling materials of all kinds, tools, exhibits in stages of preparation, cleaning and repair, etc. Such room is indispensable.

Proposed dimensions, 15 by 18 feet.

---

## LIBRARY

No library has been proposed in any of the plans and this is being added in the preparation of this letter. Of course, books and pamphlets for visitor use will be available in the Lobby but it is highly desirable to have a small room only for the Government books and personal books constantly used for reference, in a place not accessible to visitors. Rangers on days off and between parties might be allowed to come into this little room of quiet and read up on various subjects with which his work deals. This room ought to be furnished neatly with book cases, rugs on floor, table, etc. It might be the place for keeping the catalog cards of museum collections, etc.

Suggested dimensions, 14 by 14 feet.

## CUSTODIAN'S OFFICE, FILES AND STORAGE, ETC.

Thus far the reports have dwelt only on the need for museum space. Of course this structure will likely house the administrative offices, ranger's room, files and storage and such clerk's rooms, etc., as might be necessary. In this discussion, however, I am not detailing the needs along these lines for we are confining these outlines only to museum phases of the structure. We are, however, going to have to take into account the Custodian's Office, files and storage, etc., in the final drawings and proportions of the building so to that extent we mustn't forget that these offices, etc., become a part of the final plan.

---

If we are all in anything like general agreement thus far, then it seems that the next step would be for the Branch of Plans and Designs with Mr. Miller's cooperation, to attempt to draw up some plans. That will tell us about where doors, windows, etc., would have to be; would tell us whether the approximate proportions suggested for various rooms will fit into a harmonious whole; and will give the basis upon which to begin the planning of the specific exhibits for the space available. I don't know but that it would be highly desirable to consider such preliminary drawing as very tentative until Mr. Scheilbach and our Southwestern Educational Staff and Custodian Jackson make a final study to see how certain planned exhibits would fit into the type of building designed. A final checkup might reveal that it would be advantageous to make some room a little narrower, a little longer, or that a skylight would be desirable or that certain minor changes would make a recessed case possible somewhere where we would like to have one, and other important conclusions.

We could really begin now to see how planned exhibits would fit into rooms of the dimensions proposed, pending preparation of a preliminary sketch by the S.O.P.A.D.'s.

I am now working on a preliminary White Sands plan and revising an

---

earlier Montezuma one, I would be glad to have the comments of the museum experts of your staff on the plan outlines in the enclosed September Report, and on the points made in this letter.

Cordially,

Robert H. Rose  
Acting Assistant Superintendent

---

DESERT ASSOCIATIONS \* THE MESQUITE

By Ralph D. Cornell

Fellow American Society of Landscape Architects

---

Our nearby desert of the Colorado harbors a plant, the common mesquite, that is unique both in its economic values and in its wide geographic distribution throughout much of the warm Pacific areas. This tree is probably the best known and the most widely distributed of any of our desert plants, since it occurs from Utah southward nearly throughout Mexico, and from the Colorado Desert of California eastward into Texas. In addition to these habitats it is native to the West Indies, Central America, and South America, and has been introduced into the Philippines and the Hawaiian Islands, where it is more at home than some of the native flora. It might thus be looked upon as something of a cosmopolite and globe-trotter -- and wherever it travels it carries its beneficences with it.

The botanic name of this desert mesquite is Prosopis juliflora, although it has many different common names throughout Latin America and other countries, and is probably the best known plant in Mexico and arid America. Growing as it does under conditions varying from those of our arid desert wastes to those of the tropical warmth and moisture that are to be found in Hawaii and the Philippines, it has a wide variety of forms that may be disconcerting to the uninitiate but which give it added interest and wide economic value. For example, in Hawaii the tree grows to a height of sixty feet and is very shallow rooted as a result of abundant rainfall and volcanic conditions of soil; while, by contrast, the mesquite plants of our own desert rarely attain more than thirty or sometimes forty feet in height, although their roots may penetrate the soil to a depth of sixty feet. These facts illustrate well the adaptability of this plant and perhaps explain the reason why it occurs over so wide a range of territory and under such varying conditions.

The presence of mesquite in our own deserts is always an indication of good soil and of water within a reasonable distance of the surface, for its deeply tunneling roots must find moisture. It seems to thrive best in river valleys where there is a supply of underground water. The form in which it grows is largely determined by these conditions of soil, water, and climatic environment.

---

\* The word mesquite comes from the Aztec word mesquitl, through the Spanish. Other common names colloquial to parts of Mexico are

---

I do not wish to make it seem that I am discussing a plant from foreign lands, and yet it is interesting to know the circumstances of the introduction of the mesquite into Hawaiian territory. There it goes by the name of kiawe, or algaroba, and, through naturalization and usefulness has become the commonest and most valuable of all trees ever introduced to the islands. The entire tribe of Hawaiian algarobas, now so widely scattered and so prolific, has descended from a single parent tree that was grown from a seed sent to Honolulu from the Royal Garden of Plants in Paris and planted, in 1828, by Father Bachelot at the Catholic Mission on Fort Street. Man's influence is important to the existence of plants, and thus may perpetuate them through care, just as it sometimes destroys them through carelessness.

To me our desert mesquite is a beautiful tree. It commonly occurs throughout the Coachella and Imperial valleys and eastward. Though deciduous in coldest sections, it holds its foliage over a long period of time and is practically evergreen in such sections as those of the Colorado Desert. Always it sends out an early spring herald of tender, green, fernlike leaves. These are followed shortly by long yellow catkins of heavy fragrance that develop into regular, golden bean pods by some time in July. And therein lies a tale, for the mesquite beans have played an important part in the food and economic needs of many races of men. The early California Indians ate, and the Mexican Indians still eat these beans in many different forms. The pods contain from twenty-five to thirty percent of grape sugar, are very sweet, and are pleasant to munch just as they come from the tree.

To some tribes of the American Indians they were the chief staple of food and still are much eaten. The seeds and coarser parts were generally removed before grinding. In Mexico the meal is then made into cakes known as "mesquitanales" which are then baked and eaten or mixed with water to form a beverage. The meal is also sometimes mixed with water and fermented to make a sort of beer, or may be made into a syrup. The beans or meal can be stored, either before or after baking, and thus made to supply food over a long period of time.

Live stock of all kinds is fond of the beans, and, where available, they form an important economic item as stock prov-

---

guisache, chucata, tsiritzeana, algaroba, mesquite blanco, mesquite amarillo, mesquite colorado, and acacia de Caterina.

---

ender. In the Hawaiian Islands, alone, 500,000 bags of mesquite beans are gathered annually and ground into stock food. Throughout our own desert regions they contribute an appreciable item in the forage available to stock of various kinds.

While the beans are perhaps the most important item of value to be produced by this wonder tree, they are far from being the only item. The flowers themselves were eaten by the Pima Indians. They also yield an excellent grade of light-colored honey that is in demand on the market and can be produced freely in desert apiaries. Mesquite honey, produced in Hawaii, is shipped both to the United States and to Europe as an item of commercial export. There is also a gum that exudes from wounds in the growing stems of the mesquite, and closely resembles gum arabic, which makes an excellent glue and even a varnish when dissolved in water. An infusion of this solution is used for dysentery, as a gargle for treating throat affections, and for sore eyes or open wounds. The gum, in itself pleasant to eat, is also used in making candy. Besides these uses of the gum the sap of the mesquite may provide dye of permanent black: the inner bark is used by the Pima Indians as an emetic and cathartic; and the outer bark provides tannin. Thus our common mesquite may also be looked upon as the corner drugstore of more primitive peoples.

The wood of this marvel plant of our deserts also serves many purposes. In Mexico it is valued and used for railroad ties, cart building, fence posts, charcoal and fuel. In Texas it has been used for paving blocks. In Hawaii it is valued for underground and underwater piling, as it is not subject to the attack of certain devastating insects that ordinarily destroy such timber. The Indians of Tiburon Island, in the Gulf of California, make a cordage from its root fiber which they sometimes weave into coarse fabrics. In other times the Pima Indians used the wood for making clubs and plows, to serve both in war and in peace times. In our own Colorado Desert the wood of the mesquite has been used chiefly for fence posts, crude shelters, and fuel.

In the northern districts of its habitat the mesquite has developed a peculiar form of growth caused entirely by the conditions under which it must exist if it is to survive at all. In such regions as the Coachella Valley it is found growing in great clumps on sand mounds, sometimes a mile long, that form from the shifting, blowing sands as they find repose in the shelter of the mesquite thicket and there gradually build up

---

their own mass.\* The mesquite, in its turn must grow fast enough to keep above the piling sands if it is to resist a living burial and maintain its place in the scheme of life. Thus evolves a relentless battle between the wind-blown desert sands and the tender tissues of growing plants, a race for life and against obliteration by the accumulating wastes of time. Fortunately for itself and for us the mesquite is well fitted to survive in this contest. But the result may be that, while only five or six feet of growing stems appear above the mound of sand, the roots and underground stems extend as much as ten times that depth into the soil. Due to this unusual habit of growth the seeming anomaly of mining for underground mesquite has been carried on in our deserts where the roots may be in demand for fuel. This is an expensive method of acquiring firewood but has been done frequently in regions where fuel is dear and where native vegetation must be cleared away before cultivated crops can go into the ground.

In a manner of speaking I dislike to tell you of so many ways in which the mesquite has been put to man's use and the service of his needs, for I would encourage the conservation of this plant rather than its destruction. And yet I think that it is only by knowing the values of anything that we can truly appreciate it and learn to conserve it for such values. An intimate understanding of things about us always adds appreciably to the joys of living and observing, and to the pleasures of a trip into the open spaces. And a simple desert plant may acquire living interest for him who has knowledge of its habits and different potentialities.

Not all mesquite clumps, however, are forced to struggle upward through an ever-thickening blanket of shifting sand. Many of them are living mounds of gnarled trunks, thorny branches and green foliage beneath which countless desert denizens take refuge. The shade of the mesquite tree is said to be the coolest shade of the desert because of the position in which the leaves turn toward the sun. And true it is that the protection to small animals, formed by a thicket of its branches, is beyond improvement. Desert birds are quick to accept the invitation of

---

\* The same conditions prevail in the Moapa Valley, southeastern Nevada, where Mr. M. R. Harrington, Curator of Southwest Museum, is conducting excavations in Pueblo Grande de Nevada, the "Lost City." ED.

---

a mesquite tangle. The lovely crested quail scurry into the protection of its labyrinthian intricacies of shelter, while the cottony-tailed bush rabbits consider it to be their particular haven of refuge. Spiders, noisy cicadas and insects of all kinds think it was especially made for them until it becomes a living city of Babel in which can be heard the many tongues of the desert.

Not only has the small life of the animal world appropriated the mesquite clump as its home, but man has also frequently imitated these lesser folk in his search for shelter and protection from the elements. A tunnel cut through the outer perimeter of leafy twigage may lead one into vaulted chambers of gnarled branches, canopied by the lacy green of overhead foliage. Many a traveler, desert rat or prospector has thus established himself in a temporary home within the living walls of a mesquite tree. Itinerant workers and entire Mexican families have lived in such sheltered camps for weeks or months at times of seasonal employment in the desert.

Whether growing in these characteristic clumps so common to the Colorado Desert or whether seen as single trees, alone or in open forest, it is a lovely thing. Dark rich green against the tawny tones of desert, it stands out in sharp contrast to its surroundings, refreshing and inviting in a land tortured by heat. The freshness of its color, the delicacy of its foliage, the fragrance of the flowers, the gnarled ruggedness of its branching structure, all give it character that is outstanding and beautiful. Though it belongs to the desert in every sense, it gives relief from much that is harsh to the senses of man.

No other tree of our deserts has literally taken man into the protection of its sheltering arms, nurtured him with rich and palatable food, provided honey for his table, balm for his wounds and afflictions, fuel for his hearth fire, forage for his stock, cordage for his primitive uses, timber for his dwellings and plow shares for his land. Truly the mesquite is our friend and deserves the respect and considerations of friendship.

\* \* \*

(Reprinted from "The Masterkey", Vol. VIII, No. 4, July, 1934.)

\*\*\*\*\*

This is such a valuable article that we have reprinted it here for the benefit of all the Southwestern force in the hope that you will become thoroughly acquainted with it and pass the information on to your visitors.

---

SOMETHING ABOUT A THOUSAND PARTIES  
at Casa Grande National Monument

We have long talked about making an intensive study of visitors at our southwestern monuments and the talk finally crystallized into action about the middle of June. The study was started at Casa Grande National Monument because that is the easiest one for the experimental work to be done. We are now ready to report on the first group of 1,014 parties comprising 4,446 visitors.

The figures given herein are all based on a party ticket which is made up and handled with a minimum of trouble, the visitor rarely paying attention to it or asking what it is about.

When the visitor gets out of his car and starts for the administration building, the ranger puts a plain piece of paper (3"x5") in a time clock and stamps the exact time on it. He meets the visitor on the porch of the administration building, where we have the registration desk, and asks him to sign the register for himself and party. While the visitor is doing this the ranger is writing the consecutive number of the party and the number of people comprising it on the party ticket. The consecutive number is obtained from the margin of the register sheet, where each party is bracketed and numbered separately. The ranger takes his party out to and through the ruins and as he returns and leads them into the museum he again stamps the time on the party ticket. When they leave the museum the time again is stamped and, if necessary, any notes concerning the trip are made on the back of the ticket; also the ranger's name, initials, or other designation is put on the ticket. These tickets are then filed consecutively by number, and at the time of the filing the elapsed time is figured on them showing the time the party remained in the ruins and the time spent in the museum.

The information the ticket is expected to yield, then, is: the consecutive number of the party; the number of people in the party; the day and time of day to the minute when the party started; the time it spent in the ruins; the time it spent in the museum; the ranger who handled the party; and any notes as to why it was a short or long trip and how the party reacted.

This all looks and sounds like a lot of bother but handling this part of the ticket takes something less than a minute of time.

By tabulating and cross-tabulating these tickets we are able to work out various charts and tables, this part of the work being done at odd hours during the month. The simplicity of this method appeals to us. It does not bother the visitor with a lot of questions nor does it take up a lot of his time. Visitors at our monuments are restive if they have to wait as much as five or ten minutes. We do not yet understand why this is but we all know it to be a fact. Just a few days ago I noted a party of four



who signed the book individually and as each person signed he gave the pencil to the next and started on the walk for the ruins! He could not wait for his own party to sign up!

That is why we must have a gate at the edge of the administration grounds on the path leading to the ruins, where we have a sign "No admittance without a ranger." Such a party is halted at the gate until the last member arrives and the ranger is ready to lead them.

TABLE 1  
Giving various data concerning 1,013 parties handled at Casa Grande National Monument from July 1, 1934, to October 15, 1934.

1	2	3	4	5	6	7	8
No. in Party	Total No. of Parties	% of Total Parties	Total No. of People	% of Grand Total	Total Time Spent	% of Grand Total	Average No. of Minutes
1	50	4.93	50	1.13	2191	3.99	45.6
2	305	30.1	610	13.78	15635	28.51	51.2
3	168	16.58	504	11.39	9028	16.46	53.7
4	150	14.8	600	13.56	8362	15.24	55.7
5	109	10.76	545	12.31	5771	10.52	52.9
6	77	7.6	462	10.44	4500	8.20	58.4
7	38	3.75	206	6.71	1997	3.64	52.5
8	24	2.36	192	4.33	1387	2.53	57.7
9	20	1.97	180	4.06	1195	2.17	59.7
10	11	1.08	110	2.48	714	1.3	64.9
11	14	1.38	154	3.48	1042	1.9	74.4
12	9		108		561		62.3
13	8		104		589		73.6
14	3		42		174		58.0
15	4	All	60	All	222	All	55.4
16	7	others	112	others	428	others	61.3
17	1	(47)	17	(773)	87	5.52%	87.0
18	4	4.83%	52	17.58%	285		71.2
19	2		38		108		54.0
20	1		20		63		63.0
21							
22							
23	1		23		70		70.0
24	1		24		50		50.0
Misc.	6		173		391		65.1
	1013	99.94	4446	100.3	54850	99.98	54.1

You will see from this table that we show in Column 1 the division of the parties by the number in the party from 1 up to 24. On the 25th line we have grouped the 6 parties which had more than 24 in one group. Column 2 shows the total number of parties having one, two, three, etc., persons. Column 3 shows the percentage of total parties who came by threes, fours, etc. Thus, 30.1% of all our parties were two people to the party. Column 4 shows

shows the total number of people; thus, 610 came in parties of two, 504 people came in parties of three, etc. Column 5 shows the percent of the total time occupied; thus, on the second line, 13.78% of the visitors made up 30.1% of the parties. Column 6 shows the total time spent by the parties in that line; thus, two-person parties spent 15,635 minutes of our time whereas practically the same number of persons in four-person parties spent only 8,362 minutes.

When you put 600 one-person parties through the ruins and museum in 26,292 minutes, and then put 600 two-person parties through, the time used decreases to 15,635 minutes. Six hundred three-person parties would take 10,740 minutes, and 600 four-person parties would have used 6,573 minutes. Yet the average time of the party increases from 45.6 minutes for one person parties to 51.2 for parties of two persons, 53.7 for parties of three persons, and 55.7 for parties of four persons.

Column 7 shows the % of total time we spent on various sized parties. Column 8 shows the average number of minutes it takes to handle various sized parties.

We spent 5.52% of our time on 773 visitors (or 17.38% of the total) who came in parties of from 12 upwards. That these people received full value for the visit is indicated by the fact that these 47 trips averaged 64.4 guide minutes each. The reason we could do this was that the parties averaged 16 persons each.

As against this you will note that we had to give 28.51% of our time to 610 persons (or 30.1% of the total number) who came in parties of two only. This does not mean that the people themselves had a better trip for these trips averaged only 51.2 minutes. They did not get more service so it was the promptness of the service which cost us the extra time; we could not wait for larger parties to form and were forced to deliver standard service to small parties.

Fifty persons coming singly cost us 4% of our time and at this rate if all visitors came singly we could have handled only 1,250 visitors with the total time we expended. While it is expensive in guide time to handle parties of one and two, a study of the trip charts will convince one that we cannot wait for visitors to form larger parties as the wait would often be so long as to bring criticism on the service rendered.

If you wonder why we are so economical of ranger time, we might explain that a ranger at our one and two man monuments has a great many other things to do besides actually guide visitors and any method we could work out which would handle a larger number of visitors per guide hour or handle the same number of visitors in less guide hours without diminishing the trip minutes of each visitor would mean a very considerable saving to us in men and money.

We feel that Table I will repay considerable careful study.

CASA GRANDE OCTOBER TRIP CHART  
 7 8 9 10 11 12 1 2 3 4 5 6 7 8

1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
26																			
27																			
28																			
29																			
30																			
31																			

7:00 7:30 8:00 8:30 9:00 9:30 10:00 10:30 11:00 11:30 12:00 12:30 1:00 1:30

RUINS

15	150	1232	1470	1357	1670	1268	1775	1748	1342	1284	1485	1310	1417	Min. TOTAL
1	5	35	44	44	46	38	51	51	40	38	47	42	45	Parties
15.00 30.00 35.20 33.54 30.8 36.3 33.36 34.80 34.27 33.55 33.79 35.24 31.19 31.48 AVERAGE														

MUSEUM

5	29	100	290	110	313	320	139	351	270	358	199	254	291	Min. JUL.
1	1	4	11	6	11	11	8	11	10	12	8	9	12	Parties
25	84	381	463	392	515	209	350	245	325	305	299	330	289	Min. AVG.
1	3	14	14	15	16	11	14	15	13	12	12	12	14	Parties
15.00 26.25 21.87 30.25 24.2 27.90 22.00 21.92 23.26 29.16 26.44 27.63 25.78 22.88 AVERAGE														

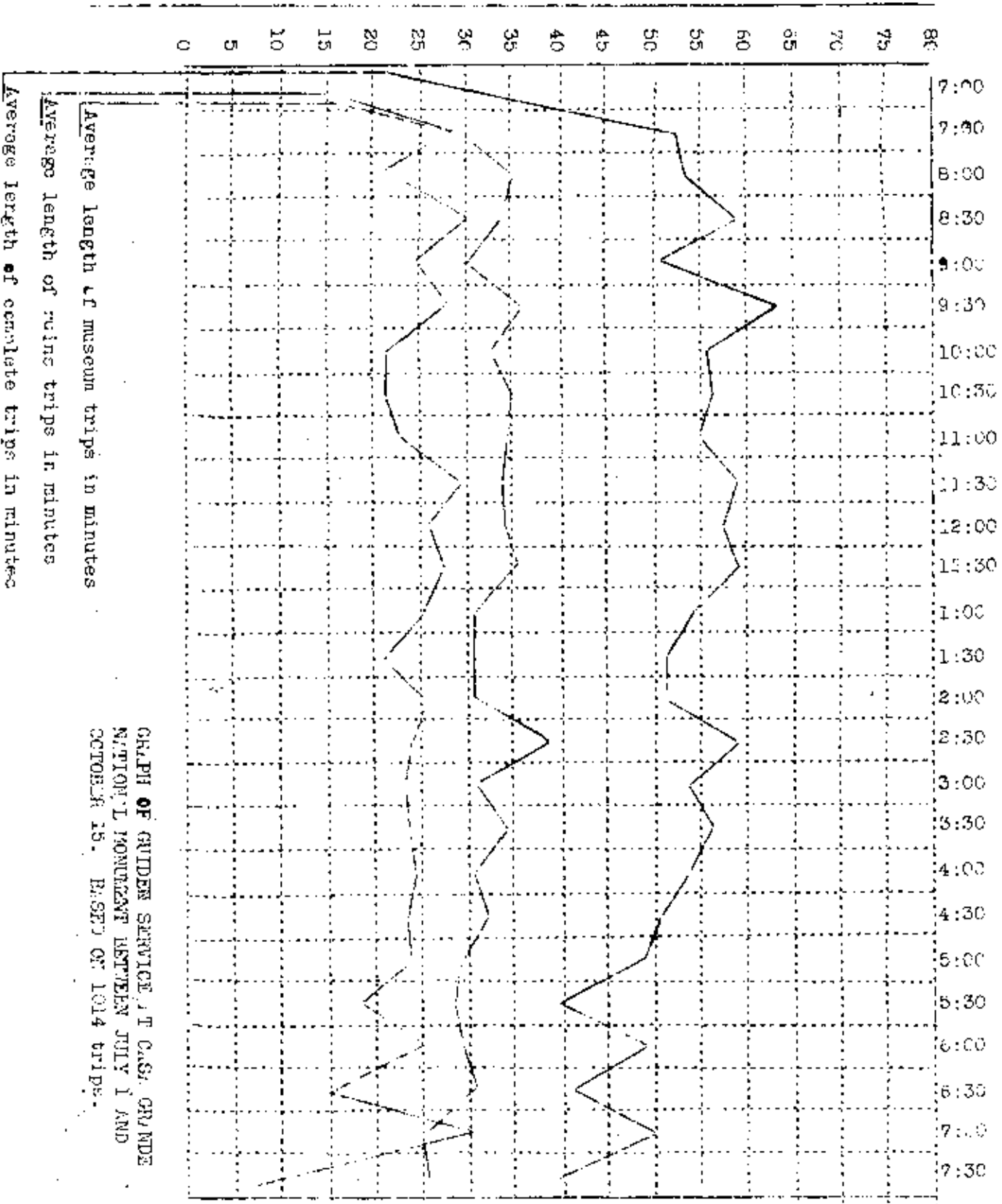
TOTAL

45	263	1932	2565	2302	2899	2236	2871	2888	2392	2289	2476	2290	2401	Min. TOTAL
2	5	36	44	45	46	40	51	53	40	40	42	42	46	Parties
22.5 52.6 53.66 56.29 51.2 63.02 55.90 56.29 54.49 59.80 57.12 58.95 54.52 52.19 AVERAGE														

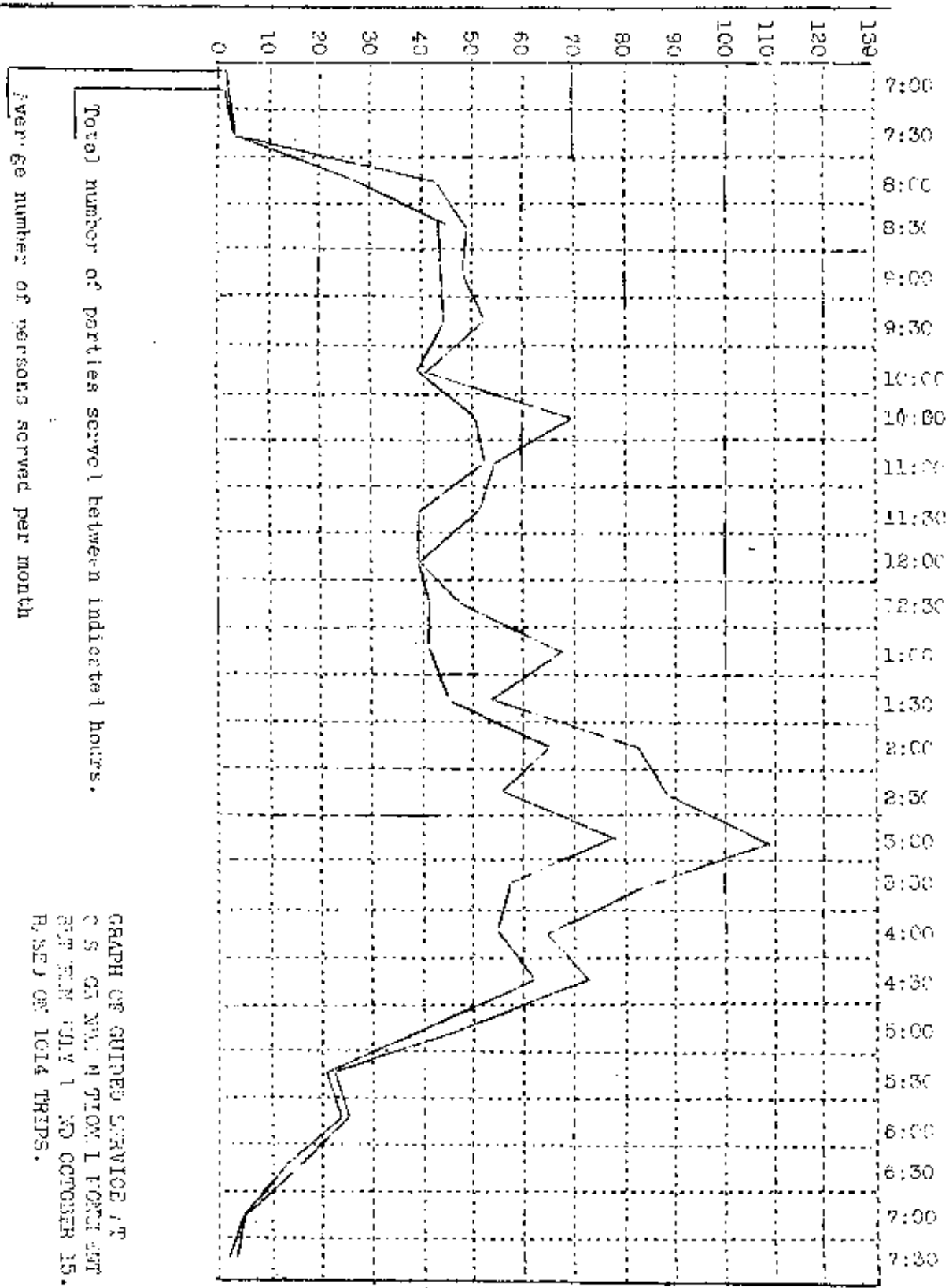
PERSONS

5	11	23	44	27	46	42	34	49	33	45	40	74	66	JULY
5	3	18	21	24	33	19	53	27	34	13	45	63	37	OCT. 1-15
10	14	163	178	172	189	153	279	207	186	173	165	237	194	TOT'L

PERSONS		TOTAL TRIP		MUSEUM		RUINS		TOTAL AVERAGE MONTH					
2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	TOTAL	AVERAGE MONTH
479	360	738	557	431	522	286	162	358	112	119	55	8294	33.99
14	9	21	14	15	15	10	6	11	3	4	2	244	
681	661	622	641	494	484	424	159	250	189	6	2	10746	34.69
17	18	26	18	13	15	13	5	6	6	1		308	
621	615	685	529	557	471	425	188	120	64			8842	29.87
21	17	25	17	19	14	16	7	5	3			296	
260	435	363	259	235	488	15	20					4754	33.24
9	11	10	8	8	15	1	2					143	
1991	2091	2408	1986	1717	1965	1150	529	728	365	125	55	32636	32.9
64	55	73	57	55	59	40	20	24	12	5	2	991	
31.11	39.01	31.68	34.84	31.21	35.30	28.75	26.45	30.33	50.41	65.00	27.50		32.9
308	187	459	366	296	260	189	101	298	64	125	23	5691	25.3
11	8	20	13	13	13	9	5	10	2	4	2	225	
431	440	480	461	365	363	350	75	113	96			7392	25.40
16	17	21	17	13	14	12	3	5	7			291	
568	465	585	319	478	316	288	104	42	17			6567	24.50
21	18	24	14	19	14	13	7	3	2			268	
144	175	244	154	94	252	8	19					2800	22.76
7	8	9	7	5	12	1	1					123	
1451	1273	1768	1300	1233	1191	832	299	453	179	125	23	22450	24.75
55	51	72	51	50	53	35	16	18	11	7	2	907	
26.38	21.96	23.89	24.07	24.66	22.47	23.77	18.66	25.16	16.27	31.25	11.50		24.75
787	537	1197	923	727	762	475	263	656	176	244	78	13985	55.27
15	9	21	15	15	16	11	7	11	3	4	2	253	
1062	1107	1102	1102	859	847	774	234	363	287	6		18138	58.13
17	18	21	18	13	15	13	5	8	7	1		512	
1189	1080	1270	848	1035	787	710	292	162	81			15409	50.68
25	18	26	17	19	16	16	7	5	3			304	
404	610	607	413	329	740	23	39					7554	52.09
9	12	10	8	8	15	1	2					145	
3242	3364	4176	3286	2950	3156	1982	828	991	544	250	78	55086	55.09
66	57	78	58	55	62	41	21	24	13	5	2	1014	
52.15	59.01	53.53	56.65	53.63	50.90	48.34	39.42	49.20	41.84	50.00	39.00		55.09
95	64	86	56	53	50	56	23	45	20	17	16	1122	
113	76	130	91	77	55	63	35	14	8			1289	
55	84	103	105	74	62	51	19	30	34	4		1322	
28	68	65	42	25	83	2	4					732	
291	512	384	294	229	256	172	81	89	62	21	16	4465	
													TOTL



GRAPH OF GUIDED SERVICE J. T. CASH, GUARDIAN  
 NATIONAL MONUMENT BETWEEN JULY 1 AND  
 OCTOBER 15. BASED ON 1014 TRIPS.



Total number of parties served between indicated hours.  
 Aver. 60 numbers of persons served per month

GRAPH OF GUIDED SERVICE AT  
 C. S. GA. NATL. MON. L. FOREST ENT.  
 REST. FROM JULY 1 TO OCTOBER 15,  
 BASED ON 1014 TRIPS.

---

## HOW A THOUSAND PARTIES

### COME AND GO

---

Pages 200 and 201 should not be mistaken for extracts from the latest murder novel. It is true we ourselves have found them almost as exciting as a best seller, and considerable time of several full sessions has been devoted to trying to unravel their mysteries.

This tabular matter was all built up on the party ticket system explained on page 196. This system has the invaluable advantage of taking practically no time to record the original data, and odd hours can be used in making up the tabular matter. So we figure it costs us very little to make these studies, and bothers the visitors, who unknowingly furnish the raw material, not at all.

The two tables on pages 200 and 201 should be printed end to end with page 200 at the left, but the limitations of our publication prevented this. They should be studied from the left end of page 200 to the right end of page 201. In this order the columns, reading from left to right, will begin at 7:00 a.m. and run by half hours to 7:30 p.m.

It will be noticed in running the eye down the page that the facts are grouped under four headings: RUINS, which means the trips through the ruins; MUSEUM, meaning the trips through the museum; TOTAL, being the data on all trips; and PERSONS, being the data on the number of individuals served.

Examination under the sub-head RUINS will show at the right hand side of the page that the data is divided into three and a half months,---July, August, September, and the first half of October. These months should be representative of our summer travel.

Under July two facts are shown in the horizontal line through the tables: the upper figures under each half hour period being the total number of minutes of guide service delivered during that half hour period for the month, and the lower figure being the number of parties handled during that half hour period for the month. These figures are carried to the right side of ~~the~~ page 201 into a total column showing the number of guide minutes and number of parties served during that month and these figures in turn produce the average number of minutes per party in the next column to the right. It will be understood that the total time of the party, which might run into succeeding half hours, is indicated under the half hour in which the party was started.

The figures under the sub-heads MUSEUM and TOTAL TRIP are arranged in the same manner. It will be noticed that under each of the sub-heads just above the double ruled line the average trip time is given for each half hour period, and it is interesting to study the variation of the average



trip time during the different periods of the day.

The last sub-head, PERSONS, shows the number of persons served during each half hour period for each month and these figures are totalled downward showing the total number served for the whole period during each half hour of the day, and are totalled to the right showing the total number of persons covered by these tables during each month and a final total to the right and downward shows the grand total number of persons covered by these tabulations.

#### THE GRAPHS.

From the tabular matter explained above the two graphs on pages 202 and 203 have been drawn.

The graph on page 202 shows the average length in minutes of complete trips, ruins trips, and museum trips for each half hour period during the day, the scale of minutes being at the left side of the graph. We found the break-down into the ruins and museum trips to be of great interest as explaining certain peaks and valleys of the total trip line as will be mentioned later in our notes.

The graph on page 203 shows the average number of persons and the number of parties for each half hour period during the day. It will be noted that in general these lines peak and valley together but there are some interesting exceptions.

#### NOTES

The following notes are intended to call attention to some of the more interesting points of the tabular matter and graphs. They are not exhaustive nor were they intended to be. This whole body of data which we are accumulating on visitors is being filed here more for future reference and study than for the few conclusions we are drawing from it as we go along. We would be mighty happy to have others of you make suggestions and draw conclusions and ask questions.

Here are the notes:

- 7:00--Very few persons. Less time in ruins and longer in museum. Total time more than doubles. This probably means that 7:00 a.m. visitors are on their way to some other place and the visit here is entirely incidental. They rush through the ruins pretty fast, but take comparatively longer time in the museum.
- 7:30--Cutting into our stride. Persons served are very few, real traffic not having started as yet. Ruins trips are below the average in length and museum trips considerably the average in length; the total trip remaining below the average.
- 8:00--Sharp increase in number of visitors; fall in museum time to below average; rise in ruins trip to above average; netting a small rise in total trip leaving it a little below average. 5365 of total visitors handled this period.
- 8:30--A sharp rise in total trip time which is the net result of a fall in ruins trips and a sharp rise in museum trips. 3,94% of visitors

- 
- handled this period. Don't know why the ruins trip falls and museum trip rises.
- 9:00--Total trip time falls nearly 10 minutes, caused by a fall in both ruins and museum trips. Visitors are holding even and we handled 3.85% of them during this period.
- 9:30 a.m.--Sharp rise in total trip time caused by rise in both ruins and museum time. Numbers of parties and number of visitors both increase. Handled 4.23% of visitors this period.
- 10:00 a.m.--Everything falls! Number of people, number of parties, time in museum and ruins, and total time, all fall. Handled 3.42% of the total number of visitors!
- 10:30 a.m.--Number of persons rises. Number of parties rises. Total trip time rises slightly due to rise in ruins trips. Persons handled go up to 5.57%.
- 11:00 a.m.--Number of parties increases slightly with a fall in number of persons to 4.63%. Total trip not much changed with slight decrease. Fall in ruins trips and rise in museum trip. The number of parties reach the morning peak.
- 11:30 a.m.--Sharp fall in number of parties as well as in number of persons. Percentage of persons handled, 4.16%. With a fall in parties and persons we get a rise in total trip time which is entirely caused by a sharp rise in museum time.
- 12:00 p.m.--Total trip time falls. Ruins trip gains a trifle but is more than offset by fall in museum time. Number of parties continues low and number of visitors falls to lowest point between 9:00 a.m. and 5:00 p.m. 3.20% of visitors handled this period.
- 12:30 p.m.--Number of visitors and number of parties both rise. 3.69% of visitors handled this period. Ruins and museum trips both increase, putting a peak in the total trip line.
- 1:00 p.m.--Total trip falls due to fall in both museum and ruins trip. Number of parties rises slightly and number of persons rises sharply. 5.30% of persons handled this period.
- 1:30 p.m.--Total trip time continues to fall caused by fall in museum time, while ruins trips remain the same. Number of persons falls but number of parties rises.
- 2:00 p.m.--Sharp rise in number of parties and number of persons to highest point reached thus far during the day. Ruins time remains at same level but museum time rises. Persons served, 6.81%.
- 2:30 p.m.--Fall in number of parties and rise in number of persons. A sharp peak in total trip time is caused by a rise in ruins trips,

the museum trip showing a slight decrease in time. Persons served, 6.98%.

- 3:00 p.m.--Number of parties reaches the peak of the day as do number of persons. Total trip time falls back, caused by a fall in ruins trip. Visitors handled, 8.60%.
- 3:30 p.m.--Sharp fall in number of parties and number of persons, attended by a rise in total trip time caused by a rise in ruin trip, the museum trip remaining practically even.
- 4:00 p.m.--Small further drop in number of parties and further sharp drop in number of persons. 5.12% of persons served. Ruins trip falls and museum trip rises.
- 4:30 p.m.--Rise in number of parties and number of persons. 6.73% of persons served. Ruins trips rises and museum trip falls, resulting in net fall in total trip.
- 5:00 p.m.--Both parties and people take sharp decline. 3.85% of persons served during this period. Total trip falls caused by fall in ruins trip.
- 5:30 p.m.--Everything falls as it did at 9:00 a.m. Number of persons and number of parties continue to fall at same rate as the preceding period. Sharp drop in museum trip causes a fall in total trip time. Percentage of visitors served gets down to 1.81.
- 6:00 p.m.--Everything rises as at 9:30 a.m. 2.9% visitors handled this period. Sharp rise in museum time causes a peak in total trip time.
- 6:30 p.m.--Sharp fall in museum time causes fall in total trip time, more than offsetting a small rise in ruins trips. 1.3% persons served.
- 7:00 p.m.--Fall in number of parties and number of persons. .47% persons served. The sharp rise in total time line is caused by a 15 minute per trip increase in the museum time which overcomes a 5 minute per trip drop in the ruins trips.
- 7:30 p.m.--There is a slight rise in ruins trips offset by a steep fall in museum trips. Everything falls----as would be natural. It is about time that the museum be locked up.

-----60-----  
OCTOBER TRIP CHART

On page 199 is the October trip chart, supplementing those published in the September report. Its conclusions parallel former ones. Only one ranger was needed between 8 a.m. and 9 a.m. Lunch hours gain were hard to arrange due to the need of more than one man between 11:30 and 12:30. Our quitting time was easily set at 6 p.m. in most cases, but if we had tried to stop at 5:00 p.m. we would have missed 7 parties and cut short 28 others. We would have had to work until 5:30 on 13 days to take care of parties within our gates. Three guides were on duty simultaneously 25 times, 4 guides 5 times, and on two occasions during the month, we needed 5 guides.

---

ALFRED PETERSON---RAMBLING IN THE SOUTHWEST

Some time ago we received a letter from Alfred Peterson, SUMMER ranger at El Morro, telling of a trip he had taken this fall. Inasmuch as his itinerary included some of the monuments, which he tells about interestingly, we have decided to run the letter here in the Supplement.

September 9, 1934

Dear Boss:

Through the kind consideration of Custodian Vogt, I was allowed a week off in lieu of weekly days off. That is, instead of one day each week I was permitted to have them consecutively, thus allowing time for visiting some of the points of interest in the Southwest that have been calling me but which I had no hopes of seeing for years, due to the fact I was tied down summer and winter. My opportunity was greatly enhanced by the fact that my good friends, Dr. and Mrs. W.M. Winton, of T.C.U., Fort Worth, Texas, invited me to accompany them on a tour through northern Arizona.

I am still somewhat uncertain as to whether or not it appeared that I asked for the invitation, inasmuch as I had asked them if they had planned any local tours after they pitched camp at El Morro after a 7,000-mile tour of the Northwest and Coast parks, anticipating that I might drive the same road and make the same stops. Their invitation followed, and I had the pleasure of riding in their car, three in a seat; and this turned out to be one of the finest geology trips I ever had, since Dr. Winton was ready with explanations of geologic features.

We left El Morro on Tuesday, August 21, and camped on the rim of Canyon de Chelly that night. The next day the "Senor" Dr. Winton and I made the descent into the Canyon and across to White House Ruin, watched by the eagle eye of Mrs. Winton through the binoculars. I am glad that I had the opportunity of making this trip, at least in part, over the old hand and foot trail of prehistoric times before the modern trail was completed. The new trail is very fine, but I appreciate seeing and experiencing things as they were of old. On the way down and back Dr. Winton explained the formation of this red sandstone in periods of time by wind blown sand dunes, the presence of gypsum in the sandstone and the consequent difficulty of obtaining pure water in this area. We took some pictures and enjoyed the trip, but regretted the fact that we could not get up into White House Cave.

I should mention that the evening before when we drove to the Canyon rim, we met the new Custodian, Mr. Budlong, and I don't ever expect to see a more surprised hombre than Bud when he spoke with the Wintons. His greeting was "What in the world are you doing here?" Bud had just finished a strenuous trip over old hand and foot trails in the wake of a native who was accustomed to the altitude and such strenuous climbing, and Bud, fresh from the lower altitudes of the Arizona deserts had evidently kept pace with him and was still gasping for breath. A little training and Bud will be equal to any of the native sons - Navajo Indians possibly excepted.

While exploring the rim Mrs. Winton found some petrified wood, and a

little exploring enabled Dr. Winton to point out one seen, or possibly two, where petrified wood occurred in the sandstone. Mrs. Winton, the botanist of the party, pointed out Mexican Tea, Oregon Grapes, and other interesting plants.

On our way out we stopped at the Thunderbird Ranch and inspected the collection of Navajo blankets, two of which were acquired by the Wintons during the process. We found 'Cozy' McSparren to be a very genial trader and host.

We left de Chelly in the morning of August 23. At noon, while lunching beside the road a Navajo came by on a spirited black pony. Despite the protests of the pony Mrs. Winton presented the Indian with some cookies for which he broadly grinned his thanks. We had supper at Williams and then drove to the Grand Canyon in time to hear the Camp Fire Lecture by the Ranger-Naturalist on "Prospecting in the Grand Canyon".

The next day, Friday, we went out with the Caravan and saw the views and listened to Naturalist McKee's explanation of the various chapters of earth history shown in the rocks of the Grand Canyon at the Yavapai Point Observation Station. At the Wayside Museum the ranger-naturalist lectured on the archaeological features of the Grand Canyon, and at various stopping places along the way the ranger-naturalist in charge of the Caravan gave interesting information about trees, flowers, birds, snakes, etc.

Saturday was a big day for me. On the advice of the Wintons, and following a desire that I've always had, I rode a mule down into the Canyon to the Colorado River, a round trip distance of nearly sixteen miles. There were ten in our party, and their homes were pretty well scattered from New York to California, and the guide was from Texas. My mule had the picturesque name of "Warbonnet." The mule just ahead was "Curly", and his rotund, jovial rider, a man from the east who had never ridden in his life, said that he was so named because he had never straightened out. Both Curly and Warbonnet had the habit of thrusting their heads well out over the precipice at every turn of the steep trail, and Curly's rider could be heard pleading with him to be reasonable. We reached the river at noon and found it as muddy as usual and lower than usual. It almost looked thick enough to walk on.

We sat on the sand in the shade of an Archeozoic cliff and ate lunch, after which the return journey back up the South Rim was begun. When Indian Gardens, the stopping place about half way on the journey, was reached, some of the riders were pretty tired and some were suffering. One girl (not too young) complained that her mule was too wide and really was suffering. The rotund rider of Curly had begun to ask the stout lad ahead of him "How's your knee-action?". His own knee-action was fast growing less, and when he finally dismounted at the rim, he hobbled like a man with two wooden legs. Within the last three miles we were caught in two or three little showers and all hands donned the slickers with which each saddle was provided. As Dr. Winton put it, the slickers were made to fit the largest rider they might have so they fitted some of us like circus tents. I found the sleeves of mine already rolled up to my size.

There were only two things wrong with the trip: (1) there were only three canteens in the party---all of them of the 1-quart size---one for the guide and the other two for the other ten of us; (2) There was no information given out by the guide unless specifically asked for, and the

only opportunity of asking was at the noon stop at the river and the half-way stop at Indian Gardens. If it had not been for the information signs along the trail (some of which were hard to read without stopping and holding up the party) and more particularly for the information received from Dr. Winton both before and after I made the trip, I would have had little idea of interest connected with the limestone, sandstone, shale, schist, and other formations through which we passed on the trail down and up again. As it is I had a first hand view of some of the oldest rocks found on the earth--and I'd like to go again.

That night we listened to the campfire lecture on "Mexico to Canada in Grand Canyon Walls", which pointed out that the climatic zones from the Sonoran to the Canadian were indicated by the plant life in the different altitudes from the river to the rim of the Canyon.

The next day, Sunday, August 28th, we left the Canyon, going generally east along the Canyon on the road to Cameron. This gave us a fine view of the upper parts of the Grand Canyon, Shadow Mountain, the Canyon of the Little Colorado, and a distant view of Navajo Mountain. My attempt at a picture of the Little Colorado River Canyon did not turn out well. Perhaps the Señor's attempts were more successful than mine. Near Cameron we took the road which connects with "66" some distance east of Flagstaff. This took us through the scenic, volcanic country north of San Francisco Peaks, and through all this absorbing scenery Dr. Winton was ready with explanations of faults, folds, and formations. From "66" we went north through Leupp to Oraibi, and then on to Shongopovi, perched on the brink of a mesa, where we saw the famous Hopi Snake Dance. This particular dance was in supplication to their rain gods to bring much-needed rain to their white brothers. About five o'clock in the afternoon the dance started with the entrance into the plaza of the Antelope priests. They circled the plaza four times, and each time each dancer stepped on the "door" to the home of the gods within the earth just to let them know things were going to happen, chanting their prayers the while. Then came the Snake Clan priests who went through a similar ceremony. This was followed by an impressive chant which would die away to a murmur and then swell out into a loud chant, and one could almost feel himself thrust back into the dim past when this ceremony was performed by the ancestors of these Indians. The snakes were then taken, one by one, by the Snake Priests from a little enclosure in the plaza and carried around the plaza, first in the mouth of the dancer and then in the hands of the gatherer, the details of which you are familiar with. While this was taking place, the Antelope priests were lined up and chanting. Some of these priests were just little chaps. The older and larger men came first in line and then down to the smallest boy, and it was mighty interesting and gave one a crawly feeling to see one of the little fellows struggling to hold a large rattler. When all the snakes had been carried, they were put within a circle of sacred corn meal and then carried away to the four directions by the gatherers.

The dance was well policed by the Indian Service. Everybody had to register and was cautioned to remain quiet and in their place during the dance. All were requested not to leave before the dance was completed and especially not to follow the runners who carried the snakes away.

Despite this caution, a large, rotund man as soon as the runners had started and the Antelope priests had not yet finished their part, got into the plaza in front of us and announced to the world, "Well, we might as well get goin'," and a boy, evidently a chip off the old block, became animated and cried, "Yeh! Let's follow them guys!"

The dance was completed a little before six, and since there was still lots of daylight and Dr. Winton had an exceptionally strong yearning for a warm shower bath in Holbrook, we went on until that desire was appeased after a late supper. And what a lucky break that was! It rained that night and all the next day. We were due back at El Morro that night and we made it, but such roads! We arrived in Gallup just before noon and hurried out again towards El Morro on the most goshawful roads imaginable, but we reached the Rock, due to Dr. Winton's excellent driving and Mrs. Winton's equally good "gyroscoping" action to keep the car in the road, in time to find Custodian "E.Z." just about to start home for supper. When he heard that about a mile of the road we had just come over was covered by water, most of it running, he camped with me all night. Who says the Hopi Snake Dance isn't effective? Mrs. Winton would she had been converted and henceforth is a Hopi.

And thus ended about the most interesting and informing week in my young life, and I can only hope that there will be more such times in store for me,

Sincerely,

Alfred Peterson, Ranger

Pete follows this letter with one dated October 28, in which he tells of another trip:

Dear Boss:

....Many of my visitors at El Morro either come from the east and have been to Bandelier National Monument, Santa Fe, Acorn, etc., or they are going that way, and they always expect the ranger to give them first hand information about the points in question. My little journey helped qualify me for doing this very thing. I left the Rock (during the first week of September) on the road through the Zuni Mountains, past the Ice Caves, to Grants on Highway 66. About 15 miles east of Grants I left the highway at an Acorn village, McCurtys by name, where they have the mission of Santa Maria, a replica of the old church at Acorn. This is a shortcut to Acorn from the west and a help more picturesque than the direct road from "66" which I followed on my way out from Acorn.

Having recently finished Willa Gather's "Death Comes for the Archbishop" I was pretty well equipped to appreciate the scenic qualities of the mesa country in that particular vicinity, as well as some pertinent points about Acorn itself. The road is not one to follow in hot weather, but it shows a greater variety of geologic formations and more grades and breath-taking views than the direct road, and when one comes in sight of the group of mesas on ~~xxxx~~ one of which Acorn is situated, despite their size they appear to be small but very picturesquely situated in a great flat surrounded

by larger nests. This is because of the road coming out on a very high point. (Wednesday). There were few Indians around, and after I had climbed the much worn rock steps and walked through somebody's back yard (if Indian pueblos have back yards) one old Indian looked at me startled and hurried away. Soon the women came and rounded me up, took a dollar away from me, pointed out "That's the Enchanted Mesa" and "That's the kivas", and started me toward the way down again. Being Scotch by nature I demanded more for my dollar, but had to ask about any and all things I wanted information about. Even then the usual answer was apt to be "I don't know" or anything else. I believe they "gypped" me a little at that, but there were rain clouds coming up,---and that means "get to the main highway." (Thursday) Slept in Santa Fe that night, and the next day I saw the Museum, etc., and the Laboratory of Anthropology. Saw Mr. Mustama and Dr. Merri. The latter was very good about showing me through this most interesting place very thoroughly, including the sanctum sanctorum. We also had quite a long talk about the shard collections which had been received from El Morro.

(Friday) Went to Bandelier National Monument that night and surprised Custodian Earl Jackson. I rolled my bag on the floor of Earl's room and we tried to complete some of the conversations we had started when rooming together at the University of Arizona. The next day Earl showed me, along with Burton Frasher and Burton, Junior, of Frasher's, Inc., Pomona, California, photographers, and others the mysteries of the Rito de los Frijoles ruins, Ceramial Cave, etc. During this trip we were all movie actors for the Frashers.

There were other stops I made but these are the highlights. While going through the Palace of the Governors at Santa Fe I caught sight of the Park Service uniforms, and, on closer inspection, found Wilt Attwell in one of them. He then introduced me to Engineer Kittredge. Later I met them at the Laboratory of Anthropology when Mr. Kittredge discussed El Morro problems---such as the location of buildings, etc.

I made a couple of trips to the State House for Custodian Vogt, and one thing after another happened until I was in a hurry to get back, reaching El Morro in a downpour of rain.

While the Wintons were camped at the Rock we all went to a Navajo sing. Custodian Vogt had rounded up a family from New York, Dr. Houser and family, four in all, and they too joined our cavalcade (of cars-not hearses) to the sing. There was considerable evidence that our tenderfeet were really thrilled and may possibly have worried about their scalps. Dr. Winton helped matters slightly, when the singing started in the dark outside one of the hogans, by coming in "disgusting." "That means big medicine. That's the scalp song." And then when they got stuck in the sand on the way out, they seemed to have visions of sitting up all night fighting off Indians. But you would have laughed to have seen Custodian Vogt curl up on a blanket and use a saddle for a pillow. A Navajo had just left it, and when the poor Indian came back in a few minutes he had to wait until EZ had his nap before he could use his own blanket and saddle.

Sincerely,

Alfred Peterson





#### THE RUINS OF TSENKAWI

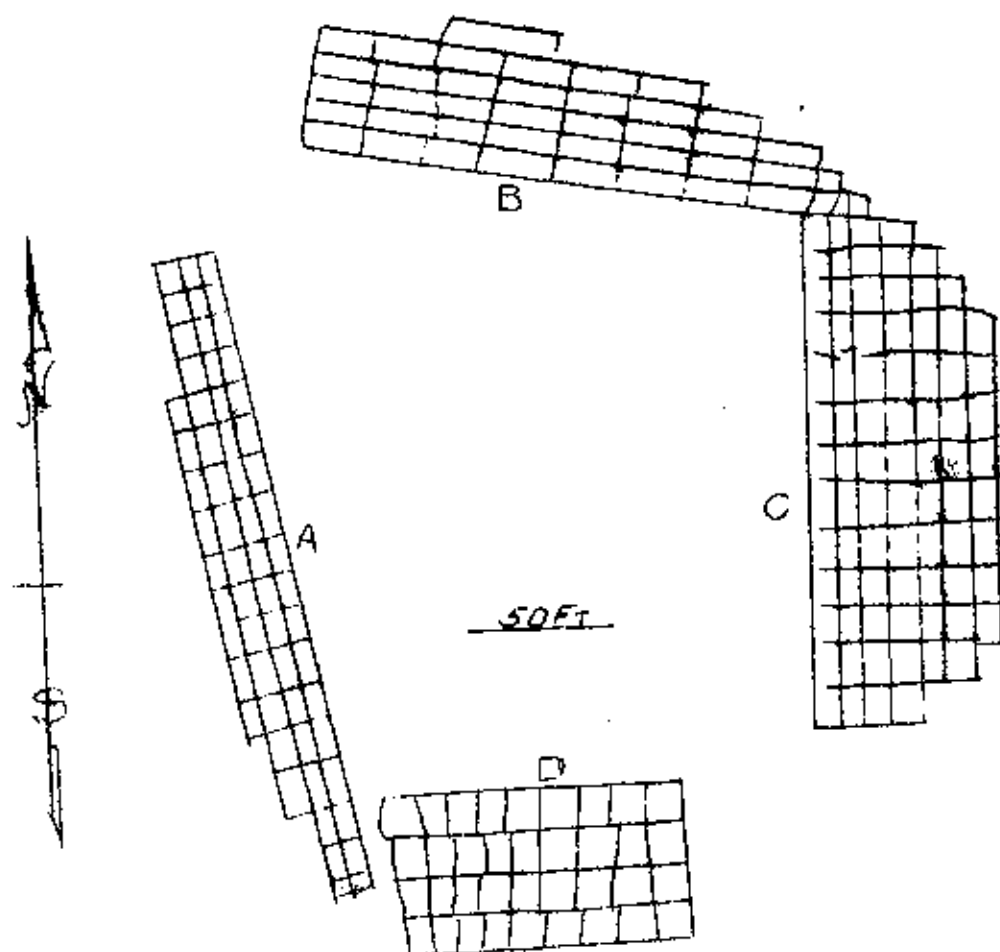
By Earl Jackson

Tsenkawi is a large ruin on the detached portion of Bandelier National Monument, lying near the southeast corner. It is situated on a skull, high mesa, nearly a mile in length, from which point is visible a vast expanse of country, from the Jemez Mountains on the west to the lofty Santa Fe Mountains on the east.

The name is Tewa, from Saekowikwaje onwikeji, meaning "Pueblo ruin above the gap of the sharp round cactus." Possibly the prickly pear or hedgehog cactus have something to do with this name. The designation does not suggest the purpose of the ruin, which was that of a fortress, and well nigh impregnable. The means of access to the top was a trail which winds up over the south end of the mesa, cutting from the valley lead upward through two shelves of volcanic tuff. In places this trail is worn to a depth of fifteen inches, solely as the result of the action of thousands of bare and sandal-shod feet and the later action of wind and rain. At one point this trail became so deep the cliff-dwellers were no longer able to use it, so they started a new one a few feet away, running parallel, and this section is worn to a depth of six inches. Think of the length of time it took to make such a trail!

Tsenkawi ruin is really a composite, as the plan shows (see sketch), made of four independent building units, in the shape of a square which has gone awry. In and about the structures are ten kivas, a surprisingly large number for the estimated population of the place, which is presumed not to have comprised of over 300 or 400 souls. This population does not include that which must have occupied the very numerous artificial cave boxes which were built on the east side of the mesa in two separate cliff elevations. The cave population was at least 200, if all were occupied at one time.

THE RUINS OF TSANKAWI (CONTINUED)



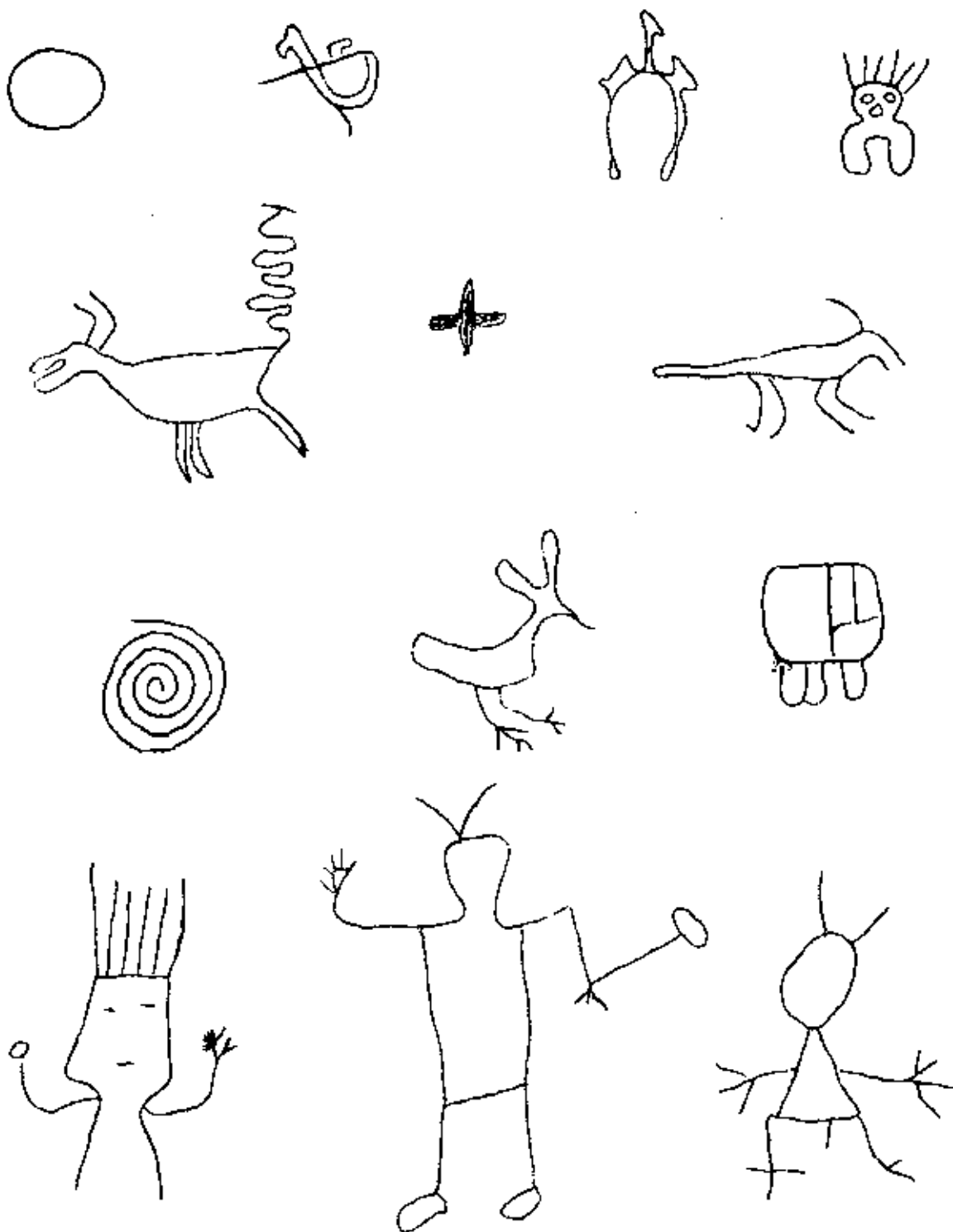
Ground Plan of Tsankawi. (After Hewett)

There is some doubt of this, as some of the caves have all the ear marks of considerable antiquity, while others could have been constructed, as far as weathering indicates, at a much later time.

The San Ildefonso Indians, who live only eight miles to the north-east, claim Tsankawi as one of their ancestral homes, and they go so far as to indicate other smaller ruins which would represent a continuous link of migration from that point to their present village. Whether or not this claim to kinship is true remains yet to be learned, but it is very likely that at least one clan group of the San Ildefonsos had some connection with Tsankawi.

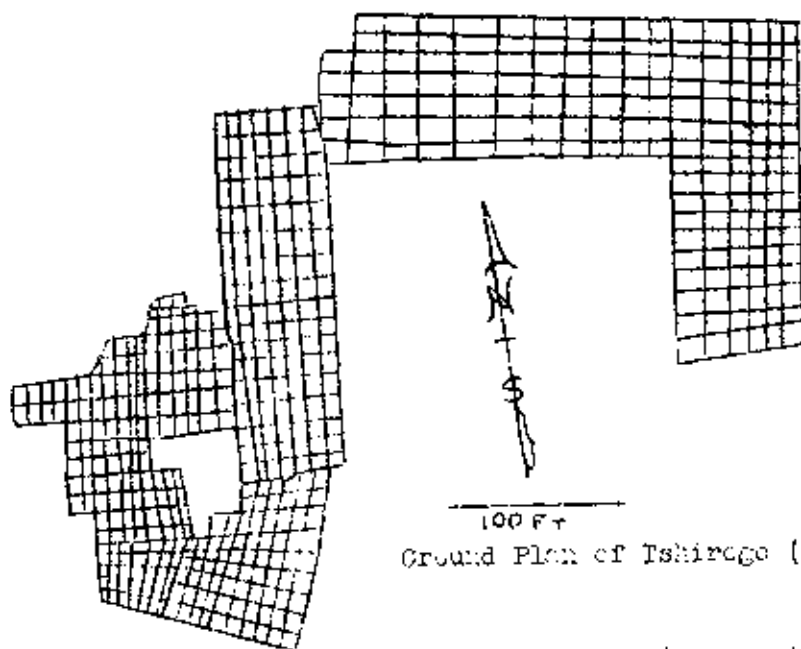
On another page are some of the most interesting petroglyphs seen on a brief prow through some of the caves under the edge of Tsankawi Mesa. To some of these crude carvings it would be hard to ascribe a meaning. The presence of the cross so often seen in this section, is not always significant. We find many indications of sheep camps which were made against the protecting cliffs near ruins, and see where the early Mexican sheep-herders used rocks from the ruins to make temporary corrals. I am told the Mexicans will still carve a cross wherever they happen to camp, believing this holy symbol will ward off lightning.

Petroglyphs From Tsankawi Ruins



## THE RUINS OF TSHIREGE

By Earl Jackson

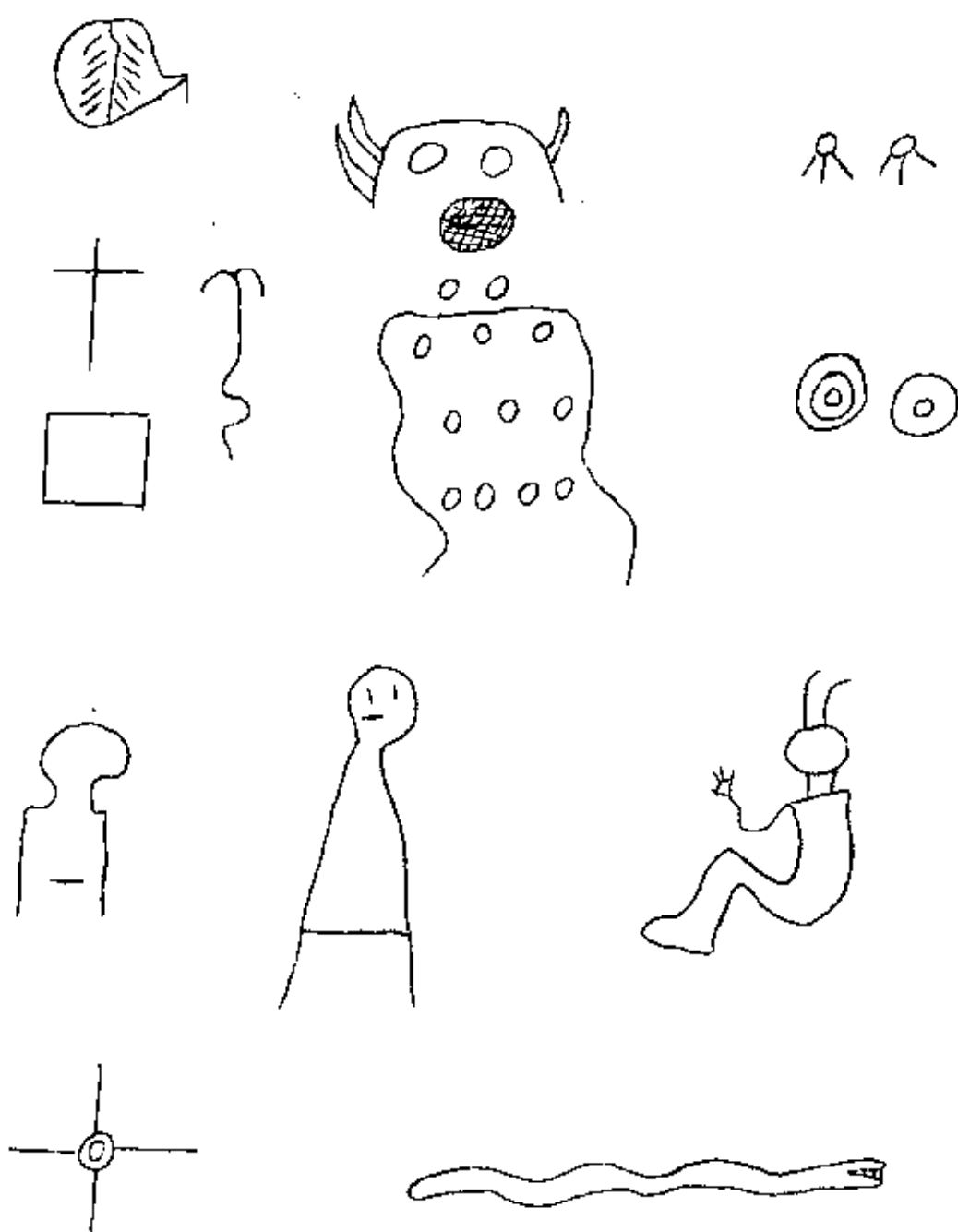


Ground Plan of Tshirege (After Hewett)

It will be truly unfortunate if this outstanding ruin cannot some day be made a portion of Bandelier National Monument. It is undoubtedly one of the largest groups of prehistoric house ruins on the North American continent, but lies a mile and a half southwest of the southwest corner of the detached portion of Bandelier National Monument, one half mile off the main road.

Originally this structure, containing upward of 600 rooms on the ground floor (see sketch) reached a height of three to four stories in places, but all upper story construction has now fallen, and only ground floor walls yet stand, in some spots to a height of six to ten feet. The same style of building was employed here as at Frijoles Canyon. Tshirege was occupied, according to tree-ring information, until 1600 or later, but not into time of historic contact. Below the rim of the mesa, on the south and east sides, extending for three quarters of a mile, are the ruins of the cave lodges and talus houses which make up a very considerable chain of cliff-dwellings. These cliff houses were occupied at the same time as the mesa structure. Petroglyphs, through and near these ruins, occur in great numbers on smooth cliff faces. (See page of Petroglyphs from Tshirege.)

Some pot-hunting has been done at Tshirege, but not enough to plumb the possibilities. Dr. Hewett reports that one graveyard has been located in the southwest corner of the large open court. A number of burials have been found in the cave rooms which had evidently been abandoned at the time of occupation for service as burial rooms. There are ten kivas in and near Tshirege. All are of the sunken, circular type, several having been hollowed out in solid tuff rock on the mesa top.



Petroglyphs From Tshirege Ruins