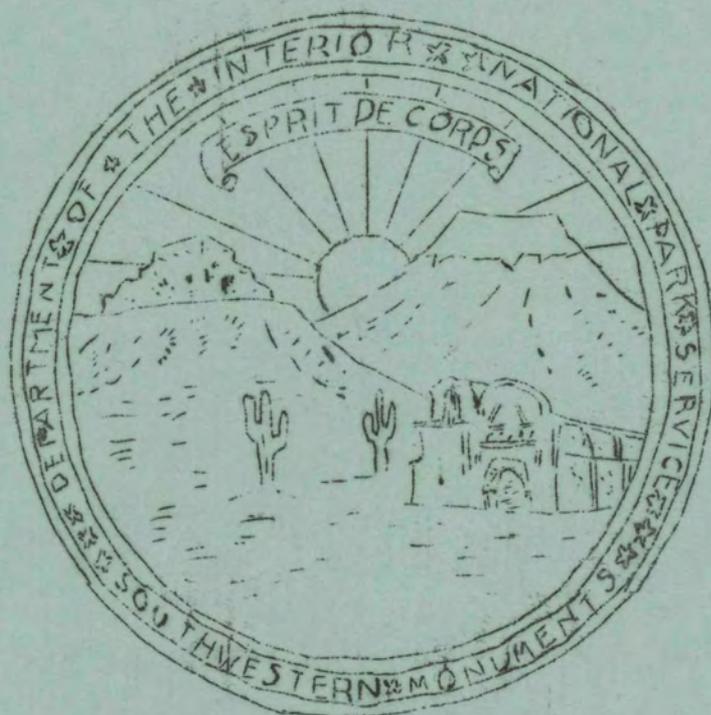


# SOUTHWESTERN MONUMENTS

## MONTHLY REPORT

MAY  
1937



DEPARTMENT OF THE INTERIOR  
NATIONAL PARK  
SERVICE

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# SOUTHWESTERN MONUMENTS

## APRIL 1937 REPORT

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# SOUTHWESTERN MONUMENTS

## PERSONNEL

HEADQUARTERS, Southwestern Monuments, Coolidge, Arizona: Frank Pinkley, Superintendent; Hugh M. Miller, Assistant Superintendent; James Luther, Chief Clerk; J. H. Tovrea, Assistant Engineer; Dale S. King, Assistant Park Naturalist; Charlie R. Steen, Jr. Park Archeologist; Millard Singerman, Clerk-Stenographer; Luis Gastellum and W. H. Sharpe, ECW Clerks; James W. Brewer, Roving Ranger.

FIELD STATIONS	AREA (acres)
1. <u>Arches</u> - Moab, Utah. J. M. Turnbow, Cu.	4,520
2. <u>Aztec Ruins</u> - Aztec, New Mexico, T. C. Miller, Cu.	25.88
3. <u>Bandelier</u> - Santa Fe, N. M. C. G. Harkins, Cu. Jerome W. Hendron, Temporary Park Ranger	26,026.20
4. <u>Canyon de Chelly</u> - Chin Lee, Ariz. Johnwill Faris, Cu.	83,840.
5. <u>Capulin Mountain</u> - Capulin, N. M. Homer J. Farr, Cu.	680.37
6. <u>Casa Grande</u> - Coolidge, Ariz. A. T. Bicknell, Cu. J. Donald Erskine, Park Ranger	472.5
7. <u>Chaco Canyon</u> - Chaco Canyon, N. M. L. T. McKinney, Cu. Homer Hastings, Temporary Park Ranger.	21,512.37
8. <u>Chiricahua</u> - Douglas, Arizona. Frank L. Fish, Cu. Homer Bennett and Bronson Harris, CCC guides	4,480.
9. <u>El Morro</u> - Ramah, N. M. Robert R. Budlong, Cu.	240.
10. <u>Gila Cliff Dwellings</u> - Cliff, New Mexico, No Custodian	160.
11. <u>Gran Quivira</u> - Gran Quivira, N. M. Geo. L. Boundey, Cu.	610.94
12. <u>Hovenweep</u> - Cortez, Colo. No Custodian	285.8
13. <u>Montezuma Castle</u> - Camp Verde, Ariz. Earl Jackson, Cu. Russell Farmer, Park Ranger	560.0
14. <u>Natural Bridges</u> - Blanding, Utah. Zeke Johnson, Cu.	2,740.
15. <u>Navajo</u> - Kayenta, Ariz. John Wetherill, Cu. Milton Wetherill, Senior Laborer	360.
16. <u>Organ Pipe Cactus</u> - Ajo, Ariz. No Custodian	330,670.
17. <u>Pipe Spring</u> - Moccasin, Ariz. L. Heaton, Acting Cu.	40.
18. <u>Rainbow Bridge</u> - Rainbow Lodge, Ariz. No Custodian	160.
19. <u>Saguaro</u> - Tucson, Arizona. No Custodian	63,284.
20. <u>Sunset Crater</u> - Flagstaff, Ariz. No Custodian	3,040.
21. <u>Tonto</u> - Roosevelt, Ariz. T. B. Onstott, Park Ranger	1,120.
22. <u>Tumacacori</u> - Box 2225, Tucson, Ariz. L. R. Caywood, Cu. James Felton, Park Ranger.	10.
23. <u>Walnut Canyon</u> - Flagstaff, Ariz. Paul Beaubien, Park Ran.	960.
24. <u>White Sands</u> - Alamogordo, N. M. Tom Charles, Cu.	142,987.
25. <u>Wupatki</u> - Flagstaff, Ariz. Clyde Peshlaki, Caretaker	2,234.1
26. <u>Yucca House</u> - Cortez, Colorado. No Custodian	9.6
Total Area (in acres)	691,028.76

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# CONDENSED REPORT

IN WHICH IS GIVEN THE HIGHLIGHTS OF THE MONTH

Coolidge, Arizona  
June 1, 1937

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

Dear Mr. Director:

The Condensed Report for the month of May, 1937, follows:

<u>TRAVEL</u>	<u>May, 1937</u>	<u>May, 1936</u>	<u>May, 1935</u>
Aztec Ruins	1,568	1,172	960
Bandelier	1,395	833	735
Capulin Mountain	1,200	1,500	1,500
Casa Grande	2,689	2,274	2,443
Chaco Canyon	796	496	340
Canyon de Chelly	222	158	23
Chiricahua	1,013	462	---
El Morro	228	---	---
Gran Quivira	531	575	396
Hovenweep	250	---	---
Montezuma Castle	907	773	1,400
Navajo	23	---	134
Pipe Spring	33	392	414
Sunset Crater	---	283	248
Tonto	413	365	398
Tumacacori	1,551	705	1,281
Walnut Canyon	667	648	600
White Sands	7,921	11,880	---
Wupatki	---	166	125
Yucca House	56	---	---
Totals	21,463	22,682	10,997

Although most of the Southwestern Monuments show gains in registration over the counts for May, 1936, decided drops at several stations have brought the travel total for May below last year's count.

Now that the schools are out of session the summer tourists are beginning to visit the monuments and by the middle of June the summer travel season should be well under way.

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CONDENSED REPORT (CONT.)

000 GENERAL

020 WEATHER

Weather may be summed up with the single word "Dry". Only a few scattered and light rains have fallen in the Southwest during the past thirty days. Days began to turn hot soon after the month started and for four days during the middle of May thermometers were climbing up to the three figured temperatures. The hot spell was followed by more than a week of very cool days.

100 ADMINISTRATIVE

123 INSPECTIONS BY NATIONAL PARK SERVICE OFFICERS

Bandelier - Harry Hommon; J. B. Hamilton; A. E. Underhill  
Chaco Canyon - T. C. Miller  
Canyon de Chelly - Harry Hommon; J. B. Hamilton; Charles Richey.  
Capulin Mountain - Vincent Vandiver.  
Chiricahua - A. L. Johnson; Clinton Rose; George Keller.  
Montezuma Castle - H. L. Bill; A. W. Johnson  
Pipe Spring - Al Kuehl  
Tonto - H. M. Miller; J. H. Tovrea; Clinton Rose; J. W. Brewer.  
Tunacacori - Don Erskine; Charlie Steen; Clinton Rose; J. H. Tovrea.  
Walnut Canyon - H. L. Bill; A. W. Johnson; H. W. Buchanan (Glacier)  
White Sands - Harry Hommon; George Collins; J. B. Hamilton; John Veal; A. W. Johnson; Russell Farmer; H. W. Buchanan, Glacier; Paul Wilkderson  
At Headquarters - A. L. Johnson; Paul Wilkderson; A. M. White; A. E. Underhill; Clinton Rose; R. D. Sias; L. R. Caywood; Tom Onstott.

170 PLANS, MAPS, SURVEYS

Dole and Roseberry who have been type-mapping Chiricahua National Monument completed their work there during the month and moved to Saguaro National Monument.

200 MAINTENANCE, IMPROVEMENTS, NEW CONSTRUCTION

220 IMPROVEMENTS

Casa Grande - New pair of wooden gates constructed and placed across trail to ruins. This replaced another gate which had been attacked by wood borers.  
El Morro - New bridge placed across arroyo on entrance road.

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CONDENSED REPORT (CONT.)

230 NEW CONSTRUCTION

Bandelier ECW

Unit #6 of Hotel Development is complete except for painting.

Unit #5, Hotel Development, completed to lintel height.

Two hand-carved beds were completed and delivered to the custodian.

Signs for Capulin National Monument completed and shipped.

Crew has been hauling materials to the water intake area

Large crew has been kept on the rock quarry and on the stone walls project.

Chiricahua ECW -

300 feet of the Sara Deming-Balanced Rock Trail completed. 3,900 feet of trails in the Heart of Rocks area now completed.

Two crews kept on the backsloping project on Bonita Park-Massai Point Road.

700 feet of Rhyolite Trail maintained.

Excavation and basement walls for administration building completed.

Work in rock quarry continued

$\frac{1}{2}$  mile Bonita Canyon road maintained -  $\frac{1}{4}$  mile resurfaced.

300 ACTIVITIES OF OTHER AGENCIES IN THE MONUMENTS

320 COOPERATING GOVERNMENT AGENCIES

Bandelier - Forest Service sent in a crew to help fight the fire in Frijoles Canyon. The custodian, project superintendent, and forestry foreman attended the Forest Service fire school on May 14 and 15.

330 COOPERATING NON-GOVERNMENT AGENCIES

Aztec Ruins - The San Juan County Commissioners and the State of New Mexico are to build a road from Highway U. S. 550 to the Monument.

Chaco Canyon - San Juan County has oil-plated the road over Escavada Wash, north of the Monument boundary. This eliminates a very bad sand crossing.

300

350 DONATIONS AND ACCESSIONS

Pipe Spring - Mr. Merlin Adams of Kanab, Utah, donated a 45-caliber Sharp's rifle which he found in an abandoned cabin several years ago.

White Sands - Mr. Watson Ritch recently found an old Mexican carreta near the monument and is donating it to the new museum.

400 FLORA, FAUNA, NATURAL PHENOMENA

440 INSECT CONTROL

Bandelier - 64 landscape planted trees were cut and burned to control the beetle, *Ips confusus* var.

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Condensed Report (Cont.)

490 MISCELLANEOUS

Temporary Ranger Tom Onstott spoke over radio station KOY in Phoenix on May 20. Several very favorable reports of his talk have been received.

600 PROTECTION

620 FIRES

Bandolier - On May 20 a fire broke out near the upper crossing of Frigoles Canyon. In five hours the fire was under control after having burned about 100 acres.

630 ACCIDENTS

Casa Grande - At 3:30 Pm, James Schenk of Phoenix fell while playing ball at a large picnic and broke his arm. Custodian Bicknell took Mr. Schenk to Coolidge where the arm was set by Dr. Pinkerton.

MAIL COUNT

Incoming:

Government	1,600
Personal	875

Total incoming 2475

Outgoing:

Government	1,808
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Total Mail 4,283

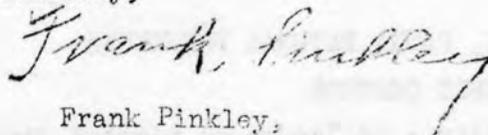
Telegrams:

Incoming	34
Outgoing	36

Total telegrams 70

GRAND TOTAL PIECES HANDLED 4,353

Cordially,



Frank Pinkley,  
Superintendent.

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# REPORTS FROM THE MEN IN THE FIELD

## WHITE SANDS

By Tom Charles, Custodian

These monthly reports would be easier if we were permitted the full swing of enthusiasm. But this potpourri of ours must be seasoned with modesty they say. Why? Well, I guess it is because if we custodians picture the unusual features of our monuments with all the color in which we see them, we would not be given much credence. And this is not criticism for we hardly believe our own eyes sometimes. If you had been passing a white sand hill once or twice a month for 50 years and one morning, for the first time, you found an old Spanish carretta, with the high wheels hewn from cottonwood logs and the rack or bed made from quaking asp poles, sitting there by the side of that hill, you would doubt it yourself, wouldn't you? Well, that is what happened recently to Watson Ritch, an old-timer in the vicinity of the White Sands. Where that old Spanish ox cart came from Mr. Ritch has no idea. He knows that it has been covered up by that sand hill for 50 years, possibly for 100 or 200 years. Quien sabe? That is a job for Charlie Steen, for Mr. Ritch has offered to leave in our new museum, this memento of privation and strife which the early day settlers suffered at the Great White Sands.

But even that story is easy. Here is one that tests your credulity. Walter H. Gardner, general sales manager of the Keystone Steel & Wire Company of Peoria, Illinois, dropped into the office this month and brought the information that he had lived on the White Sands for 18 months in the early years of this century working as a chemist for a California company. "Did you ever find one of those bolts of lightning?" said he. We frankly admitted that we hadn't been looking for anything of that sort. "Well you want to do it" said Mr. Gardner and he proceeded to explain that where a bolt of lightning hits the White Sand it drives out the water of crystallization and makes Plaster of Paris. When that Plaster of Paris gets wet it makes a solid stick of plaster just the shape of the bolt of lightning. "No place else in the world can you pick up a lightning bolt", proclaimed Mr. Gardner. So, during intermission, Ben and I are looking for lightning bolts. Theoretically, Mr. Gardner is correct, but we are not excited; we remember that theoretically you win on bank night too.

Playday on April 24 went off like clockwork. The efficient organization in the business of transportation threw a number of papas and mamas out of a job and cut the crowd down proportionately. Twenty-nine big army trucks and school busses transported over 1000 children to the sand with only 29 teachers to accompany them. The rest of the children went in private cars as heretofore. Last year a group of three or four

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## WHITE SANDS (CONT.)

school children would have a father and mother and several brothers and sisters accompany them. So the crowd was smaller this year but there were as many school children as ever before. Boy Scouts counted 288 cars up to 4:00 p.m. There were probably a total of 325 cars in attendance. National and State flags were raised by the Boy Scouts with a beautiful ceremony and sworn allegiance. Alamogordo's 92 piece school band on parade in the crystal bowl was the thrill of the day's program. Over 100 cars waited to see the moonlight on the sand, to watch the Mescalero boy scouts give their war dances around the camp fire and join in the happy climax of community singing of such songs as, "The Bear Came over the Mountain", "Merrily we Roll Along" and "Good Night Ladies." It was the best organized, smoothest running playday that we have ever had. Approximately 3000 children with teachers and parents were present.

The day following Playday we had 153 cars at the Turn-Around in 8 hours. Among the group were 19 cars and two big buss loads from State College, the "A" club on a White Sands rampage. About 150 college athletes, the track men, basketball players, football boys with coaches, wives and sweethearts. It was some party.

One of our interesting visitors this month was Frances Flood, nationally-known writer and globe trotter, co-author of Free Wheeling through Africa. Mr. Flood writes for nationally-known magazines and made a 4000 mile trip through the jungles of Africa and across the Sahara on motorcycle. He was intensely interested in the White Sands and wrote in the registration book, "I have crossed the Sahara and this is more spectacular." Another editor was A. C. Miller, a Methodist minister at Little Rock and editor of the "Arkansas Traveler."

Among the Park Service visitors were Harry Hommon, George Collins, Jim Hamilton, John Veal, in one party and it was a fine day's work we had with them. Then came Albert Johnson and wife from San Francisco. Mr. Johnson is with the Legal Division of the Branch of Land Acquisition and Regulation. Russell Farmer, ranger at Montezuma Castle, and his wife were here for a day; Hugh H. Buchanan, ranger at Glacier and Paul Wilkerson, motion picture photographer, were each here for a day.

The registration book shows 1,109 registered from 39 states and one foreign country. On the basis of 14% registration it gives us 7,921 total visitors for the month.

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## EL MORRO

By Robert R. Budlong, Custodian

The month of May has been a busy one. Visitor attendance was exactly twice that of last month, and with increasingly more time being occupied in guiding visitors, other necessary work occupies every

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## EL MORRO (CONT.)

minute of other available time.

### Weather

Days grow increasingly warmer; the month has been one of clear days with only two light showers, accompanied by lightning and thunder, but precipitation was only sufficient to lay the dust. Cacti are showing buds, oaks are well in leaf, and the last of the winter's snow melted during the month. Distant sandstorms have hung a pall of dust over the Monument several times during the month, and as I write this report the sun and nearby mesas are obscured by dust, though there is no ground-surface wind.

### Visitors

228 persons visited this Monument during the month of May. 34 persons utilized the camp and picnic grounds without inspecting inscriptions. Guided trips numbered 44, total time, 3210 minutes; average length of guided trips, 72.95 minutes. This is considerably less average time than last month. Many of this month's visitors were from nearby localities, and had visited the Rock before; others were on vacation, were usually behind on schedule, and "anxious to see the most important things in as little time as possible."

We were very pleased to number among our visitors for the month Dr. and Mrs. Tresidder, of Yosemite National Park. Irvin S. Cobb included this Monument among those visited on his recent trip through this part of the country. Mr. and Mrs. O. C. Havens paid us several most enjoyable visits, and we were their guests at a delightful picnic held in the pine cove. Mrs. W. P. Henderson, of the Federal Writers' Project, Santa Fe, also visited the Monument. We wish to express our great appreciation of valuable assistance rendered by her in obtaining material for research work, upon which I shall comment more at length in the future.

### Roads

The bridge over the arroyo suddenly threatened to collapse, settling five inches on the entire east end the night of May 2. The bridge was immediately closed, a detour made, planks ripped from the stringers, and all four stringers found to be rotten. The west bank supporting the stringers collapsed during the inspection. Using local labor, and the only material available, we constructed an entirely new bridge, shortening the unsupported span from 24 to 12 feet, running seven stringers instead of four, building 16 feet of new supporting banks to the arroyo, held by retaining walls, and using about fourteen tons of malpai rock, adobe, and sand in the construction. The bridge was reopened to traffic on the 12th, and the detour closed. The old bridge had been in place about 12 years.

Roads: The subject is a painful one, and is best avoided. They continue to be a popular cause of profanity.

### Inscriptions

During the month the inscriptions were given their first coat of "Driwal" for the season. In the past this solution has been applied with a brush. I think this method of application has two serious drawbacks: (1) even a very soft brush will remove a few sand particles, thereby causing erosion that in time must do damage; and (2) after application of "Driwal" the inscriptions are pencilled, to make them more legible. The next application of the preservative, when applied with a brush, carries the graphite out of the marks, and smears it over the rock surface, resulting in a gradual, but by now most noticeable, darkening of the rock. To overcome these two objections, I have applied the preservative with a "Flit-gun" spray. It is very slow work, and furnishes considerable exercise, but seems entirely successful.

### Wildlife

For some years past, I am told, the Golden Eagles have been nesting on the top of the rock, their nest being easily accessible to visitors - especially Zuni eagle-catchers. This year the eagles have changed their place of residence, building a new nest in a niche high up on the vertical face of the rock on the north side. Two young eagles have been raised, have now lost most of their down and acquired most of their adult plumage. They are of great interest to visitors, and the custodian daily visits the vicinity of the nest, awaiting the time when the young eagles first leave it, when it is hoped photographs of them may be obtained. I imagine the parent birds moved because they became tired of being molested by Zuni Indians. The Zunis have a habit of capturing the eagles, especially the young eagles just as they reach the mature stage, taking them back to Zuni, and there imprisoning them in cages. Object: a replenishable source of feathers, so long as the birds live and grow new ones, for use in the Zuni Indian ceremonies. I hear the birds often resemble plucked turkeys; they must get rather chilly around Shalako time in December. What an indignity to be suffered by so noble a relative of our National emblem!

### Water

The snows of the past winter melted relatively slowly, and soaked into the ground. There was very little run-off. Consequently, the lakes usually formed by run-off did not form, and, these usual sources of water for livestock not being available this spring, the problem of furnishing the necessary water has become a great one. Cisterns used for storage of water by people living in the vicinity have now run dry, some springs and wells have dried up, and the water reservoir in the Monument is about the only available source of water for many people for miles around, until

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## EL MORRO (CONT.)

the summer rains arrive. This water is rapidly growing thick and green, is full of axolotls (water dogs), frogs, aquatic insects of all kinds, and undoubtedly is a menace to health. Visitors to the Monument seldom think to carry drinking water in their cars, those who climb the rock become especially thirsty, and the great majority of the visitors, upon finding our "drinking water" to be what it is, invariably refuses to run risks by drinking it. It is absolutely imperative that a good supply of good water be developed here immediately, both for the benefit of the Park Service personnel stationed here, and that of the visitors who come to the Rock. Failure to have good drinking water available for visitors reflects unfavorably upon the Service, and visitors feel this strongly.

Drowned mice, portions of disintegrated rabbits, and other impedimenta, are fished out of the pool from time to time. I don't mind a freshly-drowned mouse or two, but it is hard to gather them in with a bucket on the end of a rope when the wind keeps them some forty feet distant; and it is when the mice have badly gone to seed that our visitors express most strongly their sentiments respecting our source of drinking water. Undoubtedly this well-ripened material imparts a distinctive, not to say novel, taste to the water -- probably helps soften it -- but visitors do not appreciate it. Every pang of indigestion from the HCWP's cookery makes us wonder if the water may not be responsible. One can feel the bacteria gnawing away at his inside mechanism -- a most remarkable sensation.

### General

One trip was made by the Custodian to Canyon de Chelly during the month, to bring back household goods left there last winter. I spent a most enjoyable afternoon and evening with Johnwill and his charming family, returning to this Monument after three a.m. the following morning. We were crowded for space in the cabin before; now, with more personal belongings installed in it, there isn't room for the two of us. One reason for the low average length of visitor stay here this month is directly attributable to this fact. Our "educational facilities" are in the cabin, and now there is no room for visitors. Something should be done about it. Our actual unobstructed floor space measures seven by four feet. I shudder to think what it will be when I bring back the other load of our belongings from de Chelly. We might build a pent-house on the roof.

The Custodian had hoped to be able to make trips into the surrounding country during the month, but so much necessary work came up that this was not possible. Such trips must be made in the near future, however, in order to inspect road signs, and become familiar with nearby points of interest. The ice caves in the lava beds 19 miles to the east are of great interest to visitors, and it is desired to inspect these and erect necessary road signs. Livestock is said to rub against the signs, knocking them down; and it is rumored that some playful Indians

have a habit of taking up signs and turning them around to point in the opposite direction. One visitor during the past week reported having made a complete circle over the country, in attempting to reach here from Grants, 40 miles distant, having driven for many miles and finding himself back in Grants when he thought he must be nearing the Monument.

The month of June approaches. Schools will be out, people will be taking their children on vacation trips, and we expect to be quite busy.

\*\*\*\*\*oo\*\*\*\*\*

## CHIRICAHUA

By Frank L. Fish, Custodian

May 1 was the official date for the opening of the fire season both on the Monument and the neighboring Forest Service areas. Lookout men occupied their stations by the afternoon of the first and Mr. Stevenson delegated two foremen and a crew of 20 enrollees for week-end fire detail. The fire cache was overhauled and checked with everything placed in readiness for a quick getaway in case of a call.

Gilbert Sykes, District Forest Ranger, reports two fires in his area so far this season; one lightning and one man caused. No cooperation was needed from this camp.

No measurable precipitation was recorded; only a few scattered drops of moisture fell with the three electrical disturbances during the month. May has been a dry month with the springs providing the only flow. So far, we have had plenty of water for both the CCC camp and the Monument facilities and at the present writing both Monument storage tanks, capacity 15,000 gallons combined, are overflowing.

Travel figures are encouraging and it is hoped an indication of the future visitor increase for this area:

Comparative figures: 1937 - 232 cars, 1,013 visitors, 20 states, District of Columbia, Mexico and France; 1936 - 102 cars, 462 visitors, 17 states and Mexico.

The Lions Club delegates attending the convention in Douglas held a picnic in the campground on the 14th with 57 members and friends showing up. They brought their own music, a native Mexican string orchestra in costume and after an excellent lunch the entire group drove to Massai Point but the day was a bit warm and no one could be coaxed to take a short hike over our wonderful trail system. "They looked, were contented and roared."

Xavier Le Chatelier, Chief Forester of French Morocco, was in interesting visitor during the month.

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CHIRICAHUA (CONT.)

Park Service officials were: Mr. and Mrs. A. L. Johnson of the San Francisco Office of the Legal Division, National Park Service; Clinton and Mrs. Rose of the Tucson District, dealing with ECW and Monument landscape problems; George Keller, Master Mechanic, inspecting equipment.

Norman and Mrs. Dole and Richard Roseberry completed the type-mapping for the Monument during the month and I am sorry to say they had to leave us. They have gone to Saguaro National Monument to see what Paul Beaubien is so proud of.

Paving of the Bisbee road has progressed to a point about one half mile this side of Double Adobe a distance of 19 miles from Bisbee. The road to Douglas is in excellent condition; preliminary surveys are being done to straighten the section from the Monument to State Road 81. Re-alignment of the Willcox road has progressed to this side of Dos Cabezas. The Turkey Creek CCC Camp worked on the Rodeo, New Mexico, road until the middle of the month at which time the camp was moved south to Rucker Canyon.

\*\*\*\*\*oo\*\*\*\*\*

## CHIRICAHUA ECW

By Wm. Stevenson, Project Superintendent

The Sara Deming-Balanced Rock Trail advanced 300 feet and 3,900 feet of foot trails were completed to the various features in the Heart of Rock Area. Work has now been discontinued on this section of the trail and a crew has been started on the Massai Point-Balanced Rock Section to facilitate transportation.

Two crews have worked the entire month on the backsloping project. 800 square yards of dirt banks were sloped near Bonita Park and 550 square yards were sloped in the rock cut section  $1\frac{1}{2}$  miles above Bonita Park. Excess material was used in widening fill slopes.

700 feet of Rhyolite trail was maintained. Two large walls were constructed, banks sloped and the material used in covering rock fill slopes.

Excavation for the basement of the administration building was finished this month and the basement walls were completed.

Work in the rock quarry continued throughout the month.

One-half mile of Bonita Highway was maintained and  $\frac{1}{4}$  mile resurfaced.

May 3 to 8 was spent by the writer on an enjoyable trip to Bandelier National Monument.

May 4, I made my first visit to the District Office in Santa Fe.

May 5 and 6 were spent with Hub and Ruby Chase in Bandelier and I'm some envious of Hub's buildings. May 8, I visited Tom and Mrs. Charles and spent an interesting afternoon in Tom's sandpile.

\*\*\*\*\*OO\*\*\*\*\*

## WALNUT CANYON

By Paul Beaubien, Park Ranger

667 visitors registered this month. Of the 520 who registered since my arrival, 339 were contacted.

Park Service visitors included H. L. Bill, Assistant Forester, Hugh W. Buchanan, Park Ranger from Glacier, and A. L. Johnson of the San Francisco Offices. Mr. and Mrs. Henning camped here for two nights.

Besides making minor repairs to buildings, the camp ground was policed and trash creating a fire hazard was removed; a box of five-year old dynamite was burned; one of the road signs from Bandelier was erected at the junction of the east entrance road and Highway 66; most of the material for the other road sign was secured; and, some 35 steps on the trail were repaired with cement. Two men were hired for a few days to help with the signs and the trail work.

Stockmen to the east and north have built a fence from the canyon rim north to the railroad. This fence is along the west boundary of the Monument, just a short distance west of the ranger station. Said fence serves to keep their stock from drifting west off the Monument - to hold their bosses at the ranger station.

For nature notes: a King Snake was seen on the trail May 10, a Gray Fox was surprised in a ruin May 18, and an Antelope was seen just west of station May 22. I had no record of a rattlesnake ever having been seen here until a gentleman from the Forest Service office at Albuquerque told of having killed one on the trail at the time of a previous visit some ten years ago.

Some water is still flowing in the canyon, so a few turkeys may be nesting on the Monument this year. Have often wondered how long water remained in the holes after the spring thaws, before the dam was constructed up the canyon at Lake Mary. This year we will know. One of the most common questions is where did the cliff dwellers get their water during the dry period of each year.

Suppose I should get the traffic count for Sunset Crater and Wupatki, but am afoot at present. The two cars (?) here are taking a rest. Tomorrow a mechanic should arrive with parts to repair one of them. Shall try to mail this report with some visitor going to Flagstaff.

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# CASA GRANDE

By Albert T. Bicknell, Custodian

## Weather:

Days clear ----- 21  
Days part cloudy ----- 9  
Days cloudy ----- -  
Maximum temperature ----- 108 degrees on May 15  
Minimum temperature ----- 35 degrees on April 29 and 30.  
Precipitation ----- 0

## General

With the weather getting a trifle warmer, travel has taken quite a drop as the visitor count will show. The month has been uneventful. A picnic of former Texas residents brought about 400 visitors to the Monument on April 25. Over 300 of these were not contacted as they merely used the picnic grounds, having been through the ruins and the museum before. For the corresponding period of last year the travel is higher this year probably due to our more accurate check of non-contact visitors. The weather has been about normal with a few very hot days. There were no bad dust storms during the period.

An accident occurred to one of the Texas picnic party. James Schenk of Phoenix fell while playing ball fracturing the radius of his right arm at 3:30 p.m. Custodian Bicknell took Mr. Schenk to Coolidge where Dr. Pinkerton set the arm.

Visitors this month came from 41 states, Washington, D. C., Hawaii, and the Philippine Islands. Six foreign countries were represented including Canada, Mexico, England, Australia, Sweden and Brazil.

## Use of Monument Facilities by the Public

Total travel: 1937 - 2689; 1936 - 2274; 1935 - 2443.

Of the 2,689 visitors to the Monument, 2,097 were contacted in guided trips through either the Ruins or the Museum. 8,762 minutes were spent guiding 281 parties through the Ruins, and 4,232 minutes were spent guiding 207 parties through the Museum. The picnic grounds were used by many parties, and one overnight camping party came during the month.

## Newsworthy Visitors

National Park Service visitors to the Monument (mostly here on business with Headquarters) included: Albert L. Johnson, Associate Attorney of the National Park Service; Paul Wilkerson and R. M. White of the Division of Motion Pictures; Everett Underhill; Clinton Rose, Resident Landscape Architect; Resident Inspector Richard D. Sias;

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## CASA GRANDE (CONT.)

Louis Caywood from Tumacacori; and Tom Cnstott from Tonto.

Other newsworthy visitors include: M. L. Wilson, under-secretary of the Department of Agriculture; Dave Sholtz, ex-governor of Florida; and B. W. Kearney, commissioner-in-chief of the V.F.W. Several large school parties were shown through the ruins among them several from various Indian Schools in this vicinity.

### Improvements

During the month a new pair of gates was constructed and installed at the entrance to the path to the Casa Grande.

Changes involving the Naturalist Division of Headquarters were made during the month. The front half of one of the residences was remodelled into an office, and the back part will be used by the two bachelor naturalists as their living quarters. The room in the Headquarters Office which the Naturalists vacated has been redecorated and will give the rest of the Headquarters unit space in which they can operate more efficiently and without being overcrowded as they were before.

### Nature Notes

The Say Phoebes in the Casa Grande still are attracting much attention with their nesting activities. The first brood of four young phoebes took flight on May 1. The following week Mrs. Phoebe laid five more eggs and started their incubation, leaving Mr. Phoebe to look after the first brood which by now are quite independent. On May 23 and 24 the five eggs hatched and now for a couple of weeks we will be able to witness the feeding of the new brood.

Several rattlesnakes have been reported on the Monument during the month, but none have been seen officially. Two black Western Whipsnakes have been seen frequently along the entrance road. A Gila Monster looking much like the one reported last month was seen on May 23 near the museum.

The various cacti have finished blooming on the Monument but in the surrounding desert the Giant Saguaro Cacti are in full bloom. The desert has become quite dry with no rain for over two months.

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## GRAN QUIVIRA

By George L. Boundey, Custodian

Visitors for May, 531.

This has been a month of high winds and lots of dust. At times visibility has been limited to about 300 feet and we have not been able

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GRAN QUIVIRA (CONT.)

to see the mountains to the south in nearly a month; nevertheless, we have had a number of eastern tourists and quite a decided increase of visitors from all around.

On April 25 the county singing convention was held at Gran Quivira, and we had visitors from all over the state. On the tenth of June we are to have a county picnic here on the Monument sponsored by the Rotary Club of Mountainair.

Have had several publicity photographers during the month, among them representatives of the Magnolia Oil Company who are putting out a large booklet on New Mexico points of interest for the benefit of tourists.

A public camp ground with four tourist cottages will be started in Gran Quivira this week. That will take care of the numerous requests for camping privileges.

Two parties, recent visitors at Casa Grande, Wade and Boardman, paid us a visit rather late one evening. They were on their way from Carlsbad and were bound for Bandelier.

We still have our house car but both last summer and this summer the birds have used it for nest building and nobody in the family would think of starting the engine until the last baby has flown. As we still continue to water the birds there is not a suitable tree or bush in the neighborhood that does not have at least one nest.

We have been able to identify all our bird visitors but one. We have two bird books, one in color, of all the birds in the United States and still we have not been able to identify them; perhaps some one can help us out. There are two pairs, both nesting in the vicinity and both stay about the house winter and summer; we feed them in the winter: size of a robin, very heavy bill, very fluffy slate color, brownish red on top of head and under the tail, lighter on underparts with a black mark on breast, very tame and always on the ground, does not sing or make any noise but resembles the eastern cat bird.

The last link of highway 60 will soon be completed. It starts at the pavement at Willard and ends at Bernardo on the Albuquerque-Socorro highway. This will give a paved road from coast to coast, by way of Mountainair which is 27 miles north of this Monument. All we will lack is a good road of 25 miles connecting Gran Quivira with Carrizozo -- this road will put us on one of the main highways and will be the making of this Monument.

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# MONTEZUMA CASTLE

By Earl Jackson, Custodian

## STATISTICAL

Visitors ----- 907; May, 1936 -- 773.  
Arizona visitors by cars ----- 559; % of total, 61.6.  
California visitors by cars ----- 165  
Texas visitors by cars ----- 26  
Ohio visitors by cars ----- 24  
Illinois visitors by cars ----- 14  
States represented ----- 34  
Foreign countries ----- 2

## Conveyance

Cars ----- 278  
Horses ----- 2  
Motorcycles ----- 1  
Arizona cars ----- 146

Contacts - All visitors contacted and registered.

Trips ----- 176  
Attendance ----- 572  
Those who climbed ladders ----- 409 or 71.5%  
Average trip time ----- 31.4 minutes  
Museum lectures ----- 146  
Attendance ----- 524  
Average museum time ----- 20.9 minutes

## Weather

Days cloudy ----- 1  
Days partly cloudy ----- 5  
Precipitation ----- 0

## VISITORS

Travel shows an encouraging increase of 134 visitors over May of last year. The record this month has shown a pure travel trend, being unaffected by presence of storms or variations in road conditions.

## WEATHER AND ROADS

It has been an even fifty days since the Verde Valley has seen a drop of rain. There have been about ten days of uncomfortably warm weather. Wind and dust have practically avoided the Monument.

Roads are all in fair condition, but corrugated. The road to Flagstaff via Mormon Lake, which was closed all winter, is now open and in good shape.

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MONTEZUMA CASTLE (CONT.)

SPECIAL VISITORS

Park Service: May 1 - H. L. Bill, District Forester, ECW, was in for about two hours on a preliminary inspection of our plant life.

May 19 - Jimmy and Sally Brewer arrived from Headquarters for a four day stay.

May 22 - Mr. and Mrs. Albert W. Johnson arrived for a two day stay in the valley. Mr. Johnson is Associate Attorney for the Park Service, and came to check information on water rights for this Monument.

Other Visitors: April 24 - Mr. and Mrs. Jack Wilson, of the Nava-Hopi Tours, in Flagstaff, were in taking colored pictures of the Castle for publicity purposes. They are planning a side trip for their tours from Flagstaff via Montezuma Castle to Pine, returning to Flagstaff via Long Valley and the Lakes.

April 25 - Mr. and Mrs. Grenville Goodwin were very interested visitors, and we greatly enjoyed their visit. Mr. Goodwin has spent several years in study of social organization and history of the Apache Indians, and probably knows more about their ways than any other white man living.

April 28 - Joe H. Thompson, director of the Conoco Travel Bureau, visited the Castle. In his party was D. J. Williams, secretary of the Jerome Chamber of Commerce.

April 29 - The magazine, Progressive Arizona, is to revive under a new name and new management. Lowell J. Arnold, Carl Henderson, and party, were in taking pictures to put in a forthcoming issue.

May 9 - 33 CCC boys from the Beaver Creek Camp, in charge of their educational advisor, J. T. Collins, visited the ruins.

May 12 - William L. (Larry) Mellon, local rancher, and nephew of Andrew Mellon, was a visitor.

May 19 - Hugh Carver, of Wisconsin, was a very interested visitor. He is a botanist collecting specimens for the Missouri Botanical Gardens.

NATURE NOTES:

On May 6 a bullsnake (*pituophis sayi*) measuring nearly six feet in length was seen crawling into the comfort station. It was late in the evening, and we suppose the snake was attracted by the warm flagstones of the floor. We believe the snake was a male, as it entered the men's side of the building.

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MONTEZUMA CASTLE (CONT.)

Two Diamond Back Rattlesnakes (*Crotalus atrox?*) were killed here on May 8 and May 9. One was on the trail in front of Ranger Farmer's tent-house, and tourists killed the other on the road. A great many have been seen in the valley recently.

On May 18 we caught a 30-inch King Snake near the Farmer tent. We put him in the basement hoping our mouse and rat population might be reduced. Tentative identification of this snake would be *Lampropeltis getulus boylii*.

Two campers, both old-time westerners, heard on the night of May 18 what they said was the sound of two wildcats having considerable verbal exchange. These were heard at the base of the cliffs on our east boundary.

We have seen at least one specie each of the toad, frog, and tree frog. The toads and frogs are here in great numbers. The excessively dry weather is rapidly drying up the creek. It has stopped running in front of the Castle entirely. In fact, one large hole of water has entirely dried up. The other evening, just before the water disappeared at that spot, we rescued approximately 10,000 tadpoles and carried them upstream.

Very few rock squirrels have been seen to date this year. Rabbits are in customary abundance, with a few jack-rabbits. Lizards are exceedingly numerous. I sure wish we had a lizard book here to identify some of these fellows.

Recently we received identification from Fred Gibson, of the Boyce-Thompson Southwestern Arboretum, on some plant specimens which were recovered in excoavations in the ruins here. Follows part of the list:

<u>Technical Name</u>	<u>Common Name</u>	<u>Indian Use</u>
<i>Celtis reticulata</i> seeds	"Hackberry"	Not known
<i>Prosopis velutina</i>	"Mesquite"	Used outer part of pods
<i>Krameria</i> sp. (K. Grayi?)	"Chacate"	Seeds for dyes and medicines
<i>Acacia Greggii</i> seeds	"Catclaw"	Used for food
<i>Cucurbita</i> sp.	"Squash"	Used for food
<i>Zea mays</i>	"Corn"	Used for food
<i>Phaseolus</i> sp.	"Bean"	Used for food
<i>Allium</i> sp.	"Wild Onion"	Probably food
<i>Gossypium</i> sp.	"Cotton"	Weaving
<i>Quercus turbinella</i> .gall.	"Oak" gall.	Probably for dye.

(The custodian might add that he learned from Hugh Cutler the oak gall was also used by some Indians for an astringent. They ground the dried oak gall and mixed it with water. It acted somewhat like alum,

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MONTEZUMA CASTLE (CONT.)

and tended to close up a wound. Also, Indians washed their feet in the solution, to toughen them. Evidently lots of tannic acid in it.)

When H. L. Bill, Assistant Forester, was in, he took a few plant specimens, and later reported on them. He designates the hackberry here as *Celtis reticulata* Torrey. He designates our Arizona Sycamore as *Platanus Wrightii* Watson. Synonyms are: *Platanus mexicana* Torrey, *Platanus racemosa* Watson; common names: Sycamore, Arizona Sycamore, or Arizona Plane-tree.

Mr. Bill also identified one of our ash trees as *Fraxinus velutina*, variety *toumeyii*.

Mr. Cutler tentatively identified our Sacaton grass as *Phragmites Communis*. Is there a correction on this from you Headquarters Sacaton experts?

When in Flagstaff recently we took a macaw skull which had been found in the ruins here. At the Museum of Northern Arizona Mr. Hargraves tentatively identified the specimen as *ara macao*, known as the Red, Yellow and Blue Macaw, native to Central America.

For the report on Birds at Montezuma Castle, see Betty Jackson's report, elsewhere in this issue.

GENERAL

To tell the truth, there is not much to say. Since the report is already too long, I will cut it short. Everything seems to be going satisfactorily here. We are thinking of having a rain dance to see if we can't prevent the country drying up and blowing away.

It should be mentioned that while Jimmy Brewer was here he repaired a nasty hole in the top balcony floor of the Castle. That is an old hole, which has been patched several times in past years without satisfactory results. Jimmy tried a different method, and I believe it is going to work.

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MONTEZUMA BIRDS

By Betty Jackson

Birds nesting this month are:

Red-shafted Flicker

House Finch

Baird-Bewick Wren

Rough-winged Swallow

Cliff Swallow ?

"Bird", Genus? Sp.?

Broad-tailed? Hummingbird

Great Horned Owl

Say Phoebe

Cactus Woodpecker

Others are nesting, but I have not located any nests.

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MONTEZUMA CASTLE (CONT.)

Birds Seen:

Arizona Cardinal	Arizona Hooded Oriole
Mourning Dove	Pallid (?) Horned Owl
White-winged Dove	Ring-necked Pheasant
House Finch	Black Phoebe
Red-shafted Flicker	Say Phoebe
Ash-throated Flycatcher	Gambel Quail
Vermillion Flycatcher	Western Robin
Western Evening Grosbeak	Cliff Swallow
Texas Nighthawk	Rough-winged Swallow
Hummingbird Sp.?	Western Tanager
Killdeer	Black-throated Grey Warbler
Arkansas Kingbird	Western Yellow Warbler
Ash Ruby-crowned Kinglet	Western Yellow Throat
American Merganser	Cactus Woodpecker
Western Mockingbird	Baird-Bewick Wren
	Western House Wren

The Ring-necked Pheasant listed above was here from April 22 to about May 5. We heard him for four days before we saw him on the 26th. He is a cocky creature, and became a bit unpopular with the custodian and ranger because of his alarm clock tendencies. There was one morning when he stood beneath our window and let out his raucus double croak, accompanied by wing-flopping, until I stuck my head out. Then he was satisfied that we were awake (this being 5:45 A.M.), so he moved off to the "Sysygy" wall to strut and croak and show off.

The Mockingbirds arrived April 28. A pair of House Wrens were here two days, April 29 and 30.

On May 2 a pair of Rough-winged Swallows were finishing a nest in the clay bank of the stream across the creek from us. But they must have had a landslide, for on the 14th the swallows were gone, and the back section of the nest was filled up with sand.

Also on May 2 I discovered the Arizona Hooded Oriole's nest on a high branch of the sycamore above the Farmers' tent. The young have flown now, probably by May 20.

On May 3 a Black-throated Grey Warbler was here for a while, and a Western Yellow-throat arrived, apparently to stay.

Our Hummingbird (which Mr. Hargrave says may not be Broad-tailed) had two eggs on the 2nd. By the 22nd the babies were hatched, but died for some reason. The parents seem to have abandoned the nest, though I can't think why. The female has been gathering cotton off the Farmers' tent and from the ropes on my vines, so I suppose she is starting a new nest.

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BIRDS AT MONTEZUMA (CONT.)

The Say Phoebe babies had hatched on May 8, and were probably a day old. One was much smaller than the other two. When they left the nest on May 22, they showed very different characters. The first one flew early in the morning, and was very independent about it. The second got off the nest at noon, and soon found a twig in the Sycamore where he rested most of the rest of the day. The parents had a hard time getting the third one to fly, and when he did, he only went about five feet to the telephone wire, and stayed there, clutching the wire in terror, the rest of the day. The parents are still feeding them today, the 24th.

May 6 the familiar White-winged Dove arrived for his annual stay.

The House Finch babies had pin-feathers well developed on May 3, and all five flew on the 11th. They grow fast.

On the 13th we discovered a Cactus Woodpecker nest, high in a sycamore. We watched the father bring food to the young, and then drop something heavy from the nest. Investigation showed it was a dead baby, with no feathers whatsoever. Cause of death unknown, but possibly suffocation.

The same day the Farmers saw a Western Yellow Warbler, and I saw a male Cardinal, who apparently has come to stay.

On May 15 I took a photograph of the Vermillion Flycatcher's nest, with at least two spotted young in it. On the 19th the nest was empty.

Also on the 15th a visitor, Prof. Cribbs, found a young Horned Owl dead on the ledge trail at the top of the first ladder. The nest is directly above, though so far in a crack that only the droppings can be seen. The old birds have been enjoying our wildlife, for we found, along with the pellets below, some rabbits' feet and part of a rat. The big fellow goes out hunting each evening, and likes to perch on the telephone pole at the top of the cliff to look over the landscape. One night a Kingbird tried to pester him, but he couldn't be bothered.

The Kingbirds, by the way, are staying, but I don't know whether they are nesting or not.

Jimmy Brewer got the first good look at the Swallows up in the Castle, and identifies them as Cliff Swallows. His identification is confirmed by Russell Farmer. I think they are nesting, but it may be just play. There are about fifty of them.

An Ash-throated Flycatcher was identified on May 22, and has been around with his wife since then.

We never would have seen the Baird-Bewick Wren if Norman hadn't found a very young one, fallen from its nest, and brought it in. After a while it got so hungry, though it wouldn't eat what we offered, that we took it

## MONTEZUMA BIRDS (CONT.)

out again, hoping that its cries would attract its lost parents. They did, and we saw a wonderful demonstration of instinct in the mother bird. First she tried to lead me off, dragging her wing. Then when I was far enough to suit her, she went back to the baby, demonstrating a hundred times the art of learning to fly, and chirped and led him, bit by bit, for about fifty feet to the place where he was found. I looked for the nest, hoping to put him back in, but couldn't find it. However, he was being well tended when I left, with his mother feeding him, and his father warbling to him from the tree above.

A small drab bird, still unidentified, has a nest in an old stump near the Farmers' tent. There are four eggs in it, white, speckled with brown, especially at the large end.

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## TUMACACORI

By Louis R. Caywood, Custodian

Visitors numbered 1,375 shown through the Mission on guided parties plus 176 who looked from the parking area or in some way used the Monument facilities. This gives a total of 1,551 visitors for the month.

Park Service visitors included Don and Marie Erskine from Casa Grande National Monument, who brought Marie's Sister, Gertrude Verheyen of Butte, Montana, on May 3. Charles Steen, Junior Archeologist, paid us a short visit on May 5. May 12 brought Mr. and Mrs. Clinton F. Rose to our Monument. Mr. Rose is Resident Landscape Architect and made his monthly resident call. He offered a number of helpful suggestions pertaining to the betterment of the appearance of the grounds. On May 22 J. H. Tovrea from Headquarters made a long-awaited visit in connection with the proposed water system and to see about roof repairs on the Mission and Custodian's quarters. The equipment for the new system, including pump,  $1\frac{1}{2}$  H.P. electric motor and two 525 gallon pressure tanks, is here and we hope to install it as soon as possible. Tov also talked over the type and cost of roofing material needed.

Other noteworthy visitors for the month include Mrs. June Bobb, Project Superintendent, Federal Archives Survey, with headquarters in Nogales, who arrived to look over the Monument files on April 24th. This date seemed to be the day for the Federal Archivists as we also had visits that afternoon from Dr. P. M. Hamer, Archivist-in-charge, and Dr. H. A. Hubbard, Regional Director, with offices at the University of Arizona. On April 27 Mr. and Mrs. Fred Winn and Mrs. C. H. Moyer were interested visitors. May 3, Father Arnold, in charge of San Savier, brought two brothers who were visiting from Chowstun, Shantung, China. These two brothers signed the register in Chinese therefore I was unable to read their signatures. Father Victor R. Stoner made his monthly call to the Monument on May 12. On May 20 a group of 57 students from the 7th grade in Nogales were guided through the Mission. After the lecture they enjoyed a picnic lunch on the grounds.

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## TUMACACORI (CONT.)

Weather conditions have been varied. May 13, 14, 15 and 16 were extremely hot with very few visitors. No rain fell during the month and Jim Felton and myself are having quite a time trying to keep the young trees alive until the rainy season. There have been a number of very windy disagreeable days during the later part of the month.

The gophers are beginning to burrow extensively on the west side of the Mission. Trapping is slow but seems to be the only way of keeping the little animals under control.

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## AZTEC RUINS

By Thomas C. Miller, Custodian

### General

Roads, weather and travel have been good here in this Monument all the month. Travel reached an all-time high record for the month of May this year. 1,568 visitors were registered and guided through the ruins and museum. Along with all the other publicity that this Monument has had for the past few years, the State police at the ports of entry are doing excellent work contacting all out of state cars and inviting them to visit the national monuments and helping the visitors to plan their trip.

The San Juan County Commissioners and the business men of Aztec and Farmington held a joint meeting in Farmington with Governor Tingley on May 7. The Governor informed us at the meeting that if the County Commissioners would secure title to the land for a right-of-way from Highway U. S. 550 to the Monument headquarters then he would build us a road. To date the right-of-way has been secured, the fence is set back, and we are waiting for the road. The type of road was not mentioned but we feel sure that this Monument will rate a good one.

### Travel

1,568 people entered the Monument in 457 automobiles, coming from 32 states, Alaska and Canada. The above number of visitors were guided through the ruins in 192 parties.

### Weather

The weather has been excellent for travel all month. Westher Statistics: Maximum temperature, 87, on the 14th and 16th; minimum temperature, 20, on April 24. No precipitation was recorded for the month. We had 19 clear days, 6 partly cloudy days, and 5 cloudy days. Dust storms were recorded on the 13th and 22nd.

Signs

Directional signs have been placed on all highways leading to the Monument. The large entrance sign on Highway U. S. 550 received a new coat of paint during the month. This job was made possible by the business men in Aztec and the surrounding country. This sign is owned and maintained by the local people.

CHACO CANYON

Sunday, May 2, the Archeological Society from Durango notified me that they were coming to Aztec and would like to have me guide them to Chaco. The Caravan left Aztec at 10:00 AM, arriving at Chaco at 12:00 noon. After having a fine picnic lunch at Chaco they were guided through the ruins by Custodian McKinney and Ranger Hastings. That being my first trip through the Chaco ruins as a visitor and not a guide, I rather enjoyed it. The boys really sold them Chaco, finishing about dark. On May 4 Custodian McKinney and I were invited to attend a meeting with the County Commissioners, regarding roads. Much was accomplished at the meeting, as the sand bed on Escavada Wash is now shaled and oiled. Visitors can now make the trip without any trouble. This work was performed by San Juan County and we greatly appreciate their cooperation. Another business trip was made to Chaco on the 21st.

Yucca House

On May 18 this Monument was inspected. No evidence of vandalism was noted. However, considerable sign left by Monument visitors was noted. I was informed by Mr. Ismay the Rancher, that 16 cars had been seen at the ruins during the month of May. This would indicate that we had 56 visitors at that Monument.

Hovenweep

This Monument has been visited by many of the CCC camps in Colorado. I was informed by one of the officers from the camp at Kline, Colorado, that Hovenweep was included on many of their trips. From the sign around the ruins, and by contacting the local people, the travel to that Monument during the month of May is estimated at 250 people. Many wild flowers were in evidence around Hovenweep and the roads were in fair condition. I spent considerable time picking up cans, lunch baskets, and paper scraps. I was unable to find where any new names were cut in the masonry walls. That is one reserve Monument that cannot be hidden from the public any more. Large numbers of them are finding it. We need six months' protection there at that Monument.

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# CHACO CANYON

By Lewis T. McKinney, Custodian

## General

Travel has been coming in steadily for the month of May, and the entrance on duty of Ranger-Historian Homer F. Hastings May 1 certainly was appreciated. The weather for the month has been quite pleasant, a light dust storm or so and a trace of rain and snow once in a while, but those are to be expected at this time of year.

The roads are in fine condition both directions, and the sand hill north of headquarters has been plated with shale and gravel and then sprayed with oil. This makes a very good 15-foot roadway that will last two or three years. Now let's see some of the Park Servicer personnel out this way; those that have been afraid of the sandy road.

I have never seen as many birds, rabbits, ground squirrels and other rodents as there are in Chaco this spring. I have counted as many as 41 rabbits without moving out of my tracks. We have fixed some old metates for bird baths; you should see the scramble about sun-up each morning. I wish this younger generation of mine enjoyed their bath as much as these birds do.

When you see Louis Caywood tell him to come over to Chaco and make the trip upon Fajada Butte with me again, for you certainly can get a fine view of that part of the Monument from there now. You can clearly see the difference in the growth of the vegetation inside of the Monument fence from that on the outside, from on top of Fajada.

The Soil Conservation Service did not discontinue their work here in the Chaco as they planned, but are still doing some fine work and are completing the structures that they thought they would have to let go unfinished because they could not hire teams to complete the work. I want to say that my old boss, Mr. R. C. Clifford, has certainly given us lots of thought on erosion control here at Chaco Canyon and has done good work and will continue to help save our ruins. And it hasn't been just Mr. Clifford, all of the Soil Conservation Service personnel has taken an earnest interest in Chaco. They can readily see what a problem we are up against and what a wonderful group of ruins we have to be saved. A total of 330,375 trees and shrubs has been planted since they began work, and I would say that about 70% of them are growing.

On May 14 Mr. and Mrs. Wetuion Hodges of the Jumping Horse Ranch of Ennis, Montana, arrived at the Monument and spent that day and night, also most of the next day before leaving for Gallup where they were to meet their two sons, who have attended the University of Arizona at Tucson, Arizona. Mr. and Mrs. Hodges were also accompanied by Dr. W. Russell Smith and Ralph James.

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SOUTHWESTERN MONUMENTS (CONT.)

On April 25 we had as guest in the Monument Irvin S. Cobb, accompanied by County Commissioner J. J. Kirk of McKinley County, Mrs. Kirk, and Daughter Carroll. They spent most of the day in Chaco and were very much interested in the Monument.

May 15 brought us as visitors Mr. W. L. Wilson, under-secretary of Agriculture, Mr. Paul Appleby, Assistant Secretary of Agriculture, Mr. Frank Pooler, District Forester, located at Albuquerque, and Mr. Parry Reiche, Regional Geologist for the Soil Conservation Service, Albuquerque, and Mr. Corn, with the Soil Conservation Service and the Indian Service, Albuquerque, New Mexico. They all spent the night with us here in the Canyon and stayed until noon the next day.

A group of 33 from Durango, Colorado, were visitors on May 2. This party was the Durango Archeological Society. This group was so much interested in our ruins, that I know of 11 visitors whom they have directed here since their visit into the Chaco.

Dr. Donald Brand with the University of New Mexico and 12 students were visitors to the Monument this month. This party arrived on the first and departed on the third. As usual, Dr. Brand was very happy to be in the Canyon once again.

Dr. Reginald G. Fisher, with the School of American Research, was also a visitor in the Monument this month. He plans to fence the northwest quarter of Section 13 on which they are building quarters, etc., for their field school. Where their lines go over the canyon walls on the south side of Chaco Canyon, they plan to paint a white line up the side of the cliff so their boundary line may be easily seen.

We were visited by a group of Navajo school children from White Horse Lake, Lake Valley, Ft. Wingate and Crownpoint schools. 83 were in the party, including a few of the teachers and Mr. J. Maytubby, Assistant Recreation Supervisor of the U. S. Indian Service at Window Rock, Arizona. After spending a few hours looking over the ruins they had two baseball games, several foot races and a few other games. The day was certainly enjoyed by all.

Mr. and Mrs. Robert A. Bennett were also visitors this month and were so interested they had to see everything to be seen in the Monument. Mr. Bennett is a writer of several western stories, and is working on a couple of books at present.

Carroll Miller of Aztec Ruins National Monument was over a couple of times this month to get a look at some real ruins again. Cal has sent over several visitors to his old home in Chaco.

We have had several overnight campers this month and would have had more if we had the ramadas a little larger or more ramadas and fireplaces for them.

## FRACO CANYON (CONT.)

The School of American Research has completed the three rooms I mentioned in last month's report and has started on two more rooms. Their group of students which were due here the first of May hasn't shown up yet but will be out within a few days.

The Threatening Rock has moved back toward the cliff  $3/16$  of an inch at the west end,  $1/4$  of an inch at the center, but hasn't moved any at the east end since it was measured one month ago.

There have been 796 visitors through the Monument this month in 287 automobiles, 4 wagons, 9 trucks, 11 pickups and 2 aeroplanes, from 14 states as follows: New Mexico, Montana, Utah, Arizona, Texas, Iowa, Ohio, Indiana, Kansas and California. 509 of these visitors were contacted.

### Ruins Repair

We have repaired several of the bad places in the walls of Bonito, this month, by reconstructing the places that had fallen out because of water seeping into the walls from above. We have also covered most of the concrete capping with earth. It looks a lot better and I can't see why it won't help about 50% of the water to go over the side of the walls instead of into the center where it does its damage.

### Weather Statistics

Maximum	93 degrees on the 15th
Minimum	25 " " " 1st
Precipitation during month	.10
Clear Days	18
Cloudy days	3
Partly cloudy days	10
Dust storms	4

\*\*\*\*\*OO\*\*\*\*\*

## CAPULIN MOUNTAIN

By Homer J. Farr, Custodian

Approximately 1,200 visitors have been here this month. I have noticed many cars from Eastern states this month. Among the states noted were Connecticut, Tennessee, Massachusetts, Virginia, New York, and one from the District of Columbia, but, of course, the majority continues to be from Texas

Yesterday Mr. Vandiver, Associate Regional Geologist, called and went over the many problems of this Monument with me. To my way of thinking, this fellow takes a broad, sensible view of the problems we have here, and I believe he is willing to help solve them.

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CAPULIN MOUNTAIN (CONT.)

The entrance road has never been in better condition, altho constant slipping of the lava does permit rocks falling in the road but these are picked up frequently and the road is very smooth now all the way. The custodian and a small crew are now engaged in building a small outside retaining wall along the road, which is located on a six-foot fill on an outside curve. This, when complete, will make for safety along this end of the drive, a thing which I have been striving for lo these many years.

Weather has been unusually dry for the month, not over one-fourth inch precipitation, and has been extremely warm all month.

Porcupines continue to do damage to the piñon trees; they seldom seem to bother juniper.

We have never had a more abundant show of wildlife than this spring. Many deer, rabbits, squirrel, eagles, hawks, and about 25 varieties of other birds have been noted.

\*\*\*\*\*oo\*\*\*\*\*

## CANYON DE CHELLY

By Johnwill Faris, Custodian

Total visitors for the month total 222 which I fear is misleading in the of this number not over 75 were actual visitors in the strict sense of the word; the balance were local parties going up on the canyon rim for picnics, Sunday afternoon outings, etc., and were not in every case or in fact many cases accompanied by a ranger. I was aware of their being on our property but did not feel it necessary that I accompany each party, and then, too, such would have been impossible in that I am only one and at times I should be at least quintuplet.

The month has been very interesting and it has been my pleasure to show a number of very splendid folks our attraction. Irvin Cobb was in the early part of the month with Buck Weaver, two groups from the Washington Office of the Department of Agriculture, a large number of officials of the Indian and Soil Conservation Services, several officials of our own Service including Mr. Harry Hommon, of the San Francisco Office, Jim Hamilton and Chuck Richy from the Santa Fe Office, and one visitor from the Grand Canyon.

The weather has been very favorable the entire month, although it has not been possible to get up either of the canyons in a car. Every party that so desired was taken up the rim and shown several places of interest other than the White House.

Some work was done on the White House trail, and I think that it will be necessary to count on two or three days work each month of our travel season. Small rocks roll down in spite of anything one can do and these makes it very difficult to climb.

## CANYON DE CHELLY (CONT.)

I have visited the Monuments in de Chelly three times this past month, twice on the rim and once in the canyon on horseback. It is a grant sight from the floor of the canyon but nothing to compare with the view one gets from the rim. Perhaps that view is worth while due to the fact it means walking about three miles through the wilds, no trail whatsoever. Anyway, it is a wonderful sight and I challenge the gang to produce anything that will give the visitor more for their money.

Everything is fine and apparently the season is breaking; this has missed one mail already, and a party is waiting to go out this afternoon so I will ring off with the excuse that I have to get busy.

\*\*\*\*\*oo\*\*\*\*\*

## BANDELIER

By Clinton G. Harkins, Custodian

### Weather and Roads

Days partly cloudy -----	16
Days cloudy -----	2
Days clear -----	13
Dust storms -----	6
Precipitation -----	.9 May 23.
Mean maximum -----	69
Mean minimum -----	44
Mean -----	53
Range -----	25

The weather has been very good with the exception of a few dust storms, the worst lasting two days, the 22nd and 23rd. One rain storm on the 22nd was very welcome, but we need several days of good rain to do our roads any good as they are very dusty and rough.

### Visitors

Visitors numbered 1,395, arriving in 332 cars from 29 states and eight foreign countries, France, Canada, Mexico, Belgium, England, Fiji Islands, Turkey and Cuba. 705 people were given ruins trips, averaging 80 minutes to the trip. Out of 123 returns, 39 were given guided tours through the ruins.

The six highest states by order of register count were as follows:

New Mexico -----	626
Colorado -----	96
California -----	49
New York -----	37
Illinois -----	37
Oklahoma -----	27

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BANDELIER (CONT.)

Newsworthy Visitors

April 24 - Mrs. E. Z. Vogt, wife of the former custodian of El Morro National Monument, and a party of high school students from Ramah, New Mexico.

April 25 - Mrs. Chuck Richey and Mrs. Alexander had lunch at Frijoles Lodge. The New Mexico Bankers Convention, with 45 members, had lunch at the Lodge and made a partial trip through the ruins.

May 2 - Officials of the Santa Fe Railway Magazine representatives and advertising agents, 45 in all. Mr. Budd, President of the Budd Steel Car Works; Mr. S. F. Bledsoe, President of the Atchison Topeka and Santa Fe Railway.

May 4 - Mr. S. F. Crecelius, Reclamation Bureau, San Antonio, Texas.

May 6 - Ranchvale High School from Clovis, New Mexico, with 29 in the party and Allison James School from Santa Fe with 53 students.

April 27 - Mr. and Mrs. Roe Emery, Denver; Dr. and Mrs. Tresidder, Yosemite National Park; Mr. Emery is president of the Rocky Mountain Motor Company; Dr. Tresidder is the president of the Yosemite Park and Curry Company.

May 17 - L. W. Wilson, Under-Secretary, Department of Agriculture; Washington; Paul Appelby, Assistant to the Secretary of Agriculture; Parry Reiche, Geologist for the Soil Conservation Service, Albuquerque; L. J. Korn, also of the Soil Conservation Service at Albuquerque, and Mr. Frank Pooler, Regional Forester for the Forest Service at Albuquerque.

ECW Officials

Mr. Fred Johnson, inspector for ECW from Washington, D. C.; Mr. Kell, Mr. Yeager and Mr. Carlos Viera, all of Santa Fe; Charles A. Richey and Mr. Kruger.

Bill Stevenson and Mrs. Stevenson and Dickie arrived on the 4th and departed the 7th. Mr. Stevenson is project superintendent at Camp NM-2-A, Chiricahua National Monument.

National Park Service Officials

Mr. Harry Hommon and J. B. Hamilton were in on the 12th going over the water situation which is far from satisfactory.

Mr. and Mrs. Underhill arrived and departed the same day for Zion National Park.

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## BANDELIER (CONT.)

### General

The continuous trucking of gravel over the road from Culebra Hill to the entrance of the Monument has left it in a terrible condition, and this has had some influence on our travel. All our trails have been cleared of an accumulation of wind falls and rock slides. Three-quarters of a mile of fence has been rebuilt in the Detached Section. The stockmen in that vicinity have been cutting the fence and putting their stock in. They have also built a few earth dams in Alamo Canyon in the Detached Section. These were destroyed. 15 head of cattle were found inside wearing an unrecorded brand.

One day was devoted to pre-suppression of fires in conjunction with the Forest Service and the Soil Conservation Service. The Park Service was represented by the Custodian and ECW by W. W. Yeager, H. B. Chase and Forestry Foreman James Fulton.

Twenty-five caution signs were posted on Frijoles Creek between the Ceremonial Cave and the west boundary against contamination of the water by hikers and fisherman. This was done on the advice of Mr. Harry Hommon, Sanitary Engineer.

Kersey and Company completed their graveling contract and moved their equipment to storage.

3,500 native trout were planted at the upper crossing these fish were from 4" to 6" long, and also 1,500 rainbow trout were planted at the same place, from 6" to 10" long. The fishing season opened on the 15th and from reports limited catches were made. Five parties were fishing on the creek Sunday, May 16.

### Forest Fires

About 3:00 PM Thursday, the 20th, a fire was reported in the head of Alamo Canyon but on further investigation it was found to be in Frijoles Canyon a mile below the west boundary. Jim Fulton left immediately with a crew of men to go in by the upper crossing; shortly after this crew had gone in, the Forest Service came in with a crew from Sawyer Mesa; shortly after this crew arrived, Jim Eden and Ed Cano, construction foremen, arrived with their crews.

The fire had started in the bottom of the canyon and crowned out on both sides. Due to the steepness of the canyon suppression was quite difficult, but by eight o'clock p.m. the fire was under control, after burning an area of approximately 100 acres.

Suppression measures were very ably carried out by Foreman Fulton. The Forest Service cooperated 100%.

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BANDELIER (CONT.)

I also wish to extend my appreciation to the camp commanders in their promptness in supplying lunches to the men.

At the present writing a continuous patrol has been maintained on the area. We expect to discontinue the night crew today, but to maintain a few men there during the day until such time as we have had a good rain.

\*\*\*\*\*OO\*\*\*\*\*

## BANDELIER ECW

By H. B. Chase, Project Superintendent

The Storage Room, Unit No. 6, of the Hotel Development, is now finished, with the exception of painting, and ready for use.

The Gas and Oil House, Unit No. 5, of the Hotel Development, has a completed wall structure to lintel height. In connection with this project a part of the crew completed the wall connection between the Gas and Oil House and the Dining Room unit, under the Stone Walls project.

Very little work has been done on Unit No. 1, Dining Room and Kitchen; it is now at viga height. Most of the lintels and corbels of the portals, which have been carried on with the No. 1 Unit, are in place.

Two hand-carved beds were finished and delivered to the Custodian as permanent Monument furniture, by the carpenter crew. Two wood hauling signs were completed and shipped to the Capulin Mountain National Monument this month. Signs are now under construction for this Monument for erection on the Detached Section. Considerable work has been done on doors, windows and corbels for the Hotel Development.

A crew has been busy for a few days transporting materials to the water supply intake area.

The entire camp was on the forest fire in upper Frijoles Canyon from Thursday evening, May 20, until Saturday, May 22, getting this fire under control and patrolling it after it was under control.

A large crew of men have been in the rock quarry during the month, quarrying and shaping stones for the construction needs.

Considerable stone work, under the Stone Walls project, has been carried on throughout the month, it being necessary to complete some sections of the wall to viga height for "tie-in" with the Dining Room unit before the Dining Room unit can be carried to completion.

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# BANDELIER FORESTRY

By James Fulton, Forestry Foreman

For the first part of the month I had charge of the rock quarry job.

On May 17, I began using a crew of 14 men for cutting lintels and dressing vigas for the hotel development.

Along with this project, I was carrying on a beetle control project consisting of cutting and burning 64 landscape planted trees for the control of *Ips confusus* var. Following is the detailed report of the project:

Insect Controlled	<i>Ips confusus</i> var.
Number of trees treated	
Pinus Edulis	37
Pinus Ponderosa	27
Total	<u>64</u>
Man-days spotting	$\frac{1}{2}$ Supervisory
Cost of spotting	\$ 2.50
Cost per tree spotting	0.039
Man-days treating	
CCC	$2\frac{1}{2}$
Supervisory	$\frac{1}{4}$
Total	<u>2-3/4</u>
Cost of treating	
CCC	\$ 5.00
Supervisory	1.25
Total	<u>\$ 6.25</u>
Cost of treatment per tree	0.098
Cost of Spotting per tree	0.039
Total cost per tree	<u>\$ 0.137</u>

On the afternoon of May 20, I received a report of a fire in Frijoles Canyon. With ten men I proceeded to the fire immediately, which was located about one mile below the upper crossing. When reached, it was about 75 acres in extent. When it was corralled and safe it was about 80 acres in extent. We are still maintaining a patrol crew on the fire.

Now that we have had a fire that was really a test of our abilities, I am convinced that the CCC's, with adequate supervision, are excellent fire fighters. On this particular fire, they pitched in and fought like demons with never a complaint that the work was too hard or the hours too long. They are certainly to be complimented on their fine spirit.

Previous to this fire we had held two sessions of a fire school for the benefit of foremen and leaders of this camp. We were also planning to hold sessions of this school on May 20, May 21 and May 22, making use of information Cy Harkins, Chase and myself had picked up at a Forest Service fire school held on May 14 and May 15. Since this fire, we feel that we, including foremen, leaders and men, are equipped with more knowledge concerning fighting forest fires than we could possibly obtain by

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BANDELIER FORESTRY (CONT.)

an academic discussion. Within the next few days we plan to hold a meeting of supervisory personnel and leaders, with the idea in mind that we can locate and remedy any weak points in our fire organization plan and our fire fighting technic.

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## NAVAJO

By John Wetnerill, Custodian

I am sending in Milton's report. Travel here has not started yet. When it does start, it will come in a rush as the main road is in the best condition to every point from here. The road to Highway U. S. 89 is the best it has ever been. There has been a lot of work done on the road to Utah. The road to Shiprock has been put in good condition, and the road to Gallup, via Chin Lee and Ganado, has been made passable.

Our friend Zeke Johnson was through the other day with a party from the University of Utah. Dr. Pack was head of the party. He had Senator Thomas, the president of the University, with him. They wanted very much to see the Be-ta-ta-kin but were afraid to put there heavy cars over the trail from Marsh Pass to the top of the hill.

By Milton Weather, Senior Laborer

Reported into Kayenta May 2 for duty at Navajo National Monument; went to Be-ta-ta-kin on the third and checked upon conditions since I had left last October. Found that the Indians had been using the Be-ta-ta-kin section for pasture for sheep, goats and horses; very little grass left and quite a bit of the young growth had been destroyed. Also found that the tools, lumber and cooking pots left in the ruins had been taken. The following list covers part of what was taken: 1 axe, 3 shovels, 1 8# double jack, 1 3# single jack, 14# stone hammer, 1 sheep herder's stove, stove pipe, lumber and 4 rods of fence.

Roads to the ruins are reservation roads, rough but passable; the road in from Marsh Pass has never been worked; road from Shanto was worked last year but has washed some from the winter run-off.

Weather has been warm during the middle of the day, cool at night, which helps. Days have been partly cloudy.

Flowers are in bloom, the wild sweet pea has been the leading one with the mallow and yucca coming into full bloom at this time of writing (May 21). There should be a good crop of acorns this year as I have never seen the gamble oak in as heavy a bloom as there is now.

Work done on the Monument: A half day was spent cleaning out the spring at the ruins. Reworked the trail from the camp grounds to the ruins as the stock had been above the trail, and rocks, dirt, etc., had

NAVAJO (CONT.)

rolled down into the trail. Two trees had blown across the trail; these I removed.

As soon as I left last fall a Navajo put a hogan and corrals just off the Monument and used the Monument for a pasture until snow drove him out in January. He had it all to himself through November and December. By the first of January there was nothing left to hold him. They moved back after the new growth started in March.

I have been pretty busy getting camp established and the trails back in condition. I have been unable to get my horse and pack mule yet, so had to hire an Indian to take my outfit from the end of the road to the ruins.

Visitors for May: One party of three on May 2; On May 5, a Harvey party of five were out on top opposite the ruins; they did not come down. On May 18, a party of four was contacted at Kayenta for four hours; they are to go to Be-ta-ta-kin, where I will meet them again.

Made a trip to Keet Zeel May 22, 1937, with the Arizona State Teachers College Archeology class. There were nine in the party with Mr. John McGregor in charge. Mr. and Mrs. Hablutzel were with the class. The party visited Be-ta-ta-kin Friday evening and left for Keet Zeel the next morning at seven, and were back at the end of the road at 5:00 PM.

The trail needs working on three places, one badly in need of repair. The trail at the big falls, where we go out the trail, needs to be rebuilt. About one mile from Keet Zeel a new crossing on a wash needs to be cut and about  $\frac{1}{4}$  mile from Keet Zeel some axe work needs to be done.

Found things at Keet Zeel in fair shape, no damage being done. The only thing missing was the registration book and can, which leaves us without any record of who has been there.

There were about two feet of snow in the Canyon last winter according to the Indians.

Birds observed at Navajo

Black-throated Warbler	Yellow Warbler ?
Rocky Mountain Orange-Crowned Warb.	Western Warbling Vireo
Cassin Vireo	Say Phoebe
Western Wood Phoebe	Pinyon Jay
Long-crested Jay	Woodhouse Jay
Canyon Wren	Rock Wren
White-throated Swift	Violet Green Swallow
Sharpe-shinned Hawk	Cooper Hawk

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NAVAJO (CONT.)

Navajo Birds (Cont.)

American Raven  
Western Robin  
Western Gnatcatcher  
Titmouse  
Long-tailed Chickadee  
Western Tanager

Turkey Vulture  
Townsend Solitaire  
Lead-colored Bushtit  
Mountain Chickadee  
Spurred Towhee  
Ruby-crowned Kinglet

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## TONTO

By Thomas B. Onstott, Park Ranger

This month shows a decided increase in heat and a corresponding decrease in visitors. Nevertheless, there is still some progress over last May.

Mr. Palmer of Station KOY, Phoenix, offered time for the Monument on the air. On the evening of the 20th, I went in for a fifteen minute interview on the ruins. In doing this I found out that it almost imperative to have more than fifteen minutes for any kind of description of a Monument.

On Sunday, May 9, Mr. Hugh Miller, Mr. Tovrea and Mr. Rose stopped in on their way back to headquarters from the northern part of the state.

Jimmie and Sally Brewer stopped here overnight on the 23rd. The next morning the three of us went to the Upper Ruins so that Jimmie might photograph some doorways. Jimmie seemed somewhat anxious about getting ready for his park ranger examination. Good luck, Jimmie.

The SWM Stencil No. 16 is not very impressive for this month, but here it is:

Total visitors	413
Total time guided	5,060 minutes
Total visitors to ruins	280
Total parties to ruins	73
Total time guided at ruins	3,750 minutes
Average size of parties to ruins	3.8
Average time of parties to ruins	50.75 minutes
Total visitors guided in museum	310
Total parties guided in museum	80
Total time guided in museum	1,355 minutes
Average size of parties guided in museum	3.75
Average time of parties guided in museum	16.9 minutes

Many visitors have asked questions concerning the wildlife of the Monument and surrounding country, to which I would reply that there

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TONTO (CONT.)

were only the smaller game animals near at hand, as only coyote, fox, and javalina hogs had been seen or heard until recently. The other night, however, I was awakened to find I had chills running up and down my spine. On listening a brief moment I heard the weird screaming of a mountain lion rather close at hand. It continued for some time, and it was several days before the curl came out of my hair. Well, now when asked, I feel quite safe in saying that some of the larger game animals are close at hand.

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## PIPE SPRING

By Leonard Heaton, Acting Custodian

Last night I read that, "If you write every other day there is a lot of news but if you wait a month to write there is no news at all." I find this to be true when I try to write my report at the end of each month but thanks to the habit I have of making a daily record of my activities writing reports isn't as hard as it used to be.

The number of visitors for May is about the same as for the preceding month. The lack of visitors is partly explained by the fact that the road to the North Rim of the Grand Canyon is not yet open. Total travel, 278.

Al Kuehl and Mr. Ward, of the BPR, were here on the 11th and 12th. They were inspecting the location of the road from Fredonia to Tuweep; the road will pass the Monument. On the second day Al spent three or four hours with me in discussion about the construction of camp tables, the telephone line, and other problems which have cropped up since his last visit.

### Nature Notes

I have done no bird-banding this month because there have been very few birds about the place. In contrast to last season only about half the number of birds are nesting here.

Lizards and snakes are not as numerous as in other years either. One bullsnake has adopted the Fort as his home and has been seen within the building several times.

I have collected some twenty-five or thirty species of plants during my spare time and am enjoying it very much, especially the study of the *Utahia sileri* cactus. When the fruiting season for the latter is over I will make a report on what I have found; some very interesting things have developed.

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## PIPE SPRING (CONT.)

### ECW Notes

We have had only seven men working on the Monument this month as one boy could not take it and went home. The men have been busy on the elimination of the wash and in constructing camp tables. All six of the tables are now cut and fitted but we are letting the wood dry before we set them up. Al will help spot them in the camp ground next time he is in.

Work has commenced on the watering trough and drinking fountain. I would like to get these two projects finished before leaving for Washington. Superintendent Draper told me this morning that he was purchasing the materials needed for both jobs so we should be finished in two or three weeks.

### Weather

The month has been very dry with west winds nearly every day. Water holes are drying up and small plants are starting to burn. We are badly in need of some rain. A few nights have been cool and several days have been almost cloudy enough to bring rain but no moisture resulted.

### Lectures

On nights on which movies were given at the CCC camp, I have given two illustrated talks on some of the Southwestern Monuments. I utilized about twenty minutes before the main show started. I have had an average of 120 boys for the talks and they wish me to continue them.

### Museum

On May 2 I was in Mount Carmel, Utah, and located some fine old pieces of furniture that I hope to get for our museum, but the people don't want to part with the stuff unless I am able to give them something to replace it.

I also got an old Sharp's Rifle from Mr. Merlin Adams of Kanab, Utah, and have been promised another rifle by Mr. Elmer Johnson of Short Creek.

I have been making some shelves and tables on which I hope to display the historic material I have on hand.

By the end of the month the old Deseret Telegraph line will pass from use and will be taken down, except for the portion of the line which is on the Monument. I am wondering if we couldn't send a couple of messages over the line to officially close it after its 66 years of use. I believe I will send telegrams to the Director and to the Deseret News, telling them of the change.

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# HEADQUARTERS STUFF

## BRANCH OF EDUCATION

By Charlie R. Steen, Jr. Park Archeo.

I spent the entire month at Headquarters with the exception of a day at Tumacacori National Monument and another at Tonto. Park Naturalist King will probably return to Coolidge by the middle of June.

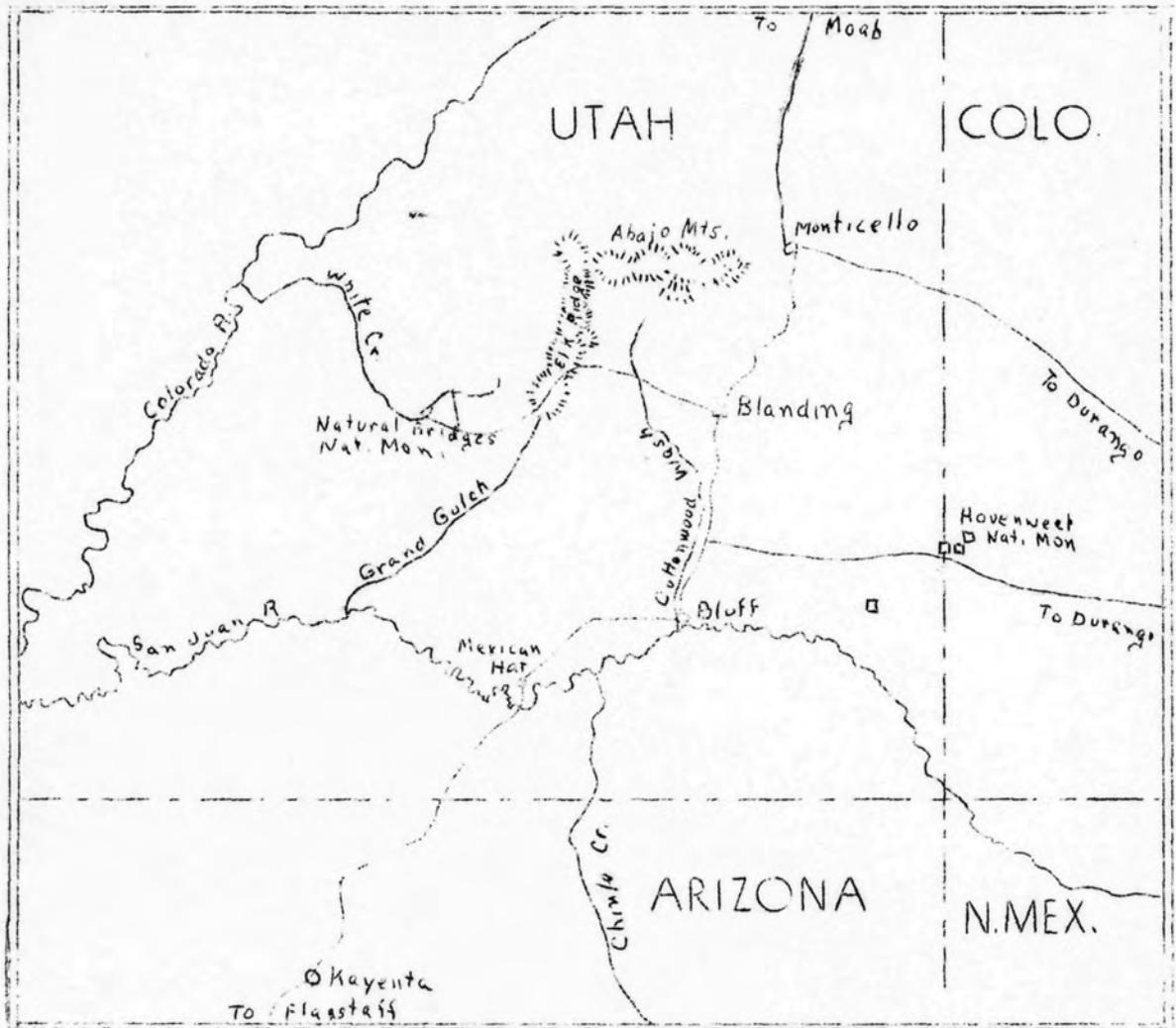
The ruins stabilization project was started at Tonto National Monument on May 28. The work is being performed by William A. Duffen and two laborers and should take between two and three weeks to complete. One short section of wall is to be rebuilt so that some original roofing timbers, which have very little support at present, may receive necessary bracing. Other items of the work include placing footings for a couple of walls which are in bad shape, cleaning up several piles of loose rock sand which lie in the rooms and destruction of an unsightly and unnecessary ramp of dry masonry which was built about seven years ago.

During May the Branch of Education Offices were moved from the administration building to the front half of quarters No. 1 which were partitioned off for the purpose. We now have three rooms, an office, library and workroom. The change from the very cramped quarters we occupied before is very pleasant; now if we can just brush aside all the remarks which are being made relative to being able to sleep on the job everything will be hunky-dory.

No birds were reported banded at any of the banding stations this month, consequently there is no bird banding chart. A summary for the full year will be printed in the June report. Another chart which is missing this month, because of lack of time, is the Visitor Statistic table; it will also appear in the next issue.

# THE Supplement

S-M MONTHLY REPORT



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# ARCHEOLOGICAL INVESTIGATIONS AT NATURAL BRIDGES NATIONAL MONUMENT

By Charlie R. Steen, Jr. Park Archeologist

## Introduction

During October, 1936, Mr. Zeke Johnson, Custodian of Natural Bridges National Monument in San Juan County, Utah, was repairing the trail in White Canyon between the Caroline and Augusta Bridges. One cool afternoon he looked about for a warm spot where he might eat his lunch in comfort and noticed that the sun was shining on a ledge about thirty feet above the floor of the canyon. After a little climb he gained the ledge, which was much larger than it appeared from below, and was quite surprised to find himself standing before a small but well preserved cliff dwelling. The feature of the dwelling which particularly caught Mr. Johnson's eye was a roofed kiva, through the roof of which passed the poles of an old ladder.

There are several small ruins on the Monument but until this site was found there were none which could be reached without a strenuous or even a dangerous climb. The one humorous exception to the foregoing statement is that on the same ledge and about one hundred yards north of the site in question is a group of about 12 rooms in a poor state of preservation which is visited by scores of people every year. Due to a constriction in the width of the ledge and the presence at that narrow place of a small group of junipers it seems that no one during the past 25 years had felt it necessary to explore the entire length of the shelf.

Since most visitors to the Monument express a desire to see ruins it was decided that I should accompany Mr. Johnson to the Bridges before the beginning of the 1937 travel season and do any needed work so that hikers to the Bridges might inspect the dwelling. I left Headquarters, Southwestern Monuments, at Coolidge, Arizona, on the morning of April 13 and arrived in Blanding, Utah, the following evening. The road over Elk Ridge was blocked by snow at that time so it was necessary to pack out to the Monument. One day was spent in Blanding getting our equipment together and in visiting a few ruins in the vicinity, and on the morning of the 16th we left for the Monument. Two days were spent in traveling each way and four days at the Bridges, which put us back in Blanding on the 23rd of the month; two days later I was back at Headquarters.

During the trip I visited and took notes of nine sites and cleaned two kivas and a small circular room in the dwelling at the Monument, which is designated as site 8 in this paper. Sherds were collected at six sites - these were left at the Museum of Northern Arizona for identification.

A Short Description of Sites Visited - Other than Site 8

(1) A series of small cliff dwellings four miles southeast of Blanding and located on the east side of Brown's Draw. A small two-story house and about a dozen single rooms are all in a poor state of preservation. The houses and storage rooms are built under a long ledge and have much the same appearance as the ruins at Walnut Canyon National Monument.

(2) - A cliff dwelling, originally of about twenty rooms on the west side of West Water Canyon. The dwelling has been pretty well wrecked by vandals but is still a fine appearing ruin. Deric Nusbaum named this five kiva house because of the five kivas in connection; he also collected some beam specimens from the site which were dated 1234-35 by Stallings of the Laboratory of Anthropology. One kiva is still in a fairly good state of preservation nearly to viga height. It has red plastered walls with broad white decorative lines between its five pilasters. Just across the canyon is another and smaller dwelling.

(3) - A sherd area on a ridge one mile north of Blanding. A few scattered rocks might indicate a house but there is nothing definite.

(4) - A badly weathered stone house of about ten rooms on a low ridge on the west side of Comb Wash just below the mouth of Arch Canyon.

(5) - A large cliff dwelling about a quarter mile up Arch Canyon from its mouth. The site is located under a high shallow overhang on the north side of the canyon. The ruin covers an area of about two acres and must have been a large village but at present, except for a few walls which stand two stories high, there is nothing but a huge mound, some sherds and viga holes in the cliff to mark the building. Judging by the height of the viga holes, petroglyphs and sharpening grooves on the rock the structure must have stood four or five stores high while it was being occupied. Hundreds of pecked and painted pictographs have been placed on the cliff; these include one long panel (20' x 3') of white paint on which many zoomorphic figures had been painted in red. Six kivas are in evidence with possibility of more being under the fill in the large plaza. Because of the difficulty of access to this site the only evidences of vandalism are a few very small holes.

(6) - A two-story cliff dwelling of ten rooms located on the west side of Fish Canyon and about one mile south of the trail from Comb Wash to Natural Bridges. The structure is in almost perfect condition with most of the rooms filled with pack rat debris. No sherds were collected at this site although a few were in evidence.

(7) - A group of five circular structures whose walls stand from one to five feet high located in a large rock shelter in a short spur of Fish Canyon around which the trail from Comb Wash to Natural Bridges passes. These houses are of the same general type as rooms 1 and 2 in site 8

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ARCHEOLOGICAL OBSERVATIONS AT NATURAL BRIDGES (CONT.)

which will be discussed further on in this paper but there were some differences which should be noted here. All five rooms are partially destroyed but the walls of two stand five feet high in part, which seems to have been the original height. The bases of the walls were formed by a double row of sandstone slabs, set on edge and plastered with adobe. On the slabs several juniper poles were laid end to end then plastered over with mud. Additional courses of poles and mud were applied until the desired height was reached. I found no pottery at this site nor has Leke Johnson, who has visited this group on a number of occasions, ever noticed any sherds in the shelter.

(9) - A cliff dwelling 1.5 miles up White Canyon from Augusta Bridge. There are two groups of houses at this site, one on the talus slope at the foot of the cliff, the other on a ledge sixty feet above the floor of the canyon. To reach the ledge one must climb a forty-foot ladder the uprights of which are of Douglas Fir poles apparently cut by the builders of the houses. Rungs have been nailed to these poles during recent years. On the ledge are several dwellings, some storage rooms and a large kiva; all the walls are in a poor state of preservation. At the foot of the cliff the houses are more numerous and in better condition. Two wattle and daub lean-tos and a couple of rectangular storage rooms cut into the hard clay at the foot of the cliff show very little evidence of the passage of the years since they were used. There are two kivas at the lower site, both with complete roofs. One of the kivas was cleaned out years ago (the site is more than a mile above the Monument boundary) and shows no particularly important feature aside from a very large niche in the wall behind the ladder and above the ventilator and a large number of pictographs scratched into the wall plaster. The pictographs are in the form of rectangles averaging two by eight inches with pottery designs scratched within the limiting lines of the figures. The second kiva is still about half full of packrat trash. Above the trash line are three niches set rather closely together. The center niche is much larger than the other two. An interesting feature of this structure is the construction of the pilasters or columns between the niches. Both are masonry columns ten inches wide, 18 inches deep and two feet high. A short juniper log, eight inches in diameter, was set upright at the front of each column and runs for its entire height. The arrangement is reminiscent of the short timbers which were placed at the bases of pilasters in the Chaco Canyon area.

Site 8

This small cliff dwelling, situated in White Canyon and approximately half way between the Caroline and Augusta Bridges, consists of two groups of houses on the same ledge and about three hundred feet apart. The first or northernmost group will not be considered in this paper as no work was performed in the ten or twelve badly demolished rooms which comprise it. As I mentioned in the introduction just south of these dwellings the ledge is constricted in width and half a dozen good sized junipers occupy this

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ARCHEOLOGICAL OBSERVATIONS AT NATURAL BRIDGES (CONT.)

small area, effectively blocking any view from one end of the ledge to the other. South of the trees is the second group of buildings, five houses, two storage rooms and two kivas.

Although my principal purpose in visiting the site was to clean out the roofed kiva and to arrange for its protection, the presence of two round structures similar to those in Fish Canyon (site #7) so excited my curiosity that I decided to clean one of those as well. It was later decided to clean the debris from Kiva #2 since there seemed to be very little fill in it as proved to be the case. The three rooms in which we worked are described herewith.

Room #2

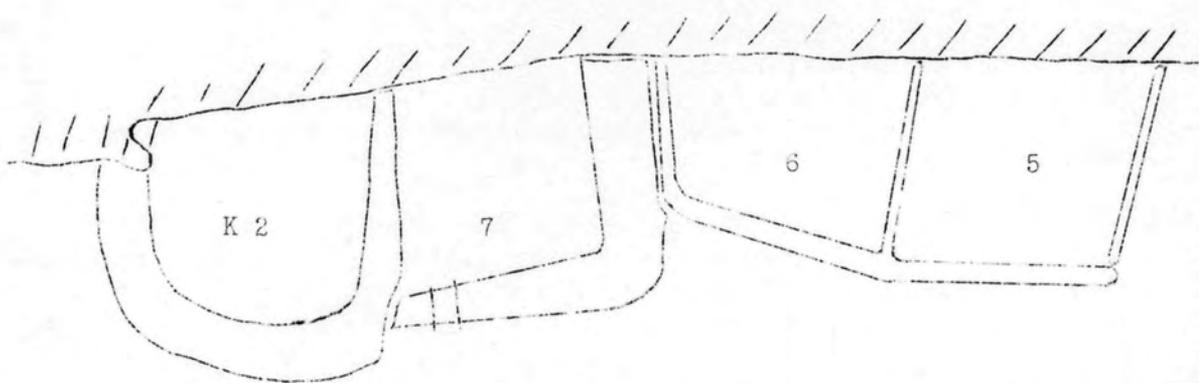
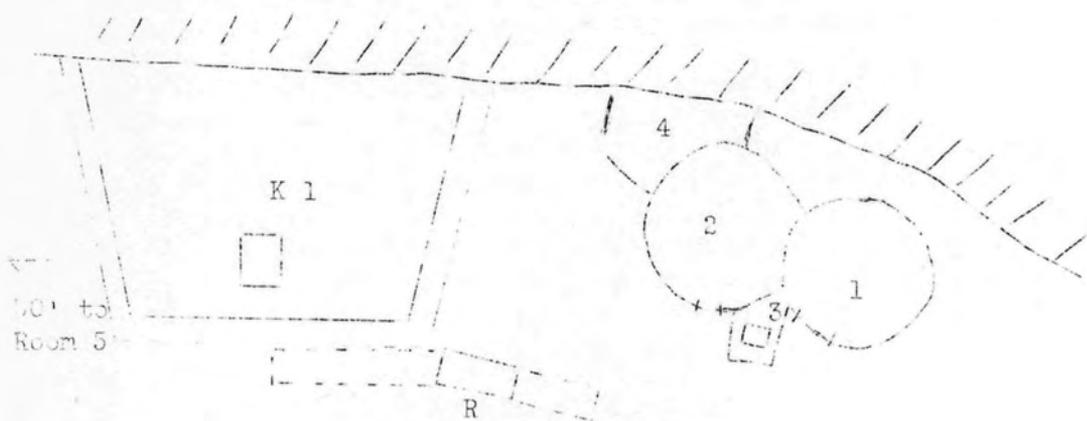
Room #2 is a small circular room abutted against Room #1 which is of the same type. The outstanding features of these rooms are the type of wall construction and the shape of the doors.

Mention has already been made of the walls at Site 7. The walls of Rooms 1 and 2 are similar except that instead of juniper poles, river boulders were used as a basic material. Here too, a double row of upright sandstone slabs were laid in a circle with a nine foot diameter as a foundation. The slabs were well cemented with adobe and a single row of small river boulders laid on the slabs; adobe was then patted around and over the boulder to form a single course. When the adobe was dry another course was added and the process repeated until the walls had reached a height of approximately five feet.

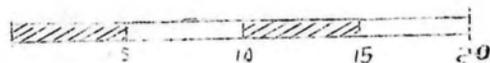
The door of room 2 (and of all similar rooms that I saw) is heart shaped, and had a pronounced moulding of mud around the door on the outer wall. This room had the smallest doorway of any of the round rooms seen. The door was only 1.4' high with a maximum width near the top of 1.4' and a minimum width at the base of 0.75'. While it is possible to enter the room it takes a little effort. Two other complete doors of the same nature were noted, each of them was approximately three feet high.

A ventilator, or a similar rectangular opening, had originally been constructed through the wall below the door but it had subsequently been chinked with small spalls of sandstone. Apparently at the same time the opening was filled the small granary which I have designated as Room 3 was added to the existing round houses and a buttress placed against the wall of room 1. This buttress came up to and squared off at the base of the door.

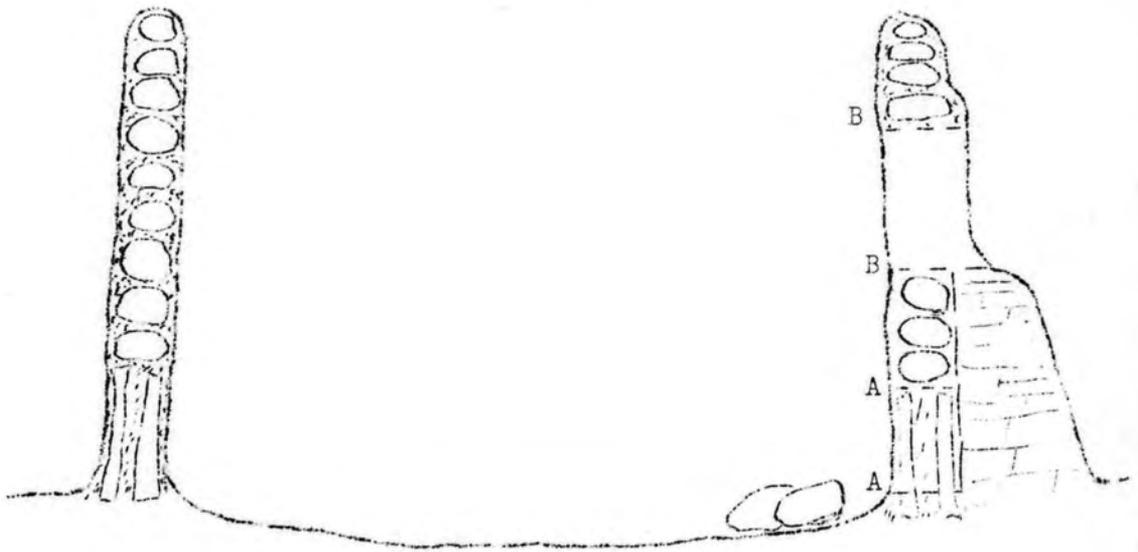
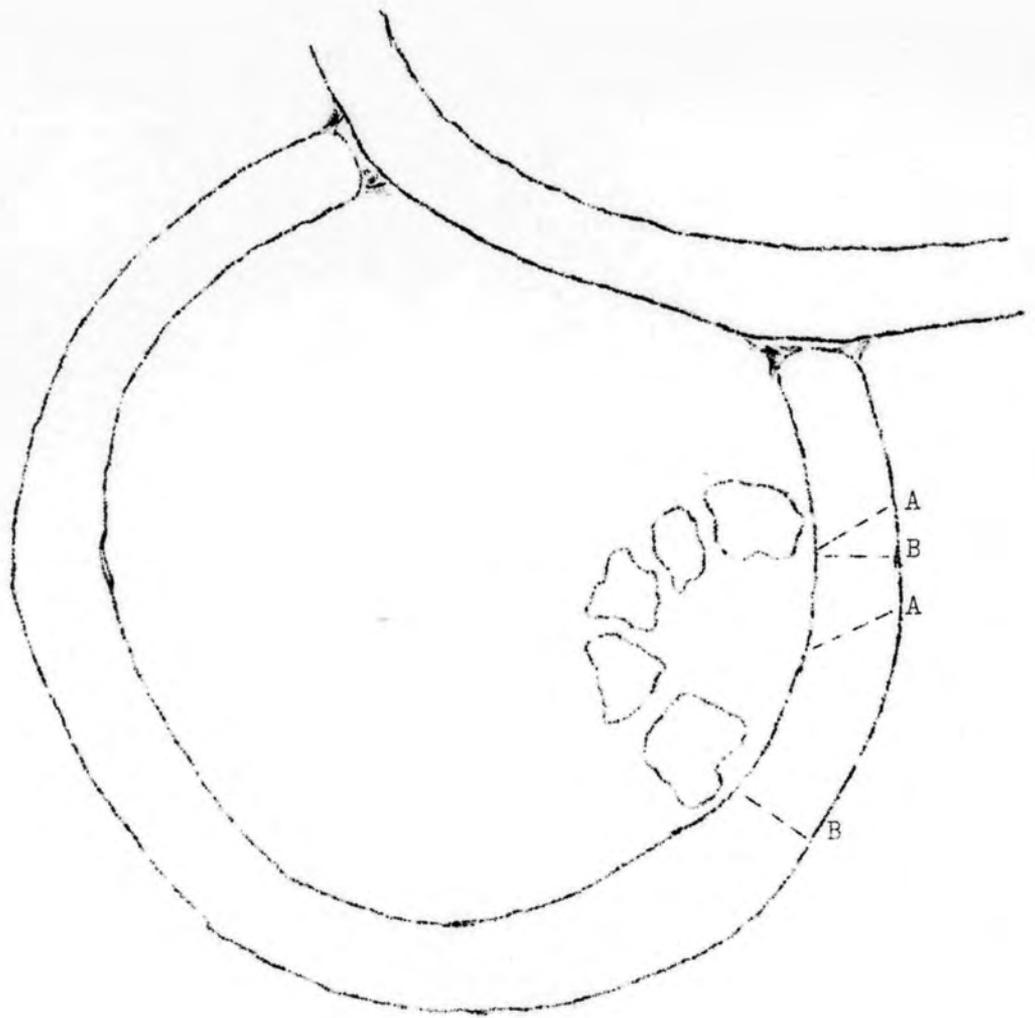
Inside the room the walls show only one feature worthy of mention, four plugs of wood which are imbedded in the walls 3.3' above the floor and which are spaced so that they quarter the circumference of the room. These plugs are securely cemented in the wall and are stuck in at an



Scale = 20'



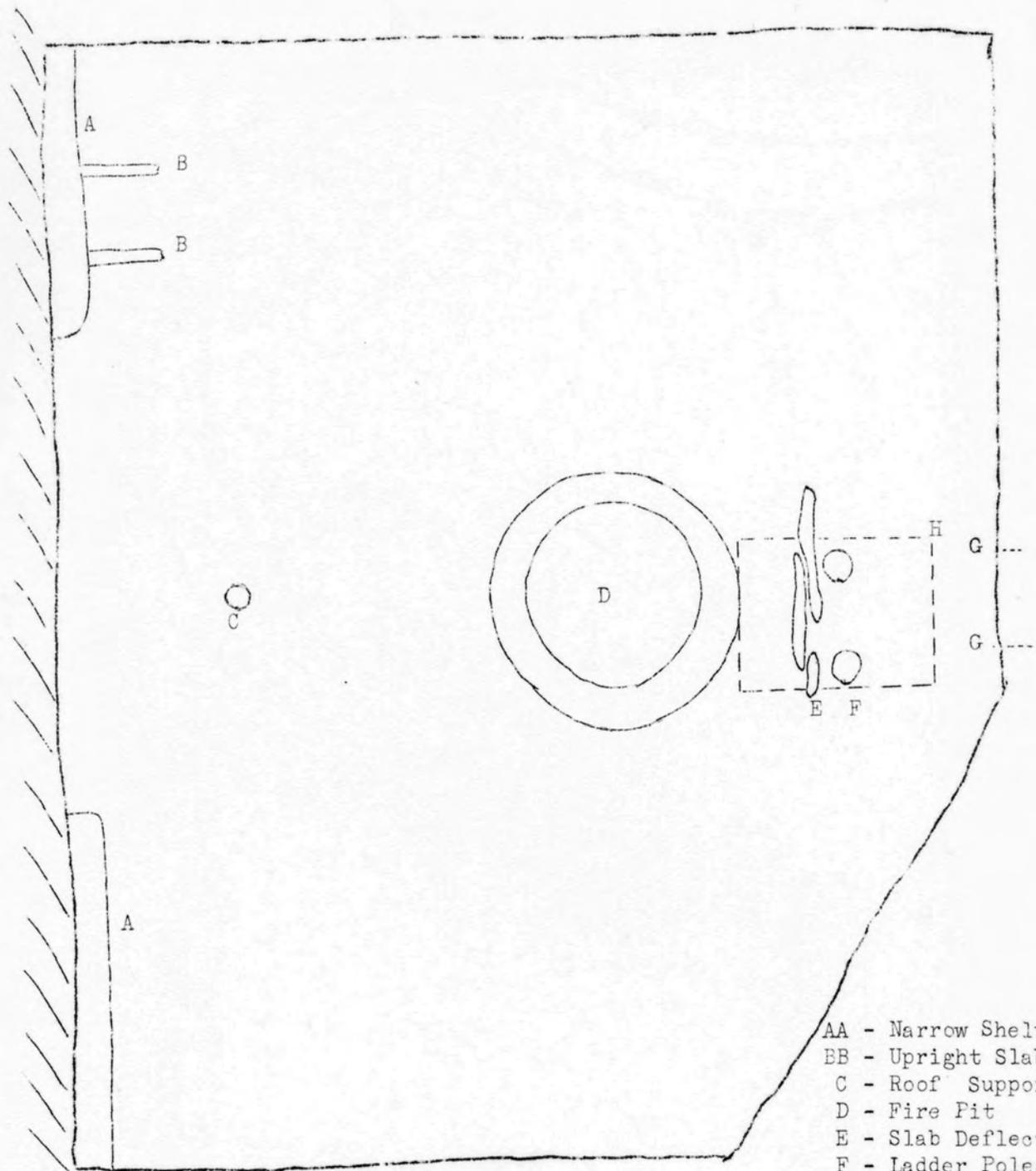
I - PLAN OF SITE



AA - Ventilator

BB - Door

II - PLAN AND PROFILE - ROOM 2

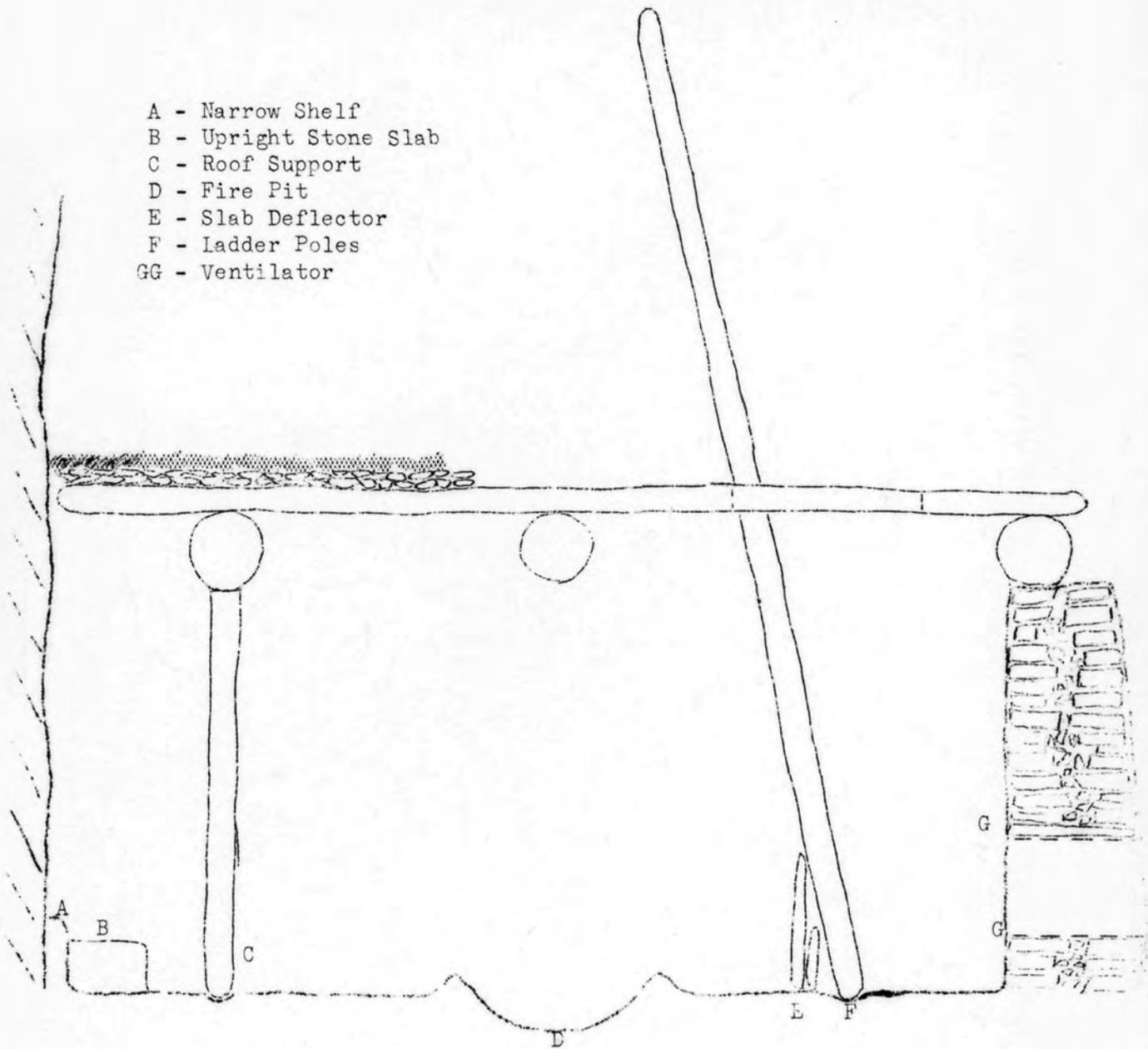


- AA - Narrow Shelves
- BB - Upright Slabs
- C - Roof Support
- D - Fire Pit
- E - Slab Deflectors
- F - Ladder Poles
- H - Position of Hatch
- GG - Ventilator

Scale  $\frac{1}{8}'' = 1'$

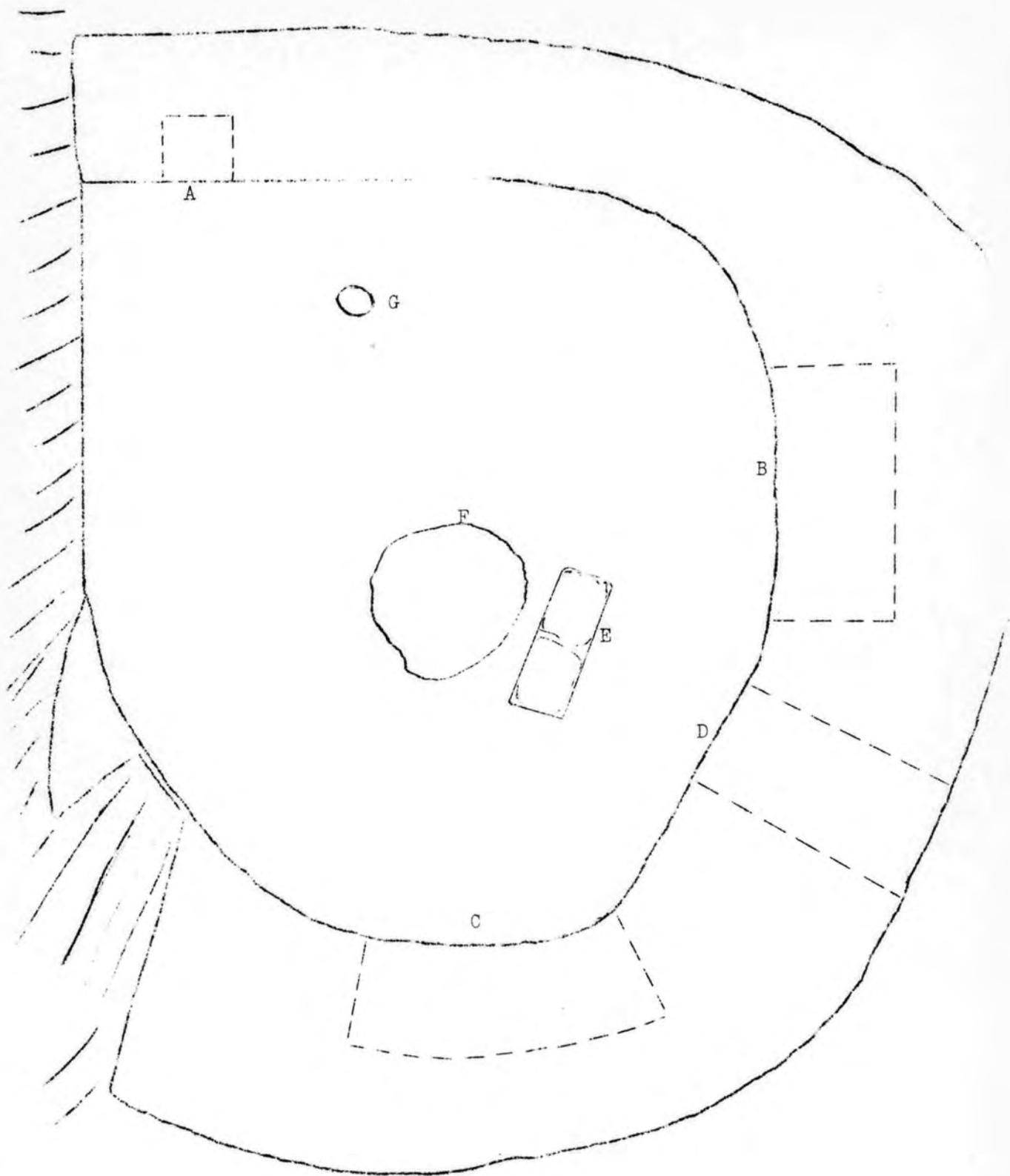
III - PLAN - KIVA 1

- A - Narrow Shelf
- B - Upright Stone Slab
- C - Roof Support
- D - Fire Pit
- E - Slab Deflector
- F - Ladder Poles
- GG - Ventilator



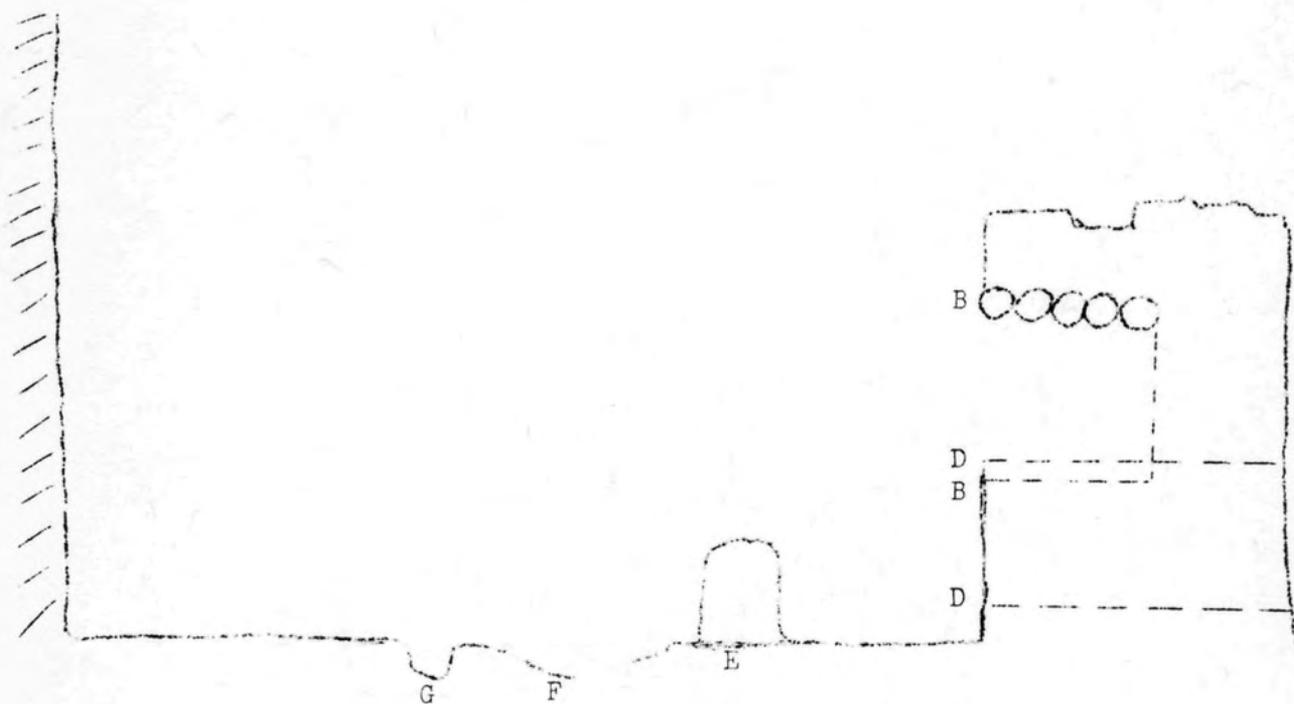
Scale  $\frac{1}{8}'' = 1'$

IV - PROFILE - KIVA 1



- A - Niche #1
  - B - Niche #2
  - C - Niche #3
  - D - Ventilator
  - E - Masonry Deflector
  - F - Firepit
  - G - Sipapu
- Scale  $\frac{1}{2}'' = 1'$

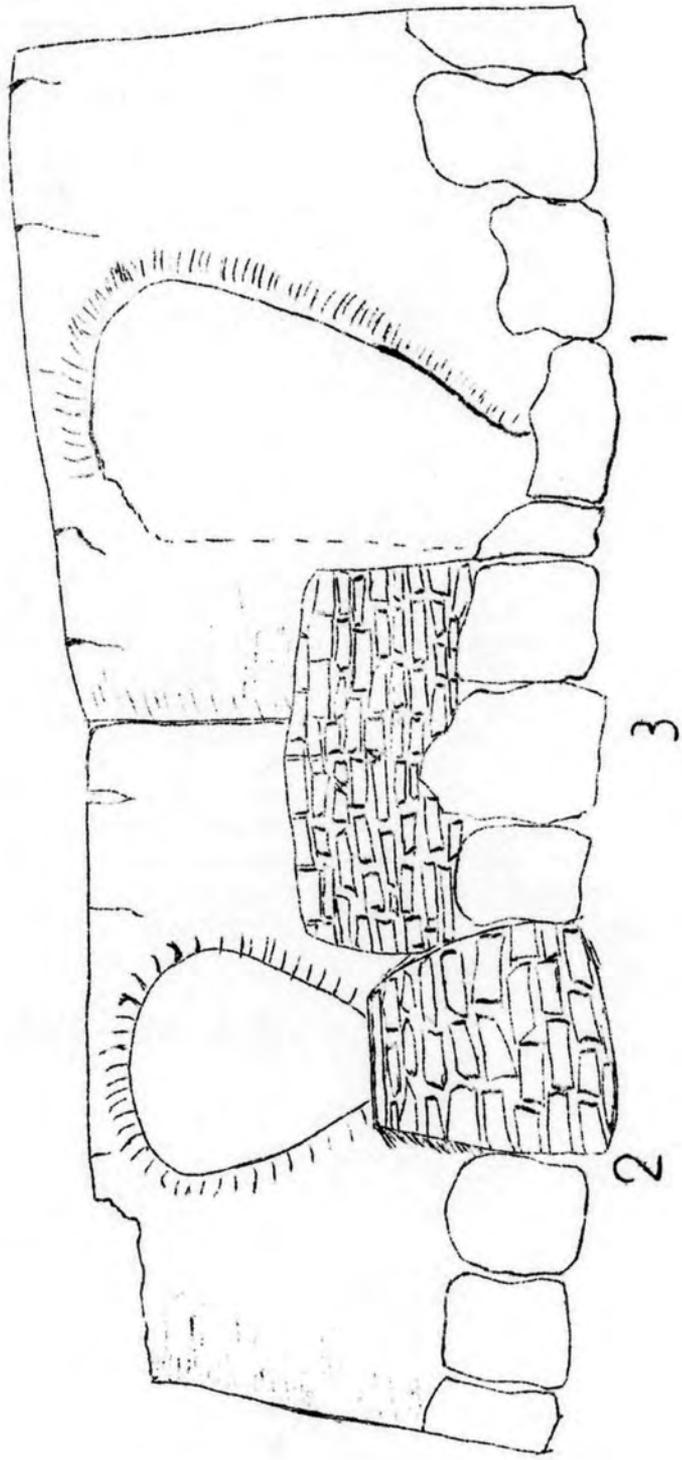
∇ - PLAN - KIVA 2



- B-B - Niche #2
- D-D - Ventilator
- E - Masonry Ventilator
- F - Fire Pit
- G - Sipapu

Scale  $\frac{1}{8}'' = 1'$

## VI - PROFILE - KIVA 2



VII-ROOMS 1,2&3

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ARCHEOLOGICAL OBSERVATIONS AT NATURAL BRIDGES (CONCT.)

angle of about 45 degrees from the perpendicular. All the plugs point toward the center of the room and although they have been broken off almost flush with the wall it is possible that at one time they helped to support the roof although there is no evidence on which to base such an assumption. A close examination of the walls of Room 1 failed to disclose similar sticks.

The debris on the floor was from three to six inches in depth and was composed only of roofing material and of a few artifacts. I am not able to reconstruct a plan of the roof from the evidence disclosed by the floor fill. Apparently the main support of the roof was a series of short sticks .75" in diameter and from 1.5' to 2.0' in length. Over these sticks, which were far from being long enough to reach across the room, was laid a thin layer of willow wands then a layer of adobe which was patted down by the bare feet of children as a large number of foot impressions show. The entire roof was no more than three inches thick; the roof had been destroyed by fire.

The floor of the room was slightly concave and plastered. There are no features on the floor except for five rough boulders which were found lying in a semi-circle facing the doorway. These stones served no apparent function. While cleaning the floor a pair of yucca fibre sandals, some small fragments of turkey feather cloth, a few pieces of yucca cord, some pointed sticks and a few sherds of two corrugated pots were found. No wall material was found on the floor nor did any charcoal or evidence of fire other than the charred roofing material turn up.

Kiva #1

This was the structure that caused the trip. A fine looking, rectangular roofed kiva with original ladder poles protruding through the hatch is not found every day. Unfortunately, when we had cleaned out the debris only one of the rungs of the ladder was found to be in place. The other three rungs, however, were lying on the floor at the foot of the ladder.

The fill in the room was approximately four feet deep around the ladder but shoaled off to not more than eight inches at the back of the kiva. The kiva was built against the rear of the rock shelter and a large block of sandstone weighing several tons is incorporated in the structure by forming the southeast corner. It may be well to call attention that a seeming difference in plan as shown in Plates I and III is due to this large rock. The measurements in Plate I were taken on the roof of the kiva whereas Plate III is a plan of the floor and shows the irregularity of the room itself as caused by the rock.

A very interesting feature of the exterior is what is left of an adobe ramp which led from the floor of the rock shelter to the hatch of

the kiva. Originally this ramp was approximately fifteen feet in length but only three feet of the center portion remain in good condition. The ramp was of solid mud, two feet wide with a plaster finish.

The roof of the kiva is of large cottonwood vigas, juniper poles, juniper shakes and mud. Large cottonwood poles were laid along and on top of the walls with the vigas resting on them. The smaller poles and shakes were laid above the vigas in alternating directions in the usual southwestern fashion.

The walls of the kiva are thick, from one to two feet, and are of double faced masonry set up in adobe with the center of the wall filled with spalls.

Two short wooden pegs and a few pictographs are the only features of the smoke stained walls of the kiva. The pegs protrude 0.3' from the south wall at a height of 3.5' above the floor. One is 2.2' the other 3.75' from the southwest corner of the room. The pictographs consist of a spiral, some triangles and a figure of a man painted in black on the west wall, near the southwest corner.

Along the west wall are two small, narrow shelves which run along the wall from the southwest and northwest corners, respectively, of the room. The first shelf extends 4.4' from the south wall is 0.4' broad and 0.45' above the floor. This shelf is pecked out of the rock of the cliff. The second shelf, or small bench, is built of adobe. It extends 3.7' from the north wall, is 0.3' deep and 1.0' high. At right angles to the second shelf are two upright stone slabs 0.6' high, 1.1' apart and extending 0.95' into the room.

The only other features of the floor are the firepit, a roof support, the deflector, the ladder and the ventilator. These, with the exception of the pole which supported one of the vigas, are in line. The firepit is large, 2.2' in diameter and has a rim raised 0.2' above the floor. The deflector consists of three stone slabs set on edge and leaning against the ladder poles. Raised 0.4' above the floor, the ventilator passes directly through the wall into the open; the ventilator is square in cross section and measures 1.6' for each of its sides.

#### Kiva #2

As was the case with Room 2 this kiva had very little fill on its floor so I decided to clean it as a supplemental exhibit. Digging the twelve to fourteen inches of soft sand which covered the floor disclosed the fact that this structure was probably abandoned and partially destroyed while the cliff dwelling was occupied. No roofing material of any sort was found nor were the few blocks of sandstone lying within and around the kiva sufficient carry the walls to a suitable height for a roof. Two other factors which point to the same conclusion are that

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ARCHEOLOGICAL OBSERVATIONS AT NATURAL BRIDGES (CONT.)

only a very few pot-sherds were found in the fill (none on the floor) and while we noted no signs of activity by rodents the floor plaster was in a very bad condition with large portions of plaster entirely missing.

The walls of Kiva 2 are very thick, from two to three feet. Both sides of the wall are of faced sandstone masonry and the middle of the wall is a rough mixture of large sandstone blocks, spalls and adobe.

Around the wall of the kiva are three niches, one quite small and two large ones. The small niche is located in the north wall of the room at a height of 0.6' above the floor. Although the wall has been destroyed down to the recess enough was left to indicate that the face was probably one foot square and that the niche extended 0.85' into the wall.

The other two niches in this kiva are of the same size and height from the floor. Both are 3.5' wide, 1.8' high and 1.8' deep. The backs of both are of faced slabs of sandstone set upright and each has a half dozen juniper headers to support the wall above and serve as a ceiling. Nothing was found in either of these recesses.

A square opening measuring 1.5' on each side and passing through the wall served as ventilator. The ventilator, as was the case in Kiva 1, is raised 0.4' above the floor. A stone and adobe deflector two feet from the ventilator protected the firepit which is so badly torn up that measurements were impossible. The wall deflector is 2.1' long, 0.8' wide and 1.1' high.

The only other feature of the floor is a small hole, 0.4' in diameter which might have been a sipapu.

#### Recommendations

(1) That a light ladder be made so that the cliff dwelling might be visited without a long and somewhat arduous climb by way of the north group of ruins. Such a ladder can be taken down and laid at the base of the cliff where it will be completely hidden so that parties who walk along the trail unaccompanied by a ranger will be unaware of the presence of the dwelling and, consequently, the ruin will be saved from vandals. Custodian Johnson was to make this ladder at the beginning of the 1937 travel season.

(2) That another archeologist investigate the occurrence and construction of the round houses which seem to be peculiar to this district. So far as I have been able to determine this type structure has not been reported up to the present.

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ARCHEOLOGICAL OBSERVATIONS AT NATURAL BRIDGES (CONT.)

Summary

The most important result of the trip was the establishment of certain definite and peculiar methods of construction for small round houses whose function is unknown. These methods are:

- 1 - Wall footings of parallel rows of upright stone slabs (this method of wall construction is not common in the San Juan region)
- 2 - Walls of river boulders, or poles laid horizontally, carried up in courses.
- 3 - Heart shaped doors surrounded by a heavy moulding.
- 4 - Possible additions to the three features listed above are: concave floors and a lack of pottery.

A possible explanation for these houses, since usually no smoke stain is found on the walls, is that they were storage rooms, but at site 8 there were storage rooms adjoining the two round structures and all other rooms of the site were built of horizontally coursed masonry of sandstone blocks. Aside from the two doors in the round houses, all doors at the site were plain and rectangular. It does not seem probable that a specialized type of construction should be developed for granaries - besides, Room 2 at one time had a ventilator - but no firepit. Further excavation of this type house is suggested. According to Zeke Johnson there are a number of round houses scattered through the region.

The well known fact that the kivas of southeastern Utah are far from being of standardized shape or construction was further borne out by the excavation of the two kivas at site 8 and observations of kivas at other sites.

Unfortunately lack of time prevented us from cleaning the floor of one of the living rooms.

ARCHEOLOGICAL OBSERVATIONS AT NATURAL BRIDGES (CONT.)

Catalogue

<u>Catalogue Number</u>	<u>Description</u>	<u>Provenience</u>
K1-1	Portion of reed screen	From fill of Kiva 1
K1-2	Oval ring of willow, lashed with yucca fibre-possibly rim of basket	"
K1-3	Fragment of fibre sandal	"
K1-4	Fragments of turkey feather cloth	"
K1-5	Bone awl	"
K1-6	Bone awl	"
K1-7	Bone awl	"
K1-8	Bone awl	"
K1-9	Corn cob with twig inserted in stem end	"
K1-10	Yucca fibre sandal-heel worn through	From floor of Kiva
K1-11	Bundle of grass, similar to Navajo comb	"
K1-12	Stone ax	"
K1-13	Billet of wood	"
K1-14	Trough shaped billet of wood	"
K1-15	Willow pot ring	"
K1-16	Short stick with grass brush tied to it	"
2-17	Bundle of yucca leaves	Floor of Room #2
2-18	Bundle of yucca leaves	"
2-19	Yucca sandal	"
2-20	Yucca sandal	"
2-21	Short length of turkey feather cord	"
2-22	Sharpened willow wand	"
2-23	Corn stalk (short length, smoothed at each end)"	"
2-24	Three pieces yucca fibre cord	"
2-25	Several pieces of knotted grasses and canes	"

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# ADDITIONAL INFORMATION ABOUT THE VIKITA

By Alden W. Jones

(Editor's note - Following the appearance of last month's paper on the Vikita, by Hayden, Steen and Pendleton, we received the following notes on the ceremony. Mr. Jones, who has worked with the Papago for several years and knows them and their legends well, has given us permission to run his letter as an addendum to last month's article.)

Since Julian has gotten me into the Supplement as a correspondent, I may as well live up to the title. In the Superintendent's Annual Report, Sells Agency, for the fiscal year 1935-36, Page 5, "Achi" is listed as census village #21, the Parent village of the "Gue-Achi de Santa Rosa District," (Gue- meaning Great). And on Page 6, in discussing J. W. Hoover's list of Papago Parent Villages, Santa Rosa and Ak-Chin being two of them is this note: "Recent information indicates that Santa Rosa and Ak-Chin are descended from Achi." I am told that Hodge's Handbook of the American Indian refers to the Village as Ati. Ruth Underhill told the teachers at Santa Rosa, who followed the local habit of calling it Archi, that it was really Aw-Chic. The headman of the village, Juan Pablo, pronounces it Ar-Chic, with the final syllable almost indistinguishable, and says it means "Narrow Water". Take your choice. At any rate, the place exists.

The Papago Legend has it, that after the People-who-came-from-the-east (and burned the Casa Grande) had chased the People-who-ran-away into the sand country, they returned to the Santa Rosa Valley, and made their first settlement at Ar-Chic, and from this settlement the whole Papago Tribe has descended. That is the reason for holding the Vikita there. Incidentally, Vikita is pronounced in four syllables, with the accent on the second: Vee-ee-kee-ta.

The Friday dance you saw at Anegam was only one of five that were being held that day. At Ar-Chic Friday night the five groups sang, and during the Saturday ceremonies they danced, in the order in which the villages were founded. 1 - Ar-Chic, 2 - Kakamutkuk (Santa Rosa north of the wash), 3 - Kakajamuk (Santa Rosa south of the wash), 4 - Ak-Chin, 5 - Anegam. For the 19 previous days of the fiesta, each of these groups had been practicing and having dances and ceremonies in its own Round House in its own village. Each group made its own symbolic figures and costumes to suit its own idea of what the various songs represented. (Hayden's conjecture is right. The songs have words, but they were muffled by the masks.) Bearing this in mind, that each of the five groups did each one of the dances, with its own symbolic objects, makes it evident that there were nowhere near as many different dances as there seemed. This is further complicated by the fact that, when it was a group's turn to dance, any member of that group who was tired, was at perfect liberty to "Sit it out," and any member of another group who

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MORE ABOUT THE VIKITA (CONT.)

felt in need of exercise could join in that dance.

The dances themselves, Saturday, were in three separate groups. First, a series representing the harvest, with the various stages of corn-growing. The clouds, then rain, the first sprouts, the short stalks, higher stalks, the ears, the ears ripened, and finally the ears husked. They always came in the same order for one particular group, but there wasn't much coordination between the five groups. Sometimes two or three groups would depict the same stage, one after another, and sometimes one group would do three or four stages before another delegation took its place.

The second series represented the various Papago Legends, but how many, I haven't been able to find out. One Indian insists that each group did only its own favorite stories, irrespective of which ones the other groups used, but I can't verify that. I had several legends pointed out to me, however. The one with the Baboquivari float was about the cave in that mountain in which E-Etoic, the little god, lived. The jagged blue mountain was Ha-Auk Muhuerta - "Where Ha-Auk was burned." The ones with the eagle were the story of B-Ak, the man who was turned into an eagle.

The final "series" consisted of the Tizwin Dance you mentioned. Or perhaps more properly, the Hunting Dance. It represented the usual hunting procedure. Tizwin is made, brought to the Round House (the 8' circle) and a dance is held that night, but there is no drinking. The next morning the hunt starts, the hunters return, divide the spoils, have a dance, get plenty drunk.

These dances were more or less fun. The memorial to the burial of the children was serious, sacred. The first ten days of dancing had been climaxed by ceremonies at the Children's Shrine west of Santa Rosa. (The original Santa Rosa village was a quarter mile west of this shrine.) These were represented in the Saturday ceremonies which you saw, by the four children in front of the lean-to. The men who passed in front of the children now and then sprinkled them with corn meal, symbolically giving them sustenance.

The official reason given for holding the Vikita this year instead of last is that it seemed at first as if the crops would be bad, and when it was found that they would turn out all right, it was too late in the season for the dance. Another often mentioned reason was the disinclination of some of the old people to have the Vikita again after the disturbance in 1931 over picture-taking. The interruption Saturday morning that you decided wasn't a fight, was when Mr. Hall, the Superintendent, made a speech assuring the people that no photography would be allowed. "The two score or more of men in army overcoats" were a charco gang who had just arrived, and picked a good place to see from. They

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MORE ABOUT THE VIKITA (CONT.)

had no reserved seat tickets. Just more nerve than the rest.

The dancers who ran around collecting food Friday night were not the original performers, but substitutes called in while the "Stars" rested. They did dance before the campfires of all the visiting families, as Hayden says, but were not allowed to collect from people of their own village. That is, Ak-Chin dancers could collect from all except Ak-Chin families.

You seem to have missed the opening ceremony of the sun-rise Saturday morning. This was done by the Sun, Dahsh, and the Moon, Mashotk. The Sun wore a headdress of turkey feathers (they should have been eagle feathers, but no eagle could be caught in time) representing the sun's rays, and dyed red, white, and blue, but not from patriotic motives. The Moon wore a white cloth semicircular mask that hung down over his chest. Both had well be-dangled gee-strings, and torsos and legs painted black. At the first sign of sunrise, the two stood inside the enclosure, facing the gate on the east, Mashotk directly behind Dahsh. As the sun rose, they moved forward, first in long slow strides, then in short quick steps as they approached the gateway, which they passed through just as the sun detached itself from the horizon, and made one trip at a jog-trot around the enclosure to the dance plaza, and back to the gate again, accompanied only by the men who made their headdresses. They took no further part in the performance.

Other notes from my book. Jose Manuel of Santa Rose, who made some of the Kakajamuk group's symbolic objects says that the ten days of dancing before each of the two main ceremonies are just rehearsals. The same men take part in each Vikita - even if he is in California he has to come back for it - but always somebody dies, and the new man has to learn all the words to the songs in those ten days. Also, a new symbol maker, such as he was, has to listen to the songs to find out what to make.

Juan Filimeno, also of Santa Rosa, whose youngest brother was one of the boys representing the children who were buried, says that the event commemorated by the Children's Shrine is the most important thing in Papago history, because it was the first big thing that happened after E-Etoic went away, it was the first crises that the Aw-O-Tahm solved all by themselves. E-Etoic got them out of all the other jams.

Of eight old men interviewed, none had ever heard of Navitco, who, Russel says, was a diety honored by the Vikita. As a purely personal opinion, I think that the identification as "diety" must be incorrect. The old songs and stories often personify natural objects, such as the sun, Dahsh, and allow them to speak, but never give them any supernatural power. Even E-Etoic, the little god - as he is so often called - was not supernatural. And if he was sometimes almost superhuman, it was only because he was a medicine man, the most powerful one the Papagos ever had. And although E-Etoic must be the same as the Pima's "Elder

Santa Rosa District traced  
from Aerial Survey

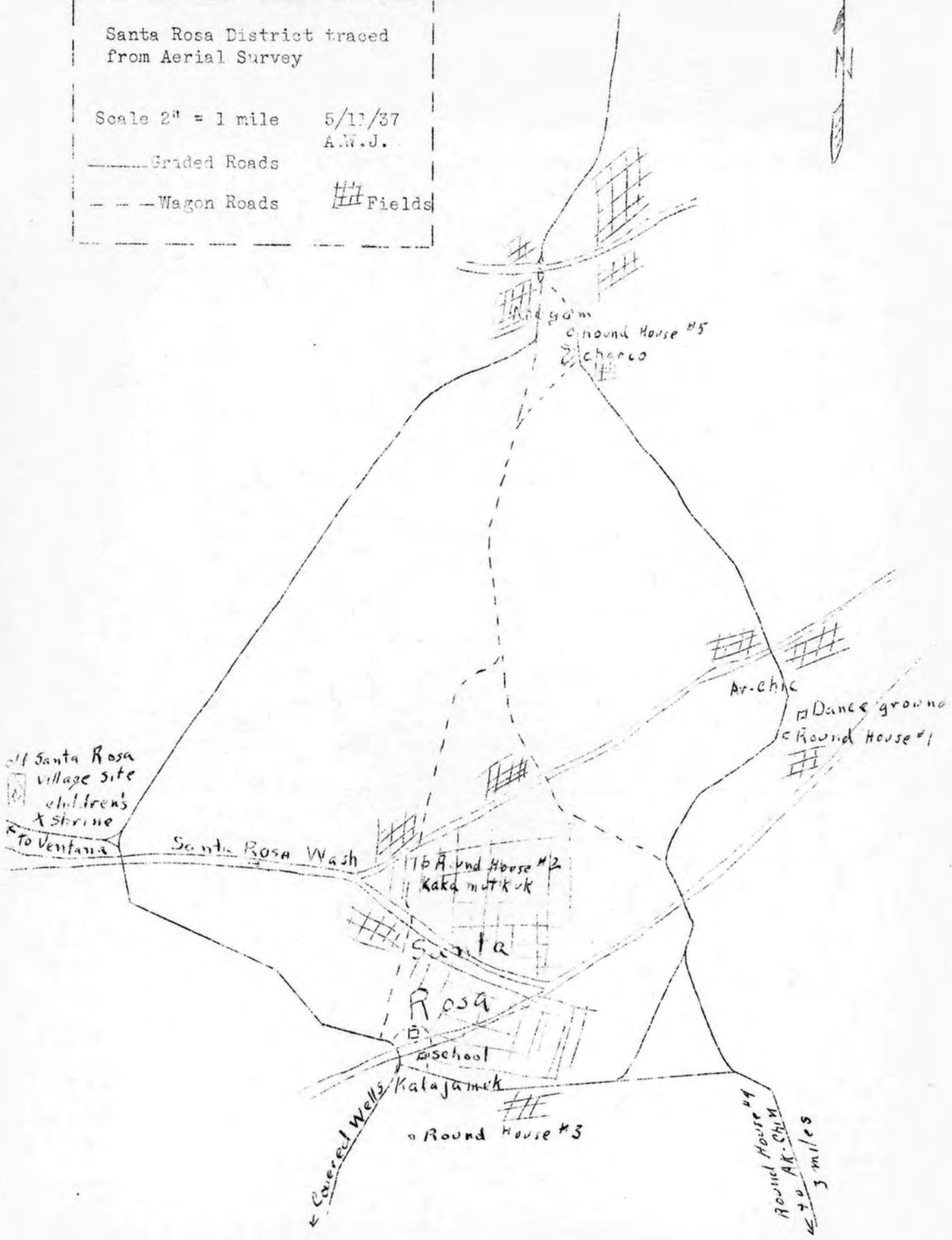
Scale 2" = 1 mile

5/11/37  
A.W.J.

—— Graded Roads

- - - Wagon Roads

## Fields



off Santa Rosa  
village site  
children's  
X shrine  
to Ventana

Santa Rosa Wash

16 Round House #2  
Kaka mutkuk

Santa

Rosa

school

Kakajamek

Round House #3

Ar-ehic

Dance ground  
Round House #1

Round House #5  
Chacco

Covered Wells

Round House #4  
AK. Chin  
to 3 miles

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MORE ABOUT THE VIKITA (CONT.)

Brother", all the differences in the legends can best be summed up in the usual Papago phrase - "Those Pima fellows, they talk too fancy."

This discussion is longer than I intended, and some of my points may seem trivial, but the five group feature of the Vikita seems to be so well known, I was surprised that you hadn't gotten it. I hope that this information may be of use to you, if only to supplement what you already have. I have checked it as closely as possible, and personally am convinced of its accuracy.

\*\*\*\*\*oo\*\*\*\*\*