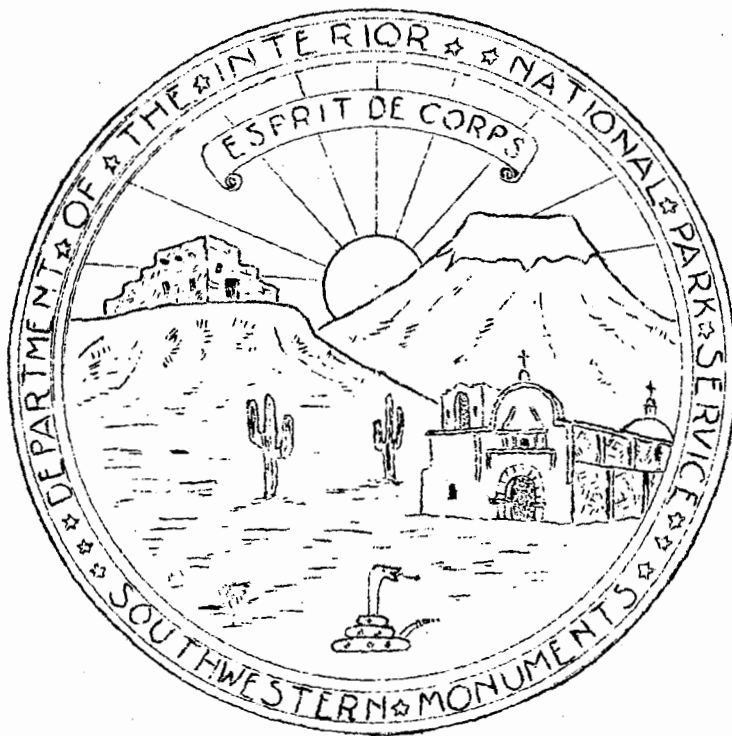


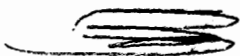
# SOUTHWESTERN MONUMENTS MONTHLY REPORT

FEB. 1935



DEPARTMENT OF THE INTERIOR  
NATIONAL PARK  
SERVICE

LIBRARY  
NATIONAL PARK SERVICE  
WASHINGTON, D. C.





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CONCERNING THIS MONTH'S COVER

On the front cover of this report will be found a new decoration with which we may all become more familiar as time passes; and it is fitting that we set down here the fact that this is the very first time it is used, also something of its origin and meaning.

It was hatched about nine o'clock on the night of February 9 by Tove, Hugh, and the Boss who were holding a Taurian Session in the East Room. A rough draft was struck out that night by Tove and that went through the mill the next day and about every one on the place had a say about it. The net result is before you, and we are willing to let it stand on its merits.

Among the Southwestern Monuments the geologic units are represented by the mountain in the background; the prehistoric units by the ruin in the left middle ground; the historic units by the church in the foreground; and the botanic units by the cactus near the center.

Behind and over all rises the sun of our destiny: on its way up and nothing in the world can stop us so long as we hold our Esprit de Corps.

And, just to show that we are serious, but not too serious, we put the rattler in the immediate foreground to show that we are good fighters, gentlemen who do not strike without warning, but when we do strike we mean business, and, finally, that it takes the wisdom of a serpent to operate this far-flung group of the most interesting units in the National Park System on the money we get!

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# SOUTHWESTERN MONUMENTS

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SOUTHWESTERN MONUMENTS PERSONNEL

HEADQUARTERS Southwestern Monuments, Coolidge, Arizona. Frank Pinkley, Superintendent. Robert H. Rose, Acting Assistant Superintendent. Walter G. Attwell, Associate Engineer. Dale King, Junior Park Naturalist. Hugh M. Miller, Chief Clerk. Robert Cole, E.C.W. Clerk.

GENERAL FIELD MEN: Harry Langley, Assistant Landscape Architect. Charles A. Richey, Junior Landscape Architect. J.B. Hamilton, Assistant Engineer.

FIELD STATIONS

1. Arches---Moab, Utah. J.U. Turnbow, Custodian.
2. Aztec Ruins---Aztec, New Mexico. Johnwill Faris, Custodian.
3. Bandelier---Box 669, Santa Fe, New Mexico. Earl Jackson, Custodian.
4. Canyon de Chelly---Chin Lee, Arizona. Robert Budlong, Custodian.
5. Capulin Mountain---Capulin, New Mexico. Homer J. Farr, Custodian.
6. Casa Grande---Coolidge, Arizona. Hilding F. Palmer, Custodian.  
Louis R. Caywood, Park Ranger.
7. Chaco Canyon---Crownpoint, New Mexico. Thomas C. Miller, Custodian.
8. Chiricahua---No custodian.
9. El Morro---Ramah, New Mexico. E.Z. Vogt, Custodian.
10. Gila Cliff Dwellings---Cliff, New Mexico. No custodian.
11. Gran Quivira---Gran Quivira, New Mexico. W.H. Smith, Custodian.
12. Hovenweep---Cortez, Colorado. No custodian.
13. Montezuma Castle---Camp Verde, Arizona. Martin L. Jackson, Custodian.  
Frank Fish, Park Ranger.
14. Natural Bridges, Blanding, Utah. Zeke Johnson, Custodian.
15. Navajo---Kayenta, Arizona. John Wetherill, Custodian.
16. Pipe Spring---Moccasin, Arizona. Leonard Heaton, Acting Custodian.
17. Rainbow Bridge---No custodian.
18. Saguaro---Tucson, Arizona. No custodian.
19. Sunset Crater---Flagstaff, Arizona. No custodian.
20. Tonto Cliff Dwellings---Roosevelt, Arizona. Charlie R. Steen in charge.
21. Tumacacori---Box 2225, Tucson, Arizona. George L. Boundey, Custodian.  
Martin E. Evanstad, Park Ranger.
22. Walnut Canyon---Flagstaff, Arizona. J.W. Brewer in charge.
23. White Sands---Alamogordo, New Mexico. Tom Charles, Custodian.
24. Wupatki National Monument---Flagstaff, Arizona. J.W. Brewer in charge.
25. Yucca House---Cortez, Colorado. No custodian.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
SOUTHWESTERN MONUMENTS

Coolidge, Arizona  
February 1, 1935

The Director  
National Park Service  
Washington, D.C.

Dear Mr. Director:

The first two pages of this report consist of a condensed resume of activities over the whole Southwestern district.

#### WEATHER AND TRAVEL

The Monuments, differing greatly in altitude and latitude, naturally experienced wide extremes of temperature during the month of February, but precipitation has been so general in the form of rain, sleet, hail and snow that stockmen and farmers predict the best forage and growing conditions we have had in years.

The bulk of the southern Monuments report warm, moist conditions and lots of visitors. Tumacacori leaped into the van with an increase in travel of 84.6% over February last year, Casa Grande follows with 13.6%, Montezuma Castle with 9%. Figures with which to compare Tonto's respectable total of 559 are lacking. Bad roads at Gran Quivira and high altitude and snow at Chiricahua cut travel at these two Monuments, but White Sands is bearing up well.

Extremely changeable "loco" weather was expected and received at Wupatki, El Morro, and Bandelier, although travel picked up at the latter. Capulin, Chaco, Canyon de Chelly, and Aztec were cold-bound. As we go north to Pipe Spring---away north of the Grand Canyon---we find almost a paradox in balmy weather and average travel.

#### FIELD TRIPS

Acting Assistant Superintendent Robert Rose left the middle of the month for the Office of the Field Division of Education at Berkeley where he will spend a month on Museum and Education problems.

Junior Park Naturalist Dale King visited Tumacacori and Gila Pueblo during the month.

#### CONSTRUCTION

Contract at Aztec on construction of the Administration Unit is practically complete. Repairing of irrigation ditches and welding of cattle-guards is under way at Pipe Spring.

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## SOUTHWESTERN MONUMENTS GENERAL

### E.C.W. ACTIVITIES

From the reports of Project Superintendents Chase of Bandelier and Hammond at Chiricahua the following itemized progress reports have been taken:

#### Bandelier:

1. Finishing of second septic tank completes "Campground Sewer System" project.
2. Last cattle-guard is ready for concrete pouring.
3. Walls, roof, and rough plumbing completed on campground comfort station.
4. All campground tables and one picnic table completed.
5. Walls of concessionaire's barns to viga height and vigas delivered.
6. Considerable progress in planting in center of parking area and along entrance road.
7. Two hundred yards of building stone quarried and delivered for office building and garage, ready to start when approved plans arrive.

#### Chiricahua:

1. Clearing, cleaning Bonita public campground effected. Some grading to be done. Sewer trench dug.
2. Sugar Loaf horse trail put through to top of mountain. Minor details to be completed.
3. Excavations started for Fire Lookout House on top of Sugar Loaf.
4. Bonita Canyon Highway bettered with rip-rap and revetments for protection of banks.
5. Telephone system nearing completion.
6. Topographic survey continuing steadily.

### PERSONNEL

No personnel changes during the month.

### VISITING PARK SERVICE OFFICIALS

Charles S. Richey, Landscape Architect, visited Headquarters Feb. 4.

Feb. 12 Joseph W. Crouch, District Project Manager, Sub-Marginal Land Division, National Park Service, arrived at Headquarters in regard to land matters at Wupatki National Monument.

REPORTS FROM THE MEN IN THE FIELD  
GRAN QUIVIRA NATIONAL MONUMENT

W.H. Smith, Custodian

Travel has been rather scarce for the month. We registered only 216 visitors entering the Monument in 61 vehicles---but the major portion of the month has been cloudy and damp and the road from Mountainair has been in pretty bad shape.

During this period of cloudy weather we got quite a little bit of moisture in the form of snow and rain, but, the winter being warmer than usual, snow melted almost as fast as it hit the ground.

Since the robbery of the Museum February 1 we have been pretty busy helping the local authorities try to apprehend the guilty parties. The sheriff of Socorro County and the local officers after looking the evidence over concluded that there was some local talent on the job as the marauders knew the lay of the land as well as any of our old settlers hereabouts. They could hit the old roads near the Monument as no other except one who is very familiar with the surrounding country.

They did a very thorough job of rifling the collection as they took everything under glass. We made several leaflets describing the collection as best we could and sent them to various places where we would suspect this collection eventually to be displayed, asking the authorities of these places to cooperate with our men here in watching for these artifacts.

On February 3 Donald D. Brand, Assistant Professor of Anthropology at the University of New Mexico, and a number of his students were here visiting the ruins. A number of these students went on from here to visit the ruins over east of here.

I was going through the register the other day collecting some data for a gentleman who was checking on travel to various Parks and Monuments for the last few years. Covering a period of the last five years here I find I have registered 4,072 persons annually, and the vehicles entering the Monument number 879 per year.

Another interesting fact about this is that the last two years I find that our travel through the winter months has more than doubled what it was five years previous to this date. This gives a more uniform number of visitors through the year than was the rule a few years ago.

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TUMACACORI NATIONAL MONUMENT

George Boundey, Custodian

Visitors for the month, 2,116.

The Fiesta at Tucson has ent many visitors our way this month and it seemed quite like old times again.

Our visitors have been very much interested in the Mission and many notable people have registered.

The FERA excavating will end the first of March. The excavation has not produced anything we did not know was here except the actual foundations of the old church (Possible Church I) and I think it has proved without any argument what I have always contended that Tumacacori was not a recent Mission of the Franciscans but is the old Jesuit Mission of San Cayetano de Tumacacori.

Many of the spring birds are here and many of the cottonwoods have leaved out, but the last two days have been cold with freezing nights and I am afraid the early blossoms will be frosted.

Have been talking with a number of old settlers about here and they are all enthusiastic about rebuilding one of the old smelters, an arastra, setting up one of the old Padre mills with the sweep for the burro, etc. Think this would be much better than making some small models in a museum. The old desert wanderers who continually drop in at the Mission wouldn't be satisfied with much less than the real thing, and the expense would not be any greater.

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## REPORT OF FERA EXCAVATIONS AT TUMACACORI

By Paul Beaubien, in Charge

Not much to report. Rain slowed the work at first and with the end of ERA in sight all effort was directed to covering the exposed walls. During rain, we dug inside the Mission where many treasure hunters had been before us. I remember your wonderment at the amount of treasure hunting inside buildings with brick or plaster floors. Supposedly anyone with a treasure to hide in a hurry would take it outside where the evidence of hasty digging could be easier to obliterate. Maybe the treasure hunters needed exercise on rainy days.

In last month's report I wrote I thought that the present Mission (or Church III) was just Church II without the transepts and with the present Sacristy, Bell Tower, and Sanctuary added. But about three feet down below the present floor level of the Sanctuary and two feet down in the Sacristy we found the specialized plaster of the transepts. Evidently the walls of the Sanctuary and Sacristy were coexistent with the wings of the older structure. I don't like to admit being too hasty last month but it can't be helped now. (Note: It takes a big man to admit he's wrong, Paul).

In the sanctuary we found a large, odd-shaped piece of gypsum plaster bearing some rather artistic decoration. I believe it to be the ledge from in front of the one statue niche there and that it should be restored.

Four pillar or arch foundations of large stones set in lime plaster were found in the Nave, but I have no idea of their purpose.

Just west of the Mission entrance is the beginning of a long mound which carries south beyond the Monument boundary. The first 18 rooms at the north end were uncovered before refilling became a necessity. No important museum specimens were found, but foundations of older rooms were discovered under some floors.

Am sorry to see the work stop now as so much remains to be excavated.

With crews changing every three days and varying in size from four to 22, I have purposely worked where new men would do less damage. But any mounds left untouched will keep.

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#### WUPATKI NATIONAL MONUMENT

J.W. Brewer, in charge

I think it's well to head out here with our outstanding news of the month. The 6th to 12th takes the headlines with a total of 1.68 inches of rainfall. The recording for the 11th was the largest with .56 of an inch in a single day. The maximum temperature for the month was 66 degrees and the minimum 25 degrees.

A very pleasant month except that when 1.68 inches of rain descend upon Wupatki it means that 424,121.544 tons of water have soaked into or run off of the Monument. Do I get the preservative I've been asking for? Don't we really need it for protection of our plastered walls? The east side talus, a section untouched by C.W.A., has begun to slide and fall across the trail; the east wall of Room 48 has partially washed out; the west wall of Room 63 is weakening because there is no drainage provided; the roof of Room 4 is leaking. Please forward one flood-control engineer and a crew of "stabilizers."

Sallie and I attended the annual meeting of the Northern Arizona Society of Science and Art on Tuesday, January 29. At the close of the business meeting Dr. Colton gave a dandy lecture on Wupatki National Monument illustrated with slides by Milton Snow. I found it very pleasant to hear for a change someone else telling the "story" of Wupatki. Lyn Hargrave topped the evening off with an illustrated lecture on his work with the Rainbow Bridge-Monument Valley Expedition last summer. The slides for Lyn's lecture were furnished by Ansel Hall of the Berkeley Office and were some very fine photographs. Sal and I left shortly after the refreshments and drove out to the Monument.

I reported in November that a trapper was camped at Heiser Spring. He's still there and has bagged the following: 21 bobcats, 52 coyotes, and 3 badgers---one of which goes to the Museum of Northern Arizona. I prepared a skin mount and the skeleton of the specimen. Also into a trap went a Golden Eagle. Clyde Peshlacai, Navajo, put in a request for this catch and removed the long feathers for use in the Night Chant. Jimmie Kiwanwyteewa, Hopi, asked for the small feathers to use on katchina dolls; I boiled the rest down to a skeleton for the Museum. Something of a "Jack Spratt", don't you think?

The first Rock Wren of the year was observed February 18; I took a specimen of Redwing Blackbird on the 19th.

On the 13th Engineer Gene Gordon brought out Mr. Crouch of San Francisco. Sal and I joined them on a trip to Crack-in-Rock. Gene came back without Mr. Crouch Saturday afternoon and stayed until Sunday evening inspecting my labors. We had a dandy visit and wound up with an inspection of our nearby Grand Falls.

In your letter of January 7 is this question "Have you discovered any new tricks on how to handle visitors or any ideas on how to make them prolong their stay?" "How to make them prolong their stay" is bothering me because on

February 22 Mr. and Mrs. J.Q. Thomas (Superintendent of Flagstaff Public Schools) and Mr. and Mrs. Micke were guests. I was across the Monument when they arrived and met them in the registration room at 3:35 p.m. The party was dressed in field clothes, so, in spite of the unfinished section of trails, I decided to make the complete circuit as a typical field trip accurately timed. When we arrived back at the parking area it was 5:10 p.m.---an elapsed time of 1 hour and 35 minutes.

Having thought it would make too long a trip if I went into my sketchy dissertation on tree-dating and pottery types, I omitted them, contrary to custom. Include those two explanations and to the total time add the time that will be spent by guests when a half-dozen museum exhibits are prepared and the Citadel and Wukoki stop-overs included; then tell me who's going to feed the folks if we get any ideas on "how to prolong their stay." On this particular field trip I watched carefully to note any signs of waning interest and found none.

When leaving, Mr. Thomas remarked "It's a good thing the National Park Service has someone to guide visitors and protect the place; another few years and it would have been carried away"; Mr. Thomas was a visitor here before Wupatki became a National Monument.

Guess I'll sign off here and pack off to town via Citadel, Sunset Crater, Walnut Canyon---and add the travel figures as a P.S.

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P.S. (Pretty Sad) The Sunset Crater road didn't look so bad from Highway 89 so we turned in and did the first three miles in slick order. Sal had the wheel and was doing her usual fine job when suddenly we dropped into a snow-covered excavation where some previous motorist had shoveled out. It was completely covered with windblown snow and impossible to see from the surface. To make a long struggle and a sad story short we "hoofed" the three miles to the highway. Right here you can feel sorry for Sal, in high heels, trying to pick a path in darkness. Fortunately, the first car Flagstaff-bound picked us up.

This A.M. with the help of one of Dr. Colton's Indians we jacked it up, put on the chains, shoveled a road, and backed out. Three inches of snow had fallen in the night so I hope you will be able to see why I did not attempt to get out to Walnut.

I have just received from John McGregor some Dendrochronology data which I thought would interest you:

Miscellaneous pieces not associated with definite rooms date 1074 to 1167.

Room 35---apparently built about 1127 and used as late as 1165, plus or minus five.

Room 36---built about 1129

Room 45---built about 1145, plus or minus five.

Room 46---built about 1145, plus or minus five; used as late as 1160, plus or minus five.

To conclude, Wupatki and Citadel combined had 50 visitors during the last month period.

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## TONTA NATIONAL MONUMENT

By Charlie Steen, in charge

This has been the most eventful month of my tenure here. To begin with, 599 visitors made an appearance, and of these 383 made the trip to the lower ruins and 25 to the upper. Two of these visitors deserve special mention: one was stone deaf and pedalling a bicycle from Los Angeles to Chicago, and the other was a hitch-hiker----I haven't yet figured how either of them happened to come up here.

This has also been League of Nations month at the Tonto. I have cordial invitations to "Come and See Us" when I get to Bogot , Honolulu, and Kobe. The folks from Edmonton, Fairbanks, Bangkok, Sydney, Budapest, Frankfort, and London are either not as hospitable as the others or figure that my chances of dropping in for a meal are mighty slim.

The wish for Park Service visitors which I expressed in last month's report was more than filled. Gene Gordon has made two trips here, and two engineering crews headed by George Hopper and Howard Leslie are wearing out shoe leather by climbing over these hills. To say the least, I am very happy over the plans for improving this Monument.

The signs arrived in good shape. I will receive some posts from the State Highway Department either tomorrow or the next day and will erect them immediately thereafter. The local foreman for the Highway Department was up to see me a few days ago and said he has received authority to fix up the entrance road. He will have his equipment here sometime this week.

We had another ten-day rainy spell this month and light showers yesterday (Sunday), but aside from those days the weather has been clear and warm. There is a good deal of snow on the mountains above the 5000-foot level which indicates more flood waters for the Salt and Tonto Rivers and more acreage of storage for the reservoir. The water level of the lake has risen more than sixty feet during the past month.

Day before yesterday a lady asked me what would happen to the water in the lake if the dam wasn't there. How would you answer that, Boss?

\*\*\*\*\*

I wouldn't tell the lady, Charlie, but I wonder if the reservoir wouldn't be called a dam failure in that case?

\*\*\*\*\*

Weather conditions during February at Chiricahua were none too good during the first and last parts of the month and regular winter weather prevailed with rain, snow, fog, and frozen ground to contend with. This caused serious interruption of work projects over a ten-day period. The last days of the month brought the heaviest snowfall of the winter throughout this area.

Development of the new Public Camp Ground Area in Bonita Canyon has progressed nicely. Clearing of roadways and disposal of brush, stumps, and timber therefrom was about completed. Some grading and fills remain to be done. The sewer system trench has been dug and laying of the sewer tile will be started at an early date.

The Sugar Leaf Mountain horse trail was put through to the top about the middle of the month---a total distance of about 4,800 feet! There remains some additional adjustments of the rock walling, landscaping, and minor details before this project can be considered completed.

Plans were received for the Lookout House, to be erected on top of Sugar Leaf, and its location staked out on the highest ground. The excavations have been started, with the trail compressor crew putting in the holes preparatory to blasting. Bids for the materials have been sent out and a mule pack train will be used for transporting all cement, lumber, and other construction items.

Another crew has been working along the Bonita Canyon highway placing rip-rap and revetments for bank protection. Betterment work continued with the motor grader.

Further progress has been made on the telephone system and completion of this project can be expected on an early date. The topographic survey of the Monument has likewise continued steadily.

A carload of galvanized water pipe and fittings was received and will be used to construct the water system for supplying the new Public Camp Grounds and Administration Area.

Indian pottery and stone relics were found on the highest ground of Sugar Leaf peak during the month and turned over to the Coolidge Office.

Inclement weather conditions have not prompted many sight-seeing tourists on the Monument during February, and we have noted only an occasional group.

Around the first of the month Landscape Architect Langley visited us with Ass't Engineer Gordon to go over various Chiricahua work projects. Associate Engineer Attwell visited us on the 18th.

Forest officials stopping off at Chiricahua during February included Supervisor Fred Winn, Messrs. L.S. Gill, and Tom Bentley.

E.C.W. Inspector Reddick was here on official business February 25.

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REPORTS FROM THE MEN IN THE FIELD  
CAPULIN MOUNTAIN NATIONAL MONUMENT

By Homer J. Farr, Custodian

Travel has been rather light but in checking over I find it a little more than last February, probably about 350.

Paul Wilkerson has been here for a few days but so far has lacked fit weather for his photo work and has not attempted to do any as yet.

The fore part of the month was exceedingly nice and warm but the past few days have been terrors. Several degrees below this morning---I'd say about six below as thermometers vary some half dozen degrees.

The Custodian here has been rather busy recently answering mail. For some reason or other everybody wrote me this month wanting to know more about about Capulin. Well, I answered many but not all.

According to some of the estimates that are being broadcast by some of the largest oil companies we may expect a bumper crop of tourists this summer.

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EL MORRO NATIONAL MONUMENT

by Evon Z. Vogt, Custodian

Among the Mexicans, especially the old timers who have spent their lives with stock, either herding cattle on the upper deck of a bronc or tending sheep in lonely valleys, the month of February "es loco."

Being loco, the weather is expected to come without any regularity whatsoever. Our present month has certainly fulfilled every requirement of rain, snow, hail, wind, accompanied by the cold of Canada to be suddenly relieved by the heat of Honduras.

Even thunder followed a day when the early morning eclipse of the sun brought Navajos to our home to speculate on what was portended. Then last week a great pall hung over the Zuni Mountains to the east of El Morro. At a distance looking like a faint, gray beginning of a snow storm in the highest reaches of the pine trees but not the quite color. The low-hanging smoke of a forest fire did not offer an explanation for the wind from the east brought no smell of fire.

The newspapers came along and told how the dust storms in Kansas and neighboring states had filled the air with clouds of dirt. This reached to a slight degree the country just east of us although at Albuquerque the passenger planes of the TWA were not able to land on the obscured landing field.

During the month I made two trips---one to Gallup in my own car with light log chains on each rear wheel. These got me through the 50 miles without much trouble. The trip I made to the ranch at Atarque, 40 miles south, was made with the mail driver in a Chevrolet pickup. Six hours were required each way to make the trip. Coming back we had three sheep herders loaded on the mail bags. With the help of a pry pole 16 feet long which we carried with us we managed to get out of six bog holes which delayed our progress and added nothing to our good

humor.

From the above Weather Notes you will realize that travel to El Morro has been absolutely nix. I did go out several times to look things over but found the snow deep, the great cliff silent and immutable, no one around. Just a few birds and an occasional cottontail.

The day was put in with a thorough inspection, however, since there are things to be seen when the winter snow is on that one cannot see when the ground is dry. Our new fence built with C.W.A. labor last year is in excellent shape. The gate is as good as when we placed it. The cattle guard, which is the best ever built in these parts, heads back any cow or horse which would enter the Monument grounds. The pit is deep and clean of snow which seems to blow across the pit and not accumulate inside.

The trail carved in the solid rock up the east face of the Monument is damaged from the melting snow to an extent which is surprizing and depressing. The rock when the steps were built showed to be quite soft but it was the opinion of all that the sandstone would harden when exposed to air. Whatever has been the action of the air, I now know action of melting snow has been very bad as several inches of stone have crumbled off right where the pedestrian climbing up the steps places his weight. I fear that we shall have to use cement capping on these steps which enable one to top out just at the base of our major ruin. The steps at other places on the trail do not seem to be badly affected, nor is the switchback trail washed or crumbled, although better drainage must be provided at several places.

Old Spanish inscriptions have not been touched or even approached by anyone during the month, although travel may begin the month of March.

Among the Wild Animals I have found that there are a few opossums around the Monument. No one thought there were any in this region but we have seen one and nearby a trapper caught one in his coyote traps.

The New Labels for our trees, grasses and shrubs have come and will be placed this coming month. They will greatly help the unattended visitor in his understanding of our flora.

The New Photos which George A. Grant took last summer at the Monument are here, having been sent by Mr. Ellsworth C. Dent, Visual Instruction Supervisor, and accompanied by a letter from Grant.

They are the finest pictures ever taken of the scenery as well of the inscriptions,---a triumph in photography, so clear and perfect that all who see them are enthusiastic over their beauty. For illustrations they will be simply fine. I certainly appreciate this work Grant did here as it will help me get our historic and scenic features before the public. I am planning to write an article for the New Mexico Magazine on El Morro and needed these pictures badly.

I was named on the Roosevelt Birthday Dance Committee. Despite the inclem-

ent weather, the hard frozen roads with high centers, and a three-mile detour at Pescado Indian Villiage necessitating fording Zuni Creek at one place, over 50 people went from Ramah to Zuni where the dance was held under the direction of Mr. G.E. Trotter, Superintendent of the Zuni Indian Reservation.

In all there were about 150 people in attendance including some 25 or so educated Indians. It was a gala occasion which lasted until 2 a.m. We heard President Roosevelt's clear, convincing, pleasing voice over the radio. All were glad to know that his courage and spirit as evinced by his voice seemed to be holding up so unfailingly under the heavy problems of the Nation.

The dance began at 8 p.m. Now and then it was pleasantly broken by musical numbers, then a drawing contest in which a silver Navajo belt, a silver hand-made ash tray, and a Navajo bracelet were chanced off for the benefit of the cause. Mrs. Vogt drew the ash tray. The interruption in form of cake and coffee at midnight didn't make anyone mad. In fact, it was an altogether successful occasion where everyone---young and old---danced. Even the Indian girls were often on the floor to the tune of the Arkansas Traveler or Rancho Grande. You may wonder if Zuni girls who often dance to the beats of the tombe in their ceremonial dances show any traces of their native dances when they dance the American steps. Yes, they do. Especially is it noticed when one dances with them, although they take readily to the rhythm of American music.

The Lookout Ruin located three miles north of El Morro near Puerta Gigantes has been dug into and damaged somewhat. Whoever is hunting prehistoric pots there is doing a great deal of damage by knocking down walls. This is a large ruin about 200 feet square hidden behind a cliff but equipped with a convenient spy hole through the cliff permitting the former inhabitants to overlook the Tinaja Valley.

I have reported this vandalism to Jesse Nusbaum of the Laboratory of Anthropology. Unfortunately, the ruin is located on Santa Fe Railway land, and it will be necessary to wait until word is received in response to Mr. Nusbaum's prompt letter to Mr. Collinson, Land Commissioner of the Santa Fe, authorizing me to protect this ruin.

The railway company owns thousands of acres of grazing land in this region and their land contains many ruins which may be of unusual value. I am working through the Navajos to find the identity of the person who is doing the ruthless digging.

Correspondence which has been going on between us regarding preservation of old Spanish inscriptions is most important and I hope results in definite action. I made a rather long report to Chief Engineer Kittredge, a copy of which went to the Director and to you which covered experiments made on a sample of the rock by the Bureau of Standards. This resulted, as you know, in selection of Dri-Wall for covering the old carvings.

But as I said, I feel that full time protection is what is most needed at El Morro. Lady Luck has thus far been with us else there would have been

some damage done to the messages carved here. We cannot count on such luck forever and I would be delighted if thorough consideration and ample protection would come out of this matter in the very near future.

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## CASA GRANDE NATIONAL MONUMENT

By Hilding Palmer, Custodian

Good weather conditions and a record run of winter visitors gave us a total of 2,923 visitors who were personally contacted on 311 guided museum and ruins trips. In addition to these, there were 267 visitors who used some of the facilities offered by the Monument. This represents a 13.6% increase over the same month last year.

The 2,923 visitors came in 855 cars from all but four states (Alabama, Arkansas, Florida, and Louisiana); from the District of Columbia, Alaska, Canada, Mexico, England, Switzerland, Scotland, Africa, and Australia. Arizona headed the list with 1,338; California second with 297; Illinois third with 172; and New York fourth with 108.

Many visitors report it extremely hard to find any kind of accommodations at either Tucson or Phoenix. Both Tucson and Phoenix report and extra heavy run of tourists. Santa Fe and Southern Pacific railroads have put on extra passenger coaches to carry increased traffic.

Weather conditions were ideal except for a few windy days and one wet day. Maximum temperature for the month was 84 on the 20th and minimum 26 on the 26th. Mean maximum for the month was 69, while mean minimum was 38. Rainfall was 1.53 inches with .93 falling on the 6th. On the 23rd a hard wind suddenly began to blow in the afternoon and continued for several days.

Charles Amsden, Secretary and Treasurer of the Southwest Museum at Los Angeles and author of "Navajo Weaving", was an interested visitor late in the month. He had spent several days research on Hohokam pottery designs at Gila Pueblo, and was gathering material for his weekly broadcasts over KFI each Thursday p.m. at 4 o'clock, Pacific time.

Among other prominent visitors were Walter S. Gifford, President of the American Telephone and Telegraph Co., and Ralph Adams Cram, noted architect.

Bird happenings of importance were as follows:

Mourning and whitewing doves were seen---rather early this year. Several birds have been seen nesting. The Western Horned Owls who make their home in the canopy over the ruins went to housekeeping February 1. Their nest is on top of the wall over the entrance to the central room which faces east. We may expect some owlets soon, because the prospective mother and father have been very diligent on the nest.

The Say Phoebe started their nest in a beam-hole in the East Room about February 25. No eggs have been laid as yet.

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REPORTS FROM THE MEN IN THE FIELD  
CHACO CANYON NATIONAL MONUMENT

By T.C. Miller, Custodian

GENERAL

Approach roads have been impassable part of the month due to heavy snows. At this time the snow has melted, except on the north sides of hills. While the snow and rains are doing the stockmen a lot of good it is doing much damage to the ruins. Seven capped walls in Pueblo Bonito have collapsed and when all frost goes out of the ground many more will follow suit. I have photographed those walls and just as soon as I can get them developed I will send a set of those pictures along with a complete report of the tragedy.

A 2'6" rise in the Chaco Wash was recorded on the 21st. Revetment work at Pueblo Del Arroyo diverted the stream this time, so there was no damage to our walls.

WEATHER

Maximum 50 on the 2nd. Minimum, minus two on the 17th.

Precipitation 1.67 inches of rain and melted snow. Greatest in 24 hours was .76 on the 13th.

TRAVEL

207 people arrived in 81 cars. Six states were represented: Arizona, California, Colorado, Iowa, Nevada, and New Mexico.

TELEPHONE LINE

The telephone line was completed on the afternoon of the 22nd, that is, from Crown Point to the Headquarters Area. Two pay stations will be installed within the Monument, one at the Custodian's residence, the other at the Chaco Trading Post. Phone boxes have not arrived, but we are looking forward to the day they are installed. Then we will be more in touch with the outside world.

MUSEUM CONTRIBUTIONS

On Feb. 6, a Navajo boy by the name of Joe Yazzi donated a large Chaco cooking pot. The pot shows to have been used, as it is burned black. It is  $14\frac{1}{2}$  by  $7\frac{1}{2}$  inches. When the Indian was asked by the Custodian where he found the pot, he said, "I was looking for my horses and found it already uncovered by erosion. I was told that Washington would pay a lot of money for a pot like this, so I brought it to you!" After I explained to the Indian what museums were for, that Washington was not buying pottery but protecting it, he was glad to make the donation. Indians have also donated two fine arrowheads and a large flint skinning knife during the month. I really believe they are getting Museum Conscious.

SPECIAL VISITORS

Ranger and Mrs. Chester Markley, Mesa Verde National Park, arrived on  
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January 29 and departed on the 30th.

J.L. Patterson and party arrived and departed on Feb.6. Patterson was formerly Acting Custodian at this Monument.

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## CANYON DE CHELLY NATIONAL MONUMENT

By Robert R. Budlong, Cust.

There was but one visitor to this Monument during the month of February, and he drove only to the rim of the Canyon.

Weather has been miserable, with snow, hail, rain, and one thunderstorm during a snow flurry.

The canyons are still impassable, with considerable water flowing through them.

Roads are worse, and this Monument has been practically inaccessible during the month. Very few cars have been able to get through to Gallup, even the mail truck having been stuck on the mountain for six days, on one occasion. We do not expect any visitors for some little time.

There is really no news to report this month. In the very near future we expect the sandstorms to start, and to continue for some weeks, so no large numbers of visitors are expected the coming month.

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## PIPE SPRING NATIONAL MONUMENT

By Leonard Heaton, Acting Cust.

I am pleased to report that I have enjoyed my work and what visitors that have taken time to come out and see the fort. Our weather has been nice and warm with only a few days of storm. Some snow, but it stayed only a day or so, thus making it possible to travel almost every day this month.

Those that made a trip through the fort this month came from Utah, Nevada, and Arizona, totalling 27. Of this number were Mr. and Mrs. Dodson of the Indian Service Engineering Department and Dr. and Mrs. Foutz, Camp Director of the Boy Scouts, Timpanogos Council.

Stockmen are feeling encouraged about possibilities of getting through the winter without much loss, as the winter surely has been mild and ideal. Only one cold snap, lots of warm storms, feed growing most of the winter, and now early grasses and weeds are getting up so stock can get it. About the only regret stockmen have is they sold off too many cattle last fall in fear of having a hard winter.

The past ten days I have been fixing up irrigation ditches and planting more trees, and next week I will finish setting out cedar and pine trees on the south side of the Monument, on the land that has been farmed. I also intend to collect different plants to be transplanted on Monument land as fast as I can get around to it.

I have noticed the following birds here this month: Redwing Blackbird, Rusty Blackbird, Robin, Kildeer, Meadowlark, Mountain Bluebird, several species of sparrows, Junco, American Raven, Northwestern Crow, Pinyon Jay, Desert Horned Lark, Cassin Kingbird, Western Horned Owl, Red Tailed Hawk, California Quail. Sixteen species of birds in February provide and uncommon situation. Next month I hope to report a lot more families visiting the place---also some nesting being done by the feathered visitors.

As far as reporting on the plant life , it is not far enough out of the ground to say much. Judging from the poor summer of last year I am doubtful if there will be many flowers this spring as there were few matured seeds last fall, and there have been some cattle on the place at different times before the cattle guards were completed. They naturally ate off some plants.

I have sent word to the Richfield welders to come in next week and do the welding, so I will be able to keep the cattle out in the future.

About Jan. 28 the Indian Service sent Mr. Dodson to survey our road through the Indian Reservation. Work has been going on all month, and is now about completed. The approach road to the Monument on the west is about as the old road is now, but the east approach road goes over the ridge directly east of the Monument and misses the cattleguards about 125 feet to the north. However, I think the road can be made to meet the guards and serve the Monument to better advantage.

When one is coming in from the east just as he tops the ridge he gets a splendid view of the Monument, buildings and all. Then as he makes the turn to enter the Monument the Fort and other buildings disappear behind the trees, and as he comes up to the parking place he can get glimpses of the Fort through the trees and over the two ponds that are in front of the fort. Since I have been over the new road route and viewed the Monument from the ridge, I like the arrangement very much.

I got the truck Feb. 8 and have driven it about 65 miles on cleanup work and hauling trees from Moccasin. I feel that I will be able to accomplish much more having the truck to haul rockp dirt, or whatnot, rather than waiting until I have accumulated enough work for a team.

Since I have started this report a snow storm has come up and we have now at 10 p.m. a half inch of snow and it is still snowing as if it would last all night.

"Let her come," as the hired man said, "More storm, more rest."

"What's that?", asked the boss.

"More storm, more grass," answered the hired man, and that is what we want up here---"More storm, More Grass."

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REPORTS FROM THE MEN IN THE FIELD  
BANDELIER NATIONAL MONUMENT

By Earl Jackson, Custodian

VISITORS

Travel is picking up. Visitors numbered 294, which is more than four times the number for last February (65). Twenty two states were represented, Washington, D.C., and one foreign country, Canada. The six highest states in order were: New Mexico, 212; Colorado, 33; Kansas, 7; Maryland, 5; Illinois and Massachusetts, 4 each. These people arrived in 74 cars. Parties were all small, two groups of eight boys each from Alamos Ranch being the largest.

WEATHER CONDITIONS AND ROADS

There is no rhyme or reason in occurrence of storms in Frijoles Canyon. I can start out through the ruins with a party and it will be so hot they will strip off their coats, and in a few minutes they will be wet with snow or rain.

Precipitation for February was .56. About three and a half inches of snow fell. A great dust storm reached Frijoles Canyon and on the 21st and 22nd dust was so thick in this region you could not see anything over half a mile away. Dust has settled, and now there are about two inches of snow on the ground, and snow is falling fast.

Roads have suffered little from the weather. At no time during the month have they been impassable, although muddy stretches made passage from here to the paved highway dangerous.

SPECIAL VISITORS

Jan. 27 Mr. and Mrs. D.B. Roben were interested visitors. Roben is construction engineer on government buildings, connected with the Treasury Department. Jan. 31 Rev. H.B. Master, Head of Presbyterian Pension Work in the United States, and Rev. Ralph J. Hall, Head of Mission Work for the same church in Arizona and New Mexico, were in.

Feb. 3 we were honored by a visit from Former Director Horace M. Albright. Mr. and Mrs. Jesse L. Nusbaum brought Mr. Albright and party, consisting in addition of Mr. Cramer, Resident Manager of the U.S. Potash Company, Mr. Van Horn, of the land department of the company, and Mr. Cummings, contracting engineer, C.C. Moore and Company. A very enjoyable afternoon was spent with these folks, and I sincerely hope they all come again. Mr. Albright expressed himself as pleased with development work he saw here.

Feb. 4 James C. Reddock, E.C.W. Inspector, was in to look over construction work and the camp. On the same day arrived William H. Sharpe, sent here from Washington, D.C. to take over E.C.W. clerical work. We are having fun making a dyed-in-the-wool westerner of him. He may be a "tenderfoot" but is a good sport and learns fast.

Feb. 8 Mrs. Albert Coors, Jr., was in for a trip through the ruins. She is the wife of the beverage manufacturer.

Feb. 24, Walter Attwell arrived for a short visit.

## IMPROVEMENTS

See Construction Report, by H.B. Chase.

Will be mighty glad when we can have a new office building down at the new parking area. Visitor control is now an awkward and inefficient task, with our temporary office a half mile up the canyon from the campground bridge crossing. Visitors can come into the campground without my even seeing them, unless I take a jaunt of a half mile to find them, leaving the temporary office and registration place while I do so.

It is distressing to see our fine new road maintenance equipment left out in all kinds of weather. We need construction of a utility building and garage for that equipment mighty soon.

## NATURE NOTES

On a recent 35-mile hike through the main portion of the Monument I did not see one turkey track on the mesa levels. All turkeys are down in the canyons, principally in Frijoles. Approximately 25 turkeys in one bunch patrol the canyon floor from the ranger station to the Upper Crossing, a distance of nearly six miles. I have put out a small amount of corn, and expect to have a fair portion to dish out tomorrow, if the snow lets up a little.

Deer tracks are very few anywhere on the Reserve, although around the base of St. Peter's Dome, just off the south boundary, I saw a number of tracks.

One visitor to the ruins was so appreciative that he (or she) followed the trail at night in a snow storm. This visitor was a raccoon, a big fellow, who dutifully followed the route through the cliff ruins, and according to his tracks found a number of the most interesting features which I point out to tourists, for he frequently stopped a few feet off the trail to enter one of the talus house ruins.

## GENERAL

One Saturday afternoon two of the CCC boys started out on a hike, asserting their intention to climb St. Peters Dome, 12 miles southwest of here, just off the Monument boundary. A snow storm came up that night, and at to a.m. the next day the boys had not returned.

Knowing the boys were from Texas plains, and didn't know anything about snow, we feared they might get lost and freeze to death.

So that morning I picked one of the huskiest CCC fellows, Logan Horne by name, and set out on the search. We followed one of two trails leading toward St. Peters Dome, and after bucking snow six inches deep to the Dome, and after circling the Dome and failing to climb it on account of deep drifts, we decided the lost boys could not have reached this far.

We turned back toward Frijoles Canyon, coming by another trail, and at about 4 p.m. while it was still snowing slightly we came to a cave where the boys had spent the night, and found their tracks in the snow leaving it. They had started back by the right direction, following the main trail, but evidently did not know how to read trail blazes, and soon lost their route.

Horne and I had hiked about 20 miles, and were just about completely tired out, with a long way to go yet, but we knew ~~we~~ must follow those tracks and see what happened to the boys.

We followed---and such a route! The boys were completely lost and took the wildest, crookedest route two people could have taken, through the roughest part of the reserve. We followed their tracks until dark, and lost them, and found ourselves in a tough spot in a kind of "V" where two canyons came together and we couldn't find a way down to the Rio Grande River. We were about to freeze to death on that wind-swept point, could find no wood dry enough to burn, and knew we would probably freeze if we stopped to rest. We did the only thing we could do---kept moving--- and followed the trackless miles back to the main trail, climbing one mountain after another, and, finally, after about 35 miles in the snow, and 14 hours, and after our fifth wind was spent, got back into Frijoles Canyon.

There we found the boys had returned late in the afternoon. In daylight they had found a way down to the river where we could not in the dark. One had some frostbitten toes, but recovered all right. Horne and I had 100% less energy than we had started with. We both swore when we got back that if it hadn't been for the other one to egg him on neither of us would have got back alive.

All this long drawn out account of a near clash with death for four people argues strong for improvement of trails through this Monument. Trails should be cleaned out, widened some in dangerous cliff places, and one or two trailside shelters should be built. In such shelters storm-trapped travelers could find dry wood and a place to spend the night, and thus weather a storm.

In order to do any of this development on trails, we must have permission for use of stub camps for CCC construction crews. These trails reach such remote points that it is a sheer waste of labor to try to work them by daily excursions from the main camp. By the time a crew could walk to the point of work the day would be half gone and they would have to start back.

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#### BANDELIER E.C.W. ACTIVITIES

By H.B. Chase, Project Sup't

Pouring concrete of the second septic tank was completed on Feb. 2., after which backfilling, cleaning up, and landscaping features were carried out and now the entire project "Campground Sewer System" is completed and ready for use.

The last cattleguard of the project "Cattle Guards" was started on the 12

and now is ready for pouring concrete. This structure is located on the west boundary line of the Detached Section on the road leading to Los Alamos school. With favorable weather this project will be completed in less than a week.

Walls of the public campground comfort station are now completed, cleaned, and pointed with local mud. A split aspen ceiling has been completed throughout the building and a three-ply 30-pound felt roof has been finished this month. The rough plumbing has been installed and connected with the sewer which leaves the pouring of floors and interior trim which we expect to complete by March 15.

All campground tables were completed in place at camp sites this month; in addition, one large picnic table in accordance with the original approved plan was constructed in the picnic area.

The walls of the concessionaire's barn are now completed to viga height which includes the lintels in place over all door and window openings. Vigas have been cut, peeled, and delivered to building site and placing of same will be started the 25th.

A large crew has been planting trees and shrubs this month. The island in the center of the parking area has been completed and considerable planting carried on along the entrance road.

Approximately 200 cubic yards of building stone have been quarried and hauled to the building site of the office building and garage. Construction of these projects has not started other than quarrying the stone awaiting arrival of approved plans.

Progress of projects here was somewhat hampered by the visit of two snow storms which shut down all work for a total of four days.

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#### AZTEC RUINS NATIONAL MONUMENT

By Johnwill Faris, Custodian

Visitors for the month total 278. This number is slightly under February last year but we have experienced this past two weeks some of the most severe of our winter weather and our visitor run has been almost nothing.

We are in final stages of construction work and the finished Museum is presenting a most pleasing appearance. I am releasing Inspector Gebhardt tonight since only the rear trellis is yet outstanding and he has gone over this feature with me and I have his ideas clearly in mind. I was somewhat disappointed in being unable to use the copperas stain for exterior coloring on our building but several tests proved it very unsatisfactory and we have decided upon and applied a cement paint which gives not only uniform color over old and new plaster but also gives an absolutely waterproof feature on the plaster, which, of course, will always be a benefit. The color will blend very well with our walls.

The odd jobs under Work Order No. 3 certainly have changed interior appearance of the old Morris residence. It presents a much more pleasing effect than did the old arrangement. The entire situation, while presenting several difficulties, is ironing out into a finished product that was beyond my expectations.

I might state in this connection that I have shifted practically all the responsibility on Inspector Gebhardt and I wish to express my appreciation for the manner in which he has shouldered the work. He has worked night and day in our behalf and the job certainly shows the results of his efforts.

Stormy weather of the last two weeks has hindered somewhat our program on the installations of lights in the Great Kiva and the placement of conduit to eradicate overhead lines in our Administration Area. I will get this work under way at the earliest opportunity. I want it understood, Boss, that this installation is not the system we eventually hope for or may install. It is merely a temporary placement of electricity so we may have it at our command in case development may require elaboration for lighting. Also that we may at the present tie into our main switch in the Administration Unit.

One feature I hope to overcome with our remaining Public Works money is that of leaky outlets on our kiva roof. The three major outlets for drains are leaking and we are unable to ascertain the cause. They were tiled and we were careful at the time to seal all joints but are finding it necessary to install galvanized darins at least from the roof to the approximate ground level in hopes of overcoming this leak.

Also, I might admit a feature you warned me of in our kiva. It is somewhat damp and whether it is still a sweating from the massive walls or an accumulation of koisture from the atmosphere I am still uncertain, but we are still finding the moisture. I shall watch this closely, and while it is of no great concern, I shall be very much interested in its cause.

We are rushing all work orders on our Administration Building and by the time this report is mimeographed and ready for us we hope to have all papers in your office regarding our unit at Aztec.

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#### MONTEZUMA CASTLE NATIONAL MONUMENT

By Frank Fish, Ranger

Custodian Jackson accidentally fell the other day and cut his right thumb very painfully, severing the leader. This, of course, necessitated an operation. At the present time he is recovering very nicely in the United Verde Copper Company hospital at Jerome. We expect him to return to duty today. Nevertheless, the responsibility for the monthly swindle sheet will fall on my shoulders.

Regarding the weather: we have had sufficient extremes, with approximately two weeks of stormy weather, with consequent result of very bad road conditions. However, there were a few days of very good spring-like weather encouraging

visitors from Flagstaff and Prescott to use the picnic area. Moisture conditions throughout this area seem favorable for the livestock industry for the coming summer.

Visitors showed 9% gain over the corresponding month last year---1,167 this year, 1,065 last year. About 500 of this year's number were from the local CCC encampments. We have had quite a number of guests from the three Guest Ranches nearby. These ranches report they are full to capacity. Business conditions in the valley seem to be on the upgrade.

Incidentally, we received five labels "Arizona Sycamore, Platanus Wrightii" which we have placed advantageously along the trail to the ruins. We could also use labels for the Creosote Bush (*Covillea Tridentata*) and the Hackberry for this region.

Mrs. Hugh H. Miller of Coolidge, Arizona, arrived on the 25th to assist in the bringing up of the new "Minnow". Mrs. and Mrs. Wade C. Smith of the Chaco region were here during the month.

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#### WHITE SANDS NATIONAL MONUMENT

By Tom Charles, Custodian

White Sands Monument was honored by a visit from Dr. H.C. Bumpus this month. It is interesting to note how the influence of a few hours visit from one man may sometimes inspire a whole community. Dr. Bumpus spoke at a Rotary Club luncheon in this city, discussed the unusual attractions of this vicinity and spoke briefly of the possibilities of trail side museums.

Within a week the directors of the Chamber of Commerce had called together the representatives of six organizations and plans were on foot to erect a community building which should house the city library, an amusement hall, a patio museum, a gymnasium, and other features. A special committee has been appointed to contrive plans for the preservation of the petroglyphs, located a short distance above the A.B. Fall home and said to be one of the most remarkable collections of Indian pictures in the world.

Another special committee is to mark the site of the Dog Canyon Fight, 12 miles below Alamogordo where Lieutenant H.M. Lazelle and three companions were killed and four others severely injured by Apache Indians on Feb. 18, 1859.

The Indians had stolen 11 oxen and three mules from the soldiers at San Elizario, Texas, and had driven them 165 miles across the desert to Dog Canyon. After riding the 165 miles in seven days, 85 of them being without water, the 22 soldiers attacked the stronghold in a harrow gorge and on a trail where the Indians could throw rocks down on them. Nine of the Indians were killed but the soldiers were compelled to withdraw across the valley to the White Sands, thence to St. Augustine Pass and Old Mesilla, which was then the Capitol of southern New Mexico and Arizona.

The Chamber of Commerce also plans on marking the bed of fossil ferns in  
SOUTHWESTERN MONUMENTS

La Luz Canyon, one of the numerous buried pueblos in the valley, the Blazer Mill where the first fight of the Lincoln County war occurred and where Buckshot Roberts and Dick Brewer lie side by side. It seems that it would take no more than another visit from Dr. Bumpus to sell this community on itself.

There were 361 visitors registered at the little box near the turn-around in the Heart of the Sands in January. It is queer the different reactions these people have about registering. One dunny-load of people who took a lady from Kansas City out to see the Sands got out at the box and registered "Grandma" but not one of the other ten in the car considered themselves visitors. Of the out of state people who go into the Sands 40 to 60 percent will register if they are out there alone. If there are several cars possibly none will register. However, we had 30 states and two foreign countries represented. The traffic through the Monument still runs better than 350 people a day.

Chuck Ritchie was here this month and left some very valuable suggestions as to how the Monument might be tidied up a bit with but little expense and effort. Charlie Sutton took down the old CWA sign, painted it over, lettered an urgent appeal to visit the Heart of the Sands, and put it back across the road from the entrance. You would be surprised what a good job of painting a truck driver foreman can do.

We have word from George Wright that we may be expecting representatives of the Wild Life Department this month to study possibilities of development in the Artesian Well area. I wonder if it will be possible to get these representatives after the blind snakes, white mice, and the burros and antelopes with "sand shoes."

The Superintendent of Schools of Otero County together with the Alamogordo Chamber of Commerce are planning a school picnic and field meet at the White Sands some time in April. There are 3,400 school children and the Chamber of Commerce estimates the crowd will be as large or larger than the one at the opening last year when state patrolmen counted 5,200. Governor Tingley has promised to be present and those interested plan to make it an annual affair.

Three airplanes lit in the big bowl beyond the turn-around one day last week and before Charlie could get down to see who they were they had taken off and flown away. They apparently had no trouble in landing or taking off. Aviators say there are as many landing fields in the White Sands as there are hills. All a field needs is a "wind sock" to make it ideal.

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#### ENGINEERING REPORT

By G.H. Gordon, Ass't Engineer

Transmitted herewith is my report for the month of February covering activities of myself and field party consisting of Howard Leslie, Transitman, Ray Hitson, Addison Pinkley, and H.E. Williams, Rodren.

The first of the month found the crew at Tumacacori Mission making a map of the walls exposed by the "Dig" being conducted by Paul Beaubien. The map

was completed on Feb. 8.

Feb. 9 the crew went to Saguaro National Monument where they completed the road map that had been started during the month of January. This job was completed on Feb. 13.

Feb. 14 was moving day for the field party---Saguaro to Headquarters.

Feb. 15 the party left Headquarters for Tonto National Monument where they mapped the ruins in connection with the plan for stabilization of these ruins. It was while they were at Tonto that H.E. Williams joined the crew. They returned to Headquarters during the afternoon of Feb. 28.

Feb. 1 I was at Headquarters preparing my reports for the month of January.

Feb. 2---I left Headquarters at 7:30 a.m. for Tonto, arriving at 11:30 a.m. and made an inspection of the trails and one of the ruins. Returned that night.

Feb. 4---Was at the Office of the Superintendent of the Southwestern Monuments with C.A. Richey, Landscape Architect, until 3 p.m. when I left for Tumacacori, arriving at 6 p.m.

Feb. 5---At Tumacacori.

Feb. 6---At Tumacacori until 4:30, when left for Headquarters.

Feb. 7,8,9,10,11---At Headquarters.

Feb. 12---At Headquarters until 1 p.m. when I left for Flagstaff with Mr. Joseph W. Crouch, District Project Manager, Submarginal Land Division, National Park Service.

Feb. 13---Mr. Crouch and I made an inspection trip over quite a large area immediately adjacent to Wupatki National Monument,

Feb. 14,15,16,17---In Flagstaff looking up land titles.

Feb. 18---Left Flagstaff at 2 p.m. for Phoenix arriving at 7 p.m.

Feb. 19---In Phoenix at State Capitol looking up land and water titles.

Feb. 20---At Casa Grande working up data collected at Flagstaff.

Feb. 21---Left Headquarters at 4:30 a.m. to attend re-interment of two priests at San Xavier Mission.

Feb. 22---J.H. Tovrea and I left Headquarters for Tonto. Went over the Ruins Stabilization map with Leslie.

Feb. 23---Ran in a proposed line for future water system at Tonto during the morning. Took notes for Ruins Stabilization in afternoon, and drove to Headquarters.

Feb. 25,26---At Headquarters working up data collected at Flagstaff.

Feb. 27---At Headquarters, then to Tonto. Went over Ruins Map with Leslie and found out he had already run the proposed trail to the upper ruins.

Feb. 28---Went over the trail system this morning and took a flock of pictures. Left Tonto at 1:30 p.m. and arrived at Casa Grande at 5 p.m.

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REPORTS FROM THE MEN IN THE FIELD  
ENGINEERING REPORT OF WALTER G. ATTWELL, ASSOCIATE ENGINEER

Owing to the demand for topographic maps of the Southwestern Monuments, Assistant Engineer George Hopper from the San Francisco Office arrived with his two assistants to assist in placing some of the Monuments on paper. He is at present mapping Tonto National Monument. Owing to heavy railroad advertising this newly acquired Monument has heavy tourist travel. No development work has ever been done by the Park Service and the topography is important.

Assistant Engineer Clark's crew is completing the topography at Chiricahua National Monument. With this data completed it will be possible to establish the Monument boundaries. This crew will be transferred to Bandelier this week to map the floor of the Valley at headquarters.

Assistant Engineer Gordon has covered his activities elsewhere in this report.

I started the month at Field Headquarters in San Francisco, spent the remainder at Tumacacori in excavation with F.E.R.A., at San Xavier in re-burying the Padres, Chiricahua and Bandelier with E.C.W. activities, Yucca House and Hovenweep on Protection, Chaco Canyon on Ruins Preservation, Walnut Canyon on Protection, Tonto on Topography, and Saguaro on Topography.

Maps and plans were completed on Trail at Sunset Crater, Water System at Tonto, Fences at Montezuma Castle, Yucca House and Tumacacori, Topography at White Sands, Erosion at Bandelier, and Ruins Stabilization at Wupatki.

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REPORT OF JUNIOR NATURALIST DALE FENC

Spent 6,086 minutes guiding visitors through ruins and museum (12.6 eight-hour days). Four days off duty, on one of which I took trip to see excavations at Tumacacori, on the other a trip to Gila Pueblo regarding recent archaeological finds in Gila Valley.

During the other  $11\frac{1}{2}$  days of the month: (1) catalogued 22 books, cross-indexed nine; (2) Received 972 metal botanical labels from Berkeley Office ---recorded, re-sorted, re-allocated them to Bandelier, El Morro, Walnut Canyon, Chiricahua, Montezuma Castle, and Casa Grande National Monuments; (3) handled four or five correspondence items; (4) copy-read and typed the Monthly Report.

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*And so here ends the regular report.  
Cordially,  
Frank Rinkley,  
Superintendent.*

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# THE SOUTHWESTERN MONUMENTS SUPPLEMENT TO THE MONTHLY REPORT

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

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

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(Dear Boss: This prospectus is not all I had intended it should be. I wanted to include a floor plan and perspective of museum building and a trail map showing the room plan and field trip, but I am sending it along as it is. Later we will complete the explanatory features not now included. The only figure is that of a wall case which I hope explains how we can use small rooms without crowding them with table-type display cases, and limiting visitor space. You will note that this case is readily moved or changed.J.B.)

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## INTRODUCTION

The need of adequate museums at Southwestern Monuments seems to have resulted in a good deal of informative discussion on the subject in the Supplements of the more recent Monthly Reports. It is a need which everyone coming in contact with visitors knows will, if answered properly, add very greatly to the visitor's complete and intelligent enjoyment of the Monument. At Wupatki we feel especially "needful" because this Monument has an important and fascinating phase of archaeology to show, and because there are over 2,000 artifacts from Wupatki which might be displayed here if we had the facilities to do so.

At any rate, we've enjoyed thinking about the part we would like a museum to play in Wupatki hospitality and planning a setup which would give the bare essentials without great expenditure or long postponement, and which, completely realized, will be almost ideal.

A museum at a Monument must fill two requirements: it must give the visitor a basis of principles, facts, or theories based on facts which will enable him to "place" and to see intelligently what the Monument has to show; it must display objects from the Monument which it is not advisable to display elsewhere.

Our plan for a museum at Wupatki is a separate room for this first requirement, the "orientation" function, and the utilization of several rooms of the pueblo itself for the second requirement. Dr. Harold S. Colton of the Museum of Northern Arizona has advocated that a restored room be used for the exhibition in cases of actual artifacts recovered and that one or more other rooms be used for "habitat groups"---life sized models shown with utensils as the inhabitants actually lived in the rooms. Thus the visitor would receive the necessary introduction before he began the tour of the Monument; the detailed story of life during Pueblo III, which is the individual story Wupatki has to convey, would be obtained as he went over the ruin. In this way our museum is not a separate unit from the pueblo, but adds its helpful information and interesting detail at every phase of the trip over the site.

## UNIT I---ORIENTATION ROOM

The exhibits and manner of display in this room require careful handling; their purpose is to give a broad conception of the factors which led to the existence of Wupatki and adjacent ruins and which determined the nature of life in these pueblos.

The information this room gives would be presented so that every visitor can and will acquire it as thoroughly as he should in order to become orientated. Hence, it must be given simply and clearly, in correct order, and above all must catch and hold his interest. The perfect solution to these requirements would seem to be a corridor or room with lighted models and charts and maps which would tell the desired story progressively from entrance to exit. By this method the information necessarily would be acquired in the correct sequence; the visitor, not distracted by anything else to be seen, would give his complete attention to the line of lighted exhibits; he would be able to make the exhibits fit his individual need of information by studying those presenting facts with which he was unfamiliar and by skipping those which he might have seen presented in other Monuments or Parks. It seems certain that by thus attracting the visitor's interested, complete, and individual attention a better basis for his enjoyment of the Monument could be assured than by a lecture which must try to satisfy and interest each of the group at once, or by similar exhibits placed in a room with other displays, or by a combination of the last two methods.

This room must, of course, be near the parking area and registration room. Ideally, it would open off the registration room, with the exit leading to a rest room or lounge where they might enjoy the view of the Painted Desert---no small part of Wupatki's attraction---and where, on crowded days, small groups could wait while a party for touring the ruin was being made up.

Another very good suggestion of Dr. Colton's is that these rooms and probably the residence be built around a patio. An enclosed patio would be a haven of refuge during the windy days we do have at Wupatki and would afford a place for showing to better advantage some of the native plants.

In the orientation room the exhibits might be placed back to back through the center, or along the walls; one method has the advantage of saving space, the other has the perhaps greater advantage of keeping visitors from crossing the room and not following exhibits in proper sequence. Skylights placed over the exhibits would throw light directly on them and would be more desirable than windows, since here the point is concentration on the exhibits and not the view.

Following is a list of proposed exhibits for this room:

- I. Chart showing derivation of race which peopled North America in prehistoric times.
- II. Map showing probable route of their migration into North America.
- III. Map showing regions or centers of regions which developed a distinct culture (thus focusing attention on the Southwest and differentiating it from other regional archaeology with which the visitor might confuse it.)
- IV. Chart of periods in the Southwest, with relative times and known dates, stressing the accumulation of traits which made

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Pueblo III and Wupatki possible.

- V. Cross-section, in model or chart, of strata and predominant land forms from the San Francisco Peaks to the Hopi mesas. This exhibit would explain in general the geology and physiography of the country to be seen from the Monument (see similar cross-section in "Days in the Painted Desert", Colton and Baxter), excepting only the results of volcanic activity which is given in a later exhibit. The feature to be stressed, either in this exhibit or in a separate one to follow, is the occurrence of clay layers in the Moencopi sandstone. These layers hold the water for the springs in the region and probably explain its prehistoric popularity in an otherwise spring-less country.
- VI. Model showing the first permanent dwelling of man on the Monument---a Pueblo II pit house.
- VII. Cross section in model or chart showing Sunset Crater and cinders which covered the Monument during Pueblo II. The effect on the Pueblo II people and the effect of the cinders on the soil which Pueblo III people later farmed should be noted. This exhibit serves to introduce the nearest neighboring Monument (Sunset Crater) by thus explaining its part in Wupatki history.
- VIII. Model or illustrated enumeration of the animal and plant life on the Monument at the time of the entry of the people who built Wupatki. This exhibit should give the background of climate, flora, and fauna for life here during Pueblo III; animal bones excavated from the pueblo and vegetable fibres used in their artifacts would serve as the factual basis. A model of the site on which Wupatki was later built would be the best way of presenting all this information.

This list comprises only the essentials, but it might be unwise to take up more space or more of the visitor's time than necessary for this introduction; at Wupatki we would not plan a comprehensive outline of archaeology in the Southwest or of man's origins and earlier cultures; such a field is given more in detail in the Wayside Museum at the Grand Canyon and is not particularly pertinent here. As much introduction as we have outlined is, however, essential.

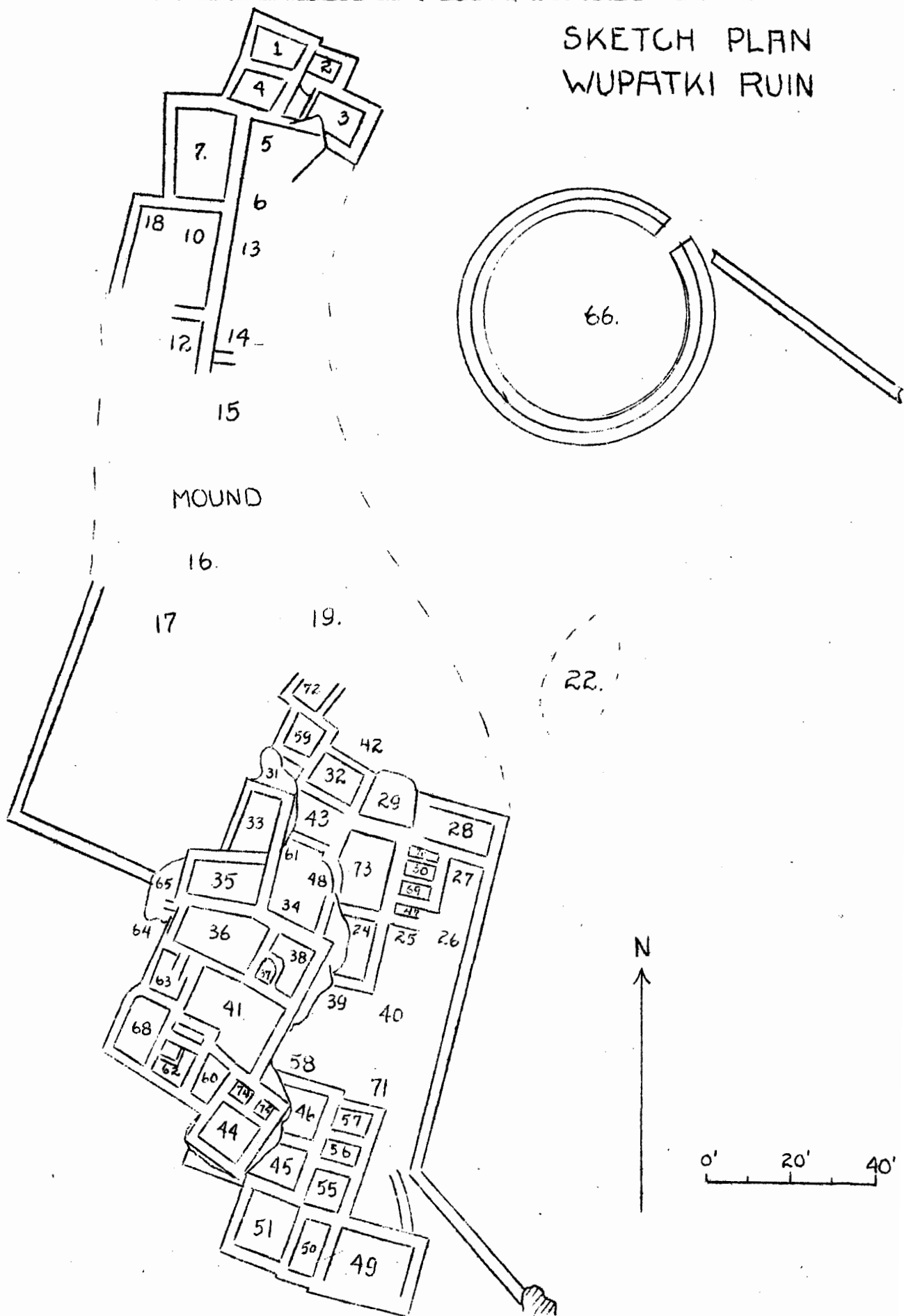
#### UNIT II\*\*--Restored Room

With this unit we begin the specialized story of Wupatki itself. Following the trail from the parking area to the pueblo a good view of both sections of the ruin is seen; the first stop is at Room 44. This room is entered by a short ladder. It shows a roof of native materials and prehistoric type construction. The T-door and windows are authentic. Two storage bins approximately four feet square occupy the back of the room in much the original state.

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From here the trail leads past the kiva on the southeast corner of the

# SKETCH PLAN WUPATKI RUIN



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ruin, along the east side of the south group of rooms where a section of unexcavated ruin is seen, to Room 4 in the north group of rooms. This trail also goes past the amphitheatre.

#### UNIT III--Crafts.

Room 4, now restored, may be utilized for a series of exhibits showing the steps in manufacture of pottery, fabrics, stone and bone implements, etc. An exhibit of food-stuffs and their preparation may be included.

#### UNIT IV--Habitat Group.

Room 1, a second story room just north of Room 4, has been reconstructed so that it may be viewed through a window from a platform. In this room may be shown a loom, fire hearth, utensils, etc. in use.

#### UNIT V--Display of Artifacts.

Following the trail around the north end of the pueblo the visitor comes to room 7. This room has the north and east walls still standing; it is approximately 12 by 15 feet and could be reconstructed to house the main body of Wupatki artifacts. It would not be necessary to plan for exhibition of all the artifacts recovered from this site; good examples of each type should suffice. On a separate sheet is a proposed sketch of cases which would display artifacts to advantage in this comparatively small space. Known trade products might be noted here.

#### UNIT VI--Dendrochronology.

From Room 7 the trail leads south along the west side of the pueblo to Room 36. It was in this room that the beams which enabled Dr. Douglass to first date Wupatki were found; the room is already restored and seems a particularly suitable place for an explanation of this method of dating ruins. A picture of Dr. Douglass recovering one of the beams from this room illustrated his article in the National Geographic of November, 1929.

#### UNIT VII--Burial in Situ.

From Room 36 a trail goes to Room 67, a semi-subterranean structure west of the main group of rooms. While excavating this room's outside walls a burial was encountered; it was uncovered, treated with a preservative, and re-buried with the idea of sometime displaying it in situ. This could be done by uncovering and casing the area, replacing the artifacts found with the burial, and providing a glass cover for it, with a removable wooden door for protection. The artifacts included two bowls, beads, and turquoise.

#### UNIT VIII---(for consideration) Navajo Hogan

The presence of several Navajo families near the Monument make an exhibit of Navajo ethnology appropriate and possible. Visitors have been interested in visiting a nearby hogan to see the homes and weaving of these people. An authentic hogan might be built on the Monument near the trail which connects NA405 with NA407, the site on the mesa north of Wupatki. It

could be used merely to exhibit Navajo articles, or it could be provided with weaving equipment donated by the Navajos near the Monument and they could be encouraged to do their actual weaving there. If handled correctly this real life exhibit would be extremely interesting; if the women were allowed to sell their products to visitors who wanted to buy, there would probably be no difficulty in getting them to spend a good deal of their time weaving on the Monument.

#### SUMMARY

Visitors would see Unit I unescorted; on the tour of the subsequent units, the "field trip", they would of course be accompanied by a Ranger.

Possibly also belonging to the museum plan are the identifying tags placed on plants seen on the field trip.

#### CITADEL

Since we know of no arrangements for the establishment of personnel or museum buildings at Citadel, our plan includes only such photographs and maps as would lead the visitor on to Wupatki.

#### MONUMENT IN GENERAL

This plan would be incomplete without provision for a map showing all the sites on the Monument. Such a map might be shown in the registration room or lounge, where the visitor could obtain information about reaching those sites not included on trails or roads.

(Ed. Note: The following information was sent in by Brewer at a later date. It concerns Room 41 whose interesting exhibit might well take its place in the sequence noted above just before "UNIT VI" on page 78.)

#### ROOM 41

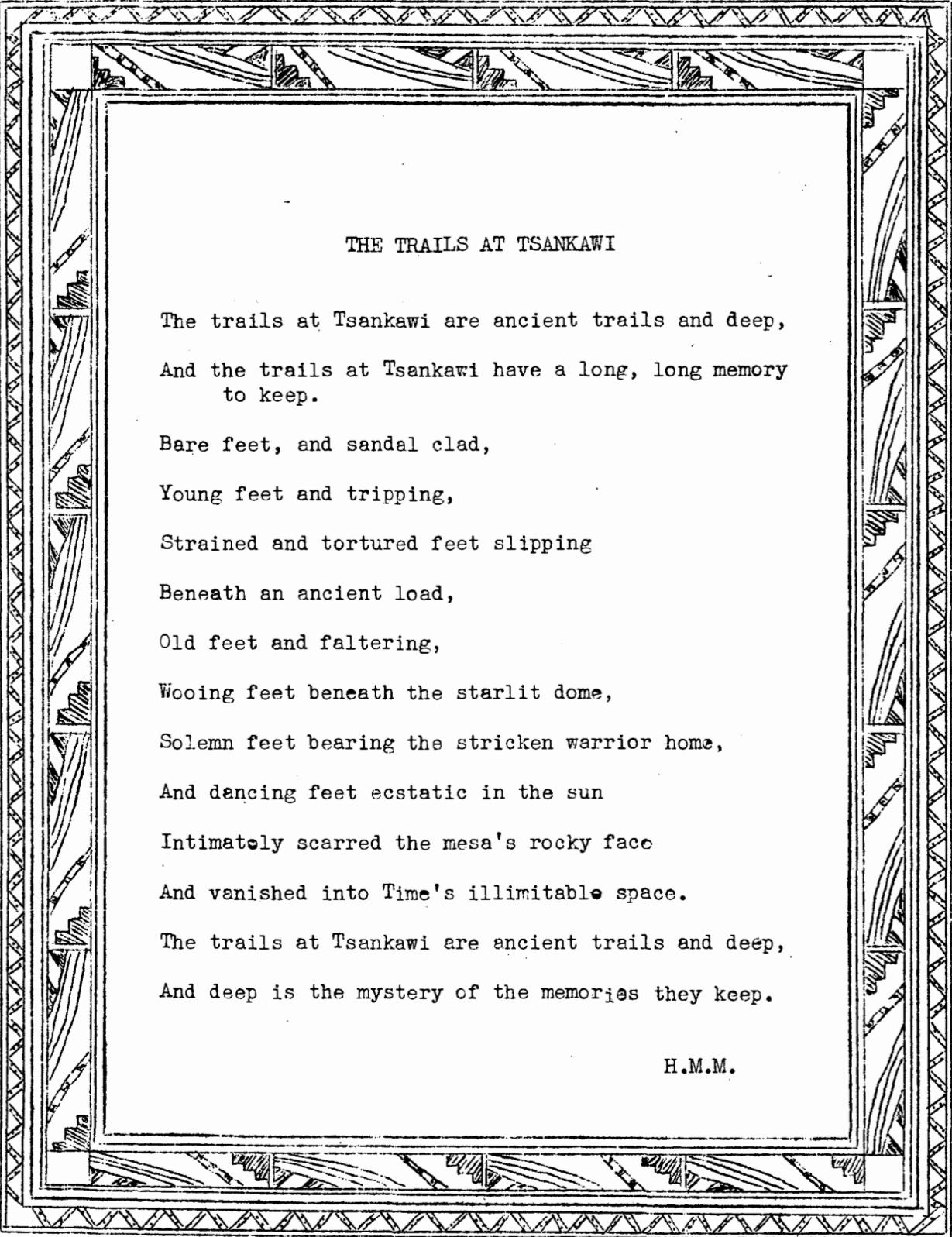
This is an unroofed room containing the best specimen of original laminated roof construction (fallen) that has yet been brought to light at Wupatki.

This exhibit is in situ and clearly demonstrates a roof type: i.e., that combining vigas, shakes, reeds (?), grass, and adobe applied in the order named.

The room also has an area of plastered wall.

The room level is that of a hypothetical fourth floor and commands an advantageous view of surrounding country and of the immediate lower rooms of the east side of the south unit.

The visitor, leaving Room 41 and having noted beams, as uncovered, next enters Room 36 and learns there the methods employed in dating like timbers. Before this room (41) can be used for exhibition the H-beam in hand should be installed under the west wall and a suitable approach constructed.



THE TRAILS AT TSANKAWI

The trails at Tsankawi are ancient trails and deep,  
And the trails at Tsankawi have a long, long memory  
to keep.

Bare feet, and sandal clad,  
Young feet and tripping,  
Strained and tortured feet slipping  
Beneath an ancient load,  
Old feet and faltering,  
Wooing feet beneath the starlit dome,  
Solemn feet bearing the stricken warrior home,  
And dancing feet ecstatic in the sun  
Intimately scarred the mesa's rocky face  
And vanished into Time's illimitable space.  
The trails at Tsankawi are ancient trails and deep,  
And deep is the mystery of the memories they keep.

H.M.M.

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For crying out loud! Here comes the Harvard College Library and the Library of the Superintendent of Documents at Washington, D.C., this last month asking us for copies of the "Epitaph of the Southwestern Monuments" which, you may remember, we discontinued publication on back in 1932.

We are getting interested. Are such organizations as this asking for copies and complete files of all these Nature Notes the various parks are publishing? If they are, what do they want them for?

Anyway, we have written them that the "Epitaph" is a closed volume, so to speak, but if they wanted to keep track of current events in Southwestern archaeology and the operation of the Southwestern Monuments we might put them on the mailing list of our monthly reports which covered the field after a fashion if they would make a special request for us to do so.

Are we wrong in thinking our special branch of work is far above the average interest to people and they want to share our fun in it, or is it just a case of something else they can get for nothing and they will ask for anything that costs nothing?

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Walt came back from San Francisco the other day and brought word from Two Pants Jim, the Engineer, that he had lost his other pair in a fire and was on a level with us common dubs again. It is all right---we will take him back into full fellowship and not bear any hard will against him for his flight into the upper realms of wealth. We will even go so far as to be glad it wasn't the pair he had on that he lost in the fire, which is being generous to an Engineer, isn't it?

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We don't know just why the Monthly Report got so absent-minded last month <sup>to forget</sup> as to mention Vital Statistics. Anyhow on January 13 a new Bud appeared at the Assistant Superintendent Bob Rose family. Her name is Helen Elaine, and she weighed eight pounds. ~ ~ ~

Following the same system of nomenclature, we should announce that a new Minnow arrived February 15 at the home of Ranger Frank Fish of Montezuma Castle. Her name is Frances Lee, and she tipped the scales at seven and three quarters pounds. Unfortunately, the name Minnow has been preempted by her elder sister Shirley, and we don't know what the diminutive of Minnow is unless it is Minuet, and that's such a poor pun we'd better not publish it.

We can't make the old crack about two new rangers, because these are Rangerettes.

Mothers and infants are doing very well, thank you.

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Notice recently was received at Headquarters of a new volume, "Spider Woman", by Gladys A. Reichard, Assistant Professor of Anthropology at Barnard College. Blurbed as "one of the most interesting studies of American Indian life that has yet appeared", the book will bear investigation, especially by Service men near the Navajo country.

Dear Boss:

I am sending to you a museum study for Montezuma Castle National Monument which you requested because of my archaeological familiarity with that region. The study goes into some detail of layout arrangement, but is not complete in any sense of the word. I believe the ideas presented form a fully adequate skeletal structure for the museum exhibit plan, but I have nothing definite worked out as to what the plan of the building should be.

Let us for a few moments familiarize ourselves with the locale and atmosphere of Montezuma Castle. Here we have evidences of an aboriginal culture complex which are intriguing. Montezuma Castle is situated to the north center of the Verde Valley, which occupies the geographic center of Arizona. This valley, which once teemed with humanity, is bounded on the east by the Mogollon Rim, on the west by the Black Range, on the far north by the Tusayan Plateau, on the south by the narrow valley which the Verde River has fought through to gain the levels of the Salt River Valley.

These mountains and plateau regions effectively hemmed in the Verde Valley, much as sand dunes would protect and conceal a desert oasis. The valley was rich in natural resources, with ample farming land and water for irrigation, game in abundance in the nearby foothills, and salt. Salt mines were rare in the Southwest, and then, as now, Indians would go considerable distances to get that material. Salt draws trade as a magnet draws filings.

Geographically, the Verde Valley was bordered by great culture areas in prehistoric times. To the south lay the Gila-Salt River Valley complex, which saw the culmination of the Hohokam culture. To the southeast, across the Mogollons and in the Tonto Basin, flourished a related culture, the Salados. This group of people reached a high civilization, and acquired some of the eastern Arizona pueblo characteristics. To the north lay the great peoples of the Tusayan plateau, from whom appear to have evolved the Hopis. These in turn were connected with the cultures of eastern Arizona and Northwestern New Mexico. To the west, beyond the first upland of the Black Range, the Verde peoples were bordered by the relatively crude civilization of Chino Valley, which had trade affiliations with both the Gila and the Tusayan.

While the Verde Valley was close to each of the enumerated cultures, the mountain fastnesses made them difficult to reach save by a few trails, chiefly following water courses. The Verde River headed in the Chino Valley, and afforded a convenient passageway to the Northwest. Oak Creek Canyon, Beaver Creek, and Rattlesnake Canyon, were good general routes into the Tusayan to the north. From the Tonto travel may have been overland through the mountains to Fossil and Cottonwood Creeks. From the Salt River Valley passage was made with facility up the Verde River course.

We know civilization was very active in the Verde Valley during at least a part of the culture period of each of the other areas, and because we know this, it seems to me we could picture the Verde region as a hub, with four spokes leading outward to the four great cultures of its periphery; this visualization would not postulate a central supremacy over these other areas.

--instead it would show the integration of diverse cultural elements trade-driven into a vortex. It would show that when the four different regions got well organized in their trading they found the Verde Valley an admirable trade route, also a source of salt, and that trading led culture frontiers into the Verde melting pot, where they had to merge into a combined culture or fall entirely. The resulting combined culture, (built, we admit, upon a possible indigenous culture which may have reached a limited advancement prior to extensive trading) presented characteristics of each of the four important bordering areas, but was not dominated by any of these.

If the foregoing visualization of Verde Valley culture as a complex has been clear, my next suggestion will appear logical. We can conceive Montezuma Castle and nearby ruins to be quite typical of true Verde Valley culture, and in our museum there can carry out a graphic treatment of the whole complex.

Verde Valley archaeology should be presented in one large room, with exhibits from Montezuma Castle and nearby ruins occupying all case exhibits. To carry out our picture of the hub and spokes, we should have one of the two following arrangements.

A. Large charts, maps, and sketches, with ample printed matter, hung in frames, one frame to depend from each of the four walls at some point between exhibit cases. These charts would picturize in brief the stories of the respective four cultures, and would be in a shallow case so arranged that they could be swung from the wall on a swivel arrangement in rotation, as necessity for their exhibition would arise.

B. The same illustrative matter arranged on a rotating swivel about a central column in the center of the archaeology room. This suggestion is in line with an idea advanced by Robert Budlong in the January monthly report.

Such exhibit ideas for representation of bordering cultures should be very useful in Southwestern National Monuments. With charts, pictures, and written material we provide for ramifications in archaeologic interest which will be shown by a small minority of the visitors. This wider scope is given without necessity for presentation of material (usually limited in quantity) from other regions. Without actually bringing in specific artifacts from outside sources, we still can give a broad treatment of southwestern archaeology when it is required, at the same time keeping the informative charts out of the way of the proper local exhibits, inconspicuous but convenient.

The Montezuma Castle Museum should contain five rooms: a lobby, an archaeology room, an ethnology room, a laboratory, and a store room.

The lobby will be essentially the same in idea as that presented in the Bandelier museum study. It will be a place for visitors to lounge, and to gather pending regular guided ruins and museum trips. A part of the lobby should be divided off into a small reading room, wherein will be contained books, pamphlets, and literature dealing with the region. Walls of the lobby will be tastefully ornamented with colorful scenes and ruins pictures. Visitors will be free at all times to wander through the museum proper at will, but the lobby should be so comfortable they will not wish to wander until the museum attendant may show them through the exhibits.

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Suggestions for the archaeology room have been advanced in brief.

The ethnology room will deal with the living Indian groups of the region. Apaches, Yavapais, Walapais, and Havasupais will be shown pictorially and through culture developments. They will be regarded as distinct from the Pueblo group of Indians, for the Apache and kindred types until recent times were nomadic and culturally unstable. Hopi Indians will be presented by rather complete exposition of their attainments, and some treatment will be given of Pima and Papago Indians by the same methods.

There is no need to emphasize the need of a good laboratory room. There is a wealth of artifact material available at Montezuma Castle, and this justifies the best laboratory that can be provided.

The storeroom should be spacious enough that material may be in good order and sequence, for it will frequently be worthwhile to take especially interested visitors or students through it.

Following is a detailed study to date for the Montezuma Castle Museum Exhibit Lay-out Plan:

Questions to be answered:

1. Who were these people? What physical type? Compare with modern Indians.
2. Where did they come from, and when? When did they leave and why? Any historic contacts? Who are their descendants?
3. What position in the New World culture scale did they occupy?
4. Who were their enemies?
5. Was theirs an indigenous culture, a borrowed one, or a combination? What distinctive additions did they make to culture or art, if any?
6. How many culture stages are represented in idealized cross-section of Verde Valley civilization?
7. From whence came the use by Apaches of Pueblo Indian basketry? What suggestions does this use lead to?
8. What evolution is evident in weaving, ceramics, jewelry, and stone implements?
9. What cultural and artistic evolutions have been carried out by their descendants?
10. What were the chief foods of the people? What crops did they raise? What agricultural development? What animal life was there?
11. What kinds of houses were typical? What evolutions in house type did they carry out?
12. How do we know these people were great traders? What geographic factors influenced the high development of trade? What native products (salt chiefly) made this a center of trade?
13. What do we know about their social and religious organization? Did they have kivas or modified kivas?
14. If it is true some of the ruins near here were occupied, abandoned, and re-occupied, why did this happen? Why do so many of the ruins in the region look as though they had been burned?
15. What do we know of their ability in structural engineering? (Principles used in construction of a great cliff-dwelling, for example,

showing batter, concavity of walls, etc.).

16. What do the interesting burial customs of this region tell us? Why do we find cremations in one place, and a few miles north solely inhumations?

17. How would this culture compare in extent, greatness, and elaborateness with the four bordering cultures? (Tonto, or Salado, Gila and Salt, Chino, Tusayan.)

18. What is the geological story of the Verde Valley?

#### ARCHAEOLOGY ROOM:

##### Models and Life Groups:

1. Relief map of Verde drainage. This map would include all the important topographic features, including each mountain range affecting facility of entrance into the region. On this map, in different colored lines, would be indicated probable migration routes into the section, and a color chart would correlate with colors the probable priority of cultural invasions. The map will include the principal archaeological sites, colored in accord with migration lines, to show probable general period of occupancy.

2. Large Miniature of Montezuma Castle. This model must be accurate to small details, and must be so assembled that it may be taken apart and put back together by person explaining architectural features of the building. The purpose in having a good miniature model is to convey to those who cannot climb the ladders to enter the original a concrete idea of it from the ground. Also, in time to come wear and tear on the Castle structure will prohibit actual entrance by any visitors, and when that time comes, all explanations will be of necessity be given from the ground.

3. Model group of House Types. This group will present miniature replicas of all the house types known in the Verde Valley evolutionary sequence. Since no cave-dweller indications have come to light, the sequence will start with the pit-houses and crude rock shelters; next will come a unit-house surface pueblo type, along with the transition pit-house cliff-house cavate room type (exemplified in Montezuma Castle Lower Ruin); next will follow a small-house surface pueblo; lastly, a model of a large community house (Tuzigoot), and a representative cliff-dwelling of the same culture horizon as Montezuma Castle. All these models will be collapsible to the extent that the roof may be taken off, or the front, (as in a cliff-dwelling), and all details of floor and room inner structure made visible. Suitable legend will be attached to each house to give approximate time sequence.

4. Life Models. Life models will be placed in the large model of Montezuma Castle. These will show at least two rooms with the family groups as they would be found in life. Individual models of people, to same scale, will be made for placement in different cases, to illustrate every important branch of activity. For example; in the pottery case will be shown a woman making a vessel; with the weapons will be shown a man returning from the hunt carrying a small animal.

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## Specific Exhibits, Charts, Sketches, and Pictures.

### Case 1. Skeletal Material.

Exhibit skulls recovered from nearby graves; also exhibit good specimens of principal bones used in anthropometric measurements. Show complete skeleton (articulated) if possible to get a good one. Separate male and female bones. Separate specimens showing pathologic growths. Show separately (from existing material) several interesting cases in which individuals met violent deaths.

Chart showing two human skulls, male and female, and principal measuring points for racial and sexual criteris. Visitors have a great interest in learning how we tell sex from bones.

### Case 2. Burials.

Exhibit one mummy (from existing material), and show a complete burial and funerary appurtenances in situ.

Explanatory sheet stating how natural agencies can effect complete desiccation without dissolution.

### Case 3. Ceramics.

Representative specimens for each type found at Montezuma Castle or in nearby district, shown in order according to sequential development. Sketches in case above each well defined pottery type, showing woman using vessel of that shape for specific function (pouring grain into storage olla, dipping water with a ladle, cooking with a cooking vessel, placing highly ornate decorated vessel in new grave).

### Case 4. Textiles and Basketry.

#### Section a. Clothing.

Specimens of G strings, sandals (in chronological order of development), fibre skirts, cotton and yucca or apocynum fibre blankets or robes, fiber capes, etc.

Sketch of a man and woman attired in typical costumes of sandals, G string, fiber skirt, probably a cotton blanket draped over shoulders, necklace, and ear rings

#### Section b. Basketry.

Showing twilling, through twining, to coiling. Part of this display must include sketch of coarse twined grain basket, type, as charred specimen found could not be preserved. Basket weave will be shown in specimens showing all basket forms found, in addition to basket-weave matting or door-hangings, and use of same weave for burial shrouds will be indicated. A specimen of the modern Apache basket will be shown in comparison with the highest coil weave development found in near region.

Chart showing principal types of cloth and basket weave, shown as small sections, with warp and weft of neutral color, except for two illustrative strands, one of each, colored differently to show course through fabric. On chart should be marked types of weave found in this section.

Chart, similar to above, except that it should show variations in types of lace.

#### Section c. Miscellaneous.

Specimens of finely woven cotton hand bags (from existing material), crude skull-coils for use in carrying pottery or basketry on the head, and various small woven articles, some of which have not been identified as to function.

#### Case 5. Stone Implements.

Herein should be shown every type of stone implement serving a utilitarian purpose. Some trace of evolution will be evident in axes and corn grinders, and this will be shown by order of arrangement. Display should include essentially the following: manos, metates, axes, picks, hoes, small mortars and pestles for paint or nut grinding, arrow straighteners, hardheads (for pounding and shaping tools), vessel stoppers, whetstones, scrapers, borers, arrowheads, etc.

Three sketches should show how a water worn rock (gabbro or diorite) is smoothed, grooved, and hafted to make a stone axe.

A sketch should show method of salt mining as done at the aboriginal mine six miles from Montezuma Castle.

One sketch should show position in which mano is held while grinding corn in a metate.

Sketches might show how a piece of obsidian is held against a flat surface and chipped with a piece of horn to make an arrowhead.

#### Case 6. Bone and Wood Implements.

Show first the materials from which the tools were made: deer horns, shin bones of deer (tibias), rabbit radii, etc. Then will follow display of daggers, knives, scrapers, awls, needles, ceremonial whistles (or turkey calls), etc.

Diagrams will show manner of affixing arrowhead to arrow shaft, and manner in which hardened wooden end is placed in reed shaft.

Diagram will show use of spinning disc.

Wooden implements will be shown by such objects as: bow, arrows, daggers, awls, needles, (of cactus thorns), cradle board, flute (of reed), spinning discs (of bark) gourds (bottles, jars, ladles,) etc.

#### Case 7. Jewelry.

This will constitute a fascinating exhibit. It will be arranged as nearly as possible under three orders, but this cannot be followed closely. The orders would be : bone and horn, stone, and shell. Specimens of the raw material in each case will be shown. Then will be exhibited necklaces, pendants, ear-bobs, mosaics, etc.

One diagram with explanation showing sketches of common types of sea shells used, and explanations about trade value of such shells, and probable sources.

A small map showing known turquoise deposits of the Southwest, with explanation giving some facts about hardness of stone, religious significance, etc. Explanation of how turquoise is used in mosaic work on shell.

#### Case 8. Miscellaneous.

A great many small items will be difficult to classify, and will be fragmentary and doubtful. This case will provide room for these articles, and the space will be thus conveniently at hand when increase of museum material needs more good exhibit space. Two important classes should be identified at once, however, and these would be:

##### Section A. Ceremonial Articles.

Here would be shown a variety of articles, some fairly positive of identification, others decidedly problematical, all will be interesting. Ceremonial flutes and whistles, gourd shells containing body paint, sticks of mineral color, ceremonial paint grinders of stone, prayer sticks, tiny

fetishes or images, ceremonial rattle of dried skin, ceremonial paint sticks, etc.

A card containing explanation should stand back of the ceremonial articles. It should be brief, but should hit at the essential nature of Indian polytheism; how Indians worship by the commonest method, emulation or imagery, in which is depicted by concrete objects and actions the ends desired from the gods through propitiatory attempts. The nebulous meanings of Indian symbols should be strongly emphasized, and some of the commoner symbols of supernatural forces (natural to us) should be drawn.

#### Section B. Foodstuffs.

Here will be shown specimens of known foodstuffs found in ruins, as: squash shells, corn, beans, two or three varieties of nuts, etc.

Here will be a map of the portion of the Verde Valley adjacent to Montezuma Castle, on which will be shown that is known of the irrigation system of the aborigines. This will show a definite canal line from Montezuma Well, seven miles distant, to almost as far as Montezuma Castle, and will be very significant of the means to which Indians would go to secure irrigation of their crops.

A large photograph of a Beaver Dam, with a beaver visible, would tell much of how irrigation problems were solved in dry summer seasons

#### Section C. Dyes and Paints.

Certain pottery and textile prints have been positively identified, others are conjectural. Specimens of the rare materials for these should be shown, both in plant and mineral form.

A clay placque, on which will be painted strips of as many vegetable and mineral colors as can be obtained from the presumed original procedures. These color strips will be identified as to nature, e. g: yellow ochre, before firing; red, - over-fired yellow ochre, or unfired hematite; etc.

#### ETHNOLOGY ROOM.

This will not be a large room, but only about half the size of the archaeology room. It would be inadvisable in such a locality to go into too great detail about modern Indian groups, for the reason that Flagstaff, 60 miles north, has an excellent museum giving very specific treatment of the culture of the Hopis. Montezuma Castle is situated in a region possessing a number of national Monuments, several museums, and possibilities of several others. For that reason it should restrict its exhibits to treatment of specific details of its own, to avoid repetition.

The Ethnology Room will contain four or five cases: a case for the Hopi, one for the Apache and other nomad groups, one for the Pimas and Papagos, and one for early historic material of the Verde Valley. Each case will give its complete condensed treatment, showing the cultural products of its group, as for instance:

The Hopi Case: Ceramics. The common types of pottery vessels made by the Hopis since beginning of historic times. These can be shown by actual specimens for late types, but pottery made before the Indian Uprising of 1680 will have to be shown only by sketches.

Sketches will show evolutions of design apparent since prehistoric times.

Basketry. The three types of Hopi basketry will be shown, and the materials from whence they are made.

Cloth. Types of weaves employed, and products.

Jewelry, ceremonial objects, dyes, medicinal substances, etc.

The other Indian groups mentioned will be treated in essentially the same manner. The case for Verde Valley historic material will consist of early relics of the pioneers, of writings and pictures in reference to the founding and defenses of old Fort Lincoln (Camp Verde), and other historic items of local interest. Local people have already donated certain interesting material to the present museum collection; this material, while ordinarily of slight widespread interest, would be so in this case, for the Verde Valley was the scene of important developments in the subjugation and civilizing of romantic Arizona.

The Ethnology Room will have ample colorful material in the form of sketches and studies of Indian house types, glimpses of domestic life, glimpses of ceremonials, with some explanations attached.

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#### PRACTICE MODIFIES THEORY---

The one pretty safe observation I have been able to make on how the public will react in a museum is that you never can tell.

Another conclusion I have come to after a good many years experience is that you never know how flat a good idea can fall until you try it out.

I am reminded to make these pseudo-philosophical remarks by Dale coming in and telling me that he has shifted the museum collection around and we no longer have the "Index Case."

The Casa Grande museum is the laboratory where we try out all the wierd ideas that occur to us about handling museum exhibits. Most of them don't work but we figure that on a percentage basis all we have to do is keep trying and for every hundred failures we will get two or three successes. Our motto on this business of testing the public by actual trial is that we will try anything once and if the visitor doesn't act properly, the scheme is a failure no matter how much it cost, how good it looks, nor who thought it up. Failures are so common that we have grave doubts about putting in special built-in cases and museum fixtures in our future museums and are going to appeal to the powers that be to absolve us from them just as much as they can. Especially is this true in an archaeological museum where you get all set to tell your story in a certain manner with the use of certain artifacts and in a certain sequence and then the excavator goes out into your field and digs up two or three sequences of pottery that shoot your pretty plans full of holes and you go out and tear up your museum collection and revamp it to fit the new set of facts. We know something about this because we have just such an episode as this right ahead of us. Now if you have built-in cases when this happens,

you can't move them along and put something new in their places. We ought to keep a museum collection in what we might call a "fluid" condition, subject to easy change. I am speaking now of a special sort of museum, a Southwestern Monument archaeological museum.

To get back to our "Index Case". We have a story to tell at Casa Grande of one tribe of Indians who came into the Valley a couple of thousand years ago and lived for a long time as pure bloods, not mixing much with their neighbors. Then another tribe came down off the high country to the northeast and mingled with these first people. Toward the end of the joint occupation some new pottery turns up. These facts have been worked out of the stratigraphy of the trash mounds and various villages occupied and abandoned at the various periods of the habitation of the Valley go to prove the stratigraphic tests.

One of our force conceived the rather brilliant idea that a display case could be arranged with the oldest types of pottery on the bottom shelves, the later types toward the middle, and the latest types on the top shelves----each type of pottery accompanied by corresponding artifacts----the whole thing showing a sequence of chronology from the bottom of the case to the top just as might be shown in a test cut through a trash mound. Well, the lad who hatched the idea sold it to the rest of the fellows and we arranged such a case in the museum and tried it out on about 8,000 visitors,---and it was a flop. It went over fine with some of them, but too large a percentage couldn't get it all, or there was a sort of delayed fuse to it and you couldn't take time to explain it all to the point where you could get the result you wanted, so we condemned it.

That is why Dale just came in and said: "Boss, we just finished moving that pottery out of that 'Index Case' of yours and have shifted some of the other stuff around so it checks with the latest facts the excavators have dug up."

So the "Index Case" is in a sense a closed case; but it still looks like a good idea just to sit down at a desk and mull it over. But eight thousand visitors told us by their reactions that it was no good.

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### THE LADY OF THE PULVO BLANCO

(By H.S. Hunter in the El Paso Times)

Dear Mr. Hunter:

I have been listening to hear from you regarding "The Lady of the Pulvo Blanco," the mysterious woman of the White Sands. Editor Burke of Carrizozo rejuvenated the story. The Albuquerque Journal, Clarence Morgan and Bill Robinson each took a fling at it.

Now tell us about it. Who was she? Where did she originate? Early Spanish settlers say she has been seen many times and was well known to the first settlers. It is said she appears mostly at early dawn or between sundown and

dark.

The apparition is first seen at the top of a dune, always moving, sometimes moaning, and it was an early belief that she was hunting for someone.

Bill Robinson tries to explain it away with scientific reasoning, but it is too much like saying there was no Red Ridinghood and that there is no Santa Claus.

What does the Southwest's leading historian know about the Lady of the Pulvo Blanco?

----Tom Charles, Alamogordo, New Mexico.

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Dear Tom: Glad you came to headquarters for your information, rightly distrustful of the pseudo-scientific minds you mention.

The Lady of the Pulvo Blanco is a gypsy (not gypsum) sprite. White, fragile, tenuous, graceful, utterly and fascinatingly mysterious, she arises from the dunes of the White Sands at dusk or before sunrise like Aphrodite from the curving crest of Thalassa.

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Dancing, shimmering, beckoning, repulsing, the Lady of Pulvo Blanco treads her fairy measures on the spotless Sands. Hers is the grace and the poetry of motion. Hers the spirit of twilight and the stars, the night breeze and the rosy-fingered dawn. She is fantastic but wholly beguiling, bewitching, alluring to comprehending souls. Her beauty is ethereal, her charm entrancing. She is silent, ageless and serene. Her eerie dance completed, she fades from view. An instant one envisions her, and she is gone, fairy-like, vanished in the tumbled whiteness of the Dunes, yet haunting with fragrant memories any who have truly beheld her.

The Lady of the Pulvo Blanco, the gracious White Wraith of the Sands, long may her lovely apparition be seen and cherished!

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#### BODIES OF FRANCISCAN PRIESTS REBURIED

On the morning of February 21, 1935, at 8 a.m. at the Mission of San Jose de Tumacacori mass was said by Rev. Francis Bree over the mortal remains of two pioneer Franciscan priests who long ago trod the desert valleys of this region working among the Indians. Following this brief mass the remains of Padre Balthaser Carillo and Padre Narcisso Guterrez were escorted by three National Park Service men over the long 40-mile trek from San Jose de Tumacacori to San Xavier del Bac near Tucson, Arizona. Many times had these padres made the long trip by foot or horseback but that day they were taken over the same route to their last resting place.

The arrival at San Xavier might well bring to mind the arrival of these same priests in early days. Indians were stationed on the hill to the right of the Mission and upon sight of the procession were seen running down the hill to tell others of the arrival.

But this time hundreds of people including high prelates of the Catholic Church, Franciscan brothers, nuns of two Catholic sisterhoods (St. Josephs and Immaculate Heart), and many townspeople were here to welcome back these old Padres to the Mission which was once theirs. Two prelates of the church --Most Rev. Daniel J. Gercke, D.D., Bishop of Tucson, and Most Rev. Edmund Gibbons, D.D., Bishop of Albany, N.Y.---joined with modern Franciscans in honoring the two pioneers.

The National Park Service men, Walter G. Attwell, Associate Engineer, Gene H. Gordon, Assistant Engineer, and Louis R. Caywood, Park Ranger, assisted by Mayor Henry O. Jaasted of Tucson escorted the bodies to the gates of the Mission where they were replaced by the Franciscan brothers,---the action significant of the transfer from the custody of the Federal Government back to that of the order in whose service the pioneers had labored. The bodies were placed before the Sanctuary where the services took place.

As the bodies passed down the Nave to the Alter a Franciscan choir sang the age-old Gregorian chant of the mass and burial service, a composition that has been used in the Church for more than 800 years. On the plain black casket resting outside the sanctuary rail were placed the symbols of priesthood - the golden chalice, the stole and missal. The casket was flanked on either side by burning tapirs. Three vetran Franciscan missionaries of Arizona assisted at the solemn requiem mass which lasted almost an hour.

Father Pudlowski preached the sermon which paid high tribute to these early Franciscan missionaries. Mention, of course, was made of the Jesuits who preceeded and in reality laid the foundation for the Franciscans. The Jesuits had been expelled after their long and erduous labors by Charles III of Spain in 1767. The Franciscans took over the work started by the earlier order. They went into the field in order to save the missions from the complete disintegration which threatened them.

Padre Balthaser and Padre Narcisso were not among the pioneers but followed in about five years, and labored in the field for almost a quarter of a century. From 1780 until 1794 Padre Balthaser Carillo was superior at San Xavier. In 1795 he died and Padre Narcisso Guiterrez took his place until 1799. The first gave 24 years of service and the second twenty odd. Father Pudlowski, on behalf of the order, thanked Bishop Gercke and Bishop Gibbons and the representatives of the Federal Government for enabling the Franciscans to bring the bodies of their pioneers back to their home mission.

Bisho Gercke, in his sermon, paid high tribute to the early padres, after speaking of their lives and work among the Indians, he said: "Today they have come back home to rest under the shadow of this mission they built and loved so well.

"The history of the missionary work of the Franciscans brings us back over a period of nearly 400 years, for only 47 years after Columbus set foot in America, Padre Marcus de Niza came to what is now Arizona."

Following the sermon and mass, Bishop Gercke donned black vestments and, wearing the mitre of the hierchy, descended from the sanctuary to bless the bodies of the pioneers with incense and holy water.

Finally, a procession was formed at the Altar headed by a Franciscan cross-bearer, followed by the Franciscans, bishops, priests, Park Service men and nuns who all escorted the bodies to the Mortuary Chapel just outside the Mission. There the grave in the floor was blessed before the remains of the Franciscan pioneers were laid to rest in their final resting place.

We, of the Park Service, who took part in the Procession from Tumacacori to San Xavier and the services following were much impressed by the sincerity and deep regard which the brothers showed during the elaborate requiem mass.

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---L.R.C.

### THE STORY OF MONTEZUMA CASTLE

Alone the Castle stands today---  
Majestic in its silent reign  
O'er all that's left in slow decay  
Of a race long gone from its demesne.

A shell of life now dead and gone,  
It seems to wait, in patience yet,  
Return of spectral shapes anon  
To live behind its parapet.

Five hundred years or more of dust  
Has settled on it like a shroud,  
And under this the dead intrust  
All that they once held dear and proud.

The white man with destructive hand  
Now reigns, in daylight, over all;  
Who knows, though, but at night a band  
Of shadow people to a call

May answer, and in darkness gain  
Ascendancy throughout the night  
O'er all their long lost domain,  
To rule in silence 'til the light?

Perhaps in tribal council there  
The spectral people gather round  
A ghostly fire, beneath whose glare  
They hear their chief his word expound.

Old memories they live with him,  
Which bring the past again to mind,  
And pierce the veil of night so dim  
To see a day long left behind,

When, happy in the low lands dwelt  
Their people, then a peaceful race,  
Who farmed their land, and ne'er had felt  
The scourge of War, nor seen his face.

'Til came a time when from the hill  
A horde of savage fighting men  
Marched down the slope intent to kill,  
To burn, and pillage, later then,

To steal their women and their grain.  
But here the valley folk gave fight,  
Until their strongest men were slain,  
And trampled by the horde outright.

One night the remnant of a clan  
Crept forth from what had been a home  
And fled from there, and thus began  
An exodus---afar to roam,

Until at last, harassed, pursued,  
On the side of a mountain stream,  
They saw a chance to here exclude  
Pursuers from a fort supreme.

Then forthwith hastened they to climb  
A mighty slope, to find a place  
Of refuge for the rest of Time  
Within the caves; then turned to face,

Far down the slope, the climbing host  
Which confidently sought their blood.

Instead, there struck on their foremost  
A hail of stone which like a flood

Swept over them to deal but death  
Throughout their ranks, 'til---in defeat,  
They left. Above---with bated breath  
---The cave folk watched from their retreat.

By this retaliation won  
They learned a lesson in defense,  
And also that retreat was done  
When from the caves they made offense.

From that time thence, within the caves  
Their children lived, and farmed the plain  
Where lay in their ancestral graves  
Those who, in that first fight were slain.

Their numbers grew, but caves were few;  
For needed room they used the plan  
Of adding walls---and thus the true  
Cliff-dwellings humbly there began.

From such a start they built with zest  
Their homes and forts of mud and stone.

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Of all the Castle was the best---  
A fortress which in time was known

To be the strongest then to stand;  
In which its people gained a height  
Of culture which, throughout the land  
In progress was the beacon light

For centuries, until befell,  
In nature now unknown to man,  
Calamity, in which the knell  
Of their existence then began.

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Perhaps a last weird ghostly breath  
The tribe then takes, for in the East  
the light of day there spells the death  
Of shadow folk---and so they've ceased

Their earthly rendezvous to hold,  
Before the daylight to retreat,  
To shadows which will there enfold,  
Their remnant in a last defeat.

---Earl Jackson

#### PRESERVATION PROBLEMS AT EL MORRO NATIONAL MONUMENT

(Note: The following letter, concerning preservation methods to keep inscriptions intact at El Morro, from Custodian Vogt to Chief Engineer Kittredge, is appended because of its general interest.)

....To cover the past, as early as 1921, with the help and interest of Acting Director Cammerer, the Bureau of Standards began experiments on samples of the rock I sent to Washington. On the rock I carved a few words about the depth of the carving of the letters of the three-century-old Spanish inscriptions.

After several years of tests during which the action of rain, frost, heat and wind was studied by the Bureau of Standards, they finally recommended a number of commercial paraffin waterproofing materials.

Each of the companies making these materials sent me a sample of their product. In the hidden "L" of the cliff just off the present foot trail made during CWA last winter and south of the camping spot known as the Nine Pine Tree Cove I then carved the words "Colorless Coverings Save Old Carvings." Each of these words were then pencilled with the same kind of lead used to pencil out the letters of the old inscriptions. After blackening with the lead I painted the words with the five materials recommended by the Bureau. Each word was numbered and a record kept of the material used on each word so that after a period of observation a decision as to the best material could be made.

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After the time had elapsed the Director sent Jesse Nusbaum (then at Mesa Verde) and with him and his good judgement it was decided that Dri-Wall made by the Billings Chapin Co. of Cleveland, O., was the material which was most effective on this kind of stone. There was very little coloration after a day or two, no chipping of the letters, and a good body to the material.

We have now been covering about twice a year all the Spanish inscriptions with Dri-Wall. Some of the Indian petroglyphs have also been covered with this paint.

As I have never delegated this important job to anyone I have had the opportunity to study the effect of this covering the escrituras with Dri-Wall very carefully. My conclusion is that it has been very effective in preventing wear of the inscriptions from the weather.

This is true, however---this summer for the first time the lead ran a little when the paint was applied giving a somewhat blotchy appearance to the inscriptions. I experimented with several different leads which Mr. Pinkley sent me and the lead still runs. This is a thing I'd not like since it spoils in a measure the outstanding clearness of the inscriptions.

The way it stands now I do not know if the running of the lead is due to the lead or to a change in consistency of the Dri-Wall. I will write to the Billings, Chapin Co. and see what they say and ask for a small fresh sample to test same. I have not covered all the inscriptions recently for the reason of this experience but had in mind going over the problem with Mr. Pinkley at the time of his next visit.

I would also like to try on some obscure spot on the cliff the water-proofing material you mention having been perfected at Stanford. If you will send me a pint or so of this material we might find it most suitable.

About the time we were having tests made by the Bureau of Standards it was decided that in order to keep people from any defacement or vandalism it would be a good idea to dig a trench along the face of the cliff wide and deep enough so no one could handily get up to the surface with their chisels and hammers to carve their names.

The very first day this work was started in front of the inscription of Governor Juan de Eulate, 1620, the men got down about four feet and were widening the trench to about six feet. Suddenly there was an ominous crack and rumble. Looking up we noticed that the cliff had cracked alongside this inscription, that there was a very slight settling of the slab--and slab it was---and even the suspicion of a bulge below the old ground line. For the first time we noted that this inscription as well as others farther east was carved on a slab some eight inches or a foot thick, perhaps, and that one could place a hand back of the slab just at the west end of the famous lines of this 1620 carving. Evidently the plan to secure protection by a trench was a mistake since by so doing we were weakening the slab which might at some time be forced off through rain freezing back of the slab.

Jesse Nusbaum came down pellmell after I wired Mr. Albright what was taking place and he recommended against the trench and suggested the placing

of a concrete toe against and under the inscription to give strength to the slab. This concrete toe comes above the ground some 18 inches or two feet and does not add to the beauty of the place but it certainly has helped in supporting weight.

The matter of tying this slab into the cliff by placing some stainless steel or bronze bolts has been discussed and considered by many Park Service Engineers, landscape men, and officials. I have gone so far as to get an opinion from the Bureau of Standards as to the right kind of metal to use for tying the slab into the great mesa thus tending to prevent the falling of the slab with the resultant loss of the priceless history it bears.

Another thought suggested was the shooting of concrete back of the slab completely filling by a pressure pump all space back there.

Still another thought discussed has been filling the crack 100 feet above the ground with concrete to prevent flow of rain water shedding off the great cliff and into the space back of the slab. This would prevent the accumulation of water which might freeze and force through expansion the whole mass forward and away from the cliff so that it would fall and be broken into many pieces.

I do not know if you noted in Supt. Pinkley's report that during our short FERA program this summer while supervising the trail work going on I found time to build a scaffold in front of the Governor Manuel de Silva Nieto inscription, date 1629. This enabled me to carry out the plan suggested by C. Richey of the Landscape Division of carving a sloping water course above the inscription from a fold in the cliff above and at the west end of the inscription in such a way that the rain water is caught and carried around and away from the top line.

The first line was being washed by the rain and has grown dim over the course of centuries. This step was most carefully done. It was not undertaken until after a test carving of the same length, depth, and degree of slope was made on one of the great boulders lying below the inscription some 50 feet. After the success of the test carving was made we carved the trough above the inscription. I photographed this work as it was being done. Afterward I used copperas water to bring back the natural color of the rock so that now very few people notice the effect of this job on the stone.

It might be mentioned here that the spots caused when some years ago I had Willard Lee of Ramah take off all the names of moderns near the old inscriptions have now almost taken the color of the surrounding stone surface. So we know it does not take many years for the effect of the weather to bring back the richness of the natural color of our monolith.

Under CWA and again under FERA we had hoped to build up natural barriers of native plants, like cactus, rose castilla, chamiso, yucca baccata, against the cliff where we were also going to place great boulders of natural and similar color thus forming a most effective barrier of protection to the history contained in the inscriptions.

I do not feel that we should cover the inscriptions with glass but that

the plan of placing natural barriers and plants as above outlined should be the plan to follow. This can be done any time during spring, fall, or summer season and should be done as soon as possible.

And in order to offer a place for more people to stand and view the inscriptions and listen to the Custodian or Ranger the area of standing room in front should be greatly widened. Last summer was the first year college crowds came to any extent. In the future we can expect not only groups of college students but societies of all sorts to come and want to be told about the place. They will number groups of 50 and perhaps 100 and they will want to go together.

With a supply of rangers these groups might be split up but at that we will need much wider viewing areas and I am very much in favor of doing this work at once if there can be a way found to do it.

The greatest need at El Morro is everyday protection and supervision. The presence of a man there all the time who is really interested in the place can do more than all other measures to prevent any vandalism.

The escrituras are the only old Spanish inscriptions, I believe, in the world. I think we are accountable for their preservation. I have often been asked what we are doing to protect them just as you have, Mr. Kittredge. I can only tell them the story as above related and say that we have tried to do all we could with our limited means.

It is just plain luck that great damage has not been done. We do not know how long this luck continues.

You know I spend all the time there I can. Even Sunday I went out through the mud and found that there was not even a track to break the crusted snow on the north side. No one had been there for perhaps six weeks. The weather made it impossible.

In front of the visitors register my car broke through the crusted snow and I found it very hard to get out.

Coming home with my son and one of our little girls in late afternoon ---for I checked over fence, trail, inscriptions, erosion, etc.---the ground on the road had thawed so that we got stuck and spent three hours in one soft mud hole before we were able to extricate our car by packing no less than 1,000 pounds of lava rock and many armfuls of brush. We jacked the car up and built a road under it so we could pull out.

The road is now about dry and I expect visitors every Sunday if it does not storm any more.

I thank you for your interest and thoughts about my Monument and I hope that through it we may come to better protection of its treasures.

Sincerely,

E.Z. Vogt, Custodian

### IS FATHER LAMY'S NAME ON EL MORRO?

(Note: In response to an inquiry of Brother Claudius Anthony of St. Marys College, California, Custodian Vogt of El Morro wrote the following letter, which may be of interest to some of the readers of the Supplement.)

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....Now in regard to Father Lamy (the Latour in Willa Cather's "Death Comes to the Archbishop") and his name on our Rock, I am sorry to say that I cannot find the name. Last August I made a very careful survey of every name on the cliff and listed some 390 names which include immigrants, army men, privates, officers, engineers, early settlers, and explorers. These names were pit on the cliff between Lieut. Simpson's discovery visit in 1849 and the 1890's and there are few since that.

There are two names which might be Father Lamy's. One is J. Lay. This might be J. Lamy. The other is J. de B. and is carved in an indented frame in the stone but it is dim, especially the name, which I was unable to decipher. Both of these names are in the "Rincon como una naranja" as General De Vargas called it in 1692. This cove "like an orange" in shape is the heart of the old camping place of the conquistadores as well as most of those who have come since and used the sheltering arms of the cliff as protection from wind and storm as well as enemies. The water was located in this great cove which is a natural catchment basin or aguaje.

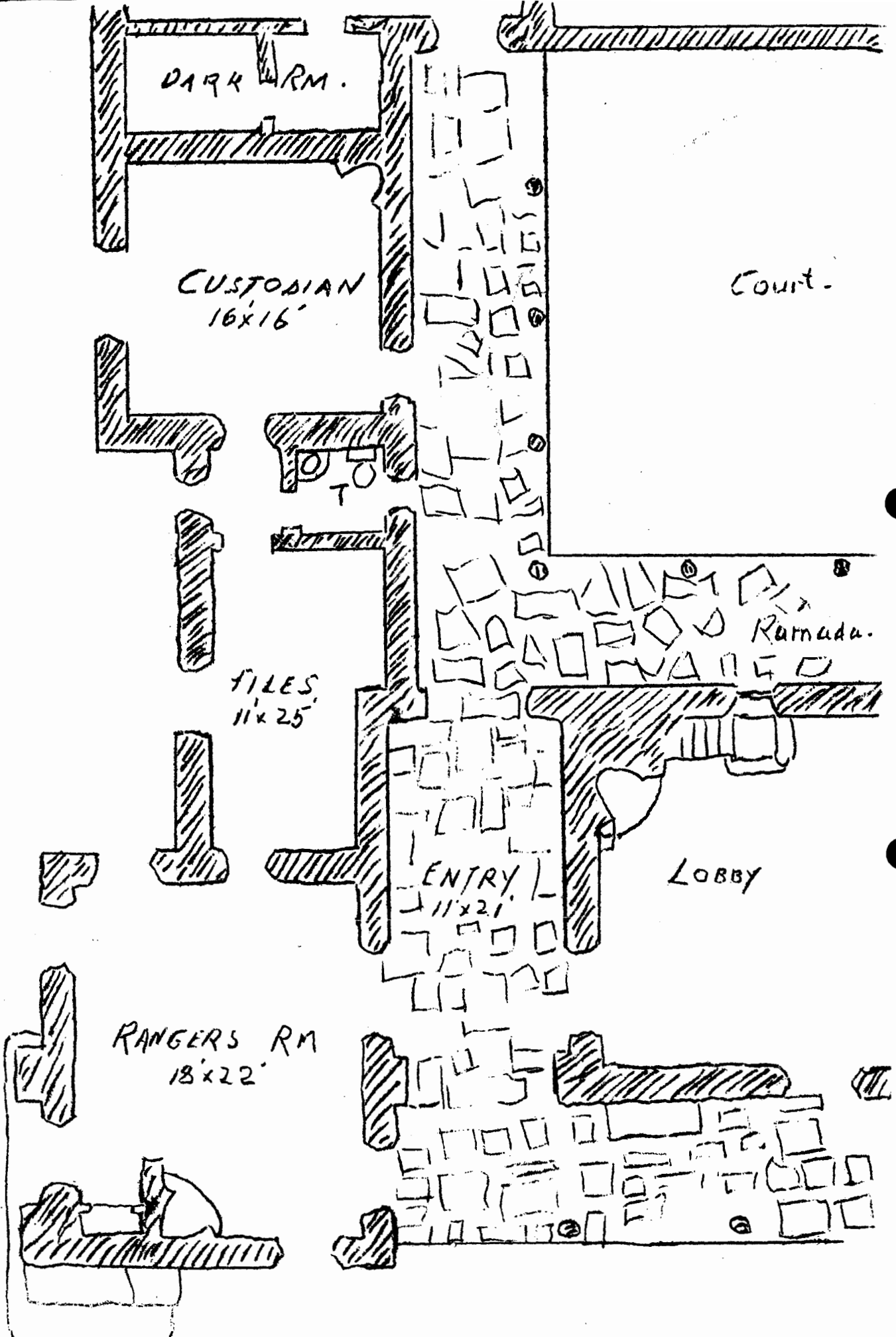
While in prehistoric and possibly historic times there was little sand in the cove, yet when I first saw it some 25 years ago there was a complete fill of sand overgrown with grass and weeds. The names, of which there are many carved around the walls of this cove, were chiseled in while the warblers stood on the ground or on improvised ladders since it seems to have been the purpose of many to get just as high as possible with their names and dates.

Now the notes I have seem to show that J. de B. was carved in 1880. I can check this in the next few weeks as soon as the great snow fall of the last few days (Note. Letter is dated Feb. 14) melts and the road dry up. You will recall that my home is one mile south of Ramah and about 13 miles from the Monument. The travel is completely at a standstill now. In fact, the mail is being packed out to hinterland post offices on horseback. As soon as I can get out to El Morro I will take a ladder and check both of the names which look somewhat promising.

I note that Judge Warner is to write a history of Archbishop Lamy. Does he happen to know if Bishop Lamy passed through here in 1880? He might have been going over to inspect the missions at Zuni or even those of Hopi Land.

No doubt he knows about Father Lamy's convent just above Lamy at the mouth of the canyon and on the left bank of the creek. Some years ago I used to punch cattle and also take sheep herds through there and there was a great ruin of a large building. The natives told me it was the work of Father Lamy. I do not know if there is much left now but I could look when I go to Santa Fe. What is left there could be photographed. Perhaps, though, Judge Warner has already done this.

Chas F. Lummis in his Mesa, Canyon, and Pueblo says the name of Father Lamy does appear on El Morro. I am sure if there it is quite dim E.Z.V.



- Court.

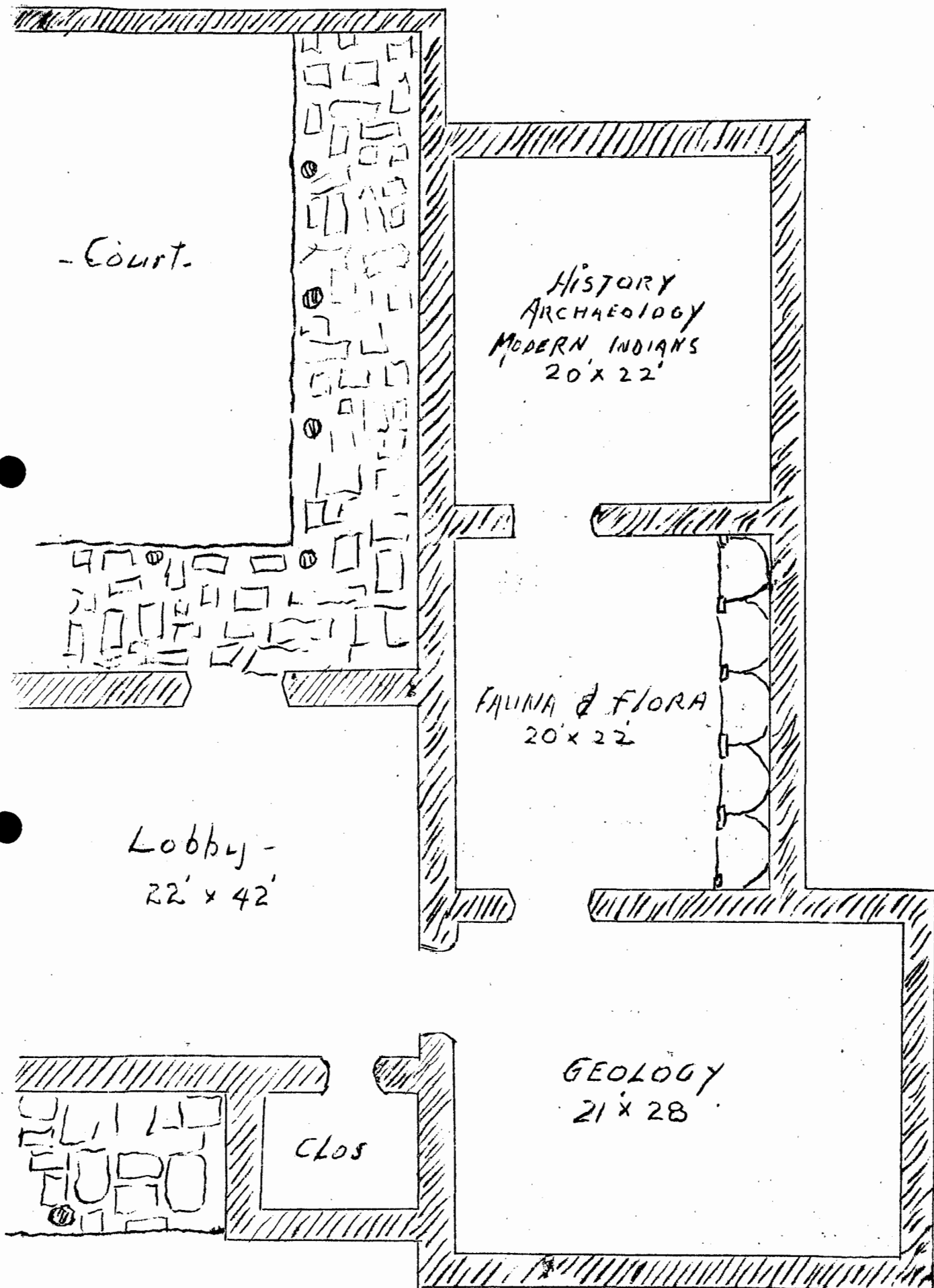
HISTORY  
ARCHAEOLOGY  
MODERN INDIANS  
20' x 22'

FAUNA & FLORA  
20' x 22'

Lobby -  
22' x 42'

CLOS

GEOLOGY  
21' x 28'



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DISCUSSION OF STUDY SKETCH FOR PROPOSED WHITE SANDS MUSEUM by R.H. Rose

(Note: On the preceding two pages you have noted a rough tracing of a study sketch for the Proposed Museum at White Sands. The doorway of the Dark Room leads into a Work Room not shown on the tracing. This room is 16 x 25 and is equipped with sink. Not shown on the tracing are the Rest Rooms which are to the left of the Rangers' Room across the Entrance road to the Sands which lead past the Rangers Room, Files, Custodian's Office, Dark Room, and Office.)

The sketch study plan was prepared by Leffler Miller of the Berkeley Office, and we like it so well we are printing it here so the rest of the Southwestern boys can see it. The following are Bob Rose's comments.)

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....I am sending herewith two study sketches on the proposed Museum and Administration Building for White Sands. You will notice that one proposes development of the second story for rooms, offices, etc., while the other consists chiefly of a development of exhibit rooms around a patio. These are merely study sketches of the most preliminary kind and the matter of windows, doors, etc., will be given more careful attention by Leffler Miller when he prepares subsequent revised sketches.

I strongly favor the one-story layout developed about the patio. Architecturally, it is more suitable. It carries the suggestion of Spanish architecture whereas the two-story plan would appear to suit some area to the north much better....

On the one-story plan I suggested putting the Custodian room where Rangers' Room is shown. For a long time there'll be but one or two men and they will be to the front anyway. The Custodian Room on the plan ought to be retained, however, for as soon as there are three or more persons on the staff there, we will wish to goodness we had the room.

The part labeled "Entry" seems desirable, though the cost is increased somewhat by including it. A sweeping view down through the flagstone paved colonnade would be effective. It does not spoil the Lobby at all, and gives the suggestion of Spanish effect and reveals the existence of the Patio immediately.

Probably more important than anything thus far suggested is the point that this Entry, though costing a little more, makes possible a more sizeable Patio. If we could not get a patio as large or large then the Court as shown, I do not believe we would want one at all. It is this point that inclined me not to object to the little extra expense that would be involved.

I have suggested a door to the "History, Archaeology, Modern Indians" Room opening to the Patio and toward the far end of the room. The matter of the Balcony to be included above Entry makes possible (1) uniting architecturally the Museum and Administration wings of the Building; and (2) the introduction of variation in the exterior to break the monotony a strict one-story Spanish style structure would have.

I think, considering what we know of the noise and other objectionable points to bringing the Rest Rooms close to the Lobby or the exhibit rooms, the idea of having them removed and yet in plain view is good. Brought adjacent to where groups will be going back and forth just hardly seems as desirable as having them removed a little.

Practically all exhibits that require painted scenes as backgrounds and dioramas and miniature groups, etc., such as we will likely have in the Archaeology Room function far more satisfactorily with indirect lighting. This was true in all the museums in San Diego, Los Angeles, and Santa Barbara that I visited. Some of the most illuminating exhibits educationally that I saw in these places would not have been possible, or would not have been at all satisfactory to say the least, had it not been for indirect lighting. It occurs to me, after seeing these museums, that it is very essential that a hand-in-hand advancement of the development program such that when museums are provided for in one setup, a suitable light plant comes in another, should take place. In nearly all cases the light plant will have been needed for the residences and utility buildings long before museums are constructed anyway. Probably by careful management these lights could be turned off while caravans were afield, or according to some other plan, and a light plan would not be worked all the time. After seeing these museums it would hardly seem desirable to prescribe doors, windows, and skylights in a new building as a temporary measure to serve until power for indirect lighting is available. a few years later, at least not prescribe such sources of light beyond the point of being easily corrected for indirect lighting when power becomes available. Therefore it seems desirable to consider that ultimately we are going to want indirect lighting in at least some of the rooms. Indirect lighting would probably never be desired in the Lobby so doors, skylights, etc., would be considered for our museum Lobbies in any case.

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#### A FEW FIGURES

We present, on page 104, the Casa Grande February Trip Chart. This chart shows the trips by days, the length of the trip being shown by a short black line, the ends of the line showing the minute the trip began and ended.

A study of the chart will show that one man could handle the traffic between eight and nine o'clock except for four days when the second party overlapped the first a little before the hour and poor service would have been delivered.

Since, with two men on duty, one man will be gone from 11:30 to 12:30 and the other from 12:30 to 1:30, it follows that any time between 11:30 and 1:30 when we have two lines overlapping we are delivering poor service. Run your eye down this two hour column and you will see this happened several times during the month.

The end of the day has lengthened out, due of course to the lengthening hours of daylight. The latest party left a few minutes before seven on the 20th. Three parties on different days remained until 6:30 or later.

With two men on the job, allowing eight hours per day, one working from



[illegible]

eight to five and the other from nine to six, we would have had to close the front gates at 5:10 in order to finish the last party by six o'clock. Four parties would not have been able to enter who did enter and get service with the gates open.

If you will compare this with the January Trip Chart, shown on Page 51 of the January report, you will see that the time of the first party has spread back close to eight o'clock instead of around 8:30 in January and the time of departure of the last parties has spread a little more toward 6:30.

"Bunching" of the parties is not so pronounced as in the winter months, probably due to the fact that with longer hours of daylight parties are distributing themselves a little better. If you hold the chart at arm's length and look at it as a mass, you can see the afternoon "bunching" starting at a little after four on the first and zig-zagging down the chart between three and five o'clock.

We have made up a Poor Service Chart for Casa Grande which shows those times each day when two men were unable to handle all parties on the ground in a satisfactory manner. The chart is made up from a study of the Trip Chart. With two men on duty, whenever three lines overlap on the Trip Chart, poor service is inevitable, and between 11:30 and 1:30, whenever two lines overlap on the Trip Chart, we are delivering poor service because one of our men will be gone to lunch. It will be seen that the poor service groups between 11:30 and 1:30 and between 3:00 and 5:00 in the afternoon. We have marked the Sundays and Washington's Birthday and you will note that poor service does not peak on those days as you might have supposed it would.

By an addition of these poor service periods we find we would have delivered a total of 1,030 minutes of poor service with two men on duty during February if both men had worked the straight 28 days. This means 17.1 hours or a little better than two days of poor service out of the 28, if both men worked 28 eight-hour shifts.

The days are lengthening out and it will be interesting to see what these charts show in the spring and summer months.

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#### SUBDUED MUTTERINGS FROM CANYON DE CHELLY

Boss, in the last monthly report Charlie Steen expressed the hope that I would rise up in wrath and tell Jackson at Montezuma Castle he isn't the only one who has a cliff dwelling at hid Monument; and then C.S. went on record about his few cliff dwellings.

Well, I wouldn't even take the trouble to quarrel with either of them. But I do agree that both of them have fine, well-preserved cliff dwellings ---- Jackson one good one and a couple of holes in the rocks he calls cliff dwellings; Charlie Steen a number of fair ones.

And I would remind them that up here we have something over 200 of them, at least, though it is true that most of them are now in ruins, and the others

fast becoming that way. I do not extend invitations to either of them to come here to see our ruins, however, because what may be a fine cliff dwelling today, may be just another pile of rocks tomorrow. They forget that they have had appropriations for repairs to their cliff dwellings; that both Montezuma Castle and Tonto Ruins could be parked in one place, such as in and around Antelope House, and you could hardly find them on the map of this Monument; that if both their Monuments were in one place, one man might adequately protect both of them, and make a stab at taking care of visitors, and throw a little discouragement into vandals.

Up here we have no funds for repairs to our ruins; no expectation of getting any the coming fiscal year; the Monument is so vast that it will take a whole flock of Rangers properly to control our visitors (the present Custodian having run himself ragged last season, trying to be in a dozen different places, all at the same time, and now wondering just what will happen the coming year, with increased travel); and the few spectacular, partially-ruined cliff dwellings we have remaining are rapidly going to pieces.

All those two men have to do is to sit in a little house and wait for the visitors to arrive. But here we have to be in a dozen different places at once, lookinglooking everywhere for the elusive visitor, who can get on the Monument by any one of half a dozen different routes.

So I won't quarrel with either Jackson or Steen. But one of these days we may have adequate personnel here (probably when it is too late), may have our ruins somewhat stabilized, be able to prevent vandalism and properly take care of all visitors; then I'll ask both Jackson and Steen to pay this Monument a visit, and see, not just one little group of cliff dwellings, representing but one small period in Southwestern archaeology, but many dwellings, many burials, many artifacts, in the richest archaeological site in the United States, bar none, where all periods, both Pueblo and Basketmaker, are represented. Then I won't have to argue with them, for the evidence will permit of no argument.

And another thing: I wish that Earl Jackson, up at Bandelier, had continued his remarks made at the close of his report, wherein he spoke of the white man's ancestors eating their meat raw, and dominating their wives. If he has the slightest doubt that the dominating of wives has become a thing of the past, and wishes enlightenment on the subject, he might enter into some personal correspondence with me. From the last reports I had, Earl is still single. But I have been married for over three months.

----Robert R. Budlong, Custodian

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EXTRACT FROM A NICE "THANK YOU" LETTER TO DIRECTOR OF NATIONAL PARK SERVICE:

"....During last summer we drove over 4,200 miles and visited 15 national Parks in the Southwest. At each and every one we were very cordially treated by the Rangers. In fact, if we had employed these men ourselves they could not have been more courteous or considerate of our welfare nor supplied us with more helpful information as to roads and points of interest. The best man was at Inscription Rock."

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Orchids to Temporary Ranger Alfred Peterson. You will remember, Chief, he was the man refused entrance into the Service five years ago--he was an inch short.

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And now we bring this report with its supplement to a rather regretful close. While there is a lot of hard work about it, it is always a lot of fun to get out the monthly report.

Reports from the men in the field will bear reading by anybody either inside or outside the Service.

Adventure is not gone out of the Service as long as you can shake hands with disaster or death in the run of the job as Earl Jackson and his companion did this month....

Romance has not died as long as Jimmy and Sally Brewer are snugly tucked away from the wintry weather at Wupatki in a room which the Archaeologists say was moved into by a little brown-skinned Hopi couple about 806 years ago....

Interesting scientific reserach has not been completely walloped by the ol' Bugbear Depression as long as Paul Beaubien continues to wrench knowledge about the old Spanish padres out of dirt-filled rooms in mounds at Tumacaopri....

Hardship has not subsided as long as Bud's mailman can get stuck on the mountain for six days, E.Z. Vogt has to buck snow for six hours to travel 40 miles, the Brewers fall into a snow-filled hole and are faced with the necessity of stumbling almost 30 miles to Flagstaff at night if some kind-hearted motorist does not pick them up....

What I want to point out with all this, Chief, is that we have an aggregation of folks in this organization who are here because they can take it---and I mean the Honorary Custodians and Rangers Without Pay just as well as the ones who are on the payroll. We need more personnel, but it must be a picked lot; the "bright light" type, which must have its movies, fades out of our picture pretty fast. We have no place for the ranger who sees only the pretty girls. The "Bughunter" ranger is welcome---more than welcome---if he can take it along with the rest of us, but we are under pioneer conditions in parts of the Southwestern Monuments and the very finest personnel is none too good.

And from the comments we get on the Monthly Report, it seems other folks also chuckle over the stories as they issue from the pioneering Custodians and Rangers.

*Cordially,  
Frank Pinkley.*