

L. R. Caywood

SOUTHWESTERN MONUMENTS

MONTHLY REPORT

MARCH, 1936



DEPARTMENT OF THE INTERIOR
NATIONAL PARK
SERVICE

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MARCH, 1936, REPORT

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SOUTHWESTERN MONUMENTS PERSONNEL

HEADQUARTERS, Southwestern Monuments, Coolidge, Arizona: Frank Pinkley, Superintendent. Hugh M. Miller, Acting Assistant Superintendent. John H. Diehl Associate Engineer. Robert H. Rose, Assistant Park Naturalist. Dale S. King and Louis R. Gaywood, Junior Park Naturalists. A. T. Bicknell, Custodian on Special Detail. Robert L. Cole, ECW Clerk. Luis Castellum, Temporary Clerk-Stenographer.

GENERAL FIELD MEN: Charles A. Richey and Harry Langley, Resident Landscape Architects. J. D. Hamilton, Associate Engineer. J. H. Tovrea, Chief Engineering Aide. Andrew Clark, Topographer. Carl Schmidt, Rodman.

FIELD STATIONS:

1. Arches---Moab, Utah. J. M. Turnbow, Custodian.
 2. Aztec Ruins---Aztec, New Mexico. John Will Paris, Custodian.
Robert W. Hart, Ranger-Archaeologist.
 3. Sandellier---Box 669, Santa Fe, New Mexico. Earl Jackson, Custodian.
 4. Canyon de Chelly---Chin Lee, Arizona. Robert R. Budlong, Custodian.
 5. Capulin Mountain---Capulin, New Mexico. Homer J. Farr, Custodian.
 6. Casa Grande Ruins---Coolidge, Arizona. W. J. Winter, Custodian.
Charlie R. Steen, Park Ranger.
 7. Chaco Canyon---Crownpoint, New Mexico. Thomas C. Miller, Custodian.
 8. Chiricahua---Wilcox, Arizona.
 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. Mortezuma Castle---Camp Verde, Arizona. Martin I. Jackson, Custodian.
Frank Fish, 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---Rainbow Lodge, Arizona. No Custodian.
 18. Sagaro---Tucson, Arizona. Paul Beaubien, Temporary Ranger.
 19. Sunset Crater---Flagstaff, Arizona. J. W. Brewer, In Charge.
 20. Tonto---Roosevelt, Arizona. Woodrow Spires, In Charge.
 21. Tumacacori---Box 2225, Tucson, Arizona. George Boundey, Custodian.
Martin Evenstad, Ranger.
 22. Walnut Canyon---Flagstaff, Arizona. Donald Erskine, Ranger in charge.
 23. White Sands---Alamogordo, New Mexico. Tom Charles, Custodian.
Barry Mohan, Utility Man.
 24. Wupatki---Flagstaff, Arizona. J. W. Brewer, In Charge.
 25. Yucca House---Cortez, Colorado. No Custodian.
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CONDENSED REPORT

Cocconino, Arizona
April 1, 1936

The Director
National Park Service
Washington, D. C.

Dear Mr. Director:

The Condensed Report for Southwestern Monuments for March, 1936:

TRAVEL	March, 1936	March, 1935	March, 1934
Aztec Ruins	808	282	429
Bandelier	429	427	280
Capulin Mountain	401	411	450
Casa Grande	2,705	3,385	2,785
Chaco Canyon	405	304	208
Canyon de Chelly	25	0	---
Chiricahua	350	---	---
El Morro	16	4	---
Glen Quivira	152	293	305
Montezuma Castle	500	597	1,056
Natural Bridges	---	0	---
Nevado	---	4	---
Pipe Spring	119	195	617
Saguaro	2,000	---	---
Sunset Crater	136	53	---
Tonto	216	746	---
Tumacacori	1,573	1,987	1,215
Walnut Canyon	360	---	---
White Sands	4,685	---	---
Wupatki	104	38	17
Yucca House	---	4	---
Actual Reported Registration	16,515	8,728	7,336

The 14 monuments which reported both in 1935 and 1936 showed a decrease from 8,728 to 8,060---698 visitors, or 7.5%.

The 10 monuments which reported both in 1934 and 1936 showed a decrease from 7,336 to 7,107---229 visitors, or 2.8%.

Thus, it would appear that March, 1936, as a travel month was eight percent poorer than the same month in 1935; almost three percent poorer than the same month in 1934. Weather conditions, apparently, are entirely responsible. Although the northern portion of our area experienced a mild month, the heavily traveled southern monuments drew rain and cold for their weather allotment, and travel decreased.

COMPRESSED REPORT (CONT.)

000 GENERAL

020 WEATHER

The northern part of our area experienced a rather mild month of March except for heavy snowfall late in the month. Wind bothered visitors a little at Chaco and Wupatki; dust appeared at Bandelier and Canyon de Chelly. Southern Southwestern Monuments which usually attract heavy travel in this month were visited by relatively cold and wet weather. Tonto, alone, received its normal quota of travelers. Ranger and forage conditions generally appear as promising. There has not been enough moisture to enable the Gila Desert to bloom with last year's abundance, however.

100 ADMINISTRATION

120 MONUMENT INSPECTIONS BY SUPERINTENDENT PINKLEY

Superintendent Pinkley and Acting Assistant Superintendent Miller visited the following monuments on business matters: Canyon de Chelly, Mar. 13; Bandelier, Mar. 14; Chaco Canyon, Mar. 16 and 17; Aztec Ruins, March 18.

Acting Assistant Superintendent Miller also visited Canyon de Chelly for an inspection of the custodian's new residence February 27.

123 VISITS BY NATIONAL PARK OFFICIALS

Aztec Ruins: Ahrens and Gully, ECW, Denver Office. W. H. Wirt of Berkeley Office. Superintendent Mestaum of Mesa Verde National Park.

Bandelier: W. H. Wirt, ECW.

Canyon de Chelly: Kenneth Saunders of Mesa Verde National Park.

Chaco Canyon: Custodian Paris and Ranger Hart of Aztec Ruins; Regional Wildlife Technician Borell.

Chiricahua: R. R. Robinson, master mechanic, Yellowstone; Ranger A. T. Bicknell; Regional Wildlife Technician Borell.

Gran Quivira: Associate Engineer Biehl, February 29 and March 14.

Pipe Spring: Landscape Architects Langley and Keeling; Park Naturalist Presnell of Zion National Park.

Tonto: Raymond Higgins of Oklahoma City Office.

Tumacacori: Master Mechanic Robinson and Ranger A. T. Bicknell.

Walnut Canyon: Ranger Frank Fish of Montezuma Castle.

White Sands: M. C. Hupcock, assistant director, National Park Service Recreational Demonstration Group; W. H. Wirt, regional forester; Adrey Borell, regional wildlife technician; Vincent Vandiver and Dr. Lewis, geologists.

Wupatki: Ranger Steen, March 18; Ranger Erskine, March 23.

180 PUBLICITY

White Sands: Reference to this monument will appear in "Our Desert SOUTHWESTERN MONUMENTS" 140 MONTHLY REPORT FOR MARCH, 1936

CONTINUED REPORT (CONT.)

180 PUBLICITY (CONT.)

Neighbors," by Edith M. Patch, McMillan Publishing Company. The monument also will receive publicity in the Continental Oil Company's exhibit in the Texas Centennial at Dallas. See Page 187.
Wupatki: Science News Letter for February 15 carried an account of "Hope Spinach," published last year in Southwestern Monuments Supplement to Monthly Report. See Page 183. "Arizona Highways" published an article on "ball courts" which mentioned Wupatki. See page 182.

200 MAINTENANCE, IMPROVEMENTS, NEW CONSTRUCTION

220 IMPROVEMENTS

Canyon de Chelly: Two lines of drainage trench run around new residence to prevent water damage. See page 185.

Chaco Canyon: One man used 19 eight-hour days painting tops of steel fence posts, building new water gaps, and maintaining fence. See page 182.

Pipe Springs: Old comfort station torn down and site obliterated. Another comfort station remodeled. See page 189.

Wupatki: Trail between Rooms 16 and 38 filled to suitable height and landscaped with loose rock material. See page 182.

230 NEW CONSTRUCTION

Bandselier: ECW progress as follows: (See page 147)

1. Roofing of Quarters No. 1 being applied. Rough plumbing is installed and interior partitions are ready for plaster. Building will be turned over to carpenters for inside finish work April 1.
2. Landscape crew worked half month on planting and obliterating. Other half month was spent completing grading slopes in Detached Section highway.
3. 450 additional feet of sewer line completed. This finishes the project. Residences are connected.
4. Storage tank (10,000 gallon capacity) and all connections completed.
5. Work continued on sign project. Many signs completed and shipped.
6. Museum building construction delayed pending receipt of lighting and ventilation plans.
7. Small quarry crew worked all month.

Canyon de Chelly: Custodian now removing forms, waterproofing water reservoir preparatory to further work. See page 183.

Chiricahua: ECW progress as follows: (See page 149).

1. Massai Point-Balanced Rock Trail now complete for 1,000 feet.
2. Echo Trail advanced 250 feet. Heaviest construction now complete.
3. 800 sq. yds. of bankslipping on Sonita Highway completed. Material was used to obliterate borrow pits.
4. Sugar Loaf Trail approach widened for purposes of visibility.

CONDENSED REPORT (CONT.)

230 NEW CONSTRUCTION (CONT.)

5. Ranger station 100% complete.
6. Bathhouse 100% complete.
7. Three fireplace and table sets constructed at Massai Point. One pit toilet moved.
8. Planting project under Foreman Fulton started.
9. Topography crew under Andy Clark finishing topographical map.
- Gran Quivira: Pump house and water system work under Foreman Gipe progressing. Tank pit dug; lumber, cement, gravel on ground. See page 159.

Pipe Spring: ECW progress as follows: (See page 158).

1. Fencing project complete.
2. Diversion ditch project complete.
3. Parking area almost leveled but work is waiting on acquisition of truck to haul gravel.
4. Walk construction stopped until decision is made concerning historic dugout which was discovered in line with one of the walks.

300 ACTIVITIES OF OTHER AGENCIES IN MONUMENTS

320 COOPERATING GOVERNMENT AGENCIES

Chaco Canyon: Bert Coddington, agronomist, and L. V. Compton, biologist, both of Soil Conservation Service, conferred during the month concerning rodent control on the monument in devastated areas. See page 152.

Wupatki: National Forest Service is cooperating on proposed cattle guard on west boundary. Tentative arrangements are for Forest Service to provide material, Park Service the labor. See page 161.

350 DONATIONS AND ACCESSIONS

Aztec Ruins: Earl Morris, Carnegie archeologist, kindly donated to the museum a copy of his invaluable excavation field notes. This acquisition greatly supplements our museum catalog, and will prove of increasing value from now on. See page 161.

White Sands: The collection of mammal and bird study skins previously made at White Sands by Adrey Borell, regional wildlife technician, transferred from the University of California, which had been storing them for us, to a storage case under the care of Custodian Tom Charles. Are available now for interested visitors and scientists. See page 168.

400 FLORA, FAUNA, NATURAL PHENOMENA

400 FLORA

Pipe Spring: Water line needed to irrigate 35 planted trees. See page 158.

CONDENSED REPORT (CONT.)

400 FLORA (CONT.)

Wupatki: Ethnobotanical specimens received which had been identified by University of California through Field Division of Education Office. See page 162.

450 ARCHEOLOGY, HISTORY

Wupatki: Broken culinary olla which had washed out of ruin was repaired. See page 162. Party of local men re-started work on the long abandoned Henry Mine near the monument. See page 163.

460 BIRDS

All new birds banded in Southwestern Monuments during March. Wupatki and Tumacacori, both important stations, started activities. Casa Grande station using colored bands on Gambel Quail, Cactus Wrens to facilitate life habits study. See page 227.

470 ANIMALS

Bandelier: The beaver which have been progressing up Frijoles Creek have constructed a sizable dam and seem ready to settle down. See page 146.

500 USE OF MONUMENT FACILITIES BY THE PUBLIC (See travel figures on P. 139)

530 NEWSWORTHY VISITORS

Bandelier: George Parker Winship of Harvard University; Jan Pieter, former consul from Holland; Spencer L. Baird, district counsel Reclamation Bureau; Frank Vosely, state land commission; C. M. Adams, sanitary inspector for U. S. Public Health Service.

Casa Grande: Drs. Charles and Will Mayo, Rochester, Minn.; Watson Smith, member of 1935 Rainbow Bridge Expedition; Dr. C. L. Fenton, palaeontologist.

Chaco Canyon: John G. Front, United States Geological Survey.

Gagero: Dr. Ira L. Wiggins, Stanford University.

Poncha: Mr. Norce Gladwin and Miss Emily Gross of Gila Pueblo.

Tumacacori: Dr. Lee C. Bartle of San Luis Obispo, California, authority on fungi and spores.

White Sands: Leo McCluskey, Oklahoma City Newspaperman; Edith Patch, University of Maine, preparing book, "Our Desert Neighbors"; M. L. Gensky, chief clerk, New Mexico highway department; Mrs. Clyde Hineley, wife of New Mexico's governor; Henry E. Riggs, dean emeritus, School of Engineering, University of Michigan; Phillip Glendon, assistant curator, University of Michigan Museum.

Wupatki: Dr. W. J. Jakin, marine biologist, University of Sydney, Sydney, Australia.

CONDENSED REPORT (CONT.)

600 PROTECTION

630 ACCIDENTS

Aztec Ruins: Miss Segerburg, Durango, Colorado, fell while descending into Great Kiva and broke her leg. Is recovering nicely. See page 160.

640 DESTRUCTION OF ANIMALS

Chaco Canyon: National Park and Soil Conservation Service experts are making study of possible rodent control in especially eroded areas in this canyon. See Regional Wildlife Technician Adrey Borell's report on page 180.

650 SIGNS

Bandelier: Under ECW this camp is making signs to be used at various necessary places throughout the Southwest.

660 SANITATION

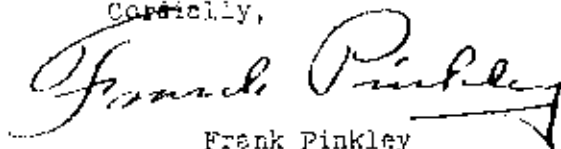
Casa Grande: Present defective sewer system may prove health menace in near future. See page 171.

900 MISCELLANEOUS

MAIL COUNT

Incoming:		
Government	1509	
Personal	<u>864</u>	2373
Outgoing:		
Government only	1547	
	<u>1547</u>	
Total mail handled		<u>3,920</u>
Telegrams		
Incoming		58
Outgoing		<u>47</u>
Total correspondence handled		4,005

Cordially,



Frank Pinkley
Superintendent

REPORTS FROM MEN IN THE FIELD

BANDELIER

By Earl Jackson, Custodian

VISITORS:

Visitors numbered 439, arriving in 124 cars, from 34 states, Washington, D. C., France, England, and Czechoslovakia. Only 24 states were represented by cars.

The six highest states by visitors were: New Mexico, 511; Texas, 17; Colorado, 15; Michigan, 9; Oklahoma, 9; California, 9.

Visitor attendance shows the biggest March in history, but only by an increase of two people over March of 1935. You might almost think I had juggled the figures to get that result.

The peak day was March 15, with 99 visitors.

Weather and Roads:

Days partly cloudy: 6.
Days cloudy -----: 5.
Days clear -----: 10
Maximum temp. ----: 65. March 9.
Minimum temp. ----: 20. Feb. 25 and March 23.
Mean Maximum ----: 55.9
Mean minimum ----: 27.9
Precipitation ----: .44 Against .10 for March, 1935.
Snowfall (traces)-: Feb. 25 and March 23.
Rain and sleet ---: March 22
Dust storms -----: March 5 and March 11.

Weather has been mild, with a low percentage of stormy and windy days. However, dust was heavy for five days. With considerable more moisture than for the same period last year, the travel record is encouraging.

Roads, during the greater part of the month, have been good, and at the present time are in excellent condition. At no time have they been anywhere near impassable.

Visitor Trip Chart:

Forty-six parties of visitors were taken through the ruins, numbering 151 people. Average time per trip was 56.7 minutes. Seven parties, numbering 16 people, were given talks without ruins trips, averaging 18.6 minutes per party. All visitors to the monument were contacted and registered.

BANDELIER (CONT.)

Special Visitors:

February 29 - A. Hackenschmidt, Ladislav Koldo, and Elmar Klos, from Czechoslovakia, were interested visitors. They are studying motion picture technique in the United States, with the aim in mind of developing motion picture advertising in their own country.

March 2 - Mr. and Mrs. George Parker Winship were in. He is the assistant Librarian in charge of Rare Documents at Harvard. He wrote the Coronado Report (24th Annual Report B.A.E.)

March 5 - W. H. Wirt arrived for regular E.C.W. inspection. Jan Dieker, former Consul from Holland, now representative of newspapers and magazines for that country, was an interested visitor.

Selder E. Tracy, who was the chief engineer for the picture "Mutiny on the Bounty," was a visitor.

March 6 - Norman Smith, Junior Geologist, E.C.W. left, after a three-week stay.

Jerry Morse, former landscape architect at Bandelier, was in for a day.

March 7 - Mrs. Frank Kentner, of the Rancho de Taos guest ranch, was in for the first time since the development work began here, and spoke highly of it. Mr. and Mrs. Spencer L. Baird, of Denver, were in. Mr. Spencer is District Counsel, Reclamation Bureau.

March 8 - Frank Vesely, State Land Commissioner, paid a return visit.

March 12 - Mr. and Mrs. P. R. Robertson, of Chicago, Illinois, were enthusiastic visitors. Mr. Robertson is the builder of Robertson Cameras, used in several divisions of the government.

March 13 - Carl F. Beall, range supervisor, Forestry Indian Service, and Joe A. Wagner, junior range examiner, were in on business with the Custodian. C. M. Adams, Sanitary Inspector for U. S. Public Health Service, was a return visitor with a party of friends.

March 14 - Superintendent Pinkley and Assistant Superintendent Miller were in for an official visit of one day. As usual, the Boss' visit straightened out a thousand and one questions which had been more or less hanging fire until he could come in.

Nature Notes:

The beaver, or beavers, (we can't tell for sure if there are two or one) which were working up Frijoles Canyon have built a good sized dam a quarter mile below the swimming pool, and this has the appearance of being intended for permanent quarters. Depredations in tree growth

BANDELLIER (CONT.)

are practically at a standstill.

Betty's bird banding is also at a standstill. With warm weather and spring coming on, the birds have forsaken their winter boarding places, and she has banded only two new ones - Grey headed Juncos. The other day she saw her first Red-winged Blackbird in the Canyon, and four Mourning Doves have made their appearance recently.

Bill Sharpe, Procurement Officer, living in the Technician's quarters now, advances a new theory as to why the Indians may have left this canyon. He thinks bed bugs drove them out.

General:

Picnic parties are again using the camp ground, although the deciduous trees haven't started to leaf out. Travel indications are looking better than they have since I have worked here. The Fred Harvey Indian Detour is doing the liveliest business in many long months. Nearly everyday brings at least one Harvey party to Frijoles Canyon, and frequently there are two.

The experiment we are carrying out with the Visitor Question Survey is quite interesting. It makes one sit back and reflect that, after all, there is a surprisingly high number of intelligent queries. And when this 30-day question list is turned in to you, you will read a list which, for intelligent answering of all issues, would require the presence of a New International Encyclopedia.

Discovered, the other day, two new ruins on South Mesa which I had not seen before. Each consists of about a dozen rooms, and each is situated on a crest of a low ridge, at the end. From one I followed a prehistoric Indian trail for a quarter mile in the direction of Frijoles Canyon before it was lost under the pine litter of the forest floor. These ruins, as far as I know, are not named. They are interesting because of the surprising amount of decorated pottery. Over fifty percent of the sherds seen were decorated, and a few glaze specimens were seen, so the dates of them would be, at the earliest, in the early culture horizon of Frijoles Canyon. A considerable number of sherds was gathered, these to be identified by type by Dr. Mera and used in the stratigraphy case of the Bandelier Museum.

BANDELLIER ECW

By H. B. Chase, Project Superintendent

Roofing of Quarters No. 1 is in progress at this time, all rough plumbing installed and inside partitions constructed ready for plaster. The building will be turned over to the carpenter crew for inside finish work on April first.

BANDELIER ECW (CONT.)

About half of the month was devoted to planting by the landscape crew, the balance of the month to fine grading road slopes along the road in the detached section of the Monument. This month's work completed the road slope project.

An additional 450 feet of sewer line was completed this month. This installation completes the sewer line project and connects the residence area development with the sewer disposal system.

The 10,000 water storage tank with all connections was completed and now ready for use. Additional water consumption by the Army of late has hindered filling the tank to capacity. However, after removal of the camp this storage tank will prove valuable in keeping an ample storage of water for Headquarters and Residence Areas.

Additional signs for this and other monuments have been completed and shipped this month.

Construction of the Museum has been stopped all month awaiting the arrival of lighting and ventilation plans.

A small quarry crew has been in operation during the month quarrying and shaping building rock as needed for the Quarters project.

Our Forestry Foreman, Fulton, has been detailed to the Chiricahua camp since March 17 for a period of six weeks to assist in planting and forestry work on that monument.

BANDELIER FORESTRY

By J. Fulton, Forestry Foreman

The first week in March my crew completed work on the vigas and lintels for Quarters No. 1 and for the museum. The lintels contained a total of 1900 Bd.Ft.; 1045 lineal feet of vigas were cut and finished.

On March 9 and 10 I was engaged in some bark beetle control work. A 57' *Pinus ponderosa*, 23" in diameter, which was infested with *Dendroctonus barberi*, was cut near the hotel. Also, it was necessary to cut 23 landscape-planted trees in the camp ground and parking plaza. Four were *Pinus edulis*, twenty-three were *Juniperus monosperma*, and one was a *Pinus ponderosa*. All these trees were simply piled and burned.

The next four work days, I had a crew on digging the ditch for telephone and power conduit between the residences, utility yard, and the office.

On March 17 I left Bandelier to go to Chiricahua National Monument. I expect to be here until about April 15 on a tree-planting project. Al-

BANDELIER FORESTRY (CONT.)

though the growing season will soon begin, I believe we will be able to get the job done in time. The planting is going along fine at this time.

CHIRICAHUA

By Wm. Stevenson, Project Sup't.

I herewith submit the following travel report for the month of March.

Due to the increase in travel during February, three enrollees were assigned as guides this month; also signs were made up to direct tourists to the points of interest.

During the month 350 visitors arrived in 60 cars representing 14 states. Travel did not increase as rapidly in March as would have been expected, but cold weather accompanied by flurries of snow the latter part of the month kept many of the local people away.

CHIRICAHUA ECW

By Wm. Stevenson, Project Superintendent.

I herewith submit the following report for the month of March.

Work continued throughout the month on the Massai Point. Balanced rock trail 1000' have been completed to date. Echo trail advanced 250' this month. The heaviest construction is now done on this trail.

Six hundred square yards of bank were sloped on the Bonita Highway; most of the material was used in the obliteration of borrow pits.

The approach road to Sugar Loaf trail was widened at its junction with Bonita Highway to permit greater visibility.

The Ranger Station at Headquarters Area is 100% complete. The Camp Ground Bathhouse is 100% complete.

Three fireplace and table sets were constructed at Massai Point and one pit toilet was moved to Massai Point from the headquarters area.

Forestry Foreman Fulton arrived from Bandelier March 18 and work was started immediately on the planting project.

Andy Clark and Carl Schmidt arrived March 9 to complete the Topography map on the Monument.

Visitors for the month include R. R. Robinson, Master Mechanic of Yellowstone National Park, A. T. Bicknell, Ranger, Casa Grande National Monument, and A. E. Burrell, ECW Wildlife Technician.

TONTO

By Woodrow Spires, In Charge

This draws to a close the busiest month I have so far encountered. Lots of visitors and plenty of new plants and flowers to identify. It is quite surprising the botanical knowledge that some of the visitors possess.

You will probably think by my weather reports I am in training for a California real estate salesman this winter. This month we have had 2.39 inches of precipitation which fell in the form of snow, sleet or rain and six cloudy and four partly cloudy days. I was unable to read the figures, but guessing would say 32 degrees for the minimum and 75 degrees for the maximum.

Visitor count for this month shows an increase of 92 visitors, or 12.7% over last month. This I account for by fewer cloudy and disagreeable days. The following figures are derived from SWM Stencil No. 16:

Total visitors at the Monument.....	816
Total time guiding.....	7250 Minutes
Total visitors taking field or ruin trips.....	444
Total number of field or ruins trips.....	93
Total time field or ruins trips.....	5100 Minutes
Average time field or ruins trips.....	51.2 Minutes
Average groups field or ruins trips.....	4.7 Prs.
Total visitors Museum trips.....	454
Total Museum trips.....	93
Total time Museum trips.....	1550 Minutes
Average time Museum trips.....	16.6 "
Average group Museum trips.....	4.8

Special trips to the upper ruin were so few that I counted them as regular field and ruins trips.

Checking last year's travel count for the same period (Feb. 25 to March 25), I find 749 persons visited the Monument against 816 for the same period this year. This is an increase of 67 persons, or 8.2%.

This month's supply of newsworthy visitors took quite a setback as compared to last month's.

Steen returned to headquarters February 29. Engineering crew left March 5. March 7 Raymond Higgins, N. P. S., Oklahoma City, accompanied by his mother, stopped in for a brief visit of their first Cliff Dwelling. March 20 Mr. Norce Gladwin and Miss Emily Cross of Gila Pueblo were interested visitors.

I believe I had the prize visitor for this month. March 9, a big 12-cylinder Cadillac drove up and a woman got out and walked down to

TOMTO (CONT.)

the Museum and requested a trip and proceeded up the trail. After some 20 minutes of puffing and panting intermingled with four or five rests, she was within 12 feet of the entrance to the ruins. Looking up she said, "Oh, this is the ruins?" Then turned around and started back down.

Tomorrow the W. P. A. crew should be here to begin work on the new latrines. This morning we had about two hours of snow which melted as fast as it fell. About two more storms like the last two and the entrance road will be impassable.

I could use the blotters for the botanical press to full advantage now as there are a great many flowers in bloom.

Yesterday I received one of the finest cakes you ever read about in a package addressed to "Custodian, Tonto National Monument, Roosevelt, New Mexico. There was no name in the package, only an address which I have so far been unable to find in the register. Anyway I accepted the cake.

About the only advantage, I can see, of being in the cabin while it is raining, is that it retards the force of the falling drops. It might save a person from being beaten to death by a hard rain but he would drown so what is the difference. It is starting to rain again so I will close so as to be able to apply myself in finding a dry spot.

CHACO CANYON

By F. C. Miller, Custodian

General:

March has lived up to its name this time, with very little precipitation and plenty of high winds. The road to the south has been fairly good this month, while the road to the north has been tough because of the blow sand. Many cars and trucks have been sticking in the sand north of Escavada Wash.

The travel has been fair but uncertain all the month. It is hard to realize that winter has gone and spring is here. The grass and weeds are starting to grow, the Prairie dogs are out, barking again. There is quite a large variety of birds in the canyon now. Ranger conditions are about average.

Weather Statistics:

Maximum temperature 62 on the 13th; minimum temperature 15 on the 11th. Precipitation .02 inch rain and melted snow was recorded for the month. Greatest precipitation in 24 hours was .07 inch on the 22nd.

CHACO CANYON (CONT.)

Travel:

453 people entered the Monument in 162 automobiles, coming from the following states: Arizona, California, Colorado, Minnesota, Michigan, Ohio, New York, New Mexico, Oklahoma, Texas, and Washington.

Museum and guide service was furnished to 70 people in 16 parties. 1,566 minutes were devoted to the visitors. Six of the major ruins of the Monument were visited by our visitors during the month. The farthest ruin from headquarters that was visited by car was 11 miles east by road.

Special Visitors:

John G. Frost, U.S.G.S., and Clifford Carr, Farmington, with Ranger Hart, Aztec Ruins, visited the Monument on the 11th.

Bert Coddington, Agronomist, L. V. Compton, Biologist, Soil Conservation Service, and Adrey Borell, Wildlife Technician, National Park Service, arrived on the 12th to study the rodent control problem here in the Canyon. Mr. Coddington and Mr. Borell departed on the 13th. Mr. Compton stayed over until the 15th in order to look the project over more thoroughly, this being his first trip here. They agreed to poison rodents within 100 yards of any dam site in the canyon.

Superintendent Pinkley, Acting Assistant Superintendent Hugh Miller, Headquarters, Superintendent Nustbaum, Sam Ahkeah, Mesa Verde National Park, and Custodian Faris, Aztec Ruins, arrived on the 12th. Superintendent Nustbaum, Custodian Faris and Mr. Ahkeah departed the same day. Mr. Pinkley and Mr. Miller departed the morning of the 17th.

Drs. Hewett and Fisher, School of American Research, arrived on the 20th and departed on the 21st. They informed us that they plan to start construction on their headquarters building, south of Chaco Wash and near the Gap, within ten days.

Improvements:

One man was used ten 8-hour days during the month, painting tops of steel posts, building new water gaps and maintaining fence.

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YUCCA HOUSE

By T. C. Miller

I inspected Yucca House and Hovenweep on the 20th and returned to Chaco on the morning of the 21st.

Nothing unusual to report on those monuments this trip other than the roads were good. The ruins show no evidence of recent vandalism.

The country in general around those monuments is in better condition for spring range than it is around Chaco.

MONTEZUMA CASTLE

By Martin L. Jackson, Custodian

Am happy to report a very interesting month at this monument. While we are off in number of visitors, the ones we have had proved to be very interested. The total number for the month were 590, of which 279 climbed the ladders.

Highway 79 is still under construction between Jerome and Prescott. Is closed from ten in the forenoon until five in the afternoon, every day and some days is closed all day. Our mail comes in on stage from Prescott by way of Highway 79. Several days during the past month we did not get any mail--the stage being unable to get through. For the last week the weather has been stormy, which naturally cuts down on the number coming in. On Sunday, the 22nd, it rained all day and is one of the few days since I have been here that we did not have a visitor. However, we are all thankful for the storm. We had been getting in on the tail end of some of these Kansas, Texas and Los Angeles dust storms. The air is much better since the storm.

While I question the monthly report being the place to air out our ideas concerning the day off each week, I can't resist saying a word or two since last month's report came out, where, it seems, an issue is being made of same. I can remember the good old days when we did not get a day off each week. But things have made a decided change since that time. We were not having so many visitors to take care of at that time, so many reports to make out, or so much statistical data for the education of the Educational Department. Personally I think Dale King was absolutely right in his contention that one should have one day off duty each week, and that it makes for a better service. And since Congress has seen fit to give it to us, I for one am in favor of taking it. I still maintain that if a man is on the job for six days and does anything while he is on the job that he is entitled to a day to do as he sees fit. I think you if this gets by.

WALNUT CANYON

By Charlie Steen, Park Ranger

While waiting for a snow plow to come free us, I will make my contribution to this month's Walnut Canyon report.

Travel for the month was 360 - an average of about six cars a day entered the monument until the 21st. Since Saturday not a single car, with one exception, has been in. The exception was the car of Don and Marie Erskine who have twice bucked mud and snowdrifts in

WALNUT CANYON (CONT.)

order to get home. The second time, however, they needed a span of houses.

The Dodge pickup is half a mile off the monument on the east entrance road bogged down in a mud hole and I hope to be able to persuade the snowplow crew to pull it out. I am pretty sure they will pull the car out for it is right in the middle of the road and the plough will be unable to get around it otherwise.

To go back to the beginning, I left Casa Grande National Monument on the morning of the second and arrived at Walnut Canyon that evening. The first visitors during my stay arrived next morning just as I was getting ready to go to the canyon and take a look out the trail. I had never been around the island, and I am afraid those poor ladies didn't get a whole lot out of the trip. They went as far as the last flight of steps on the trail and apparently didn't quite believe or trust me when I told them that, "Surely the dwellings must be just below us." At any rate, they turned back and I had to make a special scouting trip around the trail to find out where things were.

Walnut Canyon is apparently the favorite picnicking spot for the people of Flagstaff, and during my stay here I have had some slight difficulty with college students wishing to leave their names on walls and with drunks, whose delight is to throw bottles and rocks down the trail. No serious disturbance took place.

Spent a day at Wupatki with the Brewers and enjoyed their hospitality and a trip around the old stamping grounds. Wupatki, as you know, was my introduction to Arizona and the Park Service. At Citadel I recalled a certain sheep chasing incident in which Dale King took a prominent part.

Saturday night I went to Chinopovi to witness a Katchina dance for the. The dance didn't get under way until eleven and I decided to camp on the second mesa that night and get up early in the morning. The fly in the ointment was that early in the morning the snow started to fall, and I had a devil of a time getting back to the monument, and that also explains why the Dodge is or stuck out on the east entrance road.

Tried to band some birds but caught nothing but Pigmy Nuthatch repeats. One Red-backed Junco had the nerve to enter a trap, but I didn't recognize him and had to release him. I also spent five minutes watching a pair of Long-crested Jays make up their minds that a government sparrow trap was not fit place for a self-respecting jay to be seen in.

On the twentieth I recorded three pairs of Northern Violet Green Swallows and one pair of White-throated Swifts in the canyon just below Observation Point.

By J. D. Erskine, Park Ranger

Inasmuch as my time at Walnut this month was only a matter of four days, I hardly feel that I have much to add to Charlie's report. It seems that I was rather unlucky, as the weather just started to clear up during the end of February, and the day before I left was the first day that the roads were passable without chains. Now, Charlie tells me that the weather was ideal, warm, and sunny all during his stay until last Saturday night when it started to storm appropriately for my return to Walnut.

Incidentally, this storm from which the H.R.W.P., Charlie and myself are just recovering was the most severe this winter. Along with the six inches of snow there was a terrific wind and bitter cold, resulting in drifts as deep as three feet, with most of the drifts in the middle of the West Entrance Road.

As I look over the registration sheets I note that by far the greatest number of visitors were from out of state, apparently tourists. Arizona contributed the greatest number from one state, naturally, with a count of 110. California followed with 42, Illinois 24, New Jersey 16, and the balance being divided quite evenly with 29 other states and Ontario, Canada, being represented. The only Park Service visitor was Ranger Frank Fish from Montezuma Castle National Monument who stopped for his first visit to this Monument. Charlie has already given the total travel as 350. Contacts were made with 245 of these visitors.

In concluding this report I must request that someone from Headquarters write to the weather man to see if something can be done about this weather. I sincerely hope that neither my wife or I will have to again go through a four-days as tough as the past four. Briefly summarized our troubles were: first my wife in our Chevie slid off the road into the ditch in the mud 25 miles this side of Pipe Spring, and I pulled her out with 1800. Then I had the misfortune to be unable to stop upon meeting a snowplow on a blind curve near Jacob Lake in the Kaibab Forest, and turned 1800 over an embankment to save hitting the plow or my wife in our car.

Then after getting to Walnut in our Chevie we started out to get Jimmie Brewer to help bring back 1800. On the way out of Walnut Canyon we went in the ditch, but the Chevie managed to pull itself out after much fussing. Then while towing 1800 the 176 miles back to Flagstaff, my Chevie had two flat tires from stone bruises.

Then we stuck head-on in a snowdrift trying to plow our way into Walnut on the West Road, and had to walk over a mile through drifts over our knees in the face of a bitter cold wind and driving snow to get to a farm house to get help and to get warm in the case of my wife. With the help of a team of horses that towed us over a mile we managed

to get into the Ranger Station.

Then today Charlie and I had no luck at all trying to get the Dodge out of its mud hole with my Chevie. We couldn't even budge it, so believe the frame is frozen solid to the road. Perhaps the snow-plow tomorrow will have better luck. When all our trouble is over we will be able to look back and laugh, but I surely hope we are nearing the end of it now. The H.R.W.P. is surely being initiated quite violently into the life here in the Southwest.

Now I'll close hoping that next month will see the March "lion" dead and buried.

SAGUARO

By Paul Beaubien, Ranger

766 visitors reached the ranger station this month, but only 606 are listed as educational contacts. I believe 2,000 visited the monument. A higher percentage came the four miles to the Ranger Station this month than last because of improved signs.

This makes the fourth time of watching a register when I thought I would have all states represented. But after the final check-up, 12 states were not present. New Mexico and Nevada were among the missing while a third neighboring state, Utah, was only claimed by one visitor. The first twelve states, listed in the order of frequency with which they were represented, are: Arizona, Illinois, New York, Ohio, California, Michigan, Wisconsin, Iowa, Pennsylvania, Minnesota, Indiana, and Nebraska. Evidently, Saguaro National Monument attracts the mid-westerner.

Cold, damp weather slowed traffic for the last week but a few hardy individuals came every day. In the warmest weather, some visitors drive up still trying to find the barren sandhills of the desert they expected. It gives me an opportunity to tell how the plants have adapted themselves to their environment. But it is difficult to arouse enthusiasm about desert plants in a rain.

The eggs of the two Curved-bill Thrasher nests, mentioned in last month's report, have hatched and the young have already left the nests. With snow on the Tanque Verdes twice in the last week, I suppose the youngsters think they are in a cruel world.

A few deer have been seen (different days) by three parties of visitors. Also, a rattlesnake was seen on the 14th.

In the January report, I wrote of keeping a list of questions asked by visitors. Later, I decided the list was an index of my inefficiency as a ranger and destroyed it before the Boss found how much

SAGUARO (CONT.)

I hadn't told the visitors. In regard to the sensible questions, I try to beat the visitor to the punch, while the "dumb" questions are not important. Speaking of "dumb" questions, I don't think it makes any difference to most visitors how I get my boots off at night even if they can't see the ends of the laces. However, keeping a question list at a monument where a museum is planned, might prove worth while.

Dr. Ira L. Wiggins of Stanford University, while preparing for a trip to Mexico with Drs. Shreve and Mallery of the Carnegie Desert Laboratory, took time to spend half a day here to give me the benefit of his knowledge of desert plants. Maybe Bob Rose should insert another column in his educational contact stencil to provide for those instances when a ranger receives instead of gives.

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PIPE SPRING

By Leonard Heaton, Acting Custodian

The monthly report will be in the most part that of Ranger Don Erskine, who arrived here March 1 to take my place while I was detailed to guide service at Casa Grande Ruins for three weeks. So I will let Don speak for himself as to how he got along with the Monument and Fort the past 28 days.

The week from February 28 to March 1 was not very busy in travel, and I spent most of the time cleaning up and getting things in shape so that Don could handle the irrigation and other necessary things that needed doing to keep the monument going.

I am very pleased with what has been done here while away and think Don a very capable ranger who will be a good fellow to have in our Southwestern Monuments.

I want to say that I was very much satisfied with the chance to make the change to learn the methods of another monument and there come to know the weaknesses and strong points of my own. Also to give me more determination to improve. I appreciate the privilege of meeting and shaking hands with the bunch at Casa Grande--a grand lot they are. My only regret is that I can't meet them more often.

Attached is the contact report for the month as given by Don. Will let Don take the floor now.

By J. D. Erskine, Park Ranger

The report for Pipe Springs from March 2 through March 21 follows:

My stay at this monument in the land of cowboys and wild horses has been most enjoyable and I have learned a great deal. Travel to the monument in the way of tourists has been almost nil, and the two

PIPE SPRING (CONT.)

cars from states other than Arizona and Utah (local people) came only unexpectedly on their part. One came from Oregon and the other from Illinois. The Illinois party ended up in giving a show at the CCC Camp and then staying all night in their house car on the Monument. All the rest of the travel has been either local stockmen or CCC boys. Forty-one persons signed the register during my stay, but as some of them were CCC boys who just wanted to sign something and didn't stay long enough to learn anything about the Fort, I haven't included them in my contact report. I have conducted trips through the Fort to 29 persons. I can only estimate the total number of persons who passed through on the road or stopped for water. I believe my figure of 119 is fairly accurate.

Many stockmen are hauling all their water from Pipe Spring, and many days there are several trucks lined up waiting to fill their drums.

On Wednesday, March 11, I was honored with a visit by Landscapers Langley and Keeling. They spent several hours going over Park projects with me and had lunch as my guests at the CCC Camp. Also on Friday, the 13th, Park Naturalist Presnell of Zion National Park stopped for a few minutes as he passed through.

The weather has been practically ideal in the sense that it has been clear every day that I have been here with the exception of a trace of rain on one day, and last night it rained hard all night, and turned to snow toward morning. Roads this morning are very treacherous. The temperature has been moderate with an estimated minimum of about 32 degrees and a maximum of about 80.

The ECW projects on the Monument are all completed as far as they can be without money being appropriated for supplies and the use of a truck for hauling gravel. The fencing of the Monument is complete, as is the diversion ditch. Most of the leveling of the Parking Area is completed, but nothing further can be done with a truck for hauling gravel which is also the case with the camp ground road. The walk construction is complete as far as it can be until something definite is done toward the development of the old Whitmore-McIntyre dugout, which is in the line of one of the walks.

Most of my time has been spent irrigating the trees that were planted last fall. About 35 of the trees are so located that water will not run to them, so I have had to haul it in a drum in the truck and syphon it out to each tree. That has taken considerable time, and a pipe line of some sort is badly needed to assure those 35 trees of getting an adequate supply of water.

With the arrival of the new bird traps from Berkeley, I think that this should become an excellent bird banding station, as the water supply makes this a natural place for birds to congregate and also it is a

PIPE SPRING (CONT.)

stopping place for birds in their migrations. During the last week especially I have noted quite an increase in the number of birds. Probably this increase is due to migrants. I have tried to identify as many as possible, but am sadly at a loss for some of them. However, those that I have identified are as follows: English Sparrow, Gambel Sparrow (both adult and immature), House Finch, Western Crow, White-rumped Shrike, Meadowlark, Red-shafted Flicker, Hammond Flycatcher, White-throated Swift, Killdeer, and Western Crow.

The only change I engineered in the Monument during my stay was the destruction of the very unsanitary and old men's rest room. With the help of two CCC boys I removed it and obliterated all trace of it, and then by building a partition through the Women's Rest Room a double ended building resulted which will solve the problem for a Men's and Women's Rest Room in the same building. While this will serve for now, an improved rest room of some type will be needed before Pipe Spring will be able to offer rest room accommodations up to Park Service standards.

After a most interesting three weeks during which I made trips to Zion National Park, and Toroweep in Grand Canyon National Monument, I turn the Pipe Spring National Monument back to Leonard Heaton.

AZTEC RUINS

By John Will Paris, Custodian

The best March in the history of the Monument, since I have been custodian---with 602 visitors. This is over double last March.

Weather conditions as a whole have been good and the passes open most of the month. This may account for a number of them, and then, too, I think that travel is picking up a little early this year. Both Mr. Hart and myself have noticed that several parties are out-of-state cars, and many from distant points.

The CCC boys have been quite interested and several parties this month have consisted of these boys. We are especially glad to show them through, and feel that it gives them a little more pride in the work they are doing, to see what it is all about. Mr. Hart has taken all of the 52 who are working here at the present time, and the boys seem to enjoy the explanations given. We are using a chart worked up by one of our CCC boys in our museum now, and I think that they feel a little proud that hundreds of visitors see work they are doing, and the work they can do.

March broke another record, and one that we are not so proud of. This month marks the first accident of any nature to a visitor in the six years I have been here. On one of the trips this month, a lady fell in descending the Great Kiva and broke her leg. She is getting

AZTEC RUINS (CONT.)

along very nicely and I want to go on record and state that I never saw more self-control than was displayed by Mrs. Segerberg. She lives in Durango, and was taken home soon after preliminary treatment was given by the local Doctor. It has been my pleasure to have visited her several times in the hospital, and she is more cheerful and radiant even with her injury than many of us are from day to day. While we regret the mishap the worst way, and trust that such may never occur again, the visit or two that it brought about, has made us acquainted with some mighty fine people that we might have never known had it not occurred.

We were visited by several folks from the inside this month. Of course, the visit you and Hugh Miller made us tops the list, and we wish that you would repeat. One thing I can promise, Boss, Hugh will be surprised at a thing or two the next time he drops in. We profited materially by your visit and know that we would if you were to come back every week in the year.

Most of our other visits were from the ECW men. Both Mr. Ahrens and Mr. Cully of the Denver Office and Oklahoma City branch were in a few days ago. Mr. Peyssier, Camp Superintendent, has been down several times, and, last but not least, Mr. Wirt of our own ECW work. Mr. Wirt was in for a few hours yesterday and expressed himself very favorably concerning the work that the boys have been doing. You saw for yourself, Boss, that the boys have been doing a mighty nice piece of work for us, and it is going to be rounded off in a very creditable manner. This week is stormy and two days have been idle on account of storm, but with reasonable good weather for the balance of the month, we hope to finish every project that we have started.

Jesse Nusbaum from Mesa Verde was in for a few minutes a week or so ago. It was my pleasure to accompany him to Chaco and I enjoyed it very very much. In the six years that I have been at Aztec this is the first time that I have been with Mr. Nusbaum for over a few minutes at a time. Now that I have a taste of what it is like I hope that the opportunity to do so again comes real often.

Mr. Earl Morris, our old standby, contributed again this month with one of the most important gifts we have ever received. He sent us a copy of his work notes, and in them are listed every artifact that he has taken from this Ruin with the room number and piece number of each item. From these notes it is possible for us to identify every article on display as well as the many many pieces that we have in storage. Many features that we have not been certain of, we can now locate and determine exactly just what and why it is classified. We can never reciprocate for what Mr. Morris has already done for us and now with this latest contribution, we simply mark it down as a life's task and proceed the best we can.

AZTEC RUINS (CONT.)

Things are working into shape, Boss, for a very pleasant season, and we are certainly proud of the Monument we have to offer this summer. We are laying plans now for the month following and before it is too far gone we hope to have under way plans for finishing our parking area, plans for the installation of our museum developments as they are being set up in Berkeley. It is very probable that we will even give our office over to the museum people, and with a little alteration that we are hoping to get, we will have as neat a museum set-up as one could hope to see.

Go, Boss, with the CCC still going strong to finish up all our projects, the plans that we have outlined for the Month of April, I think that I had better keep in step and bid adieu to March, one of the best months in our lifetime.

WUPATKI

By James W. Brewer, in Charge

500 Use of Monument Facilities by Public

Sixty-one guests registered at Wupatki Pueblo; 53 at the Citadel Group; 10 names are duplicated, leaving a total of 104 registered visitors to this Monument in March 1934; in 1933, 33; in 1934; 17.

Largest single day was Sunday, the 8th, on which 15 visitors registered.

Of the 18 parties to the Pueblo this month 12 were contacted.

States were represented as follows: Arizona, 5; New Jersey, 4; Washington, Oregon, California, Illinois, 3; New York and Wisconsin, 2; West Virginia, Pennsylvania, Connecticut, Florida, New Mexico, Texas, and Rhode Island, 1. Foreign travel consisted of one party each from British Columbia and Australia.

530 Newsworthy Visitors

Dr. and Mrs. Colton and Katherine Bartlett brought Dr. and Mr. W. J. Dakin out on the 4th. Dr. Dakin is a Marine Biologist with the University of Sidney, Australia. (If you followed the accounts of the Australian "shark murder" you will remember Dr. Dakin's statement regarding the slow digestive organs of a shark).

N.F.S. visitors: Mr. and Mrs. E. H. Oldham on the 7th. (Ed and I talked over the possibilities of installing a cattle guard in the forest fence on our west boundary, the Forest Service to provide material, Park Service labor. Ed also suggested the possibility of running a phone line to the Forest Service ranger house a quarter mile west of the Pueblo, employing the top fence wire.

WUPATKI (CONT.)

N.P.S. visitors: Ranger Charlie Steen on the 16th. On his day off Charlie showed me some things I did not know about the Citadel surroundings---the mailman who takes a walk on Sunday! Custodian and Mrs. Erskine dropped in on the 23rd to invite us to Jacob's Lake the following day.

020 Weather

February 25 to March 1: High 35 degrees; low 26 degrees; precipitation none. March 1 to 25: high 71 degrees, on the 3rd, 13th, 14th, and 17th; low 24 degrees, on the 23rd. Total precipitation. 24 of an inch--trace of rain on the 22nd and snow on the 25th. On the morning of the 25th everything within sight was white for the first time this winter. There were 19 sunny days, 4 part cloudy, and 6 cloudy days. From the 7th to 17th, inclusive, we had 11 consecutive sunny days with some wind.

100 Administrative

160 PUBLICITY

Science News Letter (February 15) carried an account of "Hopi Spinach" growing on the Monument published last year in this Report.

Arizona Highways (February) ran an article concerning ball courts, mentioning Wupatki and showing photos of our court and of Wukoki (whether in or out of our boundary, we have taken Wukoki into our hearts).

200 Maintenance, Improvements, New Construction

230 NEW CONSTRUCTION

Trail between Rooms 36 and 15 was filled to a suitable uniform level and width and landscaped with fallen wall material.

400 Flora, Fauna, Natural History

FLORA

A list of pressed plant specimens has been returned identified in part. Some were not identified because I had not taken the specimens at the precisely correct time. In the cases of incomplete identification I will collect another specimen. In this I will be guided and greatly aided by the thoughtful notes added to the list, such as "too young."

430 ARCHAEOLOGY, HISTORY

From partially excavated Room 7 a larger than average, much broken pot washed out. I collected the pieces and put them together on

a slack Sunday afternoon. The olla is of coarse paste, rough smudged exterior; the interesting feature is a row of 5/4-inch coiled rosettes just below the neck.

Of historical interest is the fact that a "mining" party did some work in the long-abandoned Honey Mine; this mine was dug by Ben Honey in his search for old padre-buried treasure. The recent searchers, after hauling a load of second-hand lumber to the shaft and spending two or three days replacing some of the old timbers, abandoned the work.

460 BIRDS

On the 9th three V's of unidentified ducks or geese flew north, west of the Pueblo.

The Mountain Bluebirds observed so often in February were seen only twice this month--on the 3rd and 13th.

Newcomers are: Western Mockingbird (12th); Cedar Waxwing (20th); Brewer Sparrow (20th).

On the evening of the 12th Sallie, Clyde, and I went to Honey Crater to see the mine improvements. Upon our arrival an eagle left its nest above the mine shaft. Clyde and I climbed to the top and observed two eggs in the nest. Last month I reported Clyde as saying the young eagles were then in the nest; this must have been an error either in Clyde's moon count or in my interpretation of his statement.

BIRD BANDING ACTIVITY: Believing water to be our best bird bait I have installed the following: To a discarded gas drum painted green and daubed brown I soldered at the bottom a shut-off valve and short length of copper tubing. With landscape consideration I concealed this in a juniper tree, with the tube directly over a natural basin in the sandstone. After filling the barrel (the rotary hand pump again) I allowed it to drip several days before placing a homemade beginner's trap over the water. The trap I made of 1/4" mesh wire; it looked as though it might injure a frightened fluttering bird so I lined the three vertical sides with cardboard. Contrary to expectation the cardboard has not retarded the capture of birds. In about two hours' time I banded 15 Solitaires and one Cedar Waxwing. A second station of the same construction has been installed and is still in its "invitation stage."

470 ANIMALS

After leaving the Pueblo on the 20th Mr. J. R. Terhune wrote: "Saw a coyote and two antelope near our 'road' through the cinders. Not much had going. Enjoyed Sunset Crater."

WUPATKI (CONT.)

A larger than usual number of scorpions has been captured by the Honorary-in-charge-without-pay. The largest specimen was taken on the 15th, under the In-charge's bedroom slippers; it measured five and $\frac{1}{2}$ inches from end of claw to stinger on tail; the specimen was drowned in alcohol and is now in a homemade mount. We would be very interested in learning more about these very close neighbors; if there is an entomologist who would like to specialize in scorpions we will furnish him with a fine series of preserved specimens.

GENERAL

NAVAJO ARTS AND CRAFTS EXHIBIT

May I take this opportunity to thank your office for the speedy cooperation in getting the memo books mimeographed and to us so promptly. It is a great help in keeping things organized since already six articles have been brought in for exhibit. A rug came in from near Grand Falls; I did not know we would draw them from such a distance. Peter Pashlaca! has made and deposited with us four miniature saddles depicting the evolution of the saddle. Also by Peter--a model hogan and miniature figure weaving.

SUNSET CRATER

We bucked into the Sunset Crater road and shoveled out without getting the figures. Phoned Walnut Canyon upon our arrival in town and learned they are all snowed in. I contacted Jim Walkup to plow the road. Charlie says the chuck is holding out o.k. so guess they are all right. Seems to me Don and Marie have earned a rest.

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian

Travel has maintained a fair flow during the month despite the condition of the road and trails. Between four and five hundred visitors during March came. It appears that a wide variety of visitors has called on us this month. We have had a number of visitors from Georgia, Mississippi, and Tennessee. Since better cars and better highways, folks are visiting more during the winter than before.

Weather has been very fine all during this month---only a few days of heavy wind and all the old-timers here predict a return to normal of the spring snows for April. Here's hoping!

Wildlife in the Monument remains about the same as usual. I notice this spring we have about six or seven deer, entirely too many porcupines and the usual amount of Cocktail (Cotton tail) rabbits. Have numerous requests this spring for photos of the Monument and am sending what I can.

CANYON DE CHELLY

By Robert R. Buflong, Custodian

Twenty-five persons visited this National Monument during the month of March, 1936. Twenty of these were bona fide visitors; the remaining five were here on trips of inspection of the Custodian's Residence. The twenty bona fide visitors made four trips, totalling 800 minutes, averaging 160 minutes per group. There were three trips to the rim and one trip down the White House Trail. During the month of March, 1935, there were no visitors.

Weather has been mild most of the month. Roads have been rough, but passable, most of the time. As I write this report it is snowing, but it can not last very long.

Maximum temperature for the month, 70 degrees, on the 18th; minimum, 14 degrees, on the 11th. Precipitation, .36 inch; greatest range of temperature in 24 hours, 53 degrees, on the 20th. We have had some high winds and several days of heavy haze, presumably from some southern dust storm. The canyons have been impassable the entire month. Warm weather has resulted in rapid melting of the snow and ice, and after the first few warm days, the roar of the water in the canyons could be heard for a considerable distance.

Two official inspection trips of the Custodian's Residence were made during the month: Acting Assistant Superintendent Miller from Headquarters and Mr. Kenneth Saunders of Mesa Verde National Park were here February 27 and 28. Mr. Saunders was accompanied by his wife and Mr. and Mrs. Eames and daughter Consuelo. Superintendent Pinkley and Acting Assistant Superintendent Miller were here on another inspection trip March 13, departing (as usual) the same day.

Two lines of drainage trench were run around the Custodian's Residence during the month, to prevent damage by water. The house is built in an excavation several feet in depth, at the base of a hill. Considerable grading will have to be done in the future, but the trenches protect the house from drainage from the hill in the meantime.

At present I am working on the water reservoir---removing forms, waterproofing, etc. Considerable work remains to be done on both water and sewer systems, before the house can be occupied.

Two trips were made by the custodian during the month, with an official of the Indian Service, to other points on the Navajo Reservation. Mileage was clocked, photographs taken of some of the more picturesque scenery, etc. These were one-day trips, the object being to familiarize myself with the roads and country nearby, since many of our visitors wish to take side-trips on the reservation, and often ask detailed questions concerning roads, scenery, points of interest, etc.

CANYON DE CHELLY (CONT.)

Generally speaking, March has been a quiet month. It is expected that April will see the start of the tourist season at this National Monument.

TUMACACORI

By Louis R. Gaywood, Jr. Park Naturalist

Custodian George Boundey and family left here Monday, March 10, for Grand Quivira National Monument, and I arrived on the 17th on relief duty. Consequently, my remarks for this month will be short.

The weather was warm and fair and very conducive to travel through the 20th of March. However, from that date on, we have had lots of rain, high winds and the thermometer has dropped several degrees. The surrounding mountains show quite a lot of snow. Visitor registration has dropped noticeably in the last few days due to this change in weather.

The total number of visitors to the monument for the period of February 26th to March 25th, was 1573. Of this number, 1452 were conducted through on guided trips. The total registration for March, 1935, shows 1837.

Noteworthy visitors to the Mission were - Miss Florence M. Warner, Federal Relief Administrator for the State, on March 8th, Dr. Ira C. Bartle of San Luis Obispo, California, noted authority on fungi and spores, who explored the ruins of the Mission for deathless germs, on March 14th. In an article which appeared in the Tucson Star, March 24, Dr. Bartle said that the spores, buried for more than two centuries in adobe walls of the old mission, may be resurrected by modern science and examined under the microscope. He found evidence that the organisms have been in a state of suspended animation and would resume normal life when placed in favorable conditions.

Sunday, March 15, six pupils of the Art Class, University of Arizona, spent the day at Tumacacori making drawings of the Mission. Ranger and Mrs. Martin Evenstad were honored with an unexpected visit March 14, 15 and 16 from Ethel Evenstad's sister and brother-in-law, Mr. and Mrs. John A. Stormon and their two sons. Mr. Stormon is Secretary of the International Peace Garden, Bolla, North Dakota.

On March 17, Mr. Bicknell and Mr. Robinson, both of the National Park Service, were Monument visitors. Mr. Mahroni Young, designer and sculptor of the Kino Memorial, which was dedicated in Tucson, Sunday, March 15, was an interested visitor to the Mission on March 20.

Bird Banding promises to prove very interesting at this monument. During the short time that the traps were set the following birds were banded: 2 Canyon Towhees, 4 Greentail Towhees, 1 Cactus Wren, 1 Bandire Thrasher and 1 Arizona Cardinal. I hope to have a great many more to show for April.

WHITE SANDS

By Tom Charles, Custodian

There was an interesting group of visitors at the White Sands this month. Leo McClatchy of Oklahoma City, a prominent newspaper man of the Pacific Coast for many years, now publicity man for a department of the National Park Service, was with the party which had the fatal accident at Deming. On his way home he spent a couple of days at the White Sands and took some 15 or 20 pictures to try out on the Rotogravure Sections. M. C. Huppock, Assistant Director of the Park Service Recreational Demonstration group was here for a day or two in the interest of the monument. Bill Wirt, regional forester, visited the monument and his friends Mr. and Mrs. Adrey Borelli, who were camped at the White Sands.

Edith M. Patch, from the University of Maine, with three consultants, spent a few days at the Sands in preparation for a text book, entitled "Our Desert Neighbors," to be published by the McMillan Publishing Co. It seems queer to me that out of all the interesting insect and animal life at the Great White Sands, Miss Patch should select an inconspicuous white spider as the White Sands' contribution to the story. M. L. Ormsby, Chief Clerk of the New Mexico Highway Department, visited the monument and asked for enough sand to supply the sand tables at the State School for the Deaf at Santa Fe; Mrs. Clyde Tingley, wife of Governor Tingley of New Mexico made her first visit to the Sands on Wednesday, March 11. She rode over the hills in both an automobile and on the surf board and declared the, "thrilling."

Officials of the Continental Oil Company were here to make arrangements for a White Sands exhibit in their new building at the Texas Centennial, Dallas. Henry E. Riggs, dean emeritus of the School of Engineering at Ann Arbor, with a party of six visited us one day to take a final look.

Oza K. Atauliah of Herat, Afghanistan, wrote in the registration book, "A dream in white splendour; I have seen nothing like it in the world."

Phillip Blossom, assistant curator of the University Museum at Ann Arbor, spent 10 days in the vicinity of the White Sands. Mr. Blossom is an assistant to Dr. Dice who named our famous white mouse "Apache Gypsi." Our investigation leads us to believe that he would have been justified in naming him "Geronimo Gypsi." Apparently he is the wily warrior of the tribe. His feet are small, his leg muscles large and powerful. He shovels sand with all four feet in action; one lone mouse can move 400 pounds of sand in a single night. It is claimed that he has no family ties--male and female fight to death if confined together. Except for a few hours or a few days in the mating season he has no friends. He is the lone wolf of the Great White Sands.

WHITE SANDS (CONT.)

Local geologists and other students of the Sands are greatly interested in Vincent Vandiver's geological report of the Sand's origin. It is probably the most exhaustive report ever made on the White Sands and seems to SATISFY with the possible exception of one question, "Why here and no place else in the world?"

An event in the White Sands office this month was when Adrey Borell brought his mounted specimens of birds and animals ready for the museum cases. Mr. Borell left on March 22 after spending several weeks at the Sands, studying the wildlife at the Artesian well and on the Sands.

Professor V. E. Shelford, of the Department of Zoology, University of Illinois, advises us that he is conducting a field tour and giving a course in Animal Ecology in the Southwest this summer. It is understood that his party will consist of about 28 graduate students with teachers and other specialists. Their schedule shows they will be in the vicinity of the White Sands from July 4 to July 9. They expect to spend the heat of the days in the adjoining mountain section and conduct the study of the Sands at night.

The Alamogordo Chamber of Commerce has announced May 2 as the date of the 1936 White Sands Play Day, honoring 3,200 school children. On account of the intense heat in the Sands and no shade, the party will start at 2:00 p.m. and extend into the night with band concerts, Mes-calero Apache Indian dances by Indian scouts, and wind up with community singing by moonlight. It is believed the crowd will greatly exceed that of last year which was 3,500.

Our Sunday count has nearly doubled this month. On Sunday I stationed the Assistant Custodian (W O P) at the side of the road with instructions, or probably I better say with a request, to count cars and occupants. There were 65 cars that went to the Turn-around that afternoon. Yesterday afternoon, in the midst of an old-fashioned dust storm with visibility running from zero to half a mile, there were 41 cars that drove to the Heart of the Sands in 4 hours. Our Sunday visitors this month are as follows: February 23, 357; March 1, 391; March, 8, 521; March 15, 443; total Sunday visitors, 1712. Barry's count for 92 hours this month shows an average of 28.74 cars per day with 33.143 percent stopping in the Sands. This gives us 2,973 week day visitors this month. Total visitors, 4685.

Registration at the Turn-around was 747 with 34 states and six foreign countries represented.

Vincent Vandiver and Dr. Lewis, Park Service geologists, dropped in for a look at the White Sands, just in time to get their names in our list of distinguished visitors.

GRAN QUIVIRA

By W. H. Smith, Custodian

I will try to submit something for the report as Mr. Boundey arrived late in the month and he has asked me to send in something. Up to the time I turned it over to Mr. Boundey I had registered 152 visitors entering the Monument in 40 vehicles. This number I believe is below the same month last year.

On February 20 Mr. J. H. Diehl, associate engineer, came in and located and staked the ground for the pressure tank and engine house. Mr. Gipe, foreman in charge of the water work here, arrived on March 9 and began work on the eleventh. He has the pit dug for the tank and his lumber and cement and gravel are on the ground if he had enough reinforcement to complete the job he could begin pouring the concrete as soon as the forms are made. Taking it on the whole the work has progressed nicely. On date of March 14 Mr. Diehl came by again for a few minutes and was well pleased with the progress made on the job.

Well, as this will be my last report to make to you folks I will make it short and turn this over to a man that can do better by it than I ever have done. Mr. Boundey arrived on date of March 18 and took charge on the 19th. May he enjoy the future here as I have enjoyed the past. Here is wishing the entire Southwestern Monuments' force many more pleasant and prosperous years.

By George Boundey

Mr. Smith has asked me to add a few lines to the monthly report.

The family and I arrived at Gran Quivira on the 18th. We found everything going along nicely. Mr. Gipe is busy with the pumping plant and assures us we will soon have water on the monument for daily use.

At present they are hauling water in barrels about six miles.

The weather is much more spring-like than when we left here three weeks ago, and we are looking forward to a good summer season for visitors.

About 13 miles of the road to Mountainair is newly surfaced and about 20 miles of the road from Gallina Station are also surfaced. When both these roads are completed, it is bound to bring visitors to this Monument.

Everyone is sorry to see the Smiths leave. He has done a good work up here. Will endeavor to follow out Mr. Smith's policies as far as possible.

CASA GRANDE

By W. J. Winter, Custodian

The visitor count this month was 2,705. This count is taken from our stamped time slips as tabulated on SWM Stencil No. 18. This I believe is more nearly accurate than the count from the register, as some people are bound to get away without registering and others whom we see registering fail to put down the whole party. We can't very well stand over everyone while they are at the book. The number in each party as recorded on the time slips, however, is by actual count, one by one. I use the Veeder counter regularly. So, while there may be a few who escape being counted in this way, it is certain that the count is not too big and is closer to being complete than is that from the register.

The weather was very nice up until last Sunday, March 22. Temperatures had been running close to 90 and the nights were not as cold as they had been. Sunday we had a bad dust storm until noon, when it began to rain. Weather has been cold ever since and is just now starting to warm up again. Maximum temperature was 68 on the 19th and 20th and minimum 31 on the 27th. Precipitation was .34.

We met a few visitors this month who are worthy of special mention. February 28 Dr. Charles Mayo and Dr. Will Mayo, famous surgeons of Rochester, Minnesota, brought a party to see the ruins. March 3 we greeted former Governor Huntley Spaulding of New Hampshire. March 11 the Monument was visited by Watson Smith, of last summer's Rainbow Bridge Expedition, who has been doing archeological work for the Museum of Northern Arizona and the Gila Pueblo. March 17 we met A. J. Chitty, United States Marshall of Tacoma and Seattle, Washington. March 24 the ruins were inspected by Dr. C. L. Fenton, paleontologist of West Liberty, Iowa.

The only large group was a party of 90 school children from Eloy, Arizona, on March 13. No MPS visitors are recorded, all who came in being for Headquarters only.

It seems, Boss, that my grey hairs are not as noticeable as I thought they were. A few weeks ago an old lady from a party of visitors came in the museum door and looking at me said "Well, what are you, a guide?"

"Well," said I, "I am acting as such."

"Hm'm," says she, "A young student, perhaps!" And swept on, leaving me silenced.

March 3 we were very glad to see Leonard Heaton of Pipe Spring. We enjoyed having Leonard here, and he held down the Ranger's position quite capably. We were all mighty sorry that he had to leave on the 20th and sincerely hope to see him again some of these days.

CASA GRANDE (CONT.)

On a day off a few weeks ago, the H.C.W.P. and I visited Saguaro National Monument. That monument has more possibilities than I had realized. We found it highly interesting and well worth seeing. In addition to the natural attractions of the place Paul has a very interesting little trail along which he takes visitors and tells them about the cactus and other plants they see. Paul was plenty busy, too, when we were there, several carloads arriving before we left.

We are still having our troubles with maintenance here. I am still waiting hopefully for funds for a new sewer system. In the meantime, we continue to pump surplus water out into the open ditch which more or less disposes of it. When the wind blows from the direction of that ditch and pump, it is unpleasantly noticeable around the public contact area of the administration building, parking space and picnic grounds as well as the residence area. To say the least it is a poor advertisement for the Park Service, and I cannot help but think that it may be a menace to health when the warm weather comes.

Part of our electric plant has also been out of order for some days. If the trouble were mechanical we probably could have fixed it, but, being electrical, we had to find an electrician and electricians are few and far between in this neck of the woods. Finally the Indian Service kindly loaned us a man, but as yet the trouble remains unlocated. All of which darkens my sunny nature as I contemplate the electric line running right past our fence. If we just had a few dollars to bring that line into our monument, what a saving it would mean in money, time and vocabularies! With the installation once made the upkeep would be about one-third of what our troublesome system costs now, so eventually there would be a great saving to the government. Therefore, let us pray.

For relaxation (?) we are working on Bob Rose's question survey. He will have more to say about that when it is finished. In the meantime, visitors' questions are being recorded whenever possible, and wotta list!

Speaking of questions, visitors, etc., I was interested to read John Will Faris' remarks last month about not needing a day off. I am mildly curious to know if he would feel the same way after lecturing on the same subject for six hours a day for ninety days.

Ranger Charlie Steen returned the other day after his exchange detail to Walnut Canyon. It appears that he had almost uninterrupted sleep there for the last week because of the quantity of snow. Now he wants it to snow here. I never liked snow myself, but I am beginning to recognize its advantages.

EL MORRO

By Evon Z. Vogt, Jr.

Travel for the month of March was sixteen times heavier than for the month of February. This month's visitors total sixteen. Two were local people and the rest were from Minnesota, Alabama, Kentucky, Iowa, and Pennsylvania.

The custodian and I made a careful inspection of the monument today. We were surprised and pleased to find a big caterpillar and grader on the El Morro Scenic Highway. It is Indian Service equipment grading up the main road of this part of the Navajo Reservation. They are wisely following the same course which was laid out so as to serve El Morro, the El Morro Airport, the Navajos living south of Ramah, and all the Atarque country. The men working on the road receive orders from the Central Agency and are doing a fine job of improving the road.

We found the ranger's cabin unmolested and the inscriptions unmarred. The water in the cove has reached a point just a foot and a half below the spillway. The end of the pipe line which I left in the water all winter was undamaged. I shall start the water siphoning next week to prevent homesteaders from driving over the reclaimed area when they start to haul water.

The little clumps of transplanted grass sod in the reclaimed area are getting green already and this year they should mature and produce seed. The ground in the middle of this area has settled more than three feet during the winter.

The lower part of the trail leading up the south side of the Rock was found to be in excellent shape having not been washed at all by melting snows. But up above we found that all the steps which had not been replaced by concrete were disintegrating to such an extent that it will be necessary to replace them with concrete steps before the end of the year.

And say, Boss, nobody has ever explained why the Copperas which was put on the new steps by Harry Brown turned snowwhite. It makes them look as artificial as a marble stairway in a Long Island mansion.

With better weather and improved road conditions, travel in April should be more nearly normal.

By Evon Z. Vogt, Sr.

I arrived home from the mine at Summitville, Colorado, on the 2th and have been enjoying my family to the limit ever since. My trip from Colorado was easy for my car except the last 15 miles, which were an unforgettable struggle, emphasizing again the great need for road work at this point.

EL MORRO (CONT.)

In Santa Fe I met my old college room-mate and friend C. Arthur Bruce of Memphis, who motored out with me for a few days' visit. In pulling my car out of the mud at one place he pulled the frame of his car apart. His disgust at the continued neglect of the roads was such that his remarks were really worth recording. One was "Coronado may have conquered this country, but no one has been able to do so since then.".... "I'm going to try to get control of this region so I can give it back to the King of Spain." Another "Hereafter I'll address you: Evon Z. Vogt, Mud, New Mexico."

At that I was able to see some improvement since the lane leading through the farmed basin of the Ramah valley has been gravelled and the Indian Service has begun grading south of the ranch en route to El Morro Airport.

It now becomes our duty to see that this improvement swings around beyond that point so as to reach the Monument also. Since my arrival I have been asked to secure some of the large culverts lying unused at Paxton Springs for this road. I think that as I return to Colorado thru Santa Fe that I can get whatever culverts are needed by seeing the State Highway Department.

My friend Bruce became so wrought up about the roads that he is taking his club in hand upon his return to Memphis in behalf of this country. Since men like Senator Pat Harrison and Joe Robinson are his personal friends, he is going to make an appeal to them in the interest of road improvement.

In the mass of mail at my home I found the very colorful announcement of the Coronado Cuarto Centennial to be held in New Mexico in 1940. The Coronado Commission, Albuquerque, New Mexico, headed by Dr. J. F. Zimmerman as president and Gilberto Espinosa as secretary has done well in getting this well-written announcement before the public. In it the re-enactment of Coronado's entry into the Zuni country and his visits to the pueblos and passage thru the state with his camp at a point near the present Bernalillo are described. We read also "Other events will take place at Inscription Rock, where the records of so many later Spanish explorers, carved by them in living stone, are as legible today as they were centuries ago. Even pre-Coronado historic background will receive attention at the ruins of Chaco Canyon, Pito de los Frijoles and Puye."

I am writing Mr. Espinosa to get a supply of these announcements and will surely make it a point to see him in Albuquerque as this celebration which will give proper place to our wonderful history and be a year-long program is a matter which has long been close to my heart. I am anxious to do whatever I can to further it and make it a success along authentic lines.

EL MORRO (CONT.)

I am sure our monuments and the Park Service will be called on for much cooperation and that during that year our travel interest throughout this fine southwest plateau country should increase as never before.

The visit today to El Morro was delightful, an occasion long to be remembered, and I am thankful that my son and I took the time to go over all features slowly. We even mounted on the trail to the top of the great mesa to drink in the view, to talk about future excavation of the ruins.

Then we crawled under the fence and wade our way thru the piñon woods to hunt out the "hogan" of my old friend Rafael. We finally located his humble home and knew from the smoke curling out of the hole in the roof that he was at home.

We found him seated on a sheep skin, side of the fire where the sun shone down thru the smoke hole. His daughter was just finishing combing his snowwhite hair with her sacaton brush.

Rafael must be close to 90 now but very alert and active. He was delighted to see us. His interest in my mining activities came out right away and I was glad that I happened to have a small piece of ore in my pocket to show him. His eyes were able to spot the free gold which glistened in the sun and stirred up plenty of conversation in the Navajo language among all members of his family, all of whom wanted to see the "Picture rock."

His grandson is ailing badly with T B and has lost one-fourth of his weight since I last saw him. Rafael assured me that both Navajos, Dick Jose Pino and old Carrissoso, had been there to sing for his welfare and that their medicines and influence had brought about an improvement in his condition. Despite all that I hope to get the boy moved to some Indian Service Sanitarium where he can get the mild, eggs and nourishing food which will enable him to get well if it is possible.

In closing let me thank you for the Monthly Report you have sent me to my Colorado address and to express to all those who contribute to it my appreciation of their combined efforts in producing every 30 days what I regard one of the most valuable and interesting reports in the entire country.

I'll be returning to mines, mills, and metallurgy in a few days, but always El Morro and the Park Service are in my mind when I think of home.

NATURAL BRIDGES

By Zeke Johnson, Custodian

Some time ago a very fine friend of mine, Dr. J. E. Brodus, who represents the Standard Optical Company of this city and broadcasts for 15 minutes every Tuesday evening over KSL on the subject "Seeing the Scenic West, with Dr. J. E. Brodus," asked me if I would like to use his time. Consequently, Tuesday, the 24th, I gave the talk herein enclosed (see Supplement).

In being introduced by the doctor, He made mention that there was a booklet of 74 pages published by the National Park Service that could be had for the asking. So that I had a supply on hand of the "Glimpses of Our Monuments!" Now we are swamped with requests for some, and I have only one left. What can I do? Can you send me some or tell me where I can get a supply? I need 50 or more already, and I believe I'll need two or three times that many. If they are out of date, is there any other literature on the Bridges? I had several telephone calls congratulating me before I left the studio. The lead man at KSF said those programs were heard by at least a quarter of a million people. So, if I include them in my next report, I'll have a real report, ha, ha!

I have the promise of another evening about the second or third Tuesday in April. I had so many asking for a treatise on the Natural Bridges that I have only one left, and I must have something to send out. Just yesterday the boss of the American Auto Association asked me for some folders and said he surely needed something on the monument for so many people were asking for information. Oh, I must have some folders or something to send out; it embarrasses me to tell people I have nothing. Please help me out.

I feel just a little proud of what I have done this month. Had a fine outing of five days with four men, making the circle trip through San Juan on through Monument Valley, Tuba, Lees Ferry, Zien and Bryce; the first time I ever made the trip as a guide with nothing to do but sit back and try to look wise. Then I had my first experience over the Radio, and, as a result, have been flooded with telephone calls asking about the best time to visit the monument. I have also had several chances to speak at various classes and small societies. I am also glad to report that the State Road Commission has promised to do a lot of work on the road from Blanding out to the monument. They have done away with the horse outfit that they have had on the San Juan road and have out on a new caterpillar tractor. Therefore, I am looking forward to better roads.

I have been told unofficially that there is a move on foot to greatly enlarge the monument and change the name to Escalante. Oh, I hope and pray that the name will never be changed, for the name Escalante would mean nothing to the Natural Bridges. When I am officially notified of the change of the enlargement of the monument, I

NATURAL BRIDGES (CONT.)

MAY have some suggestions as to its name. I am just raring to go now and will be at the monument just as soon as I can get over Elk Ridge. Then I'll repair my trails and be ready for the rush. I am sure I will have plenty of visitors this season.

HEADQUARTERS STUFF

BRANCH OF EDUCATION By Robert H. Rose, Park Naturalist.

March, 1936, has been a very busy month for the Division of Education. With the exception of short field trips detailed later in this report, Junior Park Naturalist King has been at Headquarters for the entire month. Junior Park Naturalist Saywood was in the office between February 25 and March 16, inclusive, after which he left for Tumacacori to spend the remainder of the month on relief duty.

Educational Contacts Records:

Several days at the beginning of the month were required to bring educational contacts data up to date. The statistics for the months of October, 1935, to February, 1936, inclusive, were tabulated and these will be found in the Division of Education report for February. The statistics for March are found at the close of this report making a total of six months of the current travel year for which we now have educational contacts data. Nearly all difficulties and minor technicalities seem to be satisfactorily worked out, and it now appears that further revisions of the data will not be necessary.

Examination of the tabulations for the past six months shows convincingly that Southwestern Monuments has no open and closed seasons as far as the educational program is concerned. With the exception of the December, 1935, "low" of 8,492 educational contacts, these contacts are well over 10,000 visitors per month.

For some time we have been considering a survey of the questions usually asked by national monuments visitors. It was our thought that the results of such survey might serve some useful purpose. For example, the results might give us a better idea of what the function of our museums should be; the type of questions and the answers may give us a still better idea of the degree of simplification required in exhibits and labels; and we will at least obtain concrete evidence that the rangers among our monuments whose chief duties are public contacts must possess a great deal of general and specific information about their monument and the region as a whole.

Such survey on all of the monuments would be of interest if carried out over a period of time. However, in only a few monuments

DIVISION OF EDUCATION (CONT.)

are we situated where we can easily collect data. Accordingly, such survey is now being carried on at Casa Grande, Tonto, Montezuma, Aztec and Bandalier. In the report for April we expect to include a report on the results of this question survey.

Administration, Clerical Work and Personnel:

A list of items desired for inclusion in the Preliminary Estimates for Fiscal Year 1938 was prepared and submitted; a volume of letters of application and requests for general information was handled; some 200 posters were wrapped and mailed to various civic organizations, schools and others who might appreciate getting them; and 1500 forms for distribution to monuments were made. Attention was also given to matters relating to permanent and temporary personnel.

For a period of about a week Messrs. Pinkley and Miller were in the field and as Acting Superintendent the writer handled the usual volume of routine office matters in their absence.

For a long time we have needed a photographic file for pictures for which we do not have the negatives. Superintendent Pinkley developed a system for photos accompanied with respective negatives. During the month the writer gave several days' attention to developing the new photographic file. All photographs have been assorted according to monument or subject and placed in suitable containers for filing. There now remains the rather huge task of entering some 900 to 1,000 legends and numbers. At least we now have all photos classified and organized in such manner that additional accessions can be properly cared for.

Museum Plans:

The following progress has been made during the month with reference to preliminary museum exhibits plans:

1. First in order of importance is the preliminary exhibits plan for Montezuma Castle. Junior Naturalist Caywood drew up a preliminary plan. After the initial preparation the plan was discussed among headquarters staff members. Certain suggestions were offered and revisions made. As specifications for each exhibit are worked out, revisions for the better are certain to be made. The completion of this preliminary plan is another important step forward in our program of museum planning.
2. Junior Naturalist Dale King has been making progress on drawing up detailed specifications for exhibits to be placed in the Bandalier Museum. This is the next step which must be taken even though the preliminary plan is thoroughly done.

DIVISION OF EDUCATION (CONT.)

Several case layouts for Bendelier have been worked out by him in detail such that they can be used by museum preparators at once without modifications.

3. The Aztec Museum has been studied and a plan worked out for more efficient utilization of existing exhibits space.

Gifts and Accessions:

Several important accessions have been made during the month among which are the following:

1. A consignment of books on Southwestern subjects for the headquarters library and to be placed in circulation as much as is practicable, received from the University of California, Berkeley.
2. A number of volumes of the B.A.E. Reports have been received now giving us a more complete series of these publications.
3. "A Manual for History Museums" and "Small House Museums" were received.
4. Twenty-five copies of Gaywood's and Spicer's publication on "Tuzigoot" were presented to the library and the individual monuments.
5. Several consignments of metal self-guiding trail labels have been received from the OGB laboratories of the San Diego Exposition working under direction of the Field Division of Education.

Field Trips:

Junior Naturalist Gaywood was in the office until March 17 when he left for Tumacacori National Monument to work on relief duty. The completion of the Montezuma Castle Preliminary Exhibits Plan was his most important accomplishment during this time.

With the exception of short field trips to Saguero and Tumacacori, Junior Naturalist King has been on Headquarters assignment during the whole month.

The writer had no trips to other monuments during March. No special lecture contacts were made.

Report of Junior Naturalist King:

10 days on February Monthly Report.

Mimeographed: Navajo Arts and Crafts exhibit entry books for Wupatki;

DIVISION OF EDUCATION (CONT.)

bird banding record cards.
Wrote 34 letters.
Completed and sent to Field Division of Education for approval plans for two cases at Bandelier National Monument. Much of the ground work of these cases had been laid capably by Custodian Earl Jackson at Bandelier.
Kept natural history and bird banding files current.
Arranged botanical identification procedure with Boyce Thompson Southwestern Arboretum staff.
Prepared two skins (Locust Wren; Wilson Snipe) for Headquarters study collection. Birds had been accidentally killed and were brought to us for saving.
Started 15 mesquite seedlings for landscaping purposes.
Half day investigating purported cave in ruin south of Eloy.
Two trips to Saguro; one to Tumacacori.

Report of Junior Naturalist Gaywood:

February 25 to March 16 spent at Headquarters, Southwestern Monuments, Coolidge, Arizona. During this time work was done on the following projects:

Eleven days were spent on Proposed Museum Exhibits Plan for Montezuma Castle National Monument; three days, writing article on the figures on Hohokam pottery, in conjunction with Mr. J. E. East, to be used in the Supplement; one day spent in assisting personnel of Casa Grande National Monument with visitor guide duty. On the afternoon of March 11 went with Dole King to see ruin reported near Eloy, Arizona. One and a half days spent working on Place Names for Wupatki National Monument and one day mailing out Tuzigoot reports.

The remainder of the month, February 17 to 25, spent at Tumacacori National Monument on relief duty. During this time the Proposed Museum Exhibits Plan for Montezuma Castle National Monument was completed.

BRANCH OF ENGINEERING By J. H. Diehl, Associate Engineer

At Tonto National Monument, Transitman Clark and Rodman Schmidt completed the field survey for a new road alignment, early in the month and left their notes at Coolidge with Engineering Aide Tovrea who immediately started preparing the necessary plans in hopes that an allotment for construction might be obtained.

However, Superintendent Pinkley was advised in Washington that no funds were to be had at this time, and so far we have been unable to get the requested boundary extension to this monument, across which the proposed road would connect with the State Highway.

BRANCH OF ENGINEERING (CONT.)

The existing road to Tonto is passable, but the amount of visitor travel to this monument certainly justifies construction of a new road and expenditure for further development of the headquarters area.

Transitman Clark and Rodman Schmidt moved down to Chiricahua National Monument, where with the assistance of CCC enrollees they will endeavor to complete the topographic survey for a map of this monument.

Under ECW Superintendent Stevenson at Chiricahua National Monument, Engineer Foreman Harris is staking the location and making the necessary property ties for the telephone line to connect with Portal, Arizona.

The monthly allotment of ECW funds reduced for the seventh period from \$4,000 to \$2,883.33 is going to greatly handicap any building construction in the coming period as the amount allotted leaves such a small balance for purchase of materials and supplies, beyond the regular payroll, gas, oil, and incidental expense.

This same condition also affects the operation of the ECW program at Bandelier National Monument, where we will not be able to construct the proposed telephone line, but we must also abandon the construction of the fence project, material for which has already been purchased---owing to the cost of operating a fly camp for this construction.

At Gran Quivira National Monument, work finally was commenced about the middle of this month on the installation of the pump and pressure tank for water supply. Weather conditions have been rather unfavorable retarding progress, and Foreman Sipe will most likely spend most of April on this project and constructing water lines.

While plans have been slow in reaching project Foreman Happer of the Resettlement Administration at White Sands National Monument, he has kept his men busy mainly on the dike construction and the fence project.

PROPOSED RODENT CONTROL AT CHACO CANYON

By Adey Sorrell, Regional Wildlife
Technician

In accordance with advice from the Washington Office I attempted to learn the advisability of rodent control at Chaco Canyon National Monument. Rodent control had been requested in order to facilitate the erosion control work being conducted on the monument by Soil Conservation Service.

On February 25, I went to Gallup, but found the road from there to Chaco Canyon was impassable. However, I was able to discuss the matter with Associate District Manager W. C. McGinnies, Regional Biologist E.D. Eaton, Engineer Clifford, and Assistant Biologist L. V.

WILDLIFE DIVISION (CONT.)

Compton, of the Soil Conservation Service. We arranged to make a trip to Chaco Canyon as soon as the roads were open.

On March 12 and 13, Assistant Biologist L. V. Compton, Assistant Agronomist H. B. Saddington, Project Superintendent Lewis McKinney, Custodian F. C. Miller, and I went over the erosion and rodent problem at Chaco Canyon. The area has been overgrazed, and erosion is in an advanced stage. We found rodents numerous in the canyon portion of the monument. Our short survey indicated that Kangaroo rats, antelope ground squirrels, and white-footed mice are abundant. Cottontails are fairly common, and there are two very small colonies of prairie dogs. Harvest mice are present, and probably pocket mice also. Pocket gophers are scarce.

From my observations in the field and from discussions with representatives of the Soil Conservation Service, I believe that rodents may encourage erosion or hinder control in the following ways: (1) the larger rodents such as kangaroo rats and ground squirrels burrow into levees which have been built to control flood waters; (2) These large rodents, along with the smaller ones, gather seed planted to revegetate levees or denuded areas; (3) In some cases rodent burrows may carry water through the more stable surface soil, thus causing slopes of arroyos to sluff more rapidly, or might possibly start new lateral arroyos; (4) In some cases where rodents are numerous they may consume enough vegetation and seed to be a factor in checking natural growth of vegetation.

The party agreed that at Chaco Canyon only the first two points will be of importance. Rodent burrows in levees might easily cause breaks, and when the levees are seeded rodents will undoubtedly take a portion of the seed.

So far not enough research work has been done to determine definitely the role of rodents in erosion and re-seeding operations. How far various species of rodents will forage into the open, or what percentage of small seed such as grass might be taken, is not known.

If control of rodents were undertaken along the main Chaco Wash and its many lateral "headers" it would involve control over most of the canyon, an area seven miles long and about one mile wide. Since erosion along the main wash and its laterals is already so terrific, the small amount of increased erosion due to rodent work does not justify an attempt to control rodents along all of the washes. (Reference to photos in original report)

The party agreed that the prairie dogs should not be destroyed, as this would mean elimination from the monument of an entire species. There are only two small colonies of prairie dogs (a total of about 15 individuals) in the canyon; neither colony is very close to proposed

WILDLIFE DIVISION (CONT.)

levees. Furthermore, there are no other colonies nearby which might spread into the canyon if those now present were destroyed.

Regional Biologist Eaton told me that rolled oats poisoned with strychnine is used in controlling rodents on Soil Conservation Service projects. Cottontails, and some birds such as horned larks, members of the sparrow family, and possibly others may be killed by the poison grain. I suggested trapping as a means of control, but the Soil Conservation Service representatives felt that this method would be impractical, due to the great expense. Coyotes, foxes, and badgers are present, and a few may be killed through eating poisoned rodents.

Re-seeding and rodent control (if authorized) will be done some time before the end of June; that is before the summer rains. Erosion and rodent control work is done under the supervision of Soil Conservation Service. Labor is done by Navajo Indians employed through CCC funds.

The monument is now fenced and domestic stock excluded. I believe the work of Soil Conservation Service and the exclusion of grazing will do much toward checking erosion.

RECOMMENDATIONS:

Considering the fact that erosion in Chaco Canyon is terrific and will eventually result in the loss of important archeological ruins unless checked, and the fact that the Soil Conservation Service is spending a great deal of time and money attempting to control this erosion, I recommend the following:

- (1) That the National Park Service authorize rodent control within 100 yards of each levee or other area which has been or is to be re-seeded.
- (2) That in this special case the Park Service authorize the use of poison grain in rodent control although it is against the general Park Service policy.
- (3) That no control be undertaken along arroyos or in other areas where artificial re-seeding is not contemplated.
- (4) That no poison be distributed anywhere in the vicinity of the two prairie dog towns.

All members of the field inspection party and Regional Biologist Eaton agreed on these recommendations.

STATISTICAL SUMMARY ON EDUCATIONAL CONTACTS FOR MARCH 1936

MONUMENT	EMPLOYEES	GUIDED TRIPS	MUSEUM LECTURES	MUSEUM UNATT'D	LECTURES OUTSIDE	MISC	TOTAL EDJON CONTACTS TRAVEL (NO REPORT)
PERM	TEMP	NO	ATT	TIME	AV ATT TIME	AV ATT TIME	NO ATT NO ATT
ARCHER 1/105							
ARTEC 2		81	422	2840	5.2 32	5.5 18	1 2
BANDOLIER 1		42	151	2014	3.2 55		6 14
DE CUEVAY 1		4	20	600	5.0 165		20
DECEPIN 1/105		4	13	330	2.3 75		23
CASA GRANDE 2	1	351	2706	12120	7.7 35	8.2 10.2	34 330
CHACO CANY 1		16	70	2403	4.4 32	4.4 16.6	140 453
CHIRICAHUA 0							(NO REPORT)
EL MORRO 0							2
GILA CLIFF 0							3 (NO REPORT)
GRAN CANY. 2		42	140	1432	3.4 40		140 152
HOVATEP 0							0 (NO REPORT)
MONTANHA 2		25	518	4420	5.5 47	5.7 437	1917 590
MOPL. BRIDG 0							5 310 70
DAYAZO 1/105							(NO REPORT)
PIPER SPRG 1-125		13	38	325	3.2 45		2 31
LA BRON 0							0 (NO REPORT)
SAO JACO 1	1	105	63	6375	5.7 33		600 200
SUNSET CANY. 0							(NO REPORT)
TOOTO 1	1	33	444	5700	4.7 61	4.3 13.6	396 616
TUACACACORI 2		227	1453	9370	6.9 44		1456 1573
WILMUT CANY 1	1	70	225	2500	3.2 36		3 24
WHITE SANDS 1/5		40	436	2950	11 47		143 772
WATZCI 1	1	18	56	564	3.1 33		17 51
YUCCA FLSE 0							(NO REPORT)
EDGERS							
TOTALS 13.2	5	1274	7,348	53,323		9914	85 691 7 341 174 931 12,785 15,379

*22-permanent custodians and rangers; no ranger naturalists; and 1 temporary ranger.

**1-fifteen minute radio broadcast by Zeke Johnson; Station KCI, Salt Lake City, Utah. No estimate of contacts thru radio broadcasts is made.

SIX MONTHS TABULATIONS SUMMARY
OCTOBER 1935 - APRIL 1936 INCLUSIVE

MONTH	FIELD TRIPS		MUSEUM LECTURES		MUSEUM UNATT'D		LECTURES OUTSIDE		MISC.		TOTAL EDUCATNL	TOTAL TRAVEL
	NO	ATT	NO	ATT	NO	ATT	NO	ATT	NO	ATT	CONTACTS 6-MO	6-MO
OCTOBER	1045	6760	389	2805	175	1431	1	115	313	1157	12,318	12,698
NOVEMBER	1072	6354	295	1859	171	1365	7	485	156	584	10,647	11,309
DECEMBER	926	4769	264	1509	30	1793	1	20	70	402	8,492	8,525
JANUARY	964	6568	461	3008	128	1072	20	3233	289	1156	14,087	14,044
FEBRUARY	1141	7200	474	3369	81	711	11	1034	96	460	12,824	13,859
MARCH	1274	7348	535	3474	85	691	7	341	174	531	12,735	15,379
TOTALS	6422	38999	2438	16023	670	7113	47	4328	821	4690	71,153	75,724

SIX MONTHS TABULATIONS SUMMARY BY MONUMENTS
OCTOBER 1935 - MARCH 1936 INCLUSIVE

MONUMENT	FIELD TRIPS		MUSEUM LECTURES		MUSEUM UNATT'D		LECTURES OUTSIDE		MISC.		TOTAL ED. CTS	TOTAL TRAVEL
	NO	ATT	NO	ATT	NO	ATT	NO	ATT	NO	ATT	(NO REPORTS)	(NO REPT)
ARCHER												
AZTEC	445	2832	433	2812	2	5	3	600			6,249	3,069
BANDELIER	226	1170							134	454	1,624	2,252
DE CHERRY	47	137					1	350	1	4	491	152
CAPULIN	9	55									65	3,850
CASA GRD	1909	14582	981	8159	668	7108	1	100			29,889	15,699
CHACO	175	565	19	78					55	225	868	2,565
CHIRICAH												1,295
EL MORRO	36	222							3	9	231	225
GILA CLIF											0	(NO REPT)
GRAN QUI	220	946	13	78							1,024	1,347
HOYTOWERS											0	(NO REPT)
MONTEZ	447	2403	588	2758					4	31	5,192	3,401
NATL. BS							20	1490	9	130	1,590	125
NAVAJO									16	40	40	(NO REPT)
RIDE SPR	115	533					1	63			696	1,607
RAINBOW												(NO REPT)
SAGUARO	271	989							1	200	1,189	4,800
SUNSET									20	61	61	209
TONTO	432	2256	404	2136							4,394	3,381
TULACAC	1410	7432									7,432	7,855
WALNUT C	180	756							96	361	1,117	2,136
WHITE BD	396	3672					2	400	738	3121	7,193	21,158
WUEATKI	72	349					2	250	27	84	583	536
YUCCA	2	10									10	52
HDQTRS	-	-	-	-	-	-	14	1175	-	-	1,175	---
TOTALS	6422	38959	2438	16023	670	7113	47	4328	1104	4690	71,113	75,714

*Three radio broadcasts and two showings Park Service films during period.



DISCUSSION OF CONTACTS

By Park Naturalist Robert H. Rose

Records on educational contacts for the last six months are none available with the appearance of the Statistical Summary for March. Therefore, it is appropriate to take inventory of these tabulations and determine what facts are being revealed. In order to facilitate such study, condensed tabulations by months and by monuments have been prepared. These tabulations occur on the previous page. Following are some observations:

1. These tabulations show convincingly that we have no "closed season" during the winter months among the Southwestern Monuments. Total travel varied from a low of 8,923 for December to a high of 15,379 for March while educational contacts varied from a low of 2,423 in December to a high of 14,467 in January.
2. There is a consistent comparison between travel and educational contacts for each month of the past six months. In other words, as travel increases our educational contacts also increase, and vice versa. Generalizing, we would say that the greatest variations in travel occur at monuments where we have personnel which accounts for educational contacts fluctuating in the same manner as the travel.
3. The figures on educational contacts give a pretty accurate picture of the magnitude of the educational problem at various monuments during the winter months where we have personnel. The most astonishing surprise of the entire group is White Sands. Custodian Tom Charles has attempted to get a close check on travel and to contact about as many people as possible. The results show that White Sands ranks third among Southwestern Monuments in number of educational contacts made while the same monument has first rank in travel. This shows consistently heavy travel and no let up in opportunity for giving educational service. Walnut Canyon, generally thought of as a closed, "snowed in" monument during most of the winter had an average of nearly two groups of visitors daily (counting 96 "Misc" groups).
4. Tabulations show 14,923 contacts through museum lectures and guided service compared with 7,113 museum visitors not given guided service. Of the latter, 7,108 of these were at Casa Grande. Personnel shortage, making it necessary to use the museum as an assembling place, accounts for the inability to give these groups personal attention during their museum visits.

* In the two tabulations on the previous page, the total travel in as well as the total educational contacts should check. The travel shows 75,724 in one table and 75,714 in the other - a discrepancy of 10 or 1/100 of one percent. Educational contacts show 71,153 in one table and 71,113 in the other, a discrepancy of 40, or 1/200 of one percent. While these discrepancies are negligible in their effect on the totals, an attempt

DISCUSSION OF CONTACTS (CONT.)

will be made to reconcile the two tables in new tabulations for April.

CLOSING

I wonder if anyone noticed that the February Report didn't have a "Closing." Since that was one of the best reports the Southwestern Monuments has ever produced, I am proud to say I didn't have anything to do with it! I was in Washington during the month and got back to headquarters about the day the report went into the mail. Dale said he was afraid to fake the "Closing" and the "Ruminations" under my name because if he didn't do a good job he might get blown up for it and if he did do a good job I might step out from under and leave him to do them in the future!

March is behind us and we pause here to look back over it and see if there is any lesson to be learned before we jump off into April.

The personnel sheet remains unchanged from February but will probably show some changes next month due to the early temporaries going on and a couple of change of stations among the regulars.


The attendance figures on page 108 are nothing to write home about, but it must be remembered that we have overhauled our system of counting visitors in the last year, and the '36 figures are conservative figures as compared with the two former years. Personally, I don't think visitors are falling off as indicated by the totals shown, but the difference is due to the change in methods of counting. I am confirmed in this opinion by a couple of thousand miles of travel which I made during the month in which I inquired of gas stations, cabin grounds, hotels, etc., as to the travel and how it checks with last year at the same time, the almost invariable reply being that there were more people on the road this year and that they were spending more both in total and per individual.

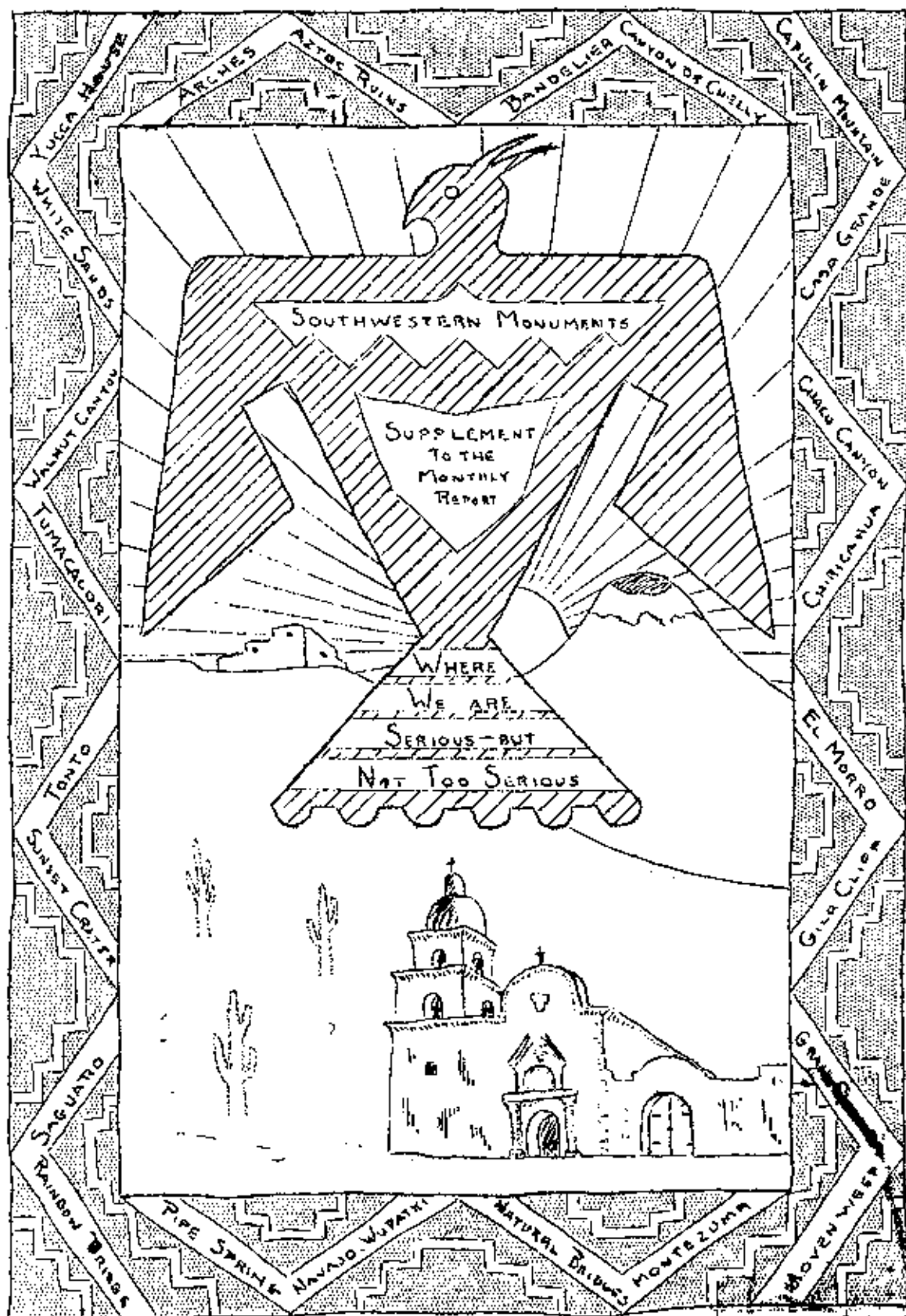
The incoming and outgoing mail count shows that the office has been busier than ever and I know from personal observation that the figures don't lie.

I told you in January you couldn't hold Zeke down; that he just went and hunted up people to talk bridges to; and in the Supplement this month we are giving you a transcript of what he talks. I think you will agree with me that it is mighty well worth while. Zeke, by the way, writes in to Bob Rose and wants credit for 250,000 educational contacts for that talk!

On the whole, we are going strong down in this district and it looks like there is plenty of work ahead to keep us busy.

Cordially,


Frank Pinkley,
Superintendent.



LIFE FIGURES ON HOHOKAM POTTERY

By John E. Fast and Louis R. Caywood.

In the Southwestern United States many different tribes of prehistoric people existed in various localities for long periods of time. Living apart and under different conditions they developed along different lines, and expressed themselves in different ways. The knowledge we have of them is derived from a study of imperishable objects which they left in their houses, graves and rubbish heaps.

In the Gila and Salt River valleys of southern Arizona there lived a people we today call the Hohokam, which is a Pima word meaning "People who are gone." The Pima tribe, together with the closely related tribe, the Papago, which today occupy part of the territory of the Hohokam, may be their descendants. They were different from other prehistoric people in a number of ways.

A characteristic difference is the method of construction of their houses and walled villages, the latter now named compounds. All walls were made of caliche, a native earth found as a sub-stratum about three feet below the present surface. It was mixed with water to make a mortar of a thick consistency which was piled up in layers of approximately twenty to thirty inches by use of the hands.

Another peculiarity of the Hohokam is that they cremated their dead, and after cremation they placed the calcined bones in a pottery vessel or with broken pieces of pottery and buried them. The designs on a great many vessels are of a red or maroon color on a creamy or buff background called Red-on-Buff. The designs are usually well executed, and occasionally portray figures derived from life; human, animal and insect forms, which occur on plates, shallow bowls, jars, ollas and a few special shapes. These figures are usually from three quarters to one and one half inches in height. On the larger vessels they are repeated many times, extending around the vessel in many rows.

Some human figures join hands in what is evidently a circular dance of action and grace. There is also the effect of a circle of animals each stalking the one immediately ahead, and a circle of feeding birds. A whole jar or plate of large size or a repaired one with more than half of the original pieces is rare. It can be inferred that shapes were similar to other utensils of the same period which bore geometric figures: crossed lines, squares, dots, and various other elements. Smaller utensils such as plates and small jars are more likely to have only a few figures and occasionally only one.

It was thought that a minor contribution would be made toward an understanding of Hohokam lives by gathering together and reproducing as many figures representing life forms as possible. Some are shown on the plates following. The pottery of the Mimbres Valley is well

LIFE FIGURES ON HOHOKAM POTTERY (CONT.)

known for its representation of life forms, but many are highly imaginative and exaggerated. For instance, there is a piece showing a man on the back of a grasshopper; there is no mistaking the grasshopper. This is clearly impossible, yet it establishes the fact beyond question that grasshoppers existed during or before the time of the Kimbrenos. Although this may be suspected or assumed, where else can one obtain as positive a confirmation of that fact? Similarly, it is hoped that Hohokam figures, when many more are obtained, will show something definitely which is now only suspected.

The plan followed was to visit all collections of Red-on-Buff pottery available, and to photograph the figures. Nearly all figures were secured, however, from fragments of former sites of archeological investigation. The amount of broken pottery, literally tons of it, that comes from an archeological excavation in the southwest can hardly be realized by one not familiar with the work.

Photography rather than sketching was used, because it was necessary to reproduce accurately. One figure may be either a deer or rabbit, another may be either a quail or a parrot, and a less accurate reproduction would tend to throw the identification one way or the other. From a photographic print an outline tracing was made on white cardboard by means of a carbon paper under the print. The tracing was then filled in solid with black India ink.

Much of the design on Hohokam pottery is quite easily rubbed off, and many figures had to be examined closely to make certain of the exact outline. However, the contrast between the bluish-red markings and the buff background was more pronounced in the photograph, when a suitable color filter was used over the lens, than when inspected by eye. In all except ten cases the figures are about eighty percent of the size of the originals, which was the largest percent of reproduction that could be obtained with the cameras at hand. The ten referred to were usually much larger figures in the originals, and were made smaller purposely, as the smaller size was more suitable for reproduction. Two of the figures were built up or re-assembled from a sherd that showed several repeated parts of figures but no complete ones. Each part of the completed figure occurs somewhere on the sherd. With these exceptions, great care was taken to avoid supplying missing parts and lines. For instance, the figures with a basket and staff in one hand (Plate II) would probably hold a crook as do other figures in the same plate if the sherd had not unfortunately been broken off at that point, but this is only a probability and cannot be definitely known.

The figures seem to have been drawn one feature at a time. For instance, a bowl with a line of repeated turtles appears to have had all the bodies painted in first, and the legs and heads added after completion of the bodies. This is evident because the color concentrates in a drop at the end of the brush stroke, visible because it

LIFE FIGURES ON HOHOKAM POTTERY (CONT.)

is a much darker bluish-red than the rest of the line of color, and often when the painter drew the appendages the paint had been thinned and was slightly lighter in color. There is a sureness in the stroke of the brush, which must have been nothing more than a chewed piece of yucca blade or a twig, and a fascination in their repetitive technique that is most interesting, and yet the lines themselves are extremely crude.

No facial features in the human forms are even attempted, excepting rarely a dot representing an eye; in fact, an attempt to make the facial outline with the tools that were available, would have detracted from the artistic value of the product. The little figures are, nevertheless, realistic, and perhaps in many cases portray the life of the times without the least imagination on the part of the observer.

The dancing figures (Plate I) seem almost to be in motion, and the action which they show is characteristic of the social and religious dances of the present day Indian. Today we know that both the Pimas and the Papagos gather from miles around for the social and ceremonial dances. These are gala affairs which everyone attends dressed in his best and all thoroughly enjoying themselves.

In Plate II the figures with the crook predominate. Besides being a utility implement it might have some ceremonial significance, as it appears as part of the regalia of the dancing figures. In modern times the Pimas occasionally used their burden baskets supported by a turpline across their foreheads. Some of the baskets in the drawings may have been earlier forms of burden baskets. Below is the hump-backed flute player so common to the Pueblo region.

The animal figures which seem to represent dogs, deer, antelope or rabbits (Plate III) are very common, but in form are so much alike that it is hard to tell what kind of animals they are. Below them on the bottom row of Plate III are two figures which are clearly scorpions. The middle figure has not been identified.

On Plate IV bird figures are numerous and a number of different birds are found. Probably the most common is clearly the quail of this region, the Gambel Quail. Others might be Road Runners. Some of the longer-legged birds might be wading birds, probably common at that time in the Gila River Valley.

The last are the reptiles shown on Plate V. Three bird figures are also shown on this plate. The first one may be a Turkey Vulture; the second shows what may be a flock of eagles or hawks. The third was not identified. The reptiles seem to be turtles, lizards and Gila Monsters.

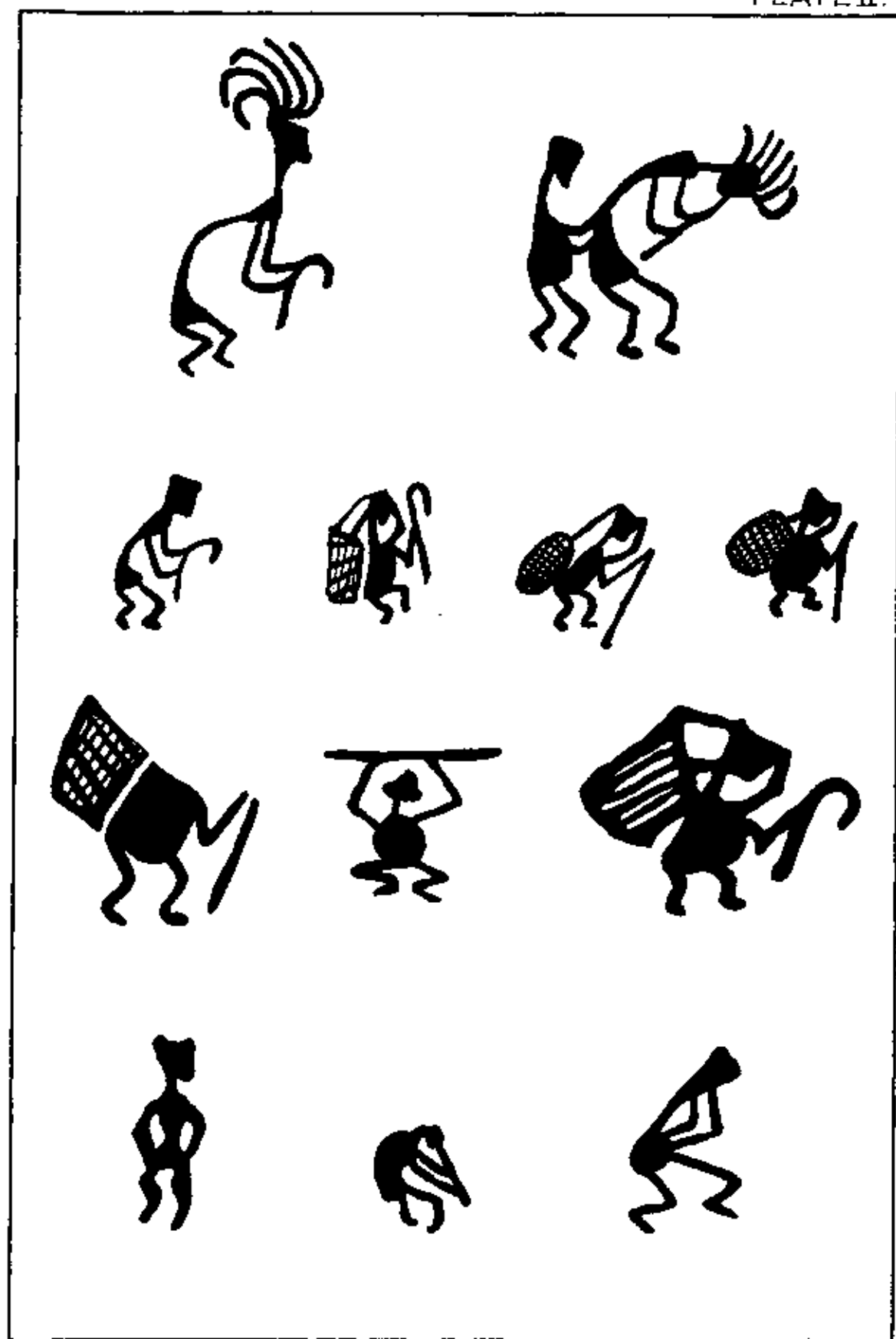
LIFE FIGURES ON HONOLULU POTTERY (CONT.)

This short paper is only a beginning in the study of figures on Red-on-Buff pottery. It is hoped that it may inspire others to do more work along this line.

Appreciation is gratefully expressed to the following institutions and individuals for their kindness in permitting the writers to study their collections and photograph desirable specimens: The Gila Pueblo Globe, Arizona; The Casa Grande National Monument Museum; The Arizona State Museum, Tucson, Arizona; The Heard Museum, Phoenix, Arizona; and the private collections of Mr. Walter C. Smith, Coolidge, Arizona, and Mr. Carl A. Moesberg, Sacaton, Arizona.



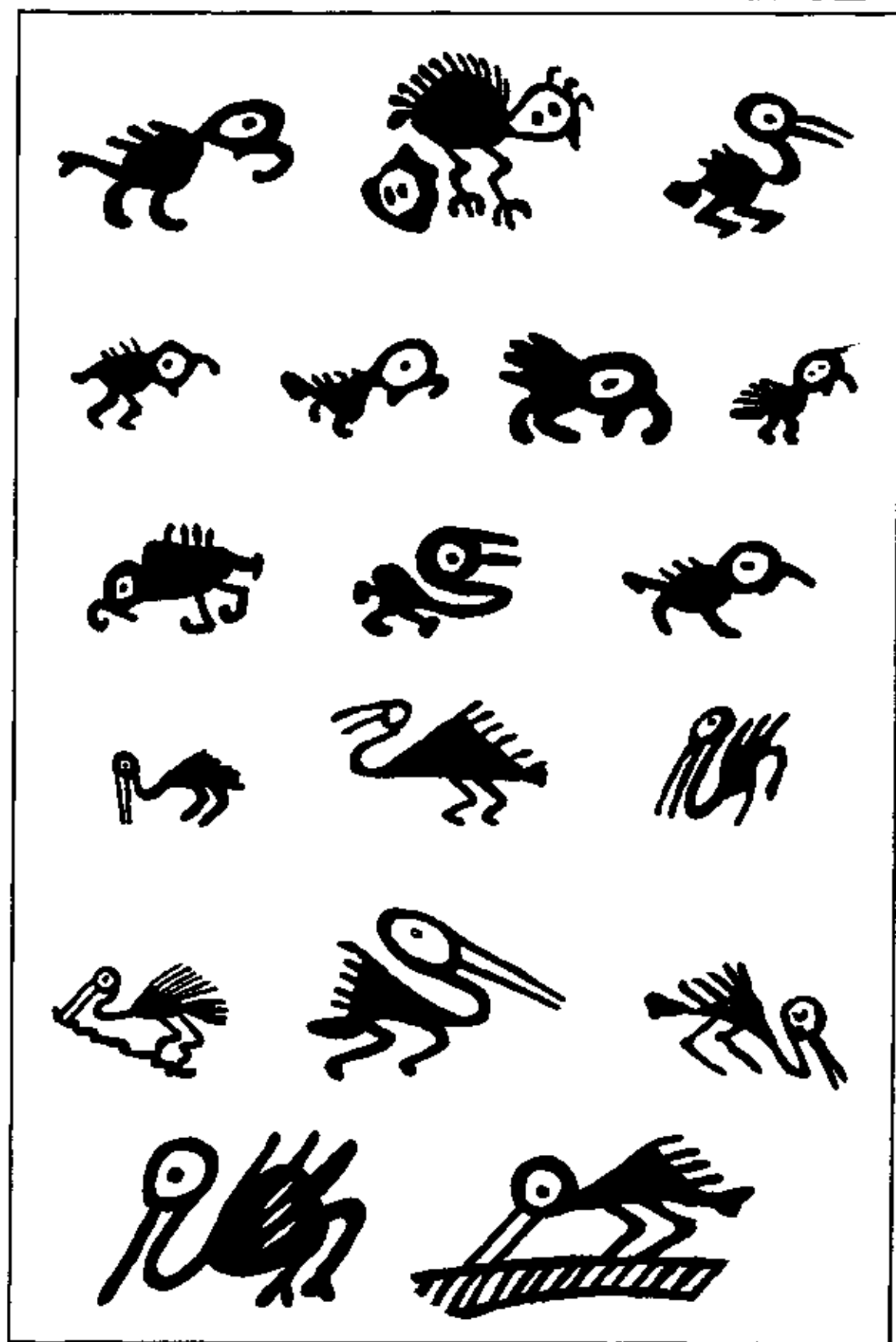




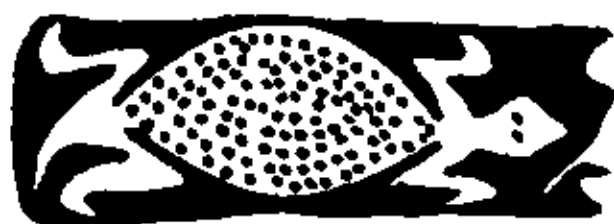
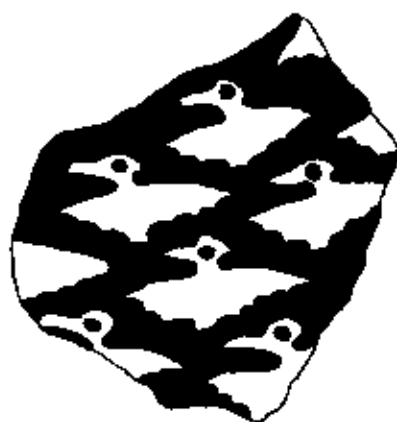














PROPOSED MUSEUM EXHIBITS PLAN FOR MONTEZUMA CASTLE

FOREWARD:

The thought of a museum plan for Montezuma Castle National Monument goes back a number of years. As early as September, 1932, Robert Rose, Park Naturalist, Southwestern Monuments, submitted to the Director a Museum Development Plan for Montezuma Castle National Monument. Three years later there appeared in the Supplement of the Southwestern Monuments Monthly Report for February (1935) a Discussion on a Montezuma Castle Museum by Earl Jackson, Custodian of Bandelier National Monument. With these discussions as a background and with the help of reports which have been written on the archeology of the Verde Valley, I am submitting for criticism an Educational Survey and Proposed Museum Exhibits Plan for Montezuma Castle National Monument.

The exhibit plans given here are not in finished form and imagination will have to be used in some instances to visualize what the completed display will look like. However, there is enough information given on each exhibit to stimulate a final plan to be worked up if these preliminary plans are approved.

This preliminary survey and plan is being sent to the personnel of Southwestern Monuments and others primarily interested in museum plans and in the archeology of the Verde Valley. It is hoped that all criticisms and suggestions will be made and forwarded to this office as soon as possible so that changes can be made in this proposed plan and the whole incorporated into a final draft to be used as working plans for museum development at Montezuma Castle National Monument.

Louis R. Caywood
Jr. Park Naturalist.

Coolidge, Arizona
March 31, 1936.

GENERAL EDUCATIONAL SURVEY

LOCATION AND ACCESSIBILITY:

Montezuma Castle National Monument is located in Yavapai County in the Verde Valley of central Arizona near the famous Jerome-Clarkdale mining district. It is reached by excellent major and minor highways. Going north from Phoenix one passes through Prescott, then over State Highway 79 through the mining towns of Jerome and Clarkdale reaching Montezuma Castle National Monument after a total of approximately 175 miles. From Flagstaff, which is on U. S. Highway 66, one travels by way of colorful Oak Creek Canyon, a distance of about 75 miles to the monument. There are other routes over less improved roads which visitors often take in the summer months when on camping trips or extended outings. One of these is either from Globe or Phoenix via Roosevelt Dam and the huge Tonto Natural Bridge near the small town of Pine and on to the monument.

ANNUAL TRAVEL:

The monument attracts year around travel and has averaged more than 14,000 visitors for the past three years. The heavy season is from June to September with an average of 1800 per month. During the remainder of the year registration is usually between 1000 and 1200 per month. Out of state travel runs well over 50% of the total. Length of time spent at the monument varies from one hour to three or four hours. With better educational facilities for interpretation this time should uniformly increase.

VISITOR CONTACTS AND EDUCATIONAL FACILITIES:

The study of visitor contacts made during 1935 shows that more than 30,000 contacts were made for the year ending December 31. With such a number of contacts it is necessary to maintain high standards for the entire year and under existing facilities this is not possible. The present so-called museum is only one small room used to house a portion of the display collection of artifacts for educational purposes. Open shelves, poor cases and bad lighting do not enhance the specimens on display.

EDUCATIONAL FEATURES:

Montezuma Castle National Monument, primarily archeological, is noted for the excellent example of prehistoric cliff-dwelling built in a cavity of the limestone cliff of Beaver Creek. C.W.A. excavations uncovered interesting house remains of both the cliff-dwelling and cave types about 100 yards southwest of Montezuma Castle. One structure was called Castle A during the excavation work which was done on it. These newly uncovered house remains, the Montezuma Castle and a number of small cliff dwellings make up the main archeological features of the monument.

PROPOSED MUSEUM FOR MONTEZUMA CASTLE (CONT.)

Other features of interest are the geology, the history, the ethnology and the flora and fauna of the region.

Geological features of the valley bring out the fact that what is now a fertile valley at one time was an enormous lake. The limestone stratum covering the valley floor was formed by deposits of sediments in a lake which finally found an outlet where the Verde River now runs south through narrow canyons to merge with the Salt River.

History, too, could be employed to make a fitting display at this monument. Espejo seems to have passed through a portion of the Verde Valley to look at some mines north and east of the present site of Prescott early in the year 1583. In 1598 two members of Guate's expedition, Farfan and Quesada, probably visited the same locality from the Tusayan region. Again in 1604 Guate and party passed through this country in search of gold and silver mines. American conquests began as early as 1836, but the main influx of pioneers did not come until 1860 when silver and gold mines discovered near Prescott drew large numbers of early settlers. Camp Verde, or Fort Verde as it was sometimes called, was first established in the spring of 1864 and was known as Camp Lincoln. It was moved five miles south, or to the present location in 1866, and named Camp Verde. It was abandoned as a military post in 1891. Indian conflicts and contacts were so numerous during this period that it might be well to work in the history and the ethnology of the region as a complete exhibit. The ethnology of both the Yavapai and Apache Indians, but especially the Yavapai, could be well worked in at this point.

A fitting exhibit portraying the flora and fauna of the region might well be put into the museum plan at this time to be worked out at a later date.

TRAILSIDE EXHIBITS:

A trailside exhibit of a model of the Montezuma Castle constructed to detail should be placed below the ruins for those who cannot climb the ladders to the ruin. This suggestion has been made several times before and should seriously be considered at this time. Of the total number who visit Montezuma Castle, only three-fifths climb the ladders and enter the ruin.

The model should be so made that it can be easily taken apart, that is, the front walls and the roofs hinged or set in slots so that they may be easily opened or removed to show the interior features of the rooms in addition to the exterior features. The model should be constructed at Montezuma Castle so the person doing the work will have access to the original at all times.

MUSEUM DEVELOPMENT PLAN

LOCATION OF BUILDINGS:

The location of the proposed museum building will be where the present parking area and ranger residence now are. Visitors will park their cars, register at the museum building and then conducted over a woodland nature trail to the area below Montezuma Castle and to the west of Montezuma Castle where additional cliff dwellings and some cave dwellings are to be seen.

PURPOSE:

The Museum and Administration Building Unit should provide space for the following:

1. A lobby where visitors will register and assemble for ruins trips.
2. Offices for the custodian, ranger and visiting personnel.
3. Rooms for exhibits to portray the educational features of the region.
4. Storage and preparation rooms.
5. Library.
6. Rest rooms.
7. Basement for heating unit.
8. Dark room (in basement).

ARCHITECTURAL FEATURES:

The Pueblo style of architecture adopted according to Verde Valley prehistoric pueblos should be used for this unit.

Windowless museum rooms should be built, and the deep, electric lighted cases similar to those adopted for the Bandelier Museum with the movable backs should be used for best results.

Indirect ventilation should be provided with a hook-up to the heating unit for the intake so that in summer the same pipes may be used for conducting fresh air to the rooms, as were used in the winter for warm air. Outlets should be provided in the tops of the walls above the cases. No light should be able to pass through these outlets. Wide interior and exterior doors are necessary for proper movement of cases and material to insure mobility and the least possible damage to specimens. Door openings should have 40" clearance.

PRELIMINARY DISCUSSION

"Montezuma Castle" is a misnomer. It is not a castle in the sense of being the home or habitation of a single owner, but was a communally owned apartment house. Montezuma, the ruler of the Aztecs of Mexico City and vicinity, probably never knew that this structure existed.

The archeology of Montezuma Castle should be concerned primarily with the archeology of the Verde Valley in the vicinity of Montezuma Castle and with prehistoric culture groups bordering this region. To obtain a clear conception of what might have taken place in prehistoric times it is best briefly to outline the geography of the Verde Valley and show its influence on the peoples who chose to make their homes in this locality.

The Verde River heads in the region of Prescott, Arizona, and to the northeast of Prescott. Granite Creek and China Creek converge into what is called the Upper Verde. By the time the stream reaches the region known as the Middle Verde, in the valley where we find Montezuma Castle, its waters have been added to by a number of streams flowing from the north, some of which head in the region around the San Francisco Peaks north of Flagstaff, Arizona. Other streams flowing from the north (no flowing streams enter the Verde River from the south) come down canyons that have cut through the Mogollon Rim. The main streams from the north, that add water to the Verde, in the order that they join are Sycamore Canyon, Oak Creek and Beaver Creek on which Montezuma Castle is located. From the broad fertile valley of the Middle Verde the river flows through a narrow canyon, which it has cut to drain an immense lake which covered the entire Middle Verde Valley during past geologic time, according to geologists. The Lower Verde is the region from this narrow canyon to the confluence of the Verde River with the Salt River.

The valleys of the Verde River were once densely peopled with aboriginal tribes and the period of evident occupation covers several years or longer, according to information produced by excavations. Mountain and Plateau areas close around the Middle Verde Valley make access difficult from every side except through the canyons entering the valley. Beyond these mountain ranges and plateaus lie other culture areas where groups of prehistoric peoples once lived, and it is the interrelation between these groups and the peoples who lived in the Verde Valley which makes the archeology of Montezuma Castle so interesting.

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PROPOSED EXHIBITS

A museum plan and discussion for Montezuma Castle National Monument includes the following parts, arranged in their relative importance:

1. Archeology
2. Ethnology and History
3. Geology
4. Flora and Fauna

ARCHEOLOGY

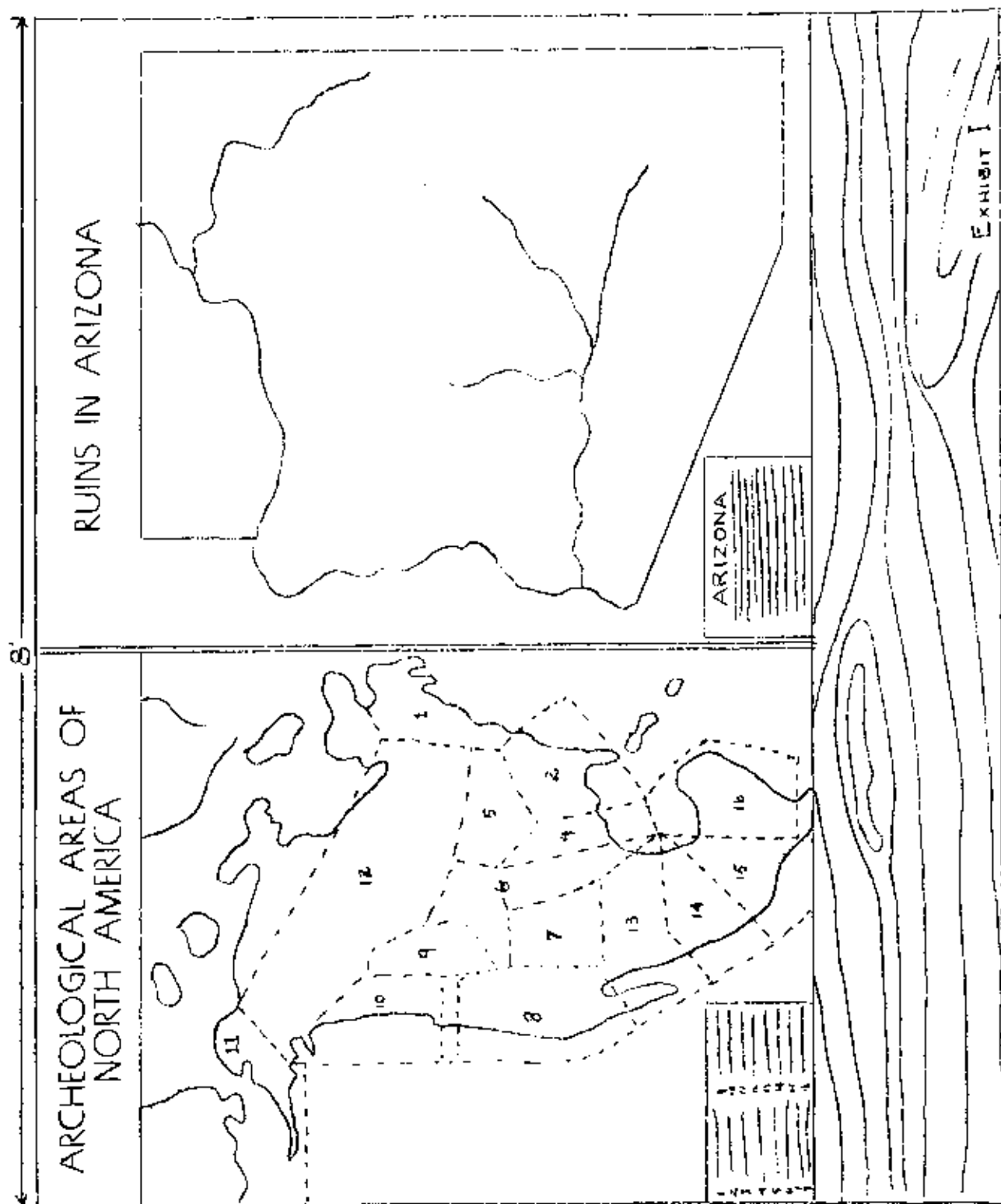
Exhibit I. - Map case one foot deep.

- A. Map of North America (Plate I) showing archeological culture areas in outline. The Southwest will be shown as a shaded area by colored hatching.
- B. Map of Arizona (Plate I) showing topography, roads, towns, important ruins and National Monuments and Park areas.

Exhibit II. - Wall case three feet deep.

This exhibit will serve as an introduction to the type of people living in the Verde Valley during the time Montezuma Castle was built and inhabited.

The most common questions asked by visitors will be answered in a chart hung at eye level. The answers will be as concise as possible. Below this chart will be examples of the clothing worn by the prehistoric Indians. A number of good specimens are already in possession of the Park Service at the present Montezuma Castle Museum, and no doubt, others will be obtainable from local collec-



PROPOSED EXHIBITS PLANS FOR MONTEZUMA CASTLE MUSEUM (CONT.)

tions in the Verde Valley as a great deal of such material is available.

A drawing or water color similar to those made for the Aztec Ruins National Monument Museum, will show a prehistoric man and woman in typical dress. Below this will be a bust of a Pueblo Indian with a headdress resembling an example found in Hidden House in Sycamore Canyon in the Verde Valley. This headdress is now on display at the Arizona State Museum, University of Arizona, Tucson, Arizona. For other examples of this type of headdress see Hodge, Handbook of American Indians North of Mexico, B A E Bulletin 110, Plate 29. This headdress may have been typical of some of the older men of the pueblos.

A panel of Exhibit II will be devoted to the Physical Anthropology of the prehistoric Pueblo Indians of the Verde Valley. A great deal of material in excellent condition is available for this display. At Montezuma Well burials are uncovered from which human bones in good state of preservation are taken and no doubt enough of these would be given to supplement what are already on hand at Montezuma Castle.

At the top of the panel will be a chart showing the comparative stature between these people and other prehistoric inhabitants of the Southwest, also modern American Indians and Asiatics as tabulated by Hooten and others. Below the stature chart will be displayed bones uncovered during excavations in the Verde Valley. Two pelvises, one male and the other female, will prove interesting to a great many visitors. Long bones also, to show size and, if possible, pathology so that visitors will realize that we today have almost the identical diseases that these early people had.

The last section of the display will be three skulls arranged in the various positions, ; i.e., norma frontalis, norma lateralis and norma basilaris. These to be placed on small upright stands. One of these, preferably the norma frontalis, will show the green facial bones and mandible, so commonly found in burials in this region. Undoubtedly before burial the face was painted with copper oxide and penetration into the facial bones took place during decomposition of the flesh.

Exhibit III. - Wall case three feet deep.

- A. At the right of the case and taking up about one quarter of the first exhibit, will be a panel containing a History Chart of the Verde Valley with a copy of an old print of Montezuma Castle above and a copy of an old map of the Verde Valley below. These two copies can be made from prints in an article by Dr. E. A. Mearns entitled, Ancient Dwellings of the Rio Verde Valley, in the October, 1890, issue of Popular Science Monthly.

The reason for having the History Chart at this particular spot is to act as an introduction to archeological and ethnological

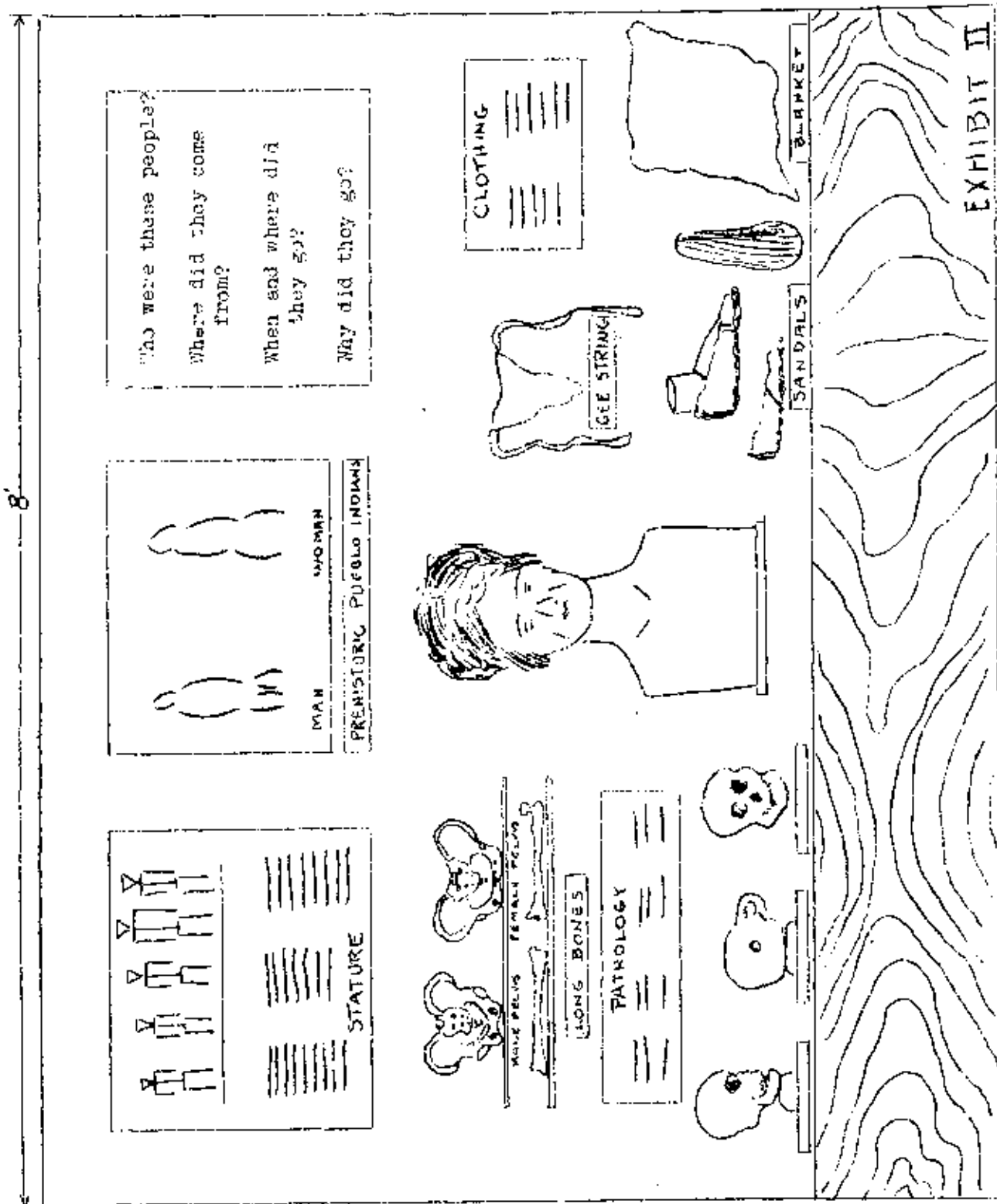
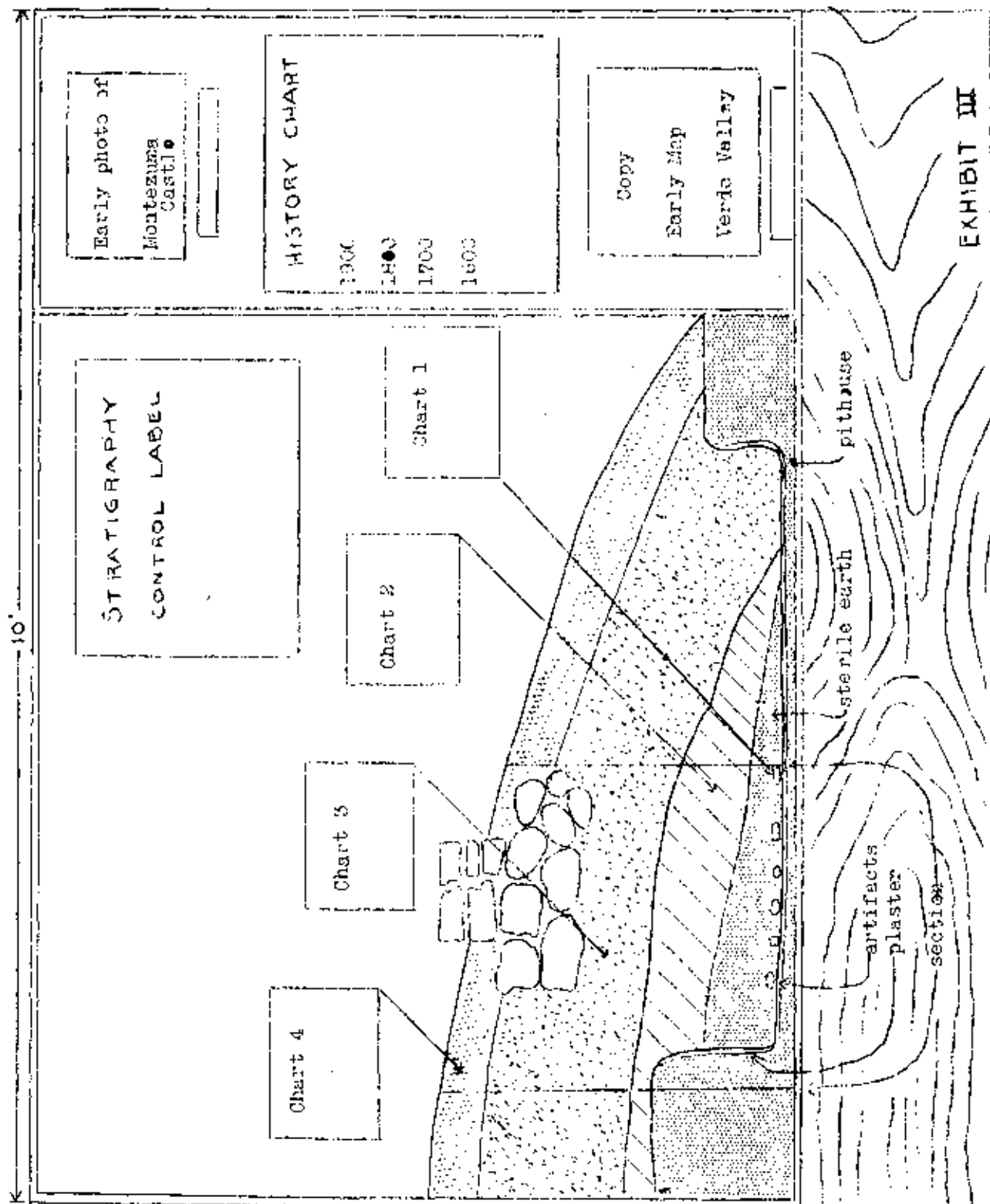


PLATE III



investigation. It will contain information pertaining to the first Europeans who came into the valley, why they came and what they found. As the chart goes from the earliest to the latest, reading from bottom to top, it will be much like the stratigraphy chart which follows. It will also give complete information on archeological surveys and excavations, and will be the introduction to the results of archeological work which will be shown in succeeding exhibits.

- B. The second section of Exhibit III, will be a stratigraphy similar to the one at Aztec Ruins National Monument but in addition to stratigraphy will tell why tree rings are not important in dating ruins in this region, and will show how ruins are relatively dated by sherds. House types will also be mentioned in the labels explaining the stratigraphy. Approximate dates of occupation in the valley will also be given. For details see Figures, 2, 3, 4 and 5.

DETAILS OF EXHIBIT III

Stratigraphy Control Label:

Stratigraphy, or the study of deposits of trash, has been most important in the working out of the development of peoples. It can be done today by going out to the city dump grounds and studying the deposits of trash. If the city is reasonably old and the earliest part of the dump is found and dug into, all kinds of queer articles of the gay 90's would probably come to light. There would be wagon parts, the remains of bustles, corset stays, etc.

The trash of the early 20th century was dumped on top of the things just mentioned and here among the ashes and dirt would be found parts of early automobiles, etc. Trash of the 1920s would be on top of this and so on until the trash of yesterday would be the last deposit.

Trash mounds of the prehistoric Indians are even better than those of today because the people usually threw their rubbish outside their front doors. When the house was finally abandoned or burned down, it fell into ruins and a new house was built on top of the remains of the old and its rubbish pile. In this manner deposits or accumulations resulted, sometimes to considerable depths, and if carefully excavated a true picture of the development of the people who lived there can be worked out. Such an excavation is called a stratigraphic study. The section below is an idealized cut through an old ruin and should be read from the bottom to the top to be properly interpreted.

Chart 1:

In the lowest stratum (Greek meaning layer) there is found a pit and the plastered walls of a pithouse (see drawing), the earliest house

type of these people when they passed from the stage of wandering hunters to that of a sedentary agricultural-hunting life. On the floor of this crude house there is found charred corn and several pottery fragments (sherds) showing that they were farmers and made pottery vessels.

Charcoal is found in large quantities on the floor. This may mean that the house was fired or caught fire and abandoned. The charcoal cannot be dated by the Douglass Method of Tree Ring Dating because the original wood was sycamore, cottonwood and juniper---none of which can be dated. Only pin, Douglas fir and pinyon can be dated. No ruin in the Verde Valley has been dated except Tuzigoot because of the lack of datable material.

The dates generally given for this early period when people were living in pithouses is before 900 A.D.

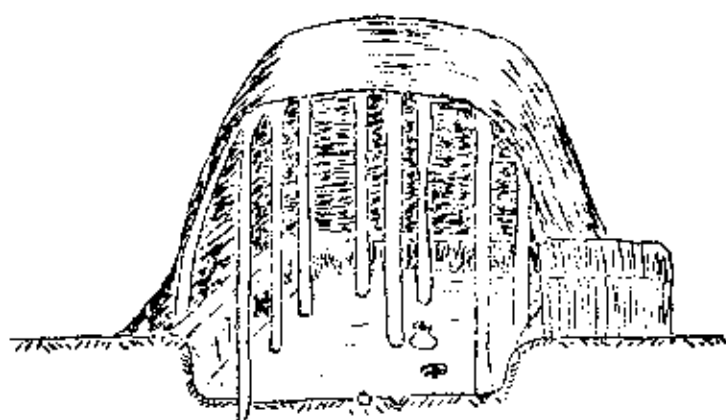


FIGURE 2----PIT HOUSE

EARLIEST TYPE OF DWELLING FOUND IN THE VERDE VALLEY

Chart 2:

In the next layer of debris there are found sherds which are different from the sherds found on the pithouse floor. Although no house remains are shown it is known from other locations that the house was a crude building of only one or two rooms built on the ground level (see drawing). The association between sherds and house types is a very common method of determining the relative age of prehistoric ruins in the Southwest. In the region around Flagstaff, Arizona, where yellow pine grows and was used for building purposes in a house type which gave a certain date there was found on the floor of the old house a

PROPOSED EXHIBIT'S PLANS FOR MONTEZUMA CASTLE (CONT.)

certain kind pottery. In a ruin in the Verde Valley which cannot be dated from the old charred beams the same kind of pottery was found; so it is believed that the pottery, which is identical, was made at the same time and a relative date is given to the Verde Valley house type. The approximate dates for this period would be between 900 and 1250 A.D.

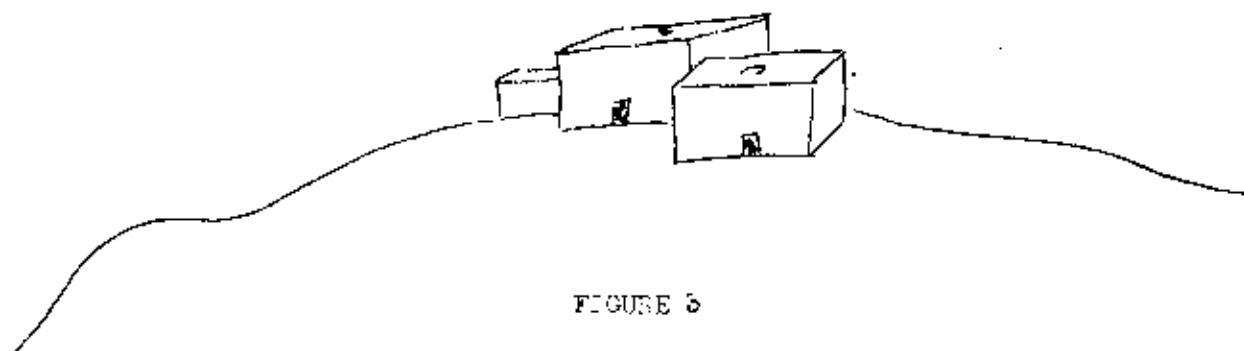


FIGURE 3

FIRST HOUSES TO BE BUILT ON GROUND LEVEL.
THE BEGINNING OF THE HUGE PUEBLOS OF LATER TIMES

Chart 3:

In the third stratum from the bottom there is more evidence of human occupation than before in the form of more sherds, more ashes from their fires and more bone tools and bone splinters. A much larger population might have existed here at that time.

The evidence of walls are plainly shown, and are made of rough and irregular rocks. At this time the houses were built in pueblos of many rooms or in multi-storied cliff-dwellings.

The people at this state of development had reached a rather high degree of civilization, comparatively speaking, but still there is no evidence of a definite religious structure, such as a kiva, found in the Verde Valley. Further to the north are found many kivas in villages and further to the south in the Hohokam country no kivas are found. In the Verde Valley midway between the areas with and without kivas there are none found. Does this point to the fact that the people were from the south?

The relative dates for this period are between 1050 and 1300 A.D.

PHOTOGRAPH OF MONTEZUMA
CASTLE

Chart 4:

In the top stratum are found as much or more evidence of occupation as in the previous stratum. There is a marked change in pottery type. A new yellow ware with brown decoration (Jeddite Black-on-yellow) is found which has its origin to the north and east in the Jeddite Valley. This was the first indication that led archeologists to believe such pottery was traded in rather than made here. Now it is quite generally believed that almost all of the decorated pottery found at Montezuma Castle and Tuzigoot was trade ware.

This last period dates after 1300 A.D. How long the people lived in the region after that time is not known. All of the large pueblos and cliff-dwellings were occupied during this period.

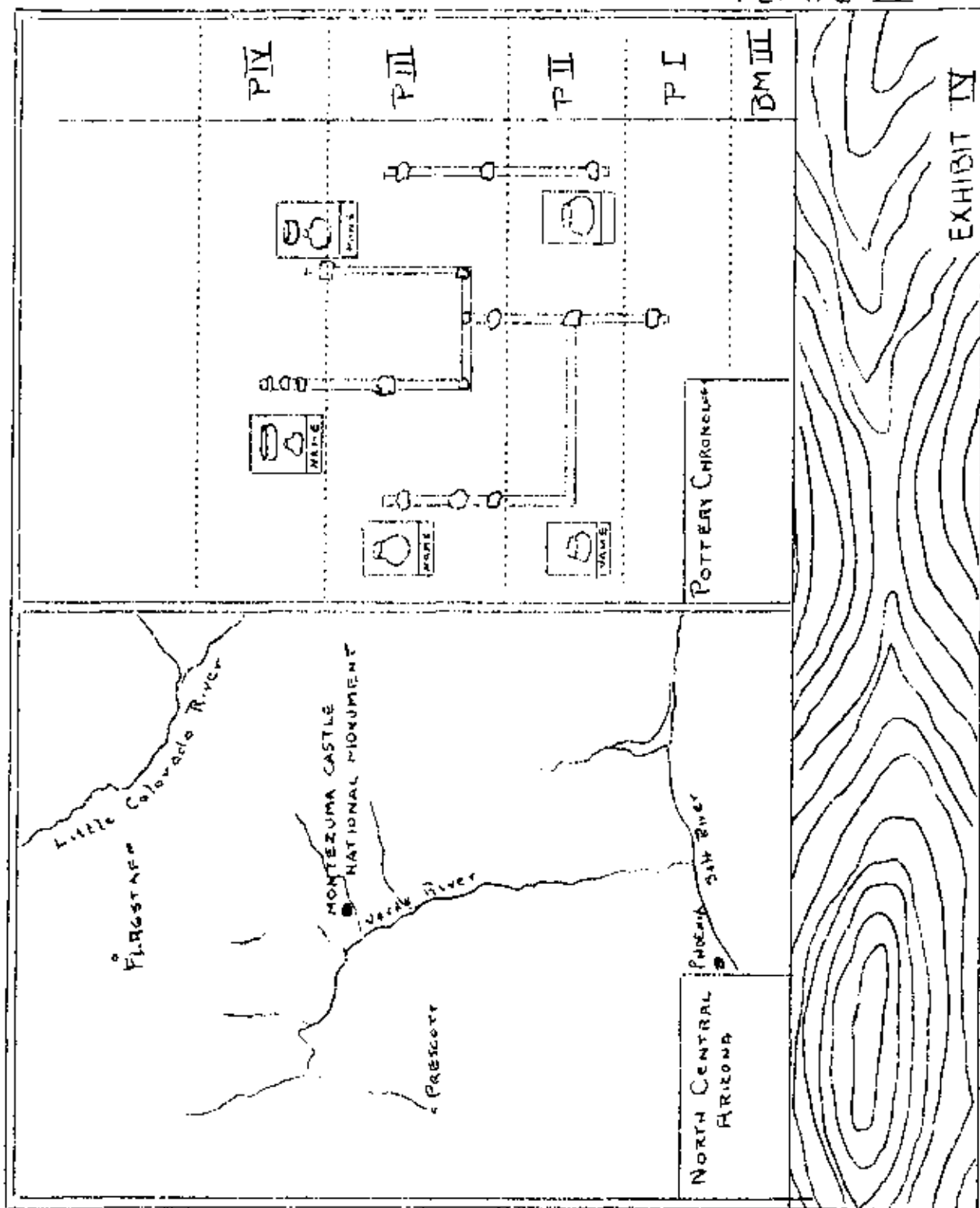
PHOTOGRAPH OF TUZIGOOT

Exhibit IV

A. Pottery Chronology.

A pottery chronology for the Verde Valley will be made up from data gathered at Montezuma Castle National Monument during the C. W. A. excavation and research, from Tuzigoot and from the studies of pottery of northern Arizona by the Museum of Northern Arizona. Typical sherds are to be used in the chronology and if

PLATE IV



PROPOSED EXHIBITS PLANS FOR MONTEZUMA CASTLE MUSEUM (CONT.)

possible photographs of type vessels will be used. On the right of the chronology will be a relative age sequence made up according to the best knowledge that we now have.

B. Map of north central Arizona.

On this map will be shown the culture groups of the area under consideration. These groups will be shown in colored shaded areas with any overlapping that we know exists. The map will show all topographic features and ruins of the Verde Valley and surrounding regions. Also possible trade routes will be shown in dotted lines on the map. As there is a salt mine in the valley near Camp Verde which we know was used by the prehistoric Indians we are almost positive that this commodity was used in barter. Also due to climatic conditions it was possible to raise cotton in the Verde Valley and because of the abundance of textiles we think that cotton and cotton goods were used for barter. In turn we find that most of the pottery found in the region is trade ware; so no doubt these peoples used their natural resources and products to trade for objects from other regions. All of these points will be brought out in the exhibit.

EXHIBIT V. - Wall case.

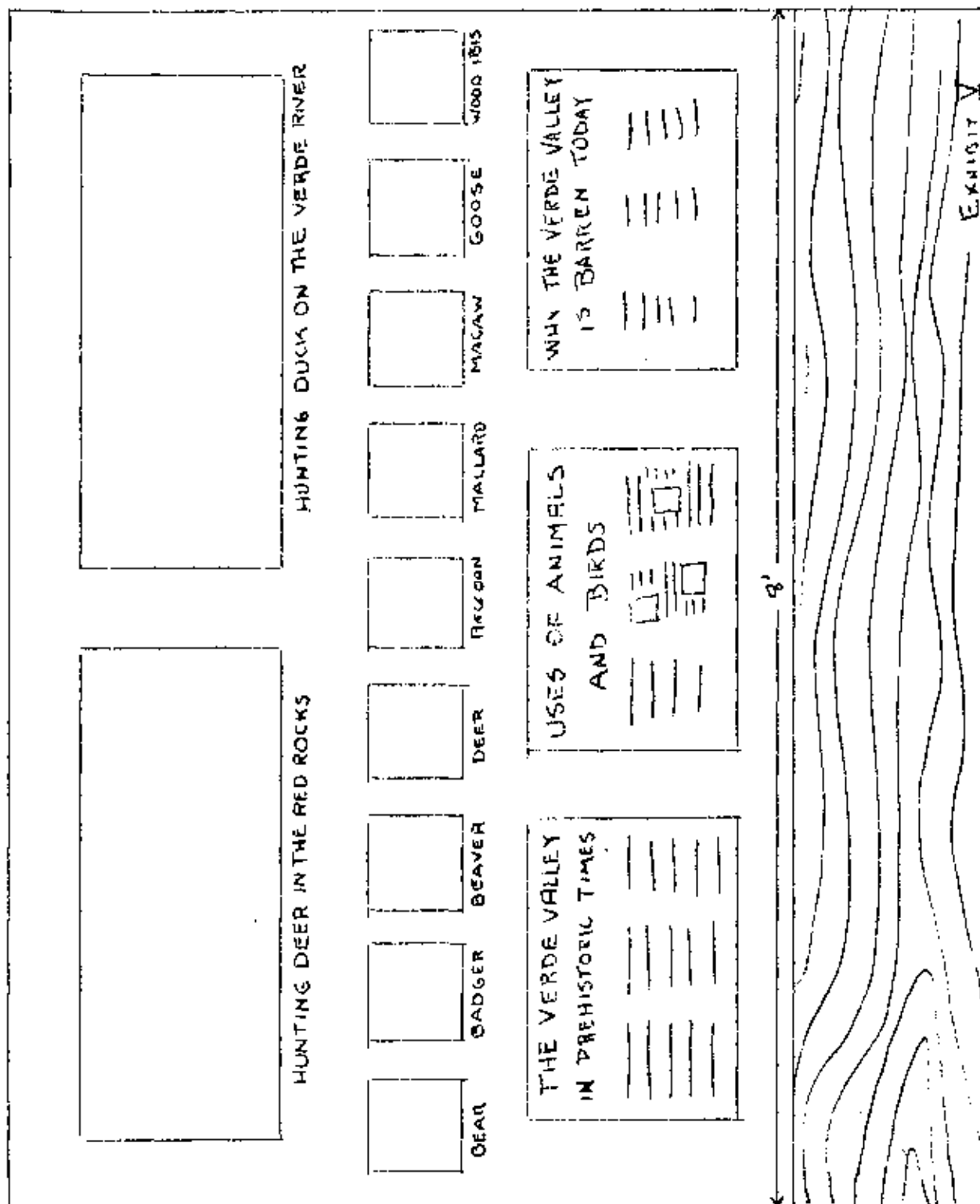
Hunting in the Verde Valley

From the number of animal and bird bones found in the debris and in the room fills during excavation, there must have been a great deal of hunting activity among the Verde Valley pueblos.

Two hunting scenes, one showing the pueblo men hunting deer, and the other portraying them hunting ducks on the river, will be used as top pieces for the case. The deer scene will show the colorful redrock country to the north of the Verde River. The other will be a typical Verde River scene with the river bordered by tall reeds, which grew there in prehistoric times. These reeds are now almost extinct, but at that time were very plentiful and were the thatch used in roofing the rooms.

Below these two large pictures, will be pen and ink drawings of some of the animals and birds which were hunted and used for food and for other purposes. Below each picture will be the bone from which identification was made.

Below these pictures of birds and animals will be labels telling: (1) what the Verde Valley must have been like when inhabited by the Indians, (2) the uses made of the animals and birds - food, clothing, ornaments and utility, (3) why the Verde Valley is barren today. In the second chart, reference will be made to the fact that no turkey bones have been found in the Verde Valley.



PROPOSED EXHIBIT'S PLANS FOR PROPOSED MONTEZUMA CASTLE MUSEUM (CONT.)

A second section of about four feet of case space will show weapons used for hunting in prehistoric times.

Exhibit VI. - Center Case.

Bone and Stone Tools and Technology.

This exhibit will show representative types of bone tools, and the bones they were made from with accompanying explanation telling how they were made.

Representative stone tools will also be shown and an explanation given on how they are made and from what material.

In the text on the labels, comparisons will be made between bone and stone implements of adjoining culture areas.

Exhibit VII. - Wall Case.

Farming in the Verde Valley:

For intensive farming on small plots, no doubt as great a population could have subsisted per total area in the Verde Valley as in any other section of the Southwest. This is further borne out by the great number of large pueblos bordering the Verde River.

Irrigation must have been employed, but not in such tremendous projects as the Hohokam employed in the Salt and Gila valleys to the south. There is evidence of a small irrigation canal leading from Montezuma Well toward Montezuma Castle. Water could have been brought out of the Verde River by the use of dikes and ditches, which have long since disappeared.

The agricultural products raised here were as numerous as those raised by the Hohokam. Cotton must have been an important crop in addition to the food staples, corn, beans and squash.

The exhibit on farming will bring out the points mentioned above in a large label. There will be enlarged photographs of the old canal near Montezuma Well and of Montezuma Well itself.

Examples of prehistoric foods will be shown in jars at the bottom of the case.

Prehistoric farming implements will complete the exhibit. The axe, planting stick, hoe and spade, were the most important tools used in clearing and cultivating the land.

Following Exhibit VII will be a diorama (A), showing a typical farming scene in the Verde Valley.

PLATE VI

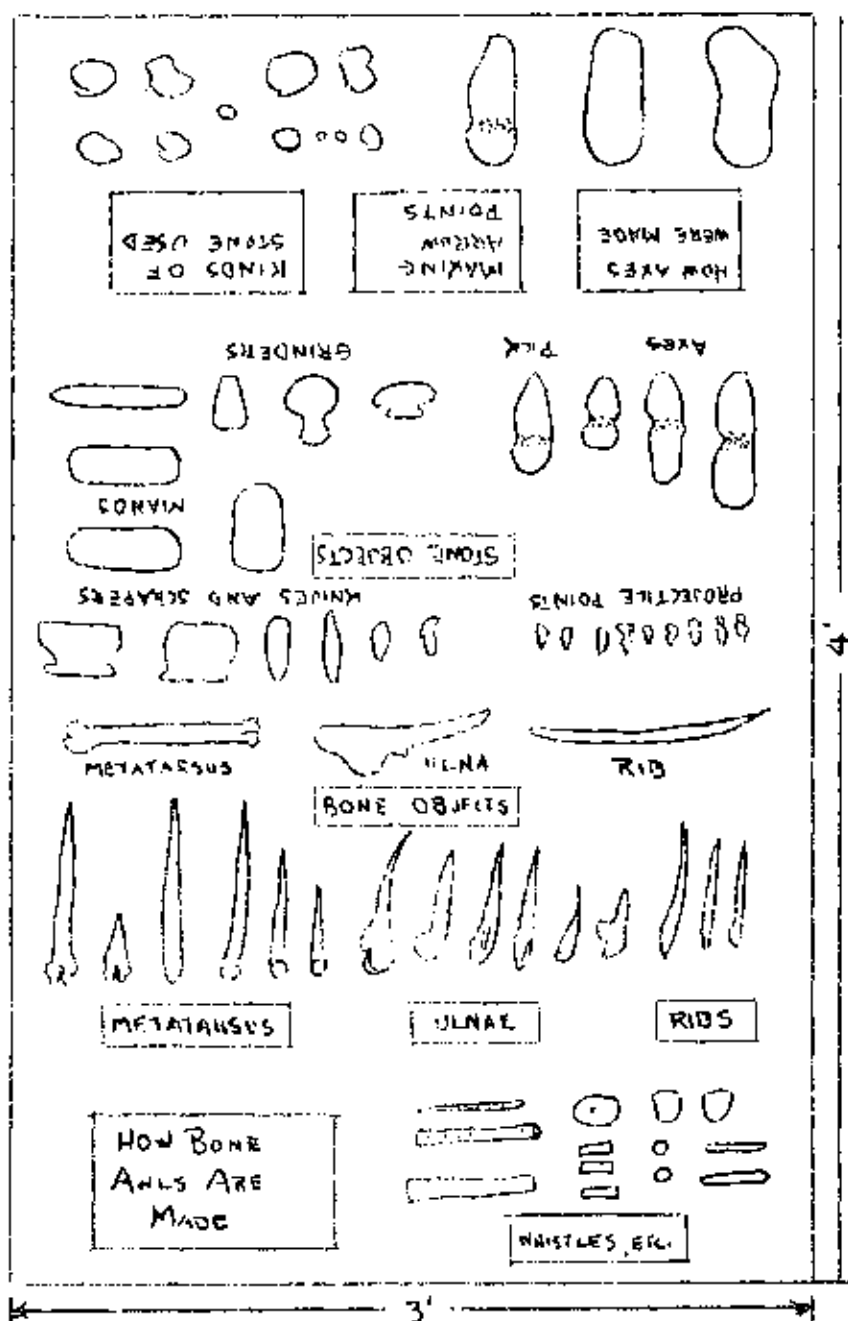
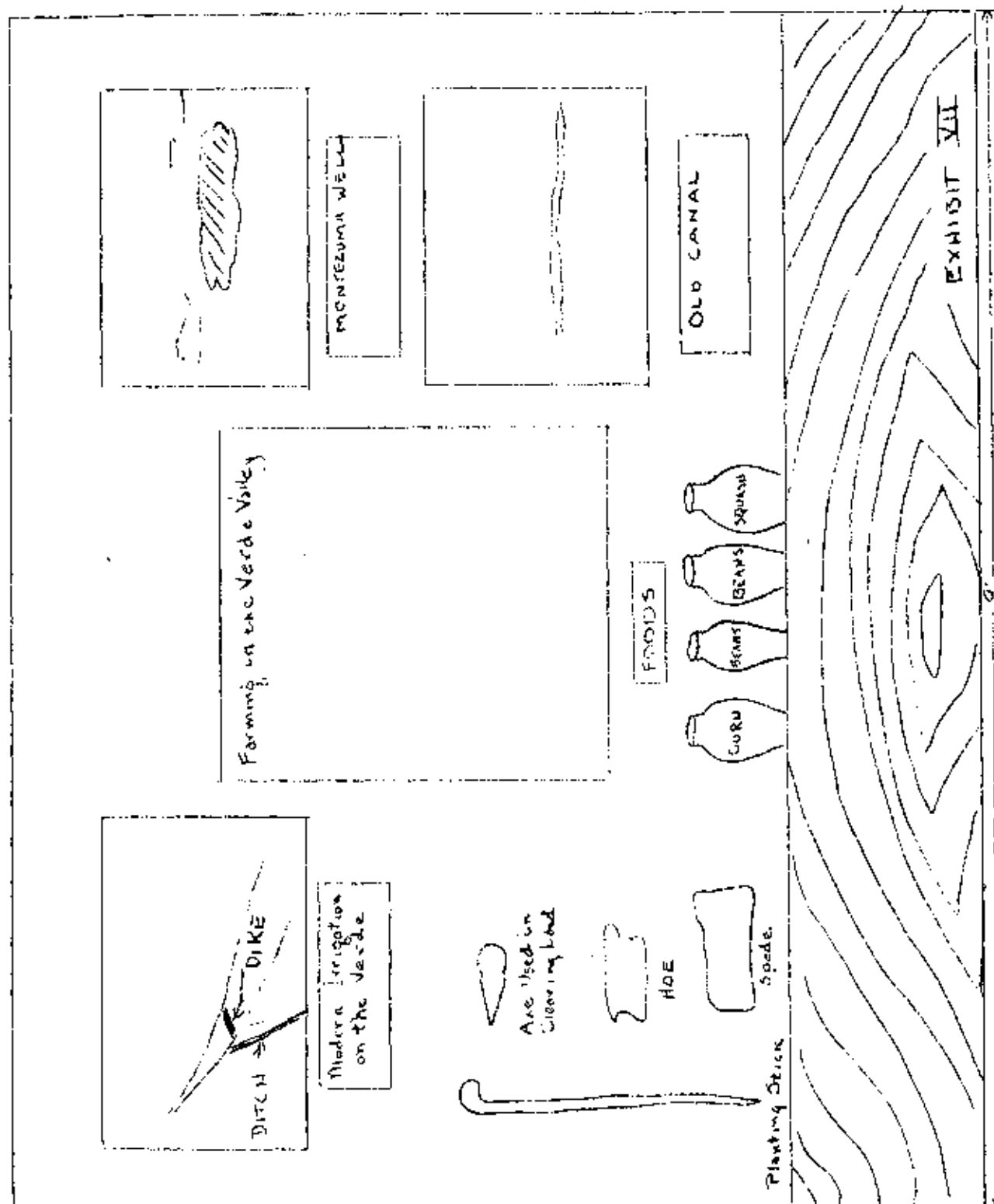
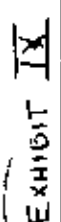


EXHIBIT VI — CENTER CASE





PROPOSED EXHIBITS PLANS FOR MONTEZUMA CASTLE MUSEUM (CONT.)

Exhibit VIII. - Wall Case.

Textiles:

The textile display will be made up of specimens of basketry, matting and cloth found in ruins in the Verde Valley.

To supplement and explain these specimens, there will be drawings mounted in the back of the case to show the methods of weaving employed in the various textiles on display.

The raw materials used in making textiles will be shown and the methods of preparing these materials will be explained. Cotton was the most important fibre used, but yucca and apocynum were also used in the making of textiles.

Exhibit IX. - Wall Case.

Prehistoric Mining:

In the past it was erroneously thought, especially by the early Spanish Conquistadores, that the Indians of the Southwest and their ancestors, the prehistoric inhabitants had mined precious metals. This thought led to the organization of marvellously equipped expeditions to the Southwest. Coronado was the first to lose his fortune, and return a broken but wiser man. In all his wanderings, even to Gran Quivira in what is now the state of Kansas, not an ounce of precious metals did he find.

Turquoise was a common form of jewelry among the Indians and was mined by them in various places, but this did not interest the gold greedy Spanish whose retrospect was on the gold of the Incas.

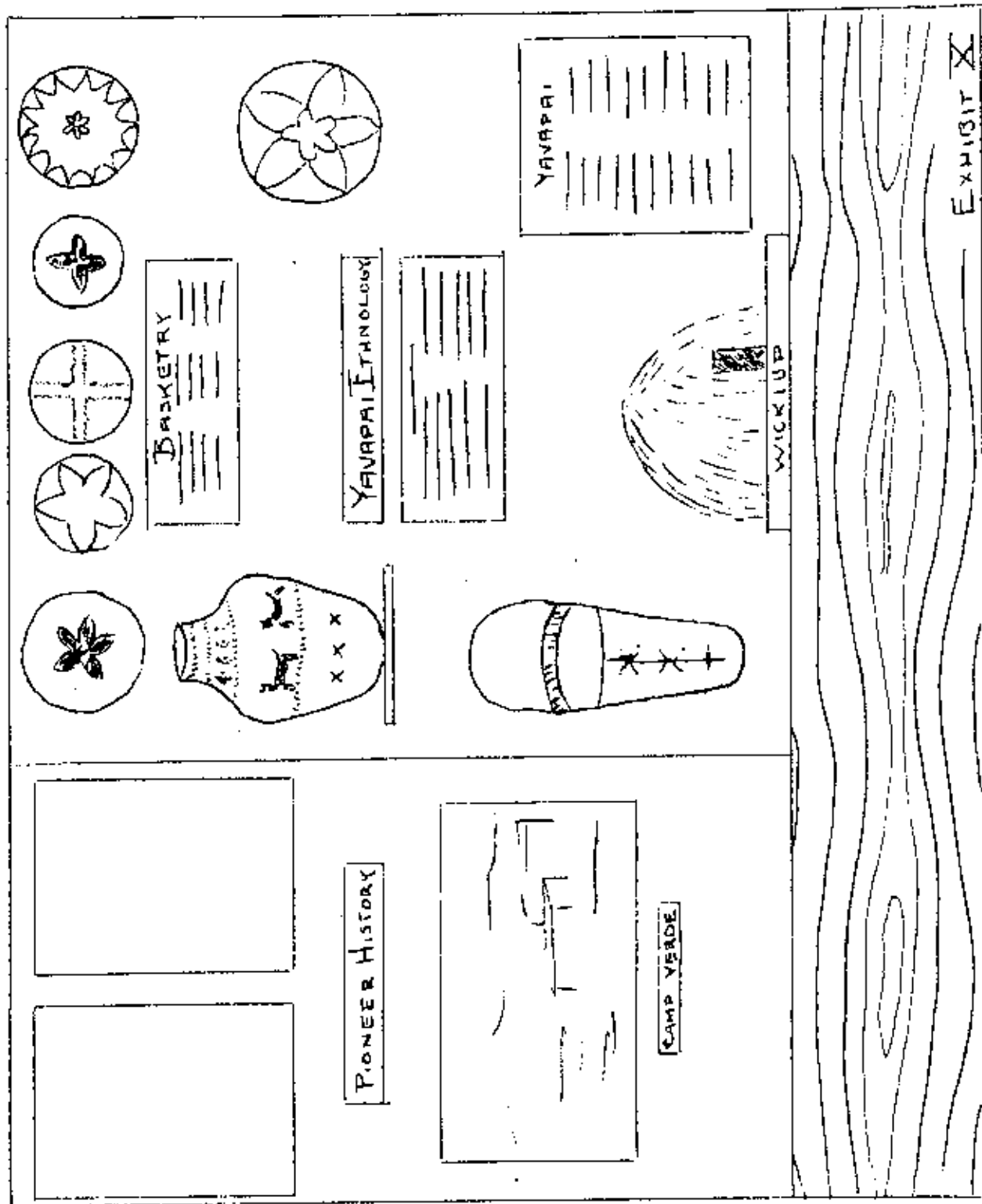
Today, many of the uninformed who visit ruins cannot be convinced even by strong arguments that there are not treasures of precious metals still buried beneath the floors or in the walls of the ruins.

This exhibit will contain a large map of the Southwest, showing all turquoise and salt mines that are known to have been used by the prehistoric Indians. There will be labels on both salt and turquoise mining and photographs of both mines. A picture of the present salt mine at Camp Verde, which was originally used by the Indians will also be shown.

Below the maps, photographs and labels, will be implements used in the mining of salt and turquoise.

Picks used in salt mining are numerous in the Verde Valley and will be part of the display. If possible, one hafted example

PLATE IX



PROPOSED EXHIBITS PLANS FOR MONTEZUMA CASTLE MUSEUM (CONT.)

will be obtained or made up for exhibition purposes. A juniper bark torch will be made to show what was used for lighting purposes while working in the mine.

Specimens of salt from the salt mine and raw turquoise from a turquoise mine will be on a small stand at the bottom of the case. Above these, will be examples of prehistoric jewelry; necklaces, inlay work, pendants, etc.

Following Exhibit IX will be Diorama B - depicting a mining scene in the Camp Verde salt mine during prehistoric times. Several Indians will be at work with one holding a torch for the others to work by.

Exhibit X. - Ethnology and History:

- A. Ethnology in the Verde Valley is limited to the Yavapai who are a Yuman speaking tribe. Culturally, they seem to resemble closely the Apache.

As the Yavapai are limited to the region of north central Arizona with only a few groups of importance today, and these mainly in the Verde Valley, it is most important to have a complete exhibit on the ethnology of these people at Montezuma Castle National Monument.

Yavapai baskets are considered among the best of the various kinds of baskets made by Indian tribes of the Southwest. As good a collection as can be obtained will be shown with any other objects of interest.

A model of a Yavapai wickiup will be made for this exhibit.

Labels telling of Yavapai life and customs will be printed and placed on the back panel of the case. Photographs of Yavapai Indians in old dress, if obtainable, will be shown.

- B. Following the ethnology exhibit, but part of the same case will be a brief sketch of the first American settlements in the Verde Valley, and the difficulties that existed between the Indians and Americans when Camp Verde was established.

Such information can still be obtained from old-timers in the region, from the Indian Agent at Camp Verde and from the Arizona Historical Museum at Prescott, Arizona.

PROPOSED EXHIBITS PLANS FOR MONTEZUMA CASTLE MUSEUM (CONT.)

Exhibit VII.

Although Montezuma Castle is not a geologic monument there is a great deal which should be told of the geology of the Verde Valley.

During tertiary times or before a neck of lava dammed the lower end of the valley and made a huge lake out of what is now the Verde Valley. Thick deposits of limestone were deposited in tertiary times. These limestones were laid down over redwall limestone.

The lake outlet finally cut through the lava which dammed it and the lake was drained. Since the time of draining the stream (Verde River) has cut down through the Verde limestone some 80 - 100 feet.

Exhibit XII. - Wall Case.

Flora and Fauna

The contents of this case is problematical at present, and could only be made up after a thorough investigation of the region around Montezuma Castle is made.

Exhibit XIII. - Center Case.

This will be a relief model of the Verde Valley, made according to scale and painted to resemble the rock formations of the valley; i.e., the Redrock country red, the Verde Valley limestone a pinkish buff, the porphory of the Black Mountain a dull red, etc.

SCENIC S. UTAH

A recent radio talk by Zeke Johnson

Friends:-

When it's spring time in the Rockies, and the birds begin to sing, men's hearts year for the wide out-of-doors, for the mountain ranges and the canyons, for the beautiful parks and monuments. Just to rest! to look! and listen.

Then the thought comes, where shall we go?

Let me tell the Radio Audience, that I have a trip in mind, that will please both old and young. Let's leave Salt Lake and start for San Juan County, Utah, a distance of 325 miles, the land of charm and beauty, take highway #50 via Price, Greenriver to within three miles of

SEEING THE SCENIC WEST (CONT.)

Thompson Springs, then turn due south on highway #47, where you will cross the Colorado River at Moab. Here you will see the high red ledges in all their splendor, towering some 1,500 feet above the level of the valley. You will also see where the Silvery Colorado enters the Box Canyons never to come out again til it has flowed through Cataract, Glen, Marble, and the Grand Canyons, to be impounded in the lake at the great Boulder Dam.

Then you look to the east and see the grand La Sal Mountain with its peaks towering high above timber line, the second highest mountain in the state. Sixty-five miles brings you to the town of Monticello. On the way you pass by the Looking Glass Rock, and just to the left you see a beautiful arch. You will be amazed at the coloring in the ledges. Twenty-five miles southwest from Monticello, under the south rim of the Blue Mountain, you arrive at Blanding.

At this point ask for Zeke Johnson, Custodian of Natural Bridges. If he is not in town, he will be at the Monument. Any of the attendants at service stations or stores will direct you, and tell you to fill your tanks with gas. Then go west over a 50-mile dirt mountain road not too good, not too bad; - just a crooked slow road but you won't mind the two and a half hours it takes to get to the Bridges, as you will be immensely interested in every mile.

The first 23 miles are through a forest of Pinyon Pine and Juniper, crossing West Water Canyon, Brushy Basin and Cottonwood. After you begin to ascend the Elk Mountain, and you see the sign, "Goblet of Venice," be sure and walk the 300 yards, and see the most beautiful specimen of wind erosion ever seen by man. Just a big red rose standing 13 feet high (five tones of rock are estimated in it) and standing on a 16-inch base. You will need your cameras and plenty of films. Five miles farther puts you up into a beautiful forest of yellow Pine and Aspen. You will be thrilled every moment as you ride through this wonderful grove of trees that almost tower to the sky, and at an altitude of eight to nine thousand feet.

Through this beautiful forest at the left you will look into arch canyon. Just stop and walk 25 yards, have your field glasses ready to look out at the four corners of Utah, Colorado, New Mexico and Arizona and see as far as the eye can reach into all four states. Then drive on and as you approach the highest divide between the Bears Ears, stop and look at the great panorama before you, to south, east and west, many mountains and beautiful Monument Valley in the distance. Fifteen miles down the mountain and through a forest of Pinyon and Juniper brings you to the Great Natural Bridges.

The Gwanchomo (Rock Mount Bridge), so called from the conical rock mound on it, is probably the oldest, for it has been carved and chiseled by erosion until its span is comparatively a narrow strip of rock. Viewed

SEEING THE SCENIC TEST (CONT.)

at a distance, one is surprised that it supports its own weight. It is the smallest of the three bridges, and yet it has a span of 200 feet, being 35 feet wide on top but only 10 feet thick in the center. It rises 108 feet above the stream bed of a short, unnamed canyon at its confluence with Armstrong Canyon. This is locally known as the Edwin Bridge.

Three miles down Armstrong Canyon, at its junction with White Canyon, the Kachina or, as it is better known, Caroline Bridge, is reached. A symbol carved on this bridge recognized as that of the Kachina, the sacred dancers of the Hopi Indians, gives it its name. This is the most massive of the bridges. Rough hewn, it gives an impression of great weight and strength. The huge fragments of rocks and piles of sand and gravel in the canyon in the immediate vicinity are in harmony with the bridge, as if the master workman, not yet having finished his work, had not thought it necessary to clear away the debris. This bridge has a span of 186 feet, a width of 49 feet, and a thickness of 107 feet at its smallest part. It rises to a height of 205 feet above the stream bed.

About $2\frac{1}{2}$ miles above the Kachina in White Canyon is the Sipapu, the Portal of Life. All Pueblo Indians believe they come into this world from a lower world through a hole or opening, called by the Hopi "Sipapu." After death, they return through the opening to the lower world, where they remain a period before going to the sky to become "Rain Gods." The Sipapu, or as it is also known, Augusta Bridge, is the largest. It has a span of 261 feet, is 40 feet wide, and 65 feet thick at its smallest part, and rises to a height of 222 feet above the stream bed. It has been so carved and smoothed and is so beautifully proportioned that it is difficult to realize its great size. Nature has carried out the general scheme by providing a more beautiful setting than in the case of the other two bridges.

There are numerous ruins of cliff dwellings in the vicinity of the bridges perched in the canyon walls in almost inaccessible places.

The natural bridges are the result of stream erosion in an elevated region. Doubtless hundreds of similar bridges have been formed and destroyed in past ages, and many more will be made and later destroyed in the ages to come.

Beds and meals are available at the Custodian's camp at the Edwin Bridge for those who wish to spend additional time in this wonderful region.

South of Blanding are such scenic attractions as Monument Valley, the Goosenecks of the San Juan River, the Navajo reservation, Hope Villages, and a return trip by the way of Lees Ferry Bridge to Bryce and Zion Canyons and Cedar Breaks.

Roads will be open by May 1 this year and I will be looking down the trail ready to welcome you to San Juan County and the Natural Bridges National Monument.

TABIRA'S WATER SUPPLY

(Ed. Note: In response to several recent allusions to the source of water during ancient days at Tabira, now Gran Quivira National Monument, Claf T. Hagen, acting chief, Western Division of Historic Sites and Buildings, gathered the following quotations which will be of interest to the field.

Mr. Hagen notes "Although descriptions by persons who visited Gran Quivira about a century ago may not provide the correct solutions, their statements contain pertinent suggestions which it seems deserve thorough investigations on the ground.")

"Benjamin David Wilson's Observations on Early Days in California and New Mexico." Edited by Arthur Woodward. Printed in the Annual Publication of the Historical Society of Southern California, Los Angeles, 1934, pages 95-96.

".....I wish to revert to my second Gila expedition, in the winter of 1835 - 6.

"Myself, and expedition, six men all told, once found ourselves absolutely without anything to eat, the only result to us was great weakness. On the evening of the sixth day getting off our mules, we felt so weak that we became very much alarmed about our condition, so I had no other recourse but to shoot my faithful mule, that I had ridden over a thousand miles, it being the only animal that showed any flesh. I feel sorry about that mule yet, the killing of which occurred some forty-two years ago. On our return as before mentioned to intercept the Mission caravan, after crossing the Del Norte, at the head of Jornada, going eastward to the River Pecos, we had the misfortune to find no water till the fifth day at night. On the fourth day, crossing an arid sandy plain leading North to South between the two parallel mountains, we saw to the North of us in the midst of this plain a large building, which encouraged us to believe that our water trouble was at an end; we went to the building and found it to be a large Church. On the northern side of the building saw evidences that there had been on that site a very large town, the Church itself was built of stone, and stood almost in a perfect state of preservation, while all the other buildings had decayed. We spent the whole day looking for water without any success. Just at night I discovered on the eastern side what satisfied me were the remnants of a concrete aqueduct. Camped there that night, next morning endeavored to trace the aqueduct, which led easterly to a mountain range. Spent the whole day in tracing it, to

TABIRA'S WATER SUPPLY (CONT.)

ascertain which was the gorge it entered, believing we should find water there. Our hopes were gratified, and our terrific sufferings ended. I had already had the experience of six days without food, and five without water, and state that the suffering caused by the former bears no comparison with that of the latter. No living man unless he has had the opportunity of feeling it, or seeing it with his own eyes, could realize how much flesh a man may lose in five days without water. Every joint in our bodies ached, our eyes sunk in our heads as if we had been dead a week, and the bones seemed to be pushing through the skin. After my return to Santa Fe narrated our discovery of that building, and some enthusiastic men went in search of it, they called it the Grand Quivira..."

Mr. Woodward's note 16, page 139.

"This was the famous, almost mythical place, "La Gran Quivira" for which Coronado sought. He found his rainbow end in a grass thatched Wichita village many weary miles out upon the plains, not at all the city of gold he hoped to discover. The name Grand Quivira was applied to this particular ruin many years later. Gregg described this ruin or rather series of ruins located in northeastern Socorro county, New Mexico, on a desolate mesa, one hundred and fifty miles south of Santa Fe. It was probably a pueblo of the Piros Indians, known as Tabira. It was first visited by the Spaniards in 1581. A mission church, the ruins of which Wilson and his party found, was originally built in 1628, a newer and larger church being erected in 1644. The site was abandoned between 1670 and 1675 because of Apache raids. The immediate water supply of the mission was kept in artificial reservoirs, no doubt supplied by the aqueduct mentioned by Wilson. These reservoirs were of course dry when visited by the trapping party, hence their trouble in locating the headwaters which originally flowed through the zanja...."

"Gran Quivira"

Description of Gran Quivira in the period 1831-1839. Extract from Commerce of the Prairies, by Josiah Gregg - New York 1845 - Printed in Reuben Gold Thwaites, Early Western Travels. Cleveland, 1905 - Vol XIX pages 361-362.

".....In every quarter of the territory there are to be seen vestiges of ancient excavations, and in some places, ruins of considerable towns evidently reared for mining purposes.

"Among these ancient ruins the most remarkable are those of La Gran Quivira, about 100 miles southward from Santa Fe. This appears to have been a considerable city, larger and richer by far than the present capital of New Mexico has ever been. Many walls, particularly those of churches still stand erect amid the desolation that surrounds them, as if their sacredness had been a shield against which Time dealt his blows in vain. The style of architecture is altogether superior to anything

at present to be found north of Chihuahua -- being of heavy stone, a building material wholly unused in New Mexico. What is more extraordinary still, is, that there is no water within less than some ten miles of the ruins; yet we find several stone cisterns, and remains of aqueducts eight or ten miles in length, leading from the neighboring mountains, from whence water was no doubt conveyed. And, as there seem to be no indications whatever of the inhabitants' ever having been engaged in agricultural pursuits, what could have induced the rearing of a city (165) in such an arid, woodless plain as this, except the proximity of some valuable mine, it is difficult to imagine. From the peculiar character of the place and the remains of the cisterns still existing, the object of pursuit in this case would seem to have been a "placer," a name applied to mines of gold-dust intermixed with the earth. However, other mines have no doubt been worked in the adjacent mountains, as many spacious pits are found, such as are usually dug in pursuit of ores of silver, etc.; and it is stated that in several places heaps of scoria are still to be seen.

"By some persons these ruins have been supposed to be the remains of an ancient Pueblo or aboriginal city. That is not probable, however, for though the relics of aboriginal temples might possibly be mistaken for those of Catholic churches, yet it is not to be presumed that the Spanish coat of arms would be found sculptured and painted upon their facades, as is the case in more than one instance. The most rational accounts represent this to have been a wealthy Spanish city before the general massacre of 1680, in which calamity the inhabitants perished -- all except one, as the story goes; and that their immense treasures were buried in the ruins. Some credulous adventurers have lately visited the spot in search of these long lost coffers, but as yet none have been found."

See also note 124, page 301.

APPRECIATION

(Ed. Note: Here is a mighty pleasant letter a visitor sent back to one of our men:)

Just a note to tell you again how much Mrs. Shattuck and I enjoyed the visit to Casa Grande. To refresh your memory we were the couple you took so much time with on February 29, in the rain. We both feel quite honored and very fortunate that we had such luck as to have you show us through Casa Grande. We went there interested and came away very enthusiastic, it makes an enormous difference how a subject is presented and explained. After our visit to Casa Grande we went to all the other National Monuments on our route through Arizona. We had a very fine visit at Tonto and also want to express our appreciation for

APPRECIATION (CONT.)

the courtesy shown us by all of you men in charge of these very interesting places. At Tonto and Montezuma Castle the men who showed us around spoke up, just as you did, when they found out that I was a little hard of hearing. We both think you have established a very fine thing in these National Monuments, handled by interesting and capable men.

We failed to ask you for a pamphlet on Casa Grande but would like to obtain one if such exists. Also if there happen to be any good books on the subject, would it be asking too much to have you inform us of them? We have really become very much interested in this subject and are looking forward to the time when we can again visit the various ruins. We also took your advice and drove down to the Mission of San Xavier Del Bac and found it interesting also.

Thank you again for a most enjoyable two and one half hours at Casa Grande and I sincerely wish that I had some way in which I might be able to return the visit.....

GREAT AMERICAN FAMILY

By Earl Jackson

A Three Act Play

Act I

Scene: The Park Office and Parking Area of a National Monument. In the background are the high cliff walls of a canyon, and in the cliff are the ruins of prehistoric Indians dwellings.

Cast: Pa Jones.

Ma Jones.

Jack Jones, son, about 19 years old.

Ruth Jones, daughter, about 18 years old.

Bill Smith, the Park Service Ranger-guide.

Ranger - (Greeting Joneses as they drive up.) Howdy, folks. In to see the ruins?

Pa Jones - (Getting out of car.) Well, I don't know. Where are we? Where is the Monument?

Ruth - Yes. Where is the Monument? That sign back on the highway said we'd see a monument.

Ranger - This is the Monument. This canyon is a part of it. The Monument is a reserve ---

Ruth - (Getting out of car.) Oh, Jack! Look at all the funny holes! (Pointing to cliff caves.)

Ma Jones - Ranger --- you are a ranger, aren't you, or are you an Army Officer --- where are the Indians? (Gets out of car after Jack

THE GREAT AMERICAN FAMILY (CONT.)

crawls over door). Oh, those horrible roads. The dust and those hairpin curves. How can you stand it?

Ranger - The Indians don't live here any more. Visitors come here to see where the Indians used to live three hundred and fifty years ago. I will be glad to guide you through the ruins and explain them to you, if you will just step over to the office and register.

Ruth - Oh, Dear! No Indians! And that man on the highway told us we would see Indians.

Jack - Nerts! I knew it'd be a fake. What'd I tell you ---

Pa Jones - Quiet, Jack. Listen to what the policeman has to say.

Ranger - If you'll just step inside and register ---

Ma Jones - What? Do we have to pay, after driving fifty miles to get here? What are the charges?

Ranger - There are no charges, Lady. All you do is sign your name on the big register book, so the government will have a record of how many visitors come here, and from where.

Ruth - Do we have to register?

Ranger - You are not forced to, but the Park Service appreciates it.

Ruth - Oh, goody. I'll write my name as Myrna Loy, from Shanghai.

(They proceed into the register room.)

Pa Jones - (About to sign.) Shall I sign for all of them?

Ranger - That will be fine. Mr. and Mrs. and Family.

Ruth - Oh, Daddy, I want to sign my name. (Pa Jones signs "Mr. and Mrs. and family.")

Ranger - I beg your pardon. I didn't mean sign just Mr. and Mrs. and family. I meant to put your names after it. "Mr. and Mrs. Brown and family," or "Green and family."

Jack - Pop, I'm ashamed of you. Ain't you got no learning'?

Pa Jones - Sorry, I'll fix it. (Correcting the signature, adding family name.)

Ranger - Thanks, folks. Now you're registered, we can start the trip. It will take ---

Ma Jones - (Pointing to register book) Pa! Sakes alive! Look who's been here! The Herrings from Sandy Wash, just as sure as I'm alive.

Pa Jones - (Looking at register.) So it is. Well, let's get going. The gentleman is waiting for us.

Ma Jones - (Excitedly). Those people live in the next town from us. When did they register?

Ranger - The date there shows they were in yesterday.

Ma Jones - Oh, maybe you remember them. Do you remember a green car with a Kansas license and two people in it?

Ranger - I'm sorry I can't place your party. There were several Kansas cars in yesterday.

Ma Jones - Oh, but you must have remembered this one. The man was about as tall as Pa there, and he used to be a professor.

Ranger - I'm sorry. He didn't tell me if he was.

Ma Jones - Oh, so you saw him?

Ranger - I don't know.

THE GREAT AMERICAN FAMILY (CONT.)

Pa Jones - Oh, come on, Ma. Let them live in peace. We're in a hurry.

Ranger, where are the things you are going to show us?

Ranger - Up the canyon this way.

Ruth - Oh, Ranger, don't tell us we have to walk?

Ranger - Yes. You walk through the principal groups of ruins. The trip lasts about an hour, and you walk nearly a mile round trip. It's a good trail.

Ma Jones - (Throwing up her hands.) Merciful heavens! A mile did you say? I could never do it in this hot sun and dust.

Jack - Aw, come on, Ma. It'll be fun. Maybe we'll see an Indian.

Ma Jones - I won't budge a foot from this car. Why, the idea! Walk a mile to see those black holes in the cliff? I can see them from here.

Pa Jones - (Disgustedly.) All right, Ma, you can stay here. I can't understand you. You were the one who wanted to come.

Ma Jones - (Vehemently) Lay the blame on me. That's just like you, Fred Jones. How did I know you had to go to the end of nowhere to reach this place? And besides, it's you and Jack who are always afraid we'll miss something.

Pa Jones - (Wearily) All right, all right. Now I'm here I'm going to see it. Are you coming, Jack and Ruth?

Jack - Sure, Pop.

Ruth - Yes, Daddy dear, if Mr. Ranger doesn't walk too fast.

Act II

Scene: The trail which leads up the canyon into the ruins. Ma Jones has stayed behind in the car. The rest of the Jones Family is with the Ranger. The trail is narrow, and Ruth pushes past Pa to walk beside the Ranger.

Ranger - You can see quite a number of the caves as we walk along. The ones the Indians lived in are those large ones at the bottom of the cliff. The others are the result of weathering. They dug their houses out with stone picks.

Ruth - Ranger, are we in Arizona now?

Ranger - Why, no. This is New Mexico. Arizona is three hundred miles West.

Ruth - Then why do you have Arizona on your belt buckle?

Ranger - Because I went to school over there.

Jack - Say, Mr. Ranger, I thought you said the Indians didn't live here any more. I just saw one, in that cave. (Pointing.)

Ranger - You did? Where? Oh, that is one of the CCC boys prowling along the cliff. The Indians left here at least three hundred and fifty years ago. We think they probably moved down onto the Rio Grande River.

Pa Jones - Then they weren't killed out by enemies?

Ranger - We think not. Those were a peaceful, agricultural people, but they were well able to take care of themselves. Drouth was likely the reason for their departure.

THE GREAT AMERICAN FAMILY (CONT.)

- Jack - Oh, I see. Say, Pop, that was the way we'll have to be leavin' Kansas if the dust storms don't stop, ain't it?
- Ranger - Now here we see one of their kivas. A kiva was an underground ceremonial chamber, and only the men seem to have entered them.
- They ---
- Jack - Ha ha ha! Ruth, I told you! Women did all the work, and the men ruled them. See, like he just said, women weren't holy enough to go into the kivas.
- Pa Jones - He didn't say that, Jack. Let him explain.
- Ranger - It probably wasn't a question of holiness, but a division of function. Men took care of most religious matters, of hunting, fighting, while women did the farming and took care of the home. (They climb a trail to the foot of the cliff, where the caves are.) Now here is one of the typical cave houses. You can look inside the door and see the pick marks on the ceiling, and the smoke blackening on the walls.
- Jack - (Noticing small door opening.) These people must have been pygmies.
- Ranger - No. We have learned positively that the prehistoric Indians were about the same size as modern Indians. That low door was likely designed for protection so that ---
- Pa Jones - Well, I've always heard they were little fellows. Why a fellow I know back home has the mummy of one, a little tiny thing. You could tell it was a grown man, though, by the size of its teeth.
- Ranger - Well, all I have to go on is the evidence we dig up. We find lots of the skeletons, and they are the same size as modern Indians. Science tells us there were no pygmies in this country. Maybe your mummy had its first teeth instead of its last ones.
- Pa Jones - But you could see them. They was just like buck teeth and ---
- Ruth - Oh, look at the pretty blue berries on this tree. Ranger, what kind is it?
- Ranger - That is a juniper. It is commonly called a cedar, but we have no real cedars growing wild in this country. This variety is the One-seeded Juniper. Tear open a berry and you'll see ---
- Jack - Say, that's interestin'! They make gin out of Juniper berries don't they?
- Ranger - I don't know. Now as I was saying, here is a nice cave room. Notice it has a smoke hole above the door. And there is a little hole near the foot of the wall ---
- Ruth - Oh, don't tell! Let me guess. It's to let the cat out, isn't it?
- Ranger - (Solemnly) Yes. (They walk on a few feet.)
- Jack - (Noticing a tall spire of weathered rock.) Say, Pop, I guess that's the Monument. Ranger, isn't that the monument?
- Ranger - No, that isn't the Monument. That's just a natural formation. The Monument is a reserve of land ---
- Ruth - Oh, I remember. You described the monument a while ago. Well, where do we see it?
- Ranger - (Desperately.) Pretty soon. (They walk a few feet farther)

THE GREAT AMERICAN FAMILY (CONT.)

Now here is an interesting room. Notice how they put the plaster on this wall to cover up the black. They plastered it just high enough so that ---

Ruth - Oh, Ranger, that's fascinating! You know, I've always wanted to meet a real archaeologist, and I believe you are one. How do you get to be one.

Ranger - It's best to go to a University and take courses in it. Then, some colleges have summer schools in the field which ---

Ruth - It must be frightfully romantic, digging up dead things and all. But I don't suppose they'd let poor little me dig. They don't allow girls to dig, do they?

Ranger - Why, sure, if they are really interested.

Ruth - Daddy, I am going to study archaeology.

Pa Jones - Ruth, don't alarm me. No offense intended, Ranger. Only if Ruth happens to meet a young Geologist she will want to study Geology, and if she meets a ---

Ruth - Daddy! You brute! (And so the trip through the ruins goes.)

Act III

Scene: Back at the Park Office and the car, where Ma Jones is.

Ruth - Oh, Mother, it was the most wonderful thing I ever saw. All those cute little holes, and little doorways. They must have been the littlest people.

Ma Jones - (Grumpily) Well, I'm glad somebody enjoyed this trip. I nearly burned up here in the heat. Now maybe we can get on the road to Taos. (They family get in the car).

Pa Jones - Well, Ranger, I certainly thank you for your courtesy and help. You've made it mighty nice for us.

Ranger - You're certainly welcome. I hope you can come again. Perhaps there will be something else I can show you.

Ruth - You've been perfectly delightful, And I've learned so much my poor head is simply going round and round ---

Jack - (Whistles "The Music Goes Round and Round.")

Ruth - And I'm going to write a term paper on this place, and then I'm coming west again and study archaeology, aren't I, Daddy? And I'll ask Mr. Ranger to help me.

Ranger - If I can help, I will be glad to.

(Jack starts car, and races motor. As they drive off a chorus of Goodbyes comes from all save Ma Jones, and Ruth sticks her head out the rear window and blows a kiss at Ranger Smith, dropping a lace handkerchief at the same time. Smith stands till they are out of sight, then goes to the fountain, where icy water is gurgling. He soaks his head under the water for some minutes, and then straightens up, to find that the Brown family from Creosote Flats has arrived for a guided trip.)

Finis.

NORTHEAST BUILDING

By the Boss

Several years ago, about 1925 or 1927, we were expending some money on wall protection in Compound A at the Casa Grande National Monument. Mr. George L. Boundey was supervising the work and was running a gang of two or three Indians. He was underpinning the worst walls with adobe and protecting the tops of the walls and the bad places with a coating of cement. Also, in order to prevent capillary attraction from taking ground water back up into the walls after a rain, we decided to run a trench a foot wide and a foot or more deep along each wall, carry our cement coating from a foot below ground level up to a foot or more above ground level and then backfill the trench.

When we started into the repair of the building which we know as the Northeast Building in Compound A, Mr. Boundey made some interesting finds. His original drawing of the job turned up in the files the other day and is copied here in order that the data may not be lost.

This building had been excavated by Dr. J. Walter Fekkes back in 1904-1908 and we never thought of finding anything when we started our repair work. I afterward recalled, however, that while Dr. Fekkes had gone under the floors of the Southwest Building and the rooms up the west wall of the Compound, he had, due either to lack of time or money, stopped his shovels at the floor levels in this Northeast Building.

Upon starting our trenches along the inside of the walls and getting beneath the floor level, Mr. Boundey began finding some interesting things and we finally determined to go through the whole site since we had to move between a third and a half of the dirt in our repair job.

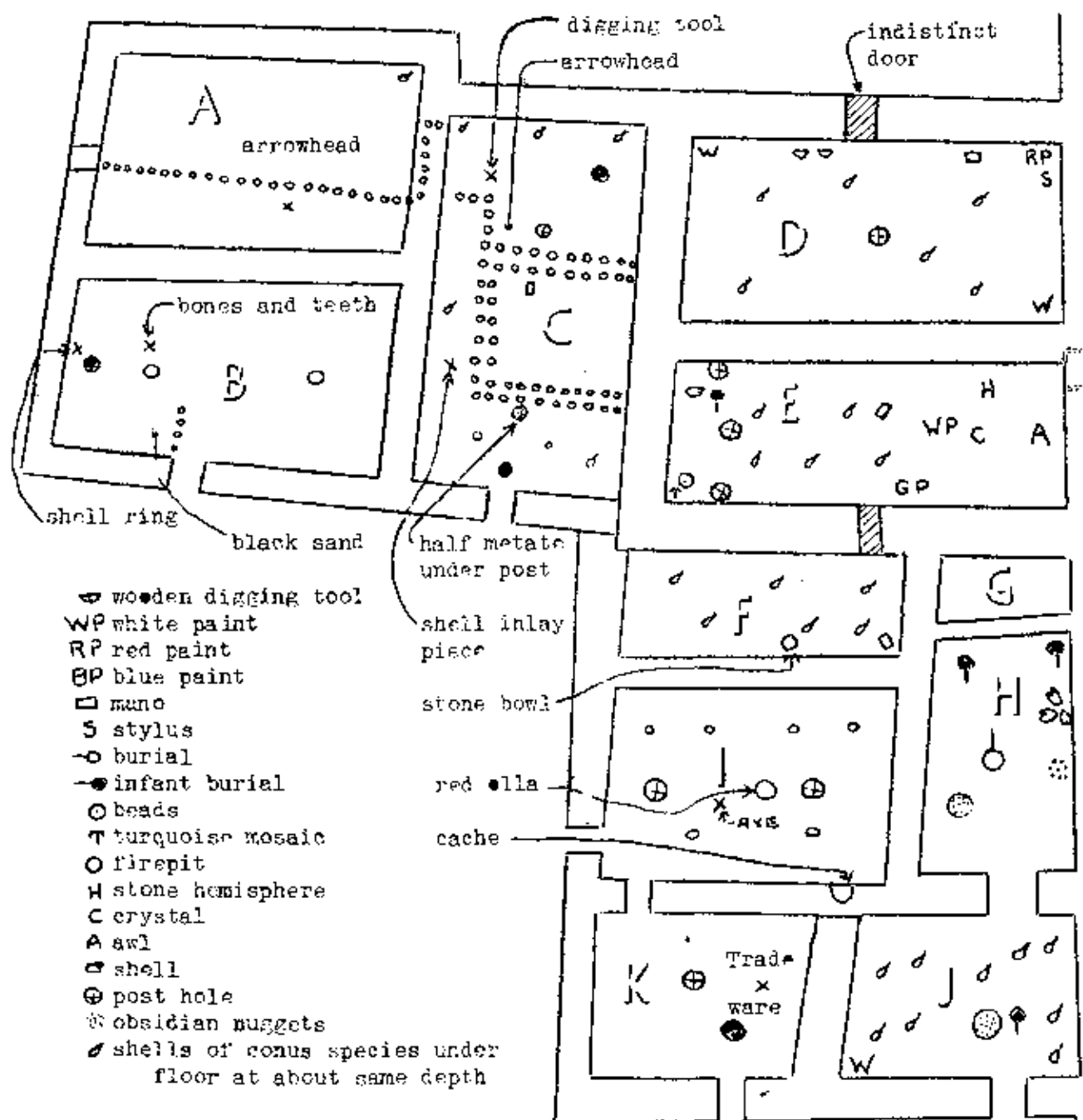
We found that an older house had stood on this site; that its walls were of the reinforced type of construction, having vertical poles embedded in the walls, and that this older house had been razed in order to erect the present Northeast Building. This older house was not so large as the present one and the people living in it had thrown some of their trash out to the south forming a small mound of material which had been levelled out and covered up by the south part of the present structure. This accounts for the trade ware which was found under the floor of room K. We could trace the foundations of this older house under the floors of rooms A and C but did not definitely locate them under D and E. This was not due to careless working because the whole job was very carefully done. We did not examine the plaza outside the walls of the upper house, but I have not doubt the foundations of the old house could be traced under the plaza to the north and west of room A.

The plan reproduced here is self-descriptive and needs little comment, but especial attention should be called to the location of the turquoise mosaic which was found near the southwest corner of room E. These are the finest pieces of turquoise mosaic which have yet been found in the United States and are on display in the museum at Casa Grande National

NORTHEAST BUILDING - COMPOUND A CASA GRANDE NATIONAL MONUMENT

Room H---Peculiar roof construction of matted juniper bark. Extended over firepit

Room K---Trade ware (Jeddite Black on Yellow) 18" under floor. No conus shells



ARCHAEOLOGICAL NOTE (CONT.)

Monument. It appeared to us that it had been buried under the floor for safe-keeping during the habitation of the present house and for this reason we believe it belongs to the late period of Compound A.

The numerous small shells seemingly scattered purposely under the floors not only here but in many other rooms at Casa Grande give rise to the question of whether or not there may have been some ceremonial idea connected with their burial under the floor at the time the house was built. It is not unusual to find shells under the footing of the posts which supported the main beam in the roof. Might there not have been some idea that by offering these shells, which came from the home of the water God, from the great water to the southwest, where, as far as they knew, all the water in the world was stored, they could gain the good will of the water God and be assured of plenty of water for their crops as long as they lived in this properly dedicated house?

"THRONE" ROOM IN "CLAN HOUSE"

The plan here shown is that of the large room in the "Clan House" at Casa Grande National Monument. This is the room which has the so-called "throne" in it, shown here by the hatched portion of the wall a little to the right and below the center of the room.

In repairing the walls of this room in 1926 or 1927 we ran trenches beneath the floor along the footing of the walls in order to bring a cement coat up from a foot or more underground to prevent ground sapping by capillary attraction.

In running these trenches we found the footings of walls underneath the floor of the room and discovered that the so-called "throne" is a portion of one of these older walls which was left sticking up through the floor.

The wall to the south of the "throne" is abutted against the south wall of the room, showing that it was built after the south wall and it now stands about five feet above the floor.

There seems to have been a double reconstruction, for these foundations under the floor would fall into at least two periods. After the last reconstruction the "throne" and the piece of wall to the south of it were left standing while the remainder of the walls were torn down to or below the floor level. What purpose these two stub walls served has never been determined.---FP

MORE ABOUT PEYOTE

(Ed Note: In a recent letter to Custodian Tom Charles, Director Fred Gibson of the Boyce Thompson Southwestern Arboretum comments thus:)

"Unless we become too much involved, more elucidation of Peyote seems to be needed at the present time. There is apparent confusion about the use of the name "Mescal Button" which means only the dried portions of the cacti cited in the list that I made and has no relation to the Mescal plant, which is any of several kinds of *Agave* species or Century plants, not in the least related to cacti.

"As for the Texas town called Peyote and Mr. Sitton's explanation of its origin, which undoubtedly refers to the shrub or in some cases a small tree, *Sophora secundiflora*, common names "Coral bean" and "Frijolillo." This plant bears coral-red beans that are very poisonous. The story goes that if one eats a quarter of one bean that he becomes very intoxicated, a half bean makes him crazy and a whole bean is sure death. I find no reference to it being called Peyote. Some of the cacti with that name do grow near there and it is likely that the town takes its name from that source, rather than from the shrub.

"I would like very much to get some seeds of the White Sage for planting here in our gardens, if not too much trouble for you to collect and mail. A very small quantity is all that is needed.

It looks like the Peyote business has picked up and maybe some of us will be convinced before it is over, so let's have it...."

BIRD BANDING

A total of 201 new birds were banded at Southwestern Monument stations during March.

Casa Grande, finishing up its heavy banding season, carried the main burden, banding 164. Operators at this station were aided immensely by John E. East, who made a specialty of Gambel Sparrows, and started a specific study project of that interesting little winter visitant. Approximately 55 Gambel Quail now carry colored bands as well as numbered ones, and we hope to make some interesting observations in the future.

Particularly heartening was the beginning of banding at Wupatki and Tumacacori, both potentially important stations.

Walnut Canyon and Bandelier were hampered by weather conditions which have made trapping difficult.

SOUTHWESTERN BIRD BANDING TOTALS

Species	Bandelier	Casa Grande	Chaco	Navajo	Time Spr.	Tumacacori	Walnut	Wupetki	Total
Bluebird, Ch-b.									
Bluebird, Ch-b.							215		215
Cardinal, Ariz.		1				1			2
Crossbill, Bend.							17		17
Chickadee, Mtn.				6			3		9
Creepers, R.M.	2								2
Dove, W. Mour.		2	3						11
Dove, Inca			2						2
Finch, House		129							129
Flicker, Red-sh	1								1
Flicker, Ariz.		2							2
Goldfinch, Gr-bkd							2		2
Jay, Long-crstd	2								2
Jay, Woodhouse	3			6					9
Junco, Gre-hded	49	2		8					59
Junco, Montana				3					3
Junco, Pak-side	7								7
Junco, Red-bkd	9			2			38		49
Junco, Shufeldt	7			13			10		30
Mockingbird, W.		2							2
Nuthatch, Pyg.	21						25		46
Nuthatch, R.M.	2						6		8
Owl, W. Horned		1							1
Phoebe, Say		18	1						19
Quail, Gambel		22	36						58
Roadrunner		3	1						4
Sage Robin, Western							7		7

Species	Bandelier	CasaGrande	Chaco	Navajo	Pipe Spr.	Panacocori	Walnut	Wupatki	Total
Spicker, R-nape							4		4
Spicker, Rocky M.							2		2
Chrike, White-r.		2							2
Siskin, Pine									
Solitaires, Town.							9	15	22
Sparrow, Gambel		274							274
Sparrow, Lincoln									
Sparrow, W. vesper									
Sparrow, Wh.-cr.				6					6
Swallow, Ho-wing.		3							3
Thrasher, Bend.		4							4
Thrasher, Criss.		7							7
Thrasher, Sage								2	2
Titmouse, Grey							1		1
Towhee, Canyon									
Towhee, Or-tail		2							2
Towhee, Spurred	1								1
Waxwing, Cedar								1	1
Woodpeckr, Gila		7							7
Wren, RM hairy	1								1
Wren, Mourus							9		9
Wren, Cactus		34				1			35
*---new species to this listing									
GR-TOTAL	105	2	513	184	0	0	347	0	1053
TOTAL	107	697	0	0	50	0	347	15	1229

RUMINATIONS

Chief, I wasn't far wrong when I told you back there in Washington that I had better get back on the job or the boys would find out how useless I was. Everything was well greased and running smoothly when I arrived at headquarters and started to making a hand again with the work. All the accumulation that four weeks put on my desk was the yellows and a very few pieces of special mail. From which I take it I am getting to be a big executive since I can persuade some one else to do most all the work.

Blessings on Charlie Brill's head for making us introduce that system of filing yellow copies consecutively! A man can come in from the field after a week or two weeks or, as in this case, a month away from his desk and all he has to do is to read a thousand yellows and he knows what went through the office while he was away. And that is only one of the blessings Charlie Brill left with us too.

This thing of finding out that the Southwestern Monuments didn't all evaporate while I was out of the district has shown me the possibilities of taking a vacation this summer or next fall. The last vacation I took lasted about ten days and then Mr. Albright wired that he was coming into my district and I had to hurry home and try to convince him that we were needing twice as many men and twice as much money as we were getting. We were fairly successful in proving our point too, but that is another story.

You have, I hope, noticed this ruckus which has started among us as to whether or not a man should have a day off every week. It looks like we are progressing or at least changing our viewpoint from the old days when there wasn't any argument about it; we just didn't have the day off. As you know, Al Bicknell is wintering with us down here and he and I occasionally tell a few lies about the old times as old-timers will in order to keep the fires of argument burning, as it were. Al is an old hand around the Yellowstone and it is great to hear him tell of all the joys of winter patrol; he does it so well that I had much rather hear him tell it than go up there and experience it myself. By the way, as soon as Al gets through building a few more craters up there in the Craters of the Moon National Monument he is going to move down here and join our crew.

We thought we were going to get results from all this crying in the wilderness about studying visitors. Carl had some funds we thought we could use for putting a real psychologist among our monuments and spend six months trying to find out what a visitor thinks and why. We built several large air castles, refused to consider half a dozen willing but ignorant youngsters and had just won our way through to one of the few men in the United States who knows much about museum visitors and were dealing for one of his right hand men to take on our problems when word came out of your office that we couldn't hire a psychologist with those funds, and so our brilliant bubble broke.

REMUNERATIONS (CONT.)

So, as you will note in the Supplement, we are going on guessing the best we know how that the visitor is going to think when he gets into the Montezuma Castle museum and have worked out a basic study of the case set-up there. It looks pretty good to our boys, but of course this is only the primary stage and it is going to have to run the gantlet in the offices of Carl and Annel and go through many amendments and improvements before it reaches the final stages.

I still think, however, that while we are studying the reactions of bugs and birds and beasts and flowers, it would be good business to put a couple of experts on the study of mind or reactions. After all a visitor ought to grade as high as a B and if it is a matter of aiding the scientist who has been hit by the Depression, I guess the psychologists are about as depressed as the scientists in these various other fields.

A word of thanks is due Mr. John East who not only collaborated on gathering the material and writing the article on the Hohokam pottery figures in this Supplement, but who furnished the plates to illustrate it. Mr. East is one of our Honorary Research Students Without Pay who comes out from the East each winter and stays with Mr. and Mrs. Smith, over at the Vah-ki Inn, for a couple of months while he works hard at some of the problems which worry us and appeal to him. He has gone back home now, but we are looking forward to having him with us again next fall.

Unfortunately, in the rush of the last two months, we have been unable to find time to get out a Broadcast, but we are hoping to find time for one in April before all this gossip of the District which we have picked up as we went hither and yon gets too old.

Cordially,

The Boss