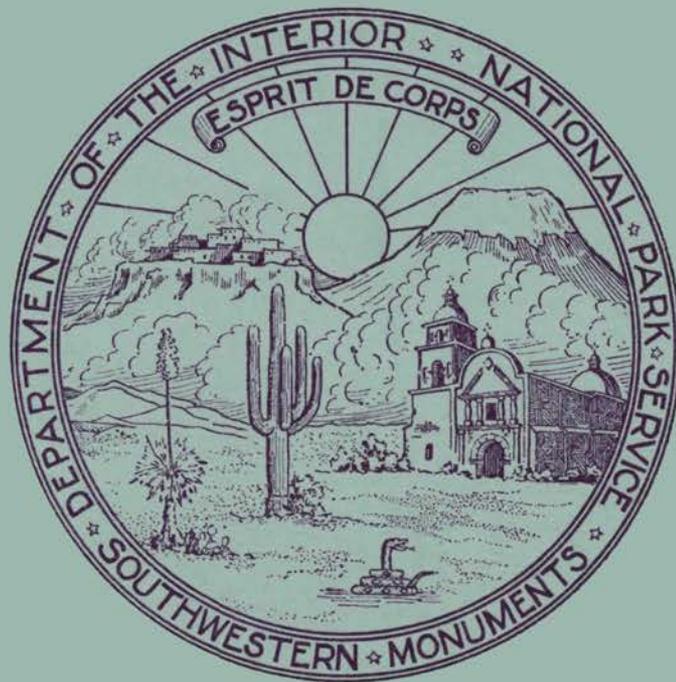


SOUTHWESTERN MONUMENTS

MONTHLY REPORT



J A N U A R Y - - - 1 9 3 8

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

CONCERNING THE SEAL OF THE S.W. MONUMENTS

By The Boss

We have many newcomers in our Service who probably have wondered about the seal which adorns the cover of our monthly reports.

The original design was pitched upon about nine o'clock on the night of February 9, 1935, by J. H. Tovrea, Hugh Miller, and the Boss who were holding a Taurian session in the engineering office of the administration building. Tov. struck out a rough draft and about everyone on the place had something to say about it the next day. Some changes were made in October, 1937, and the net result now stands on its merits.

Among the Southwestern Monuments, the geologic units are represented by the mountain in the background; the prehistoric units by the ruins on the mesa in the left middle ground; the historic units by the church in the right foreground; and the botanic units by the cactus near the center. Behind and over all rises the sun of our destiny; on its way up and nothing in the world can stop us so long as we hold our Esprit de Corps.

And, just to show that we are serious but not too serious, we put the rattler in the immediate foreground with the idea that we are good fighters all, gentlemen who do not strike without warning, but when we strike we mean business. Also there is the idea that it takes the wisdom of a serpent to operate this far-flung group of the most interesting units of the National Park Service on the money we get! In the slightly revised draft of last October, Tov. put some clouds in the middle distance for which he has an artistic alibi, but being interpreted I think they symbolize the clouds of doubt as to whether we are going to get through the current fiscal year after two impoundments have been put on our appropriation. He also put the two stories on the bell tower in allusion to the never-ending argument between Tov. and the Boss as to how the Tumacacori bell tower would have been finished; the Boss, being no draftsman, is unable to show it as it really would have been but closes with this Underwoodian shot, that it certainly wasn't going to be finished that way!

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SOUTHWESTERN MONUMENTS PERSONNEL

HEADQUARTERS, Southwestern Monuments, Coolidge, Arizona: Frank Pinkley, superintendent; Hugh M. Miller, assistant superintendent; Parke W. Soule, chief clerk; J. H. Tovrea, assistant engineer; Dale S. King, assistant park naturalist; Charlie R. Steen, junior park archeologist; Natt N. Dodge, junior park naturalist; Millard Singerman and Luis A. Castellum, clerk-stenographers; Ira G. Goodwin, CCC clerk; F. E. Stonehocker, machinist; J. L. L. Baehr, utility man.

<u>FIELD STATIONS</u>	<u>VISITORS, 1937</u>	<u>ACRES</u>
1. <u>Arches</u> , 1,000, Moab, Utah, Harry Leed, custodian- - - -		4,520.00
2. <u>Aztec Ruins</u> , 14,303, Aztec, N. Mex., T. C. Miller, cust.-		25.88
3. <u>Bandelier</u> , 14,380, Santa Fe, N. Mex., C. G. Harkins, cu.-		26,026.20
4. <u>Canyon de Chelly</u> , 1,422, Chin Lee, Ariz., Johnwill Paris, custodian - - - - -		83,840.00
5. <u>Capulin Mountain</u> , 26,100, Capulin, N. Mex., H. Farr, cu.-		680.37
6. <u>Casa Grande</u> , 33,661, Coolidge, Ariz., A.T. Bicknell, custodian; 472.50 David J. Jones, park ranger; Jimmie Rodgers, Stremple Coyle; Marvin Hale; and Teddy Savage, CCC guides and helpers.		
7. <u>Chaco Canyon</u> , 8,014, Chaco Canyon, N. Mex., L.T. McKinney, cu.	21,512.37	
8. <u>Chiricahua</u> , 9,228, Douglas, Ariz., Frank L. Fish, custodian; 4,480.00 Enrolllee Savoy and CCC Guides Homer Bennett and William Stone.		
9. <u>El Morro</u> , 2,298, Ramah, N. Mex., R.R. Budlong, custodian-		240.00
10. <u>Gila Cliff Dwellings</u> , 250, Cliff, N. Mex., no custodian -		160.00
11. <u>Gran Quivira</u> , 4,414, <u>Gran Quivira</u> , N. Mex., G.L. Boundey, cu.		610.94
12. <u>Hovenweep</u> , 500, in charge of T.C. Miller, Aztec, N. Mex. -		285.80
13. <u>Montezuma Castle</u> , 9,813, Camp Verde, Ariz., Earl Jackson , custodian; Jesse D. Jennings, park ranger,		520.00
14. <u>Natural Bridges</u> , 740, Blanding, Utah, Zeke Johnson, cust.	2,740.00	
15. <u>Navajo</u> , 329, Kayenta, Arizona, John Wetherill, custodian; 360.00 Milton Wetherill, park ranger-historian.		
16. <u>Organ Pipe Cactus</u> , 5,000, Ajo, Ariz., no custodian- - - -		330,670.00
17. <u>Pipe Spring</u> , 1,042, Moccasin, Ariz., Leonard Heaton, cust.		40.00
18. <u>Rainbow Bridge</u> , 300, Tonalea, Ariz., no custodian - - - -		160.00
19. <u>Saguaro</u> , 20,000, Tucson, Arizona, no custodian- - - - -		63,284.00
20. <u>Sunset Crater</u> , 10,000, Flagstaff, Ariz., P. Beaubien, in charge	3,040.00	
21. <u>Tonto</u> , 5,368, Roosevelt, Ariz., Thomas Onstott, in charge -	1,120.00	
22. <u>Tumacacori</u> , 18,472, Box 2225, Tucson, Ariz., L.R. Caywood, cu.	10.00	
23. <u>Walnut Canyon</u> , 10,772, Flagstaff, Ariz., Paul Beaubien, rang.	960.00	
24. <u>White Sands</u> , 91,532, Alamogordo, N. Mex., Tom Charles, cust. 142,987.00 James B. Felton, park ranger, Joe Shepperd, grader operator.		
25. <u>Wupatki</u> , 2,080, Flagstaff, Ariz., P. Beaubien in charge- -	35,865.00	
26. <u>Yucca House</u> , 400, Cortez, Colo., T.C. Miller, Aztec, N. Mex.-	9.60	
Total--291,426 visitors last year, 1,132 sq. miles; acres-		724,619.96

[Faint, mostly illegible text at the bottom of the page, possibly a duplicate or bleed-through from the reverse side.]

OPENING

By Superintendent Frank Pinkley,
Southwestern Monuments,
Coolidge, Arizona.

Dear Mr. Director:

The month of January has been one of unusually mild weather over our whole district. Where we should have had snow banks, our men are reporting flowers in bloom. This is fine for the winter visitors who have reached Tucson, Phoenix, and El Paso in large numbers, but the range men, who expect the winter rains and snows to fill the ground with moisture for the spring and summer grass, are none too pleased, nor are the irrigation farmers who look to the snows and rains of winter to fill their reservoirs.

Business seems to be holding up well though the copper mines are easing out men as copper prices go softer. There is some unrest among the cotton planters, the cause being the uncertainty as to what the Government is going to do about next year's crop. On the whole, the situation seems not at all critical in Arizona and New Mexico and business seems pretty good.

Few personnel changes took place during the month. We had to abolish two positions at the CCC camp at Bandelier in order to get enough funds to continue the construction we have under way there. One of the CCC guides from the spur camp at Casa Grande went over the hill and has been replaced with Teddy Savage who is breaking in nicely and bids fair to come up to the high average the other boys are setting in guide work.

Personnel living conditions were improved slightly during the month: a gas refrigerator went out for the ranger quarters at Montezuma Castle and some overhauling is being done in the naturalist quarters at headquarters. Bad housing conditions continued at Navajo, Walnut Canyon, and El Morro; bad water conditions continued at El Morro and White Sands. We are having a long delay in getting personnel papers through for the changes which must be made in order to fill positions at Aztec, Navajo, and Montezuma Castle. This delay caused us to be undermanned at Aztec for the month; the Custodian there having to put in considerable overtime.

We had a serious fire at Bandelier CCC camp, preliminary estimates indicating a loss in building of \$800 and of equipment about \$4,200. Boards of investigation and disposal have been appointed and have not yet had enough time to make a report. First report was made to us by wire while the fire was still burning and preliminary forms went through promptly to the Region and to you. We hope we can share in the emergency funds to replace this loss promptly, otherwise our work is going to be sadly handicapped in the construction we are carrying on at Bandelier.

OPENING (CONT.)

The spur camp at Casa Grande has been opening the adobe pit, making adobes and getting started on one building of the utility group. They have the concrete foundation in and about four feet of wall up. We get considerable amusement out of the requirements of the various branches and inspectors in regard to this camp. In a spur camp, which is supposed to be rather temporary, we now have a main house about 140 feet long by 20 feet wide and two other houses about 20 feet by 20 feet. We have electric refrigerators, electric lights, running water, sewage system, a heating plant, and hot water for shower baths, and are gradually catching up with the other requirements. We are now starting an educational service for these 24 boys. We have about 70-odd signatures for the various classes and will start with some 12 or 14 instructors. It seems like a lot of overhead on a spur camp; the requirements are pretty stiff. We worked this project up as an experiment to determine if it was feasible to place spur camps at several of our monuments where we are badly in need of construction but cannot seem to share in any emergency funds, cannot get construction money under the regular appropriation, and have not enough projects to keep a regular sized CCC camp busy.

Our financial problems continue to disturb us. Lack of funds is causing some inefficiency and will probably cause more before we get through the present fiscal year. The point is that with a little more money we could do a lot more work and deliver a lot more service. We haven't good protection now at several of our monuments and the outlook into the future as the visitor season opens up at some of our places which are now closed by the weather, is rather gloomy. It looks like we will not have funds enough to put on the temporary help which in turn means that we will not be able to give adequate protection nor will we be able to give good service.

So long as we keep CCC camps at Bandelier and Chiricahua, we carry little fire risk; if these camps are moved this year we will immediately be carrying a big hazard at both places. We have a hot spot at Saguaro and there is no particular reason, except that a kind Providence be on our side, why the whole top of the Rincon Mountains should not be burned off this summer and if that occurs, we will certainly come in for a lot of criticism because of the lack of protection. The answer is, of course, to get enough funds to handle these jobs should the occasion to do so arise.

The Organ Pipe Cactus National Monument is wide open to mountain sheep poachers, our funds thus far including nothing to protect it against vandalism of this or any other kind. Organ Pipe doesn't need much; no roads; no trails; very little housing or water development, but it does need protection and considerable study. At least one man's time should be devoted to it, five hundred square miles of country is worth that if it is worth anything.

Cordially,

Frank Pickley
Superintendent.

CONDENSED REPORT

IN WHICH ARE GIVEN THE HIGHLIGHTS OF THE MONTH

Coolidge, Arizona,
February 1, 1932.

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

Dear Mr. Director:

The Condensed Report for the month of January, 1938, follows:

<u>TRAVEL</u>	Jan. <u>1938</u>	Jan. <u>1937</u>	Jan. <u>1936</u>	Travel Year <u>To Date</u>
Arches	25*	---	---	261
Aztec Ruins	798	278	225	2,945
Bandelier	298	231	254	2,476
Canyon de Chelly	14	3	10	212
Capulin Mountain	250	600	350	2,250
Casa Grande	4,766	3,744	3,570	12,843
Chaco Canyon	73	89	260	685
Chiricahua	583	241	250	2,292
El Morro	81	7	4	540
Gila Cliff Dwelling	0*	---	---	25
Gran Quivira	103	174	287	713
Hovenweep	0*	---	---	0
Montezuma Castle	599	172	312	2,441
Natural Bridges	0*	---	---	147
Navajo	4	---	---	78
Organ Pipe	700*	---	---	2,800
Pipe Spring	151	---	307	560
Rainbow Bridge	0	---	---	66
Saguaro	3,000*	1,064	800	8,100
Sunset Crater	100*	---	80	1,483
Tonto	679	438	751	1,539
Tumacacori	1,943	1,964	1,607	4,493
Walnut	231	25	285	1,886
White Sands	4,730	6,007	4,402	19,731
Wupatki	63	---	106	313
Yucca House	0*	---	---	70
Totals	<u>19,191</u>	<u>15,577</u>	<u>13,960</u>	<u>68,949</u>

*Estimated.

Although several monuments report a falling off of travel as compared with January, 1937, the Southwestern Monuments as a unit shows an INCREASE

CONDENSED REPORT (CONT.)

OF TRAVEL over last month and over January of last year. A detailed discussion of January visitor records is made on page 66 of this report, and a tabulation for comparisons is shown on page 67.

000 GENERAL

010 Matters of Unusual Interest or Importance.

Bandelier: A fire on the morning of January 17 destroyed the garage, tools, and one truck. The total loss is estimated at \$5,000. (see p. 27).

Aztec Ruins: The Mt. States Tel. and Tel. Co. has offered to put their wires underground if the Park Service will dig the trench and cover the cable. (See p. 19).

El Morro: Funds are needed badly to plaster-cast inscriptions for permanent preservation (see p. 13).

Headquarters: Approximately half of the 55,000 new Southwestern Monuments descriptive folders have been received.

Walnut Canyon: Analysis of travel figures shows the inadequacy of present facilities for handling the public. Walnut Canyon proves to be the western gateway to the Southwest and deserves development. (see p. 37).

020 Weather

For the second consecutive month, weather reports from the several monuments indicate that the weather has been consistently mild. "Dry", "balmy", "Ideal", "springlike", "excellent", like spring", and "fair", are some of the terms used by the field men in reporting from their monuments this month. Tumacacori reports the greatest variety with "two inches of snow on January 20 and the rest of the month so warm that the cottonwood buds are swelling".

022 In Approaches

Arches: Aside from a few days, the approach road has been open and in good condition throughout the month (see p. 51).

100 ADMINISTRATIVE

123 Visits by National Park Service Personnel

Aztec Ruins: Gordon Vivian, L. T. McKinney, W. C. Kruger, E. A. Rose, L. W. Hitchcock.

Bandelier: Erik Reed, Ward Yeager, H. L. Bill, I. A. McClatchy, Cecil Doty, C. E. Richey, J. E. Kell, C. E. London.

Casa Grande: J. Felton, Wm. Macy, Jesse Jennings.

Chiricahua: Luis Gastelum.

El Morro: C. N. Gould, Erik Reed.

White Sands: Adrey Borell, H. Cornell, Lackey.

150 New Equipment

Montezuma Castle: One gas refrigerator from headquarters (see p. 41).

180 Circulars, Placards, and Publicity.

Headquarters: Twenty one thousand nine hundred of the new Southwestern Monuments folders have been received for distribution.

CONDENSED REPORT (CONT.)

They were prepared at the Government Printing Office, Washington, D. C.

Montezuma Castle: The United Artists color-film scenic reels, "Wonders of Arizona", will contain views taken in this monument. They will be released after the middle of the year and will be available in the 16 mm. size for rental (See p. 40).

White Sands: Bird life keynoted last month's usual volume of publicity in local newspapers (see p. 47).

200 MAINTENANCE, IMPROVEMENTS, AND NEW CONSTRUCTION

210 Maintenance, Unusual

Casa Grande: A program of cleanup about Compound B has been carried out. (See p. 35).

Chiricahua: Unusual highway maintenance was necessary during the latter part of December because of the heavy snow (see p. 16). One half mile of the Upper Rhyolite Trail has been maintained.

Pipe Spring: Considerable has been accomplished in the way of removing unsightly weeds and dead leaves (see p. 22).

Walnut Canyon: In cleaning the cistern, it was necessary to scoop out 42 tons of water (see p. 38).

220 Improvements

El Morro: Roads in the monument have been improved with the cutting down of high centers and the filling of holes (see p. 12).

Navajo: Retaining walls, grades, and culverts have been built into the trail to the ruins (see p. 25).

Pipe Spring: Twenty cottonwood trees have been planted (see p. 22).

Tonto: Considerable trail work has been done. The pipe line has been protected from cattle damage (see p. 24).

230 New Construction

231 CCC Construction

Bandelier: Tyuonyi ruins stabilization has been completed and is reported a fine job (see p. 27). Pipe connections to the 20,000 gallon reservoir and to the fire hydrants are being installed. The east side wall of Hotel Unit No. 2 is up to lintel height and the remainder is to sill height. All doors and five window frames have been set. In the Employee's Dormitory, two rooms are up to viga height, and the other five up to lintel height. Ten pieces of furniture have been turned over to the custodian. The rock quarry has been in operation all month. (See p. 31).

Casa Grande: The new shop building is up to the four foot height. (see p. 35).

Chiricahua: During December, 100 square yards of banks were sloped one half mile north of the Bonita Highway - Sugar Loaf Trail intersection and 200 square yards of banks were sloped one half mile south of Bonita Park. In the Employees' Residence, the rock work is complete, the roof in place, and framing for the partitions has been finished. (See p. 16). January accomplish-

CONDENSED REPORT (CONT.)

ments include the sloping of 250 square yards of banks two miles north of the Bonita - Sugar Loaf intersection, surfacing of one fourth mile of the Bonita Highway and one half of the Sugar Loaf Trail, and the maintenance of one and three-fourths miles of horse trails. Plastering has been finished in the Employees' Residence with plumbing installed in the bathroom. The water line from the Headquarters Main to the Employees' Residence has been completed and work started on the Utility Area Extension Project.

232 R. D. Construction

White Sands: Powerhouse construction is 75 percent complete and Residence No. 2 is in the finishing stages. The wall around the gas and oil houses has been started (see p. 49).

300 ACTIVITIES OF OTHER AGENCIES

310 Contractors

Chiricahua: Ed. Riggs is planning to try out horseback service this coming season (see p. 15).

320 Cooperating Governmental Agencies

Chiricahua: W. Reed, S. G. Dowell, Hutchins, and Keating of the State Highway Department were visitors. (See p. 15).

Gila Cliff Dwellings: The Forest Service has constructed sufficient fence to exclude stock from the ruins. Salvage materials and time was donated. This is an example of the fine spirit of cooperation and helpfulness of this Bureau. (See p. 52).

Headquarters: The Forest Service Nursery at Superior donated 100 desert Broom seedlings for planting about Headquarters and Casa Grande buildings.

Pipe Spring: For the past six months a building has been furnished to the Division of Grazing which has been conducting a survey in the surrounding areas. The building was carefully used and left in excellent condition (see p. 23).

Walnut Canyon: Coconino County spent four days in grading approach roads to the monument (see p. 38).

330 Cooperating Non-government Agencies

Headquarters: The consistent generous aid of the Boyce Thompson Arboretum has been continued this month in identifying plants and preparing botanical specimens for display. Headquarters and Casa Grande personnel aided Mr. W. Langdo Kihn, artist for the National Geographic Society. (See p. 34).

250 Donations and Accessions

Bancelier: The United States Weather Bureau is shipping equipment to establish a cooperative weather observation station (see p. 27).

Tumacacori: Two and one half tons of unassembled museum cases have been received (see p. 57).

Walnut Canyon: The Museum of Northern Arizona has furnished the monument with eight volumes of Museum Notes (see p. 38).

CONDENSED REPORT (JONT.)

400 FLORA, FAUNA, AND NATURAL PHENOMENA

410 Ranger, Naturalist, and Guide Service

Casa Grande: Guide Service and Educational work required 102 CCC man-days. Buster Baldwin replaced Johnny Cocks as CCC Guide, and Teddy Savage was added to the Guide Force. (See p. 35). A "Desert Trail" is being worked out to guide exceptionally interested persons to archeological and botanical features of the Monument not reached in the guide program. This self-guiding trail is an experimental as well as a service and educational feature (see p. 36).

Chiricahua: James Minton relieved William Stone and Enrollee Savoy was added to the force of CCC Guides (see p. 15).

El Morro: The Custodian wishes that he were quintuplets as he is finding difficulty in being at several places at once to maintain the needed guide as well as protective service (see p. 9).

420 Museum Service:

Montezuma Castle: The table case obtained from Headquarters now houses the interesting textile exhibit (see p. 41).

460 Birds

Gran Quivira: A check list is being worked up; the January record shows 22 species (see p. 55).

Headquarters: Bird-banding operations handled 98 birds.

Montezuma Castle: Bird Notes for January appear on page 44.

Tumacacori: Sixty nine birds were handled this month (see p. 58).

Bandelier, Navajo, Pipe Spring, and Walnut Canyon bird-banding and observational records will be found under their respective reports (see index). The establishment of a new bird-banding substation at Bandelier is a big step in the progress of this activity in the Southwestern Monuments. (See p. 27).

470 Animals

Gran Quivira: "Skunks make nice pets", (see p. 55).

Montezuma Castle: Skunk photographed sorrowing over damaged den under floor of old shed (see p. 42).

White Sands: On the trail of the elusive porcupine (see p. 49).

480 Miscellaneous

Chaco Canyon: Threatening Rock movements occasion comment (see p. 54).

500 USE OF FACILITIES BY THE PUBLIC

510 Increase or Decrease of Travel

Headquarters: Total travel to the monuments shows an increase over that of December, 1937, and over January, 1937. (See "Visitor Statistics" under Headquarters Report).

530 Newsworthy Visitors

Casa Grande and Headquarters: W. Langdon Kihn, artist.

Chiricahua: Dick Bird, writer and photographer, gathered material for an article for a Canadian magazine (see p. 15).

Tumacacori: Father Juan, supervisor in charge of the San Miguel Mission of California (see p. 56).

CONDENSED REPORT (CONT.)

600 PROTECTION

610 Police

El Morro: Inadequate! (See p. 11).

Montezuma Castle: For the report of the apprehension of small boy "firebugs" see page 41.

620 Fire

Bandelier: On January 17, fire destroyed the garage, tools, and one truck. Although handicapped by lack of water pressure, the custodian prevented adjoining buildings from burning (see p. 27).

Montezuma Castle: Mischievous small boys set a leaf fire which caused some damage. They were apprehended by the custodian and ranger (see p. 41).

650 Signs

Walnut Canyon: Seven signs were painted and placed (see p. 38).

900 MISCELLANEOUS

Arches: The custodian announces the discovery of a new natural bridge easily accessible from the monument (see p. 51).

Headquarters: Possibility of some stabilization work on the famous San Xavier Mission near Tucson is discussed on page 58.

MAIL COUNT

Incoming:		
Official	1,935	
Personal	<u>1,325</u>	0
Total incoming		3,260
Outgoing:		
Official only	<u>2,696</u>	
Total outgoing		<u>2,696</u>
TOTAL POSTAL MAIL		5,956
Telegrams:		
Incoming	25	
Outgoing	<u>25</u>	
Total telegrams		<u>50</u>
GRAND TOTAL PIECES OF MAIL HANDLED		6,006

Cordially,



Frank Pinkley,
Superintendent.

IF
YOU
HAVE NOT
RETURNED
FINAL NOTICE

the mailing card which was enclosed with the December number of our Monthly Report, it will now cost you three cents to remain on our mailing list. We think it is worth that much, but you may differ with us or you may not have three cents. In either case, we bid you Godspeed and hope you have a pleasant journey through 1938 though you may never know whether we survive the financial rocks ahead of us or not. With part of our appropriation impounded, it is going to take a nice hand on the rudder to get through.

If you should have three cents and can't find your December number in order to recover that mailing card which would have come free, and still wish to keep track of the best unit of the National Park Service, you had better write us a letter to that effect or your name will be cast into the outer darkness. Al. comes along just in time to remind me that a one cent postal card would turn the trick and I had to tell him that I feel sorry for Mr. Farley and his boys; maybe they got an impoundment order too and the extra two cents may be needed over in the Postal Department just like it is with us, so I will let it stand: you write us a letter and not a postal card. It is true we furnished you with only a card to write to us in that green insert in the December number, but we are spending another man's money and you, presumably, are spending your own. Al. says he thinks my real reason is I don't want the postal boys to see what you say about the Monthly Report on a postal card, but I know that isn't true because if you didn't like it you wouldn't spend one cent in telling me so unless it made you mad and then you would probably put a special delivery stamp on it so it wouldn't have time to cool off on the way. But our Report doesn't make anybody mad except now and then and he is generally within our Service.

Quite seriously, we would be glad to take a hundred names off our mailing list, but we don't want to take off one who is getting real use from the report. The word Service was put in National Park Service with some forethought and we will be glad to serve you. If it isn't a service, let neither of us be put to any further trouble.

Cordially,

Frank Pinkley
Frank Pinkley,
Superintendent.

HOW TO USE THE MONTHLY REPORT

By The Boss

The way to get the greatest use of this report each month would be to read it from end to end. A surprising number of people who receive it tell us they do.

If you cannot spend that much time with it, we might point out that we have put it together so you can reach any part of it quickly and easily.

The Report is divided into two main parts:

1. The Report proper, and
2. The Supplement.

The Report proper divides into three sections:

1. The Condensed Report.
2. Reports from Men in the Field.
3. Headquarters Report.

As its name indicates, the Condensed Report is a condensation of all the field reports and never exceeds six pages, thus the busy reader can get the meat of the field reports in four minutes if he has little time to spend.

The reports from the men in the field are then included almost verbatim so the interested reader may get, if he has the time, and wishes, the complete picture of what happened at any monument. The field man may also feel that he has this direct contact with the Washington Office and his report is neither suppressed nor changed in its transmission. This also automatically makes a permanent record of the field reports, since this monthly report is deposited in the files of at least fifty libraries and institutions.

The headquarters report is supposed to give a general picture of the problems of the Southwestern Monuments as a whole and the handling of those problems during the month.

Following the index page you will find the Personnel Page on which we give the list of the monuments, the name and address of the man or men in charge during the month, the area of the monument, and the number of visitors it had in the previous travel year.

At the end of the June and December reports, we include a general index of the six issues so that any article in the Supplements or the Reports for the six months can be found easily. This divides our reports for the calendar year into two volumes of about 450 pages each.

FIELD REPORTS

FROM THE MEN ON THE JOB

EL MORRO

By Robert R. Budlong, Custodian,
Ramah, New Mexico.

Visitors this month, 81; total since October 1, 540.

Oh my, my; that man is here again! And this time he's going to write a report that may be somewhat lengthy, but it is felt that it is necessary.

TRAVEL

Here comes a flock of figures: A total of 73 persons visited this monument during the travel month of January, 1938. All of these were contacted but one, and he arrived while we were in town getting supplies. Field trips made were as follows:

Guided trips around inscriptions: Ten trips; total people, 46; average people per party, 4.6; total time, 590 minutes; average time, 59 minutes.

Guided trips on trail: One trip; three persons; 65 minutes.

Unguided trips on trail (by permission): Three trips; total people 16; average people per party 5.3; total time 190 minutes; average time 63.3 minutes.

Unguided trips on trail (without permission): One trip; total people, four, time unknown.

Office visits (educational): Seven "visits"; total people, 32; average people per party, 4.6; total time, 555 minutes; average time, 79.3 minutes.

The above collection of data may need some explanation. In the first place, we have but two kinds of trips here: around inscriptions and over the trail. The trips around inscriptions should always be conducted trips, but it will be observed that one trip this month was not a conducted one. The trail trip is usually made without a guide. This is because we are single-handed here, most of the visitors come to see the inscriptions and the more interesting of those inscriptions are in Spanish. This means not only a talk on the history, but calls for interpreting of the Spanish. Those who take the trail trip usually want the exercise and the view from the top of The Rock, and there is little chance for vandalism to occur on the trail. The inscriptions, however, need constant protection. Therefore, except in unusual cases, we do not guide trail parties. Observe, also, that one trail trip was made "with-

out permission." More about this later. Our "office visits" were described in our last monthly report. They constitute our "museum" trips.

We were most agreeably surprised to have as visitors on the eighth Dr. Gould, Jack Diehl, and Erik Reed, all of the Santa Fe office. We hiked up on the trail, looked over the ruins, and spent some time in the cabin discussing official matters. They had to return to Santa Fe that evening, so, of course, their visit was far too short. Come again, and make it soon!

Dr. Donald De Leon, of the Bureau of Entomology, Ft. Collins, Colorado, and his sister, visited the monument January 13. We enjoyed their visit immensely.

WEATHER

We haven't had any; we've only had climate! This time last year we were solidly snowed-in (and running out of food). But this isn't winter; it may be spring, or fall, but never could it be called winter. We have had two light flurries of snow, but no real moisture, and moisture is something we badly need, since we had no real rain all last summer. We would have such a season as this, after making extensive preparations for a severe winter.

INSCRIPTIONS

All major inscriptions are ready for winter. They have been pencilled, and have been thoroughly coated with "Driwal" to keep out moisture. In addition, much work has been done on old, faint inscriptions, and many new ones or traces of new ones have been found. These have been pencilled and waterproffed, of course. But quite a number of these new ones are too high to be reached with a stepladder. Our present ladder is ten feet long, and entirely too short, except when I fall from the top step, as I did once this month, just to keep in practice. We shall either have to get a longer ladder or build a scaffold in order to do the work we wish to do upon these high inscriptions. I have some more things to say about inscriptions before I finish this report, but they will be put under the heading of "Protection" later on.

ROADS AND TRAILS

Much work was done on roads inside our boundaries during the month. High centers were removed, holes filled, etc. The trail around the inscriptions received considerable attention also, as did the trail leading to the top on the north side of the rock.

BOUNDARIES

Tracks of livestock inside the canyon in the rock were observed

through binoculars, and today I did a little fence-riding on foot. Found the lock on the gate leading into the canyon open. It must have been opened by striking the padlock with a hammer, which is a good way of opening padlocks when a key isn't handy. The fence had been cut in one place, and this was repaired. There has been some cutting of tree branches and some brush inside the canyon also, within the past week. The Navajos who seem to be responsible have been warned; the gate re-locked and chained, and considerable work was done filling arroyos under the bottom strand of wire on the fence where stock could get under.

PROTECTION

This report is long enough already, but I have only begun to write. "The time has come", the Walrus said, "To speak of many things", and if you don't omit the remarks to follow, it may be necessary to publish the Southwestern Monuments Monthly Report in several volumes this month. Anyhow, here goes:

This relatively small area (240 acres) has been a national monument for just about 32 years. This means that it is, and has been, protected by the National Park Service. Waddy mean, "protected"? Of course, signs have been stuck over available ground when a year-around man wasn't stationed here. Rangers have been here during summer months for some years past, and much very fine work was done by the part-time custodian formerly in charge. But if you will take one look at the surface of the rock, and observe the hundreds of scars where once visitors carved their names in the rock in spite of our "protection" the thought is bound to be brought home most forcibly that "protection" in the past has been a joke. And for the present? Well, our shack (only meant for a protection from weather, and never for a "Custodian's residence") is located half a mile from the entrance gate, and around on the south side of the rock, with the entrance gate on the north side, out of sight. Observe, under our paragraph on "Visitors" that one unguided trip was made on the trail, and one past the inscriptions, "without permission." Refer to our visitor statistical record, not made a part of this report, and note that this meant, in the case of the trip over the trail, that a bunch of local people drove in, parked their car back in the trees just inside the gate, and spent heaven-only-knows how much time wandering all over the monument. Luckily, they were seen, and contacted. The trip around the inscriptions without permission was made by a group of people who drove in, parked their car on the north side unseen, wandered around the inscriptions, and were only contacted because they happened to drive around this side of the rock in order to find space enough in which to turn their car around. They didn't drive to the cabin to register. They were waved down and asked to do so. Fortunately, in this case, the people were of the type extremely interested in the preservation of these inscriptions. But how many people may have driven in, hiked around past inscriptions and trail, and driven out again unseen? To answer that only partially, just look at those scars on the rock again, where a few of them carved their names, and the answer will be in the hundreds.

Our cabin is out of sight of the gate. It is true that we have conspicuous signs at the gate pointing the way to the office; requests along the road to "Please Drive to Custodian's Office" and "Visitors Please Register at Office" and other signs warning against the carving of names, but does that mean anything? It means we have a lot of signs warning against the carving of names, but does that mean anything? It means we have a lot of signs I wish we could do without, but that is all it means. Time after time during the year I have been stationed here, I have gone around the rock to find parties of visitors inspecting the inscriptions; twice I have found people about to carve their names on the rock beside or over some of our most priceless inscriptions and have just been lucky in getting there before any damage was done. We have inscriptions on both sides of the rock, and many times while I am guiding a party on the north side, a party or parties will drive to the south side and start inspecting the inscriptions there. A man can only be in one place at a time. I repeat, it is only by good fortune that we have had no damage done this year.

It is not just because this happens to be my present station that I say that here at this monument we have some of the most important original records of the past history of this region -- utterly priceless records covering several hundreds of years -- that deserve immediate and full protection, which is something we haven't had in over 30 years of governmental "protection" and also something we don't have now. At most of the monuments we are mighty short-handed, and that means, mostly, that the visitor has to be kept waiting, or doesn't receive the service we would like to give him. But I submit that that isn't so important as protection of what we have to show the visitor. That is, we may keep the visitor waiting ten minutes longer, being short-handed, than we would if we had one more man stationed there; but at least we have protection of what we have to show that visitor in numerous monuments where we are only short-handed. But here we are without protection. Visitors can drive in and go all over our monument, and we'll never be the wiser until we find the damage they've done. And so, first of all, we need to have some sort of office built between the gate and the inscriptions. That is, make sure of contacting our visitor before he has a chance to go anywhere within our boundaries. And if we can't possibly give complete protection to our inscriptions no matter how many buildings we have here, let's put a "cyclone" type of fence completely around those inscriptions, even if it will be unsightly.

Next, the inscriptions themselves: Suppose we succeed in keeping the vandal from doing damage. The majority of the inscriptions are within a few hundred feet of a road passing outside of our boundary fence. A lot of shooting at rabbits, prairie-dogs, and other things (including some of the neighbors) goes on outside that fence. The inscriptions are plainly visible from the road. How about a stray bullet hitting one of those inscriptions? It isn't improbable -- you should see the bullet marks on the rock now. How about vandalism before we can get a solution of that problem? How about falls of rock--

both of the rock on which the inscriptions are carved, and of rocks above the inscriptions? We have frequent rock falls here, and one old inscription dated 1666 on which I have been working for months, trying to bring out all of it, has several fresh scars right across the face of it where the rocks have fallen since I found the inscription and began work upon it. Therefore, it seems to me that quarters or no quarters, protection or no protection, we should get the necessary funds to have the following work done immediately: We should have impressions made of every one of our major inscriptions, from which, either now or in future years, exact reproductions of inscriptions can be cast in plaster. It is not at all improbable that before we get real protection of these inscriptions they may be partially or totally destroyed from one cause or another. Although I am planning to photograph every one of our hundreds of inscriptions before the year has passed, the value of a photograph of some valuable inscription is hardly comparable to the value of a plaster cast of that same inscription -- after the inscription is gone. In spite of our attempts at waterproofing inscriptions, and in spite of the protection we try to give them, many of those that were here when I first came here, a year ago, have weathered appreciably, and will soon be gone.

But this is so long I can't go more into detail, much as I would like to do so. If this outburst isn't sufficient, just let me know, and I'll put an asbestos ribbon on this typewriter and really dwell at length on the subject of making sure that in the future -- not just at present -- we will continue to have something of value here to show the visitor.

WATER

AND FURTHERMORE.....

*****SWM*****

Bud calls attention to a very serious problem in this matter of protection. There is always a hazard that some half-demented person or some ignorant person will do irreparable damage there. He is correct in his inference that putting the proclamation on the monument was no protection; name-cutters as a class being so ignorant they know nothing about the law against such vandalism. The only thing which they can understand is a man in uniform. Bud is right in saying that the visitors should be made to come past headquarters so they may be spotted and taken in charge by our Custodian as soon as they arrive. However, we would only reach a temporary solution of our problem by moving the office or residence around to the north side of the rock in order to intercept the traffic which now enters on the northeast corner of the monument. The north, west, and south sides of that monument are surrounded by patented land and the only place we reach the section line and a future public highway is on the east side of the monument. It would therefore seem more logical to move the entrance around to the east side than to

EL MORRO (CONT.)

move the administration area around to the north side if any moving is to be done. Administrators, Landscapers, Engineers, Educators, and others have not yet been able to reach an agreement as to the location of a headquarters at El Morro and we expect to ask for a re-study of the whole question this spring or early summer.--F. P.

*****SWM*****

CHIRICAHUA

By Frank Fish, custodian,
Douglas, Arizona.

WEATHER

Warm rains in late December ended the first splurge of winter and until January 20, weather conditions were like cherry-blossom time; in fact, one blossom of a wild verbena was still resisting and full of life on January 19 at an elevation around 6,000 feet. January 20 started off with rain and then snow to a depth of four inches, followed by rain on the 21st, resulting in most of the snow melting. Adverse weather days: December 29, drizzling rains; January 3, rain; January 4, fog; January 9, cold wind; January 15, rain; January 20, rain and snow; January 21, rain and fog; and January 22 and 23, cold wind at Massai Point.

ROADS

Surfacing of the Elfrida-Bisbee road was completed early in January. This makes a continuous surfaced road from Bisbee to ten miles north of Elfrida, or leaves approximately 32 miles of gravelled road out of 70 into the monument. There is a stretch of 17 miles of gravelled road between the pavement at Elfrida and the pavement ten miles this side of Douglas; it is understood five and a half miles of this section will be surfaced during 1938 by the State.

The Pinery Canyon-Rodeo, New Mexico, road is evidently open, as several cars have entered the monument from the east on that route during the month and as late as this writing, January 23. However, this road crosses the Chiricahua Mountains around an elevation of 8,000 feet and may be blocked by snow at anytime between December and April.

VISITORS

	JANUARY	1938	1937
Number		583	241
No. of cars		150	54
Out of State		183 or 31.3%	
No. of States		27	
Foreign Countries		3	
Total stay in monument		27,987 minutes, or an average of 186.5 minutes per car.	

CHIRICAHUA (CONT.)

CONTACTS

	<u>1938</u>	<u>1937</u>
Number	81	3
Attendance	380	7
Total minutes	4,660	500
Percent of Contacts	65.1	2.9
Average party	4.7	2.3
Average time minutes	57.5	*166

*Only trail trips counted in 1937.

N. P. S. VISITORS

Luis Castellum, clerk-stenographer from headquarters office. Luis has been in since the 18th working on CCC matters and burning the "midnight oil" with Bill Stevenson and his force in what appears from across the room to be massive piles of paper with "high fa'luten" words.

STATE OFFICIALS

Mr. W. Reed, state engineer; Shelton G. Dowell, chairman, Highway Commission; and District Highway Engineer Hutchins. Also Patrolman Keating of the Arizona State Highway spoke a few words to the enrollees on the subject of "Safety".

FOREIGN VISITORS

Dick Bird of Regina, Canada, noted writer and photographer spent a number of days with his daughters in riding and hiking over the trails. His reactions were quite favorable to the monument and he intends submitting an article to a Canadian geographic magazine. Mr. Bird has travelled extensively in 38 countries and was kind enough to give an interesting talk to the enrollees at the CCC camp. One can best judge the reception of the talk when overhearing such comments as "I could listen to him all night".

CCC GUIDES

William Stone was away on leave part of the month, January 7 to January 17, due to illness of his grandfather. During his absence, James Minton helped out. Enrollee Savoy was added to the force for clean-up work around the buildings on January 20.

*****SWM*****

We had a very pleasant visit one day this month when Frank and Corabeth came in to headquarters with Ed. and Mrs. Riggs. Ed is planning to test the traffic this summer to see if a saddle stock permit will pay its way. We will naturally do all we can to make it a success because so many visitors come unprepared for walking or are

CHIRICAHUA (CONT.)

unable to walk and thus miss some of the finest formations. Chiricahua is an ideal horseback monument and the visitor can enjoy from an hour or two to a full day in the saddle. We also have some places for the he-man type of ultra-conservative who decries roads, trails, or anything else that looks like comfort in a national park or monument. We have some scrambled places without trails where he can tear his pants to his heart's content, -- only he never goes into them. Incidentally, we have a bit of quiet fun at Bandelier with the he-man type who weeps great gobs of tears because we have brought a road into the canyon and established a headquarters and, "gone are the days", etc. We cheerfully point out a sort of a trail winding up the south side of the canyon and tell him to take a day or two off and go on up there and over into the next canyon and the next one and he will find solitude he can cut with a knife, -- but he practically never goes. He wants his solitude with his feet under Mrs. Frey's well-filled table three times a day when you get right down to the case-cards, and actually going out into open country and risking his neck is about the last thing you can get him to do.--F. P.

*****SWM*****

CHIRICAHUA CCC

By William Stevenson, project
superintendent, Douglas,
Arizona.

DECEMBER REPORT

Highway maintenance has been a major project this month due to snow on December 13 and 20. These snows held up work on the back-sloping and trail maintenance projects for one week. Numerous small slides were removed, ditches and culvert basins cleared, and one half mile surfaced. Snow removal required 200 man days.

One hundred square yards of banks were sloped one half mile north of the intersection of Bonita Highway and Sugar Loaf Truck Trail. Materials were used in widening fill slopes. Two hundred square yards of banks were sloped one half mile south of Bonita Park and materials were used for surfacing from the Sugar Loaf Truck Trail intersection south.

One half mile of upper Rhyolite Trail was maintained. Banks were sloped, trail re-surfaced, and additional drainage provided.

Rock work was completed on Employee's Residence and the roof is in place. Framing for partitions has been completed.

JANUARY REPORT

Two crews continued on the backsloping project this month. Six hundred fifty square yards of banks were sloped two miles north of the intersection of Bonita Highway and Sugar Loaf Truck Trail and 700

CHIRICAHUA CCC (CONT.)

square yards were sloped one mile south of Bonita Park. Materials were used for surfacing and widening fill slopes.

Highway maintenance was light until the latter part of the month when snows caused numerous slides which necessitated clearing ditches and culvert basins. One fourth mile of Bonita Highway and one half mile of Sugar Loaf Truck Trail was surfaced.

One and three-fourths miles of horse trails were maintained including that section of Rhyolite Trail between Hunt Canyon and the intersection with Echo-Massai Point Trail and the section from Rhyolite to Massai Canyon. Banks were sloped and entire length surfaced. Additional drainage was provided.

All plastering was completed on the Employee's Residence. Plumbing fixtures were installed in the bathroom. Floors and cabinets are now being fabricated in the carpenter shop. Painting is being held up on this building pending receipt of color selections.

The water line extension from the headquarters main to the employee's residence was completed.

The Utility Area Extension Project was opened this month. The area was cleared and excavation started.

*****SWM*****

We have two reports from Bill this month. Due to some oversight, the December report got lost in the shuffle and we are setting the record straight by putting it in here a month late. Otherwise, the historian, fifty years from now, in searching these records might think Bill and the Chiricahua Camp sat around and loafed during December.--F. P.

*****SWM*****

CAPULIN MOUNTAIN

By Homer J. Farr, custodian,
Capulin, New Mexico.

Visitors this month, 250; total since October 1, 2,250.

Well, I really am ashamed to make this report for January, for our visitors have been just about like hens' teeth. I believe that 250 would constitute the run and most of them are local; just a few from Oklahoma, Kansas, Texas, and Colorado.

The past few months I have noticed quite a number from Colorado and my curiosity was aroused so I asked a few of these what prompted them to visit this monument when their state boasts of the grandest mountains in the world. We do know they have the "heart of the Rockies", but my question has been answered by several who stated, "One

CAPULIN MOUNTAIN (CONT.)

can get a perfect view of the entire landscape", as one fellow told me, "from all seven directions" from the drive up Capulin Mountain.

WEATHER

Weather has been rather cold but not unusual for January, with no moisture worth mention, so far, and only one or two windy days, although just east of us here within 100 miles, we have heard of severe dust storms.

ROADS AND TRAILS

Roads and trails are in good condition with only the usual sloughing off lava and cinders and, of course, a few rocks.

PORCUPINE CONTROL

Recently I note quite a number of small pines damaged by Mr. Porky in spite of the fact that there are several fewer of him than last summer. I hope before winter is over to get them reduced to a fair balance. I am very proud of our deer and they appear to be not so wild lately. I believe we now have about 12 or 15 in the park. One extra large buck visits this monument about monthly, tho' I presume he thinks he is visiting some fair doe, I seldom actually see him but I see his footprints often.

TIME

We have just recently finished a fair calendar year and half of our fiscal and well started on a new one. Personally, I feel more like doing things than I have for many moons and my hopes and best wishes go to you all that you may feel as well as I do.

*****SWM*****

AZTEC RUINS

By T. C. Miller, custodian,
Aztec, New Mexico.

Visitors this month, 798; total since Oct. 1, 2,954.

GENERAL

The new year came in with a bang here at Aztec Ruins. We have scored an all-time high record in travel, weather, and roads. Wolf Creek Pass in Colorado has remained open and in excellent shape the entire month. State road 55 has remained open with only a few days that the road was slippery. We have been enjoying excellent weather throughout northwestern New Mexico, with a little rain, a light snow that melted as it fell, and many bright sunny days. No official trips were made away from the monument during the month. The entire month was devoted to visitor contacts, with very little time to do the

AZTEC RUINS (CONT.)

necessary chores. January at this monument is normally quiet. It is believed that the increase in travel here is due to improved roads and an open winter.

WEATHER STATISTICS

Maximum temperature - - - - - -53° (January 16 and 17.)
Minimum temperature - - - - - - 9 above (January 10.)
Total precipitation - - - - - -.70" Greatest amount recorded
in 24 hours, .35 on January 3.
Clear days- - - - - - -17
Cloudy days - - - - - - -11
Partly cloudy days- - - - - - 3

For the corresponding period of last year: Maximum temperature 44° January 6. Minimum temperature minus 22 on January 22. On 13 nights it was well below zero.

SPECIAL VISITORS

Captain Charles Carey, director, Smithsonian Institution, Washington, D. C., and party were interested visitors on December 29.

Gordon Vivian, archeological foreman, Mobile Unit, Chaco Canyon National Monument, was here and photographed the ceilings of 12 rooms, original roofs in the ruins. These pictures are badly needed for additional supporting data in making a ruins stabilization report on waterproofing rooms, requested by the Regional Director's Office.

Mr. and Mrs. Ray Ismay, from Jucca House National Monument, arrived January 6 and departed on the 7th. Gordon Vivian and Custodian McKinney were here on January 19. Mr. Fred G. Healy, state administrator of WPA and W. C. Kruger, landscape architect, both of Santa Fe, and District Supervisor E. A. Rose and Project Engineer L. W. Hitchcock paid us a visit January 18.

UNUSUAL VISITORS

A passenger plane flew over the ruins two or three times on January 5. On the 6th, the party returned by car from Durango. This party spent a lot of time in the ruins and in the museum and were really interested. Before the party left the monument, I asked them the following question: "How did the ruins look from the air?" The reply was that it looked like a beehive. Anyway, it must have looked good enough to make them want to return. I would appreciate it, Boss, if you would not broadcast this beehive business because I happen to know a few custodians that would try to change the name of this monument.

MONUMENT IMPROVEMENTS PROPOSED

The Mountain States Telephone and Telegraph Company have agreed to

AZTEC RUINS (CONT.)

remove the telephone poles and wire from the monument and replace them with underground lead cable, without cost to the Service, if the Service will dig the trench and bury the line. The distance is 980 feet. This would save the Park Service about \$1,000. This monument is out of funds, Boss, I suggest we try Chuck Richey; you know how Chuck dislikes telephone poles.

INTER-MONUMENT TRANSFERS

Dump truck USDI No. 8121 NPS was transferred from Chaco Canyon to Aztec Ruins December 28.

TRAVEL

Seven hundred ninety eight people entered the monument in 233 automobiles coming from the following states:

Arizona-----	7	Kansas-----	16	Ohio-----	4
California--	51	Michigan--	4	Oklahoma----	36
Colorado----	207	Missouri--	13	Texas-----	17
Indiana-----	4	Montana---	1	Utah-----	8
Illinois----	3	Nebraska--	5	Washington---	3
Iowa-----	4	New Mex.--	410	Wisconsin----	2
		District of Columbia-----	3.		

GUIDE SERVICE

Number of field trips:-----112 with 637 persons.
 Number of museum trips:-----121 with 686 persons.
 Number of special groups:--- 6 with 47 persons.
 Total contacts:-----1,370 persons.
 Total guide time in field:--3,689 minutes.
 Total guide time in museum:-2,708 minutes.
 Total guide time:-----6,377 minutes.
 Tctal visitor time at monument: 9,039 minutes.

*****SWM*****

We wonder now how many of Carroll's visitors are due to the open winter and how many of them are due to the new Wolf Creek road which the State of Colorado has promised to keep open during the winter from now on. The nearly 25% shown in the table as coming from Colorado would indicate that the Wolf Creek Pass must have furnished its quota, and that in turn looks like the visitor line on the Aztec chart is going to get a permanent winter bulge in it.--F. P.

*****SWM*****

PIPE SPRING

By Leonard Heaton, acting custodian,
Moccasin, Arizona.

Visitors this month, 151; total since Oct. 1, 560.

As I sit here at the desk trying to think of just what I should put into this monthly report, I can't help but think back over last year at this time. The difference in the weather then and now!

A year ago we were snow bound, getting the snow plows from Utah to come in and open up our roads for us, receiving mail only a few times the entire month, and the thermometer down to 20 below most every night. This year is entirely different. Today there is about one and one half inches of snow which is going fast; roads and southern slopes are clear of snow but there is some mud. The temperature has been getting down around ten above so far this winter. Flies and gnats, as well as several other varieties of insects that I do not know, were sunning themselves in the window this forenoon. Grass is coming up and some is six inches to a foot tall along the irrigation ditches. The meadow, before the last snow, was full of dandelion flowers; the heads so thick you could hardly see the grass. The only regret that I have for such a winter is that we usually get our early fruit frozen by a late frost in the spring.

The weather report for the month is as follows:

Days clear-	-----	11
Days partly cloudy-	-----	10
Days cloudy--	-----	10

We had a storm on December 23, blustery and rain. On December 24 one and one half inches of snow fell, but it stayed only a day. January 2 and 3 we had a good steady rain. More rain came on January 15 and 16 with an inch of snow on the 19th which soon melted. Snow fell again on December 20. We got about six inches that is about gone today.

VISITORS

This month I have had an increase in giving service to visitors, the most of them coming the last four days. These are CCC enrollees.

The total contacts given this month on road information and the monument is 87; time spent 819 minutes, as compared with 30 for last month and none for a year ago.

Unguided visitors that used the monument facilities, I have counted 64 as against 114 for December.

CCC ACTIVITIES

On January 4, some 40 boys returned home as their enrollment period was up, and on January 19, 65 new boys came in to fill up the camp. The

PIPE SPRING (CONT.)

new boys are mostly from the state of Indiana and they seem to be well behaved boys, at least many of them have spent part of their time here in the fort learning about the history of the place.

CCC

I have not had any help from the CCC this past month as I thought that I could do all the work that there was to be done as long as it was not part of the CCC monument projects. Last month, 125 feet of $1\frac{1}{2}$ -inch pipe was purchased and the lumber for the garage was charged to the \$50.00 allotment for our projects. Nothing has been done this month that I know of.

I have been asked several times if and when we were getting in the truck the Park Service has promised for use up here. It seems that the CCC wants it for their own use as well as for the monument. As yet, I have received no word concerning it.

Acting Superintendent Paul Higden told me he had a letter stating the Park Service had a Chevrolet truck in Salt Lake City and to come and get it. But I don't know.

BIRD NOTES

The past month my bird records show the following catches and repeats:

	<u>New</u>		<u>Repeats</u>		<u>Totals</u>	
	Jan.	Previous	Jan.	Previous	New	Repeats
Gambel Sparrow	78	134	44	157	122	201
Song Sparrow	4	8	1	29	12	30
Spurred Towhee	2	1			3	
Greenbacked Goldfinch	2				2	
House finch	1	1			2	
Shrike	1				1	

There are two more Gambel Sparrows to add to my return records. These are birds that I banded in April, 1936; making five that I banded in the same month that have returned to the monument.

PLANTING

This month I have set out 20 cottonwood trees across the road from the camp entrance road and east to the monument entrance. And as soon as one can get out and work, I want to set out 20 or 30 more in the camp area and around the parking area. There will be planting to make around the residential area as soon as I know just where to plant. I hope we can get the trees in this spring.

CLEANUP

The forepart of the month most every day that I could be out was

PIPE SPRING (CONT.)

spent in cleaning up the weeds and leaves from around the fort, ponds, campground, and east side of the meadow, also cutting out the suckers from around the elm trees west of the fort and on the east side of the meadow. There are several more days work by the meadow before it is all cleaned up.

FORT

The plaster in the upstairs of the lower building has cracked up a lot this winter and in one place a piece of plaster has fallen out and it looks as if there will be some more fall before long. There is also a place in the upper building where the plaster is off. I will get at it and fix up these two places when warmer weather comes.

WEST CABIN

For the past six months, the Division of Grazing has had the use of the west cabin for the Range Survey crew to use as their office and map room, under the supervision of Mr. Bill Wright. They were good housekeepers and left the place in excellent condition when they moved out January 15.

My big concern now is, will I be able to keep the boys out of it and from holding parties up there? There appears to have been some kind of parties held already.

CLOSING

I bring my January report to a close hoping that I will be able to make February show as much improvement and accomplish as much as I have in January.

*****SWM*****

In order to clear the record, we might tell Leonard here that his truck is not lost, but we think is on its way. We are expecting one out of Texas now and as soon as we get delivery on it will let him know.--F. P.

*****SWM*****

TONTO

By Tom Onstott, ranger in charge,
Roosevelt, Arizona.

Visitors this month, 679; total since October 1, 1,539.

This brings to a close a very pleasant month as far as both weather and visitor contacts are concerned. After getting the new SWM 16 all straightened out last month, there has been no more trouble. So far, it has not broken down even on busy days.

TONTON (CONT.)

During late December and the first few days of January, there was a great deal of local travel which might come under the heading of "holiday rush" parties. These helped to shorten the average party time down quite a bit. In spite of this, the museum contacts are getting longer and with a little revising and possible addition, the time will increase still more. The only big drawback to long museum contacts here is that the majority of our visitors are very nervous about driving the Apache Trail and, after they have gone through the ruins, they are usually in a hurry to get on the road so that they will be sure of getting back on pavement before dark.

One party of campers stopped this month. Seven students and an instructor from the Palo Verde Ranch School arrived on the evening of January 8 and stayed overnight.

Just before dark on the evening of the 6th, Mr. and Mrs. J. W. Rodkey, personal friends of Mr. Cammerer, stopped in for just a few minutes.

Mrs. Vickrey, the archaeologist in charge of the dig at Pesh Ba Gowa in Globe, brought out a party of friends on the 17th and spent quite some time looking over the ruins and museum.

Natt Dodge fooled me. He really came to take the pictures of the upper ruin. The Dodge family arrived early enough to go through both ruins, but it was too dark for Natt to take pictures. He took his shots the next morning (Sunday, the 23rd), and I am wondering if he was as stiff Monday morning as I was. It is some hike up to the top of the mountain opposite the upper ruin.

Four of the much needed twelve gutters were put in this month and some widening done on the trail to the lower ruin. Six wheelbarrow loads of clay were put in front of the museum to cover the sharp rocks which nothing short of black powder could move.

Early in the month, the cattle again got up the pipe line with the same result. This time a dry masonry ramp was put under the line and no more trouble has been encountered.

<u>VISITOR STATISTICS</u>	<u>1938</u>	<u>1937</u>	<u>1936</u>
Total visitors	679	432	757
Total registered	581		
States	32		
Foreign countries	3. Canada, England, and Mexico.		
Field trips	129	76	93
Attendance	429	334	536
Time	5195 (total of SWM 16)	Av. att.	3.3
	4875 (actual time)	Av. time	40.27

TONTO (CONT.)

Museum trips	85	Per cent contact	111
Attendance	328	Average party per car	3.14
Time	1327	Unattended parties	135
Av. att.	3.8	Unattended people	421
Av. time	15:6	Time	3575
Special parties	1	Av. size party	3
Time	150	Av. time	24.2
Attendance	4	Total time on monument	11202
		Total parties to monument	176

Weather: Maximum, 70; Minimum, 33; only one solid freeze.

Question of the month: A lady visitor standing on the parking lot and looking up at the lower ruin asked, "Oh, guide, can one stand up under that overhang?" That just happens to be a new one on me, Boss.

*****SWM*****

We might tell Tommy that Natt came home deeply in love with Tonto. If and when he gets fired from his present position, he has his application in for that Tonto job.

Tommy's reply to "the question of the month", was, we think, an A#1 answer, although Tommy was too modest to include it in the report. He told the lady, very politely, that the only people who ever had any trouble in standing upright under the overhang were those over 35 feet tall.--F. P.

*****SWM*****

NAVAJO

By Milton Wetherill,
Kayenta, Arizona.

Visitors this month, 4; total since October 1, 78.

So far, we have had very little winter. January has been more like spring. One storm January 15-16 was rain with snow. Rain started again the night of the 18th with snow following and at six o'clock the next morning, five inches of wet snow was on the ground. The Water Birches along the bottom were bent double with the weight of the snow.

I have been working the trail from the camp ground to the ruins. Where there are bad places, I am building retaining walls and grading up the trail. At one place, I put in a rock culvert to carry the water across the trail in place of letting it run down the trail.

The trail down from the end of the road is in very bad shape, as the Indians the last part of December and the forepart of January were putting between 200 and 300 head of sheep over it every day. They would take them out on top in the morning to graze returning to the forks of the Canyon at night. No water on the Mesa.

NAVAJO (CONT.)

Dr. S. P. Welles, Museum of Paleontology, University of California, Berkeley, California, was in to look at a new dinosaur.

Several Indians were in to collect plants for medicine to be used in sings (ceremonials). Plants collected were: Douglas Fir, horses-tail, rose, service berry, alum root, wild geranium, and three types of yucca.

BIRD NOTES FROM BE-TA-TA-KIN

Birds observed: Woodhouse Jay, Long-crested Jay, Canyon Wren, Sharp-shinned Hawk, Western Robin, Mountain Chickadee, Rocky Mountain Nuthatch, Gray Titmouse, Shufeldt Junco, Montana Junco, Pink-sided Junco, Gray-headed Junco, Red-backed Junco, Raven.

The Sharp-shinned Hawk made a try for dinner but failed when I stepped out to see what was wrong. He had a Long-crested Jay down trying for a kill. This took place 15 feet from the tent, at noon.

There is a pair of Canyon Wrens that stay at the Ruins. Their cheerful song can be heard at daylight every morning.

One Montana Junco banded, with 29 repeats on juncos.

*****SWM*****

BANDELIER

By C. G. Harkins, custodian,
Santa Fe, New Mexico.

Visitors this month, 298; total since October 1, 2,476.

TRAVEL

Travel has been very slow this past month but has shown a slight increase the last two weeks. There were 298 people who visited the monument in 80 cars from 19 states and 5 foreign countries. Our visitors made 34 trips through the ruins with an average of 3.7 people to the party and 61.9 minutes per group. Twenty-four parties were shown through the museum and averaged 3.6 persons to the group.

TRAVEL STATISTICS

Total travel- - - - -	298	Total guide time, museum- -	385
Total contacts- - - - -	61	Total guide time, special -	280
Guided trips- - - - -	34	Total visitor time- - - -	14780
Museum trips- - - - -	24	Av. time field trip - - - -	61.9
Special groups- - - - -	3	Av. time museum contact - -	16.
Total guide time in field - - - -	2105	Total guide minutes - - - -	2490

BANDELIER (CONT.)

WEATHER

The weather has been ideal the past month with no snow and very pleasant days. The roads are in good condition, but they are a little sloppy in the afternoons. Some snow still remains in the shaded places and will perhaps hang on for a few months yet.

The State Highway Bridge Department has finished the rebuilding of the four bridges on our entrance road. This work was completed on January 14, along with the completion of all guard rails. This is a very fine piece of work and will last for several years, as new stringers, decking, and guard rails were installed on all of the bridges.

The Forest Service has opened the road over the Jemez Mountains and several parties have made the trip over the Valle Grande, for skiing and other winter sports.

Word has been received from the Department of Agriculture, Weather Bureau, in Albuquerque that equipment is being shipped to this station to convert it into a regular cooperative Observer's Station.

GENERAL

Work on Tyuonyi, the great community house, was completed on the 21st and is a mighty fine piece of work and a much needed improvement. Considerable stabilization was done to the excavated kiva inside the court at Tyuonyi. This leaves both of our excavated kivas in good condition and they should need no further stabilization for several years.

FIRES

Around 10:00 A. M. on January 17, a fire started on the floor of the garage while the CCC enrollees were cleaning out the gasoline tank on one of the trucks.

The fire soon spread to the work bench and wall cabinets, destroying the entire contents of the garage and one truck. We were severely handicapped by lack of water pressure; however, we were successful in confining the fire to the garage building and preventing its spread to other structures. The roof on the blacksmith shop, which adjoins the garage, was saved, but all hand tools and contents were a total loss.

BIRD BANDING

Materials and instructions for a bird-banding station were received January 1. Twenty-eight birds were banded during the month, using one two-compartment trap, as follows: 19 Grey-headed Juncos; two Pink-sided Juncos, three Shufeldt Juncos, two Say Phoebes, and two Red-backed Juncos.

BANDELIER (CONT.)

WEATHER CHART

Days cloudy- - - - -	16	Mean Minimum- - - - -	-19.29
Days partly cloudy - - - - -	2	Mean- - - - -	-28.69
Days clear- - - - -	13	Range - - - - -	-18.51
Max. Temperature - - - - -	46,16th.	Precipitation - - - - -	.35
Min. Temperature - - - - -	4,25th.	Snow- - - - -	-2 in.
Mean Maximum - - - - -	38.09		

NEWSWORTHY VISITORS

January 9. Mrs. E. J. Dykersterhius, U. S. Forest Service, and party of three, Taos, New Mexico.

January 12. Mr. and Mrs. G. M. Gross, Wichita, Kansas.

January 15. Mr. and Mrs. Charles C. Shepard, Omaha, Nebraska.

January 18. V. Floor, Wald Zurich, Switzerland, and Mr. and Mrs. Fred Herding, Hollywood, California.

PARK SERVICE VISITORS

December 30. Eric K. Reed, assistant archeologist, Santa Fe.

January 17. Ward W. Yeager and H. L. Bill, assistant foresters, Santa Fe.

January 18. Leo A. McClatchy, Cecil Doty, and Charles E. Richey, all from Santa Fe.

January 19. John E. Kell, CCC inspector, and Clifford E. London, junior equipment engineer, from Santa Fe.

FOREIGN COUNTRIES REPRESENTED

Canada, three; Tibet, one; Switzerland, one; Ireland, one; and France, 1.

NATURE NOTES

The past summer a pair of Abert Squirrels raised a family in the vicinity of the upper falls on Frijoles Creek, and hikers using the trail to the Rio Grande river often remarked that they had seen them and commented on their unusual beauty. The Abert is perhaps the most beautiful squirrel of New Mexico, if not of the entire country. It is a dweller of the yellow pine forests over much of the state. The Abert is locally referred to as the tassel-eared squirrel and is represented throughout the state by the light grey and the black or dusky color; the light grey color being predominant here in Bandelier National Monument.

These squirrels lend an air of distinction and interest to the monument and were often noted in the camp-ground the past summer. Being expert tree climbers and highly skilled in leaping among the tree tops, they caused no little comment and attracted a great deal of attention

BANDELIER (CONT.)

from the campers. They are about the size of the eastern grey squirrel but of a more robust form. Their ear tufts stand up conspicuously and the long, plume-like, black and white tail which is always in evidence, appears to the pride of the squirrels. A wide cinnamon stripe extending along the back tends to ornament these beautiful creatures.

The typical color phases of the Abert Squirrel occurs throughout the New Mexico range but prevails almost wholly in the northern section of the state. In Bandelier, the underparts are white, but the upperparts of the body are light grey and the cinnamon back stripe is much less defined than on the animals farther south. These squirrels feed extensively on pine twigs, clipping the tips from the limbs and letting them fall to the ground. They then make a second clipping so as to get two or three inches of the twig from which they gnaw the outer bark and eat the tender inner bark. In fall, winter, and spring, this inner bark constitutes a considerable part of their food and even when acorns or pinyon nuts, both favorite foods, are available, they often resort quite freely to the pine bark diet. This pine topping habit often becomes so common that ranchmen complain because of the supposed injury to the trees, and the serious effect to the unborn calves where cows feed on the fallen needles. These squirrels are fond of the nuts of the pine which they begin to cut from the cones long before they are ripe. Their range in elevation is between 6,500 and 8,500 feet and they seldom leave the yellow pine forests although they occasionally venture above the range of the yellow pine to the spruce and fir. However, they do not make a permanent abode in such places.

Altho these squirrels make use of large knotholes in trees, they regularly build, high up in the branches, bulky nests of leaves, pine needles, and twigs, and line them with soft grass and shredded bark. Sometimes several full-grown squirrels, all probably members of one family, may be found occupying these outside nests. They are active throughout the year but remain in their nests during storms and severe winter weather, and they have been known to stay under cover for a week or two at a time in mid winter.

The young apparently are born at varying times between April and September. Although not definitely known, it seems probably that there are two litters of three to four each season.

On one occasion the past summer at the upper crossing on Frijoles Creek, I sat on a boulder about half way down the side of the canyon debating whether to go on down or return, when directly below me I noted the hollow-topped stub of a Douglas Fir, the top being a little below me and about thirty feet away. The heads of four half-grown squirrels of the Abert family were protruding from the opening, their bright eyes turning to all sides. Suddenly, a hawk glided by, one of its wing tips almost brushing the noses of the squirrels. Instantly, they vanished from sight and noises of scratching and frightened chattering continued for several minutes as though they were burying themselves.

BANDELIER (CONT.)

under the nest. About 20 minutes later the boldest showed his nose at the opening, but it required another ten minutes before he came out on the stub. Confident that no further danger threatened, he began frisking about as playful as a kitten, but the others remained under cover.

*****SWM*****

One of the worst pieces of news we had during the month was the fire at Bandelier. Our money comes so hard and we have so many places to use it that we hate to have to put any of it into rebuilding structures or rebuying tools and equipment; yet we cannot run that camp up at Bandelier without tools and shop equipment.

We realize that the boys did a mighty good piece of work in confining the fire to the building in which it originated and think they are to be complimented on the speed with which they got on the job and the satisfactory way they handled it when they arrived.

It is good to have that badly needed work on Tyuonyi done. That ruin has been suffering these many years for lack of stabilization work.

Again we are glad to note the general activities at Bandelier; the weather station going in, the bird banding, and the nature notes.--F. P.

*****SWM*****

BANDELIER FORESTRY

By James T. Fulton, forestry
foreman, Santa Fe, N. Mex.

FIRES

On January 17, 1938, a fire did \$800 worth of damage to our utility area garage, completely burned one truck, and destroyed \$2,800 worth of tools. Detailed report is on file.

FIRE PRE-SUPPRESSION

On January 20, we of the Supervisory Personnel checked all fire hydrants to see that they were in good working order. The reason for this inspection was that on the day previous the hydrants in the Hotel Development were connected to the water lines. It was found that all hydrants had good pressure, enabling a two-inch line to throw a 60-foot stream of water.

MISCELLANEOUS

For the past month I have been working on Job 51, Lobby and Sales Room of the Hotel Development. The walls are finished to an approximate height of six feet.

*****SWM*****

BANDELIER CCC

By James M. Eden, acting project
superintendent, Santa Fe, New
Mexico.

During the month a small crew of men have been making pipe connections to the 20,000 gallon concrete reservoir and connecting all fire hydrants within the Hotel Development area.

Wall construction on the east side of Unit No. 2, of the Hotel Development, has been completed to lintel height during the month, and the remainder of the wall is to sill height. All door frames and five window frames have been set in this building.

The two rooms of the Employee's Dormitory (Hotel Development), which were started the latter part of December, have been completed to viga height during the month. Lintels have been placed in the other five rooms of this unit.

During the entire month the Ruins Stabilization crew have been working on the community house. Stabilization of this community house was completed on January 21 stabilizing, in all, 242 rooms.

The eight pieces of furniture which were reported complete last month have been turned over to the Custodian for permanent monument use; also two additional pieces of furniture have been completed this month and turned over to the Custodian. Part of the carpenter crew have been busy all month hewing lintels for the Employee's Dormitory.

During the entire month a crew has been at work in the rock quarry, quarrying and shaping building stones for use in the Hotel Development area.

*****SWM*****

BANDELIER RUINS STABILIZATION

By J. W. Hendron, foreman, Box 669, Santa Fe, New Mexico.

At the writing of this report the stabilization of Tyuonyi, the big community apartment house, has been completed. The job consisted of the stabilization of 242 rooms which were excavated by the School of American Archaeology in 1908, 1910, 1911, and 1912; and the cleaning of the small excavated kiva, and its partial reconstruction. The stabilization of the rooms, but not that of the kiva, was discussed in last month's report.

At the time of excavation by the School, one of three small kivas was excavated, and at the time of the stabilization the wall was not noticeably different. The mortar had washed from between the building stones to some extent and the fill around the outside of the wall had formed in such a manner that a great deal of rain was caught by the

BANDELIER RUINS STABILIZATION (CONT.)

structure. This fill was cut down to such a level that three feet of additional wall might be built all around onto the original wall. As the wall was being constructed, it was back-filled around the outside and a certain amount of flare was given to the wall to keep it from falling to the inside. The fill was then formed into a slope so that drainage would not be to the inside.

While preparing to stabilize the ventilator shaft, it fell in, but perhaps this was fortunate, since it has now been reconstructed and the building stone set in cement to insure its standing for some time to come.

Two other small jobs were completed including the cleaning and stabilization of two pitted rooms of a rectangular structure a few feet east of Tyuonyi, and the replastering and smoking of the Sun Kiva, the largest cave cut out of the tuff cliffs in the canyon.

*****SWM*****

CANYON DE CHELLY

By Johnwill Faris, custodian,
Chin Lee, Arizona.

Visitors this month, 14; total since October 1, 212.

A month of unbelievable weather but only 14 visitors! A light snow, although wet, fell on the eve of the 20th. Ten above zero has been the coldest to date, while a year ago tonight it was 25 below. This month last year the pipes were frozen 17 days of the 31. Quite a contrast, but that is just another one of the marvels of de Chelly; one needs never worry about being bored even with the weather. Everything here is just fine, Boss; not a great rush of visitors but lots of fun with all my Navajo pals and, Boss, it would take a vocabulary like that of Graham MacNamee at the Rose Bowl in Pasadena to describe some of the sights I have been privileged to see on various inspection trips. The lights, shadows, etc. Honestly, I am considering lending my support to the anti-lynching bill now before Congress by inviting the Southern Bloc to visit de Chelly, and any filibuster can then be carried on indefinitely on the wonders of Canyon de Chelly National Monument.

It has been most interesting at odd times to run down some of the early history of the Navajo, incidents in the life of Kit Carson and other references on de Chelly. Budlong very kindly furnished me several references that I have found worth while. Speaking of Budlong, I want to congratulate him on the frontpiece and article (pg. 33, January, 1938, issue) in the "Masterkey" on El Morro and that famous waterhole. Bud may claim the water is terrible, but he will have to admit that the ole hole, vermin and all, have heaped a lot of good publicity at his doorstep. So I guess it is an ill wind that blows no one some good.

CANYON DE CHELLY (CONT.)

You, of course, Boss, have been up both Canyons many times, but I wish you might accompany me when it is without any life. To go up this time of year is almost wierd. One can hardly realize how much the Navajos add to the setting until he sees it without them. In this connection, I have several ideas that I am submitting in a separate letter at a later date.

The CCC camp has lessened operations of recent date and there is not a great deal going on in this neck of the woods. I still battle with Cozy verbally on any subject that either of us choose to defend, but the Navajo has no regard for our discussions and takes my opponent off to place a value on a rug or pelt, and so it goes, but we will make every attempt to keep the wheels turning and in the spring open up with a bang. Am yet getting letters from last-summer visitors telling us of the pleasures our unit afforded them. That's what comes of those requirements we place on our rangers, I am thinking of adding even more for the coming season. Any suggesticns, anybody?

*****SWM*****

CASA GRANDE

By A. T. Bicknell, custodian,
Coolidge, Arizona.

Visitors this month, 4,766; total since October 1, 12,843.

WEATHER

Days clear-	- - - - -	-21
Days partly cloudy-	- - - - -	6
Days cloudy -	- - - - -	4
Maximum temperature -	- - - - -	-78° on the 13th.
Minimum temperature -	- - - - -	-24° on the 12th.
Mean maximum temperature-	- - - - -	-70.0
Mean minimum temperature-	- - - - -	-35.5
Precipitation -	- - - - -	-0.35 inches.

The winter visitors ought to be getting a mighty fine impression of Arizona this year. During the past month the days have been warm with very little wind, temperatures average about five degrees above normal. Usually, January is one of the rainy periods, but this year the rainfall is about .71 inches below normal. Prevailing winds for the month have been from the southwest.

GENERAL

Total travel for the month reached a new high with 4,766 visitors of which we contacted 4,500. The visitors represented 43 states, Washington, D. C.; Hawaii; and five foreign countries, namely: Canada, England, France, Germany, and Norway. Approximately 75% of the visitors registered from the following states: Arizona, 47%; California, 12%;

CASA GRANDE (CONT.)

Illinois, 1%; and Oklahoma, 4%.

On the evening of January 5 we were honored by a visit from the Federal Reclamation Repayment Commission. Among those in the party were Everett K. Gould, Denver, Colo.; W. R. Wallace, Salt Lake City, Utah; George T. Cochran, La Grande, Ore.; Charles A. Lory, Ft. Collins, Colo.; G. W. Linweaver, G. O. Stanford, and Misses Katharine Tully and Gladys Whitney, of Washington, D. C. The Boss, Dale, and Davey conducted the party through the ruins and museum. Even to us old hands the ruin was quite spectacular lighted with red flares. We are almost considering conducting parties through the ruins only at night by the light of the flares. It would make our "mud house" much more impressive for visitors.

The National Park Service had an opportunity to help the National Geographic Society this month by contacting various individuals who could aid Artist W. Langdon Kihn in obtaining portraits of the various Indian tribes of southern Arizona. Ranger Jones was detailed to spend several days in the Yaqui village (Pascua) near Tucson with Mr. Kihn in order to give him an insight into the village, and help him arrange for portraits with individuals. This will be one of the very few studies of this type which has ever been made on the Yaquis. All of us are looking forward to seeing the series of paintings on Southwestern Indians in the National Geographic Magazine.

Dr. Emil Haury and Harry Getty of the University of Arizona visited the monument with a group of archeology students in order to see what a prehistoric watchtower looks like. While the Casa Grande is not the only watchtower in this region, it is the only one preserved in something of its former glory.

USE OF MONUMENT FACILITIES BY THE PUBLIC

Total travel; 1938-----4766; 1937-----3744; 1936-----3370.

Of the 4,766 visitors to the monument, 4,500 were guided through the ruins, the museum, or both. It required 14,287 minutes to guide 400 parties through the ruins for an average time of 35.7 minutes. In the museum 7,739 minutes were spent guiding 333 parties for an average time of 23.2 minutes.

VISITORS

Among the visitors to the monument for the month were Odd S. Halseth, archeologist at Pueblo Grande; Miss Frances Gilmer, author of "Traders to the Navajos"; John Fast, of Chicago, who has made some very interesting studies of the birds on the monument; Sherman Bushnell of the Bureau of Public Roads who was a friend of the Soules and Bicknells at Yellowstone.

CASA GRANDE (CONT.)

National Park Service visitors to the monument included Ranger Felton and wife of White Sands, William Macy of the Museum Division, and Jesse Jennings and Jane of Montezuma Castle. Jesse was mighty proud of the finish on his boots. Not to be outdone by one of the field men we inquired as to the procedure. He mentioned that it required about a half hour each evening, but for the details he had to ask Jane. We suspect that if it were not for Jane, Jesse's boots would look like ours.

CASA GRANDE CCC

One hundred and nine man days were used this month on Job #50, Shop Construction. Excavation for the foundation was started December 28, 1937, but little work was done until the second week in January when the footing and the foundation was poured. The concrete was given a seal coat to prevent capillary attraction, and about four feet of adobe wall has been built to date.

Guide and educational work, Job 53, required a total of 102 man days. Johnny Cocks, guide, left us on the 5th and was replaced by Buster Baldwin. Teddy Savage, a new man in camp, has also been added to the guide service, and is working in nicely.

A reconditioned motor was installed in CCC truck #13781; one day was spent hauling sand for foundation of the shop building.

On Job 54, Clean-up, we used 31 man days cleaning up old lumber and trash in the vicinity of Compound B.

Job 55, Adobe Manufacture, was continued, 128 man days being spent on this project. The boys are turning out a mighty fine bunch of adobes.

Due to Army regulations and unfinished work at camp, it has been necessary to use 40 man days picking up at odd jobs.

Chaplain Prebert held services at camp on December 26, January 2, and 16. A. J. Beatty, educational adviser, NM-2-A, visited the camp in connection with his work on December 31, January 3 and 17. Camp was inspected by Dr. Barker, district surgeon on January 2; by Lt. Keiling, Commanding Officer at BR-19-A, on the 12th, and Captain Half on January 14.

Safety meetings were conducted on Thursdays of each week, and the following classes were held:

	<u>Instructor</u>	<u>Dates</u>
Arithmetic- - - - -	-Mr. Hobbs-	-Jan. 18 and 24.
Spanish - - - - -	-Mr. Hobbs-	-Jan. 12 and 19.
Building trades - - - -	-Mr. Hobbs-	-Dec.27;Jan.3,10, and 17.

The educational division program was put into effect January 17.

Junior Naturalist Dodge gave a lecture illustrated with lantern slides on the evening of January 21. The boys are also indebted to Natt for the loan of a radio for use in camp.

By the time our next report is due, we hope to have in operation a self guiding trail routed by way of one of our ruins which the visitor seldom sees, because we do not have time to take him to it.

In a mimeographed pamphlet issued to each visitor expressing a desire to see the trail, there will be a short discussion on the pre-historic ruins he will see, and bits of information on the plant and animal life of the desert. In this manner, we hope to give the visitor who has time a more complete picture of the lives of the Hohokam, and of the adjustments they had to make to their surroundings. We are not investing any money in this project until we see whether or not we have what the visitor wants. By asking that the pamphlet be returned to the office, and watching for the return of the visitor from the trail we hope to determine whether or not we are presenting our information in the proper manner. If this project is a failure, we shall at least know what we cannot do with our visitors. On the other hand, if we succeed, we shall have somewhat of a solution to the problem of the visitor who expresses a greater interest than the average.

*****SWM*****

There was a rather amusing scramble around the lot the other night the committee mentioned above came out to see the ruins. Judge McFarland, who had them in tow, waited until they were sitting down to a seven o'clock dinner to call me over the phone and ask if he could bring them out when they arose from the table. Of course I told him to come along and then a hasty scout around the lot showed everybody off on business or pleasure except Davey, Dale, and myself. As pinch hitters we seemed to fill the bill; at least they went away quite enthusiastic.

The "Desert Trail", which Al speaks of, bids fair to compete with the museum discussions around headquarters. We have had a lot of fun with it thus far and are anxiously awaiting its dedication. Davey and Al have put in a lot of time on the booklet, which will likely run to 20 pages of mimeographed material and we ought to be ready to go within the next week or so.--F. P.

*****SWM*****

WALNUT CANYON

By Paul Beaubien, jr. park
archeologist, Flagstaff, Ariz.

Visitors this month, 231; total since October 1, 1,886.

WALNUT CANYON (CONT.)

There were 231 visitors this month. The roads have been sloppy from several light snows, but were never impassable. Without a ranger here, conditions would be just those desired by "pot-hunters" -- easy access, and few to evade.

The highlight of the month was Hugh Miller's visit on January 8. It was the first time he ever stopped for more than a few minutes. Was glad to see Dale King and J. H. Tovrea for a few minutes on January 21.

During the month I spent some time studying the old register sheets. After the name and address columns, there is blank space which visitors frequently utilized by writing in remarks. Too often these remarks have been uncomplimentary in regard to lack of roads, trails, etc. For almost two years I have used this space by having the date and the time of arrival written after each entry. By having the time of arrival, I was able to identify groups which had been contacted at the ranger station.

I checked over the time of arrival for four of the summer months when there were 7,533 visitors. I found that five percent arrived before 8:00 a. m., and that 19 percent arrived after 5:00 p. m. Thus, a ranger working nine hours a day, seven days a week, could contact 76 percent of the visitors -- if he didn't have anything else to do, or didn't personally conduct any parties to the cliff dwellings.

I also checked addresses for four months, to learn which states were furnishing the most visitors. As tabulating by states takes lots of time, I only checked one of the heavy travel months. Below are lists of the ten leading states for each of four months:

	<u>April, '37</u>	<u>May, '37</u>	<u>Aug. '37</u>	<u>Nov. '37</u>	<u>Average of the four months.</u>
1	Arizona	Arizona	Arizona	California	Arizona
2	California	California	California	Arizona	California
3	Michigan	Oklahoma	Texas	Kansas	Texas
4	Wisconsin	Texas	Oklahoma	Ohio	Kansas
5	Kansas	Illinois	Ohio	N. Mex.	Oklahoma
6	Texas	Missouri	Kansas	Washington	Ohio
7	New York	Kansas	Illinois	Oklahoma	Illinois
8	Penn.	N. Mex.	Missouri	Nebraska	Missouri
9	Iowa	Indiana	New York	Michigan	Michigan
10	Missouri	Washington	Penn.	Penn.	New York

California produces many visitors (more than 19% of the total, and about 27% of the out-of-state), and Washington was tenth in May and sixty in November. Evidently, many western visitors encounter their first southwestern monument in the Flagstaff region. I wonder how many miles off the highway they would drive to see another monument, after sampling the facilities of Wupatki, Sunset Crater, and

WALNUT CANYON (CONT.)

Walnut Canyon?

It was interesting to note that with 4,436 visitors in the four months, every state, Washington, D. C., Hawaii, and 12 foreign countries were represented. April and May produced the same number of foreign visitors, while the heavy travel month of August only produced one more than either. Perhaps foreign travel is not subject to as much seasonal variation as domestic travel. The foreign countries, Brazil, Canada, China, Denmark, England, India, Mexico, Peru, South Africa, Switzerland, Venezuela, and the West Indies, produced only six less visitors than the 12 states of Conn., Del., Idaho, Maine, Nevada, New Hampshire, N. Car., N. Dak., Rhode Island, S. Car., Vermont, and Virginia.

During this month, seven freshly painted signs were placed, and all of the 42 tons of water removed from the cistern.

Should mention that Dr. Harold S. Colton donated eight volumes of the "Museum Notes of the Museum of Northern Arizona" to the monument library. Also, the county spent four days grading the entrance roads.

Three trips were made to Wupatki during the month, and one to Sunset Crater, Jan. 8. One hundred forty one people had registered at Sunset since Nov. 25. The road from Sunset to Wupatki was still blocked by snow.

Clyde Peshlakai has been busy -- most of the time on roads. But with the work scattered along some 15 miles of roads, the results are not impressive except to those familiar with their previous condition.

Forty four visitors had registered at Citadel, and 19 at Wupatki Pueblo.

*****SWM*****

Paul turns in some interesting visitor information in this report and has our thanks for putting in the extra time which it took to gather it.

Again Dr. Colton has added to his already long list of generous deeds and we thank him on behalf of the Service for the valuable volumes which he has given to the library at Walnut Canyon.--F. P.

*****SWM*****

MONTEZUMA CASTLE

By Earl Jackson, custodian,
Camp Verde, Arizona.

Visitors this month, 599; total since October 1, 2,441.

STATISTICAL

Visitors- - - - - 599. Last Year: 172.
Arizona by cars- - - - - 412. - 68.7% of total.
California by cars - - - - - 74. - 12.3% of total.
Total states - - - - - 25.
Foreign Countries- - - - - 2. Canada and England.
Territories- - - - - 1. Hawaii.

Conveyance:

Cars - - - - - 159.
Horseback- - - - - 2.
On Foot- - - - - 5.

Contacts:

Guided field trips - - - - - 136.
Attendance - - - - - 441.
Trips through Castle - - - - - 99.
Those who climbed ladders- - - - - 328. - 74.3% of total on
trips.
Average persons per trip party*- - - 4.69
Average persons per trip group** - - 3.31
Average trip time per party- - - - 56.47 minutes.
Average trip time per group- - - - 39.03 minutes.
Museum talks - - - - - 121.
Attendance - - - - - 417.
Average persons per talk party - - - 4.58
Average persons per talk group - - - 3.44
Average talk time per party- - - - 23.34 minutes.
Average talk time per group- - - - 17.55 minutes.
Special guide trips- - - - - 6.
Attendance - - - - - 51.
Average party and group time - - - - 26.66 minutes.
Unguided trips - - - - - 59.
Persons on unguided trips- - - - - 208.
Average unguided trip time - - - - - 16.16 minutes.
Average actual guide and lecture time - 61.4 minutes.
Average group minutes on monument - - - 83.47 minutes.

*Party means total persons on part or all of a trip.

**Groups are natural arrival units of a party.

Weather:

Precipitation - - - - .50. Dec. 24 and 27, Jan. 15 and 19.
Days Cloudy - - - - - 8.
Days Partly Cloudy- - - 3.

MONTEZUMA CASTLE (CONT.)

Max. Temp.- - - - - 72 on Jan. 22.
Min. Temp.- - - - - 21 on Jan. 11 and 12.
Mean Maximum- - - - - 63.01
Mean Minimum- - - - - 31.

(Temperature readings are from Jan. 1, 1938)

WEATHER AND ROADS

Weather has been unusually mild, with no snow in the valley. Surrounding mountain country which at this time last year had several feet of snow, now measures it in scant inches.

Approach roads are in fair condition, such as are. By this I mean there are very few approaches now. The road by Stoneman Lake, as is usual in winter, is bringing us no visitors. The road from Pine and Payson is bring very few people, as all wer weather travelers on that route complain of the slippery mud. One hitherto well-traveled road from Oak Creek Canyon to the Castle via Cornville is in such bad condition, due to construction work going on there, that people won't travel it. I am quite convinced that we have lost quite a bit of travel by that road being obstructed, because many people will take that short route to the Castle from Oak Creek Canyon who would not drive the longer road by Cottonwood and Camp Verde.

SPECIAL VISITORS

Park Service: None.

Other Visitors: January 3. E. Hill Leith and his wife, the new proprietors of the Beaver Creek dude ranch, were interested visitors.

January 12. Donald de Leon, former C.C.~~W~~. Entomological technician, who needs no introduction to most of us, was in for a short visit. He was accompanied by his sister. He is back now with the Bureau of Entomology and Plant Quarantine, stationed at Fort Collins, Colorado.

January 15. Second Lieutenant Randall P. Leglar, of 'CCC Camp F-39-A, located at the mouth of Oak Creek on the Verde River, was in with a group of 52 enrollees.

January 16. Robert B. Coleman, a professional cameraman, who works for United Artists and non-theatrical distributors, shot considerable color film of Montezuma Castle.

PUBLICITY

Color films of Montezuma Castle taken by Robert B. Coleman, will be part of a scenic motion picture reel entitled "Wonders of Northern Arizona," which will be part of a 12-reel scenic production "Encyclopedia of the Screen", to be released after the middle of the year by collaboration of United Artists and non-theatrical distributors. Mr. Coleman says these color films, which he is taking on 35 millimeter

MONTEZUMA CASTLE (CONT.)

film, will be reduced to 16 millimeter so that they may be available to schools, churches, various state and county agencies, and chambers of commerce. He states that before these pictures are completed he expects to return here in June and take some more when the foliage is on the vegetation. (The matter of permission for Mr. Coleman to take these pictures was taken up with you by phone.)

ADMINISTRATIVE

New Equipment: One new Electrolux Refrigerator was delivered January 23, when Ranger Jennings returned from a Headquarters trip.

MAINTENANCE, IMPROVEMENTS, AND NEW CONSTRUCTION

Maintenance: A thorough cleaning has been given the basement of the custodian's residence, which serves as a machine shop, storehouse, paint shop, laundry, gas house, repository for archaeological and herbarium specimens, etc. etc.

Improvements: A flat top table case, from the old Casa Grande museum, has been installed in our museum room and our textile exhibit placed in it.

VANDALISM

On the night of Friday, January 14, a group of school children built a picnic fire about a quarter mile up Beaver Creek from the custodian's residence. They were shortly joined by five boys who proceeded to make themselves obnoxious by setting a number of fires in the dead leaves of the creek bottom around the camp fire. Then the entire party left, and the original picnickers came to me about midnight and reported the fires. Ranger Jennings immediately went to the scene of the fire, and found it burning merrily. He stomped out the two worst sections of fire, and then the rain came and stopped the rest.

In all, about 200 feet of creek bottom was burned over. This consisted mostly of down leaves, but about a half dozen small willows and water moodys (*bachharis glutinosa*) were burned so badly they will probably die. The fire also spread up the brush slope far enough to burn half a dozen small mesquite and cat claw bushes, probably enough to kill them.

On Monday morning I rounded up the five miscreants and took them individually before their parents and gave them about 30 minutes each of pretty straight talking to, impressing upon them the seriousness of the offense, attempting to show them how adherence to a moral and legal set of principles would be more advantageous to them than such actions, and telling them that their reactions to my visit would be the determining factors as to whether prosecution would be necessary.

MONTEZUMA CASTLE (CONT.)

This matter was taken up with you in considerable detail in official correspondence, so I only mention it in this report as a routine matter.

NATURE NOTES

On January 6, under the floor of an old equipment whed which Jesse had torn down, we found a large rat's nest. This nest was made of shredded Juniper bark, Mesquite leaves, and playing cards. There were rat droppings, and droppings of some larger animal. These latter contained great numbers of Hackberry (*Celtis reticulata*) seeds. Suspecting the rat had been dispossessed of his home, that he might, in fact, have met with catastrophe, we were cautious as we removed the last two or three boards of the floor. And under the last board was a very handsome skunk, almost certainly the Northern Hooded Skunk (*Mephitis macroura milleri* Mearns). This fellow had tolerated all the hammering and noises without scenting, but he appeared quite irritated at having his roof taken off over his head, and for some minutes he glared at us while he stamped one foot up and down upon the dry twigs, much as an irate school ma'm might tap her foot in exasperation as she surveyed the class to see which boy had shot that spit-wad.

I ran to the house and got my camera while Jesse and his mother watched the irritated skunk, and when I got back to take the picture, Jesse lifted the last floor board with infinite discretion. Then the skunk looked peacefully around him, his anger all gone, but great curiosity manifest in his attitude. He rooted around through the ruins of the nest a moment, and then came over to investigate Mrs. Jennings and me. He nosed within three feet of us, then changed his mind about visiting, turned his back on us, and plowed, nose first, under the rat nest once more, while I shot his picture. Finally convinced that there was nothing more of interest in the nest, he dropped his nosy manner, and strode briskly away into the bushes, as though he just remembered an important appointment. Although he had kept his beautiful long tail up all the time he was conducting his investigation of his damaged home and the interlopers, he never let loose the least odor, for which we were thankful. Jesse offered to catch it if Uncle Sam would give him two weeks leave on pay during the subsequent enforced isolation, but we had to forego Jesse's offer, not knowing of any government regulations regarding salary status on skunk catching.

It might be of interest to know that several varieties of our ants haven't yet found out it is winter, and have been active all through the autumn and winter to date.

For bird notes, see Betty Jackson's report, appended to this one.

MONTEZUMA CASTLE (CONT.)

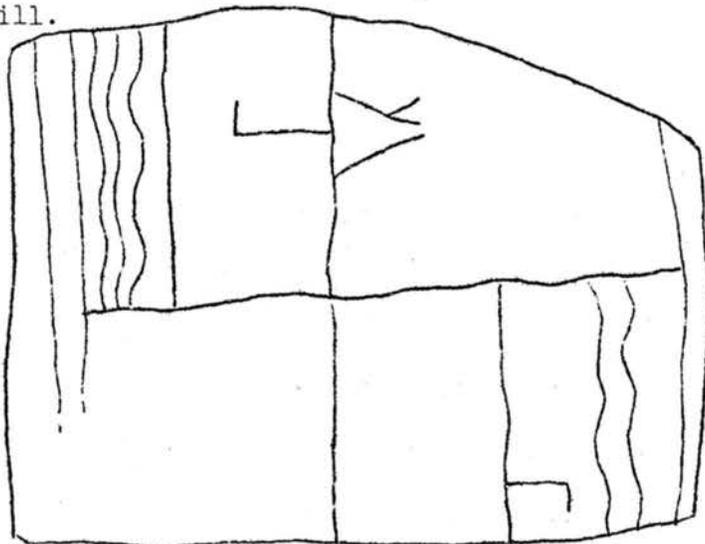
GENERAL

Jesse Jennings made one official trip to Headquarters this month, going down on the 22nd and returning on the 23rd. No other official trips to other stations occurred this month, and no other Park Service contacts.

If you find an over abundance of statistics in my monthly reports, I should be overjoyed to heed any advice you felt necessary in their reduction.

In general, from the custodian's standpoint, affairs have gone quite satisfactorily here this month. Visitor contacts are up a bit, and length of visitor stay has increased over last month.

The labels which I worded for the display case of sexual differences in male and female skulls and pelvi are too complicated for the average person to understand, so will have to be done over. I am beginning to think we will have to give elementary physiology lessons before people will understand any type of bone labels. When one visitor came in and looked very interestedly at a loose mandible for some moments, and finally asked "Is that the upper or the lower jaw?" I realized how much of a job it will be to teach even the simplest anatomy lessons. We won't give up trying to simplify science, though. If we must say that the skull is what keeps the backbone from unravelling, we will.



A MONTEZUMA CASTLE WALL PICTURE

If you care to put this in the supplement, to invite any comment that might be forthcoming, I would be much obliged. It is an accurate copy, reduced one-half in size. The original was incised in the plastered wall of one of the rooms of Montezuma Castle. The sketch has intrigued most of the people who have looked at it carefully, yet

MONTEZUMA CASTLE (CONT.)

we have never received any good suggestions as to even a likely meaning of it. It is so peculiar, and shows such lack of symmetry, that it must not have been intended just as a design.

Would surely be glad if some reader would show this sketch to archeologists or Indians and, if anything interesting shows up, report it in next month's supplement.

Thanks.

*****SWM*****

BIRDS AT MONTEZUMA CASTLE

By Betty Jackson.

This report is written mostly from observations made by Jane Jennings in January. I want to express my thanks to her for keeping the records for the monument unbroken.

Chestnut-backed Bluebird	Bluebird sp?
Arizona Cardinal	Duck sp?
House Finch	Finch sp?
Red Shafted Flicker	Geese sp?
Cocper Hawk.	Desert Sparrow Hawk
Sharp-shinned Hawk	Mud Hen?
Treganza Blue Heron	Oregon Junco
Ashy Ruby Crowned Kinglet	Belted Kingfisher
Gambel Quail	American Raven
Western Robin	Road-runner
Gambel Sparrow	Western Chipping Sparrow
Red-naped Sapsucker	Crissal Thrasher
Hermit Thrush (var. ?)	Cedar Waxwing
Cactus Woodpecker	Baird-Bewick Wren
Wren sp?	

On December 24 at 5:15 p. m., Earl heard a honking overhead and looked up to see a flight of geese going over. He roused us all out, and we were in time to count at least 25 of them, flying in a perfect V formation and heading about 10 degrees west of south. They were going very fast, and we would never have seen them if they hadn't called Earl's attention to their presence by honking.

On the 29th, Jane and Jesse saw what they believe to have been mud-hens flying over. Also on this day Jane saw the bird I have listed as Bluebird sp?. It looks like the Eastern Bluebird more than anything else, but we can't track it down.

Something frightened a Kinglet by the tent, and he ruffed up his crown and complained in a shrill angree "Wee-wee-wee". First he lit on Jane's clothes line, then moved to a tree a few feet from her,

BIRDS AT MONTEZUMA CASTLE (CONT.)

where she was able to observe the opening and closing of the red crown perfectly. First the feathers on the head separated in a slit, then the red feathers stood up through, forming the complete "Ruby Crown" as the crack widened to include the whole top of the head. The process reversed when he calmed down.

On January 1 a bird got very familiar with the Jennings. The door of the tent was open, so he hopped in, perched on the rung of a chair, and looked around at his hosts. He sat there gently twittering for a minute or two, while they watched, then turned around and hopped out. Later he was seen feeding on bread crumbs under the canvas they have over their woodpile.

The bird looked sort of like a Baird-Bewick wren in markings, but his shape is quite different. He is much stubbier -- sort of like a little ball with a tail. The tail is shorter than the wren's, too. He's been seen around in the bushes quite a lot.

The cardinal has been giving a morning entertainment daily since January 2, sitting on the top of a tree near the tent and singing.

The Robins were last seen on January 2. They seem to have left us now.

On this same date Earl saw the Cactus Woodpecker spending several hours eating the leaf-galls on the hackberries.

On January 5 the Cedar Waxwings were seen in a large flock, apparently collected for their departure, for that's the last that has been seen of them.

Mrs. Jennings saw the Road Runner on January 9, and again later very close to the tent.

Also on the 9th, and again on the 10th, Jane and Jesse saw flights of ducks. They were unidentifiable.

The Bluebirds seem to have petered out, instead of leaving in a bunch like the Robins and waxwings. There are about three left now.

On the tenth Jane saw something very interesting. She was watching a flock of sparrows and house finches feeding in the bushes when suddenly they all dropped to the ground, where they crouched, perfectly still. She looked up, and there was a sparrow-hawk, flying close to the ground.

She didn't hear any alarm note given, but says she might have failed to notice it, not being on guard.

BIRDS AT MONTEZUMA CASTLE (CONT.)

On January 11 she saw a bird she thinks is a finch, feeding on the sycamore balls. The description is similar to a goldfinch, but there was no black on the head, only the greenish yellow that was also the color of the back. As he sat on a twig, he reached out with one foot, caught the twig supporting the ball, and pulled it to him, then with his beak he pulled it apart, sending the fluff over his shoulders in both directions, but not making a sound.

On January 22 I saw a Sharp-shinned Hawk on the road to Camp Verde, about a quarter mile from the west boundary of the monument. He's the first I've seen here.

*****SWM*****

These are the usual good reports from the Montezuma Castle. I am as anxious to hear any comments on the wall picture as anyone because, with Earl's Dad I have spent various hours guessing what it was all about without coming to any conclusion. I think there can be no question about its age, it is not modern.--F. P.

*****SWM*****

NATURAL BRIDGES

By Zeke Johnson, custodian,
62½ South Main, Salt Lake
City, Utah.

Not much to write about this time. Only still glad to be alive and on the job.

I have made one talk or lecture on the Bridges to 268 interested listeners and have contacted 387 in other places and other ways. Nearly every mail brings inquiries about the monument and other scenic parts of Utah.

We are having a very mild winter here and I hear it is about the same at Blanding. Mrs. Johnson and I are enjoying best of health and are anxious for spring to come so we can go home to the Bridges.

*****SWM*****

WHITE SANDS

By Tom Charles, custodian,
Alamogordo, New Mexico.

I have often heard that it doesn't make much difference whether you have one child or eight, it takes all your time anyway. I am just beginning to realize the truth of that statement. Take this matter of Public Relations: before I got a full time ranger I didn't have much trouble in talking the Chamber of Commerce out of putting on a White Sands float for the Sun Carnival, or making a drive for this cause or that one, because I was too busy, but since Jim is on

WHITE SANDS (CONT.)

the job at the White Sands it seems that they think my time is open for any free job.

Just what is a custodian's obligation in this matter of "community service"? I want to know. When the Governor of the State writes you that you are the county chairman for the Crippled Children's Fund, what you going to do about it? Well these were the questions I had to answer this month. I feel that the fact that I was custodian of the White Sands had much to do with my being appointed so I accepted the job graciously and have pushed the work vigorously. We have organized every part of the county. In the past two weeks, through several committees, I have put on two dances, a double header basketball game, an enchilada supper, a tag day, a community singing, and a farm market where all products were donated and then auctioned off to the public. Fortunately, every one of them was a "hum-dinger". For instance, the Spanish American girls gave the enchilada supper. They arranged to feed 125, but they actually fed nearly 200. The Junior Woman's Club, a group of girls from 15 to 18, put on a tag day and contributed \$21.65 for the benefit of crippled children.

In addition to this, I had the pleasure of presenting the last year's development at White Sands to the annual meeting of the local Chamber of Commerce with representatives from Tularosa and Las Cruces. That job is always a pleasure, for this youngster of ours holds its own pretty well in any show ring. So you see, Boss, Jim relieved me at the White Sands but I was busy in Public Relations and it doesn't make much difference whether you have one child or eight. It takes all of your time anyway.

The newspaper boys have been kind to us again this month. Bill Robinson, dean of New Mexico Newspaper men, grew dramatic in his syndicated column this week over Adrey Borell's dried-up duck farm. "The Carlsbad Caverns had over 200,000 visitors last year", says Bill, "But the White Sands entertained over a half million visitors during that time. Travelers from other states and countries, from the tundras of the arctic to the jungles of the tropics. They all rested from the wear of the open road, grateful for the shelter and beauty of the marshes and the vast expanse of gypsum. They did not require the trained guides and concealed lights like the other 100,000 who made the turn-around in the world's greatest natural amphitheater, they left no record but will be back again this fall". It is the never ending variety of feathered people that gives Mr. Robinson his inspiration. He lists a few like the Snowy Gulls on their way from sea to sea; the Canadian Swan; the lively little Savannah sparrow, even the Palm Warbler, all hosts where they have no fear of hunters.

Too bad, Bill, you write as Borrell and the Wildlife Department planned that it should be, but the 200-acre lake has dwindled to 10, aye, maybe 5 acres; the six swans have dwindled to none, and the rest

WHITE SANDS (CONT.)

of the birds in proportion:

Cyrus McCormick, editor of the New Mexico Sentinel gave the White Sands a three column spread last week with a picture of the headquarters building. It was an unusually informative article.

Miss Laura Treaster writes from Denver that she has sold a White Sands story to the Michigan Motor News to appear in an early number, while "Picturesque" gave us a full page, with five pictures and a fine story. "Picturesque" is a Who's-Who of the Southwest's attractions so we consider that breaking into the lime light. "Desert", a new southwestern magazine published at El Centro, California advises that they will carry an illustrated White Sands story in a forthcoming issue, while our mutual friend Dr. Halliday gave us a nice story in the Log Book, a college publication for his school of osteopathy in Des Moines, Iowa. Looks like they are fine friends that we have in the newspaper profession.

On the 13th of this month the New Mexico Highway Commission let the contract of ten miles of new blacktop on Federal Highway 70, between the White Sands and Las Cruces and word has trickled through via the grapevine that Governor Tingley expects to finish that road this summer.

Another bit of good news came to us this week with H. H. Cornell's visit and the suggestion that the picnic ground troubles have been about ironed out and that development may be just around the corner. So, you see, Boss, we are doing nicely, we are looking back on the period when growing pains might be expected and everything looks bright for the future.

WHITE SANDS RANGER REPORT

By Jim Felton, Alamogordo, N. Mex.

TRAVEL

We may as well open on the subject causing the most discussion around here. The question is--to add or not to add! During my absence on leave Mr. Shepperd counted our visitors, and after my return we both indulged in this activity. An attempt was made to check every car that came into the monument via the oil surface highway.

Also a little "dope" was gathered on the travelers who park along Highway 70 and walk the few yards to the Sands; they must be classed as visitors. On an average, we found as many visitors taking this short way to the monument as are driving in on the new entrance road. Many of these "roadside dudes" park down below Ridinger's station, completely out of sight from any point near headquarters; therefore, it is impossible for one man to get an accurate check on all. Last month this Barry Mohun count was Greek to me. Now that I know how these statistics were gathered, the 14% registration figure is plausible. It was figured from all visitor contacts, including my roadside friends, which is, of

WHITE SANDS (CONT.)

from all visitor contacts, including my roadside friends, which is, of course, correct. Our total number for the month is a bit short using this method, but is near enough so that we can forget the difference.

Our registered visitors numbered 1,043, while we counted 555 cars with 2,365 people to the White Sands via the monument highway. Multiplying this by two for the uncontacted, estimated visitors along 70 we have a grand total for the month of 1,110 cars and 4,730 visitors. Guess I short-changed White Sands on the count last month; however, this number is going to be a question until Highway 70 is realigned.

CONSTRUCTION

In my absence, the RD project made notable progress. It looks as if a branding corral were going to be added to the lay-out. It encloses the gas and oil house which has in connection a pen for oil barrels.

The power house is now in the picture, but it lacks the roof, floor, fixtures, motor, etc.; however, I guess an architect would say that it is 75% complete.

Much crashing and banging in residence number two indicates that the boys are at work and will reach the stage of finishing touches soon.

GENERAL

After a good vacation at home which included three, perhaps I should say four, short visits at Headquarters, we are glad to be back in harness. The last stop at Casa Grande was rather an impromptu affair, for after getting some 75 miles out toward the White Sands, one of the knees on the Chevrolet broke, necessitating a forced landing. With the help of a goodly portion of the Headquarters staff, we returned to spend a pleasant night and make the successful start the next morning.

The most interested visitor to the monument during the month, in the opinion of the ranger, was Adrey Borell. We really went places together--in the monument, Boss. The White Sands porcupine had a narrow escape, for we tracked him up and down the sand hills, but we were in the same predicament as a much publicized Arizona sheriff--just 15 minutes behind our victim, but unable to overtake him.

My introduction to the lake side of the sand pile was made during these days. Adobe Walls looks like a good place to propagate quail. According to the old timers, they were once native in this section--the quail I mean. It's over along the lake bed that the geological story of the Sands comes to light. Well, you can see from this that I think the west side of the monument is tops!

WHITE SANDS (CONT.)

WEATHER

The big December snow storm touched the edges of the White Sands, Ice on the highways, especially in the mountains, made roads tricky and visitors scarce for a few days. The past three weeks brought many warm days and only a few nights with freezing temperatures. A corresponding increase in visitors in this period has been noticed. Our largest crowd for the month came last Sunday when weather conditions might have been described as ideal. On the cloudy, cold days, we have had only three or four cars.

PARK SERVICE VISITORS

On January 13 and 14 A. E. Borell checked the birds for this season against older records. No new feathered visitors were added to our winter bird lists.

H. H. Connell and Mr. Lackey of the Regional Office conferred with Custodian Charles on the 20th. They let me in on their pow-wow which was held on the highest sand hill near the proposed picnic area. It's agreed that we are to have some tables and possibly the culvert type shelter. Someone even mentioned a substitute for the present Chic Sale.

*****SWM*****

Tom, you raise a real question when you ask just what is a custodian's duty in the matter of community service.

I should say that so long as it doesn't actually interfere with his duty to the Government, he should go as far as seems feasible. We encourage our men to join local chambers of commerce, Rotary, Kiwanis, or Lions clubs, and to help out in local matters. They should, of course, stay out of all local or factional quarrels, and, equally of course, politics is completely out of the question in all its roots and branches. This will give a man a pretty big field to be of use to his neighbors and should not interfere with his duties to the Government.

*****SWM*****

ARCHES

By Harry Reed, custodian,
Moab, Utah.

Visitors this month, 25; total since October 1, 261.

WEATHER AND ROADS

Weather has been ideal this month with the exception of a few days. There has been very little snow in the monument. We had considerable fog the first week, which resulted in heavy frost covering the trees

ARCHES (CONT.)

and sagebrush. The temporary road from U. S. Highway 160 (formerly 450) into the monument is in very good shape. The sand is packed hard and no washouts have occurred. There have been only a few days during the winter season when one could not have made an enjoyable trip to the Arches.

VISITORS

There have been few visitors this month. I feel sure many more persons would visit the monument during the winter if they were aware of the favorable conditions. Of the few who visited the monument, only one car was from out of the state.

MISCELLANEOUS

My brother and I have made two hikes into the territory just across the Colorado River from the Arches. This area lies north and east of Moab. One of the most remarkable features we found was the view one gets of the Arches from a high ridge of sandstone known locally as "Lion's Back". This sandstone ridge, which is the highest point between the Colorado River and Moab Valley, extends from a point near the Colorado River bridge (U. S. 160) to the rim of Wilson Mesa at the foot of the La Sals. At one point of observation, we had the river canyon with its perpendicular walls hundreds of feet high in the foreground and a beautiful panorama from the Court House Towers to the Windows in the distance. One can see blue sky through the Massive Arch (south window) which stands out on the skyline.

We found a small but perfectly shaped natural bridge which is so completely hidden that no doubt it has been seen by but very few persons. The span of the bridge is about 16 feet, the height eight feet, and its thickness is less than two feet. It spans a natural watercourse. The top is almost perfectly level and the arch is very symmetrical.

This trip especially to the point overlooking the Colorado River Canyon would make a splendid side trip from Arches National Monument as it is easily reached on horseback over a very good stock trail.

*****SWM*****

This is a good report from Harry and we are interested in the new arch on the east side of the river. We were surprised to hear the mild winter of the Southwest is reaching as far up as the Arches National Monument and will watch the February and March weather up there with considerable interest; for it seems to us there is some winter some place ahead of us yet, since we have none behind us thus far this year.
--F. P.

*****SWM*****

GILA CLIFF DWELLINGS

Just to show you the kind of cooperation we get down in our district, we submit the following:

"Dear Mr. Pinkley:

"Reference is made to your letter of December 27, 1937, in regard to fencing needed in the Gila Cliff Dwellings National Monument.

"Kindly be advised that during the early part of this month, Ranger Woodrow together with Mr. Wm. Laney, grazing permittee, completed 2 short pieces of fence thereby making the Cliff Dwellings proper free from depredation because of livestock grazing in this section.

"In regard to furnishing you with a photograph of the completed fence, Mr. Laney's son who assisted with the work, took some pictures of the fence, and he signified his willingness to give us a copy of the photograph; upon receipt of photograph you will be furnished with a copy.

"In the construction of this fence, salvaged wire was used and no cost except contributing time was involved. Of course, you appreciate the construction of this fence is only of a temporary nature, but it will serve the immediate need for excluding stock from the above mentioned area.

"In case we are able to cooperate with and assist you in the future, please do not hesitate to call upon us.

Very sincerely yours,

(SGD) L. R. Lessel
L. R. LESSEL,
Forest Supervisor."

Do you wonder that the feelings between the Forest and Park Service are so cordial in the Southwest?

*****SWM*****

CHACO CANYON

By Lewis T. McKinney, custodian,
Chaco Canyon, New Mexico.

Visitors this month, 73; total since October 1, 685.

This finds me sitting up here on Threatening Rock this morning,

CHACO CANYON (CONT.)

which may seem a heck of a place to write a monthly report, to you and the rest of the happy family of the Southwestern Monuments. But I wish every doggone one of you were up here with me, it is such a fine day, just like a spring morning. And to sit here and look down on old Pueblo Bonito is something that will give you a grand feeling when everything else fails. Also you can look up the canyon a few hundred yards, and there sits old Chettro Kettle that is doing her best to puff up her feathers and make you think that it is just as grand as old Bonito. But, Boss, she will "sho" have to do some puffing. There across the canyon is Casa Rinconada, the largest and grandest old Kiva in the Chaco, sitting there on that little hill so it can see what is going on all over the floor of the canyon, from Hungo Pavi which is up the canyon, to Penasco Blanco, which is down the Canyon about one and a half miles (only it is not on the Canyon floor, but sits out there on that old rock point.) You can also look over Pueblo del Arroyo, Klen-Klet-Soi and dozens of small ruins from here

Since most of the concrete has been removed from Pueblo Bonito it looks much better, for those places that were covered with concrete did show up like a gold piece on a sidewalk. The Kivas show up much better also since the dead-corners have been cleared out. I believe by May 1 we can show our visitors more of Bonito than they ever saw before and it will take a lot less time than it has in the past, as we can show them several different things and places from one or two stops, where it did take maybe a dozen stops. They can see the fire-pits and other things in the floor of several small kivas that have been covered up in the past.

After reading last month's report, I find that I am supposed to be somewhere over in Arizona and formerly of Chaco, but when I awcke this morning I was still here in this good old wind-swept gully called Chaco.

Boss, yesterday when I started this report I was talking about the very fine weather we were having, but this afternoon, which is January 23, I have changed my mind. I have just returned from Penasco Blanco with a party of four people, and it is snowing like the devil; the wind must be blowing about 50 miles per hour. I saw something pass over that looked like it may have been a Park Service hat from over Aztec or de Chelly way, but I guess it was either a sun bonnet or a tumble-weed.

I have had through the monument this month 73 visitors, from the following states: Calif., Colo., Ariz., Kans., Okla., and N. Mex. The District of Columbia was also represented.

On the 12th of this month Mr. John C. McPhee and Mrs. Mae C. McPhee were in the monument for several hours taking pictures of the work that was being done by the Mobile Unit and other pictures of the

CHACO CANYON (CONT.)

ruins. Mr. McPhee is publicity man for the Navajo Service from Window Rock, Arizona. Mr. McPhee asked me to take some of my pots, skulls, and so forth, from the museum (blacksmith shop) out into the ruins of Pueblo Bonito so he could get a picture of them. While we were out there he asked me to pose for him with an armfull of pots, skulls, etc., because he wanted a picture of an archeologist with his treasures. I told him I wasn't an archeologist, so he told me just to stand there and look dumb. Of course, that was easy. Then he took another one of Vivian and me, I looking like an archeologist and Vivian looking natural.

The weather has been just fine this month until today, that is, it has been fine for January. The minimum has been 9° above, the maximum was 55° ; precipitation, .18; with only $2\frac{1}{4}$ inches of snow for the entire month, still patches of snow sticking about on the north hill sides. Five cloudy days, 7 partly cloudy ones, and the balance clear.

Threatening Rock is still restless. Maybe it is the cool nights, but anyway, it has moved outward since August. I have just returned from up on that said rock in this snow and wind storm. It measures $2\frac{3}{4}$ on the east end, $2\frac{7}{8}$ in the center, and $2\frac{3}{4}$ on the west end. If John Keur and Ranger Hastings had a disagreeable time measuring that rock last summer, they should try it alone during a snow storm, when there is ice and snow all over it.

I notice in last month's report that Budlong had re-covered his roof. I am very sorry, Bud, I didn't know it was missing.

The road conditions, both directions, are better than they have ever been before. The Indian Service has been grading the road between Crownpoint and Seven Lakes, and several of the bad places already fixed.

Guess I had better close this, get a little sleep, and see if I can get it out to a railroad tomorrow.

*****SWM*****

We have been turning these Threatening Rock measurements over in our mind and doing some wondering. The measurement was set at the east, center and west points of the rock last summer at exactly two inches. In December the east was out $10/16$ inch, the center, $11/16$ inch, and the west, $9/16$ inch. Now in January the east is out $12/16$ inch, the center $14/16$ inch, and the west $12/16$ inch.

This means that the rock has come forward about $3/16$ inch, or at least that it was forward that much at this last measurement. I do wish, Lewis, that you would make some daily measurements on it for a while; one in the morning and one in the evening, and check the wind at the same time. I am wondering if we will not find as much as two or three sixteenths variation after the sun has shone on the outer

CHACO CANYON (CONT.)

face all day, or after a strong wind has been blowing through the gap again* the face of the rock.--F. P.

*****SWM*****

GRAN QUIVIRA

By George Boundey, custodian,
Gran Quivira, New Mexico.

Visitors this month, 103; total since October 1, 713.

Visitors for the month of January: 103. This is quite a bit under January visitors for the past several years and the weather is not entirely to blame either, as we have had some good days as well as a lot of snow, cold, and high winds. The visitors we have had are the worthwhile kind and without exception were enthusiastic over the possibilities of this monument.

Dr. C. W. Serbel, John D. Anderson, Floyd V. Studer, and H. C. Pipkin, all of Texas State College, Amarillo, Texas, spent an afternoon here, photographing and making a general survey of the ditches from which the pueblo people here obtained their water supply.

P. J. Klingenberg and E. C. Tatum, of the Soil Conservation Service, and R. S. Campbell, of the U. S. Forest Service, Berkeley, California, spent some time on the monument looking over the conditions under which the old people lived before the over-pasturing by sheep and cattle took place.

This being one of our quiet months, I have been checking over the condition of road signs along the various approaches to the monument and with the exception of several in the vicinity of Carizozo they are now in good shape.

I am keeping a check list of about 28 birds which frequent our watering place but as we feed also, I am quite sure some of the birds wintering here this year do not as a rule stay here during midwinter.

A woodcutter working in the Cibola National Forest a few miles to the west of us, was found frozen to death about two miles from his camp.

Of all the birds and animals on the monument, I think we like the skunks best. We have one up at the Mission that is as tame as any kitten, but there are two that play around the house that are more amusing than any animals we have ever observed. They are not albinos, but have more white on them than any we have seen before. Their tails are about 18 inches long and they carry them straight up in the air and as the hair is very long, they resemble the tail of a peacock when spread out. They do everything that two kittens would do

GRAN QUIVIRA (CONT.)

in playing together but they seem to like "follow-the-leader" best and they will march for 15 or 20 minutes at a time round and round with tails fully spread.

*****SWM*****

It is rather interesting that both Gran Quivira and Montezuma Castle turn in skunk stories the same month, and both in praise of the gentle little beasties. The average reader of this report will hardly think of a skunk in such an interesting light and as such a pleasant companion.--F. P.

*****SWM*****

TUMACACORI

By Louis R. Caywood, custodian,
Box 2225, Tucson, Arizona.

Visitors this month, 1,943; total since October 1, 4,493.

VISITORS

In spite of the reported poor visitor travel throughout the Southwest, there have been 1,943 visitors this month which is a slight drop below 1,964 of last January. Of the 1,943 who visited the monument, 1,590 were guided through the mission and 353 either looked from their cars, saw the mission without a guide, or merely used the facilities.

Some old friends of the Park Service dropped in to see Tumacacori on January 3. Dr. and Mrs. Colton and Katherine Bartlett, all of the Museum of Northern Arizona, Flagstaff, had been to Guaymas, Sonora, for a few days and I had almost given up seeing them, knowing they were in Mexico, but they paid us a good long visit.

Father Juan, Superior in charge of old San Miguel Mission in California, paid us a visit on January 21. On my way to Berkeley in October I visited both San Miguel and San Antonio missions which are under Father Juan's supervision. At that time he promised to visit Tumacacori but little did I think he would, and it was quite a surprise to see him. Father Juan promised to loan some of the old Franciscan vestments which are at San Miguel mission to the Tumacacori museum, if possible.

Park Service visitors included the following: Mr. and Mrs. Louis Schellbach and son, Grand Canyon; Luis Gastelum and Millard Singerman, Coolidge; Frank Russell and Milo Christiansen, Santa Fe; J. H. Tovrea, Coolidge; and William Burnham, Project Superintendent, Camp SP-11. William Macy, Museum Division, Washington, D. C. stopped to show how the museum cases should be put together.

WEATHER

January 20 brought the first storm of the year with rain and snow. The snow fell in huge flakes and soon covered the ground to a depth of about two inches. A group of 36 students from the Nogales Public Schools visited the monument and had a grand time snow-balling. By noon the next day the snow was gone. However, it reminded me of Chaco Canyon and the trips Lewis McKinney and I took to the Chaco ruins and how we climbed Fajada Butte one cold windy day.

The cattlemen and farmers really needed the moisture which fell during the snow and rain storm. It will soften the ground for plowing and make the grass grow on the cattle ranges.

The weather, aside from the snow, has been so temperate and spring-like that it has fooled the cottonwoods along the Santa Cruz river into shooting forth their waxy growth just previous to blossoming and leafing. No doubt the snow and the succeeding cold days will discourage any further growth.

MUSEUM

The museum and administration building lost some of its new appearance during the storm. There are water stains above the wainscoting in many places. The red water drains have peeled in places, exposing a white surface and the cream colored exterior finish has cracked and washed off in places. Alkali is soaking up from the ground along the walls in many places. Alkali also appears along the sides of the red drains. However, I think this weathering adds much to the building. Just like a new pair of boots--they are much better after being broken in.

Two and one half tons of museum cases (not exhibits), tables for cases, etc., arrived at Nogales and have all been hauled to the monument and stored in the museum building. All of the equipment came knocked down from the Western Museum Laboratories at Berkeley, California, where it was made in the shops. Most of it was hauled to the monument in the Government pick-up, **but three large cases were too long** for the pickup and had to be hauled by Peoples Freight Lines, Inc. The **next** step will be to turn carpenter and assemble the tables on which the cases will rest. The cases themselves and the glass fronts will be fitted together with aluminum strips.

The new question most often asked now by visitors is whether the new building is the church and when will there be services? What if the building had been in the shape of a cross!!!

TUMACACORI (CONT.)

BIRD BANDING

Bird banding has been resumed to some extent after a long vacation with the following results:

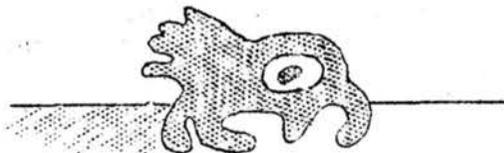
Gambel Sparrow - - - - -	52	Gambel Quail - - - - -	3
Green-tailed Towhee- - - -	2	Arizona Cardinal - - - - -	1
Canyon Towhee- - - - -	4	Cactus Wren- - - - -	2
Palmer Thrasher- - - - -	4	Pyrrhuloxia- - - - -	1

*****SWM*****

Fathers Juan and Bonaventure drove quite a distance out of their way to come past Casa Grande for a little visit. Padre Bonaventure had been here only a month or so ago but I had not seen Padre Juan since he came out of the Apache country on his way over to take charge of San Miguel and that was three or four years ago. Naturally, there was a lot to talk about. Padre Bonaventure, by the way, said he had a small booklet on San Xavier which would be off the press soon. Be sure to get that in your library at once, Louis, and we will get copies for the headquarters library.

Tov. and Jack Haile spent part of a day looking over San Xavier last month on the possibility of expending some WPA funds in its stabilization. The tough problem is to decide whether to handle those cracked arches with unsightly steel rods across the nave on the inside or with buttresses or flying buttresses against the outside. Tov. hasn't had time to figure stresses and strains yet, but I am anxious to see in a perspective sketch what the possible flying buttress will look like. To the objectors who will say none of the Arizona chain of missions had flying buttresses we can point out those on the towers at San Xavier; one doesn't think of them as such, but that is what they are.--F. P.

*****SWM*****



HEADQUARTERS

Custodian Bicknell reports the following Headquarters work: Repairs and improvements were made on the following cars: the knee action mechanism was repaired on USDI #8114 after towing it in from 21 miles east of Florence; valve grinding job and new rings and piston expanders placed in USDI #1801; headlights repaired, new battery and cables installed on USDI #1803, and a Stewart-Warner Heater placed in the Boss' car, USDI #13916.

A fuel-oil heater was installed in the Batchelors' Quarters, and racks for fuel oil barrels were built for the Boss, King, the Dodges, and the Bachelors. The gas stove in King's quarters was overhauled. Celotex and an insulating wall was built in the Naturalists' office.

The stand pipe on the sewage disposal line was packed to prevent freezing. One day was spent hauling fertilizer in cooperation with Asst. Naturalist King's arboretum planting program.

*****SWM*****

BRANCH OF EDUCATION

By Dale S. King, park naturalist.

The Educational Staff for the month of January was composed of Park Naturalist King, Junior Park Naturalist Dodge, and CCC Enrollee Marvin Hale, who is temporarily assigned to this department. Junior Archeologist Steen continued his temporary assignment on contact duty at Tumacacori National Monument in a relief capacity.

TIME SPENT ON VARIOUS PROJECTS:

	<u>King - Steen - Dodge - Hale</u>		
	<u>Days</u>		
<u>General Office Work</u>			
Correspondence (King 162 letters; Dodge, 88)	4-3/4		1
Conferences and discussion			
With Headquarters staff	1/2		1/2
With visiting scientists, artists, technicians	1-1/4		
Library (file, rearrange, issue publications)	1-3/4		1/2
Reports			
Monthly	1/4	7-1/2	8-1/2
To Washington Office	2	1/2	
To Region III Office	1/4		
Miscellaneous	1/4		

BRANCH OF EDUCATION (CONT.)

	King	Steeh	Dodge	Hale
Publicity				
Prepare and issue informational and publicity material.....			1-1/2	2
Check Region III publicity releases.....	1/4			
Miscellaneous				
Painting and carpentry work.....				2-1/4
Wrapping and mailing materials.....				1/2
<u>Research and Education</u>				
Public Contact				
Outside lecture preparation and delivery.				1/2
Guide duty at monuments.....	3/4	25	1	
Office visitors.....				1/2
Museums				
Acquiring equipment.....	1/2			
Planning.....	1/2		1/4	
Arboretum planting and preparation.....	1/4			4
Visual education				
Slide library inventory and arrangement..	1/4		4	
Photography.....	1/2			1/2
File prints and negatives.....				3/4
Printing, developing and enlarging.....				1/2
Casa Grande CCC Side Camp educational program.....	2-3/4			
Flora and fauna observations and bird band.	1/2		3-1/4	4
Establish Bandelier bird banding station.	2-1/4			
Ruins stabilization project administration.				
Mobile Unit at Chaco Canyon.....	3/4			
Bandelier.....	1/4			
Aztec Ruins.....	1/4			
<u>Field</u>				
<u>Field trips</u>				
Tonto.....				2
Region III, Bandelier, Chaco Canyon, Walnut.	6			
Total for 25-working-day month.....	27	25	25-3/4	22-1/4

During the month the routine work has been kept current and the bird banding records have been brought up to date. In addition, the lantern slide collection has been thoroughly gone over and inventoried.

Hale has carried on much of the "leg work" involved in bird banding, and has operated the mimeograph machine for all materials put out, including the monthly report. He has also broken and prepared the ground for arboretum planting, done painting and carpenter work, and numerous errands and odd jobs.

PROCESSED MATERIAL

The following pieces were mimeographed during the month:

SOUTHWESTERN MONUMENTS 60 MONTHLY REPORT FOR JANUARY, 1938.

BRANCH OF EDUCATION (CONT.)

2000 copies of the Aztec Ruins Informational leaflet.
70 copies "General Information on Adobe Preservation".

SOUTHWESTERN MONUMENTS LOAN LIBRARY

Loan and return records were kept current, but no time was available for cataloguing new books. Accessions for the month consisted of 74 books, 130 pamphlets, and 30 periodicals.

ACCESSIONS

The 55,000 Southwestern Monuments folders, about half of which have been received, constitute the major accessions of the month. This folder gives a brief outline covering the major features, size, and accessibility of each of the Southwestern Monuments together with guide maps and sketches picturing the monument features. It was printed by the Government Printing Office and is now available for distribution. In addition, the following accessions are returned. 600 folders for filing mimeograph stencils, three lizards, three centipedes, and one scorpion; 75 pottery stands.

BIRD BANDING

Bird banding activities at the Headquarters section have been continued throughout the month with the following results.

<u>Species</u>	<u>New</u>	<u>Repeats</u>	<u>Returns</u>
Dove, Western Mourning- - - - -	1	0	0
Quail, Gambels- - - - -	11	33	2
Shrike, White-rumped- - - - -	1	0	0
Sparrow, Gambels- - - - -	4	30	6
Thrasher, Crissal - - - - -	2	2	0
Woodpecker, Gila- - - - -	1	1	1
Wren, Cactus- - - - -	1	1	1
Total- - - - -	21	67	10
Total birds handled- - - - -		-98	

SLIDE LIBRARY INVENTORY

With the request for an exchange of slides from Yosemite National Park and the starting of a slide collection at the Santa Fe Regional Office, a thorough overhauling and inventory of the Headquarters Slide Library was accomplished. In addition, a number of negatives were sent to the Berkeley Museum Laboratory for making up into slides. The slide library inventory follows:

<u>SUBJECT</u>	<u>NO. OF SLIDES</u>	<u>SUBJECT</u>	<u>NO. OF SLIDES</u>
Arches	8	Biology	32
Aztec Ruins	22	Kayenta Pot Designs	19

Number of new individuals of each species banded in Southwestern Monuments since July 1, 1937.	Bendelier		Headqtrs.		Navajo		Pipe Spring		Tumacacori		Walnut Canyon		Total	
	Jan.	Pre.	Jan.	Pre.	Jan.	Pre.	Jan.	Pre.	Jan.	Pre.	Jan.	Pre.	Jan.	Pre.
	Gambel Quail			11	17					3	0			14
W. Mourning Dove			1	0									1	0
Pallid Horned Owl			0	1									0	1
Rd-naped Sapsucker											0	1	0	1
Mearns Woodpecker											0	3	0	3
Lewis Woodpecker											0	8	0	8
Gila Woodpecker			1	1									1	1
Rd-shafted Flicker											0	1	0	1
Say Phoebe	2	0											2	0
Long-crested Jay											0	1	0	1
Evening Grosbeak											0	2	0	2
House Finch			0	6			1	1					1	7
Crossbill											0	77	0	77
Grn-bkd Goldfinch							2	6					2	0
W. Vesper Sparrow					0	2							0	2
Gambel Sparrow			4	14			78	134	52	0			134	148
Shufeldt Junco	3	0			0	19					0	2	3	21
Montana Junco					1	14							1	14
Pink-sided Junco	2	0			0	6							2	6
Gray-headed Junco	19	0			0	3					0	1	19	4
Red-backed Junco	2	0			0	1					0	5	2	6
Song Sparrow							4	8					4	8
Spurred Towhee							2	1					2	1
Canyon Towhee									4	0			4	0
Green-tailed Towhee									2	0			2	0
Arizona Cardinal									1	0			1	0
Arizona Pyrrhuloxia									1	0			1	0
White-rumped Shrike			1	0			1	0					2	0
Palmer Thrasher									4	0			4	0
Crissal Thrasher			2	3									2	3
Cactus Wren			1	0					2	0			3	0
Rock Wren			0	1									0	1
Rocky Mtn. Nuthatch											0	5	0	5
Pygmy Nuthatch					0	2					0	72	0	74
Mountain Chickadee											0	1	0	1
Townsend Solitaire											0	5	0	5
Western Robin											0	9	0	9
Chestnut-bkd Blubb											0	67	0	67
Total	28	0	21	43	1	47	88	144	69	0	0	260	207	494
Grand Total	28		64		48		232		69		260		701	
(Arrangement of species is that of the A.O.U. check-list of 1910)														

BRANCH OF EDUCATION (CONT.)

Bandelier	3	Kofa Mountains	2
Canyon de Chelly	4	Miscellaneous	43
Capulin	1	Missions	115
Casa Grande	33	Petrified Forest	18
Chaco Canyon	29	Tombstone	9
Chiricahua	8	Tuzigoot	8
El Morro	20	Bryce Canyon	3
Gila Cliff	1	Crater Lake	1
Gran Quivira	8	Glacier	2
Hovenweep	3	Grand Canyon	14
Montezuma Castle	23	Grand Teton	2
Natural Bridges	0	Mesa Verde	9
Navajo	36	Rainier	4
Organ Pipe	1	Rocky Mountain	8
Pipe Spring	5	Sequoia	4
Rainbow Bridge	1	Yellowstone	12
Saguaro	5	Yosemite	11
Sunset Crater	0	Duplicates	63
Tonto	4	Tumacacori	24
Walnut Canyon	6	Broken beyond repair	9
White Sands	3	Sent to Yosemite	26
Wupatki	28	Sent to Regional Office	48
Total slide collection		657 slides	
Total discarded or sent away		83 slides	
Library balance		574 slides	

NATIONAL PARK SERVICE VISITORS

Richard Sias, Jim Felton, Tom Onstott, H. Hommon, W. E. Macey, F. Russell, M. F. Christianson, and Frank Fish.

COOPERATIVE INSTITUTIONS AND AGENCIES

Bryce Thompson Southwestern Arboretum: identification of plant specimens and donation of plants.

Donation of publications: University of Utah, University of Colorado Museum, Carnegie Institution of Washington, D. C., Department of Agriculture, Weather Bureau, California Academy of Sciences, United States Geological Survey.

CASA GRANDE CCC SIDE CAMP EDUCATIONAL PROGRAM

There being no facilities through regular channels for academic and vocational instruction for the Casa Grande CCC Side Camp, Park Naturalist King was assigned to organize this program. The program began to function January 24, 1938, with each enrollee in camp being enrolled in at least one course of a total of 16, taught on personal time by 10 staff member at the Headquarters. The total enrollment in

BRANCH OF EDUCATION (CONT.)

classes at the beginning was 74. Subjects being taught were: elementary arithmetic, English, archeology of the Southwest, shorthand, conversational Spanish, mechanical drawing, model making and museum technique, penmanship, photography, auto repairing, cooking, general building trades, bookkeeping, typing, and plane surveying.

NOTES ON PROJECTS NOT MENTIONED ABOVE:

A soil sample from Casa Grande was sent to the University of Arizona in connection with the arboretum planting program.

Dodge secured an excellent picture of the Pauline Weaver inscription for a forthcoming issue of the "Desert" magazine. The photograph was taken at night under artificial light.

Aid was given to the project of restoring Scaled Quail to Gran Quivira, Bandelier, El Morro, and Chaco Canyon National Monuments in New Mexico.

A small collection of pottery was received from Mr. Taylor P. Gabbard, of Tempe, Arizona. This will be carried in the accessions for next month as soon as the necessary forms are executed.

Aid was given to the successful establishment of a cooperative weather bureau station at El Morro National Monument.

Arrangement was made with Jack Whitehead, botanist at the Southwestern Arboretum, to prepare a cactus specimen for the Department of the Interior Museum in Washington, D. C.

The customary game warden appointments were obtained from State Game Warden Sawtelle for Arizona personnel.

Considerable progress was made in the arboretum planting in the Headquarters residence quadrangle.

*****SWM*****

MOBILE UNIT

By Gordon Vivian, foreman,
Chaco Canyon, New Mexico.

Since the last report, the figures for which were taken on December 15, we have been confining our operations mainly to wall capping and cleaning out the existing drainage ditches. Since there is such a great deal of wind-blown and water-carried material around Bonito neither Custodian Mac. nor I could exactly locate these existing ditches. So we spent 138 mandays cutting a ditch from the north side of the ruin to a small arroyo at the northwest and clearing away much of the accumulations of the east side of the site. It is problematical just how much help

MOBILE UNIT (CONT.)

this work will be toward draining the interior rooms but it will at least prevent water from standing against the outside walls.

The capping completed the last month is as follows:

	<u>Square yards</u>	<u>Man days</u>
Kiva C *	31	35
Kiva D *	33	43
Room 157-158	20	32
Room 159-160	17	22
Room 176	12	28
Room 286	5	7
Room 287	10	12
Room 288	5	7
Room 175	7 (cubic yards)	18
Room 228	10	14
Kiva H	18	10
Room 237	4	6
Total	<u>172</u>	<u>234</u>

This is 165 square yards of capping and seven cubic yards which were built along the face of a three story wall to act as both support and protection. A total of 234 man days were required for this work which, counting the cubic work as requiring about twice the time that the plain capping does, shows that our figures per yard are a little higher than they were last month, coming to one and a third man days per yard.

We have lots of excuses to offer for this increase in time, but I can't decide which of the best two to put forward. Either the boys are doing a better job or else the fact that the rock is getting harder to find is slowing them up and adding to the job overhead. All the men on the trucks hauling water and adobe, and gathering rock are divided evenly among the jobs.

One wall repair job is now in progress on the west wall of Room 241. This wall is one of those that held back the two stories of fill around Kiva D. The entire central section of the wall, a large triangular area, had been completely rebuilt once before, some time, apparently, before the concrete capping was put in place. This rebuilt section had been pushed far out of line, there were two gaps in it at the bottom and part of the veneer at the top had sloughed off.

Some of this work on the walls and capping is now getting up in the air. Working on the third story walls entails a lot of scaffold building and moving. So far we have been lucky or else the safety meetings are having an effect. At least we have had no accidents on the scaffolding. Our only one in two months happened when one of the boys got in a hurry to leave the job at five o'clock. He jumped off a wall and landing

on a loose rock sprained his ankle.

Mr. McPhee, public relations man for the Navajo Service, came over from Window Rock and took a couple hundred feet of movie film and some still photos of the work in progress. No one objected to having his picture taken as is sometimes the case, and a fine time was had by all. The oldest man on the job, whose papers say he is 67 and who easily looks it, was even urged into a trot for the action shots. This man is a mud carrier by profession and doesn't usually appear to move at all.

We received the eighty gallons of assorted chemicals ordered for us by the Coolidge office but since I have never even heard of any of them before and neither have the Navajos, and we have no instructions as to their use, they were put in a safe place where they at least won't freeze.

After a lull when we forgot to take many "After" pictures, the photograph-pasting department of the Unit is again experiencing a business revival. Our instructions call for us to keep all five copies of the prints and job reports until the entire job is completed. However, I think that we ought to send them down to Coolidge for safe keeping. The place we are pleased to call an office is none too clean, dirt and things keep sifting down from the ceiling, and when it rains everything has to be moved continually to keep it just ahead of the new leaks that develop. Just how badly it leaks can be understood when it is known that those hardy folks, the Bob Harrises, moved out into the open spaces after spending one night in it. We are not complaining about having to work in it, not at all. We have a raincoat and a tin hat with which to deflect things that fall from the ceiling, but the papers would be much better off in a good filing cabinet.

*****SWM*****

VISITOR INFORMATION

By The Boss

As nearly as we can get the figures, we had 19,191 visitors at the Southwestern Monuments in January. This compares with 15,577 last January, and with 11,503 last month. It looks as if we are having a considerable increase over the number of winter visitors of last year.

On this number of visitors, we registered 14,065 informational contacts. That sounds like a lot of work and it really is, but there were 10,609 visitors who were not contacted. Nearly 8,000 of these unattended visitors were at White Sands and Saguaro, where at least the visitors could do little vandalism by being unattended, but we are still undermanned when we can reach only little more than half of our visitors with our information service. By shifting our present forces, we could reach a much higher percentage of visitors but such shifts would open us up to vandalism and we figure that protection should precede informa-

VICTOR STATISTICS FOR JANUARY, 1938
SOUTHWESTERN MONUMENTS

MONUMENT	EMPLOYEES		FIELD TRIPS				MUSEUM TALKS				Unattended	Total informational Contact	Total Travel	Per cent Contact
	Per. Temp.	No.	Att'd Time	Av. Att'd Time	No.	Att'd Time	Av. Att'd Time	Av. Att'd Time						
									Att'd Time	Av. Att'd Time				
Arches	1	--	--	--	--	--	--	--	--	25	--	25	--	
Aztec	1	--	637	5.7	32.8	121	686	5.7	22.3	112	1323	798	171	
Bandelier	2	3	125	3.6	61.9	24	87	3.6	16.0	173	212	298		
Canyon de Chelly	1	--	3	2.3	122.0	--	--	--	--	7	7	14		
Capulin Mountain	1	--	--	--	--	--	--	--	--	250	--	250	--	
Case Grande	2	3	400	4.5	35.7	333	3903	11.7	23.2	266	8403	4760	176	
Chaco Canyon	1	--	15	62	1680	10	39	3.9	29.0	11	101	73		
Chiricahua	1	2	81	3.0	460	--	--	--	--	203	380	583	65.1	
El Morro	1	--	11	49	655	7	32	4.6	75.3	12	81	81		
Gila Cliff	--	--	--	--	--	--	--	--	--	--	--	--	--	
Gran Quivira	1	--	27	103	1850	--	--	--	--	--	103	103		
Hovenweep	--	--	--	--	--	--	--	--	--	--	--	--	--	
Kontezuma Castle	2	--	136	441	7684	121	417	4.6	23.3	208	858	599	143	
Natural Bridges	--	--	--	--	--	--	--	--	--	--	--	--	--	
Navajo	--	1	2	4	300	150	--	--	--	4	4	4	--	
Organ Pipe	--	--	--	--	--	--	--	--	--	700	--	700	--	
Pipe Spring	1	--	30	87	819	--	--	--	--	64	87	151		
Rainbow Bridge	--	--	--	--	--	--	--	--	--	--	--	--	--	
Saguaro	--	--	--	--	--	--	--	--	--	3000	--	3000	--	
Sunset Crater	--	--	--	--	--	--	--	--	--	100	--	100	--	
Tonto	--	1	129	429	5195	85	328	3.8	15.6	250	757	679	111	
Tumacacori	2	--	273	1590	7840	--	--	--	--	353	1590	1943	81	
Walnut Canyon	1	--	21	58	485	35	101	3.0	17.2	82	159	231	68	
White Sands	2	--	--	--	--	--	--	--	--	4730	--	4730	--	
Wupetki	--	--	--	--	--	--	--	--	--	63	--	63	--	
Yucca House	--	--	--	--	--	--	--	--	--	--	--	--	--	
TOTAL	20	10	1274	8472	51554	736	5593	7.5	22.3	10609	14065	19191	72	
Last Month	22	8	1054	4539	37012	775	3227	4.1	19.9	7012	7868	11503	68	
January, 1937			977	7528	36059	388	3158	8.1	21.1		11032	15577	70.8	

VISITOR INFORMATION (CONT.)

tion. As a matter of fact, we are, as usual, on the conservative side with these figures because we actually did give a great deal of information at White Sands in January but have not yet brought things to a system whereby such contacts can be tabulated and reported. By next month we hope to have such a system in effect.

Of the 14,065 informational contacts, 8,472 visitors were given field trips and 5,593 were given museum talks. .

The field trips averaged 40.4 minutes as against 36.1 a year ago and 35.1 last month. There were 1,274 field trips as against 977 last year and 1,054 last month.

We gave 736 museum talks in January as against 388 a year ago and 775 last month. The museum trips averaged 22.3 minutes each as compared with 21.1 minutes last year and 19.9 last month.

Casa Grande made 156% contact out of a possible 200%; Aztec came second with 171%; Montezuma Castle third with 143%. Tonto, a one man post, did exceedingly well with its 111% out of a possible 200%. Lest you might infer that Casa Grande was overmanned, we might explain that one man, on other duty, guided practically not at all except on peak loads, the other regular employee did considerable other work aside from guide duty and the CCC boys worked only five days per week. The average was a little more than three men on duty per day.

Experiments have been carried out at Casa Grande during the month looking to superceeding form SWM 16 with a much simpler method of accounting for visitors. I know our own field men will be very glad indeed to hear this.

*****SWM*****

MORE VISITOR STATISTICS

By The Boss.

Some time ago we re-arranged the museum at Casa Grande. We thought the visitor interest might be changed and that it would be reflected by a longer or shorter stay in the re-arranged museum, so we were watching the museum time with considerable interest. We had agreed that it would take three or four months to give us worthwhile figures because the boys would have to get used to the new arrangement and we wanted to get enough parties to offset minor variations. This interesting experiment, however, was ruined by changes in personnel; one of our men being transferred to another unit of the system, and a new man to this unit, though with experience elsewhere in our work, being transferred in here. In addition to this, three CCC boys were broken in for guide work. All this, of course, upset our experiment on the changed museum which was based upon the same men working in a re-vamped museum under about the same conditions as to weather, run of

VISITOR STATISTICS (CONT.)

visitors, type of visitor, etc. I might say that as far as the experiment went, which was not far enough to be conclusive, the changed museum was reflected in no particular change in visitor interest as shown by a change in visitor time in the museum.

The change of personnel gave us a chance to experiment a little in another direction and I think we have something interesting to report on that work. We thought we might find out something about the speed with which a new man can get adjusted to our work and how effective a man with no archaeological background would be in holding visitor interest.

As a control on what would be considered regular service we added the figures on one of our regular guides who had been working more than a year and found that in 33 parties handled on field trips just prior to the introduction of the new guides, he had totalled 1206 minutes, or that the average party time was 36.5 minutes in the field. Another guide, who had also been with us more than a year, with 32 parties ran a total of 1042 minutes, or an average of 32.5 minutes per party in the field. One factor which should be mentioned, but which we could not put in figures, was that Guide B during this period had to work alone much of the time which means he had to hurry his parties to the detriment of his field time which, but for this complication, would certainly have been a couple of minutes higher.

Three of our new men were CCC boys and the fourth was a regular Service employee who had a thorough background in archseology but was new to this particular place. After a few days of training in which the new men went around with the regular guides, read some preliminary literature, etc., they were started out with their own parties. After 87, 91, 65, and 39 parties had been handled by these respective guides, we checked up their various times and found they had averaged 28.0, 29.2, 28.2, and 33.7 minutes respectively. The 33.7 average was turned in, of course, by the regular employee who had the background and had only to adapt his knowledge to this particular job. Control A and B had run an average of 36.5 and 32.4 respectively and as we explained, Control B was probably two minutes low, due to causes beyond his control. We find, then, that Guide 4, after 39 parties, is holding his visitor interest within a minute or two of the normal period.

In Museum trips we find almost a precisely parallel situation. Control A, in 19 museum trips averaged 23.4 minutes. Control B, in 22 trips averaged 15.8. Control B was under pressure much of this time, by having to work alone and should be credited with a higher average, probably around 20 minutes, which he would have maintained if he had sufficient help. We now find that the guides had 76, 75, 52, and 47 parties respectively and averaged 16.7, 17.9, 18.9, and 23.9 minutes respectively; the last average being that of the regular employee with the archaeological background who has quickly adapted

VISITOR STATISTICS (CONT.)

himself to the new work and is turning in an average along with that of Control A.

It was at this point that we figured up all trips and averages and had a general talk over the situation expressing our desire to find out if the boys could maintain a higher visitor interest, reflected by a slightly longer visitor stay, by putting out a little more effort.

After another run of field trips, of 56, 41, 49, and 29 trips respectively, our guides turned in averages of 34.0, 33.3, 32.0, and 37.8 minutes per party. This means that the guides had lengthened their trips 6.0, 4.1, 3.8, and 4.1 minutes respectively in a rather short series of trips. We expected the three new guides to be able to hold visitor interest much better when they had their own interest in doing so aroused; also, they were acquiring more background day by day, thus the better enabling them to hold visitor interest. The most surprising thing, and no one was more surprised than the man himself, was that Guide Four, the regular employee who had the background and was at home with ruins, should increase his visitor interest in practically the same proportion as the new men.

The museum trips showed a parallel increase. After 39, 27, 38, and 48 trips respectively, the guides averaged 22.0, 22.7, 23.0, and 30.5 respectively. This shows a gain in visitor interest of 5.3, 5.2, 4.1, and 6.6 minutes respectively and here again the regular employee has made a proportional increase along with the new men. The new men are now checking along with Control A while Guide Four is seven minutes ahead of Control A.

I am fast coming around to the theory that if you want to build up visitor interest in your museum as reflected by an increasing time spent there, you can get a ten percent increase in an infinitely shorter time and at no additional expense by working with your guides, whereas I question if you can get a five per cent increase by spending a thousand dollars in working over your museum.

We have always considered a 55 minute trip at Casa Grande as about a standard trip with 45 minutes as a short trip and 65 minutes as a long trip; a trip in this sense being a combination of the standard field and museum trips. Control A, with 36.5 minutes in the field and 23.4 minutes in the museum totals 59.9 for the complete trip. Control B, who, as we have explained, was working alone part of the time and had to cut his trip time badly, totalled 48.3 minutes. At the end of the first month on the job, the four guides were doing 56, 56, 55, and 68.3 respectively; in other words, the three CCC boys at the end of their first month are hitting the standard guiding time at Casa Grande right on the nose while our regular employee who has been transferred in, and who has an archaeological background, has adapted himself to the new job and is knocking the high average of 65 minutes for a row of loops!

VISITOR STATISTICS (CONT.)

What does all this mean?

BEFORE AND AFTER CHECK-UP ON FIELD TRIPS

FIELD TRIPS BEFORE			:	FIELD TRIPS AFTER			
No.	Minutes	Average	:	No.	Minutes	Average	Gain
Control A---	33	1206	36.5	:			
Control B---	32	1042	32.5	:			
Guide 1-----	87	2437	28.0	:	56	1906	34.0 6.0
Guide 2-----	91	2665	29.2	:	41	1368	33.3 4.1
Guide 3-----	65	1836	28.2	:	49	1569	32.0 3.8
Guide 4-----	39	1324	33.7	:	29	1097	37.8 4.1

BEFORE AND AFTER CHECK-UP ON MUSEUM TRIPS.

MUSEUM TRIPS BEFORE			:	MUSEUM TRIPS AFTER			
No.	Minutes	Average	:	No.	Minutes	Average	Gain
Control A---	19	445	23.4	:			
Control B---	22	349	15.8	:			
Guide 1-----	76	1276	16.7	:	39	860	22.0 5.3
Guide 2-----	75	1348	17.9	:	27	613	22.7 5.2
Guide 3-----	52	984	18.9	:	38	874	23.0 4.1
Guide 4-----	47	1124	23.9	:	48	1467	30.5 6.6

*****SWM*****

CASA GRANDE JANUARY GUIDE STATISTICS

By The Ross

At Casa Grande, in the month of January, we checked 4,569 persons through the ruins and 3,903 through the museum. These people were handled in 400 field parties and 333 museum parties. This makes the average party about 11 persons, which would make a nice party if they were all that size. The trouble is that, since most of our parties run much lower than that, it means we had to handle parties of 50 and 60 at the peak loads in order to get the average of 11. As a matter of fact, we did handle a maximum party of 81, which is far too large for good service.

These figures deal with the guides and not very much with parties. There were seven guides doing more or less work during the month. The names are Rodgers, Coyle, Baldwin, Cocks, Savage, Jones, and Bicknell. Custodian Bicknell was busy all month on other work and his only guiding was in the nature of pinch hitting on Sundays and during noon hours. He handled 12 field trips and 4 museum trips; 250 persons in the field and 76 in the museum. His parties, being oversize, an average of 21 in the field and 19 in the museum, tell you he was pinch hitting and the traffic piled up on him. The figures are therefore worthless as showing the ability of the guide; he was working with only a few parties and handling those under abnormal conditions, such as noon hours, Sunday peaks, etc.

Jones was doing other work part of the time; working up the data

CASA GRANDE GUIDE STATISTICS (CONT.)

for a desert trail, etc. and did not handle a full share of the visitors. He helped out on Sundays and peak loads which would tend to give him a large average party. We find he has a larger average party both in the ruins and museum than anyone else except Bicknell, whose figures were distorted even more by the same factors which influenced Jones' totals. Jones handled 40 field parties in 27 days where the three men who guided regularly handled 100 or more field parties in a less number of days. Jones, then, was not under regular guiding conditions and in addition to his large number in party being charged to this, we will have to charge a little of his trip time, for increasing the number slows down the party. He has nearly 41 minutes in his field trips. This distortion shows up clearer in Bicknell's field time of 46.5 minutes.

Cocks worked only five days in which he handled 18 ruins trips and 13 museum trips. Cocks was a CCC boy with several weeks of training and did about his average, 37 minutes in the ruins and 19.2 in the museum, a total of 56.2 for the average round trip. Anything above 55 minutes can be called satisfactory time.

Cocks then quit and Savage went in. After his breaking-in period of several days, Savage handled parties for five days in which he took 16 parties through the ruins and the same number through the museum. His time averaged 29 minutes in the ruins and 16.8 minutes in the museum, making a round trip time of 45.8. This is not a bad total for a beginner with as little experience as Savage had and he will undoubtedly raise the time next month.

Baldwin, another CCC boy, handled 107 field trips in 20 days, which averages out as the largest number per working day handled by any guide. His time is a little lower than the others, both in the ruins and the museum. His average ruins trip was 31.6 minutes and his museum time was 21.3, a total round trip time of 52.9.

Coyle, another CCC boy, with a little longer experience, turns in 107 field trips and 90 museum trips in 24 working days. His field trips average 34.4 minutes and his museum trips, 23.2, or a total round trip of 57.6 minutes.

Rodgers, another CCC boy, has an average of 38.7 minutes for 100 field trips and 23.2 for 82 museum trips, an average round trip time of 61.9 minutes, a very good time indeed.

*****SWM*****

THE Supplement

S·M· MONTHLY REPORT

ORIGIN OF THE TERM "AZTEC RUINS"

By Art. Woodward

To the layman, the name Aztec signifies a definite connection with the ancient Nahuatl people of Mexico and it is difficult to explain away the fact that the Aztec Ruins National Monument is in no way connected with those "Romans of the New World".

"How did the ruins get that name?" is frequently asked.

The answer must be: white men who didn't know one Indian tribe from another and thought that all Indians who built stone houses must in some manner be related to those almost legendary people in Mexico, gave the name to the ruins.

"But when?"

And there the one who is being questioned must say, "Well, I don't exactly know but it must have been sometime after the first American settlers began to come into the Animas Valley, probably in the 1870 decade.

In the following quotation, one early date for referring to the ruins as being of Aztec origin is at least definitely pinned down. Whether all subsequent references came from the gentleman in question is open to debate but, at least, we have a starting point. If anyone knows of an earlier reference to the naming of Aztec Ruins, it would be interesting to hear from him.

The ruins were first noted, but not named, upon the map prepared by Don Bernardo de Miera y Pacheco for the Escalante Expedition in 1775.

On August 4, 1859, J. S. Newberry visited the ruins and described them for the first time but did not name them.

Lewis H. Morgan was there in July, 1878. Tentative digging in the ruins is said to have been begun by settlers who carted away building stone about 1876. The first actual attempts to make any excavations were carried out in 1882. Ten years later Warren K. Moorehead made an examination of these ruins. He wrote a little-known report, a serial, entitled "In Search of a Lost Race", profusely illustrated with photographs, maps, and sketches of many archeological sites in the Southwest. Publication of this began in "The Illustrated American", April 2, 1892, and terminated August 20, 1892.

Later, of course, the American Museum of Natural History tackled the problem of making a thorough excavation of the ruins, a report of

THE ORIGIN OF THE TERM "AZTEC RUINS" (CONT.)

which Earl Morris has given to students in a series of monographs of the Anthropological Papers of the American Museum of Natural History.

However, to revert to the item which may be responsible for attaching the name to the ruins: On February 16, 1861, one Charles Baker, then residing in Animas City, County of San Juan, New Mexico, wrote to the Surveyor General of New Mexico concerning that part of the country.

He stated: "The valleys of the Rio de las Animas and San Juan are strewn with the ruins of cities, many of them of solid masonry. Stone buildings three stories high are yet standing, of Aztec architecture. An immense and prosperous population has at some former period resided here, and but few localities are capable of sustaining a more numerous one...."

This was published in the "California Farmer", June 19, 1863.

*****SWM*****

STABILIZATION OF THE KIVA IN THE GREAT CEREMONIAL CAVE AT BANDELIER

By J.W.Hendron

(Note: The original report with photographs is on file and available for reference at the Southwestern Monuments Headquarters Library, Coolidge, Arizona.)

Of all the archeological features in Bandelier National Monument, the "Ceremonial Cave" which lies near the upper end of the cliff dwellings in Frijoles Canyon is among the most interesting.

It is situated high in the face of the cliff just opposite the upper pueblo. The cave is entered with considerable difficulty, all vestiges of its ancient entrance having disappeared. The cave has contained several rooms built against the wall, and back of these were excavated rooms. In the bottom of the cave was a kiva excavated in the rock floor. This we cleared of its accumulated debris, finding numerous interesting articles well preserved because of their protection from the elements. This is one of the few ceremonial caves found in this region. One long known to us is that called "La Cueva Pintada," or the Painted Cave, in the northern wall of the Canada de la Cuesta Colorada. This cave has its walls covered with pictographs painted in red, white, and black. The ceremonial cave at the Rito has some features in common with

KIVA STABILIZATION GREAT CEREMONIAL CAVE AT BANDELIER (CONT.)

the Painted Cave, but contains no wall paintings.*

The great cave is 150 feet above the water of the creek. Mr. Jesse L. Nusbaum made it accessible by the building of about 90 feet of ladders and 200 feet of rock trail and stairway. The first ladder, 25 feet in length, is placed at some distance to the left of the cave. By means of this, a level is reached along which, by the cutting of a trail in the rock and the building of strong hand-rails and a stairway mounting to a height of another 25 feet, the landing is reached upon which is placed the second ladder. This is 40 feet in length and leads to another landing along which a trail is built to the foot of the upper ladder. This is 25 feet long and reaches a point from which a path has been constructed to the floor of the cave, 30 feet above.**

During the summer of 1910, work was continued on the small kiva previously mentioned, under the direction of Mr. Nusbaum, who at that time was a member of the school staff.*** It consisted of a reconstruction in part of the wall and the reconstruction of the roof.

The building stones of soft volcanic material had fallen from the top of the wall on the west and southwest portions between the time of abandonment of the cave and the time of excavation of the kiva in 1908. Mr. Nusbaum built the wall up to an equal level and then proceeded with the reconstruction of the roof.

The kiva is an exceptionally small one, varying in diameter from 12.1 feet to 13.9 feet, the diameter being a little greater at the upper part of the wall at the height where the main vigas were set in. The roof construction consisted of only three main vigas of Ponderosa Pine approximately six inches in diameter, and long enough to extend through the walls for several inches. Across these were nailed vigas or poles of pine varying from two to four inches in diameter with the bark left on. They were laid northwest to southeast. Pine needles and juniper boughs were laid over the poles and were followed by several thicknesses of the Denver Post, dated August 23, 1910, and addressed to Jesse L. Nusbaum. Over this were placed additional pine boughs, and on top a coating of dirt several inches thick. The final course of rock around the top was apparently laid on without mortar.

The entrance or central opening was built in the southwest portion

*Hewett, Edgar L.: The Excavations at Tyuonyi, New Mexico, in 1908; Papers of the School of American Archaeology, Archaeological Institute of America, No. 5, p. 448-449

**Hewett, Edgar L.: The Excavations at El Rito de Los Frijoles in 1909; Papers of The School of American Archaeology, Archaeological Institute of America, No. 10, P. 664-665.

*** Organic Acts and Administrative Reports of the School of American Archaeology, Archaeological Institute of America, Santa Fe, New Mexico, N.S., Paper No. 6, 1907-1917, p. 93

KIVA STABILIZATION GREAT CEREMONIAL CAVE AT BANDELIER (CONT.)

of the roof and consisted of short lengths of pine notched at the ends, which were preserved sufficiently for use a second time. The entrance was large, being as long as the distance between two of the main vigas to which the framework of the entrance was nailed, and no more than three feet wide. A ladder approximately 30 feet long was placed through the opening, the side pieces resting directly in front of the firebox where the floor of the kiva had been worn down, evidently from the constant scraping of feet.

Although the main vigas and some of the poles were in fair shape due to the protection received from the ceiling of the cave, it was thought advisable to remove the entire roof. Some of the earth from the roof had fallen to the inside of the structure as a result of the disintegration of the pine needles, juniper boughs, and newspaper, leaving wide gaps between the poles. This was dangerous to the welfare of visitors walking on the roof as well as being an appalling sight. After the roof was removed, six or eight inches of accumulated debris was cleaned from the floor.

Portions of the inside wall showed the effects of the weather, the thick coating of plaster having fallen away, particularly in the west portion, leaving the building stones in plain sight. The mortar had washed from between some of the large building stones and some of the small wedges of tuff had fallen out, leaving the main wall in a weakened state. The method of construction here parallels that of other archeological types in the canyon, the chinking technique being exactly the same. It was necessary to repair these breaks in order to renew the original strength and to keep the wall from falling to the inside.

The wall construction of this chamber is similar to that of the large kiva which has recently been stabilized. The building blocks for the main wall were evenly laid with the smooth sides to the inside of the kiva, while the building blocks which thickened the wall to the outside were haphazardly laid in mud mortar. This condition was evidenced by imprints in the original mortar from which the retaining blocks had fallen. Apparently the retaining wall was heavier on the south and southwest sides due to the fact that the floor of the cave sloped in those directions, but was not present on the northeast side, or at least no evidence of it was found. The south and southwest portions were subject to the weakness of the talus slope while the opposite portion was protected by the ceiling of the cave itself. A shallow trench not more than 18 inches deep, and not more than two feet wide was dug around the northeast portion of the wall of the kiva, and crude stones both large and small were laid in cement next to the thin inside wall, which under ordinary conditions will not give to the outside. The stones laid up on the outside may keep it from falling to the inside. The other half of the wall seemed to be the greatest problem, and I have mentioned before that the building blocks which acted as a retainer had fallen down the talus slope leaving that entire part of the structure bare. A good

KIVA STABILIZATION GREAT CEREMONIAL CAVE AT BANDELIER (CONT.)

portion of the main wall itself had fallen away and many of the blocks were so loose that their removal was necessary. A retaining wall varying from one to three feet in width at the ground level had to be built up with rocks and cement in order to hold the original wall. It extends little better than halfway around the entire structure, beginning in the north portion where it is about one foot wide and widening to approximately three feet at its base on the south side, then narrowing down again as it reaches the southeast section. The explanation for the extreme thickness in the south portion is due to the fact that more erosion has taken place at this point and has left four feet of the inside wall standing unprotected. The thickness of the retaining wall at the time of occupation of the cave may have been somewhat different than the present reconstruction, but from a stabilization standpoint it was necessary to gain this width at the base to hold up the inside wall. Of course, there is no doubt but what it might have stood for some time, but it was thought wiser to insure its standing for a longer period of time. I do not think that this reconstruction of the retaining wall departs too much from the original type since the erosion process had played such an active part in the front of the cave.

The circular wall of the shaft of the ventilator had to be extended upward as the retaining wall was being built and it is at this point that the retaining wall widens. The outside opening of the shaft now stands little better than three feet above the present ground level. How much higher the original was extended is not known. The shaft on the inside was in an extremely weakened state due to the fact that the supporting building blocks under the lintel were not of sufficient size to withstand the pressure of the kiva wall. The mortar from between these small chunks of tuff had come loose and the right side of the lintel, literally speaking, was hanging in midair. It was necessary to take off the pressure by raising the lintel a very little with a screw jack. The old mortar was scraped from the joint and then filled with cement and a building block was worked to fit the space. Perhaps the best procedure in this particular case would have been to tear out the entire wall above the ventilator and reconstruct it, but this would have taken away from its archeological value.

Making a comparison as to the nature of the structure by means of a photograph taken 29 years ago, it seems that the loose portion of the inside wall which had to be reconstructed was the same part which was rebuilt 27 years ago. The west portion of the wall was in extremely bad condition, more so than any other part. It is not known what method the original inhabitants used in mixing their mortar, but it appeared to be a clay mixed with a coarser material. This is the best mortar that I have yet seen in any of the ruined structures in the canyon and was much stronger than that of the previously restored portion, the mortar of which was nothing more than a powder.

Three new main vigas of pine were laid over the wall and set into

KIVA STABILIZATION GREAT CEREMONIAL CAVE AT BANDELIER (CONT.)

the building stones, and then cemented into a course of building stone laid up to the level of the tops of the vigas. Vigas or poles of pine approximately three inches in diameter were laid across the main vigas and nailed. The ends laid an inch or so over the wall but were flattened on the top so that additional courses of building stone could be laid over them, and cemented to the wall. Small willow branches were laid across the poles and nailed, and then 2 x 4's and then wet down. This was followed by small chunks of tuff thrown into the grass which would serve to hold the layer of mud together. The mud was not just poured on, but was worked down into all the cracks and leveled off to the tops of the 2 x 4's. When the mud had dried, it was mopped over with hot tar. Strips of tar paper were cut to fit and laid over the tar while it was still warm, the edges of the paper being flashed into the wall. The edges of the paper which overlapped were sealed with tar and then a final coating of tar was mopped over the entire roof. This was followed by a final course of building stone which may be called a parapet wall, and a flashing of cement was brought down from the wall to the roofing paper. The edges of the paper were nailed to the framework of the central opening which is in the southwest portion of the roof and, to seal these edges tight, tar was poured to cover them. Then a flashing of cement was brought down from the framework over the tar paper on all four sides. After the cement had set, a layer of mud two inches thick was spread over the top, and then followed by a coating of loose earth.

A canal or drain for the roof was cut from pine and built into the southwest portion of the wall. A final coating of mud was put over the outside of the structure to give it a more natural appearance.

Little is known as to the exact style of roof used by the prehistoric inhabitants of Bandelier National Monument, but certainly there must have been several styles, some elaborate and others just mere shelters from the weather. The type discussed in this paper follows the style of the one removed, which in all probability was reproduced under the supervision and guidance of Indians from the neighboring pueblos.

Due to the fact that this little kiva is sheltered somewhat by the ceiling of the cave itself, it would be very difficult to estimate the life of its roof. If we use the first reconstructed roof as a criterion, which after 27 years of weathering would hold the weight of a man, and then take into consideration the amount of material and methods used in building the present roof, we may be well assured of its holding up for a much longer period of time.

*****SWM*****

RESEARCH PROJECTS IN THE SOUTHWESTERN MONUMENTS

Compiled by Dale S. King

In preparing a report listing research projects in the Southwestern Monuments under the auspices of the Civil Works Administration, the Federal Emergency Relief Administration, and the Works Progress Administration, the following bibliography was assembled. It is printed here for the purpose of record.

- Rensch, H. E. "Chronology for Tumacacori National Monument." 1934. Available from National Park Service, Western Museum Laboratories, University of California, Berkeley, California. 84 pages. Mimeographed chronology with 37 bibliographical references.
- Beals, Ralph L. "Material Culture of the Pima, Papago, and Western Apache." 1934. Available from National Park Service, Western Museum Laboratories, University of California, Berkeley, California. 45 pages. Mimeographed compilation of selected material, with 6½ pages of bibliography.
- Beals, Ralph L. "Preliminary Report on the Ethnography of the Southwest." Available from National Park Service, Western Museum Laboratories, University of California, Berkeley, California. 75 pages with an additional 38 pages of bibliography. Mimeographed compilation of selected material.
- Colton, Harold S.; King, Dale S.; Steen, Charlie R.; and Harris, Robert S. "Report on Nalakihi, A Prehistoric Ruin on Wupatki National Monument, F-68 CWA Work Project No. 4". April 12, 1934. Present location: Museum of Northern Arizona at Flagstaff, Arizona; Bureau of American Ethnology; National Park Service files in Washington. 169 pages and 2 folded maps. (a) Typed field notes, photographs, and drawings of excavations of small pueblo ruin; (b) report of archeological survey of 20 quarter sections in northern portion of Wupatki National Monument; (c) report of engineer on same survey. At present in preparation by Dale S. King for publication, probably by Museum of Northern Arizona. The dendrochronological material of the excavation was published by McGregor, J. C., "Dates from Tsegi and Nalakihi," Tree Ring Bulletin, Tucson, Arizona. October, 1936, page 15.
- Colton, Harold S.; Hargrave, Lyndon Lane; Brewer, J. W., Jr.; Williamson, Ten Broeck; Van Valkenburgh, Richard; and Motz, J. C. Fisher. "Scientific Report on Excavation of Wupatki, F-68 CWA Work Project 10, Wupatki National Monument." April, 1934. Present location: Museum

RESEARCH PROJECTS IN SOUTHWESTERN MONUMENTS (CONT.)

of Northern Arizona at Flagstaff, Arizona; Bureau of American Ethnology; National Park Service files in Washington; Southwestern Monuments Loan Library, Coolidge, Arizona. 134 pages and 3 maps. Typed field notes, photographs, and drawings of excavation of large Pueblo ruin. Pertinent facts will be published by the Museum of Northern Arizona with issuance of their research work on Pueblo III culture period, it is believed.

Vivian, Gordon. "Final Report, Archeological Reconnaissance under CWA, Chaco Canyon National Monument." May 12, 1934. Copies available at Chaco Canyon National Monument Library, Southwestern Monuments Loan Library, Bureau of American Ethnology, and National Park Service files in Washington. 26 pages. Mimeographed notes of methods used and facts discovered in studies of wall disintegration in ruins, topographical map of Chetro Kettle ruins area, and petroglyph survey.

Hastings, Russell. "Report of Archeological Excavations at Casa Grande National Monument under CWA Program, 1934." March 22, 1934. Copies in National Park Service files in Washington, Southwestern Monuments Loan Library, and probably the Bureau of American Ethnology. 5 pages. Brief mimeographed report summarizing architectural types, superposition, features, artifacts, burials, and conclusions of excavation of Hohokam pithouses.

Caywood, Louis R., and Spicer, Edward H. "Tuzigoot, the Excavation and Repair of a ruin in the Verde Valley near Clarkdale, Arizona." July, 1935. Copies may be obtained from the authors or from the National Park Service, Western Museum Laboratories, University of California, Berkeley, California. There are loan copies in the Southwestern Monuments Loan Library. 119 pages, 18 photolithoprinted plates. Mimeographed scientific report describing architecture, artifacts, burials, conclusions and discussion of excavation of a Pueblo site. (Note: Tuzigoot is not yet a national monument, but its proclamation is expected at any time. Therefore, this report should be included in any compilation. The work at Tuzigoot was largely done by CWA, FERA, and WPA.)

Beaubien, Paul L. "Excavations (WPA) at Tumacacori, 1934." March 31, 1937. Was contained in the Supplement to the Southwestern Monuments Monthly Report for March, 1937. Copies are on file at the Southwestern Monuments Loan Library, the National Park Service files in Washington, and the Tumacacori National Monument Library. 46 mimeographed pages and one printed folded map. Eight mimeographed plates. This mimeographed report is abridged from the original typewritten report which is on file at the Southwestern Monuments Loan Library. The original report includes more than 100 photographs and six large maps and drawings. Subject matter covers the wall-outlining excavations done at Tumacacori during 1934. It is hoped that the original report can be published with private funds within the next two years.

ANTHROPOLOGICAL GLOSSARY

(Ed. Note: We owe our thanks to Professor George P. Murdock of Yale University for the following material. It was included in a course on general ethnology which was taken by Park Naturalist Dale S. King while on educational furlough during the winter of 1936-1937.)

Acanthion -- Point of the anterior nasal spine.

Acculturation -- Assumption of culture through contact. (Diffusion is just different way of looking at same process - bird's-eye point of view as were looking down on map. Actually is from point of view of the borrowing tribe. Acculturation as specific term applies to impact of western civilization on native peoples.)

Adhesion -- Taylor's term. The union of elements in a culture complex.

Adz (e) -- A cutting tool, primarily for wood working, with blade roughly at right angles and perpendicular or slanting to handle.

Affine -- A relative by marriage, an "in-law".

Age -- area concept -- Theory that extent of distribution of a trait is directly proportioned to its age.

Age -- grade - A tribal sub-group wherein membership and promotion are dependent upon age.

Agglutination -- Linguistic -- Formation of words by adding prefixes, infixes, and suffixes to roots.

Agnate -- A patrilineal relative.

Aleatory element -- Element of luck, chance, accident (Sumner's term. Particularly in regard to religion -- situation wherein man must adjust) Floods, disease.

Alinement (Alignment) -- Upright megalithic stones arranged in parallel rows.

Ambil-aneke -- Under patrilineal condition an exceptional form of marriage characterized by absence of bride price, by matrilineal residence, and by matrilineal descent (when father has no sons, but daughters, her children carry on line).

Amitate -- Lowie's term -- Special relationship with paternal aunt. Parallel to avunculate.

Amok -- Frenzied desire, institutionalized among Malays, to kill every person encountered.

Amulet -- Object worn as protection against evil.

Androcracy - System of male authority.

Angakok - Eskimo shaman.

Animatism -- Marat's term -- Attribution to things of life and power but not of a soul.

Asimism -- Tylor -- Attribution of souls to things.

Anthropometry -- Science of measurement of human body.

Archeology - Study of material remains of ancient or prehistoric peoples.

Areoi -- A Tahitian society characterized by promiscuity and

infanticide.

Artifact -- A material object fashioned by human workmanship.

Assagai -- Iron-tipped throwing and thrusting spear of Bantu.

Atlatl -- Spear thrower.

Augury -- Art or practice of foretelling events by auspices or omens.

Avatar -- Incarnation, especially of a god, as a man or animal.

Avunculate -- A special relationship with the maternal uncle. Especially where he exercises domestic authority and the nephew inherits from him or succeeds him.

Awl -- Pointed implement for piercing holes.

Babiche -- Thong of skin, especially eel skin.

Balsa -- A raft or boat constructed of reeds lashed together in bundles.

Band -- A tribal sub-group united not by kinship ties but by living together under nomadic or semi-nomadic conditions.

Banner-stone -- A prehistoric North American artifact of problematical use, made of polished stone with two symmetrical wings extending laterally from a perforated axis.

Bark Cloth -- Fabric made by beating inner bark of certain trees.

Barrow -- Earthen mound, usually covering a grave.

Basion -- Median point in the anterior margin of the foramen magnum.

Batik -- An Indonesian method of executing designs and colors by protecting portions of the fabric by wax before dipping in the dyestuff, then removing the wax by boiling.

Beena -- Matrilocal, matripotestal marriage occurring as an exceptional form in India.

Bell-beaker -- A pottery vessel shaped like an inverted bell.

Berdache -- A person who dresses like and lives the life of the opposite sex.

Betel -- A species of pepper; leaves and nuts chewed with lime by natives of Indonesia.

Bezoar -- Stone concretion found in the digestive tract of certain animals and often used as a medicine or fetish.

Blood brotherhood -- An artificial relationship usually established by a ceremony of drawing, exchanging, or mixing blood. Especially common in Africa.

Blood vengeance -- Obligatory practice of avenging with death the slaying of a kinsman.

Blowgun (blowpipe) -- A hollow tube through which darts are propelled by breath of operator.

Boat Stone -- A prehistoric American artifact of pottery stone, shaped somewhat like a boat.

Bola (bolas) -- Implement consisting of one or more weighted cords which, when thrown, entangle the quarry.

Bonze -- A Buddhist monk or priest.

Boomerang -- A curved and flattened throwing club, especially one which when thrown describes evolutions in air, returns to vicinity of thrower.

Bow-drill -- A drill operated by a bow and string.

ANTHROPOLOGICAL GLOSSARY (CONT.)

- Brachiation -- Arboreal locomotion by swinging from the arms.
- Brachycephalic -- Possessing a relatively broad head with cephalic index of 81-2 or above.
- Brachycranial -- Possessing a relatively broad skull with cranial index of 80 or above.
- Brand-tillage -- Rude agriculture on land from which the brush has been burned off.
- Brass -- Copper and zinc alloy.
- Bregma -- Point of junction of coronal and sagittal sutures.
- Bride-price -- Payment or gift by groom or his group to father or group of the bride.
- Bride-show -- Exhibition of bride often to enhance bride price or to collect a dowry.
- Bronze -- An alloy of copper and tin.
- Bull-boat -- A type of skin boat, especially the Plains type of bison hide over frame.
- Bullock -- A castrated bull -- an ox.
- Bullroarer -- An elongated slat of wood whirled at the end of a cord to produce a roaring sound.
- Bundling -- Practice of courtship in bed. Particularly in early New England.
- Busk -- An annual harvest ceremony of Southeastern Indians, (Creeks) with purification and new fire rites.
- Cacique -- Chief among central and southern American Indians.
- Cairn -- Mound of stones or rubble.
- Calabash -- A gourd or utensil made from the dried shell thereof.
- Camp-circle -- Originally of Plains Indians camp. Each band or sib has its special place in the circle.
- Carabao -- East Indian water buffalo.
- Cardinal Point Concept -- Attribution of ritual significance to north, south, east, west, and sometimes to zenith, nadir, and middle, by tribes of Mexico and Southwest.
- Cartouche -- An oval or oblong figure on Egyptian monument containing sovereign's name.
- Caschrom -- A foot plow (Celtic term).
- Cassava -- Manioc plant or the starch made from its root stalk.
- Catamaran -- Vessel with two parallel hulls joined by light framework supporting a mast and sail.
- Caul -- A portion of the amnion which sometimes covers the head of a child at birth and often regarded as lucky.
- Celt -- A chisel- or axe-shaped stone implement.
- Cenotaph -- An empty tomb of a person buried elsewhere.
- Ceramics -- Pottery or the art of manufacturing it.
- Charivari -- Mock serenade of discordant noises.
- Checkerwork -- Technique in basketry in which warp and weft are similar and pass alternately over and under one another.
- Chthonian -- Pertaining to gods of the underworld.
- Churinga -- An elongated fetish object of stone or wood among Central Australian tribes.

ANTHROPOLOGICAL GLOSSARY (CONT.)

Cicatrization -- Formation of scars by gashing the skin.

Cicisbeism -- Possession of married woman by recognized lover.

Parallel to concubinage.

Cire-perdue -- Process of casting in which molten metal is poured into a pottery mold made by covering a wax model or object by clay and applying heat to melt wax and bake clay.

Cist -- A sepulchral chest or chamber.

Clan -- Unilateral exogamous kin-group, especially matrilineal.

Classification System -- System of relationships in which terms apply not to individuals but to groups of persons.

Click -- An inspired clicking consonant. Particularly among South Africans. Coca -- A shrub (erythrox) leaves of which, containing cocaine as an active principle, are chewed as stimulant by South Americans.

Codex -- An ancient manuscript.

Cognate -- Relatives by blood, especially in female kin.

Coif -- Close fitting cap worn by medieval woman to conceal hair.

Coiled Basketry -- Technique in which waft is sewed through holes in a coiled or spiral warp.

Composite-bow -- Bow built by lashing together several pieces of bone, horn, or wood.

Concubintancy -- System in which persons are born into marriage-ability with each other. Australian and Melanesia.

Condyle -- An articular prominence on a bone. Example -- lower jaw.

Confarriation -- Ancient Roman form of marriage in which the bride shared a cake of spelt with groom and was initiated into worship of his household gods.

Contagious magic -- Frazer -- Magic based on principle that things in contact continue to influence each other when separated.

Convergence -- Independent development in different regions of similar culture traits from dissimilar origins.

Coracle -- Small boat of skin stretched over wicker frame. Irish.

Corbel arch -- A masonry span made by advancing successive courses until the top ones can be joined by cap-stone.

Corn-spirit -- Frazer -- Spirit personifying the life force of growing grain with which it flourishes and dies.

Corroboree -- Ceremony among Australian aborigines.

Counting coup -- Prestige-bringing military exploit among Plains Indians, notably being the first to touch an enemy.

Coup de poing -- Chipped hand axe of lower Paleolithic man in Europe.

Convade -- Actual simulation of childbirth by its father as well as less striking practices of taboos observed by him during or after birth of the child.

Craniometry -- Science or technique of measurement of skulls.

Cranng -- A prehistoric fortification in a lake or marsh, built of earth or stone reinforced by piles.

Creole -- A person of French or Spanish descent born and bred in a colony.

Crest -- Totemic devices usually representing animals associated with

ANTHROPOLOGICAL GLOSSARY (CONT.)

sibs and widely used in decorative art on Northwest Coast.

Cromlech -- A circle of monoliths.

Cross-cousin -- A father's, sister's or mother's brother's child outside of one's sib.

Cubit -- Unit of length originally measured from elbow to tip of middle finger.

Cult -- Objective behavioristic aspects of religion.

Cultural threshold -- W. B. Wallace -- Level of culture necessary before a trait can be borrowed.

Culture Area (Hissler) -- A geographical area in which the cultures conform to one general type.

Culture trait -- Unit of culture, i.e. an artifact or folk-way.

Cuneiform -- Wedge shaped, especially with reference to ancient Babylonian writing.

Cupping -- Blood-letting by forming vacuum over the skin.

Curare -- South American dart and arrow poison.

Cymotrichous -- Characterized by wavy or curly hair.

Daimon -- Spirit or god, that is, a supernatural being who cannot be identified with soul of individual human being.

Deadfall -- Trap so constructed that a weight falls on the animal.

Demography -- Description, especially statistical, study of a population, quantitative.

Dendrochronology -- Dating of prehistoric sites by comparison of their timbers with a chronological sequence of tree rings established for the area.

Lentalis -- Tapering tubular shells of a clam or marine mollusk, used as a standard of value by many Pacific tribes of North America.

Deodand -- Thing forfeited to God or the Crown because it has been the immediate cause of death of a person.

Dervish -- Member of one of several ascetic moslem monastic orders.

Descent -- Rule regulating membership in an unilateral kin group.

Diffusion -- Spread of culture traits by borrowing or migration.

Distaff -- Staff supporting the fiber in spinning.

Divination -- Practices aimed at foretelling future events.

Dolichocephalic -- Head with cephalic index less than 76-77.

Dolichocranial -- Skull with cranial index less than 75.

Dolmen -- Three or more upright stones supporting a cap stone or table.

Doors of the Dead (Frazer) -- Special apertures made in a dwelling through which to remove a corpse.

Dower -- A widow's share or interest in property of her deceased husband.

Dowry -- Property brought by wife to husband in marriage.

Druid -- Ancient Celtic priest or shaman.

Dualism -- Religious doctrine that universe is under dominance of two opposing principles or pantheons, one good, the other evil, as in Zoroastrianism.

Dual organization -- Primary division of a tribe into two halves or moieties.

ANTHROPOLOGICAL GLOSSARY (CONT.)

- Duk-duk -- A secret society in the Bismarck Archipelago.
- Dumb barter (silent barter) -- Primitive form of exchange in which parties do not commit a contact, each depositing its goods and withdrawing while the others leave the equivalent.
- Dysteleology - Vestigial or seemingly useless organ or study of such organs.
- Eidolism -- Doctrine of disembodied souls or ghosts (Sumner and Keller).
- Endocannibalism (Steinmetz) -- Eating of fellow tribesmen.
- Endogamy -- Rule prohibiting marriage outside of one's social group.
- Eolith -- Rude chipped implement of Eolithic Period.
- Epicanthic -- Pertaining to the epicanthus or Mongolian eye fold.
- Eponym -- A mystical or historical person from whom a clan or other social group derives its name.
- Equinox -- One of the two dates each year (about March 21 and September 22) when sun appears to cross the equator.
- Ethical dualism -- Possession of one code of ethics for the in-group and another with reference to outsiders.
- Ethnocentrism -- Believe in superiority of one's own group and its ways combined with contempt for outsider and his ways.
- Ethnography - Descriptive study of primitive cultures.
- Ethnology -- Comparative study of primitive cultures.
- Euphemism -- Substitution of an inoffensive word or phrase for one that is unpleasant, indelicate, or taboo.
- Evil eye -- The envious glance of certain persons or spirits radiating evil influence.
- Exogamy -- Rule prohibiting marriage with same social group.
- Exorcism -- Practices designed to expell or banish evil spirits.
- External soul -- Soul thought to reside in animal, plant, or other object external to its own body.
- Exuvial Magic -- Magic worked with discarded parts of body: hair, nails, excreta.
- Father-right -- Type of social organization characterized by all or most of the following: patrilocal residence, paternal authority, and patrilineal descent, inheritance, and succession.
- Felt -- A fabric of matted work and hair made not by weaving but by rolling and beating.
- Fetish -- An animate or inanimate object in which an alien spirit resides.
- Fibula -- (a) Lesser of two bones of lower leg; (b) A prehistoric metal clasp or safety pin.
- Filly -- Young mare.
- Fire-drill -- A wooden drill, rotated between hands, on a wooden hearth to generate fire by friction.
- Fire-piston (Fire syringe) -- A piston pressed into hollow cylinder to generate fire by compression of air.
- Fire-plow -- A stick plowed along a groove in another piece of wood to generate fire by friction.

ANTHROPOLOGICAL GLOSSARY (CONT.)

Firstling -- First-born offspring of man or domesticated animals, especially when reserved as sacrifice.

Flail -- A threshing implement or weapon consisting of a club, attached at one end to end of a handle so as to swing freely.

Folk lore -- The comparative study of folk tales and of customs and beliefs of a superstitious or legendary nature. Used in broader sense in England.

Folkway (Sumner) -- A customary element of behavior.

Fontanelle -- An interval closed by a membrane between the angles of the cranial bones of an infant.

Foramen -- A small hole or opening in a bone.

Foreshaft -- A piece connecting the shaft and lead of spear, arrow, or other implement.

Forge -- A place where metal is wrought by heating and hammering.

Forking -- The distinction in terminology from relatives in the male line to relatives in female line.

Fostering -- Nursing and rearing of children by foster-parents.

Foundation Sacrifice -- A sacrifice, especially of a human being, to provide a guardian spirit in laying the foundation of a building.

Frankfort Horizontal -- The plane on which a skull is oriented, drawn through the upper margin of the external ear openings and the lower margins of the eye orbits.

Freemartin -- An infertile female calf born as the twin of a male.

Fricative -- A consonant (eg. "f", "v") produced by the friction of the breath when forced through a restricted oral passage.

Gaff -- Hook with handle. Used in fishing.

Gens -- An unilateral kin-group, especially patrilineal.

Geophagy -- Practice of eating earth or clay.

Gerontocracy -- Government by the old men.

Ghat -- A broad stairway descending to a river, often from a temple, used in India for bathing.

Ghee -- Clarified butter. A staple dairy produce in India.

Ghost -- Disembodied soul of deceased human being.

Ghost dance -- An American Indian religious dance associated with messianic beliefs.

Gild (Guild) -- An occupational association for mutual aid.

Glabella -- A point over the nose, midway between the supra-orbital ridges.

Glottal stop -- A stopped consonant produced by closing and sudden opening by the glottis (e. g., the elephant).

Gnathion -- The lowest median point on the mandible or chin.

Go-between -- An intermediate agent, especially in arranging a marriage.

Gorge -- A support for bait which a fish swallows and cannot eject.

Gorget -- An ornament worn at the neck or throat.

Goura -- A combined string and wind instrument of South Africa, consisting of a bow with its string fastened to a stave at one end by a quill which is vibrated with the breath.

Grave-escort -- Human beings sacrificed at a funeral to provide the

ANTHROPOLOGICAL GLOSSARY (CONT.)

deceased with retainers in the other world.

Group marriage -- Theoretical marital union of several men with several women.

Guardian spirit -- An individual protective spirit often acquired especially in North America through a dream or vision.

Gunwale -- Upper edge or side of boat.

Gynecocracy -- Matriarchy or government by women (Bachofen).

Hack -- A primitive hoe or pick.

Hamstring -- To disable by cutting the large tendons in back of knee on either side.

Handfasting -- A European form of trial marriage contracted by the clasping of hands and ripening into marriage with pregnancy or the birth of a child.

Hand game -- An American Indian game in which one player or two each conceals in his hands a pair of wooden or bone cylinders, one plain and the other marked, while the opponents guess the location of the plain cylinder.

Harpoon -- A spear with detachable head attached to a line.

Haruspication -- Divination, especially by inspecting the entrails of sacrificial animals.

Hashish -- A narcotic preparation of hemp, chewed or smoked in the East.

Heddle -- An appliance in weaving to raise or lower a set of warp thread so that the weft may be inserted.

Heifer -- A young cow that has not calved.

Heliolithic -- Pertaining to the diffusionist theory of the Egyptian origin of higher culture.

Heili -- Rim of the ear. Often pierced for insertion of ornaments.

Henotheism -- Belief in a pantheon in which one god is superior to the others but not supreme.

Hetairism -- A hypothetical primitive stage of promiscuity (Bachofen).

Heirodule -- A temple slave, especially one serving the god as a sacred prostitute.

Hlonipa -- (Zulu) -- Tabu against mentioning the name of a dead person.

Homeopathic magic -- Magic operating on the principle that like influences like. (Imitative magic.)

Hominy -- American Indian dish of hulled or crushed maize prepared by boiling.

Hook-swinging -- A religious rite of self torture in which the body is suspended by hooks thrust through the skin (Plains Sun Dance).

Hypsicranial -- Characterized by a relatively high skull.

Imitative magic -- Magic based on principle that like affects like.

Incest -- Sexual intercourse by relatives between whom marriage is forbidden.

Infibulation -- Attachment of a contrivance to the female genitals to prevent copulation.

Infix -- A grammatical element inserted in the middle of a word.

Inion -- Most prominent part of the external occipital protuberance.

Javelin -- A throwing spear.

ANTHROPOLOGICAL GLOSSARY (CONT.)

- Jettatura -- A spell cast by persons supposedly possessed of the evil eye.
- Jinn (singular of Jinni) -- Spirits or demons in Mohammedan folk belief; often regarded as susceptible to magical coercion.
- Joking relationships -- A relationship between definite kinsman characterized by license rather than avoidance.
- Juju -- A West African fetish or its supernatural power.
- Junior right -- Preferential inheritance by the youngest son or child.
- Jus Primae Noctis -- Right of a chief, lord, or priest to possess the bride on the first night of her marriage.
- Kachina -- An ancestral clan spirit of the Hopi or a doll or masked dancer representing such a spirit.
- Kami -- An ancestral spirit or divinity in Japanese Shinto belief.
- Karma -- Buddhist theory that the ethereal character of one's acts determine one's lot in future existences.
- Kava -- A non-alcoholic Polynesian drink made by chewing the roots of a species of pepper.
- Kayak -- Skin man's boat of the Eskimos.
- Kindred -- A bilateral kin group.
- King's peace -- Taboo or law against private vengeance, first imposed by the king on his own household and gradually extended to the entire realm.
- King's touch -- Belief that a king can cure a scrofulous person by touching him.
- Kirn -- The last sheaf of a harvest; hence, a festival.
- Kitchen midden -- A heap of sherds and refuse marking the site of a prehistoric human habitation.
- Kiva -- An underground chamber used for religious rites by the Pueblo Indians.
- Knobkerrie -- Knobbed throwing stick of the South African Tribes.
- Kraal -- A corral; South African native village or village community.
- Kula -- A system of ceremonial exchange in the Trobriand Islands.
- Kulturkreis -- A Graebnerian culture area.
- Kumiss -- A fermented drink of mare's or camel's milk.
- Labret -- A lip plug.
- Lama -- A Tibetan or Mongolian priest or monk.
- Lambda -- Point of junction of sagittal and lambdoid sutures.
- Lanugo -- The downy foetal hair.
- Lares -- Ancient Roman tutelary divinities of particular places, i. e., houses, fields, cross roads.
- Leach -- To dissolve out a soluble substance by the action of a percolating liquid.
- Leiotrichous -- Possessing straight hair.
- Leptorrhine -- Possessing a relatively narrow nose.
- Leucoaerm -- Characterized by a light skin color.
- Levirate -- Rule that a man must marry his brother's widow.
- Lex talionis -- Law of retaliation.

ANTHROPOLOGICAL GLOSSARY (CONT.)

- Libation -- Pouring out of a liquor as a sacrifice.
- Lingam -- A Hindu phallic symbol used in the worship of Shiva.
- Linguistic stock -- A group of related languages, unrelated to others.
- Lintel -- A horizontal piece spanning a door or other opening.
- Lunar month -- Period from one new moon to the next, amounting to a fraction more than $29\frac{1}{2}$ days.
- Lure -- An object, not itself edible, used instead of bait to attract fish.
- Lycanthropy -- The assumption by witchcraft of the form and traits of a wolf.
- Mace -- A heavy staff or club, usually of metal, and often spiked.
- Macrodon't -- Having large teeth.
- Mana (Melanesian) -- Impersonal supernatural power.
- Mandrake -- An European herb with a forked root, often resembling a human body and consequently invested with human attributes and widely used in medicine and magic.
- Manes -- Spirits of the dead and underworld divinities.
- Manioc -- Cassava or the plant which yields it.
- Manitu -- A supernatural being or power among the Algonquin tribes.
- Mantra -- A sacred Vedic text recited as a spell by Brahmins.
- Manumission -- Release from slavery.
- Manus -- The paternal authority of a husband over his wife.
- Matriarchate -- A hypothetical state of female authority, analogous to patriarchy.
- Matrilineal -- Characterized by descent, inheritance and/or succession in the female line.
- Matrilocal -- Characterized by residence of husband with his wife or her group.
- Matripotestal -- Characterized by authority vested in the mother.
- Mead -- A fermented drink made from honey and water.
- Medicine Bundle -- A fetish bundle of plains and most of the central Algonquin Indians.
- Mediterranean Release -- A type of arrow release in which three fingers are placed across the string, the arrow being held lightly between the first and second.
- Megalith -- A large stone monument, especially prehistoric.
- Melanoderm -- Characterized by a dark skin.
- Menhir -- A single erect stone monument.
- Menopause -- Period of natural cessation of menstruation.
- Merging (Lowie) -- Grouping of lineal and collateral relatives under same term.
- Metate -- A flat or concave stone on which maize is ground.
- Metempsychosis -- Passing of soul at death into another body, animal or human.
- Metronymic -- Bearing the name of mother or another relative in its female line.
- Microdon't -- Having small teeth.
- Microlith -- A tiny chipped stone implement characteristic of the

ANTHROPOLOGICAL GLOSSARY (CONT.)

- Mir -- A collectivistic Russian village community.
- Miscegenation -- Interbreeding of different races, where contrary to the mores.
- Mnemonic -- Assisting or intending to assist the memory, i.e. Quipu.
- Moiety -- A primary tribal subdivision where there are two such.
- Moko -- Maori Tattooing.
- Monandry -- More or less durable informal monopoly by a woman by one husband at a time.
- Mongolian release -- A type of arrow release in which the thumb is crooked around the string with the thumb across the nail of the first finger.
- Monoamy -- Institutionalized marital union of one man and one woman to the exclusion of any plurality of spouses.
- Monolith -- A single large stone monument; i. e. A menhir.
- Morning gift -- A gift from husband to bride on morning after the wedding. Common Germanic custom.
- Mortmain -- Property in the hands of the church; ecclesiastics in early law conceived as civilly dead.
- Mos (pl. mores) -- A popular usage or folkway which is thought especially conducive to societal welfare, which exerts a coercive influence on individuals to conform, but which is not coordinated by any authority.
- Mother-right -- Type of society, originally characterized by ~~all or~~ most of the following: maternal descent, inheritance, or succession, matrilineal residence, and maternal or avuncular domestic authority.
- Nagualism -- A Mexican development with ritual and organization of the guardian spirit concept.
- Nasion -- Median part of the fronto-nasal suture.
- Necromancy -- Divination by communication with the spirits of the dead; hence black magic in general.
- Needfire -- A purificatory fire built on occasions of need, such as epidemics, cattle plagues, and outbreaks of witchcraft.
- Nephew-right -- Right of a nephew to inherit from or succeed his maternal uncle.
- Nome -- A province or district of ancient Egypt.
- Nose Flute -- A kind of flute played by blowing through the nostrils.
- Nubility -- Marriageability in females.
- Obelisk -- An upright gradually tapering four-sided pillar terminating in a pyramid.
- Obsidian -- Volcanic glass which, because it fractures readily into sharp edged flakes, is widely used in manufacturing stone artifacts.
- Occipital -- Pertaining to the occiput.
- Ontogeny -- Life history of an individual organism.
- Onychomancy -- Divination by means of finger nails.
- Orbitale -- Lowest point in margin of eye orbit.
- Ordeal -- A painful or dangerous test of guilt or innocence: Supposedly under divine control, escape from injury being regarded as a vindication of innocence.
- Orenda -- The Iroquois conception of supernatural power.

Ortho-cousin -- A cousin belonging to the same sib.; i. e., a father's brother's child under patrilineal descent or a mother's sister's child under matrilineal descent.

Ortho-nathous -- Characterized by relatively flat face or a large facial or maxillary angle.

Ossuary -- Place where bones of the dead are deposited.

Osteometry -- Measurement of the bones of the skeleton.

Outrigger -- An auxiliary float attached to a boat by a spar.

Paddy -- Rice, especially when growing.

Palaver -- An African parley, debate, or conference.

Pan-pipe -- A musical instrument consisting of several tubes of varying length.

Pantheism -- Doctrine that the universe as a whole is God.

Pantun -- A Malay verse form for short improvised poems.

Parallel cousin -- A father's brother's or a mother's sister's child.

Parallelism -- The independent development of similar culture traits in different regions.

Parfleche -- An untanned buffalo hide with the hair removed, usually decorated and folded to form a bag or case. Made by Plains Indians.

Pariah -- A member of a low or despised caste.

Parka -- An outer garment of tailored skin worn by the Eskimo and Athapascans. (To be continued)

*****SWM*****

RUMINATIONS

partly about poultry but mostly about other things.---By the Boss.

Chief, I have been feeling rather low in my mind and humble the last day or two because of some fifteen or twenty-year-old chickens that have come home to roost.

It has to do with a chart we were making up to show the various lines of authority running from headquarters to the many field stations. In a Taurian session, which lasted so long that I barely got under the wire at six o'clock for dinner, it developed that one man was sure if we put the Custodian of Casa Grande up among the headquarters it would develop a lot of grief in the minds of some of the field men who would say: "That rascal at Casa Grande is no better than we, so why is so much favoritism shown by putting him up there?" Of course, as a matter of fact, he is put up there to show that in addition to his regular duties as a custodian, we are saddling a lot of headquarters work on him, such as taking care of quarters and offices, running the machinery pool, keeping track of the condition of all field equipment, etc. There was a time when the field men claimed, with some justice, that we used headquarters men to help out the local problems at Casa Grande. That time has been gone these many moons and now we are using the local Custodian to help out an overworked headquarters staff. If our headquarters were at any other place than a monument where we could do this, we would have had to ask for another man some time back in

RUMINATIONS (CONT.)

order to handle this work. In other words, this is another gain we make by being located at one of our monuments instead of in the city. Among the offsetting disadvantages is this feeling of the field men that the monument at headquarters, which in reality is always being pulled and hauled around and having its routine interfered with and upset by the experiments we are continually trying out on it, is in some way a favored monument. I don't know how we can correct this impression unless we pull in one or two field men and let them have a month of this soft, easy work and thus put them in the way of finding out how much of a snap it is.

I like to tell the yarn about the old man who was counseling his son who was just starting out in the world. The old man said: "Son, honesty is the best policy; I've tried both and I know." There will probably always be a yowl between the lone-post field man and the headquarters man as to which has the worst end of the deal. Personally, my heart is with each of them for I've tried both and I know.

A man out in the sticks on our lone-post jobs has to do everything in the way of taking care of his monument and its visitors, the dirty work right along with the rest. He must work at any and all hours whenever the work is there to be done, must be late at meals and occasionally miss one, cannot have regular time off, and so on. There are some offsetting advantages to these disadvantages, but I need not name them here. I have done years of time on a lone post job and have gone through every stage of self pity at my abandoned condition and anger at the boss and the outfit up there at the main office who have abandoned me, that any of these modern field men will have great trouble working up any kind of a mad spell that I didn't go through before the Park Service was invented.

I once heard Mr. Albright tell a superintendent that a certain alibi wouldn't explain a certain situation: that he had used that alibi too often himself when he was running the Yellowstone to accept it from another superintendent. So I am with a field man--I've been there.

Especially does a field man get mad when he writes in for information or for supplies and doesn't get them by return mail. We have just been overhauling things around the office in an attempt to correct this very trouble. When the man in the field runs out of envelopes, he wants envelopes right now and no alibi or sweet talk will fill the need ten days later. On such little things hang grouches and bad feelings.

On the other hand, the field man assumes something which is far from the truth; he assumes that he knows all about what is going on at the main office and what makes that outfit up there tick. And he sometimes builds quite a high house on this flock of sand. Eventually the time comes when his house falls, but in the meantime he has been sore

RUMINATIONS (JONT.)

over something that never happened as he assumed it did, and everybody has been out of humor over nothing at all. Like that field man who was all tied in knots because headquarters had feathered their nest, so to speak, with electric refrigerators and were letting the field go without. It just wasn't true; the last families to get artificial refrigeration were those at headquarters and this poor fellow had been all wrought up over something that hadn't happened.

And on the obverse side of this coin is the headquarters man who wonders what in the world that field man does with all his spare time and why can't he get those six or eight reports out promptly on the days they are due instead of hanging fire a few days and balling up the main report here in the office which can't be made up until they come in. And why does a field man always use his last envelope to write to you that he is now out and for goodness sake to hurry some more to him. Why does he always order his ink in the winter when it can freeze and break on the way to him and never order it in summer? Of course, it isn't always that way; the harrassed office man just thinks it is and builds a house of wrath on his flock of sand.

You understand, Chief, these little knocks are nothing that will tear the machine apart: it is running right along and delivering good service, but if we could adjust the parts to a little closer tolerance the service would be still better. If they could just understand that the man up top-side has made all these fool mistakes and take his word for it that they are mistakes, everything would run better. After all, the Boss may know the lone-post job though he doesn't happen to hold one at this time.

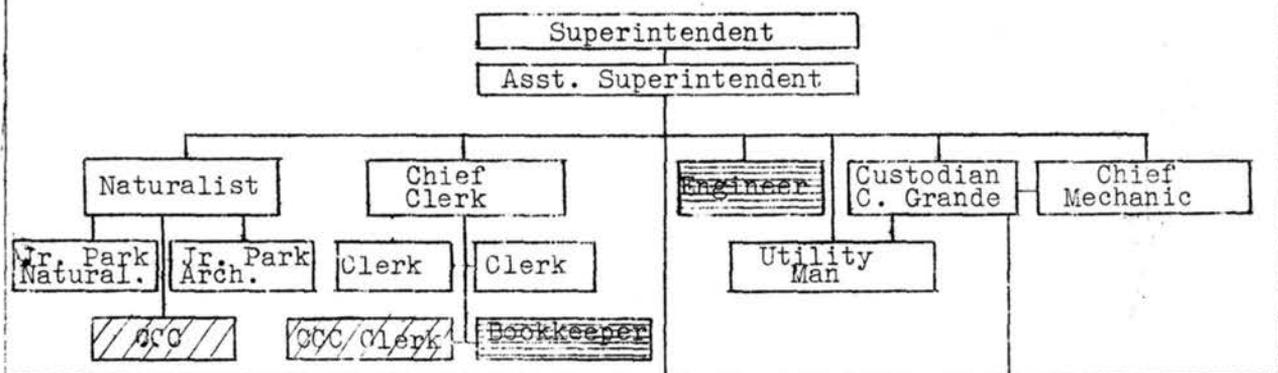
So the chart will have to show the custodian up in the headquarters staff for certain reasons, obscure, perhaps, to the lone field man but plain enough to the man who made and uses the chart, and if the field men will just assume that the Boss knows what he is talking about, it may save him building chicken roosts in the now far distant future.

And we will put the chart in, by the way, just to prove that there isn't any real dynamite in it.

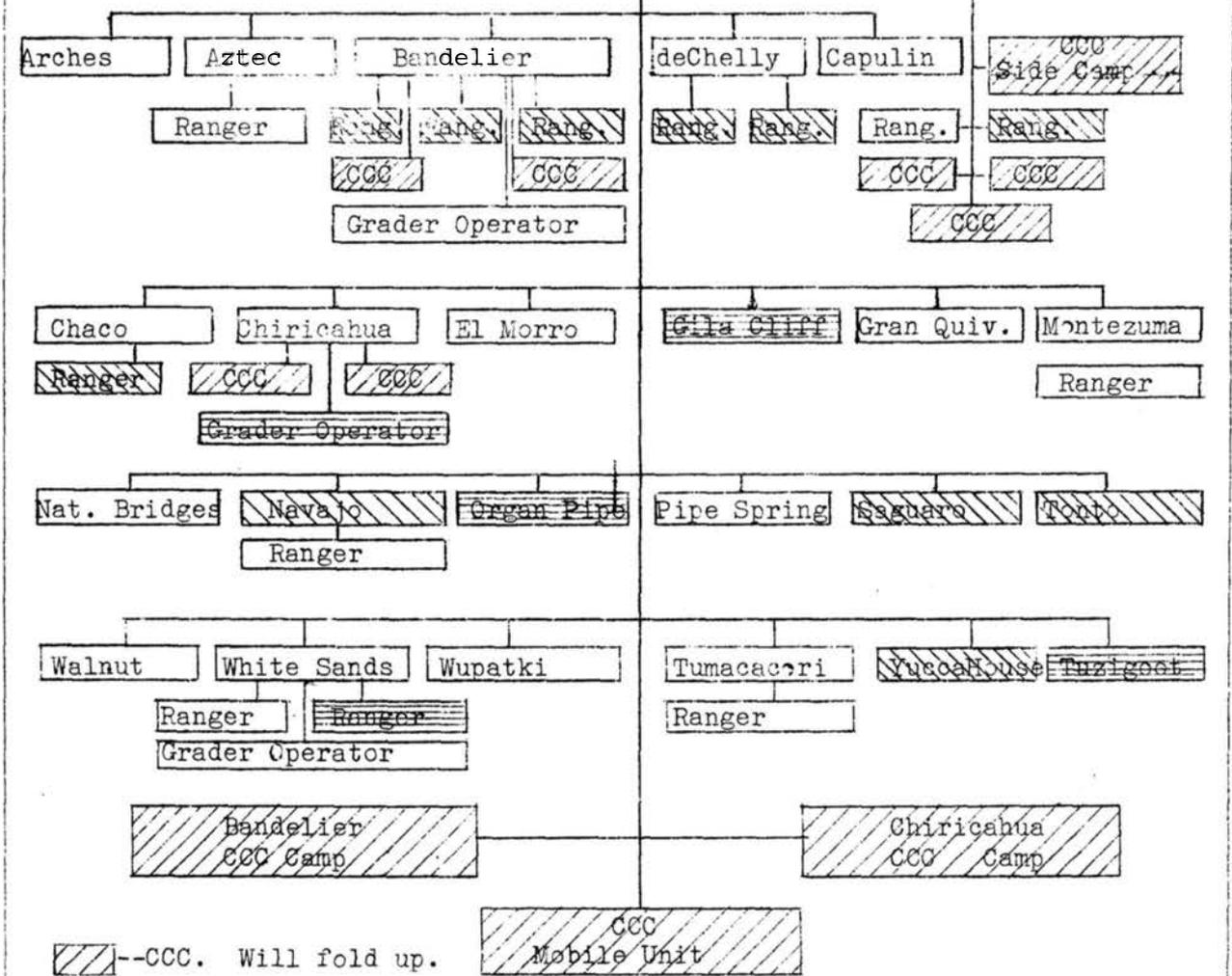
Cordially,

The Boss

HEADQUARTERS.



FIELD



- CCC. Will fold up.
- Badly needed.
- Part time

ORGANIZATION CHART SOUTHWESTERN MONUMENTS