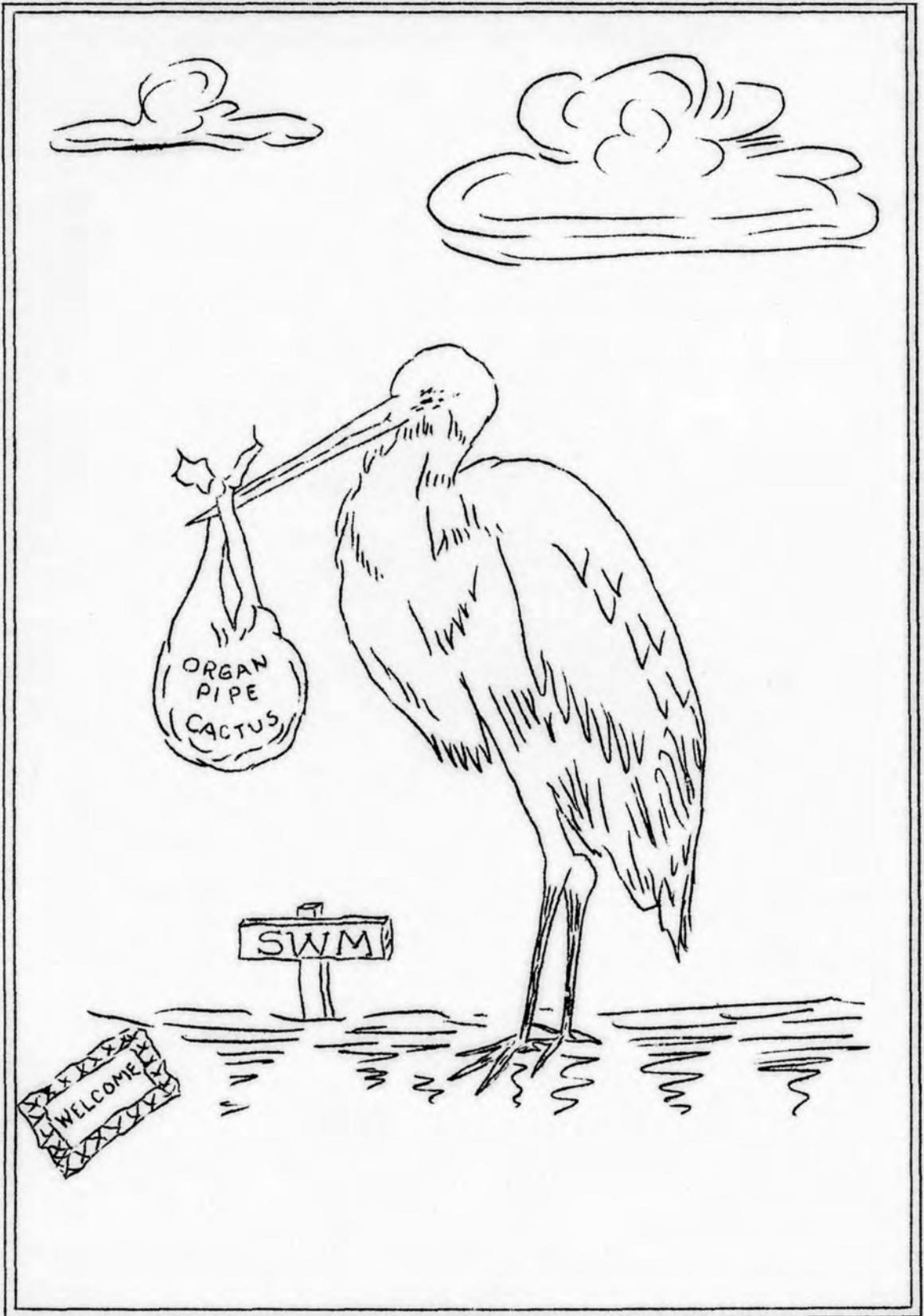


SOUTHWESTERN MONUMENTS MONTHLY REPORT

APRIL 1937



DEPARTMENT OF THE INTERIOR
NATIONAL PARK
SERVICE



SOUTHWESTERN MONUMENTS

APRIL 1937, REPORT

INDEX

CONDENSED GENERAL REPORT

Travel -----	221	New Construction, etc.-----	223
General Weather Conditions -	221	Other Agencies -----	223
Administration -----	222	Activities in Archeology ----	223
Maintenance -----	222	Miscellaneous -----	224

REPORTS FROM THE MEN IN THE FIELD

Aztec -----	249	Gran Quivira -----	242
Bandelier -----	245	Montezuma Castle -----	233
Bandelier ECW -----	247	Natural Bridges -----	167
Canyon de Chelly -----	225	Pipe Spring -----	252
Casa Grande -----	240	Saguaro -----	226
Capulin Mountain -----	255	Tonto -----	261
Chaco Canyon -----	250	Tumacacori -----	242
Chiricahua -----	227	Walnut Canyon -----	251
Chiricahua ECW -----	228	White Sands -----	238
El Morro -----	228	Wupatki -----	248

HEADQUARTERS STUFF

Branch of Education -----	256
Bird Banding Activities -----	256
Visitor Statistics -----	257

THE SUPPLEMENT

The Vikita Ceremony of the Papago, By Julian Hayden and Charlie R. Steen, with Life Sketches by Isabelle Pendleton -----	263
--	-----

SOUTHWESTERN MONUMENTS

PERSONNEL

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

FIELD STATIONS

1. Arches - Moab, Utah. J. M. Turnbow, Custodian.
 2. Aztec Ruins - Aztec, New Mexico. Thomas C. Miller, Custodian.
 3. Bandelier - Santa Fe, New Mexico. Clinton G. Harkins, Custodian; Jerome W. Hendron, Guide.
 4. Canyon de Chelly - Chin Lee, Arizona. Johnwill Faris, Custodian.
 5. Capulin Mountain - Capulin, New Mexico. Homer J. Farr, Custodian.
 6. Casa Grande - Coolidge, Arizona. Albert T. Bicknell, Custodian; J. Donald Erskine, Ranger
J. W. Brewer, Jr., Guide
 7. Chaco Canyon - Chaco Canyon, New Mexico. L. T. McKinney, Custodian.
 8. Chiricahua - Willcox, Arizona. Frank L. Fish, Custodian; Homer Bennett and Bronson Harris, CCC guides.
 9. El Morro - Ramah, New Mexico. Robert R. Budlong, Custodian.
 10. Gila Cliff Dwellings - Cliff, New Mexico. No Custodian.
 11. Gran Quivira - Gran Quivira, New Mexico. Geo. L. Boundey, Custodian.
 12. Hovenweep - Cortez, Colorado. No Custodian.
 13. Montezuma Castle - Camp Verde, Arizona. Earl Jackson, Custodian; Russell Farmer, 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. Saguaro - Tucson, Arizona. Paul Beaubien, Park Ranger.
 19. Sunset Crater - Flagstaff, Arizona. No Custodian.
 20. Tonto - Roosevelt, Arizona. Thomas B. Onstott, Park Ranger.
 21. Tumacacori - Box 2225, Tucson, Arizona. Louis R. Gaywood, Custodian; James Felton, Park Ranger.
 22. Walnut Canyon - Flagstaff, Arizona. Winston H. Carrington, Ranger.
 23. White Sands - Alamogordo, New Mexico. Tom Charles, Custodian.
 24. Wupatki - Flagstaff, Arizona. Milton Wetherill, In Charge.
 25. Yucca House - Cortez, Colorado. No Custodian.
 26. Organ Pipe Cactus - Ajo, Arizona. No Custodian.
-

CONDENSED REPORT

IN WHICH IS GIVEN THE HIGHLIGHTS OF THE MONTH

Coolidge, Arizona
May 1, 1937.

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

Dear Mr. Director:

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

TRAVEL

	<u>April, 1937</u>	<u>April, 1936</u>	<u>April, 1935</u>
Aztec Ruins	1,102	701	554
Bandelier	667	742	643
Canyon de Chelly	4	22	101
Capulin Mountain	1,000	600	500
Casa Grande	3,627	3,436	3,766
Chaco Canyon	803	781	742
Chiricahua	1,087	550	---
El Morro	114	42	---
Gran Quivira	202	229	373
Montezuma Castle	948	1,054	1,350
Pipe Spring	38	96	212
Saguaro	1,302	1,200	1,520
Tonto	840	876	812
Tumacacori	1,808	1,700	1,687
Walnut Canyon	635	647	314
White Sands	8,278	5,709	---
Wupatki	264	146	101
Total Travel	22,719	18,830	12,700

With the advent of warmer days and drier roads travel is picking up throughout the Southwest. Travel to the monuments during April increased by 4,000 over that which was recorded for the same month in 1936. That means that our understaffed monuments (practically all in the Southwest) are going to be swamped with visitors during the coming summer, and that visitors will not receive the attention and information they will need and also that our prehistoric and historic sites will again be exposed to vandalism.

Scattered rains have fallen over most of the southwest during the past few weeks. These have kept the ranges in fairly good shape and have not rendered any roads impassable. High winds, which in some districts carried dust, have been general.

CONDENSED REPORT (CONT.)

000 GENERAL

010 - MATTERS OF UNUSUAL IMPORTANCE

Organ Pipe Cactus - This Monument was created by proclamation on April 16. The area contains more than 330,600 acres on the Mexican boundary, south of Ajo, Arizona.

Tonto - On April 8, the President issued a proclamation which enlarged the area of Tonto National Monument by 480 acres. The new land is located between the old north boundary and the State highway.

100 ADMINISTRATION

123 PARK INSPECTIONS BY PARK SERVICE OFFICERS

Aztec Ruins - W. W. Yeager; Johnwill Faris, Don Watson

Bandelier - W. W. Yeager; Erik Reed; Clinton F. Rose; J. B. Hamilton; J. H. Diehl; Lyle Bennett; Robert Albers; F. L. Anderson.

Canyon de Chelly - J. B. Hamilton

Casa Grande - Charles Smith; Harvey Cornell; W. H. Wirt; Ward Yeager; Dr. W. B. McDougal; Charles A. Richey; Vincent Vandiver; John H. Diehl; Dr. Charles N. Gould; George L. Collins, J. B. Hamilton; R. D. Sias.

Chiricahua - W. W. Wirt; Ward Yeager; Richard Roseberry; Norman Dole;

Gran Quivira - Erik Reed

Montezuma Castle - Vincent Vandiver; Hugh M. Miller; J. H. Tovrea

Natural Bridges - Charlie R. Steen

Pipe Spring - Hugh M. Miller; J. H. Tovrea; Al Kuehl.

Saguaro - J. H. Tovrea; Hugh M. Miller; J. B. Hamilton; H. H. Cornell; Clinton Rose; C. A. Richey; Vincent Vandiver.

Tumacacori - Dr. Charles N. Gould; John H. Diehl; Charlie Steen; Luis Gastellum; W. H. Wirt; Ward Yeager.

White Sands - Louis R. Caywood; Dr. Charles Gould; H. E. Rothrock; V. W. Vandiver; Erik Reed.

Yucca House - Thomas C. Miller.

170 PLANS MAPS SURVEYS

Bandelier - The USGS party making a topographic map of the Monument continued their work during the month. They expect to complete the job about June 1.

Chiricahua - Foresters Roseberry and Dole were type-mapping the Monument during April.

200 MAINTENANCE, IMPROVEMENTS, NEW CONSTRUCTION

210 MAINTENANCE

Capulin Mountain - Maintenance of the road up the Mountain carried on during the month by the custodian.

CONDENSED REPORT (CONT.)

210 MAINTENANCE (Cont.)

Wupatki - Trails maintained throughout the month and some work done on the entrance road.

230 NEW CONSTRUCTION

Bandelier ECW

Storage room of the Hotel Development completed to viga height; vigas placed and graded for roof construction.

Foundations and some wall for the gas and oil house - Hotel Development.

Dining room and kitchen, Hotel Development, walls to lintel height. Three hand-carved tables and chairs completed for permanent Monument furniture; two beds for the dormitory now being assembled.

A very large crew at work in the rock quarry during the month.

Casa Grande - New sewage disposal system completed and put in operation.

Chiricahua ECW

Excavation for Administration Building 60% complete.

Sara Deming-Balanced Rock Trail advanced 800 feet.

100 square yards of bank were sloped on the Bonita Park-Massai Point road.

White Sands - Construction continued on administration area buildings.

300 ACTIVITIES OF OTHER AGENCIES IN THE MONUMENTS

320 COOPERATING GOVERNMENTAL AGENCIES

Casa Grande - Indian Service electricians replaced all overhead wires with underground conduits.

Chaco Canyon - Soil Conservation Service has been working more than 100 Navajos on the flood control problem in Chaco Wash. More than 200,000 trees and shrubs are being planted. Work was scheduled to stop at the end of April only half complete.

700 ACTIVITIES IN ARCHEOLOGY

Aztec Ruins - Seven rooms over which the original ceilings are still in place were protected and made waterproof and several sections of wall were patched.

Chaco Canyon - More than 600 cubic yards of debris have been removed from the back side of Threatening Rock. The material has been spread on the road.

Natural Bridges - Some ruins stabilization was carried on in the newly found ruin in White Canyon. The work will be reported in full in next month's report.

CONDENSED REPORT (CONT.)

MISCELLANEOUS

MAIL COUNT:

Incoming:

Government	1,738
Personal	<u>854</u>

Total incoming 2,592

Outgoing:

Government Only	<u>1,899</u>
-----------------	--------------

Total Mail 4,491

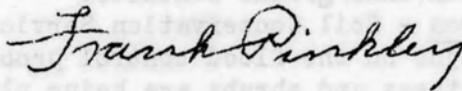
Telegrams:

Incoming	31
Outgoing	<u>26</u>

Total Telegrams 57

GRAND TOTAL PIECES HANDLED 4,548

Cordially,



Frank Pinkley,
Superintendent.

REPORTS FROM MEN IN THE FIELD

CANYON DE CHELLEY

By Johnwill Faris, Custodian

Again there is little to report from De Chelly. We have actually had a visitor, in fact four of them. Only four that were really visitors to the Canyon. Ten individuals were in on official business but not to see the Monument. Of the ten mentioned eight were ECW men who wanted to go over some of the details of the work they contemplate doing. Two were our own Park Service folks, Jim and Mrs. Hamilton.

I am attempting a little change in the handling of visitors and as soon as it has had a fair trial I will present it to your office and you can advise me as to the defects you can uncover. In fact I rather imagine I shall attempt many different types service and shall keep your office informed as to the success I experience with each. It is hard to get used to four to eight hour parties when I have been so used to forty minutes to the party. By the time we can get started here I would have finished at Aztec.

Weather conditions have not been especially inviting to the tourist and while the roads have been passable most of the month, much of the travel has been via Chambers and that means considerable more rough road for the visitor leaving Highway 66. Several wind storms made those days rather disagreeable for travel so it may be that the weather favoring us more we will have more people coming in. Then too the concession has not opened as yet and it is most difficult to secure accommodations.

One official trip to Gallup and a personal trip to Aztec during the month constitute all the travel done by the Custodian. Of course, I have made many trips up the rim and plan to make many more before too many visitors come in. The canyon is running the highest of the year at the present time and travel even with horses is impossible at the time of this writing. I have been unable to make any survey as to any damage that might have occurred to any of our ruins, but I feel confident that the wash so far is not enough to do any more damage than has probably occurred every year for several generations.

Several matters of importance to the Monument were thrashed out while Jim was here and I feel sure several features will benefit as a result. I have hopes of getting you and Hugh Miller up this way but so far have not gotten very far. If Charlie happens up this way you might send him in and I will go over a lot of the educational features with him.

*****00*****

SAGUARO

By Paul Beaubien, Park Ranger

This month 458 visitors have been contacted at the ranger station, and I estimate that 40 more will be seen before May 1. Up to the evening of April 19, 1,302 were met at the Speedway entrance by the CCC boys. These boys leave the gate at 3:30, so miss those who come after the hottest part of the day.

Park Service visitors included J. H. Tovrea, J. B. Hamilton, H. H. Cornell, Clinton F. Rose, C. A. Richey and V. W. Vandiver.

Checking the register from November 1 to April 11, I found that 18% of the visitors registered from Arizona. All are not local people as towns more than 100 miles distant are well represented, and many winter visitors gave their Arizona address. The six leading states, Arizona, Illinois, New York, Michigan, California, and Ohio, produced 59% of the total. More out of state visitors registered from Michigan until the middle of February when Illinois and New York came to the front. California and Ohio were fifth and sixth all winter. 23 states with ten or less representatives were: Maryland, Connecticut, Delaware, South Carolina, Florida, North Dakota, Louisiana, Nevada, West Virginia, Maine, Virginia, Tennessee, Arkansas, Kentucky, Mississippi, Rhode Island, Alabama, Georgia, Vermont, Montana, New Hampshire, North Carolina, and Utah. There were 20 from Washington, D. C.; one from Alaska; 22 from Canada; 8 from Mexico; 7 from England; 3 from Sweden; 2 from France; and 1 each from Russia, Germany and Belgian Congo.

Dr. Forest Shreve of the Desert Laboratory of the Carnegie Institution has recently spent some time at the Monument. He donated some literature toward a library, and made several valuable suggestions in regard to a museum. With his help plus that of Prof. Thornber, University of Arizona, and Mr. H. E. Lee of Rapid City, South Dakota, I have some 60 desert plants accurately identified.

Several saguaros were in bloom April 20, while some hedgehogs were in bloom two weeks earlier. Have noted that the first individuals to bloom last year are the first to bloom this year. The ocatillos have carried red buds for a long time but only a few flowers are out. The desert hackberry, normally evergreen, lost its leaves during the extra cold winter, but the new ones are already grown.

Most of the winter I've kept bread crumbs on the window ledge in order to get close-up pictures of birds. For the last three weeks, Palmer Thrashers have been bringing their young to the window to feed them. The youngsters are nearly the size of the adults and can fly quite gracefully, but they still pipe for their feed like nestlings.

*****OO*****

CHIRICAHUA

By Frank L. Fish, Custodian

Cool nights and pleasant warm days prevailed for the greater part of April. A few days were disagreeable from dust blown by strong westerly winds from the Sulphur Springs and San Simon Valleys. On clear days the view across these valleys is very pretty, especially at this period of the year when spots of green are visible.

Roads approaching the Monument are in fair but dusty condition except for a short stretch that is under construction near Double Adobe on the Bisbee Highway and another stretch near Dos Cabezas on the Willcox Road. Monument roads are in good condition outside of a rough spot where the backsloping crew is working.

A jump in attendance is noticed for the month. Comparative figures for this and last April are: 1937, 1087 people in 256 cars; 1936, 550 people in 150 cars. Thirty states, the District of Columbia, and Mexico were represented this year. A number of groups are finding the Monument of interest and welcomed guided trips. The larger parties were:

Mineralogical Society of Southern California, under the leadership of Edwin V. Van Amringe, instructor in geology, Pasadena Junior College.

Arizona Society of Natural History under the guidance of Fred Winn, Supervisor of the Coronado National Forest. Dr. Stine with the party presented colored moving pictures in the evening of Boulder Dam, Death Valley National Monument, and Zion and Bryce National Parks. A trip from Laredo, Texas, to Mexico City, including a bull fight and fishing at Guaymas on the Gulf of California. These were an interesting set of pictures showed in sequence over a time of three hours.

National Park Service officials for the month were. W. W. Wirt, Ward Yaeger, Richard Roseberry, Norman and Mrs. Dole. Roseberry and Dole are type-mapping the Monument and have aided in classifying many of the trees and plants besides making a good start of a botanical collection for the area.

Ed. Riggs reports one of our interesting balanced rocks in Picket Canyon fell sometime last year. As I never saw the rock when standing he promises a picture for our files. We have a number of delicate balanced rocks that should be protected in the near future; namely, the Mushroom, Totem Pole, and the Tall Balanced Rock.

Herbert Gerdis, Warren, Arizona, drove through the Stop sign at an excessive rate of speed April 11. The custodian made contact with Mr. Gerdis later and requested him to register when leaving. This request was ignored but later he made a special trip from Warren to obey the Monument regulations after receiving a written request.

Burned letter signs are being made for the guidance of visitors and

CHIRICAHUA (CONT.)

are being placed as they are completed.

With the arrival of the new enrollees a general clean-up is being done also. Landscaping of the CCC Camp is progressing. We have cooperated in lending time and giving seedlings necessary for the work. One crew of new men is enlarging the ball diamond located on Lillian Riggs' property close to camp.

Mr. Gibson of the Harnischfeger Corporation installed the power shovel that was recently received at the Monument on crawlers, on the 21st and 22nd.

The old broken down power shovel that was left in the brush near the camp ground by the Bonita Canyon road contractor was removed this month to Globe to be made over into a drag line for working the tailings of a mine.

*****OO*****

CHIRICAHUA ECW

By Wm. Stevenson, Project Superintendent.

Excavation for the basement of the Administration Building is 60% complete. A section of the 4-inch headquarters water line was moved in connection with this project.

Sara Deming-Balanced Rock horse trail advanced 800 feet. The trail is now complete to the Balanced Rock.

In the rock cut sections between Massai Point and Bonita Park 100 square yards of bank were sloped. The materials were used in widening fill sections of the highway. A small crew has been working in the stone quarry preparing rock for the Administration Building.

The tree planting project was discontinued April 1 but the tank truck has been kept busy watering trees.

Projects have been handicapped this month by a shortage of men. An average of only 45 has been available; however, 86 new enrollees are now in camp and will soon be released for work.

*****OO*****

EL MORRO

By Robert R. Budlong, Custodian

The month of April at this National Monument marked the beginning of our visitor season. The month has gone with the wind, and it is hard to realize that thirty days have passed since writing the last report. There is so much to report this month that this may be somewhat long.

EL MORRO (CONT.)

Weather

Spring weather; beautiful days, cool nights, a few snow flurries. The land is rapidly growing green, farmers have plowed their fields, and a few early wild flowers are in bloom in the Monument. Snow remains on the ground in sheltered spots, as it has done for seven months to date, lacking six days.

Roads

Visitors invariably comment upon the roads when first they arrive at the cabin. I am afraid I cannot repeat their remarks in this report. I would suggest that you drive over said roads, and voice your opinion of them when you reach here -- your sentiments will be those of our visitors. Visitors are frequently appalled at their own language used when describing the roads, and often feel called upon to remark, later, that they are ordinarily not profane by nature, but that the searing phrases just seemed to come to mind without effort.

Travel

One hundred fourteen persons visited this Monument during the month. I am not including local persons who visited us, but only those who came to see the Rock. During the first part of the month the Custodian was busy taking one of those trips so beautifully described by Tom Charles month before last - the "flu" bug caught me, and I was more or less distantly removed from everything for some time. As a result, I missed guiding several parties, but the HCWP rose to the occasion in her usual inimitable style, and did the honors nobly. Two parties of school children from Ramah picknicked at the rock. The guided trips numbered 20; total time, 2375 minutes; average length of guided trips, 118.75 minutes. We had two parties of campers, staying overnight.

Jim and Mrs. Hamilton paid us a welcome visit on the 17th, and, as usual, left too soon. If we could get that house this year, Boss, we'd be able to put these folks up overnight, and thus enjoy their company for a longer period of time. We also were much pleased to be visited by Mr. and Mrs. Imhof, of Taos, and by Mr. O. C. Haven, s formerly with Gila Pueblo. A couple of high spots of the month were the visits paid by Mr. E. Z. Vogt and by E. Z. Vogt, Jr. We hope they'll return soon and often.

Roads and Trails

Several disused roads in the Monument area have been closed during the month by placing posts in the ground to bar visitors from the roads. These were old roads, used in past years, and now no longer useful. Jim Hamilton inspected the trail, the steps, and the bridge I mentioned last month as being unsafe. He agreed, and I have placed guard rails along the bridge, using 4 by 12 by 16' planks, spiked in place, to keep traffic

EL MORRO (CONT.)

to an area supported by three solid stringers -- the fourth is loose. Quotations have been solicited from local people for the building of a retaining wall for the earth supporting the stringers, and it is expected that this wall will be constructed during the coming month. The steps on the south side of the trail must be replaced by concrete ones, as reported last month, but remainder of the trail is in good shape, and considerable clean-up work has been done to put it in proper condition for visitor travel. The trail to the inscriptions on the north side of the rock was forming a gully several feet deep in places. This gully was filled, and a flight of temporary stone stairs constructed during the month.

Transportation

The new truck has arrived. I managed to obtain a ride to town in time to mail my last monthly report from Gallup, and get the new truck the same day. I went in in a snowstorm, and returned with the truck and a beautiful case of "flu" which laid me up for about two and a half weeks immediately thereafter. One eardrum abscessed and went the way of all flesh during the process, contributing to the gaiety of nations, but ye custodian has now entirely regained his hearing after being somewhat deaf for a few weeks. Being a married man, this inability to hear anything wasn't such a handicap, at that.

Quarters

We're somewhat crowded, Boss. During the month we have been visited by most interesting and interested people, many of whom wished to spend considerable time discussing numerous matters. We invited them into the shack, but since it is hardly large enough for the two of us, I usually had to go outside and talk through a window to those inside. Is there any chance of getting something more resembling a house in the near future? We need it.

Research

During the past winter much work was done along lines of research. I am indebted to Mr. E. Z. Vogt, Sr., to E. Z. Vogt, Jr., and to the Franciscan Fathers for the contributing of many volumes now out of print, which volumes have supplied me with much material on which I have worked during the past winter. However, now that the visitor season has commenced, all research work has had to stop, and there will be no time for it until the coming winter. I have been promised much material, both books and manuscripts, and see where I shall have my hands more than full during the entire winter. I wish to acknowledge, also, Mr. Vogt's kindness in loaning me Lieutenant Simpson's report of 1849, which report I have copied in its entirety for the official files. It makes a volume of 130 single-spaced typewritten pages. The remainder of the material worked up during the past winter is mostly in the form of shorthand,

EL MORRO (CONT.)

longhand, and typewritten notes, but it will be impossible to compile this in the desired form until the visitors stop coming. While this report is already much too long, I would like to describe, briefly, what we are attempting to do:

It is desired to place in the official files of this National Monument all available material relative to the Rock, the inscriptions, the expeditions that passed by here, members of which carved their names upon the rock, etc. The object of this is simple: I wish to prove the value of making available to future custodians and rangers here, authentic material relative to the rock, inscriptions, etc. That is to say, instead of new men having to rely upon the memory of their predecessor for their information relative to the Rock, they will be able to go to the official files, and find their source material there. When one relies upon his predecessor's memory for his facts, the chance of errors being carried on and on is too great to make this system wise to use. I intend to devise a filing system that will be complete, and one that will enable a new man to gain, with a few hours' study, facts upon which he can base his talks, with much detailed information also in the files for his further study at a later date. This means a tremendous amount of work -- but again we can't do it during the summer. It is work for the winter.

Photography:

For three and a half years this custodian has been trying to "put across" his idea of the value of photographs in the education of the public -- visual education. At de Chelly I was so busy I had very little time to make much progress in this work; also I had no electricity at the house, though I did rent it from the local Mission, and managed to make a hundred or two enlargements from negatives I had made. And now here I am, with no running water, and no electricity, but with nine cameras, a battery of fifteen lenses, three enlargers, and several gross of film, and foaming at the mouth because while I can make my negatives, I can't make enlargements of them. I usually make my prints 11 x 14 inches, on 16 x 20-inch mounts. What I wish to do here is to be able to show to visitors photographs of things in which they are interested. One good photograph is worth several hundred words of description. Photography is merely a hobby of mine, and I have been doing all my own work in it for nearly 24 years. This work is done at my own expense, but I wish to use the prints to contribute to the interest of visitors. Do you have a one-lung 350-watt, 110-volt A.C. generator lying around loose? If so, I can use it. For example, people inquire relative to the lava beds to the east. I would like to be able to draw from my files a number of 16 x 20 prints showing the lava beds, typical formations, etc. I am also using three-dimensional photographs to better illustrate deep canyons, high mountains, etc. I intend to make a number of three-dimensional photographs in direct natural color during the coming month of cactus blossoms, to show to visitors who will arrive

EL MORRO (CONT.)

too late to see the cacti in bloom. I have an improved method of making anaglyphs for screen projection, and while this necessitates a viewing device, it has been proven to be a superior method of showing visitors such things as scenes in Canyon de Chelly, etc. During the coming month the HCWP will act as Ranger Without Pay once a week, while I dash off to the lava beds and nearby vicinity to obtain the desired photographs. I wish, also, to obtain photographs of the "Seven Cities of Cibola" (which seem to number only six) in their present condition, photographs of nearby points of interest, etc. Dusty shelves of pottery and artifacts have their place in visitor education, but long labels and descriptive text will not catch and hold the interest of the average visitor. Give me electricity, and a place to work, and I'll show you something that will make your visitors sit up and take notice.

During the month 64 negatives were developed, but no prints made, since much of the work was with a miniature camera, and contact prints are too small. Eighteen sets of stereoscopic negatives were made. The more interested visitor finds three-dimensional photographs vastly superior to straight prints, and it is intended to use this method of photography for portraying many of the principal points of interest in the nearby vicinity. While I can make prints by gasoline lantern (contact prints), I wish to use transparencies for my stereoscopic pictures, and for that we'll need electricity. Ye custodian sits up until the wee, small hours of three and four and five a.m., working of nights, and we can use that electricity to furnish adequate light to minimize eye-strain when doing this research work during the coming winter. A gasoline lantern is a miserable thing when much work of this nature is to be done. I'll make the prints at my own expense until I can prove that the use of photographs in visitor education is a coming thing. I hereby go on record as requesting a portable, single-cylinder, 110-volt, 35--500-watt A.C. generator for use in the field. Do we get that generator? I'll furnish the gasoline to run it. And do you have a spare lantern-slide projector lying around, unused? I'll make the slides.

General:

Generally speaking, this is much too long as a report. There is more to mention, but I have taken up too much space in this consolidated monthly report as it is, so will leave the rest until next month. It will be a busy one. By the way -- can we get a summer ranger here this year? We're going to need one.

Note: I might explain that Bud is no kodak snapper but turns out stuff fit to hang on the line. The hundred or two enlargements he speaks of making at de Chelly were made with his own materials and represent a too great investment for him to donate to the Monument.

EL MORRO (CONT).

(2) His ideas sound mighty interesting as he expounds this usual education and he has us sold to the point where we plan to throw in with him for some experiments.

(3) We do happen to be able to put our hand on a one cylinder, two kilowatt, 110-volt plant in usable condition, though it is D.C. instead of A.C. We plan to get this over to Bud and then furnish government materials so he can make up a duplicate set of his Canyon de Chelly and El Morro enlargements, lantern slides and negatives for filing for government use at the Monuments. -- F.P.

*****00*****

MONTEZUMA CASTLE

By Earl Jackson, Custodian

STATISTICAL:

<u>Visitors</u> -----	948; April, 1936, 1054.
Arizona visitors -----	568 % of total, 59.9.
California visitors -----	164
New York visitors -----	31
States represented -----	35
Foreign countries -----	7

Conveyance

Cars -----	288
Arizona cars -----	152

Contacts - all visitors contacted and registered.

Trips -----	174
Attendance -----	607
Those who climbed ladders -----	438 or 72.1%
Average trip time -----	34.9 minutes
Museum lectures -----	157
Attendance -----	528
Average museum time -----	.17. minutes.

Weather

Days cloudy -----	3
Days partly cloudy -----	6
Rain -----	March 28, April 3.

VISITORS

Travel is again lower than last year for this month. We are unable to account for this. It may be remarked, however, that until the last week or so a surprising number of people coming in from Flagstaff have told me they made the trip despite warnings of bad roads into the Verde Valley. This leads to the conclusion that many people decided not to

MONTEZUMA CASTLE (CONT.)

come to the Castle on that account.

The reports of bad roads evidently got out as the result of the January snows. The snows blocked the Mormon Lake road into the valley, and made the Oak Creek canyon road bad for a short while. But, save for a few days in January, the latter road has been in good condition.

Knowing that the Flagstaff people would not deliberately steer people away from the Verde Valley and the Castle, but feeling that warnings against the use of the Lakes Road had perhaps conveyed the impression that both roads leading here were bad, the custodian wrote the Flagstaff Chamber of Commerce to that effect, asking that members be advised to give more specific road information. Whether action was taken or not, we have not been informed, but have had no more mention of bad road reports.

WEATHER AND ROADS

Weather has, on the whole, been quite agreeable. The late spring season has at last arrived. Incoming roads are somewhat corrugated, but in rather good condition. Very few visitors come in over the Apache Trail, and practically none via the Black Canyon Road. We learn that recently contracts were let for construction of some bridges on the Apache Trail, so are hopeful that road will be made into a better all-weather route.

SPECIAL VISITORS

Park Service

March 24 - Vincent Vandiver, Regional Geologist, ECW, was in for a few hours on work preliminary to a geological report on the region.

April 17 - Hugh Miller, Assistant Superintendent, and J. H. Tovrea, Assistant Engineer, were in for about three hours, on general inspection and to check over damage to the revetment wall and needed erosion control on the residence area.

Other Visitors

March 31 - Frank Turner, Project Superintendent, Survey of Federal Archives, was in to check over my office, which is located in the corner of the living room, and the filing case, which consists of a paper packing box.

Dr. and Mrs. V. H. Haas, U. S. Public Health Service, San Francisco, were very interested visitors.

April 7 - J. W. Ingram, C. J. Wildenoor, and S. A. Berryman, all of the British Dominion Government in South Africa, were very interested visitors.

MONTEZUMA CASTLE (CONT.)

April 9 - 15 members of Frank Burke's shows paid a visit to the Castle.

April 10 - 10 grammar school children from Bridgeport visited the Castle and picnicked, under supervision of their teach, Nona Scudder.

Dr. Ira B. Bartle, of San Luis Obispo, California, was in to take borings in the Castle walls for bacteria study. Dr. Bartle will be recalled for his exceedingly interesting research on bacteria in Tumacacori Mission walls.

April 11 - Dr. M. A. Nicholson and family of Duluth, Minnesota, were interested visitors. Dr. Nicholson is with the Duluth Clinic.

April 13 - Dr. T. C. McCleave, of Berkeley, spent several hours with us. He visited Yosemite National Park in 1889, and knows more about the Park Service than most of its employees of recent years.

Mrs. Charles Harley was an interested visitor. She is from Harley Farm, Annapolis, Maryland, and was an ardent booster for Bandelier when this custodian was stationed there.

April 14 - Mr. and Mrs. Fred G. Steenberg, of Fond du lac, Wisconsin, were visitors. Mr. Steenberg explored Montezuma Castle in 1894, and showed us some photographs he took at that time. Since they are the oldest photographs of the Castle we know of, we persuaded him to agree to send us prints when he returns to his home.

April 17 - 26 guests of the Rimrock Ranch paid the Monument a visit and farewell picnic for this season.

NATURE NOTES

There is more green growth on the Monument this spring than has been seen in many years, thanks to the wet weather in January. Although spring was delayed, it came with a rush when it finally got here.

The frogs have all abandoned winter quarters, and since the creek cleared up, they have enlivened all our evenings of late with their songs. The toads appeared about a week ago. A number of garter snakes, commonly called water snakes here, have been seen. Rattlesnakes are out, but haven't been seen at the Castle yet. We recently got a Venex snake-bite kit from Headquarters, just in case, and believe it is the best looking kit we have seen.

For birds, see appended report, Birds at Montezuma Castle, by Mrs. Jackson.

MONTEZUMA CASTLE (CONT.)

GENERAL

While nothing of very exciting nature has transpired this month, we have kept busy and out of mischief, and are well pleased with April.

We hear good assurance that the Arizona Power Company will put in electricity to the ranches on upper Beaver Creek. Their line will pass close to the Monument, and we are hopeful of tying into it.

We learn that the Yavapai County Chamber of Commerce is seeking to negotiate road improvements into Montezuma Castle vicinity. If plans work out, we should have an oiled road, and some of the bad curves on Beaver Creek eliminated. These plans are, of course, still quite tentative.

Following the visit of Dr. Bartle, Ranger Farmer did an interesting bit of analyzing himself. His report "The Plaster of Room 12 and 13 of Montezuma Castle" is appended to this report. It might be mentioned that the room numbers he used are from the structural study made by Dr. Edgar A. Mearns in 1886, reported in Popular Science Monthly, Volume XXXVII.

THE PLASTER OF ROOM 12 and 13 OF MONTEZUMA CASTLE

By Russell Farmer

The appearance of the plaster collected with the spatulate boring tool of Dr. Bartle as he took samples to examine for bacteria, led the writer to attempt a crude analysis of the material to determine its calcium carbonate content.

Chemical apparatus consisted of two tumblers; the available reagents were nitric acid and sodium bicarbonate; and the guides to procedure were vague memories of college laboratory technique, and a clear conscience. With this somewhat crude equipment, results were only approximate but interesting.

By dissolving and reprecipitating the calcium carbonate, I found that it made up about one half of the sample by volume. The insoluble residue consisted of fine quartz sand for the greater part, with considerable red clay and some carbonaceous matter. The latter seemed to be soot which everywhere covers the walls.

The results of this experiment and the appearance of the fresh plaster exposed by vandals indicate that the builders of these rooms did not use the red mud of the creek bottom, which is mostly clay and quartz sand; but that they knew the value of lime as a plaster material and utilized it. The exposed plaster in Room 13 seems to be made up of small pieces of limestone cemented with lime. Perhaps the strength of the Castle

MONTEZUMA CASTLE (CONT.)

walls is due to the interlocking of calcite crystals formed by pressure and other agents operating these hundreds of years.

BIRDS AT MONTEZUMA CASTLE - April 24, 1937.

By Betty Jackson

Only one bird was banded this month, and there was one return. They were both female Gambel Quail.

On March 25 the first Canyon Towhee appeared.

On April 3, and for about a week thereafter, we had about a dozen Pale Goldfinches visiting with our House Finches, picking around under the bushes for seeds.

Though the following three birds were not seen on the Monument, they were close by. On April 6 we saw a Painted Redstart up Beaver Creek, and on the seventh a White Rumped Shrike just off the Monument. These have been around Camp Verde for nearly two months, but only came up here recently. On the 21st a Mockingbird was flying just west of the boundary. I think I've seen one near the Farmers' tent, but never got near enough to make sure.

A pair of Arizona Hooded Orioles arrived April 13, and are acting as if they were nesting, but I haven't located the nest as yet.

The Say Phoebes had their nest all finished by April 16, and their eggs laid then or soon afterwards. They simply remodelled the old nest above our front door. There were three eggs in it on the 19th, and none have been added since. I am interested to note that the male and female take turns sitting on the eggs.

The House Finches are nesting too. One pair has a nest on one of the beams supporting the roof of the other Jackson house. There are five white eggs in it now, and I think they have been there about a week.

A Broad-Tailed Humming-Bird and wife are building their nest in a branch of a Sycamore, about twenty feet from the gasoline pump. It is about ten feet from the ground, but standing on the road your eyes are on a level with it, and you can see the birds stuffing the cracks with something that looks like Cottonwood down. The outside is completely plastered with mud and bark and lichen, and looks just like the Sycamore bark. The lining ought to be finished in about three more days.

A pair of Vermillion Flycatchers are nesting somewhere by the creek, but I don't know where.

On the 21st Russell Farmer saw a Fish-Hawk dive into the creek and

MONTEZUMA CASTLE (CONT.)

bring up a big fish, about as long as he was. I wish I could do that.

Norman identified a Western Tanager on the 22nd. We still have all the birds that have been mentioned in previous reports, except the Juncos and Gambel Sparrows which left the first week of April.

To complete the report, a pair of Arkansas Kingbirds came this morning. One of them got a caterpillar on our lawn, and, after tossing it in the air to get it started the right way of the grain, gulped it down whole.

*****OO*****

WHITE SANDS

By Tom Charles, Custodian

This has been a very successful month from the attendance standpoint. We have had 11 $\frac{1}{2}$ % increase in the registration over last month and 45% increase over attendance for the same period last year.

We started the month with an extremely unfavorable Easter. It was one of the worst days I have ever experienced at the White Sands but despite that fact 49 cars were present at the sunrise service and 205 cars were at the Turn-Around before 4 P.M. that day. Eighteen of these were trucks or busses which carried an average of 20 people. When Barry counted the cars last year it showed that over the 6 months period there were half as many cars that stopped along the 10 mile front as drove to the Heart of the Sands. On that basis we had 1942 visitors on Easter day. Fifty boys came from the CCC camp at Elephant Butte, 130 miles away; 42 more came from a camp in Las Cruces; one school bus came from Ancho a little town 100 miles above Alamogordo. I am sorry to report that I do not believe a single one of them could possibly have enjoyed the Sands that day but many of them stayed for several hours.

The last two weeks have been one wild whirl of parties. Scarcely a night but one to four or five parties are given at the Heart of the Sands. Some of these come from as far as El Paso on the south or Carrizozo or Ruidoso on the north. Probably the outstanding party of the month was one given by the Austin High School of El Paso, on April 9, when 175 pupils, teachers and parents came up in 29 cars and busses, cooked their wienies on the three makeshift fireplaces, improvised their own surf boards out of spare auto tires and really had a good time. Just a day or two before this party 50 of the Girl Reserves of El Paso came up for an afternoon and evening. But probably the most esthetic group was the A Capella Choir of 12 voices from the State Normal School at Las Vegas, New Mexico. It was indeed an inspiring event to hear those trained voices singing on the Sands just as the sun sank over the San Andres and the dark shadows crept across the snow-white dunes.

Our registration this month shows 1159, with 39 states and 5 foreign

WHITE SANDS (CONT.)

countries represented. On the basis of 14% registration this gives us 8278 visitors for the month.

Saturday the 24th will be our third annual playday. Looks like the crowd will be bigger than ever before. The principal of a little four-room school at Claunch, New Mexico, up near Albuquerque, wrote to ask if they may bring 25 children down for the day; Dr. McKee, president of the State Normal School at Portales, 250 miles away, wrote that he is sending several cars down; Cloudcroft will have 120 present, Weed 60; the Lincoln National Forest is furnishing 7 trucks to haul children who have no other way to go; the Taylor grazing camp at Tularosa will furnish 5 trucks; Mr. Happer and the town will haul the drinking water, the Chamber of Commerce will give free lemonade to the children for a couple of hours at least. The local school band of 92 pieces will furnish the music, the Mescalero Boy Scouts will dance around the camp fire in the early evening and the school children and the grown-ups from three counties will gather in the crystal bowl and sing familiar songs under the full moon, accompanied by picked instruments from the band and under the leadership of Jerry McGuire, the band master. Looks like it will be a real show, Boss; you better come over and see how we are going to handle the howling demand for shade.

Our register shows some distinguished visitors in the past month; there is L. R. Caywood and wife; Dr. Chas. Gould, H. E. Rothrock and wife; V. W. Vandiver, and Eric Reed of the Park Service; Mrs. Mary Campbell of New Jersey, a world traveler, who represents the organization, The Seeing Eye, which trains dogs to lead the blind; then there were J. H. MacPherson and wife, and a friend from Bushkill, Pike County, Pennsylvania, all artists and here because they saw five sketches of the Whites Sands at Tucson recently; these pictures were made by the internationally known artist, Elliott O'Hara of Philadelphia and are said to be very beautiful. Then there was F. L. Britton, one of the editors of Popular Mechanics, Chicago. Mr. Brummett, a representative of the Hilton Hotel in El Paso; Dean Carroon from the State Normal in Las Vegas; Dr. McKay, president of the State Normal School at Portales, and many others.

This month, also, we received the new text book, Desert Neighbors, edited by Edith M. Patch, Entomologist of the University of Maine, in which she gives the White Sands frequent and quite elaborate mention.

So despite the fact that Ben has had to work a little overtime to keep the road clear of sand and the gnats have taken almost full possession out at the edge of the Monument, this has been a rather rosy month for the Great White Sands.

*****OO*****

CASA GRANDE

By Albert T. Bicknell, Custodian

Weather:

Days Clear -----	21
Days part cloudy -----	7
Days cloudy -----	3
Maximum temperature -----	100 degrees on April 15.
Minimum temperature -----	32 degrees on March 27.
Precipitation -----	Trace on March 25 and 28.

General

Travel is beginning to drop off just a little. The weather for the month has been quite pleasant being perhaps just a little cooler than was expected. As this is being written the air is quite cool and pleasant. Only three or four dust storms were experienced during the month. One on April 22 was considered by those who have lived in this vicinity for some time to be the worst one for many years. The main reason for the excessive dust is the increasing acreage which is being prepared for cotton planting. Though the total visitor count dropped 285 from last month it is still 191 higher than April of 1936. It might be pointed out that one possible reason for the higher count over last year is that we are trying to keep an accurate count on those cars and persons who are not contacted on guided trips. Last year those people were not being counted at all, and yet they are actually Monument visitors inasmuch as they use the roads or the picnic grounds or the comfort station.

Travel this month has come from 42 states, Washington, D. C., Hawaii, Philippine Islands, Scotland, Chile, and Norway. One hundred and twenty-five of our total count consists of those persons attending the Easter Sunrise Service which was held here on Easter Sunday with Rev. Glenn Smiley of the Coolidge Methodist Church officiating.

Use of Monument Facilities by the Public

Total Travel: 1937 ---- 3,627; 1936 ----- 3,436; 1935 ---- 3,766.

Of the 3,627 visitors to the Monument 3,156 were contacted in guided trips through either the Ruins or the Museum. 12,376 minutes were spent guiding 387 parties through the Ruins and 5,494 minutes were spent guiding 283 parties through the Museum.

Newsworthy Visitors

National Park Service visitors were mostly for Headquarters with Superintendent Charles J. Smith of Petrified Forest National Monument the only one to be considered a Monument visitor. Those visiting Headquarters included: Harvey Cornell, Regional Architect; W. H. Wirt, Regional Forester; Ward Yeager, District Forester; Dr. W. B. McDougall,

CASA GRANDE (CONT.)

Regional Wildlife Technician; Charles A. Richey, District Landscape Architect; Vincent Vandiver, District Geologist; John H. Diehl, Regional Engineer; Dr. Chas. Gould, Regional Geologist; George L. Collins, Ass't. Regional Officer, District B; J. B. Hamilton, District Engineer; and Richard D. Sias, Resident Inspector.

Others worthy of mention were: Irvin S. Cobb; G. J. Olsen of the Museum of the American Indian in New York City; Karl P. Schmidt of the Field Museum of Chicago; Emil Haury of Gila Pueblo with the noted authority on the Bronze Age of Europe; Dr. V. Gordon Childe of Edinburgh University, Scotland; and Odd S. Halseth of Pueblo Grande with two distinguished visitors from Norway.

Quite a number of large parties visited the Monument during the month, among them a University of Arizona anthropology class of 56, 40 members of the A Cappella Choir of Arizona State Teachers College at Flagstaff, 20 Pima 4-H Club members from Blackwater, 37 students of the Indian School #18 in Phoenix, 24 students from the McDowell School, and a group of 70 CCC boys from Randolph Park, Tucson.

Improvements

The new sewer system is now in operation and seems to perform efficiently. During the month much work was done in the electrical line. An automatic electric motor was connected with the water pump at the well, and this relieves us of much worry in connection with the operation of the pump as the old gasoline engine used previously was a never-ending source of trouble. It was necessary to replace the electric wires to the Administration Building on account of burned insulation. All overhead wires have been put in conduit during the month.

Nature Notes

On March 27 Mrs. Say Phoebe laid four eggs in the nest referred to last month. The eggs hatched on April 11, and at this writing the young birds being fed by the parents provide much interest and entertainment for the visitors in the Casa Grande.

On April 14 the first rattlesnake of the season was found by the steps leading into the Casa Grande. It was a $3\frac{1}{2}$ -foot Mojave Diamond-back. It was killed and found to have nine rattles. The first Gila Monster of the season was seen on April 18. It was a very fine specimen over 20 inches in length. It, of course, was not molested.

During the month Hedgehog Cacti and a Cholla have burst into bloom, and in the surrounding country the Saguaro Cacti are just beginning to bloom. The Creosote Bush with its bright yellow blossoms and the Mesquite with its fresh green foliage give added color to the desert at this season. Many small flowers have been observed on the Monument, in particular several

varieties of Mallow are in abundance.

*****OO*****

GRAN QUIVIRA

By George L. Boundey, Custodian

Visitors for April, 202.

April has been a month of high winds and sandstorms. The moisture in the ground has allowed the grass and weeds to start but the blowing sand cuts them off and as yet there is not much sign of spring.

The bluebirds are starting for the north but many of the robins are still with us. They both winter here on the juniper berries.

The people of Socorro, our County seat, are very much opposed to the new cutoff road between Carrizozo and Claunch. Carrizozo has completed a good highway to our county line and the prospects are very favorable that Governor Tingley will allot enough money to connect up with the highway at Claunch. This is the only remaining unimproved highway between Santa Fe and El Paso. I had a talk with the Secretary of the Chamber of Commerce at Mountainair yesterday and he says Torrance County on the north will be willing to loan the necessary road equipment so a passable road can be made in case the money from the State did not materialize.

Mr. E. K. Reed of the Santa Fe office visited us a few days ago in regard to establishing an ECW camp here on the Monument. It would consist of between 25 and 30 men and the principal work contemplated would be the repair of walls of Mission and Monestery. I told him we were very much in favor providing Superintendent Pinkley and the Landscape Division would endorse it.

Dr. Smith, retired, former Custodian of this Monument, has moved to Texas and I understand he will be joined there by several of his married sons and daughters.

*** **OO*****

TUMACACORI

By Louis R. Caywood, Custodian

Perfect Arizona Spring weather brought us a record number of April visitors. No rains and few windy days contributed to make this an excellent travel month. Visitors registered from Italy, Sweden, England, Ecuador, Canada, Mexico, Hawaii, Alaska and 41 states. Travel totalled 1,808 people; and of this number 1,230 were guided through the Mission.

The month seems to have been the season of many special parties. A group of one hundred students from Pasadena Junior College who were

TUMACACORI (CONT.)

on a geological field trip during the Easter vacation visited the Monument. Dorothy Harvey and party from San Diego State College stopped at the Mission on their return from a field trip which took them to Guaymas. Dr. R. K. Wyllys, History Department, Arizona State Teacher's College at Tempe, with a party of students visited us on March 29. Dr. Ball, University of Arizona, and Dr. Needham of Cornell University came in on April 4. They made their way through the back gate of the Mission and down to the river where they searched for dragon fly larvae. Mrs. Brame of the Heard Museum, Phoenix, was guided through the Mission on this same date. Father Stoner came on the Ranger's day off; therefore, we missed his visit. Karl P. Schmidt, Alfred Emerson, and Leon L. Walters, all of the Field Museum of Natural History, were interested visitors on the 18th.

During the month we contacted several Park Service officials. Dr. Chas. N. Gould and Jack Diehl spent the afternoon of March 24. Charlie Steen and Luis Gastellum were present for two days of the Easter Ceremonies. When W. H. Wirt and Ward Yeager were here on the 18th, the tent-caterpillar situation was given some attention. We have been able to burn up the caterpillars in the peach and willow trees, but it was thought best to leave the control to nature in the largest cottonwoods, as the damage is negligible.

The Easter event was the interest of the month. All activities were carried on by the Mexicans living in the neighborhood, and from the opening ceremony on Wednesday until the closing one of Saturday night at least 450 of the local inhabitants came to view the performances. To add that the dudes were thrilled would merely be hinting at their interest. Picture-taking, applause, and general excitement was plentiful. The events opened Wednesday night with the altar in the Sanctuary decorated and walls covered with drapings and religious pictures. Pharisees danced, rang cowbells, and romped, while the women knelt and prayed. The writer hesitates to express an opinion as to whether or not he thinks there might have been any significance in the two acts falling simultaneously. During the morning and afternoon of Thursday and also Friday, processions were held in front of the Mission. Night services were held inside and around the altar with nearly a hundred of the local Mexicans as an audience. On Saturday morning 20 small boys whipped the Pharisees as they marched in and out of the Mission. Following the whipping the Pharisees unmasked in front of the altar and joined the women in prayer. Thus ended the most novel part of the Fiesta. However, all participants gathered around the altar Saturday night for the closing ceremony. For an hour there was much singing and praying, then confetti was thrown over the worshippers bringing to an end a bit of interesting Tumacacori folklore.

The Custodian and H. C. W. P. spent part of the month on vacation in Mexico City and vicinity and during their absence the Ranger and H. R.W.P. were in charge. The above account of the Monument activities during the month was written by Ranger James Felton.

TUMACACORI (CONT.)

The trip to Mexico City is one long to be remembered. We traveled in our own car and accompanied the Hennings in their car via Laredo, Texas, Monterey, and Valles to the Mexican Capital. The roads are good for almost the total distance. Only 62 miles of gravel road was encountered on the Pan American Highway. We stayed in Mexico City taking side trips of a day to the cities of Puebla, Toluca and Cuernavaca. A two day trip was made to Taxco, a Mexican National Monument. Every roof of every building in Taxco is of red tile and one could spend days seeing the quaint buildings, the polite inhabitants and the beautiful cathedral. After the hub-bub of Mexico City, Taxco has an air of calm and serene quiet. The cool still evenings are refreshing and exhilarating. No other town could give you the feeling of peace like that of Taxco and its inhabitants, the Taxqueños. Their hospitality is sincere in spite of the fact that they are probably the most visited people in Mexico. Other places of interest visited were to more Mexican National Monuments, Xochicalco, and San Juan Teotihuacan, both archeological sites, the floating gardens of Xochimilco, Cuicuilco Pyramid, and the Shrine of Guadalupe. While in Puebla we saw the making of Talavera pottery and tile, an art brought into Mexico by the first Spanish. Broken fragments of Talavera pottery are still found at Tumacacori Mission.

Cholula, the city of 365 churches, is extremely interesting. Cortes, in 1519, claimed there were 400 pagan shrines in Cholula. He caused these to be destroyed and promised to erect a church for each one destroyed. His promise was almost fulfilled. After seeing so many beautiful churches one realizes how strong an influence the Church was in Mexico and how the priests were able to penetrate into New Mexico, Texas, Arizona, and California in spite of the many adverse conditions encountered.

Altogether three weeks were spent in Mexico and one week in Texas and New Mexico. We paid our first visit to Carlsbad Caverns and White Sands. At the Caverns we met Superintendent Boles and the personnel of the Park. From there we swung north to Alamogordo where Mr. and Mrs. Tom Charles told us about the White Sands. Our visit to the Sands was rather disagreeable because of a terrible wind storm, but on a clear still day the sands must be dazzling. We can see why Tom thinks he has the best Monument in the Southwest. The new buildings at the entrance look very good.

Back home again at Tumacacori we find the power line completed, the new electric pump ready for installation and work almost ready to begin on our proposed museum and administration building.

*****OOO*****

BANDELIER

By Clinton G. Harkins, Custodian

Visitors

Our visitors numbered 667 arriving in 191 cars from 26 states and 3 foreign countries. Of this number there were 124 returns; there were 77 guided trips through the ruins, averaging 90 minutes per trip. The foreign countries represented were England with 3 visitors, France with 1, and Belgium 1.

The six highest states by order of car check were as follows:

New Mexico -----	102
Colorado -----	19
California -----	17
Minnesota -----	7
New York -----	6
Texas -----	5

The total travel through Bandelier National Monument for the year follows:

Previously reported -----	2,284
This month -----	667
To date -----	2,951

Weather and Roads

The weather has been very fine this month with occasional wind and dust storms. The lack of rain has caused our roads to get pretty rough, and with the added trucking over them, due to graveling of the entrance road, chuck holes are forming, but it's a waste of time and money to put a grader on unless we have some rain. The State is moving equipment in to repair the chuck holes, and do minor repairing on two bridges on the Ramon Vigil Grant.

Weather

Mean Maximum -----	69
Mean Minimum -----	36
Mean -----	54
Range -----	30
Days partly cloudy -----	17
Days Clear -----	11
Days Cloudy -----	2
Dust Storms -----	2 March 26 and April 6
Sleet Storm -----	1 April 19

BANDELIER (CONT.)

Newsworthy Visitors

Allen B. Cook, Tour Editor, of The American Guide, Santa Fe, New Mexico, and Mr. Clark, Editor of the Santa Fe New Mexican.

Captain and Mrs. Mitchells, U. S. Army, Washington, D. C.

Mrs. Ina Sizer Cassidy, State Director of Federal Writers Project, Santa Fe, New Mexico.

Mr. Edward C. Hoenicke, sales manager of the Eaton-Erb Foundry Company, Detroit, Michigan.

W. H. Roberts, U. S. Engineer, Memphis, Tennessee, and Mr. James Abussell, Conchas Dam, New Mexico.

Mr. Ed Mabie, professor of the University of Iowa, and Rodney Stewart, were interested visitors Easter Sunday.

Miss W. T. Bowring, and R. G. Bowring, of London, England.

Col. F. B. Catron, Thomas Catron, Marjorie Catron, and Lieut. and Mrs. D. K. Armstrong, U. S. Army, Ft. Benning, Ga.

The Koshire Club from the Texas Technological College of Lubbock, Texas, with 32 members, took a trip through the ruins.

Mr. and Mrs. Berger, writer for the New York Times, were here on the 21th gathering material for an article about the Monuments in the Southwest.

Park Service Visitors

W. W. Yeager, ECW District Forester, from the Santa Fe Office, and Erik K. Reed, Archeologist, arrived on the 23rd of March. Mr. Yeager returned that evening to Santa Fe; Mr. Reed remained several days assisting Mr. Hendron in museum preparation.

Mr. and Mrs. Clinton F. Rose, ECW Landscape Architect, Tucson, Arizona, were here Easter Sunday.

Mr. J. B. Hamilton, Associate Engineer, and Mr. John Veal, Assistant, were in for a short stay April 2; Mr. Hamilton returned a few days later, in company with Jack Diehl, Regional Engineer, from the Regional Office, Oklahoma City.

Park Ranger and Mrs. Gammill of Yellowstone National Park were here April 13 on their way to the Petrified Forest National Monument, and Grand Canyon National Park, incidentally escaping the cold and snow of Yellowstone

(BANDELIER, CONT.)

while enjoying a vacation in the Southwest.

Mr. and Mrs. Lyle Bennett, and Bob Albers, of the ECW Office in Santa Fe, were visiting the ruins on the 18th.

Mr. and Mrs. F. L. Anderson, arrived on the 19th and departed on the 20th. Incidentally, Mrs. Anderson is the daughter of Assistant Director Demaray.

General

T. T. Ranny, head of the U. S. Geological Survey party, moved to the vicinity of the Painted Cave with one man on April 5, while the remainder of his party finished mapping in this area. They completed their work here and left for the Painted Cave and Capulin Canyon on the 15th. They expect to finish about June 1. They are in a pretty rough country on Capulin making it necessary to use pack horses to move to their camp.

The road surfacing continues to move along slowly but sure. There remains $\frac{1}{2}$ mile of road to surface, after which they have a stock pile to get out. Their crusher has been broken a great deal. Another very unfortunate accident happened at their plant Friday, the 11th; Roy Harper (colored) got his arm caught in the conveyor and at first the doctor thought it would be necessary to amputate it above the elbow, but the last report is to the effect that his arm can be saved. Mr. Kersey was recently discharged from the hospital following his accident of last month.

On a recent trip to the vicinity of the Painted Cave a great deal of deer and turkey sign was noted. Cattle are working back on to the Monument through Capulin Canyon.

Kalsomining of the Administration Building was completed on the 20th.

Personnel

Marvin Baker, was put on the pay roll as a rock checker the 7th of April.

*****00*****

BANDELIER ECW

By H. B. Chase, Project Superintendent

The Storage Room, Unit No. 6 of the Hotel Development, has been completed this month to viga height, the vigas now in place and being graded for roof construction.

Foundations and a small height of wall for the construction of the Gas and Oil House within the Hotel area is now in the process of construction.

BANDELIER ECW (CONT.)

Unit No. 1, Dining Room and Kitchen, has been carried forward all month, with all walls now in place to lintel height. Considerable corbel and lintel work has been carried on with wall construction to make possible the completion of portals with the principal unit.

Three each of hand-carved tables and chairs have been completed by the carpenter crew and delivered to the Custodian for permanent Monument furniture. Two hand-carved beds for the dormitory rooms are now being assembled in the shop.

An unusually large crew has been working in the rock quarry since the arrival of the new enrollees, quarrying and shaping the required needs of building stones together with an effort to stock pile a considerable quantity to meet the construction needs at the time other projects are started.

*****OO*****

WUPATKI

By Milton Wetherill, In Charge

Things are quiet at Wupatki but Citadel and Sunset seem to have their quota of visitors. The road to Wupatki is not all it should be, a blade over it would help things out.

I have worked and raked the trails at Wupatki and all are now in good shape. Dug several rocks out of the road and shot one which was too big. Obtained the powder from Walnut Canyon. This was a part of that which I bought last fall to work the trail with.

I Made a trip into Sunset from U. S. 89 and found that the Forest Service had flat bladed the road from U. S. 89 over all roads on the Coconino National Forest on the south side of the mountain and east of U. S. 89. They used a bulldozer to clear the snowdrift on the north side of Sunset. The road is soft but a few cars have travelled it and it will soon be in good shape.

Temperature at Wupatki: Average low, 41; high, 71; April has been windy most of the time, with no precipitation.

Birds seen at or near Wupatki Pueblo:

- | | | |
|-------------------------|--------------------------|----------------|
| Bullock Oriole | Mourning Dove | Brewer Sparrow |
| Desert Sparrow | Pinyon Jay | |
| Townsend Solitaire | White-rumped Shrike | |
| House Finch | V sper Sparrow, 2 banded | |
| Sparrow Hawk | White-throated Swift | |
| Canyon Wren | Rock Wren | |
| Say Phoebe | Brewer Blackbird | |
| Ash-throated Flycatcher | Cassin Kingbird | |
| Golden Eagle | Bald Eagle | |

AZTEC RUIN

By T. C. Miller, Custodian

General

April has been a good month in the way of visitors here in this Monument. The weather has been good for the most part of the month. However, much high wind, rain and snow has been noted but it had little effect on our volume of travel. Approach roads to the Monument have been rough but passable all the month. Wolf Creek Pass in Colorado is closed due to snow slides and all the side roads are quite muddy.

Travel

1,102 visitors entered the Monument in 350 automobiles coming from 24 states and the District of Columbia. April, 1936, 701; 1935, 554; 1934, 578; 1933, 468; 1932, 394; 1931, 603; 1930, 814. 133 field trips were made during the month and 159 museum trips.

Weather Statistics

Maximum temperature, 83, on April 5; minimum temperature, 19, on March 30. Precipitation 1.02 inches rain and melted snow was recorded for the month. Greatest amount recorded in 24 hours was .76 inch March 26. Clear days, 16; cloudy days, 9; partly cloudy days, 6.

Easter Sunrise Services

Easter Sunday, March 28, the Methodist, Presbyterian and Baptist Churches combined held their Sunrise Services in the House of the Great Kiva at the Aztec Ruins. This unique building made a splendid setting for the impressive services that took place. Rev. L. W. Rishel, Rev. John Cox and Rev. J. M. Young were in charge of the services, which were attended by 125 people coming from Aztec, Farmington, and the surrounding country.

The ministers and congregation greatly appreciated and enjoyed the novelty of meeting in the Great Kiva and many expressed their pleasure in attending such a unique service. The people of Aztec cooperated in making the services a success and we especially wish to thank Hillstrom and Fisher Hardware for the use of the necessary pipe to lay a gas line to the Kiva so it could be heated with three natural gas heaters which were loaned by the Aztec Natural Gas Company and Mrs. James Lanier. By heating the Great Kiva the people were much more comfortable and better able to enjoy the services as the weather here is still quite cold in the early morning. The Baptist Church was kind enough to loan us a piano.

This Easter Service was commented on by the Associated Press and even the Des Moines, Iowa, radio station spoke of Aztec Ruins being

AZTEC RUINS (CONT.)

one of the places where special Easter Services would be held. The local papers and radio stations also commented on the services here.

Due to the cloudy weather we were unable to take any pictures.

National Park Service Officers

Mr. W. W. Yeager, District Forester, Santa Fe, New Mexico, paid us a short visit March 25. Custodian Faris and family from Canyon de Chelly were here April 18. Don Watson, Junior Park Naturalist, Mesa Verde National Park, paid us a visit also on the 18th.

Ruins Repair

Seven rooms with original ceilings have been protected and made waterproof during the month. Also much has been accomplished in the way of patching sections of walls in the ruins that had collapsed during the winter months. No permanent capping was performed due to the shortage of funds. A complete report will be made on ruins repair and mailed to your office when the job is complete.

Monument Inspections

One trip was made to Chaco Canyon under date of April 13. 108 men and 38 teams are employed in that Monument by the Soil Conservation Service. Their work this month has been replacing the diversion dams that were destroyed by flood waters last year. Also much planting in the Chaco Wash is being done.

Yucca House National Monument: This Monument was inspected on April 20. The country in general around Yucca House looks nice and green, the prairie dogs are out and two rattlesnakes were seen on the south side of the ruins. The fence around the ruins was up and the gates closed. No visitors have been to Yucca House this year.

*****00*****

CHACO CANYON

By Lewis T. McKinney, Custodian

April has been a fair month for visitors here at Chaco, but the March winds are about a month behind as we have had one hard wind and dust storm right after another. The roads have been in pretty fair condition except the sand hill north of headquarters about five miles, which has moved over in the road. Several of our visitors have been stuck in the sand and had to walk in to headquarters to get help to get out. Two different parties spent the night in the sand.

There were 803 visitors through the Monument this month; 401 of them were contacted. On April 1 we had as visitors through the ruins:

CHACO CANYON (CONT.)

18 from Thoreau, New Mexico, High School; Mr. Lyman E. Allen, the principal of the school; Miss Florence Smith, the history teacher; and 16 of her history pupils. They arrived at the Monument about 10 AM and spent the entire day looking over the ruins and other things of interest in the Monument.

The Soil Conservation Service has been working about 108 Navajos on erosion control here in the Canyon this month, but will close the work the last of this month; however, the structures that they have started are only about one half complete, and no doubt will be destroyed completely the first big rain we have. They have planted and have here on the ground to plant 202,375 trees and shrubs.

The School of American Research, University of New Mexico, and the State Museum of New Mexico have finished three more rooms to their research station. They are installing another water pump with a gasoline engine to help out on their water supply this summer. I just received a letter from Dr. Brand, head of the department, University of New Mexico, in which he states that their general session of about 60 students will be out again this summer. The School of American Research will have only about 16 in their field school group.

The maximum temperature for the month was 84, on April 15; the minimum was 18, on March 27; .38 inch of precipitation was recorded during the month, also at least 10 heavy dust storms which moved part of our Monument on eastward and took away a lot of the moisture from the ground. We have had several partly cloudy days as well as four cloudy ones.

In general things have been pretty lively around Chaco this month: riding fence, repairing fence, cleaning tumble weeds away from fence, building water gaps, the Soil Conservation Service active with their 108 Navajos, and trying to secure enough water for them and their 34 teams, cleaning out from behind Threatening Rock from which we have moved 600 cubic yards of debris and placed on the road and near the house, repairing the walls of Pueblo Bonito and handling visitors has kept me pretty busy; also the bridge of ten years has made a hand.

*****00*****

WALNUT CANYON

By W. H. Carrington, Park Ranger

There was quite a change at Walnut Canyon this month as compared with last since the weather and roads improved so much that a sizable number of visitors registered at the Monument. Altogether 635 visitors registered at the Observation Point, with an estimated 10% of that number not registering. Twenty-nine states, the District of Columbia, Canada, Mexico and China are represented on the books for this month. The largest daily registration was on Sunday, April 18, with a total

WALNUT CANYON (CONT.)

of 74; this was closely followed by the 25th with 70. On both these dates local traffic contributed heavily to the totals.

Visitors in the Government Service were: Col. R. S. Fitch, USA; J. H. Fackett and C. H. Miller, U. S. Navy; Dr. Gordon E. Davis, Public Health Service; Ben Hazard and Tom Beaulieu of the Cleveland National Forest; and Ranger Walter Gammill of Yellowstone National Park.

On April 15 Captain F. M. Williams of Kingstone, Pennsylvania, took moving pictures of the Canyon; these will form part of a scenic collection which is being made for educational purposes.

The road to Observation Point has required constant work to keep enough earth on the bedrock to make a reasonably smooth road. The County entrance road has been in fine shape this month due to being dry and having been scraped several times. Despite several light snowfalls the snow has disappeared except in a few sheltered spots in the Canyon.

I have heard many compliments on the condition of the loop trail, these being tempered somewhat by a few remarks to the effect that "The steps are too far apart and high in the steep places." There seems to be some truth to this, particularly as it refers to women and children. I have done a little cement work where the steps had cracked and placed an extra wire in the guard rail at Observation Point after some children had nearly fallen through. This was due to the fact that they reached for the top cable which was too high for them.

With the coming of warmer weather an increase in visitors is looked forward to for the coming month.

*****OO*****

NATURAL BRIDGES

By Zeke Johnson, Custodian

About all I have to report this month is the success of our trip to the Bridges, and I am sure that Mr. Steen has told you all about that before now. I think that Charlie will agree with me that the trip was a grand success. The ladder in the kiva was not as well preserved as I had expected it to be but I am **very** proud of what we found and did. I will soon be back on the job and glad that I have those fine ancient buildings to add to the attraction of the Monument in spite of the added responsibility in keeping them intact for future generations.

*****OO*****

PIPE SPRING

By Leonard Heaton, Acting Custodian

The travel as well as the visitors to the Monument have increased considerably this month. Roads are about as good as they will ever be

PIPE SPRING (CONT.)

this summer. There has been an increase of 345% over last month's travel and I believe the local travel has been as much. Total visitors, 38.

Three of these visitors were Park Service officials: Hugh Miller, Assistant Superintendent, Southwestern Monuments; J. H. Tovrea, Ass't. Engineer; Al. Kuehl, Landscape Architect; they came in on the 16th about 8:30 AM. I showed them through the fort, telling parts of the history as well as talking about improvements to be made on the Fort. From about 9:30 until 11:00 we discussed the ECW projects to be worked up by the boys in camp, giving Hugh and Tov an idea of what we were trying to do to the place while they were on the ground.

We called on Superintendent Draper and discussed with him our problems of financing these projects and he told us that he had been given authority to prorate his allotment as to the number of men working in the Monument. So we will be getting some of the projects worked up that need it before the summer travel sets in.

When we were through with the Monument problems. Al suggested that we drive up to Moccasin and show Hugh and Tovrea the Heaton village and while up there I suggested that they stay for luncheon as the wife was fixing them some sandwiches and the like; so I got to visit with them until about 2:00 PM, when they left for the South Rim of the Grand Canyon.

Weather

The forepart of the month was stormy and cold, giving us several rains, some snow and sleet. The past two weeks have warmed up, bringing out the leaves and flowers.

We have had four days of very hard winds from the west, with a lot of dust and sand, making it very disagreeable to be out in.

ECW Notes

A new bunch of enrollees came into camp April 15. They are from west Kentucky and seem to be a decent bunch and I believe we will get along all right. Mr. Black, the educational advisor, is willing to cooperate in every way he can and has asked me to give them something to print in the Pipe Post that the camp puts out each month, as well as getting some films for their show.

I had only 2 men working on the Monument until the 19th, when 8 men were assigned to the Monument. We have completed one picnic table and hauled dirt into the wash.

Superintendent Draper told me that they had about \$44.00 to buy materials this month and I suggested that he purchase those materials

PIPE SPRING (CONT.)

which would be needed for the drinking fountain and watering trough. So we ought to soon wind up some of these little projects.

Bird Notes

I have had my bird traps set most of the month but can't get any of the feathered tribe to enter very often; have banded the following:

- 1 Western Vesper Sparrow, repeated twice
- 2 Greentailed Tohees
- 3 Song Sparrows

For some reason birds are not visiting this place as they did last spring. Three Gamble Sparrows have showed up so far; they came in on the 20th. Very few other birds are back. I have been wondering if there is some climatic condition affecting their return.

Plant Life Notes

Since the warm weather has arrived there are a number of small plants coming up and a few are beginning to bloom. As they bloom in full, I am taking 3 species of each plant; one I will keep; one I will send to Jack Whitehead; and one to headquarters.

There has also been reported that a specie of cactus is growing up here that is very rare. I decided to find it, if possible. By studying all the books on cactus I could get and writing for a description on the Utahia Sileri, and after spending four days tramping over the hills and flats, I located this cactus east of the Monument in some little grey hills. I sent three specimens to Jack Whitehead, who confirmed my find as the Sileri cactus.

I have marked several of these plants and am taking notes on them about every five or six days, as to their growth, flowering and fruit. This research will be invaluable as it is reported that very little is known about them.

There are a few other plants that I am studying because of their being reported as being poisonous to livestock.

I was wrong in my guess that the fruit would not be killed this winter, as a very small percentage of the trees are blooming this spring, which will mean that we will have a shortage of fruit this coming fall.

Personal

My health has improved a lot this last month since I went to a doctor and had my eyes tested and purchased some glasses to look through, on his suggestion.

PIPE SPRING (CONT.)

I surely enjoyed the visit of Miller and party very much. I only wish that I could come in contact with more of the Park officials and I have thought of using most of my annual leave in visiting some of the parks and monuments, getting acquainted with the officials and their way of handling problems similar to mine. I am apt to ask for two or three days leave each month to take these trips and hope to make one of them south.

*****OO*****

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian

There have been about 1000 visitors to this Monument during April. Two groups of CCC boys from Oklahoma visited the Mountain and judging by the noise they apparently swelled their lungs and enjoyed themselves. I have noticed license plates from Canada and Mexico during the month.

We have had some nasty weather during April with some high winds, but the winds were each followed by some precipitation which was very welcome. Total precipitation for the month was about 1.5 inches. The wild flowers and wild cherries, for which the mountain is named, are blooming.

A couple of weeks ago I took a crew of three men and a team and started work on the entrance road. All drainage structures have been cleared and cleaned and the shoulders on about a dozen curves have been built up and graveled. About forty tons of rock were taken from the slopes and placed on the shoulders as a sort of rip-rap for holding high shoulders on the curves. Some unsightly piles of rock which had been taken from the road were removed. Both ditches along the road have been thoroughly cleaned and considerable rubbish was burned. We have hauled many loads of gravel and spread it on the road where slick spots are apt to occur in wet weather. The road has been widened three feet for 200 lineal feet to comply with a request Mr. Kittredge made several years ago.

Batching and working is a problem, but I have been getting both jobs done fairly well. Mrs. Farr has been at Ojo Caliente for a couple of weeks, taking baths for rheumatism. She hopes (and I do too) that she can come home before long.

I was slightly injured a few days ago while attempting to load a road plane on a trailer - the result was a sprained back. This was very painful but I saw no place to stop so I am still working. A wide belt in the daytime and some liniment and a hot water bottle at night keeps the old boy going. There is joy in my heart that the Boss is back on the job and a prayer for more rain and warmer weather.

*****OO*****

HEADQUARTERS STUFF

By Charlie R. Steen, Jr. Archeologist

I was at headquarters during half of the month and at Natural Bridges National Monument for the balance of the time. While at the Natural Bridges Zeke Johnson and I did some ruins stabilization in the small cliff dwelling which he found last fall. A full report of the work will be made in the Monthly Report for May.

The appointment of Dale S. King to the position of Assistant Park Naturalist has been approved. The vacancy created by the transfer of Robert Rose to Boulder Dam Recreational Area will thus be filled by King upon his return from Yale University in June.

Bird Banding

Very few birds were reported as banded this month. Four stations sent in the following list:

Casa Grande	2 Say Phoebe
Montezuma Castle	1 Gambel Quail
Pipe Spring	1 Western Vesper Sparrow
	2 Green tailed Towhee
	3 Song Sparrows
Wupatki	2 Vesper Sparrows

While Mr. Fast was at the Vah-ki Inn this spring we asked him to summarize his bird-banding activities for the Report; a few days ago the following article arrived:

"Bird-banding was resumed at Vahki Inn again this year and was continued from March 9 to March 24. It will be recalled that this location is about one half mile from the headquarters building of the Casa Grande National Monument and that several hundred Gambel Sparrows were banded there from February 3 to March 24 last year. This year 26 Gambels were banded of which thirteen were adults and thirteen were immature. Twelve birds banded the previous year were caught. Of these six were banded as adults and six were banded as immature, but of course all were adults this year. Eleven of the twelve were banded at Vahki and one was banded at headquarters.

"It was noticed last year as well as this year that the birds started to leave on their migration journey the first week in March so the birds available for trapping were comparatively few. However, the information obtained combined with the records of the Monument show some quite

BRANCH OF EDUCATION (CONT.)

interesting facts.

(a) Casa Grande National Monument is a winter resort for the Gambel Sparrow.

(b) They return year after year to the same location.

(c) This location is very limited in extent, perhaps not more than a few acres. Practically no birds banded at one station are caught the same season at the other, but a very few change locations the next season.

In addition to the Gambels, one Mourning Dove and one Lincoln Sparrow were caught and banded. One Say Phoebe banded last year was observed roosting on the porch of the Inn in the exact spot where it was banded. It was identified by a red celuloid band on its leg."

ABOUT VISITORS

By Frank Pinkley

Reference is made to the October, 1936, Monthly Report, page 244, where an analysis was made of the record of 27,704 visitors at Casa Grande National Monument.

Another six months of figures has accumulated and we show a tabulation here dealing with 19,652 visitors and a total of 33,087 visitor contacts. These figures are not only of interest in themselves, as dealing with a sufficient number of visitors to offer pretty reliable deductions, which eliminate the small fluctuations which would cause errors if deductions were drawn from a small number of visitors; but we are now able to compare seasonal figures for the same seasons in two years and study differences caused by differences in peak loads, personnel, etc.

We are dealing in this tabulation with the heavy visiting period of the year at Casa Grande, October 1 to March 31, both inclusive. The monthly travel struck bottom in July with 1,142 visitors, raised to 1,487 in August, to 2,045 in September and in the six months showing in this table goes up to 2,190 in October, 2,909 in November, 3,052 in December, 3,744 in January, 3,845 in February and 3,912 in March. This curve has probably reached the top in March and will certainly start down in May if it does not in April.

The curve this season was much more regular than last; the figures follow:

	<u>1935-36</u>	<u>1936-37</u>
October	2,281	2,190
November	2,165	2,909
December	2,135	3,052

HEADQUARTERS STUFF (CONT.)

	1935-36	1936-37
Brought forward	6,581	8,151
January	3,370	3,744
February	3,043	3,845
March	2,705	3,912
Totals	15,699	19,652

In the winter of 35-36 the figures start up in October, drop back in November and December, start up again in January, decrease in February and March, and then went up to the yearly peak of 3,436 in April, not shown on these tables.

Visitor Contacts

Visitors at Casa Grande were offered a guided trip through the ruins and another through the museum. Each visitor who accepted either one of these trips was counted as a visitor contact, thus, in the six months which we are here considering if all 19,652 visitors had made both trips we would have checked 39,304 visitor contacts, which, being 200% of the number of visitors, we would have called a 200% contact. Instead of the theoretical 200% perfect contact it will be noted that we actually made 168% contact for the whole period: 33,087 contacts with the 19,652 visitors.

The percentage of visitor contacts will rarely, if ever, reach 200% but we find it is subject to wide fluctuation: by getting the personnel to put steady attention and pressure on it we have made a maximum visitor contact of 198% per month and by having, in part at least, an uninterested personnel, we once fell to a minimum of 81.1% per month. This is not to say that visitor contact can be translated directly in terms of personnel effort; it is not as simple as that. Several factors enter into the percentage of visitor contact. One is the peak load. If our men get swamped for a couple of hours in the afternoon with a small peak of visitors in an otherwise normal day, some of these visitors will refuse to go into the crowded museum and your contact percentage will drop through no fault of yours. This is greatly accentuated on heavily peaked days like Sundays and holidays. Showers and days of high winds may keep some visitors from going through the ruins but they will go into the museum. Again the contact percentage drops.

With all due allowances for natural causes, however, I am convinced, from a study of nearly 50,000 visitors at Casa Grande that personnel effort is the predominating factor in heavy fluctuations of personnel contacts at Casa Grande, which is to say that a lazy man can make a suspicious valley in percentage of contact curve by not attending a number of his parties through the museum.

The 168% of this six months compares well with the 145% of visitor contacts obtained for the same period of the previous year or with the

HEADQUARTERS STUFF (CONT.)

155% which was the average for the whole of the previous year.

It will be noted that the visitor contacts run by months 185%, 157%, 157% and then jump to 171%, 173%, 167%. Despite the fact that there was a heavy increase in number of visitors, we got a higher contact figure. The reason is that an additional man went on duty January 1 and, while a part of one man's time was thereafter devoted to outside work, getting the monument caught up on numerous things not directly connected with handling visitors, the fact that we could throw one more man into the peak loads is reflected in the percentage of visitor contacts, which promptly rose.

It will be seen, upon following the matter up, that our visitor contact trouble occurs in the museum. Out of 19,652 visitors, we guided 19,212 through the ruins. The remaining few were cripples, heart cases and locals who had been here many times and stayed around the headquarters while their party went to the ruins. In order to prevent vandalism, we have a sign at the gateway leading to the ruins explaining that there is no admission without a ranger. Since visitors very properly consider the ruins the primary object of the visit, and since administrative reasons demand that they be guided, we automatically get a very high visitor contact there.

The museum contact is, however, a different matter. Although we had much rather explain it to him, we can have no real administrative objection to the visitor wandering into and through the museum at will and a certain percent of visitors prefer to get the much smaller amount of information by doing that.

Lack of personnel on peak loads is another factor which causes us to turn parties into the museum without guide in order to occupy them for ten or fifteen minutes until the next party leaves for the ruins. A large percent of such parties, upon returning from the ruins trip, will tell the guide they have seen the museum and will not go back in there with him but will be on their way.

Another case may happen when a guide must leave for lunch in order to keep the whole schedule running and so turns his party into the museum telling them that the next guide will explain things to them if they will look around and wait about 20 minutes.

There is, too, an occasional lazy guide who will turn his party into the museum and tell them to "just look around all they want to" and then go off and sit down.

All these factors, and several more minor ones, combine to cut museum contacts and explain why out of 19,652 visitors in the period being considered we made only 13,355 museum contacts. We are, however, doing better than the previous year, when, out of 15,699 visitors we made only 8,159 museum contacts.

HEADQUARTERS STUFF (CONT.)

If our basic presumption, that the more visitors we contact the better service we are delivering, is correct, these figures are here pointing to the weak spot in our armor and we need to put all hands and the cook on the problem of increasing the visitor contact in the museum

Trip Time

The second basic presumption which we have made is that, other things being equal, the longer a visitor stays the better service we are delivering. So many factors enter into the stay of the visitor that this broad assumption must be taken with considerable salt when we apply it to several thousand cases and nothing could fall wider of the mark when applied to the individual case. We are well aware of the danger of making a fetish of trip time and some day we hope to get time to write a young book on the various factors which enter into it, but, after studying trip time at various monuments for the last couple of years, I yet think it is a very useful signal and will bear much further investigation.

It will be noticed that the trip time for ruins trips runs through the six months as follows: 29.4, 29.5, 33.5, 30.3, 26, 30.6. Out of that line of figures the low time of 26 minutes in February demands some explanation. The explanation is forthcoming in the fact that we were breaking in a brand new man who knew no archeology. The boys were carrying a heavy load of visitors and simply threw this new man into the breach with a consequent valley in the trip time curve. By the next month he had his work pretty well in hand and the curve comes back up.

Now look what happens in the trip time in the museum. It runs by months as follows: 22.3, 21.1, 21.3, 21.5, 16, 17.1. You get your February drop due to the new man, in great part at least, but you do not get a rebound in March as you do in the ruins trip time. Is there a reason or is it chance? My theory is that the ruins part of the guiding at Casa Grande is pretty easy to learn and our new man picks it up in a month and can bring his trip time up to the average, whereas to give a good general talk in our museum, answering all kinds of questions, etc., requires a longer time in getting the ground work built and our new man does not respond so quickly with his trip time.

If we are right and a new man can break a trip time curve like that, is there not something to our basic assumption that the longer the average trip time, comparing one period against another at the same monument, the better service we are delivering, other factors being taken into consideration?

We come now to something about trip time which is still on the board awaiting explanation. Our average trip time for the six months under consideration in the ruins is 29.5 whereas a year ago covering the winter season for the same time, it was 35.6. Why that big drop? If you say

HEADQUARTERS STUFF (CONT.)

the visitor is changing or our personnel has changed, I beg to point out that the average trip time in the museum this winter was 19.9 whereas last winter it was 20.1, practically the same!

** *****00*****

TONTO

By Thomas B. Onstott, Park Ranger

It looks mighty like the hot weather is making havoc with the Southwest's best monument. The first two weeks were fine, but the last two have been quite warm. Although we natives are just beginning to feel human again, the tourists on looking up at the Ruins, map their respective brows and ask for a verbal description. With the boom in fishing at Roosevelt Lake, the travel on the Apache Trail has increased, but the daily number of visitors here has steadily dropped.

Many people who were here several years ago have paid return visits this month, and all of them heartily joined me in heaping causes on the heads of the vandals who destroyed so many roofs and walls in years passed.

Dr. Haury and Mr. and Mrs. Kelley of Gila Pueblo were here early this month to measure the amount of water in their rain guage. The tally was 9.0 inches precipitation for the three month period January 1 to April 1.

Mrs. John F. Tanner with 50 anthropology students spent most of the afternoon of the tenth at the Monument. All made the trip to the Upper Ruins in top shape with the exception of one young lady who became quite ill from a combination of too much bus riding, exertion and sunshine.

Dr. Haury returned on Sunday, April 11, with Prof. Childe, a European archeologist from Scotland. After a short visit to the Lower Ruin, they went to the Upper Ruin to get a better idea of house type with less interruption from crowds.

Mr. E. T. Little and Mr. J. M. Johnson of the Parker Creek Experimental Station of the U. S. D. A. stopped in on the 14th and gave me very valuable and long needed information on the flora of the Monument.

Dr. Alfred Emerson and Mr. Leon Walters who are collecting snakes for the Field Museum of Chicago were very interested and interesting guests on the 22nd. I am afraid the Monument has lost its reputation for snakes as none have been seen yet this year. Perhaps the snakes knew the collectors were coming.

The Monument has recently developed a lost and found department to the tune of three pairs of sunglasses, one fountain pen, and one Eastman Kodak.

TONTO (CONT.)

The SWNM Stencil # 16 figures for April are as follows:

Total number of visitors	840
Number of people to ruins	562
Number of parties to ruins	125
Average number of persons to party	4.5
Total time guided at ruins - minutes	5,480
Average time per party	43.8
Number of people guided in museum	378
Number of parties guided in museum	105
Average number of persons to party	3.6
Total time guided in museum - minutes	1,380
Average time per party	13.2

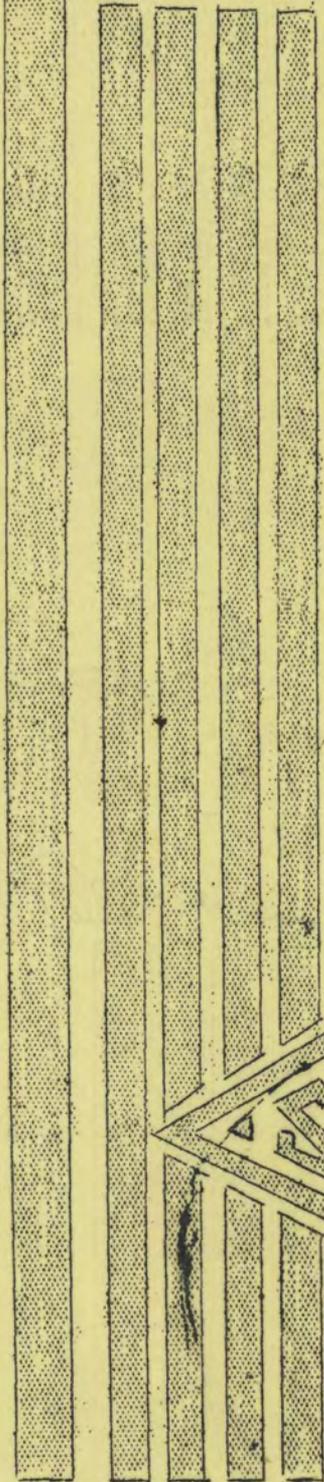
The weather has been mostly clear with some wind. Month's totals:

Days clear	23
Days partly cloudy	5
Days cloudy	2
Total precipitation	.09 inch.



ORGAN PIPE CACTUS

THE Supplement



S·M· MONTHLY REPORT

Since this paper was written some doubt has been raised as to whether we are correct in saying that the ceremony took place in old Santa Rosa. One critic, Mr. S. J. Jones of Sells, Arizona, says that the village in question is named Ar-chi and is thought by the Papagos to be their ancestral home. We can find no reference to Ar-chi in the literature of the Papago country nor on maps of the district, however the site is also well known as Ak-chin (at the mouth of the wash).

VIKITA CEREMONY OF THE PAPAGO (CONT.)

masks were painted in a black chevron pattern, the chevrons arranged in columns side by side, about an inch wide.

Attached to the back of the mask, below the clump of feathers and at about the base of the head, was a strap or panel of variously colored cloth or canvas, hanging free, usually about 4 to 6" wide, and reaching to the small of the back. This panel was fringed, usually with short turkey feathers, and had ornaments fastened to it. These ornaments were, variously, of tin, cut into diamonds, squares, or circles, of mirrors large and small, of cutout paper figures representing both a person picking sahuaro fruit and a curious human figure with what seemed to be horns on its head. One back strap had the chrome plated hub shields of an Essex and Plymouth automobile fastened to it, brilliantly polished. Several had spread hawk wings tied to the panel edges in place of the turkey feather fringe. Others had the tail feathers of the Western Red Tail Hawk arranged side by side across the bottom, with turkey feather fringe on the sides; another had the spread tail of a similar hawk tied across the bottom. The fringe of one strap was of the green imitation grass used in Christmas decorations. Another had, in place of the usual panel, a medallion about two feet in diameter, of long hawk or eagle feathers arranged radially about a small central disc, and attached to the headress by a slender strap.

Many or all masks had a braid or twist of horsehair or human hair attached to each side, hanging down over the dancer's breast, and ornamented with tufts of red down or other bright plumes.

The dancers wore white garments reaching to the knees, usually sleeveless. Some of these shifts or tunics were opened up the side from hem to armhole, with overlapping edges apparently held closed by the belts which the men wore. Others wore plain tunics without the side opening. The belts were varied. Many were of wide canvas, with cowbells and dinner gongs tied to them. These sometimes had a fringe of tinklers, made of cones of rolled tin five or six inches in length, hung by thread or copper wire from the lower edge of the belt. One man wore several immense brass bells, resembling sleighbells, three or more inches in diameter, on his belt. While most belts had a few bells, several were solidly hung with them.

Many dancers, in addition to a narrow belt with bells tied to it, wore fringed aprons, consisting of two roughly semi-circular pieces of canvas, one before and one behind, joined at the hips with string. One at least wore a black apron. Another dancer wore a cloth cartridge belt, with large wooden cartridges four inches long, painted red and blue, in the loops. At least one dancer wore a machete, in its scabbard, stuck through his belt. Some carried pouches attached to their tunics below the right breast, and several of these pouches looked suspiciously like ladies' handbags.

VIKITA CEREMONY OF THE PAPAGO (CONT.)

All the dancers carried quivers of arrows, the quivers being made of canvas, painted red or left natural color, or of skins. At least one quiver was made of the entire skin of a kit fox. These quivers were fastened across the small of the back at an angle, open end up and to the dancer's right. Many quivers were fringed.

Two or more men carried imitation powderhorns of cowhorn, in one case carried slung over the left shoulder and resting on the right hip, in the other, tied to the belt on the right side.

The dancers' arms and legs were bare, though a few men had shirt sleeves and Levi legs rolled up and showing beneath the tunic. Legs and arms were painted with what seemed to be white clay, decorated with groups of short vertical lines, done both in red paint and by scraping off the clay.

On the left wrist the dancers wore ornaments of skin, canvas, or of both. One wore the entire skin of a ringtailed cat wrapped around his wrist, the tail dangling. Other wrist decorations were made by wrapping the end of a long strip of material, two to four inches wide, once about the wrist, letting the end dangle a foot or more. These were often fringed, or had plumes tied to them, and were painted in colors. Many were red with white geometric patterns; one was yellow with diagonal green lines.

Each dancer carried a wooden arrow, fletched with turkey feathers, the point carved out the wooden shaft, or carried a wooden wand or lance, in the left hand. These were red, with white banding. In the right hand most carried a bow made of grotesquely twisted wood. These bows ranged from two to two and one half feet long, and were also painted red with white banding. A few men carried wooden guns, one being made of a twinned saguaro rib, the butt representing the stock, and the ribs the barrels of a double barrellled shotgun. One or two men carried cheap commercial popguns. Several men with guns carried arrows in their left hands, though others carried wands and used them as ramrods.

Legs were bare from knee down, and the dancers wore anklets of black leather or of black cloth on which were sewed one or more rows of cocoons, fastened by one end. One dancer's anklets were solidly covered with cocoons, as if he had strung them and wrapped the string spirally about his ankle. All dancers wore sandals, of leather soles tied on with thongs. In some cases cocoons were sewn to the ankle binding, on the outside.

The chorus was made up of both men and boys, and each member carried ceremonial objects in both hands. All but two were bare headed, and wore halves of gourds bound over their faces. These gourds were decorated with horizontal zones of color, consisting of a blue band one and one-half or two inches wide at eye level, a red zone, extending

VIKITA CEREMONY OF THE PAPAGO (CONT.)

from the blue to the top of the mask, probably painted with ochre, which bore white figures in dots or short lines, and the lower zone in white, probably clay, which extended to the bottom of the mask and bore designs in red, which varied with each mask. All these red patterns resembled the typical Papago black-on-red pottery designs, consisting of scrolls, hachuring, diagonal lines, diamonds, etc.

The two choristers who did not wear gourd masks were small boys, who wore instead sack-like coverings of canvas which fitted down over their shoulders. These were not fringed. On the crowns was a clump of mustard yellow material, possibly dyed cornhusks, about two inches in diameter and an inch high. The masks had eyeholes, round ears of some thick material, possibly rawhide, about two inches long semi-circular and concave, and plugs or round wooden sticks, each about three-quarters of an inch in diameter and three inches long, fastened to the mask in place of a mouthhole. One of these was straight with squared end, the other was hooked and pointed. They were not painted, nor did the masks bear any painting.

DANCE MOVEMENTS, SONG, RITUAL OBJECTS

The dancers and chorus at this noon ceremony on Friday performed evolutions which were simpler and less elaborate than those performed on Saturday. The chorus entered the enclosure and there received from the old men the objects which its members were to carry. The dancers meanwhile waited outside the enclosure, posturing and treading the ground and jingling their bells. When the choristers had received their equipment, they formed in line in front of the enclosure and marched single file around it, contra-clockwise, preceded by the dancers, who leaped and ran and cavorted in front of them. When they had completed the circuit, the chorus came to rest, facing south, the leader nearest the enclosure, and the dancers stopped before the entrance, in front of the chorus, in a group. During this march the chorus was singing, and continued to sing after halting, raising and lowering their right heels in time to the song. The dancers shuffled or stamped or leapt into the air as they pleased, always in time to the song. They did not follow any fixed pattern in their movements about the dance ground, but milled about in a group, some dancing in one spot throughout.

The song, always to the same tune, seeming to be repetitive generally in the pattern a-a-b-b-a, was wordless, the syllable o-o-o-oh being used throughout, although words may have been rendered indistinguishable by the muffling of the masks. The time was the same throughout the song, but the rhythm was varied. The range of notes was short, probably not exceeding an octave. At the end of the pattern, the chorus repeated twice a long drawnout o-o-o-oh, each beginning on the same note, increasing in volume and rising about a half tone, held for a moment and ending in a slight diminuendo and a very slight drop in tone. At the

VIKITA CEREMONY OF THE PAPAGO (CONT.)

end of each, just before the tone stopped, a high pitched, clear, two syllabled call was sounded by a chorister, possibly by means of a whistle, which resembled a phrase of turkey or quail conversation.

During the first o-o-o-oh, the choristers raised the objects which they carried to armslength above their heads; during the second, they lowered them again to waist level. The dancers poised themselves at the end of the tune, and violently shook their hips during each o-o-o-oh poising again at attention between the two. The chorus repeated the song several times while standing in line, then trotted around the enclosure in silence, preceded by the running dancers, and entered it, giving their objects back to the old men and receiving new ones.

The objects which they carried varied with each period of dancing. No order or sequence in the distribution was noticed, though the cotton covered triangles, described below, were carried at intervals. These objects were, variously, slender wands 18" long or so, painted red with white banding; similar wands with desert grasses, possibly Indian wheat, tied around them at the top; slender wands, red, with balls made of raw cotton, about 4" in diameter, formed on the upper end, and with zigzag brown lines radiating from the top center and running down the sides; isosceles triangles held upright, the downward extension of the two long sides serving as handles, and the triangles filled in solidly with raw cotton, with a zigzag brown line on the front; husked ears of corn.

The chorus also carried, during one period, a flat, stretcher-like framework covered with white cloth, about eight feet in length, with rounded upper end, made by lashing light cross pieces to an outside frame. This was carried upright by several choristers, and the other choristers took sahuaro fruit-gathering sticks from the sides of the enclosure where they had been placed, and supported the frame with these hooking them over the top. These poles were about twelve feet long, with a short stick crossed near the top at an angle, the whole painted red. When the period ended, these poles were stuck back vertically into the arrowweed walls of the enclosure.

This dance lasted possibly an hour and a half. Towards the close, the old men inside brought out bundles of the objects, wrapped in burlap or blankets, and placed them in the wagons. They also brought out several bundles of clothing belonging to the dancers and put them also in wagons. Men also brought out gourd vessels, painted white with red designs trailing from the mouths, and placed them in the wagons. Several of these were wrapped in sacking.

At the close of the dance, the choristers took the cloth-covered framework and arranged themselves about it as if carrying a stretcher. The dancers grouped themselves at the forward end of the chorus, carrying the sahuaro poles, and they all set out down the road to old Santa Rosa, to the southeast a couple of miles. While the chorus and dancers

VIKITA CEREMONY OF THE PAPAGO (CONT.)

were forming thus in procession, boys and men, not in costume, brought out bull roarers, and these formed the vanguard, keeping the bull roarers whirling continually.

These bull roarers consisted of two pieces of wood, each about 18" long and about $\frac{1}{4}$ " thick, an inch wide at the upper end and two or more inches wide at the outer end, which was cut to a short point. The pieces were attached to each other by a heavy cord five or six feet long. The sticks were painted, usually with red ochre, with geometric designs in white on them, of hachuring, diagonal lines, diamonds, or bands. A few were painted with white clay, with red decoration.

The wagons fell into line behind the dancers and chorus, some twelve or fifteen of them, dogs and colts trailing along, young bucks on horseback riding up and down. A little over half way to old Santa Rosa the procession halted, and the dancers and chorus marched into a field to the left of the road. Here they rested a few moments, while the men got water to drink, and then sang and danced there in the field for about half an hour. Dancers and choristers alike broke ranks as they pleased and went into the brush, resuming the dance when they returned. The chorus did not march during this dance, although the song was the same as before, but formed in two lines facing each other, one on either side of the framework, which had been laid on the ground. The dancers were grouped just to the north of the ranks. We did not see whether or not the chorus carried any objects during this dance. At the end of this time the procession formed again and resumed its way, preceded by the men and boys with bull roarers.

Just before reaching the plaza at old Santa Rosa, the procession stopped, the wagons going on to the dance ground, the dancers and chorus remaining in formation while girls came running with blankets. They held the blankets up, apparently to shield the dancers from view of the crowds in the plaza. After a wait of half an hour or so, the dancers moved to the north edge of the plaza and halted again, still screened by the blankets, which were held before and about the group during this last short march.

Another group of dancers was gathered on the opposite side of the plaza 300 yards or so to the south, screened behind brush.

We were told by Papagoes that a similar dance was held that noon both in old Santa Rosa and in new Santa Rosa, and that both the Anegam and old Santa Rosa groups were now waiting for the new Santa Rosa group to arrive. During this wait the Anegam men lay down on the ground and rested.

The dance ground here was laid out between two NW-SE trending lines of houses, a hundred or more yards apart. A square enclosure of cane and tall arrowweed, neatly tied between horizontal poles into

VIKITA CEREMONY OF THE PAPAGO (CONT.)

walls about eight feet in height, had an entrance in the centre of the east side, and was oriented so that the sides lay NxS, ExW, respectively. This enclosure was about 30' along each side. Directly west of this and probably fifty feet away was a lean-to open to the east and west, measuring perhaps 12' across the entrance, and 10' deep. Between this and the enclosure was the dance ground proper, about which the chorus marched in a circle about 30' in diameter, as described below.

In front of the entrance to the enclosure, distant 30' or so, was a great pile of mesquite logs. About three P.M. small groups of gaily dressed women and girls, one group from the Anegam villagers and one from the old Santa Rosa, ran to the pile of wood. Each woman took up a piece and ran to the enclosure and left it, running out and making a complete circuit of the enclosure before running off the dance ground to her own people. This was done to the accompaniment of much laughter and gaiety among the crowds of women and spectators. Later, just before four P.M., and the beginning of the dance, after the new Santa Rosa dancers had arrived, this was repeated.

Meanwhile, many wagons had arrived, ranging in a great crescent about the west side of the dance ground, with the lean-to as center. School busses full of children from Sells Day Schools drove up, and several truck and trailer loads of Papago cotton pickers, brought in by white men from the direction of Casa Grande.

At four P.M. the new Santa Rosa dancers and chorus, who had arrived shortly before, drew up in front of the enclosure, where they were joined by the local dancers and chorus. The Anegam group moved up to within 30 yards or so and halted. A crowd of men, mostly young men and a few boys, assembled, all with bull roarers, and raised a tremendous noise. The combined groups of dancers then trotted and ran around the enclosure several times, accompanied by the wielders of the bull roarers as well as by men and boys who ran alongside, laughing and shouting. The dancers clowned all through this, shaking their bells and cutting up in comical fashion.

The choruses of the two groups dashed inside the enclosure, without running around it, carrying their equipment, and remained inside. The Anegam group joined in after the others had made several circuits, the chorus going directly inside the enclosure.

Then, the choruses inside, the dancers outside, singing began within. It seemed the choruses remained separate inside the enclosure, one in the SE quarter, one in the NE, and one in the NW quadrant. These choruses sang the same song as that sung at Anegam, but not in unison, each chorus singing independently of the others. The masked dancers outside stationed themselves in groups, one outside each corner within which a chorus was singing, and kept time, shuffling and stamping and jumping, to the chorus opposite which they were stationed. Dancers

VIKITA CEREMONY OF THE PAPAGO (CONT.)

from each group continually broke ranks and ran to the next, hesitating as if to catch the new rhythm, and joining in, only to break again in a moment or so. When darkness fell, most of the dancers were gathered on the north side of the enclosure near the NW corner, although a few were at each of the other two corners. This was all accompanied by much clowning and grotesque pantomiming, with hilarity in the crowd of on-lookers, now numbering several hundred Papagoes.

After dark, about eight P.M., the number of dancers seemed to diminish, and many were running about over the plaza and among the crowds. We were told by a Pima that the masked dancers did individual dances before the camp fires of many or all of the Indian families gathered there, and asked for food. This received, the dancer put it in his pouch and ran with it back to the enclosure, where it was placed in the common supply for the dancers during the night. Within the enclosure six fires were blazing, about which throughout the night the dancers and chorus and onlookers warmed themselves. At four A.M. the dance stopped, the performers presumably getting some rest, and was not resumed till just before seven A.M., at sunrise. During the early hours of the morning, at least, only one chorus was singing, and few dancers were about.

The plaza was a colorful place Friday night, scores of camp fires blazing, masked dancers jingling about among the wagons and here and there in the darkness of the plaza new arrivals, in wagons and in cars, coming up and making camp, the singing continuous, with the repeated o-o-o-oh at the end of the tunes affecting us much as does the never-ending beat of the drums at other Indian ceremonies.

Before daylight the camp fires were burning brightly, lighting the great crescent of closely spaced wagons; a few babies cried here and there, and the soft pat-pat of women making tortillas was a monotone underlying all the varied sounds of the encampment. Horses whickered in the fields about the village, and now and then a mule brayed. The dancers were silent, save for an occasional jangle of bells as some dancer joked and postured for his friends about a fire.

The sun rose behind clouds, a brilliant dawn turning to a grey, cold morning. As the light grew stronger, but before the sun was surely above the desert ranges, the dancers began to gather in front of the enclosure. Just before seven A.M. they marched, jangling bells and cavorting in high spirits to the dance ground between the enclosure and the lean-to, and there broke ranks and gathered with the crowd of spectators on the south side of the dance floor. Visitors came running from all sides to the spot where they were, and we could not find out what was happening. A Papago, camped beside us, suggested that a fight was going on, but the crowd was quiet and orderly, though interested, and we were inclined to discount his opinion. Soon, however, the dancers broke away from the crowd and ran to the entrance of the enclosure, where they waited for the chorus to appear. There were now two choruses only,

VIKITA CERIMONY OF THE PAPAGO (CONT.)

one which was to march out with the dancers, and one which was to remain inside. Singing began, the same song as that sung during the night, and one chorus, of about fifteen singers, in elaborate costume, emerged from the enclosure and, preceded by the herd of dancers, marched to the dance floor. This chorus sang independently of the chorus inside.

Meanwhile, from somewhere came two score or more of men, all in army overcoats, who lined up against the west side of the enclosure outside, some standing, some sitting, as though they were privileged persons occupying reserved seats.

The chorus carried, the first time, the triangular forms of cotton, representing, we were told, clouds, the brown zigzag lines signifying lightning. The costumes of the chorus were, in the main, as follows. Each man or boy, most were in their teens, was stripped to the waist, with bare legs and feet. They wore skirts brilliantly colored, both of cotton and of rayon, reaching to the knees. Many of these skirts had had panels in contrasting colors sewn to them, and one in particular had a vertical red panel on the left side of a blue skirt, with the four playing card symbols applied on it in blue. Several had Christmas tree decorations, tinsel, glass balls, etc., sewn to their skirts. Each chorister had, stuck in his belt behind, a pair of bull roarer sticks, nearly all of which were red, with white decoration. They all wore anklets of black material with cocoons sewn to them.

From the waist up the choristers were painted red, spotted all over with inch wide circular daubs of white clay. About their necks all wore bright silk rodeo neckerchiefs. One boy wore a mirror strapped across his chest with bright ribbons. Several boys wore strands of Christmas tinsel, like crossed bandoliers, over their shoulders. All wore the gourd masks, with the exception of the two little boys who wore the sacklike masks described above. These boys also wore skirts.

At the head of the chorus, which marched in single file except when several had to help carry floats, the two little boys trotting alongside near the head of the column, was a leader. This leader, a middle-aged man, was clad in a plain white tunic, belted at the waist and reaching to the knees. His legs were painted white, and he wore sandals; his arms were bare and painted white, his hands were black. About his head he wore a white band in which on the left side was stuck a long tail feather of hawk or eagle. The upper half of his face was painted black, and the lower half smeared with white.

This leader carried in the crook of his left arm a deep tray basket of Pima manufacture, about 18" in diameter, painted white and black inside and out in alternate eighths. In the basket was white meal, which held in place four sectors of short, dark turkey feathers, lying against the inside of the basket.

VIKITA CEREMONY OF THE PAPAGO (CONT.)

The chorus marched to the dance floor in single file, the leader, head bowed, in front. While the dancers, numbering about 34, grouped themselves near the center of the dance floor, the chorus halted facing south, on the north edge of the floor. Here they sang for a few moments, repeating the song more than once, the dancers jangling their bells at each long drawn out tone. Then the chorus marched again, still singing, making a complete circuit of the floor, while the dancers remained in the center, still dancing. This circle was about 35' in diameter. The chorus halted in front of the lean-to, facing east, and sang the tune through several times, possibly four in all. The leader, when the chorus had halted, walked back along the line, tossing a pinch of meal upon each one in turn. Then the chorus, ending the song, followed their leader in single file off the dance floor, marching along the south side of the enclosure and into it, while the dancers ran on ahead and waited for them outside, near the northwest corner.

Inside the enclosure, the second chorus, in similar costume, had been singing, holding the objects which the marching chorus was to carry on its next circuit. A number of times this chorus ended its song before the marchers had arrived, and waited in silence until they had entered. The outside group took the objects, and formed again at the entrance and began the march, resuming their song while the inside chorus received new objects from attendants and began the song also.

In the entrance of the lean-to, facing east, stood six people in costume, who apparently paid no attention to the dancers and chorus. Two girls in their teens, one younger than the other, stood side by side in the center of the entrance. They were flanked by two boys, one on each side, who in turn were flanked by two middle-aged men. The two men wore costumes similar to that worn by the chorus leader, were similarly painted, and held the baskets of meal. The two boys were nude to the waist, wore brightly colored skirts, and were bare legged and barefooted. The left half of their heads and torsos was painted black. Each wore a white head band with a feather stuck in the back of it. In their left hands each held a miniature bow and arrow, also painted black. The two girls wore ankle length skirts of bright material, one of brilliant green rayon, and were barefoot. Their arms and shoulders were bare, their upper clothing consisting of two wide ribbons or sashes crossed over the breasts and reaching the waist. The younger girl, in the green skirt, wore purple ribbons. These girls held in their right hands husked ears of white corn.

An old man who seemed to be attendant upon these four young people was dressed in blue denim trousers and coat, and wore a headband and feather. Inside the lean-to was a seated man in a white tunic and head band, with the lower half of his face painted white. His arms and hands were also white. He had in front of him several large bowl shaped baskets, inverted, and painted white. Throughout the morning he beat on one of these baskets with a stick, in slow even tempo, the beats about

DESCRIPTION OF PLATES 1 TO 6

- 1 - Member of the chorus
 - 2 - Objects carried by chorus and dancers
 - 3 - Dancer, front view
 - 4 - Dancer, rear view
 - 5 - Costume of chorus leader and of the attendants in the lean-to
 - 6 - Lean-to with attendants and four young people
-



PLATE NO. 1

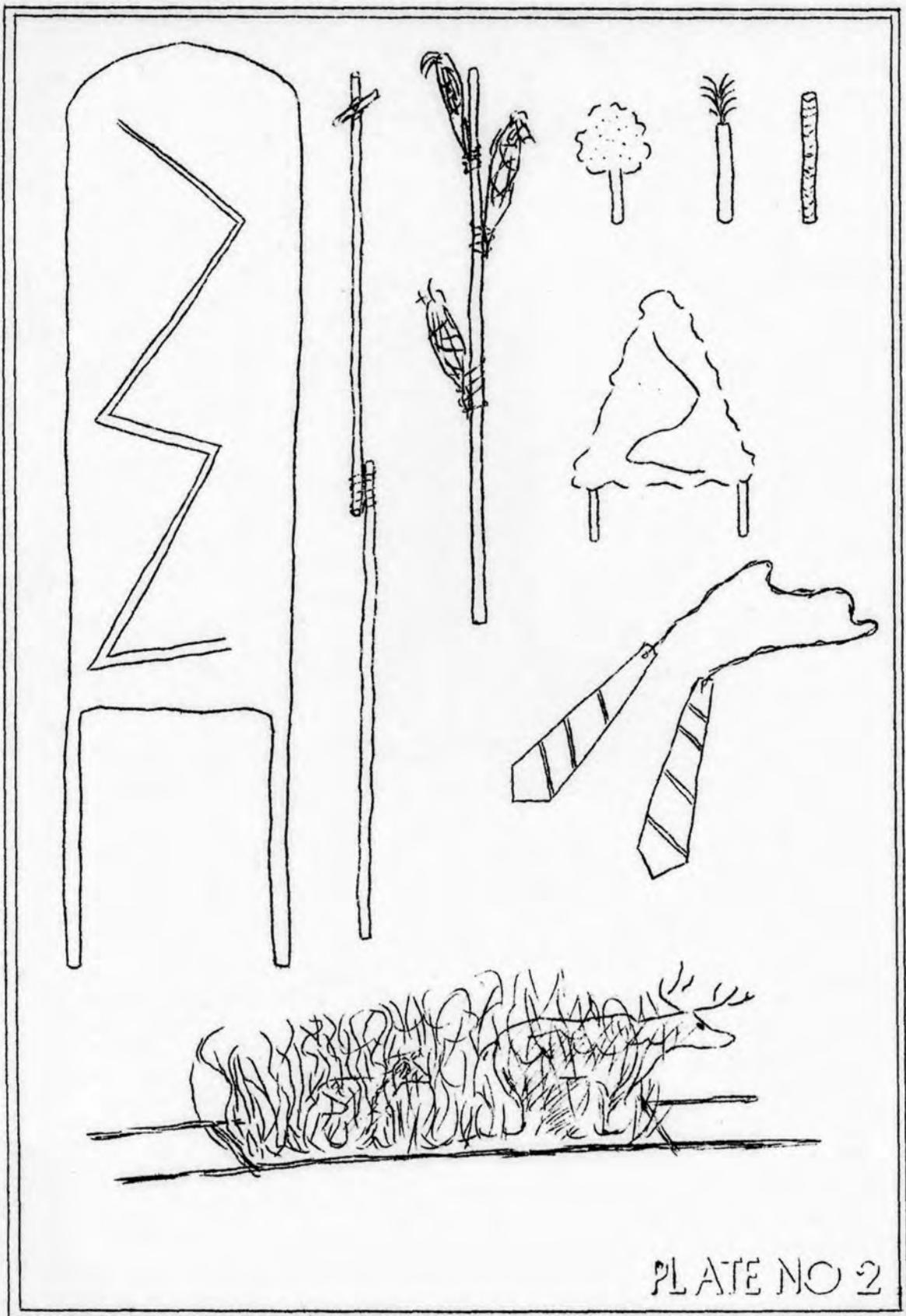


PLATE NO 2



PLATE NO. 3



PLATE
NO 4



PLATE NO 5

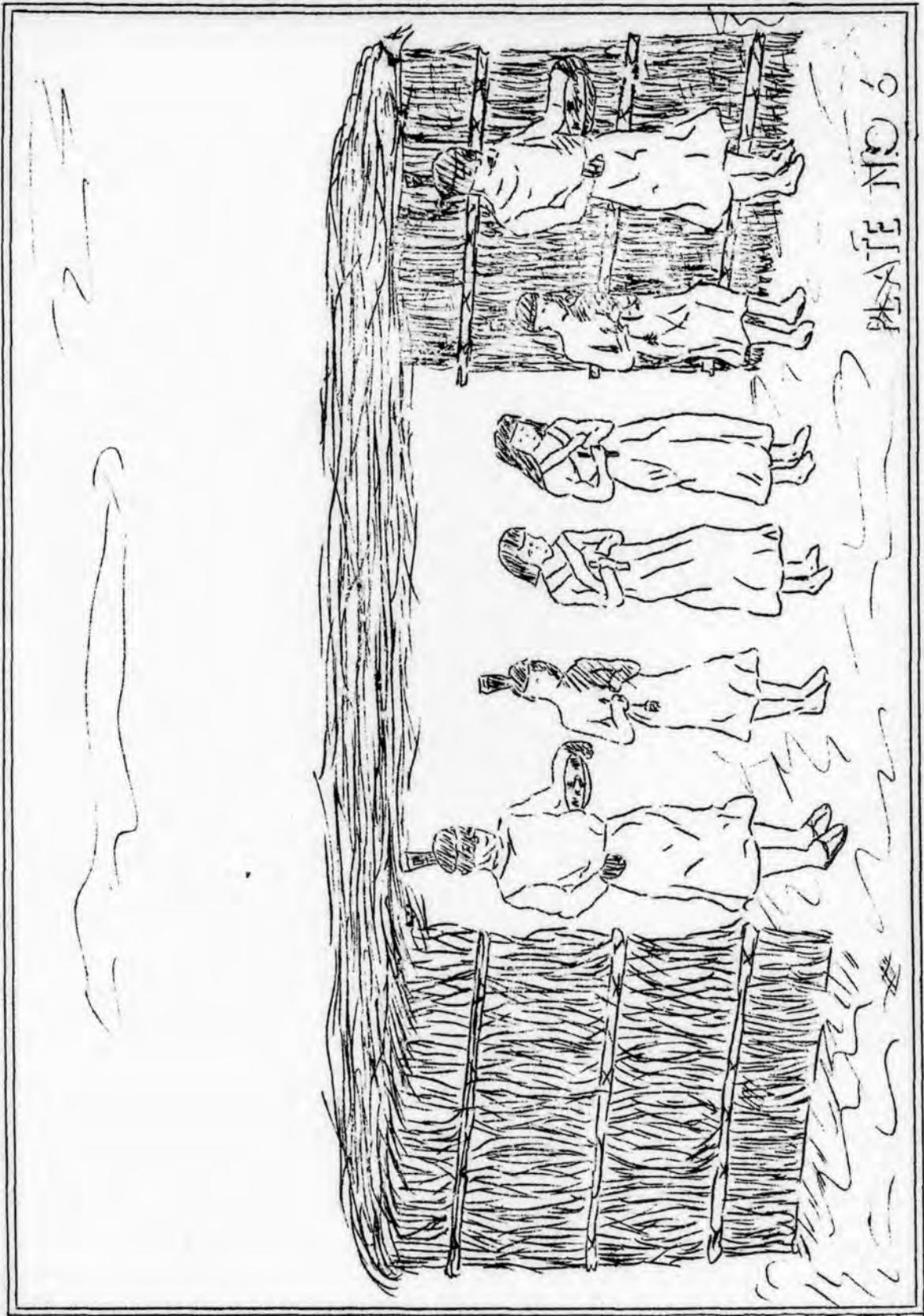


PLATE NO 6

VIKITA CEREMONY OF THE PAPAGO (CONT.)

four seconds apart. Throughout the afternoon he pulled a stick across a notched and concave piece of wood supported between two of the baskets, in the same tempo. He held the far end of the notched stick firmly against the basket with his left hand, and pulled the other stick toward him with his right. The movements were evenly spaced, but abrupt.

The two boys, arms stiff at sides, extended them slightly at one drum beat, and returned them to position at the next. The girls bent a little at the knees at one beat, and straightened at the next. The denim-clad attendant watched over these four like a hawk, correcting the angle at which the girls held the corn, or the boys their bows and arrows, tilting their heads up if they drooped, and wiping their faces carefully with a cloth every few minutes. These four, at intervals of possibly half an hour, were helped to a kneeling position by the attendant, where they remained, heads bowed and eyes closed, for perhaps ten minutes. At the end of this time the attendant carefully helped them to their feet again.

The men in white walked up and down at intervals in front of these four, and spectators were seen to walk with them on several occasions. What they or the spectators did we could not find out. Many of the people in the crowd watched these performers in the lean-to with great interest and respect, and the whole atmosphere of this part of the ritual was that of solemnity, in contrast to the clowning of the dancers.

During the morning, the chorus carried many different objects, including several elaborate floats. In addition to the objects carried by the chorus at Anegam, there were red staves about 6' long, with bundles of grass, resembling ears of corn, tied to them at intervals. Similar staves were carried at another time, with the addition of what seemed to be imitation corn tassels on the top of each one. Husked ears of corn were carried at least once. Each of these different objects was carried more than once during the day, notably the "cloud symbols" which were carried at more or less regular intervals.

The first float was a well stuffed deer standing on a stretcher-like framework of poles. The dancers prepared for his appearance with a great hullabaloo and much pantomiming, some crouching and aiming their guns, others pretending to set up blinds of grass, others stalking the deer and hunting for tracks. When the deer appeared, and during the marching, the dancers aimed at it with guns and bows or touched it with lances. The men with guns pretended to place the charges or to clean the barrels with their ram rods. The crowd applauded all this with much excited talk and many jests, answered several times by dancers who ran at the crowd and scattered the onlookers with fierce charging and war-like gestures. The chorus carried tiny bows and arrows painted red, held at the draw, each chorister aiming his arrow upwards to the left.

VIKITA CEREMONY OF THE PAPAGO (CONT.)

Later, after the chorus had marched several times with small objects, another float appeared, this one long, with four deer in single file upon it, with short arrowweed tied to it in bunches to simulate brush. These deer were made of dried deer skins and heads stretched over frameworks of sticks.

Another float, some time later, bore a deer and two fawns, in single file, partially concealed by clumps of arrowweed. Beneath the deer on the float was a small hemisphere of black cloth, about 12" high, and on top of this perched a bird cut out of thin wood and painted black. It had a humped back and large hooked beak.

The last float of this kind bore one deer, a shaggy old brute with tremendous grizzled head, the hide stretched crudely over sticks, as was done in the case of the two preceding deer floats.

The dancers went through the same performance with each one of these floats, and the chorus carried bows and arrows with each. Beside the deer floats, there were several others. One, requiring six choristers to carry it, was a long stretcher on which was a model of Baboquiviri, some four feet long and two feet high, with the peak standing a foot above the sharp ridge. This was of cloth stretched over a frame, painted an uneven green color. Behind the mountain, one on each side, were two pyramids of white cloth, about a foot high. In front of the mountain, and on the same float, was a large black hemisphere, some two feet in diameter, on which perched a bird, possibly a foot high, cut out of a flat piece of wood. This bird also was humpbacked and had a large hooked beak. The wing, beak and legs were black, the rest of the body and the head were white. The chorus carried triangles in this procession.

One float, coming later, was a representation of Santa Rosa mountain about three feet long and twenty inches high, sharp ridged. This was painted a dirty grey color and on it were sahuaros about ten inches high, painted blue. Just below the peak, on the side of the mountain was a human figure in black, cut out of flat wood, square-shouldered and square-headed, about six inches high. Its arms were straight and held out from the sides, and its legs were bent out at the knees, feet apart.

Another float consisted of a roughly hemispherical frame, covered with brown cloth, about 3' long and 2' wide, on top of which stood what seemed to be a clump of grass about 6" high. A similar float, but smaller, a foot and a half in diameter, was carried later by one man of the chorus, and this had what seemed to be two green corn leaves sprouting from the top of it. What the choristers carried with these floats we did not notice.

VIKITA CEREMONY OF THE PAPAGO (CONT.)

In the afternoon a white cloth covered framework similar to that carried at Anegam was brought out. This was about ten feet high and four feet wide, with a bilobate top, each lobe the same size, one of which had a smaller lobe at its edge just below the top. The high wind which came up before noon made this an extremely difficult thing to carry, and the dancers, propping it up with sahuaro sticks, were hard put to it to keep it from blowing away. In this period the dancers discarded their bows and arrows, took up the sahuaro fruit gathering poles and held the frame upright by hooking the short sticks at the end of the poles over the top of the frame. A similar framework was brought out a little later, probably the same one carried at Anegam.

After this a float bearing a blue mountain about 3' long and 18" high appeared. Triangles and semicircles of white paper pasted on light stick frames were fastened upright about and on the sides of the mountain. The choristers carried triangles behind this float.

The last float observed was a hemisphere on a stretcher, some four feet in diameter, solidly tied in with raw white cotton, and with brown zigzags leading from the top centre down the sides. This was almost demolished by the wind before the procession was completed. The choristers carried the wands with the cotton balls on the upper ends during this period.

About ten A.M. an east wind came up, blowing in gusts, and increasing in velocity as the day wore on. The dust blew in dense clouds, along the north and south sides of the enclosure, across the dance floor and directly into the lean-to. How the four young folks there breathed at all was beyond our understanding. The old man was continually wiping their faces, especially their eyes, with his cloth. In the afternoon the dust was so heavy and thick, swirling in stinging blasts, that we could not see the dancers eight feet away from us. A little girl sitting on the front bumper of a car nearby went to sleep and fell off on the ground without waking up. An hour later she was drifted deep in sand, and we were afraid she would suffocate.

About 11:30 A.M. the chorus entered the enclosure and remained inside, and we were conscious of a renewed interest and vitality in the crowd of patient and dusty spectators.

A dancer ran around to the dance floor and there, with a stick, described a circle on the ground, about 8' in diameter, leaving a narrow opening on the east side. He then returned to the group, waiting on the east side of the enclosure. Then several dancers ran to the dance floor, each carrying a gourd, painted white, with red lines trailing from the rims, each with a stopper of wadded cloth, and very carefully set them upright around the circle, just inside the line, scooping out a hollow in the ground to hold each gourd upright. These men entered the circle on hands and knees, head down, as though crawling

VIKITA CEREMONY OF THE PAPAGO (CONT.)

through a low doorway. Other dancers, by twos and threes, did the same, while the dancers already on the floor postured and clowned and apparently made fun of the newcomers. When most or all of the dancers had brought in their gourds and set them up, the whole group ran around to the front of the enclosure and halted for a moment. Then the group again ran to the dance floor, one man carrying an effigy of a deer, made by stretching a small deer hide over a stick framework, with antlers tied to its head.

This the bearer set on the gourd just south of the circle, and the dancers stalked and killed it with lances. This was accomplished with the most grotesque pantomiming, the dancers creeping up on the deer and spearing it. The crowd of spectators enjoyed this tremendously, cheering on the hunters and offering advice. Meanwhile the high gusty wind kept blowing the gourds over and rolling them on the ground, so that the dancers had to chase them and put them back in place. A little yellow puppy, very much excited by the uproar, dashed into the milling dancers, barking and chasing them. The dancers turned on the pup and pretended to hunt it, finally chasing it off, brandishing their weapons and leaping into the air. This also was much enjoyed by the onlookers.

After the deer had been dispatched, it was skinned and divided, still in pantomime. Then the dancers gathered in a great circle, tangent to the east side of the circle inscribed on the ground, and sat down. The ensuing few moments were apparently spent swapping lies about their hunting exploits, one holding his hands apart to describe the length of his catch. Another took a Bull Durham sack from his pocket and pretended to roll and light a cigarette. Others reached over and took up gourds, only to be stopped and apparently scolded by two men who sat in front of the entrance to the circle of gourds.

Soon, however, the men guarding the gourds turned and on hands and knees took them up and passed them out through the entrance. They were banded about the circle of seated dancers, who removed the stoppers and pretended to drink deep from the vessels.

Now occurred a drunken riot in pantomime, in which the dancers became drunker and drunker, and the action more and more ridiculous. One man imitated a drunk sick to his stomach, with appropriate motions, collapsing on the ground and rolling about, helped up by other drunks who then collapsed with him. Others performed various obscene gestures, mimicking the discharge of natural functions, and evincing a rather considerable knowledge of various perversions.

One by one the drunken dancers staggered off the dance floor, breaking into a run when outside the ring of spectators, and going to the enclosure. Last out were three, apparently boon companions, who had a most difficult time helping each other off the floor, complicated by the puppy, which dashed about them, yapping and snapping

VIKITA CEREMONY OF THE PAPAGO (CONT.)

at their heels, quite terrifying them.

Now, the time being twelve noon, the crowd dispersed to its various camps, and ate lunch, and for about an hour no dancers or choristers appeared.

About one P.M. a few dancers straggled out of the enclosure, as if to warm up before the afternoon performance, and by two P.M. the dance was in full swing again. The wind and dust had increased, and a heavy black cloud was moving up from the southeast, from the direction of Baboquiviri.

The dance from two until four P.M. employed no new floats or objects other than those noted above, but about 3:30 the young people in the lean-to, with their attendants, disappeared. The crowd began to disperse, and an old Papago told us that rain, for which they had been dancing, was coming soon, that the dance would end before five, and that after the dance, in the evening and night, everyone would get drunk. We left at four, and as we left the crowd of spectators, the dancers were coming out carrying hoes and rakes, the choristers carrying sticks on which were imitation ears of corn. The rain was almost upon us then, dense clouds of dust preceding it and blotting out the entire scene.

The dust was so heavy in the moments before the rain began that we had to stop our car, unable to see the road, or even houses and corrals within three feet of us. Then the rain started, and in this rain we proceeded homeward.



MORE ABOUT THE VIKITA CEREMONY

By Charlie R. Steen

During the summer of either 1922 or 1923 Mr. Frank Pinkley and Mr. George Boundey were camping in the Papago country and were told by an Indian trader that a large amount of old Papago ceremonial material was cached northeast of the village of Santa Rosa. The two men decided to look for the cache and left Santa Rosa by the road which leads to Anegam. A mile north of the village they left the road and followed a narrow trail which lead east through the mesquite thickets, and at a distance of about a half mile came upon the remains of a brush enclosure similar to that which was used at Santa Rosa in 1836. In the immediate vicinity of the enclosure was found much paraphernalia which the Papagos claimed to have been used during the Vikita; some had been shoved under scrub mesquite and some deposited in the forks of the branches of taller trees. Apparently, at the conclusion of the dance, the Indians had secreted their costumes and other objects which had been used where they might be hidden from prying eyes; no attempt had been made, however, to prevent deterioration for everything was exposed to the elements and badly weathered.

The dance at this enclosure, according to the best information available, had been held in 1911. Several facts suggest that the Indians had intended or desired that this equipment be used only once; and that when the time for another ceremony arrived that a new enclosure and new accouterments for the dancers be prepared; these are: The enclosure had not been kept in repair (and apparently had seen no more use), the costumes and devices carried by the dancers had been discarded and at least two dances had been held since this dance area had been used.

The Papagos of both Santa Rosa and Anegam felt a sort of half reverence for the site but when Pinkley and Boundey asked permission to gather specimens of the material lying about no objections were made. Some time later, in fact, Indians from the Santa Rosa Valley expressed their satisfaction that the articles were being cared for. Their attitude seemed to be that although they were unable or unwilling to provide a place of safe-keeping for these ceremonial objects they were glad to see someone else do it.

Accounts of the Vikita (Pima-Navitco) are rare in ethnologic literature. Lumholtz (2), Russel (5) and Mason (3) have recorded second-hand descriptions or have described collections of ceremonial material which had been used in the dance, but as far as we have been able to determine there are no written accounts by an eye-witness. Frank Russel, in his paper on the Pima Indians, described the following objects or customs which were also noted during the dance of 1936 or which have a direct bearing on the ritual.

"The Papagos have a tradition that the gourd was introduced by Navitco, a deity who is honored by ceremonies at intervals of eight years - or if

MORE ABOUT THE VIKITA CEREMONY (CONT.)

crops are bountiful - at the end of every four years at Santa Rosa."
p 91.

"Dr. McGee has called the writers attention to the fact that the angle at which the hook stands (on the saguaro gathering stick) is of great ceremonial importance among the Papagos". p 103.

"During his stay among the Pimas the writer heard of but two wooden masks being in their possession. One of these was collected and is here depicted in Fig. 26. Dr. Hough called his attention to the fact that it resembles those made by the Yaquis of Sonora, and it is probable that the conception, if not the mask itself, was imported from the south along with the masked Navitco ceremonies, despite the assertion of its former owner to the contrary, because it represents a higher degree of skill in wood-working than the writer has seen done by a Pima. It is of cottonwood, perforated for the insertion of horsehair eyebrows, chin whisker, and two tufts in the center of each cheek, and is ornamented by an interrupted scroll and other lines unmistakably intended to be decorative. The mouth contains a half dozen pegs, giving a very realistic representation of teeth" p 108.

"Any shallow basket of sufficient size, such as are in common use in every household for containing grain or prepared food, may be transformed into a drum by simply turning it bottom up and beating it with the hands. In accompanying certain songs it is struck with a stick with rapid glancing blows." p 167.

"The notched or scraping stick is in very general use to carry the rythm during the singing of ceremonial songs. When one end of the stick is laid on an overturned basket and another stick or deer's scapula is drawn quickly over the notches the resulting sound from this compound instrument of precussion may be compared with that of the snare drum--" p 167.

"A disk rattle that has been used in the Navitco ceremonies was secured at the village of Pe-eptcilt. It is not a Pima instrument but whether Papago or Yaqui the writer cannot say. It contains two sets of four disks loosely held by wires passing through a wooden handle." p 168.

"From the same individual who owned the disk rattle the writer obtained a rattle that had been used as a belt during the Navitco ceremonies. It is made of successive layers of canvas, red cotton cloth, oil cloth and an old braided hatband, to which are attached by leather strings 21 brass cartridge shells.

"There are two sets of cocoon rattles in the collection that were worn in ceremonies. The cocoons were obtained from the Papagos or Yaquis of Sonora. They are of a specie of bombycid moth; their outer coverings

MORE ABOUT THE VIKITA CEREMONY (CONT.)

have been removed, and a few gravel have been sewed into each cocoon. There are seventy pairs of cocoons in one string and sixty-seven in the other." p 168-9.

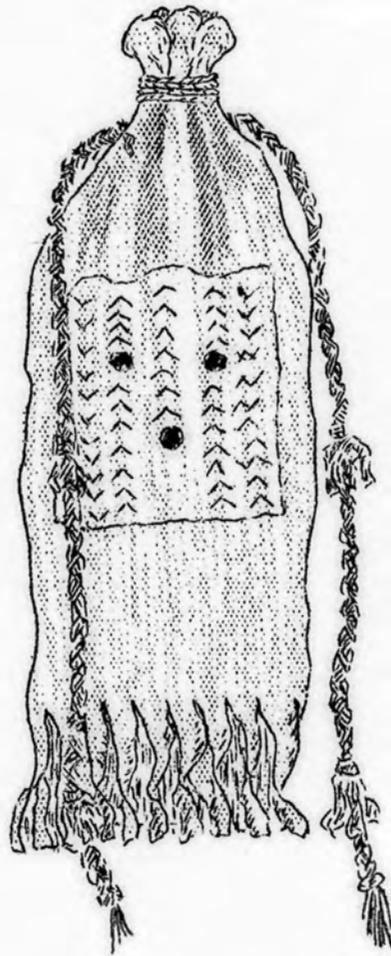
The Navitco of the Pima seems to have been identical with the Vikita but apparently has not been held for about two generations. A Pima at Santa Rosa claimed that in the old days his people had held a similar ceremony but that the words had been different. By 'words' he must have meant 'vowel sound'. George Webb, a Pima living at Gila Crossing, told Julian Hayden that he remembered hearing of such a dance from his father but that it had not been held for about fifty years.

Although Mason (3) did not see the Vikita of 1913 which he described he secured a very good description from the villagers of Santa Rosa. Mason is the only one of the several writers who mentions the parody of the tizwin festival which occurs at noon. Worthy of mention is the fact that a tizwin festival held every year in July, by Papagos living south of Sonoita, Sonora, is also known as Vikita (1).

In January, 1937, Miss Rosamond Norman of Ontario, California, furnished the Southwestern Monuments library with an account of the Vikita which took place during the first week of December, 1921. The dance which Miss Norman witnessed, and which she mistakenly called a Sun Dance, was held at Santa Rosa. She possessed a simple camera of the box type, and, with it carried under her arm, was able to take seven pictures of the dancers and the crowd. The description and pictures of the ceremony, as furnished by this correspondent, tally exactly with our own observations. While watching the dance she overheard a rancher from near Ajo say that a Papago cowboy had asked for the feathers of his Thanksgiving turkey so that a headdress could be made of them.

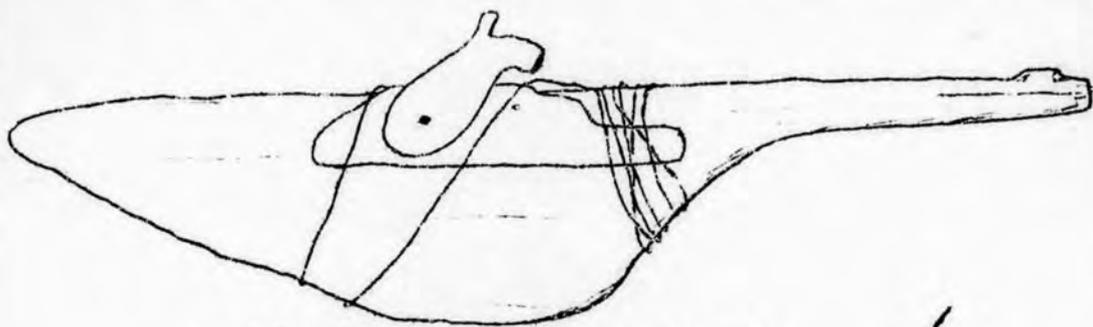
Description of Articles collected at Santa Rosa in 1922

- 11 Bull-roarers: These range in length from 40 to 60 centimeters and were made of flat sticks squared off at one end, which was perforated for a cord, and pointed at the other. In use two bull-roarers are tied to opposite ends of a six or seven foot cord and one is used as a handle while the other is being twirled. They have been painted on both faces, the designs consist of rows of bands or chevrons on a lighter background.
- 12 spears of wood. Average length 90 cm. The spears are simple round sticks, round at one end and painted red.
- 1 mesquite root bow. This is identical in character with the crooked bows carried by the dancers at Santa Rosa.
- 1 large gourd with the stem end sawed off. This has the same appearance as the gourds used during the parody of the tizwin ceremony. There is decoration on the specimen.

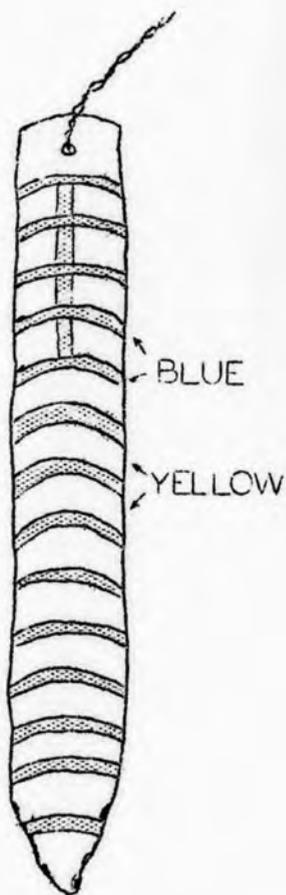


CANVAS MASK

SCALE $\frac{1}{5}$



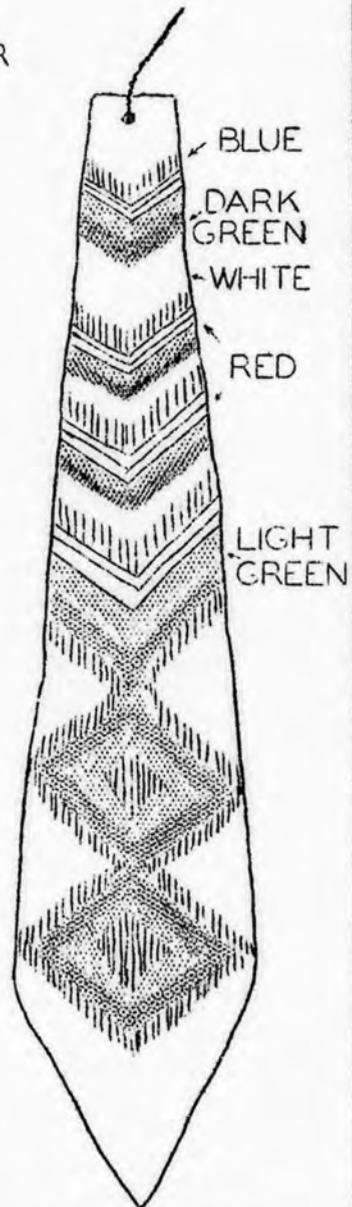
A REMOUNTED RIFLE HAMMER



BULL ROARER

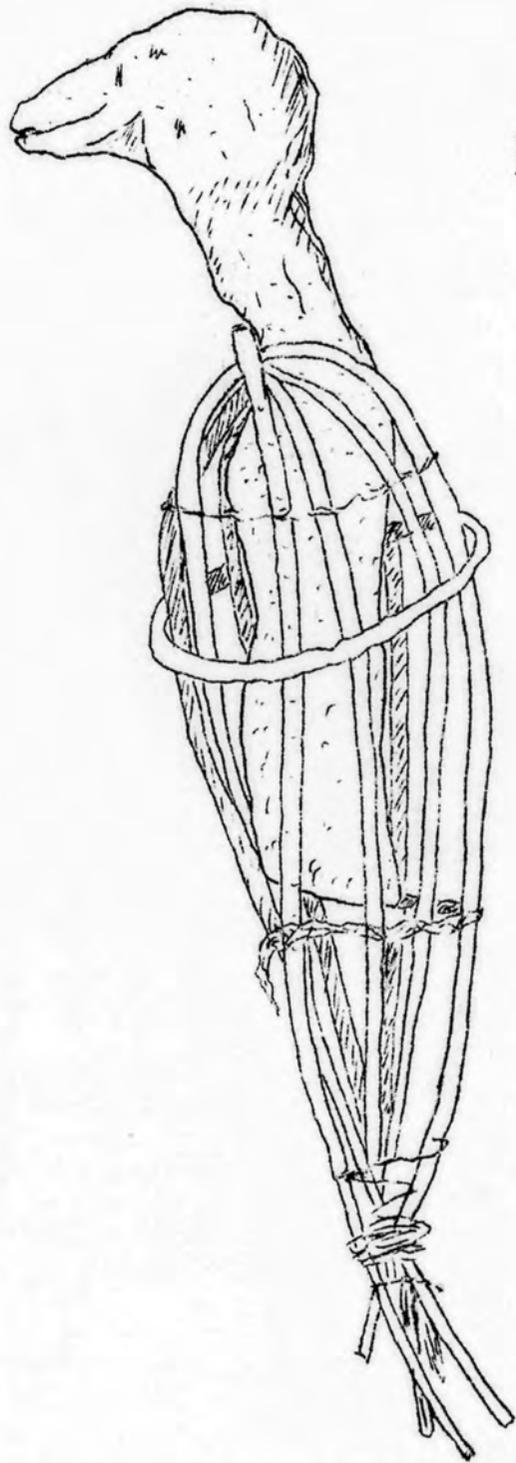


SPEAR



BULL ROARER

SCALE 1CM=1"



BIRD
EFFIGY

SCALE $\frac{1}{3}$

MORE ABOUT THE VIKITA CEREMONY (CONT.)

- 1 mammal skin, probably of a cat. The animal was shaved of all hair except for the whiskers, then skinned. The empty skin was then loosely filled with grass.
- 1 long string to which are tied primary feathers of a white chicken and secondary feathers of turkey. The feathers, 25 of each, are tied alternately at the quill end.
- 1 cow horn, in imitation of a powder horn. The skull end has been sawed off and blocked with a piece of wood. The pointed end has a .32 caliber cartridge shell tied to it.
- 1 effigy of a rifle. A short piece of wood, 32 centimeters in length and roughly shaped to resemble a gun, has a portion of an old percussion rifle hammer tied to it with baling wire. The hammer is from a percussion lock musket, army type, made at the Harpers Ferry Arsenal and dated 1857.
- 1 bird effigy - see plate
- 1 fringed canvas mask. The face consists of three holes for the eyes and nose and a large painted square in which is a design consisting of rows of small chevrons. This might easily have been a mask to which a head-dress of turkey feathers could be attached.
- 2 primary feathers of turkey, tied together at the quills.
- 1 fringed kilt of blue denim and white canvas.
- 1 anklet or garter of harness leather to which are sewed three sleigh bells.
- 2 thick bundles of turkey feathers.
- 5 batons painted white with a red spiral running their entire length. Length: 44 to 60 cm. Thickness: 2 cm.
- 3 batons, painted blue. Length: 40 to 55 cm. Thickness: 2 cm.
- 1 crude dagger carved from wood. Length 26 cm. no painting or other decoration.
- 2 strips or belts of cotton cloth to one side of which feathers were sewed. Some of the cotton used in the cloth is apparently of native spinning and dyeing (brown) while other threads are undeniably of commercial manufacture. The feathers seem to have been white and were dyed a deep purple with a dye which has not yet been identified. These belts or straps are 6 cm. wide and 82 and 94 cm. in length. A few threads of the cloth were sent to the Ethnobotanical Laboratory

MORE ABOUT THE VIKITA CEREMONY (CONT.)

of the University of Michigan but not much was learned, chiefly, I think, because not enough material was furnished. These small pieces of cloth are quite interesting and as soon as more is known about them a descriptive paper will be prepared.

Duplicates of practically everyone of the items listed above were recognised in the costumes and paraphernalia used by the dancers at Santa Rosa in 1936.

Summary:

The conservative nature of the Papago is evident upon comparing the earlier written accounts of the Vikita with the ceremony which we witnessed. For the past thirty years observers have cried out that each succeeding Vikita would probably be the last held, yet the dance of 1936 seems to have been no different than any other unless one counts the larger percentage of articles of white manufacture which were used as adornments.

The astonishing thing which we noticed was that after nearly three hundred fifty years of association with Jesuit and Franciscan missionaries there is not a single phase of the ceremony which might suggest Christian influence. It so happened that the subject of borrowing of religious practices was discussed early in the day and all three of us were on the watch for an element of christianity to appear.

The Papagos seem to share with the nomads of northern Mexico the practice of destroying or abandoning ceremonial equipment after it has served its purpose. In this connection, the turkey feather headdresses furnish a puzzle. The canvas mask in the Casa Grande collection is almost certainly the mask worn by a dancer, minus its crown of feathers. Lumholtz collected two complete headdresses which suggests that these are sometimes preserved.

The best information concerning the four youths in the ramada west of the dance plaza was that this portion is a modified representation of a family, a warrior of which had either been killed by enemies or had killed; our various informants were very hazy on this point. During the old days this rite served as one of the purification ceremonies. The old man who tended the four was necessary because during the dance they may not touch their bodies with their own hands. These youngsters must fast during each day of the performance.



MORE ABOUT THE VIKITA CEREMONY(CONT.)

Bibliography

1. The Papago Ceremony of Vikita, by Edward H. Davis. Indian Notes and Monographs, Vol. III, No. 4. Museum of the American Indian, Heye Foundation, 1920.
2. Lumholtz, Carl - New Trails in Old Mexico. New York, 1912.
3. Mason, J. Alden - The Papago Harvest Festival. American Anthropologist, Vol. XXII, No. 1, N.S. 1920.
4. Norman, Rosamond - Letter of January 5, 1937.
5. Russel, Frank - The Pima Indians, Annual Report, Bureau of American Ethnology, 1908.
6. Spier, Leslie - Yuman Tribes of the Gila River, Chicago, 1933.



ON THE MIGRATION OF ATHABASCANS INTO ARIZONA

By Charlie R. Steen, Jr. Archeologist

Recently Earl Jackson and myself had some correspondence in regard to the length of time during which the Apaches have lived in what is now Arizona. There is a pretty wide spread belief that the Apaches and Navajos have occupied their present ranges over a long period, but such is not the case, as is borne out by observations of the early explorers of the Southwestern United States. Thinking that a short discussion of the situation might be beneficial to men at other monuments, it was decided to run the arguments in this report.

Following is a quotation from a letter by Earl Jackson:

"Before writing the two page paper, however, I must confess that on one point of your criticism I am convinced, to put it in the parlance of the proletariat, you are 'all wet'. You say 'It is pretty generally conceded that there were no Athabaskans in what is now Arizona until the middle of the Seventeenth Century'.

"Where I went to school I was taught to believe Navajo offshoots probably entered Arizona about 1200 A. D. Of course, I assume you must have access to much more recent theories. I should be very grateful if you would tell me where I can read these authorities who ascribe a 17th century entrance for the Apaches.

"In addition to the incessant occurrence of legendary references to the cliff dwellers by the Apaches of this region (which information is, I grant, to be taken with a grain of salt) we have two things in our museum which present mighty strong arguments for a meeting of cliff dwellers and Apaches.

"These two things are baskets. In a cave near here, on a level with cloth garments of the cliff dwellers, was found a well preserved burden basket, of a plain weave but definite style. A few years ago we bought a modern burden basket from an Apache Indian. It is exactly the same weave and peculiar style of the prehistoric specimen.

"In a sub-floor burial just west of Montezuma Castle was found the skeleton of a child of about 8 years. Over its face was a coiled basket of exactly the same material, shape and weave as common Apache baskets of today.

"To me, the evidence presented by these two instances of the baskets is: either the Pueblo Indians contacted the Apaches and borrowed their basket type or the Apaches contacted the Pueblos and borrowed their basket type.

"But if the Pueblo people left the Verde in the 14th century, they

MIGRATION OF ATHAPASCANS INTO ARIZONA (CONT.)

could not possibly have contacted the Apaches, if, as you argue, they did not appear until the seventeenth century."

As regards the Apache, Marcos de Niza, the first European to cross the present Apache country in Arizona and New Mexico, makes a point in claiming that the region between the Gila River and the Zuni villages was entirely uninhabited. F. W. Hodge, in the recently published History of Hawikuh, says:

"Having reached the last of the Sobaipuri settlements, which he estimated to be 112 leagues from the place where he first heard of Cibola, the friar rested three days. He was now at the mouth of the San Pedro or on the Gila nearby. Taking possession of the valley, he started to cross a totally unoccupied country which the Indians informed him would require a march of fifteen days, and that at its end Cibola was situated. This 'despoblado', or uninhabited region, I take it, was the country between the Gila in Arizona and the Zuni pueblos in New Mexico, later occupied by various bands of Apache." (page 19).

In a footnote to the above paragraph Hodge gives this information:

"Bandelier contends that the region was inhabited by the Apache in the first half of the 16th century, but of this there is no substantial evidence. It is true that in 1541 Coronado met the Querechos, identified with Apache on the Texas plains, but the chroniclers of his expedition make no mention of them in the present Arizona and New Mexico, through which they passed, although they were found on the Pecos by Chamuscado in 1581 (Mecham, 284). The first reference to the westward encroachment of the Apache, under the name Querechos, "who are like the Chichimecos," is made by Diego Perez de Luxan in his journal of the Espejo expedition in 1582-83, when a band of them had settled near the site of the present pueblo of Laguna. These may have been the same Indians as those mentioned in documents pertaining to the entrada of Juan de Oñate in 1598-99, and by Fray Alonso de Benavides as Apaches de Navajo. When it is considered that Coronado and his chroniclers noted every Indian tribe that came under their observation or of which they heard, and that the expedition passed directly through the later Apache country of Arizona, only to find it uninhabited, there is little likelihood that the Apache had migrated from the southern plains as far westward as Arizona during the first half of the 16th century. The same may be said of that Apache division which later became known as the Navaho, for Coronado sent two parties from Cibola to the Hopi villages and to the Gran Cañon of the Colorado, respectively, without noting any unsettled

MIGRATION OF ATHAPASCANS INTO ARIZONA (CONT.)

Indians during their journeys. The despoblado referred to by Fray Marcos is consistent with the accounts of this region given by the chroniclers of the Coronado expedition in the following year."

Whatever one may think of Fray Marcos journal there is no doubt of Coronado's journey nor of the authenticity of the records which were made by the various chroniclers of the expedition. At that time (1540-1542) there were, apparently, no Apaches west of the Rio Grande and the Navajo were still in the valley of the Chama. Coronado's party, likewise, saw no signs of contemporaneous occupation between the time they left the Gila and their arrival at Hawikuh. The first mention of the Querrechos (Apache) is made during the first winter spent in the Rio Grande valley and neither of the two expeditions which Coronado sent into the present Navajo country saw Indians there with the exception of the Hopi.

The first written record of Apaches and Apache trouble for Arizona was made by the Jesuit Missionary Kino who related the difficulties of establishing missions along the San Pedro River because of raids by the nomadic Nadene, who by that time had established themselves in the mountains of western New Mexico and eastern Arizona.

In regard to legends or myths of local Apaches dealing with the cliff dwellings, the Apaches or Mohave Apaches of the Verde River are in reality Yavapai who have, apparently, lived along the Verde or west of it during a long period of time.