

# SOUTHWESTERN MONUMENTS

MONTHLY REPORT



OCTOBER 1939

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SOUTHWESTERN NATIONAL MONUMENTS

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October, 1939

SOUTHWESTERN NATIONAL MONUMENTS PERSONNEL

HEADQUARTERS

NATIONAL PARK SERVICE

COOLIDGE, ARIZONA

FRANK PINKLEY, SUPERINTENDENT

Hugh M. Miller, ass't supt; Park Soule, chief clerk; Dale S. King, asst. archeologist; Charlie R. Steen, jr. archeologist; Natt N. Dodge, jr. naturalist; El Alberts, relief ranger; Luis Gastelum, clerk; Ira Goodwin, asst. clerk-typist; Howard Nieber, asst. clerkstenog; Lawrence Mungerro, CCC jr. clerk-stenog.; Ray Ringenbach, CCC jr. clerk-typist; F. E. Stonehocker, gen. mechanic; J.L.L. Baehr, utility man. Tony Ramirez, mimeograph operator, CCC.

DETAILED FROM REGION III: J. H. Tovrea, assistant engineer.

FIELD STATION	POST OFFICE	PERSONNEL	1939 VISITORS	ACRES AREA
1. ARCHES	Moab, Utah	Henry G. Schmidt, cust.	1,835	33,680.00
2. AZTEC RUINS	Aztec, N.M.	T.C. Miller, custodian and Homer Hastings, ranger	15,188	25.88
3. BANDELIER	Santa Fe, N.M.	C.A. Thomas, jr. arch., and G. G. Philp, temp. ranger	11,048	26,026.20
4. CANYON DE CHELLY	Chin Lee, Ariz.	Ted Cronyn, cust.	2,128	83,840.00
5. CAPULIN MT.	Capulin, N.M.	H.T. Ferr, cust.	34,700	680.42
6. CASA GRANDE	Coolidge, Ariz.	A.T. Picknell, cust.; C.D. Wyatt, ranger, & 3 CCC guides	25,109	472.50
7. CHACO CANYON	Chaco Canyon, N.M.	L.T. McKinney, cust.	3,618	21,509.40
8. CHIRICAHUA	Douglas, Ariz.	Frank Fish, cust; H. Stratton, grader oper. 1 CCC guide	7,975	10,694.80
9. EL MORRO	Hamah, N.M.	R.R. Budlong, cust.	2,735	240.00
10. GILA CLIFF DWELLINGS	New Mex.	No Custodian	90	160.00
11. GRAN QUIVIRA	Gran Quivira, N.M.	A. Peterson, guide	2,518	610.94
12. HOVENWEEP	Cortez, Colo.	No custodian	168	285.80
13. MONTEZUMA CASTLE	Camp Verde, Arizona	E. Jackson, custodian; Wm.L. Bowen, ranger	7,887	521.41
14. NATURAL BRIDGES	Blanding, Utah	Zeke Johnson, cust.	1,044	2,740.00
15. NAVAJO	Tonalea, Arizona	J. Brewor, cust.	435	360.00
16. ORGAN PIPE CACTUS	Ajo, Ariz.	W.R. Supernauth, cust.	7,000	330,687.00
17. PIPE SPRING	Moccasin, Ariz.	L. Heaton, act. cust.	3,192	40.00
18. RAINBOW BRIDGE	Tonalea, Ariz.	No Custodian	175	160.00
19. SAGUARO	Tucson, Arizona	D.V. Egernmeyer, cust.	18,000	63,284.00
20. SUNSET CRATER	Flagstaff, Ariz.	D. Jones, in charge	8,779	3,040.00
21. TONTO	ROOSEVELT, ARIZ.	John Peavy, custodian	4,500	1,120.00
22. TUMACACORI	Nogales, Arizona	L. Caywood, sut.; C.G. Harkins, ranger	18,388	10.00
23. TUZIGOOT	Clarkdale, Ariz.	T. Smiley, in charge	- -	42.61
24. WALNUT CANYON	Flagstaff, Ariz.	P. Beaubien, jr., arch.	11,050	1,879.46
25. WHITE SANDS	Alamogordo, N.M.	J. Faris, cust.; Geo. Sholly, ranger; Joe Shepherd, grader operator	58,955	143,227.47
26. WUPATKI	Flagstaff, Ariz.	D. Jones, custodian	3,122	35,865.30
27. YUCCA HOUSE	Cortez, Colo.	No Custodian	82	10.00
TOTAL TRAVEL YEAR 1939:- 1,189.395 sq.miles			249,721	761,213.19

## OPENING

By Superintendent Frank Pinkley of the Southwestern National Monuments, Coolidge, Arizona.

Probably this month should go down in our history as the "Month of the new men." It was in October that we began to get our vacant jobs filled up. Don Eggermayer moved from his ranger position at Casa Grande to take over the custodianship of Saguaro National Monument east of Tucson. Charlie Wyatt was the new appointee to take Don's place as ranger at Casa Grande National Monument. William Supernaugh entered on duty at Organ Pipe Cactus National Monument as its first custodian. John Peavy entered on duty as the first permanent all-year custodian at Tonto National Monument. Henry G. Schmidt entered on duty as the first permanent all-year custodian at Arches National Monument. William Bowen entered on duty as permanent ranger at Montezuma Castle National Monument. Tom Charles resigned his position as custodian at White Sands National Monument and Johnwill Paris was appointed as full-time custodian in charge of that monument. David Jones was redesignated custodian instead of ranger at Wupatki National Monument. Howard Rieber took Robert Petric's place as assistant clerk-stenographer, Bob going back to the Indian Service at Window Rock at a nice increase in salary.

Now when we get the new men for the Gran Quivira and Tuzigoot jobs we will have a full hand and can begin to play the game. At present Alfred Peterson, our old pinch hitter, is taking care of Gran Quivira, and Ed. Alberts is in the process of turning Tuzigoot over to Torah L. Smiley, who will carry on until we can get a man from the list to take the job over.

Since last April we have been running short-handed and it is certainly a relief to us to get these jobs filled and get things running again.

Of course the high light of the month was the Superintendents' Conference at Santa Fe and the meeting afterward with the American Civic and Planning Association. The conference did a considerable amount of good work and it seemed to me that the general "osprit" was raised by the meeting.

After the superintendents' conference was over I went out to Bandelier National Monument and spent a day and a half examining the fine work which is being done there by Custodian Art Thomas and Camp Superintendent Hub Chase. We can be very proud of the work which has been and is yet being done at Bandelier and I hope Mr. Demaray and Mr. Wirth have expressed such a feeling to you. The camp was in the process of moving out of the monument to new quarters several miles away up on the mesa and at the time I was there almost all the men were working for the Army on the new camp construction. In the end this will give us a chance to make a fine clean-up and landscaping of the old camp site in the monument and put every thing in apple pie order when we get ready to close up the work.

The camp at Chiricahua National Monument is now under the leadership of Ed. Knagge, whose appointment as superintendent of the camp came through during the month, and is also doing a good job. Their No. 3 residence is housed in and plaster is going on the walls and it is a very fine job. We are trying our best to get a landscape job filled at that camp and hope we will have a completion report to give you



## OPENING (CONT.)

next month.

The Casa Grande side camp, which belongs to the parent camp at Chiricahua has been busy during the month under Joe Hobbs and Custodian Bicknell and has a pump house pretty well finished and a blacksmith shop well begun.

At our Flagstaff camp the work is moving well. Lieut. Harry Kieling has been moved by the Army from our Chiricahua camp to the Flagstaff camp and with Harry to run the Army end and Bill Stevenson to run our end, if the high country gods will just give us the breaks on the winter weather, that camp is going to be putting out a lot of work.

The side camp out at Wupatki National Monument has made progress on the custodian's residence and that work is far enough along for us to ask for more plans to keep it busy.

The new camp at Chaco is not yet lined out into satisfactory production and we are working on some of the minor troubles which have been slowing it down.

The Mobile unit which is working on ruins stabilization at Chaco Canyon is showing good progress.

The Branch of Plans and Design checked on the new location of some eight miles of proposed road in Organ Pipe Cactus National Monument during the month and gave us a very favorable report. As I told you last month, we had already checked this new survey from the interpretation angle and found it satisfactory. I had a talk the other day with Mr. Hutchins of the Arizona Highway Department. He and the Governor are very anxious to have us put a unit of this road under construction and we will probably take this up with you in the next few days.

With Henry Schmidt now in charge up at Arches National Monument, we hope to get the preliminary work laid so that when the CCC camp comes in next spring it can get to work with the least possible delay. We have a site which has been agreed upon by the Army and there ought to be no delay about beginning construction as soon as they are ready to go to work.

The usual administrative inspection trips were made by our headquarters men and the usual copies of the reports have been forwarded to your office for your information; you will see that we have control over our district.

Visitors are off for the month. In October we had about 56% as many as in September and about 58% as many as for October of last year. We got a high percentage of contact on them, 71% of the total number as against 59% last month and 53% for last year. We might have forecast this had we known the number of visitors were going down, because, other things being equal, a drop in visitors will allow the men more time to meet a larger percentage of them. Eight monuments which are this year ahead of last year. 14 monuments which are this year behind last, have a total this year of 6,170 visitors as against 16,547 last year.

We have a serious problem of water development at Navajo, where, in trying to bring water up from the bottom of the canyon, we drilled a hole down through the cliff and tunneled in to meet it at the foot of the cliff. We are in far enough and are having trouble finding the hole.

We also have water problems at El Morro, where we have two dry holes, and at Organ Pipe, where we want to locate an administrative area at some place near where the highway comes across the north boundary of the area.

# CONDENSED REPORT

## IN WHICH HIGHLIGHTS OF THE MONTH ARE GIVEN

Coolidge, Arizona,

November 1, 1939

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

Dear Mr. Director:

The Condensed Report for the month of October, 1939, follows:

### TRAVEL

Station	October 1939	October 1938	10/1/39 to 10/1/39	10/1/38 to 10/1/38	10/1/39 to 10/31/39	10/1/38 to 10/31/38	% 1939
Archos. . . . .	155	55	-	-	155	55	281
Aztec Ruins . . .	667	1349	-	-	667	1349	49.
Bandelier . . . .	695	613	-	-	695	613	113
Canyon de Chelly.	277	131	-	-	277	131	211
Capulin Mt. . . .	3500	3100	-	-	3500	3100	113
Casa Grande . . .	696	2471	-	-	696	2471	2
Chaco Canyon. . .	221	403	-	-	221	403	5
Chiricahua. . . .	433	483	-	-	433	484	89.
El Morro. . . . .	131	274	-	-	131	274	47.
Gila Cliff. . . .	10	10	-	-	10	10	-
Gran Quivira	298	259	-	-	298	259	115
Hovenweep-	10	10	-	-	10	10	-
Montezuma Castle.	501	601	-	-	501	601	83.3
Natural Bridges .	69	91	-	-	69	91	75.8
Navajo. . . . .	31	50	-	-	31	50	62.0
Organ Pipe Cactus	410	900	-	-	410	900	45.3
Pipe Spring	46	268	-	-	46	268	17.2
Rainbow Bridge	20	20	-	-	20	20	-
Saguaro. . . . .	166	1300	-	-	166	1300	12.7
Sunset Crater . .	540	447	-	-	540	447	120.0
Tonto. . . . .	471	274	-	-	471	274	171.0
Tumacacori . . .	370	916	-	-	370	916	40.3
Tuzigoot . . . .	360	-	-	-	360	-	-
Walnut Canyon . .	725	964	-	-	725	964	75.2
White Sands . . .	1815	6720	-	-	1815	6720	27.0
Wupatki . . . .	279	230	-	-	279	230	121
Yucca House . . .	20	30	-	-	20	20	66.
TOTALS. . . . .	12916	21970	-	-	12916	21970	
LAST YEAR . . .	21950	20459	-	-	21970	20459	

## CONDENSED REPORT (CONT.)

Custodians unanimously report lovely "Indian summer" weather at all monuments, northern and southern. Travel held up well, which may indicate that some travelers are learning what Southwesterners already knew, --that October is one of the finest travel months of the year.

Little rain fell, but September precipitation had been sufficient to keep vegetation in northern monuments green. Killing frosts held off. Southern monuments were dry looking, but weather was balmy and pleasant.

### MATTERS OF SPECIAL MOMENT

Regretful news was that of the serious illness of John E. Fast, one of the Southwestern National Monuments' finest friends. He has been bed-ridden on his ranch near Tumacacori National Monument, and the whole staff sincerely wishes his speedy and complete recovery.

Pothunters dug into a room and two storage bins at Ruin J, and isolated site in Wupatki National Monument, lending credence to our belief that such a large area of numerous ruins cannot be patrolled adequately by one lone man. See page 286.

Interesting was the announcement that the neat Sunset Crater registry remains un-marred after a year of service, although unattended. We are now more optimistic concerning unattended exhibits, providing they are executed in a fashion to command the public's respect.

Carl license fee of 50 cents per annum has proved a much more satisfactory method of charging at Bandelier than the former system of 25 cents per adult. Page 291.

### 100 ADMINISTRATIVE

#### 160 - General Publicity

Headquarters - Archeologist Steen prepared another article for the Coronado Cuarto Centennial series, "Spanish Padres of New Mexico."

Naturalist Dodge gave one talk on bird conservation to a local group.

Arches - Kodachrome motion picture sequence nearing completion.

Will be valuable in public contact and promotional work. Page 254.

Chiricahua - Travel pictures taken by Arizona Highways and Atlas

Educational films. Bowie, Arizona, Chamber of Commerce erected signs on entrance highway. Page 253.

Montezuma Castle - Warner Brothers Broadcasting Corporation gathered material for a radio broadcast.

White Sands - Pictures obtained by New Mexico Travel Bureau, International Motor Count Association, Arizona Republic and Gazette, and American Lumberman. Two writers are using White Sands as locale. Page 255.

### 200 MAINTENANCE, NEW CONSTRUCTION, AND IMPROVEMENTS

#### 210 - Unusual Maintenance

Aztec Ruins - Custodian's office and two west museum rooms repainted.

Minor repairs to water and electric systems. Page 262.

Bandelier - Light plant problem temporarily solved by installation of industrial unit auto engine. Entrance road surface giving trouble and probably will have to be replaced. Page 291.

Canyon de Chelly - Water and sewer systems overhauled. Page 285.

Chaco Canyon - Custodian's residence repaired. Page 279.

CONDENSED REPORT (CONT.)

Montezuma Castle - Unsightly shack torn down. Minor improvements to grounds and residences. Page 267.

Natural Bridges - Trails in good shape after much work. Page 295.

Saguaro - Custodian moved in and made preliminary cleanup. Four and one half miles of road smoothed. Windmill cleaned and repaired. Page 270.

Tumacacori - Much maintenance needed, especially plastering of exterior of residences. Rains wash sand in parking area. Page 283.

Tuzigoot - Rains badly washed 20 feet of retaining wall, endangering sewer system. Page 262. Trash removed and grounds cleaned. Page 263.

220 New Construction

Capulin - Custodian working on camp tables and fireplaces. Page 269.

Montezuma Castle - Pump house built and painted. Page 267.

Navajo - Retaining wall built to stop flooding of basement light wells and to form back patio. Page 278.

230 - Special Improvement Activities

Bandelier CCC. Page 291.

Camp moved out of Frijoles Canyon to new location.

Stables with water and sewer connections complete. Garage and heater room complete.

Wood boxes for cabin units almost finished.

Museum Lobby ceiling poles being cut. Otowi Section hill road betterment started. Capulin entrance sign being made.

Casa Grande CCC. Page 274.

Equipment Shed B complete except for doors, as is Pumphouse.

West boundary fence repaired.

Blacksmith shop, which will complete utility area, started.

Chaco Canyon CCC. Page 281.

Earth dikes completed, south approach road betterment going slowly, boundary fence work progressing, all trees for telephone poles cut.

Chiricahua CCC. Page 259.

250 sq.yds. of backslipping removed at Sugar Loaf-Massai Point intersection; another 200 yds. sloped half mile north of Headquarters on Massai Point road.

Orientation Station at lintel height.

Residence No. 3 roof completed, plastering continued, and rough plumbing and electrical wiring installed.

Residence landscaping continues, signs almost completed, some borrow pit elimination.

El Morro PMA Page 296

Residence occupied October 12. Fine design and construction.

Residence to inscriptions trail 10% complete but will be stalled soon by bad weather. Arroyo bridge being constructed.

Navajo - PMA. Page 278.

Water situation unchanged, -- drill hole can't be found.

Pipe Spring CCC. Page 256.

Camp of other government agency moved out for winter, lessening custodian's annoyance and worry. No progress in work.



## CONDENSED REPORT (CONT.)

Saguaro CCC. Page 270.

Administration building 80% complete. Roofs finished but ramadas need more work. Building lacks plaster, floors, windows and doors.

Walnut Canyon CCC and PWA. Page 277.

Custodian spends much time attempting to arrange easement for water line. Half mile of trench dug and floor of 1,200-gallon sump poured.

Residence No. 2 ready for plastering.

Residence No. 1 masonry walls 75% complete.

60% of masonry walls of exhibit room of administration building done.

Sewer line excavation complete and forms in place for septic tank.

White Sands RD. Page 255.

Tule removal from lake and road work continues.

Hupatki CCC and PWA. Page 277.

Residence roof complete; plumbing and wiring continues.

Five miles of entrance road maintained.

240 - Improvement to monument approaches

Arches - Custodian worked on washes in road to windows section. Some new entrance signs placed; need more. Page 253.

Aztec Ruins - Paving on US 666, south approach, continues. All directional signs taken up for re-painting and half replaced. Need for larger, more impressive signs. Page 267.

Bandelier - Fine hand carved signs put up. Page 292.

Chaco Canyon - CCC improved south approach; state highway bladed the north route. Page 292.

Natural Bridges - Custodian improved entrance road markedly. Page 295.

Navajo - CCC-ID improved Shonto Hill to relatively good shape. P.279.

Organ Pipe Cactus - Ajo-Tucson road oiling completed. Branch of Plans representatives inspected new road location in monument. Page 276.

Saguaro - County graded approach roads and custodian set up signs. Page 270.

Tuzigoot All entrance roads are paved except short stretch from Clarkdale which was recently bladed by county. Directional signs need replacement, however. Page 263.

## 300 ACTIVITIES OF OTHER AGENCIES IN MONUMENTS

330 - Cooperating Non-Government Agencies

El Morro - New Mexico Public Health Service very kindly aided custodian prepare illustrated public health lecture. Page 297.

Gran Quivira - Guide given much information by Joe Toulouse of Museum of New Mexico. Page 284.

Tuzigoot - United Verde branch of Phelps Dodge Corporation invaluable aid in establishing status of museum material recently turned over to National Park Service. Page 263.

350 Donations and Accessions

Headquarters - 40 Kodachrome racks, 3 pueblo models, 25 5 x 8" file drawers, six bird traps, 1,000 collapsible cartons, 12 books, 30 periodicals. Page 301.

Montezuma Castle - Large specimens of Gila Monster, W. Diamond

CONDENSED REPORT (CONT.)

Rattlesnake. Page 267.

400 INTERPRETATION

410 - Lecture and guide service

Headquarters - Naturalist Dodge gave talk on conservation of birds.

Aztec Ruins - New type of guide tickets much more satisfactory.

Page 261

Bandelier - Service suffers because custodian must stay at office to collect fees and CCC men have to do guiding. Page 292.

Chiricahua - Service greatly reduced by new guide rule. Enrollee of Custodian Fish. Grader Operator Stratton administered monument, spending much overtime in deer season. Page 258.

El Morro - Custodian instituted new public service with health talk. Page 297.

Tuzigoot - Montezuma Castle serves at Tuzigoot one day per week enabling day off. Allows easy interchange of equipment and saves government expense. Page 264.

420 - Museum Activities

Bandelier - Expert Arthur Woodward's advice appreciated. Working plans for Museum Lobby reviewed by Headquarters museum men and approved. Page 300.

Casa Grande - Number of lettered labels received from Western Museum storage collection will be moved to new building soon, eliminating a fire hazard of long standing. Page 301.

Sunset Crater - Neat looking unattended register is still unmarred after one year. Page 289.

Tumacacori - Mass diorama needs separated circuit - - burns switch contacts. Page 283.

White Sands - Shipment by Headquarters staff of artifacts for display and continued work by Western Museum Laboratories advanced the installation project. Page 300.

Wupatki - Plans for administration building being formulated. Important that adequate space for storage be provided. Page 287.

430 - Research and Observations

431 - Botany

Capulin Mountain - Good crop of pinons and some acorns. Page 269.

Tuzigoot - Small number of plants collected and sent off for mounting. Page 264.

Wupatki - CCC enrollees gave material aid in collecting 82 herbarium specimens in duplicate. Page 287.

432 - Zoology

Bandelier - Temporary Ranger G. G. Philp starting collection of bird study skins. Bird banding re-commenced. Report of summer bird observations will be found in Supplement, page 314.

Casa Grande - Rodents taking advantage of cover afforded by limbs fallen from dead mesquite trees. Page 301.

Gran Quivira - Rattlesnakes still found in visitor area along paths, necessitating control. Page 265.

Organ Pipe Cactus - Deer, antelope, and bighorn sheep reported, and

## CONDENSED REPORT (CONT.)

one bighorn ram consorts with bell cow in western part of monument.  
Cabeza Prieta game refuge to west will aid Service program  
at Organ Pipe Cactus. Page 275.

Tuzigoot - This new monument not imposing zoologically, but a small  
covey of quail exists and may increase with elimination of house cat  
problem. Page 264.

White Sands - Ranger Sholly starting bird banding. Page 255.

Wupatki - Antelope scarce in October, due to lack of rain. Page 288.

### 434 - Archeology

Chaco Canyon - Archeologist Vivian working on reports of excavation  
of small house ruin. Page 280. He reports peculiar shafts encountered  
in stabilization of two kivas. Page 281.

Wupatki - Vandalism at Ruin J mentioned in introductory paragraphs.  
Page 287.

### 435 - History

Headquarters - Archeologist Steen accumulated much historical  
data in preparation of article "Padres of New Mexico."

Montezuma Castle - 1898 newspaper clipping obtained which gives  
information on Castle. Page 268.

### 436 - Other

Headquarters - Photo filing project advanced through help of  
Custodian W. R. Superbaugh. Page 300.

Tuzigoot - Ranger Alberts observes that visitors are much interested  
in mining operations accentuating our belief that Southwestern  
Monuments must give brief exposition of surrounding locale, local  
local color, so to speak. Page 264.

## 500 USE OF MONUMENT FACILITIES BY THE PUBLIC

### 510 - Increase or decrease in travel

Saguaro - Custodian able to contact only about one tenth of travel  
until administration building is finished and traffic is con-  
trolled. Page 271.

Tuzigoot - First month of figures indicate fairly heavy travel  
at this monument. Page 262.

### 52 - Newsworthy visitors

Superintendents and American Civic and Planning Association at  
Bandelier; latter group also at Aztec, Chaco and Canyon de Chelly.

## 600 PROTECTION

### 610 - Ranger Service

Headquarters - Several days were spent breaking in new men who came  
on duty during the month. This process has not been possible in the  
past, and should be intensified and expanded in the future.  
Page 302.

Arches - Henry Schmidt entered on duty as custodian during month.  
Made survey of possibility of contact and protection station at  
Willow Springs. Page 254.

Casa Grande - Ranger Charles D. Wyatt entered on duty September 8.

Montezuma Castle - Mr. L. Bowen entered on duty as ranger October 1.

Navajo - Experience shows urgent need for temporary ranger during three  
summer months. Page 278.

Organ Pipe Cactus - Custodian W. R. Superbaugh now on duty.

Saguaro - Custodian D. K. Eschmayer moved to monument October 1.

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# FIELD REPORTS

## FROM THE MEN ON THE JOB

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### ARCHES

By Henry G. Schmidt, Custodian,  
Moab, Utah.

Visitors this month, 155; travel year to date 155.

This report will introduce me as one of the new members of the Southwestern National Monuments' family. May I take this opportunity to say "hello" to all of you, and with this greeting give my promise to help make the Southwestern National Monuments one of the outstanding members of the National Park Service.

#### Weather

As a new arrival in this region, I should not be expected to expound too freely on the weather, but I cannot resist to tell you the Utah autumn is unique, both in color and mildness. There has been very little rain during the month of October, but the precipitation of last month was ample materially to aid growth and vegetation, both in the valley and on the monument.

#### Roads

The road into the Windows sector of the monument is in fair condition. Harry Reed worked the washes which were damaged by the September rains, and, since my arrival, I have filled in a few of the worst ruts and pot holes.

#### Visitors

It is difficult for me to say accurately how many persons have visited the monument this month. After making the following observation, I have set the travel count at 155 people. In two days at the monument, I met six parties with 23 people. Five of the parties were out-of-state; three from Colorado, one from California, and one from Ohio. On October 19, Harry Reed, Dr. J. W. Williams, George L. Waters and myself made the trip into the Windows sector of the monument, and while there I contacted several other visitors. They all agreed that the trip was well worth the rough ride over the temporary road.

#### More About Visitors

George L. Waters, manager of the Eastman Kodak Stores, Inc., in Salt Lake City, Utah, visited the monument on several occasions this month. He has taken a number of colored shots of several of the arches, and numerous black and white shots of the Windows sector.

#### Signs

The entrance signs, received by Harry Reed the last of September, were erected by him the first part of this month. It is quite evident that more signs are needed, I will make a survey and report on this problem in November.



## ARCHES (CONT.)

### Miscellaneous

The matter of erecting a temporary contact and protection station at Willow Springs has been thoroughly investigated, and the report made to the Boss. The erection of the proposed station will materially aid in making an accurate travel count, and will make it possible to give the visitor to the Arches, much needed assistance and information.

I wish here to acknowledge the splendid assistance I have received from Harry Reed, Dr. J. W. Williams and L. L. Taylor of Moab, in lining out my work here. Their cooperation has been invaluable and very much appreciated by this custodian.

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### POSTLUDE

By Harry Reed

As Mr. Schmidt is now on duty and will make a report for this month, I will briefly summarize events and activities in the monument prior to his arrival on October 18.

Your second letter requesting that I quit work on September 30 was received on October 2. As the last of the entrance signs had just been received, I installed these on October 3. On October 4, I made a final inspection of the entrance road making minor repairs at points where slight damage had been done by rain a day or so before. The road is now in good condition.

On Saturday October 14 several members of the American Planning Board of Washington, D. C., accompanied by a number of Park Service officials, arrived in Moab and were entertained the following day at Dead Horse Point overlooking the Colorado River. Due to lack of time the party did not visit the Arches.

The movie of the Arches will be completed as quickly as possible. As I have told you in the past, I do not have a movie outfit of my own any more so it is necessary to work on the film at such times as Mr. McGibbeny can come to Moab. We will make a special effort however to complete it in the very near future.

===== SWNM =====

## WHITE SANDS

By Jdmwill Faris, custodian,  
Alamogordo, New Mexico.

Visitors this month, 1,815; travel year to date, 1,815.

The last monthly report I made to your office was October, 1938, from de Chally. The twelve months intervening have been most interesting and profitable in many ways. Tom is most certainly a grand tutor and I wish it were the privilege of all the boys to spend a year or so under Tom. His patience and consideration in attempting to bleach out an old cliff dweller to fit into his Sands, I certainly appreciate, and not only that, but the time and energy he gave in training me to meet his public, I thoroughly enjoyed.

The year has been very different than most of the ten spent in your employ. Boss, I sincerely believe every custodian should serve a year

## WHITE SANDS (CONT.)

as ranger every four or five years. Much good can come from it. New views, new ideas, new appreciation for the relationship between custodian and ranger, etc. The people of Alamogordo, Las Cruces and even El Paso have been grand. July 1 George and Maurice annexed themselves to White Sands and they too have been swell. Several visits from you have added too to our enjoyment. We have missed your visits in the higher monuments. Our big regret is in losing Tom as Custodian. Of course, he is with us in the "White Sands Service the concession different".

Travel has been good all year, of course we noticed the effect the charge had on our travel, but over 13,000 paid admissions were collected and with the permits now, we are looking forward to a decided increase in our number of repeats.

It seems that we are almost on the brink of an expansion in travel. Any number of important and influential publicity connections have been our fate the past month or so. Matt Dodge was in for pictures; Joe Burscy sent in a man for the State of New Mexico for pictures; E. H. Lightfoot, president of the International Motor Count Association was a most enthusiastic visitor and was insistent that he be supplied with pictures to accompany an article in the Association Magazine. B. P. Lynch, managing editor of the Arizona Republic and Phoenix Gazette is desirous of pictures; the American Lumberman, and other trade journals are extremely interested. At the present writing we have two writers in the area. So, Boss, with the enthusiasm radiating so constantly around us, is it any wonder we get so excited over our area?

RD projects are progressing about as usual, the lake and the road are the major projects at present.

The regular monument activities have centered about general contacts, routine duties, minor museum development and George is laying out a program to start his banding and trapping.

1815 people in 529 cars visited the area in October. Since the 11th, when the permits were started 191 permits have been issued. Our register in the field shows 34 states represented. This is easily accounted for in that El Paso friends bring their guests in Texas cars which are covered by permits while after registering in the register the home state is used.

Travel has held up very well. The weather has been ideal, all roads in good shape and carrying reasonable heavy travel, much of which passes us by as visitors but hits us hard for water, air, pump, jacks, etc.

We expect a slight decrease in our number of visitors for the next few months, but it will enable us to lay plans for a most extraordinary year in 1940.

At this writing Johnnie is expecting to undergo an operation for appendicitis. We will keep you informed.

\*\*\*\*SWNM\*\*\*\*

# PIPE SPRING

By Leonard Heaton, acting custodian,  
Moccasin, Arizona.

## Weather

The weather has been on the sunny side this month, and has given us a lot of growing days, so much so that the grasses and flowers will mature their seeds and be in good shape for the winter. Up to date we have only had one light frost which just nipped the leaves. Nights have been cool enough to make the leaves on the trees turn color and a few of them are beginning to fall.

Of the 30 days this month there have been 22 clear days; 6 partly cloudy days and storm on the 26th of September and 8th of October, just enough to make the roads slick for a few hours. As a fall month it has been ideal and we have enjoyed it very much.

## Travel

The travel to the monument and through has been on the decrease, though I have had some very interesting parties out to see the fort and am well pleased with their reaction to the monument. My count shows 46 visitors to the fort coming from Utah, Arizona, California, Minnesota, Hawaii, and CCC boys from camps near by. 21 people held picnics in the camp area this month and 188 traveled through the monument without stopping to see the fort. This travel was mostly local people.

Noteworthy visitors to the monument for October are Dr. and Mrs. H. Gregory of Hawaii, of the U. S. Geological Survey; Mr. P. Boone and Walter Mann of the U. S. Forest Service, Mr. and Mrs. J. V. Lloyd, who are out for material for a book covering a two weeks trip in the southwest. Mr. Lloyd has written several books on travel and scenic places.

## CCC Activities

The first week in October was devoted in finishing up small jobs and moving from this camp to a camp in Las Vegas. The mutual moving of the boys took place on the 5th, taking every thing that could be moved but a few heaters, and the Yellow Dog (which is still here with the CCC foremen). The CCC foremen are loading their trucks and will pull out for Ajo tonight or early in the morning; and they will leave only a few old tools and a pile of posts and a lot of broken down trucks.

The caretaker for the Pipe Spring and Short Creek Camps (Mr. Westrope) will live at Short Creek and make a call at this camp about once a week. So I will have the place all to myself for about five months.

There has been no CCC work on the monument this month because I could not get the material in so that I plan the sewer tile. Since the trench was dug and the manhole and septic tank were open I put in the tile connecting these two places the last week or so. I have only about half the tiling needed to complete the sewer job.

The D. G. left me the old Dodge dump truck that the Park Service turned over to them in March 1938. It is in fair condition, and ought to stand a lot of service, though the tires are old and the bat-

## PIPE SPRING (CONT.)

tery needs recharging.

### Nature Notes

As to bird work I have not got around to doing any trapping. One reason is that I have no grain with which to set my traps with and than I have been busy with other things.

The gray squirrels are plentiful on the monument this fall. One pair is making their home in the rocks that line the south bank of the west pool, and most any time I can see them busy carrying foodstuff to store for the winter. It is an odd sight to see one of the squirrels go running along the road with his teeth holding a gourd that is about a third larger than his head, and then when he gets to his hole he has to either cut up the gourd or dig the hole larger so as to get it inside.

With a little patience they would become very tame as now they will let people get within several feet before they run in their holes.

### Accidents

This is the first real accident that I have to report from this monument. And it was because my head did not save my foot. On the 7th when I came to work I found that I had forgotten to bring the keys out of the fort when I locked up the night before. So nothing to do but climb over the wall and get the keys so that I could open up. Well just as I was pulling myself over the top one of the rocks gave way and the next thing I knew I was rolling on the ground at the base of the wall. When I got up I found that my arms, back and hands were skinned and bruised and that my left leg from the knee down was very numb but I could still stand on it. After a few minutes I again went up and over the wall and work at a few odd jobs till about noon. By that my leg was getting so stiff I could hardly walk, so went home and the next two days was spent mostly in bed. By Tuesday the 10th, I could get around after a fashion so came back to work, doing some light work, but mostly just to be at the monument. On the 13th I called to see Dr. Norris and he said that the small bone in the leg could be easily cracked and that the muscles were pulled away from the bone in several places. The only thing to do was to stay off the leg as much as possible.

I am getting along as well as could be expected, with the work I have put the leg to and in another week or two I ought to be OK again.

I also took two days leave on the 17 and 18 and an hour or so the next two days, because of an accident. My five-year-old boy, Lowell, was knocked down by a car driven by Van Church of the Indian School. For two days we did not know whether the boy would come through or not as he had a severe bump on the back of the head which affected his stomach and caused bleeding at the nose. But he is now getting along fine, although very weak and poor from the shock and bruises.

In closing, I have a lot of work that I need to get done before winter sets in and it will keep me busy most of the time if I get it done. This lame leg has thrown me out of about two weeks work, but if the weather holds out for a few more weeks I will get the best of it done.



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## TONTO

By John Peavy, custodian,  
Roosevelt, Arizona.

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Visitors this month, 471; travel year to date, 471.

When I first made my debut in Coolidge two weeks ago all of the Park Service personnel told me what a grand place Tonto is and how much I would like it; at the time I was a little dubious. However, after being here for a week, Marge and I agree that this is one of the most beautiful and interesting spots that we have had the fortune in calling home.

The weather has been very agreeable for the last week. However, I hope we get an abundance of moisture in the near future so that Roosevelt Reservoir will again be full to capacity.

Most visitors who are visiting the monument for the second or third time remark on the fact that the entrance road and trail are in very good shape as compared to some instances in the past.

Quite a few interesting "cosmopolitans" have visited here this week. I was especially interested in a gentleman from Berlin, Germany who is stranded in this country due to the war condition. He was a geologist and mineralogist and I garnered quite a bit of interesting information concerning the geology of this area during our trip to the lower ruins.

Minor repairs this month include fixing locks and catches on doors and windows in house, repairing chair bottom in museum and placing rocks to support prehistoric stopping stone which had started to crack in the Upper Ruin.

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SWMH

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## CHIRICAHUA

By Frank L. Fish, custodian,  
Douglas, Arizona.

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Visitors this month, 433; travel year to date, 433.

The weather for October has been ideal from the visitors' standpoint. Lowest temperature was 40 degrees on the 15th. There have been a few light showers, but no measurable precipitation was recorded.

Contact service to the visitor has been naturally reduced, due to the abandonment of one CCC guide (as per orders received). This leaves the custodian and one enrollee to handle the checking station, museum, and contact at Passai Point. This is particularly noticeable when visitors are here during the lunch hour and no contact is possible other than the museum. With the Custodian taking sick leave for an appendicitis operation on October 12, the greater burden of contacting and checking was thrown upon Enrollee Ragsdale, who is to be commended for his fine work in keeping things running along those lines for the remainder of the month.

In addition to maintenance work, Hunter Stratton had to carry on the duties pertaining to the administration of the monument, such as game patrol, reports, etc. He is doing excellent work and putting in long hours of overtime.

## CHIRICAHUA (CONT.)

Visitors show a decline, unless we should add the 87 new enrollees to the count. These were left out as they are considered as part of the regular personnel of the monument.

Comparative figures with the same period of 1938 follows:

October	Cars	Visitors	Out-of-State	Trips	Attendance	Total Mr. Guide Serv
1939	113	433	133	100	397	3,200
1938	<u>131</u>	<u>484</u>	<u>101</u>	<u>68</u>	<u>313</u>	<u>3,155</u>
Loss or Gain	- 18	- 51	34	32	84	5

Deer season opened October 16 and we have the following people aiding us in spotting any breaking of the rules: Mrs. Duckett of the Pinery Store, watching and listening on the south boundary and Mrs. Martha Stark doing the same on the west. With their aid, the establishing of the state game refuge to the west, and the enrollees on projects within the monument, we feel the deer within the area are well protected or can be protected from any trespassing in short order.

Some of our visitors were: Max Kegley, and Mr. Carlson of the "Arizona Highways" (they were taking pictures and getting material for an article), Roy M. Edwards and party from Bowie Chamber of Commerce. They intend to put signs up directing visitors through Apache Pass to here. Bertram G. Bates and Harry Peterson of Atlas Educational Films adding views to a collection of "Scenes of Arizona". The "Boss" arrived during the afternoon of October 23 and we had a nice visit and looked over some of the improvements. I felt sorry for the "Boss" when his old Ford only went 206 miles on 12½ gallons of gas, but I bet an old hat she does better the next time, if he doesn't lose any parts out of the carburetor.

===== S T I =====

## CHIRICAHUA CCC

By Edwin F. Kagle, project superintendent.

Backsloping has continued through the month. Two hundred and fifty square yards of rock sloping was removed at the intersection of the Sugar Loaf-Massai Point road. About 200 square yards of rock and dirt banks were sloped about one half mile north of headquarters on the Bonita Massai highway. Materials from this work is being used to dress up and stabilize slopes.

The Bonita highway is in good shape except where backsloping is being carried on and a small maintenance crew has been able to keep it so.

Rock work has been carried on as usual for building purposes in the rock quarry.

The Orientation Station walls are ready for window and door lintels. The carpenter crew will start on this the first of next week.

Residence No. 3 roof was completed early this month, including staining of the shingles. Plastering is going on at a fair rate and

## CHIRICAHUA CCC (CONT.)

should be completed early next month. Rough plumbing and electrical conduit is complete. Rock work on this building is 100% complete.

Landscaping has been carried on during the month around the residential area. Excavating is complete in Residence No. 3 back yard and ready for rock retaining, but we will await advice on the type of wall for this job.

Work on the gas and oil house has been held up due to a shortage of supervisory personnel but will start on this work the first of the coming month.

The same is to be said of the power house and laundry.

The sign project is about complete. A number of them have been placed and need a little touching up and repainting. This project will be kept open for some time yet to allow for adjustment and additional signs, if necessary.

Some work on borrow pit elimination has been done this month. This usually is governed by the amount of waste materials we have on hand.

The furniture project has been held up for some little time due to lack of specifications for preserving of woodwork and type of leather seats; we hope to get this information soon.

87 new enrollees arrived during the month, increasing the company strength to 203 men.

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SWM

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## AZTEC RUINS

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

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Visitors this month, 667; travel year to date, 667.

### General

Weather and roads have been excellent for travel in northwestern New Mexico. The fruit raisers have gathered and sold a fine crop of fruit in the Animas Valley. Construction on U. S. 666 between Gallup and Shiprock is well under way and this means we will soon have a paved road to U. S. 66 and to all points east and west. The status of state road 55 and 44 has not changed since last report but we hope the state will soon finish that road.

The high spot of the month was reached on the 12th when we were visited by 55 members of the National Park Service and the American Civic and Planning Association headed by Regional Director Tolson. This was the first visit to this monument by several of the National Park Superintendents and old timers in the Service. We are sure they liked our monument and we hope to have many more appreciative visitors like this group.

### Weather Statistics

Maximum temperature 78 on October 1, minimum temperature 27 on October 11. Precipitation .48 inches for the month. Clear days 24, cloudy days 4, and partly cloudy days 3. First frost was recorded October 4.

## AZTEC RUINS (CONT.)

### YUCCA HOUSE AND HOVENWEEP NATIONAL MONUMENTS

The above monuments were inspected on October 16. Found everything in good shape. We are still having some travel at Hovenweep. While I did not contact any visitors, the tracks indicate that we had three people that day that visited all groups of ruins, including the Hackberry group where the Ute Indian marked up the old Bottlegger Cave with charcoal mentioned in Ranger Richert's report. Noticed now, well painted

Sign on road with arrow pointing direction to Hovenweep Castle, put up by local people. The Springs at Hovenweep have increased their flow of water since the fall rains. The roads are in good shape and we will probably have fair travel at Hovenweep until the snow flies.

At Yucca House the Ruins are as previously reported, no evidence of new vandalism. The monument fence needs a complete overhaul and a new set of steps on the stile as the steps built by Jimmie Brewer a few years ago have served their purpose. In the vicinity of Hovenweep and Yucca House I heard many nice things about Roland Richert's season there as roving ranger.

### NEWSWORTHY VISITORS

Superintendent and Mrs. Thos. E. Whitcraft, Grand Teton National Park, were monument visitors October 1. Ranger and Mrs. Bowen, Montezuma Castle. Huch C. Cutler, Missouri Botanical Garden, St. Louis Mo.

#### Travel from October 1 to October 22, inclusive

493 persons arrived in 159 automobiles, coming from 31 states and the District of Columbia. This compares favorably with travel for the corresponding period of last year when 973 people visited the monument, including the Grand Lodge Convention group of 400 persons who came in a group.

### Guide Service

493 persons were guided through the ruins in 103 groups. All visitors were contacted and received guide service in the ruins and in the museum. Guide tickets sold - 353; children, 16 or under and complimentary passes, 140 persons.

Our supply of guide tickets was exhausted October 1, and since that time we have been making our own tickets, and numbers carried forward as prescribed by your office. The type of ticket now being used gives us a better permanent record than the theatre type ticket formerly used. A space is provided for the date, and the visitor signs his name, city and state, and name and age of children, 16 or under. We keep the carbon copy and give the visitor the original.

We like this type of ticket because we can discontinue from No. 10-144 and have a complete record of each day's travel in a permanently bound file. This is the same type of ticket used at parks where all visitors are guided. This type of ticket gives the visitor a receipt for his money and it makes a better impression on the monument visitor than the theatre ticket torn in half, which the visitor will dispose of as soon as possible.

### Maintenance, Improvements and New Construction

All road signs have been taken up to be repainted. To date 50%

## AZTEC RUIN (CONT.)

of the signs have been repainted and put back up. Signs are being used only at junctions and it is believed that we should have larger, more impressive signs.

The two west museum rooms and the custodian's office received a new coat of paint during the month. This was accomplished by the regular personnel. The waterpump and electric wiring in the administration building were repaired during the month. Also some much needed repairs to plumbing fixtures were accompanied including a new unit in the water heater at the custodian's residence.

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## TUZIGOOT

By Edwin C. Alberts, relief ranger,  
Clarkdale, Arizona

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Visitors this month, 360; travel year to date, 360.

### General

Tuzigoot was reached October 4, after a rather harrassing trip from Coolidge in the "Flying Dutchman", and on October 5 the monument was placed in operation. For a "baby" monument, Tuzigoot has been well nurtured -- almost a complete plant awaits the new man for the post. Certain features will, no doubt, require attention -- the water lines are badly coated with rust and chemicals; rains in September have washed out some 20 feet of the retaining wall behind the museum, endangering the sewer system; certain stabilization work appears to be required in the ruins -- but generally speaking, this "baby" is through its adolescence, and is ready to stand on its own feet beside its numerous brethren. (or sistern? - Ed.)

### Weather

The month just past has been warm and pleasant here. Although no official records are being kept at the present, unofficial readings of 95 degrees were seen, and minimums of 45 degrees were noted. The only unpleasant weather observed so far was the 8th, which was indeed chill and dreary. This was the date of the Hildgely Bridge dedication in nearby Oak Creek Canyon, and seems to confirm the traditional role of parades and picnics as bringers of storm. The 23rd, just past, brought slight showers and winds.

### Visitors

For the portion of the month during which the monument has been open (October 5 to 24, inclusive) a total of 360 visitors were registered. Four of these came in on foot; the remainder arrived in 104 automobiles. Of these 59 cars were from Arizona, with 21 from California. A total of 18 states was represented. Registration was noted from Canada, Sweden and England. The 360 visitors were not all attended; only 204 being listed in the 41 ruins trips given; the proportion being better in the museum, with 314 attending museum talks. This is due, in part, to the fact that at this area, the majority of visitors are accompanied by local friends, who do enjoy the museum, but to whom



## TUZIGOOT (CONT.)

the ruins are an old story -- thus they are glad to entrust their friends to a guide, while they wait in their cars, in relative comfort.

Among Park Service visitors to the monument this month are Davey and Corky Jones, from Wupatki; Earl and Betty Jackson, from Montezuma; Jimmie and Sally Brower from Navajo. Other visitors include: Max Kegley, of "Arizona Highways", Phoenix, who took some color shots of the ruins; Dr. Harold Colton, in for a brief chat. Miss Grace M. Sparkes of the Yavapai Association, Prescott; Mr. and Mrs. Brown of the San Francisco office of the Public Roads Administration. Three educational groups visited the area; two groups from the Jerome Elementary School, and one group from the High School at Mayer, Arizona.

### Roads, etc.

The approach road from Clarkdale is somewhat corrugated in spots, but was recently bladed by the county and might be considered as in good condition. The main roads in the region are modern paved highways and are in excellent condition. Signs are needed for Tuzigoot, as the old WPA direction signs are neither attractive to see, nor are they strategically spotted. The Kiwanis Club in Clarkdale plans to erect a n attractive sign at the Tuzigoot turnoff in that city, awaiting official NPS signs. Two rather weatherbeaten signs between Tuzigoot and town have been repaired by the writer.

### Maintenance

The Monument has been blessed by nature in a way -- the crop of Russian Thistles exceeded all records, apparently. One is tempted to marvel at these weeds -- Cy Harkins' crop down at Tumacacori would appear rather stunted if compared with the Tuzigoot growth. The bulk of these weeds have been cleaned out and burned, by now, but a goodly quantity still remain in odd corners of the area. Other work of this nature accomplished this month includes removal of great quantities of unsightly cans and garbage containers from a mound just east of the museum, and the grounds about have been given a reasonably thorough clean-up.

Two trips have been made to Montezuma Castle National Monument -- one to borrow certain necessary clean-up tools, and one to borrow that monument's pick-up for use in the removal of heavy rubbish. A word of gratitude should be expressed to Custodian Earl Jackson of that monument for his whole-hearted cooperation in this regard.

A complete inventory of material on hand at this monument has been made. The United Verde Branch of the Phelps Dodge Corporation has extended invaluable aid in establishing the status of much of this material, and has extended every courtesy to the Service.

### Personnel

Miss Rosalin Svob of Clarkdale served a few days in the museum here in familiarizing the writer with numerous details regarding the monument and the collection here. Custodian David Jones of Wupatki was with us October 8 to aid in handling expected crowds from the Midgely Bridge Dedication in Oak Creek Canyon. He was of considerable aid in building up a type ruins talk, and in demonstrating methods of plant collecting and nature observations. Through arrange-

## TUZIGOOT (CONT.)

ments with Custodian Jackson of Montezuma Castle, Ranger William Bowen of that nearby area is to spend a day each week at Tuzigoot so as to permit the man here to take his weekly day off. Mr. Bowen spent October 21 here in this capacity. This arrangement appears to be highly satisfactory, as in this manner not only may days off be disposed of efficiently, but it will permit a simple way of transferring equipment back and forth, as needed.

### Nature Notes, etc.

The flora and fauna of the ridge of Tuzigoot cannot be considered colorful. The native cover is chiefly mosquito and creosote bush, and associated plants. Some yucca, and of the cacti, some *Opuntia* and *Echinocereus*, are in evidence. The proximity of Peck's Lake accounts for an occasional observation of the Troganza Blue Heron. Numerous Gambel's Quail are seen north of the museum, on a small mesa. More will probably be seen nearer the buildings here when three house cats have been liquidated. A small collection of plants has been assembled and will be sent off shortly for identification and mounting.

### Miscellaneous

The area for the tailings from the Clarkdale smelter has been extended this month. In the near future this material will form a natural boundary to the entire Tuzigoot Ridge on the west. It is interesting to mention in this connection that the smelter operations -- slag-dumping, the tailings, and the smelter smoke -- are provocative of as much interest on the part of non-local visitors, as are the ruins. Thus it appears that a guide here should include a dash of metallurgy, chemistry, and economics in his "line". And on a clear day, with the view of Jerome, like a diorama, perched upon the slopes of Mingus Mountain, it takes considerable forensic exertion to keep these non-local visitors from expressing their amazement at such a spectacle -- even in the midst of a fairly coherent explanation of pueblo room construction.

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## GRAN QÜIVIRA

By Alfred Peterson, guide,  
Gran Quivira, New Mexico.

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Visitors this month, 298; travel year to date, 298.

### Travel

Visitors for the month number 298, in 72 cars, as compared to 259 for October 1938. My busiest day for guiding was Sunday, October 22, when the county singing convention was held in the Gran Quivira schoolhouse.

Noteworthy visitors were Mr. and Mrs. Joe Brow of Harvard, noted for excavations of early Spanish missions at Awatevi on the Hopi Indian Reservation; and Mr. J. Toulouse and party from the Abo Ruins about 12 miles from Mountainair. Mr. Toulouse is in charge of the excavation work at Abo which has the same ground plan as Gran

## GRAN QUIVIRA (CONT.)

Quivira, except that the positions of the Mission and the convent is reversed, and he was able to give me considerable interesting information.

### Weather

The month started with over a week of high winds, and then on the 7th and 8th we had 1.75" of rain in less than 20 hours -- the rain gauge was nearly filled to the top. On the morning of the 10th the bird-bath was frozen over, and frosts occurred rather commonly. Recently the weather has been fine and clear as a rule. The rainy day made the local bean growers gloomy, but the following fine weather cheered them, since it permitted the threshing to continue.

### Roads

Some shovel work to fill a few holes and to level it at the cattle-guard has put the entrance road in good condition. The road to Mountain-air is also in good condition, except that the culvert washed out a long time ago is still out. Some of the visitors come from Alamogordo and Roswell, and they make no complaints about roads.

### Wildlife

Two rattlesnakes have been killed on the grounds and another escaped into a hole in the ruins of the Old Church. This hill seems to be a favorite wintering place for snakes, and I am told that they are especially dangerous in the spring.

We always find fresh deer tracks in the eastern end of the monument area, and coyotes are frequently heard singing to the moon - reminding us of Kinishba Ruins at Fort Apache where a young coyote collapsed right in front of our kitchen early on the morning of the day we left Kinishba. Dean Cummings wrote that the coyote died the next day, quite definitely from starvation.

A packrat has persisted in making a nest under the seat of the V-8 Pickup, always finding a way to get back in each time it was driven out - even going up through the floor past the emergency brake lever. So I took her for a ride. One day when I went to Gran Quivira for mail I chased Packrat from the pickup down in the village, three-quarters of a mile away. Have not been bothered since.

### General

Thistles and goat-head burrs have been hoed and raked from around the buildings and burned.

The heavy rain washed the mud mortar from the walls of the Mission and caused masonry to fall off in patches in about a dozen places. It appears that these stones should be replaced. The wind has started blowing and clouds are forming as though we might have some more weather.

While going over the books and papers left in the restored room in the Mission ruins where the museum collection was kept, I found, among other books that I consider should have better care, a copy of the Smithsonian Report, 1854, published in 1855. This book is a senate document and, among other things contains the diary of Major James Henry

## GRAN QUIVIRA (CONT.)

Carleton, U.S.A., telling of his visit to "Ibo, Quarra, and Gran Quivira" in 1853 with 100 men. They started from Albuquerque on December 14, 1853 and returned to that city 10 days later, at 8:00 PM Christmas eve. On page 313 the story of the bells and "treasure" as told to Major Carleton has been cut from the book. A note penned on the margin by former Custodian W. H. Smith disclaims the cutting. The book had been presented to Mr. Smith by Orrin S. Hoag, Locata, Michigan, in January 1936. This may be old stuff to you, Boss, but it is very interesting to me, even though the book had been mutilated..

Also, I found a picture of The Boss looking like a youngster and wearing a cherubic smile and an early edition of Park Service uniform.

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SWNM

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## MONTEZUMA CASTLE

By Earl Jackson, custodian,  
Camp Verde, Arizona

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Visitors this month, 501; travel year to date, 501.

During October 30 states and Washington, D. C. were represented, as well as Canada, England, and Spain. Cars totalled 189. The above figures on attendance are obtained by adding 437 tickets sold, to 59 children who entered as under 17 years of age, and five complimentary passes. 120 persons additional drove into the monument and out again without availing themselves of our services. So a total of 621 persons drove into the monument. A fraction over 19% of total arrivals were backouts. Total arrivals were 3.3% higher than for October of 1938.

### Park Service Visitors

September 28 - J. H. Tovrea, Assistant Engineer was in on inspection. October 8 - 9 Ranger and Mrs. David J. Jones, of Wupatki National Monument, arrived on the evening of October 8, and departed the morning of October 9. October 14 - Superintendent and Mrs. Thomas E. Whitcraft, of Grant Teton National Park, arrived, spending the night on our camp ground, and seeing the Castle the following morning.

### Weather and Roads

J. Pluvius has kept this district pretty well "on the wagon." Precipitation was only .17 inches. Two days were cloudy, two partly cloudy. High temperature of the month was 90, low was 36. mean maximum temperature was 82.5, mean minimum 42.6.

Roads are in uniformly good condition, with all approaches open. Numerous stretches of gravel road all through the district are disagreeably corrugated, but readily passable.

### Maintenance, Improvements, and New Construction

Repair work on Montezuma Castle, (reported last month as 70% complete) was finished during the month. The Castle is now in the best shape it has been for several years, and should in the normal course of events require little repair expenditure for 25 years.



## MONTEZUMA CASTLE (CONT.)

A pumphouse was built and given two coats of paint during the month. A set of shelves was made for the office so the custodian can keep track of the various forms necessary for official reports. Of course, this left noticeably less room in the office, but we will get along.

A small amount of tree surgery was done on trees which were storm damaged in August.

Three oil burning heaters were cleaned out and installed in the two residences and office building.

A shack on the north side of the museum, which had been used as a summer sleeping porch in the residence days of the building, was torn down and removed.

Routine grounds cleanup and weed control on the entrance road were kept current.

A plumber was employed to make complete installation of Flamo heaters in the two new residences, together with necessary plumbing changes to effect this.

### Personnel

Employment of Carl L. Back as per diem guide terminated on October 13. On October 14 Mr. and Mrs. William L. Bowen arrived. On October 16, Bowen entered on duty as ranger.

A temporary arrangement has been made for one of us at Montezuma Castle to go to Tuzigoot National Monument, (30 miles distant) for one day each week to enable Ranger Edwin C. Alberts, of that monument, to have a day off.

### Publicity

On October 20, Ray Howitt, resort reporter for Warner Brothers Broadcasting Corporation, gathered some data which will be used in radio broadcasts. Montezuma Castle will share in this publicity.

### Gifts and Accessions

On October 12 Weaver Hayden, of Camp Verde, Arizona, donated a large specimen of the Gila Monster (Heloderma suspectum) to the museum. He collected this 18-inch individual on the west side of Camp Verde five and a half miles from Montezuma Castle. One or two have been seen on this monument, but are extremely rare here, and so we were very glad to get this gift. This makes a total of one Gila Monster in the museum collection.

### Museum and Education

During the month another Western Diamond Rattlesnake was pickled and added to the museum exhibit. This is not classed as an addition in the records, because it replaced a specimen which had gone bad. I have learned that the taxidermists mean it when they say it is advisable to eviscerate large bodied snakes when pickling them. Otherwise, it is difficult to get sufficient penetration into all the parts with alcohol. So with the new specimen I took out its insides before putting it in alcohol, and it looks as though it will do all right.

An 18 inch Gila Monster was injected with alcohol and added to the reptile exhibit in the museum.



## MONTEZUMA CASTLE (CONT.)

Have tried different types of preservatives on centipedes, hoping to get a nice specimen for the insect case. So far, have tried every method I know, and haven't yet gotten a centipede which would retain both color and form.

Have done something in the museum of which I am not at all certain of getting your approval. The situation can be corrected if you desire. Several months ago I made up a great number of labels for the museum exhibits, and put them in place. I thought "This makes the museum look much better and more business like. It is neater in appearance, and self explanatory. It has dignity."

That may all have been true enough. But the trouble was, the people took to the labels so thoroughly they forgot there was an attendant. This hurry, hurry complex that fills our travelers apparently made them feel the labels told all they needed to know, and they paid only perfunctory attention to our attempts to make accompanying explanations and elaborations. So, actually, they were learning less about the museum than they ever had before. I'd better qualify that statement: Much less information was penetrating the consciousness of the visitor than before; it is quite possible, of course, that he remembered a much higher percentage of what he read than of what he heard. I have no way of proving that point, one way or another, unless I offer a written examination to each visitor before he leaves.

So now all these nice looking labels have been carefully removed from the museum and stored in the laboratory room. After a few months we should be able to see if museum contacts aren't greatly improved by the visitor hearing about the museum instead of merely reading about it.

### Miscellaneous

During the month the custodian attended classes in First Aid which were offered during four nights in Jerome, Arizona.

Recently I was talking with a visitor from Lomita, California. He is a doctor, named F. H. Racer. He mentioned an old newspaper clipping about Montezuma Castle which he owned, and consented to send it over when he reached home. The clipping came the other day. It is from the Marietta, Ohio, Register, for January 31, 1898, and was taken from the Arizona Cor. St. Louis Globe-Democrat. The clipping is quoted as follows:

#### Aztec Stones for Grinding Grain

"J. A. Powette recently discovered and secured two most perfect prehistoric metal stones. They were taken from the floor of a room in the eighth story of the prehistoric Montezuma Castle. Four feet of bat guano was taken from the floor and the stones found under it. The larger stone weighs over 100 pounds, and Mr. Powette had some difficulty in descending the four ladders placed at intervals from the base to the top of the castle, a distance of about 100 feet. The metal is about 2 feet long by 18 inches wide, is of blue granite and must have been used for years, as the stone is worn down so that the outer edges are several inches higher than the bottom of the groove in which the smaller stone slid up and down, crushing the grain. The smaller stone, or grinder, was found near the larger."

## MONTEZUMA CASTLE (CONT.)

Evidently a proof reader could not believe such a word as "metate" existed, and so that might account for the statement that Mr. Pewette found "prehistoric metal stones."

Since the Castle has only five stories, and Mr. Pewette found the stones "in the eighth story", we would more or less feel like concluding that at least the stones were found on the top floor.

Little by little the lore about Montezuma Castle increases. We are deeply grateful to Dr. Racer for sending this newspaper clipping.

On October 8 the custodian, as an official representative of the National Park Service, attended the official dedication of Highway 79 and the opening of the Midgeley Bridge. This was a joint occasion, held near Sedona, in Oak Creek Canyon. It marked officially the completion of road paving between Prescott via Jerome, Clarkdale, Cottonwood, through Oak Creek Canyon to Flagstaff.

Very bad weather prevailed that day, but despite this, about 1000 people attended the celebration and barbecue, and stood in the rain to hear the Governor and other speakers make their addresses. The occasion was dignified and impressive.

In general, the monument appears in good shape. Maintenance is current, and we are having a lively tourist attendance for this season.

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## CAPULIN MOUNTAIN

By Homer Farr, custodian,  
Capulin, New Mexico.

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Visitors this month, 3,500; travel year to date, 3,500.

In reporting the few activities in and around Capulin Mountain National Monument for October, I find that we have had approximately 3,500 visitors this month.

Weather has been extra nice and warm so far although the past two days have been quite windy and that usually means snow shortly; however, no snow or rain so far this month and everything is getting mighty dry.

Our crop of nuts is ripe and birds and beasts are fattening. Especially do we have a splendid crop of pinon nuts, and some acorns.

The roads to and in the monument have been in splendid condition all during the month and trails have been kept in fair condition. The extremely dry weather keeps the roads beat out and keeps the custodian on the jump most of the time filling in ruts, but this has been carefully looked after.

The custodian has been busy most of the time working on camp tables, fireplaces, etc., for the monument.

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# SAGUARO

By Don W. Egermayer, custodian,  
Route 2 - Box 544, Tucson, Arizona

Visitors this month 166; travel year to date, 166.

## General

The custodian moved down from Coolidge on October 1 and 2, and spent the first week cleaning and scrubbing the small house which the University of Arizona had placed at his disposal, but which had been inhabited solely by birds for the past five months. Moving in and getting settled took the better part of the first week; the second week was pretty well filled with policing roadsides and picnic areas, collecting the accumulated tin cans and beer bottles, and maintaining the worst spots on the road. The third week marked the beginning of deer season, and considerable time has been spent on patrol. A standard rural route mail-box was purchased, painted, lettered, and set up at the junction of Harrison and Houghton roads, five miles west of the south gate. During odd times a standard NPS filing system was set up, and the accumulation of material which has been collecting since May was filed - properly, it is hoped. On the 15th, directional signs were set up on all roads, also signs directing visitors to the ranger station.

Having no weather station equipment, no accurate weather report can be compiled. It is hoped that, by the time of the next report, arrangements can be made to obtain copies of the records from the Tucson Airport. Generally, the entire month was fair, warm, and rather windy. Rain fell on the 6, 7, 23, and 24th of the month - amount unknown, but estimated at approximately .50 inch total.

## Administrative

Only one official inspection was made during the month, this by Associate Landscape Architect Miller and Associate Engineer Tovrea, accompanied by Custodian Supernaugh from Organ Pipe Cactus, who arrived on the morning of October 18.

October 15, both the Tucson papers carried short publicity items on the Saguaro National Monument, and emphasized the fact that the entire area was closed to deer hunting.

## Maintenance, New Construction, and Improvements

Four and one-half miles of road were partially and hastily maintained by the custodian, who merely filled in the worst of the washes, due to pressure of other work, and the imminence of the arrival of the CCC, who, it is expected, will be able to do this work more thoroughly. One half day was spent in fixing up the windmill at the Chamber of Commerce well located in Section 31; this is now in fair working order, and it is no longer necessary to haul water from town or from neighboring ranches.

The construction of the administration building, being built by the CCC Side Camp from SP-3-A, was halted, temporarily, when the men were returned to their main camp the 21st. The roof of the building proper was completed, but the roofs of the ramadas still lack the final

## SAGUARO (CONT.)

tar and sand coating. As a whole, the building is probably 80% complete, lacking only the outside and inside plaster, the floors, and the windows and doors. With the arrival of the junior enrollees in the camp, 72 of whom came in from Pennsylvania on the 10th, the remainder of the company transferring from the North Rim of the Grand Canyon on the 22nd, it is hoped that this first unit of the new headquarters area will be speedily completed. During the one week that the first contingent of the junior company worked on the roads, 4.9 miles were maintained, and are now in excellent condition.

Early in October both approach roads to the monument were graded by the county, the Speedway road from the end of paving to the Pantano wash, the Broadway road clear up to the south gate of the monument; both these are now in good shape for winter travel.

### Interpretation.

Only a few cars actually reached the Ranger Station during the 10 days the signs have been up, but 52 persons, in 15 cars, were contacted for a total of 427 minutes, an average of 28.4 minutes per party.

### Use of Monument Facilities by the Public

In addition to the parties actually contacted, 110 persons, in 47 cars, were counted on occasion of the custodian's trips around the area; it must be borne in mind, however, that this probably only represents one-tenth the total travel, as most of the visitors would have come at times when the custodian was not driving on the roads, or working where they would be seen and counted. Until such time as the new headquarters building is finished and can be occupied, and the north gate closed, routing all traffic through the south gate, no accurate count, or even estimate, of the visitor travel can be obtained.

While the garbage pits at one picnic area indicate considerable use of the picnic facilities, only four persons were actually seen eating on the grounds. It is hoped that proper directional signs can be placed during the next month, and that this phase of public use will benefit considerably.

### Protection

Considerable time has been spent since the opening of the deer season on game patrol, which, at Saguaro, entails a good deal of travel, as the areas most frequented by hunters lie over twenty miles away from the ranger station, on the north and south sides of the Rincon Mountains. In addition to patrol, and posting, ranchers living along and near the boundaries of the monument have been contacted and asked to co-operate to the extent of warning all prospective hunters of the closed status of the monument. To date every single rancher was very willing to help, and without exception have their own private or leased land posted against hunting. One owner, in particular, asked for any help that could legally be given in keeping all persons off his patented land, as he has been losing considerable beef, killed by ostensible hunters. It is a certainty that there is some hunting near the southwest corner of the monument, near the old Rincon Ranger Station, but so far no one has been caught in the act, although two



warned, as they were hunting immediately outside the boundaries. On all patrol trips, a supply of game refuge signs are taken along, and at this time the entire west side of the monument, most of the accessible part of the north boundary, and a good part of the south boundary have been posted. It is not thought necessary to post or patrol the east side of the area, as it is rather inaccessible by road, and cannot be reached by horse under several hours travel.

#### New Equipment and Transfers

New Equipment received this month included the following:

- |  |  |
|--|--|
| 1 - G-F office desk.                   | 1 - Rake   |
| 1 - Four-drawer filing cabinet         | 1 - Shovel, L.H.R.P.                                   |
| 1 - Underwood typewriter, used         | 1 - Ax, S.B.   |
| 1 - 2½ gallon fire extinguisher        | 1 - Mattock, Pick.                                     |
| 1 - O'Keefe & Merritt gas range        | 2 - brooms   |
| 1 - Duo-Therm oil heater               | 2 - Paintbrushes                                       |
| 1 - Cal. .45 S&W Revolver              | 1 - Coleman Gasoline lantern                           |
| 1 - Chevrolet Coupe-Pickup, Model 1934 | 1- 250-gallon water tank                               |
| 1 - 1-qt. hand fire extinguisher       | Assorted office supplies, stationary, and publications |
| 2 - 10-gallon milk cans                |  |

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## CASA GRANDE

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

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Visitors this month, 696; travel year to date, 696.

#### Weather

Weather has been ideal. So perfect that even conversation on the subject must certainly not be classified as trite. With a maximum temperature of 97 degrees on September 25 a minimum of 41 degrees on October 5, only three days that could be classed as partly cloudy, no precipitation, and just two days when the wind would annoy even the most fastidious, we announced to the world we have the best.

#### General

Custodian Bicknell returned from annual leave spent in cool (?) Long Beach September 30 to resume his many duties at the monument for another year. Mrs. Bicknell and he were discovered tramping down the entrance road lugging a brief case and other traveling impedimenta. They had not hitch hiked all the way home as it appeared but had been let off the bus at the entrance expecting to find someone at the checking station which had been abandoned since their departure.

Charles D. Wyatt reported for ranger duty September 28. He was the first of a considerable fall crop of new rangers. Wyatt came from



## CASA GRANDE (CONT.)

Boulder Dam National Recreational Area where he was employed as Senior Foreman Engineering. Ranger and Mrs. Wyatt and their two children were assigned quarters in the original superintendent's residence.

After months of waiting Don and Ruth Eggermayer got off to his new post at Saguaro National Monument September 30. He spent three days moving, making his last trip Monday October 2. We here at Casa Grande wish Don all the luck in the world.

Ranger Ed. Alberts, who has been on duty at Casa Grande during the time Al. has been on annual leave, left for Tuzigoot October 2 to be present at the official opening of that National Monument on October 8.

Gene Stonechecker suffered a compound fracture of his left thumb while handling a hot water tank in the monument laundry. The X-ray showed both a traverse and longitudinal fracture as well as considerable splintering. The doctor tells him that there will be no stiffness.

### Use of the Monument by the Public

Visitors: 1939 - 696; 1938 - 1936; 1937 - 2,021; 1936 - 2,124

The seasonal increase so evident in past years is hardly noticeable this year with but 28 more visitors than in September, and only 36 percent of what we had in 1938.

Of the 696 visitors all were contacted and shown through the ruins in 224 parties. Total time for these trips was 10,409 minutes or an average of 46.7 minutes per party. There were 593 persons shown through the museum in 200 groups for a total time of 4,633 minutes averaging 23.1 minutes for each group. 20 persons guided themselves over the Desert Trail and 83 people in 13 groups enjoyed picnics on the monument.

Since abandoning the checking station at the gate we have had a large number of local people who drive past the sign which tells them of an admission charge on to the parking area to stay long enough to point out the ruins to their friends. Before the ranger on duty can contact them they speed out. There were 248 such people in 98 cars during the month or 35.6 percent of the total visitors.

There were 626 tickets sold during the month and 15 people passed as government or cooperating agency employees. There were 55 children under 17 years of age.

The visitors at the monument came from 34 states. Of these 34.3 percent were from California and 31.2 percent from Arizona. Illinois, Texas, and Kansas were the next best represented in the order named.

Among our visitors were four from foreign countries and two from Hawaii and Panama. The foreign countries represented were Australia, India, England, and Canada.

### Interesting Visitors

Dr. J. P. Harrington of the Bureau of American Ethnology accompanied by Francis Elmore, recent temporary ranger at Chaco, stopped by for a brief visit as they were returning from a linguistic expedition into

## CASA GRANDE (CONT.)

Sonora, Mexico. Dr. Harrington glanced over some of the ethnological data on file in the custodian's office.

Former Governor Thomas Campbell of Phoenix honored us with a visit October 11. He was accompanied by two friends from Prescott.

### Park Service Visitors

Superintendent and Mrs. Whitcraft of Grand Teton National Park visited Casa Grande October 16.

Not exactly a member of the official Park Service family but such a good friend of ours that we will include her in this section is Miss Harlan James, executive secretary of the American Planning and Civic Association. Miss James was shown through the ruins and museum by the Boss.

Hugh Miller returned from the Superintendents' conference at Santa Fe October 11. Al. Bicknell went up to Phoenix the morning of the 14th to meet the Boss who was accompanied by Lyle Bennett, associate architect. Later that same day four other members of the Branch of Plans and Design came in for a "pow-wow" on things architectural. They were: Tom Vint, chief of planning; Harvey Cornell, regional landscape architect; Jerry Miller, assistant landscape architect; and Joe Abbott, associate architect.

Jimmy and Lally Brewer of Navajo National Monument spent a few days at Casa Grande during the last part of the month.

Cozy and Insa McSparron, proprietors of the Thunderbird Ranch in Canyon de Chelly, gave us a hurried visit on the morning of October 23. They were on their way to a winter vacation in Mexico City, D. F.

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### CASA GRANDE SIDE CAMP CCC

#### Job No. 53 Guide Service:-

After four trips through the ruins and museum and a great deal of skull practice over the guide lectures, Enrollees Bryant and Burch have fallen into the routine of things and are conducting their parties with the graciousness and aplomb of seasoned guides. Man-days expended, 83.

#### Job No. 54 Monument Maintenance:

Hogwire and steel fence posts have been received from the Indian Irrigation Service to repair the damage done to our west boundary fence caused by their equipment. The repair work has been completed.

The garage has been plastered and the hot water tank that got Gene Stonehocker was installed by Custodian Bicknell. This installation greatly facilitates the laundry work for the ladies of the monument. Man-days, 52.

#### Job No. 63 Yard Wall

No work was done on this project during the month as progress is contingent upon the completion of the blacksmith shop.

#### Job No. 68 Equipment Shed B:

The plastering on this job is completed leaving only the hanging of the doors to complete the entire building. Man-days, 92.

## CASA GRANDE SIDE CAMP CCC (CONT.)

Job No. 74 Pumphouse:-

The bricklaying, inside plaster, and roof is completed. Man-days, 56.

Job No. 75 Blacksmith Shop:

This project will complete the buildings planned for the utility area. The building was just started. Man-days, 22.

The designation of the administrative main camp of the side camp here at Casa Grande has been changed from CHM-2-A to NP-9-A and the rationing main camp from SP-3-A to MA-2-A.

Captain Harvey has been here to inspect the camp on October 1, 12, and 20.

Mr. Knagge, project superintendent of NP-9-A, was here to look over the work on October 1, 4, and 24. Mr. Reagan, educational advisor at MA-2-A, accompanied Captain Harvey on his trip here October 20. He left a supply of employment information sheets which were filled in by enrollees and returned to him. Captain Lavaine inspected the camp October 24.

Enrollee Cantu was taken to the hospital October 11 with a bad case of intestinal influenza. He was confined to the infirmary at Camp MA-2-A for eight days.

Custodian Bicknell made official trips to Phoenix for the CCC on October 10 and 11.

Jimmie Brashear, enrollee guide, has made a trip to Phoenix every Monday this month for CCC laundry besides driving the Boss to Chiricahua and San Simon on October 24.

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## ORGAN PIPE CACTUS

By William R. Supernough, custodian, Ajo, Arizona.

Visitors this month, 410; travel year to date, 410.

### General

This month sees Organ Pipe for the first time with a full time custodian who is going to have his hands full with the patrol of 500 unfenced square miles with only one established road, but many miles of car trails just winding through the desert.

September rains made an abundance of feed on the monument which is bringing back the game from Mexico to their home grounds. Several reports of bighorn sheep, deer and antelope have come in this month. One old ram seems to have found a friend as he is seen almost daily running with the bell cow on the Henry Gray Ranch on the west side of the monument. The establishment of the new Cabeza Prieta game refuge which joins the monument on the west, is going to be a big aid in our efforts to bring the game back to its original status down here.

Organ Pipe was visited this month by Tom Vint, and J. M. Abbot from Washington and Lyle Bonnett, Jerry Miller and H. H. Cornell of the Regional Office, accompanied by the Boss and J. H. Tovrea from headquarters. Two days were spent looking over the new road location and location of administration site for the future.

Roads

On October 24 the Arizona State Highway Department completed the oiling of the Ajo-Tucson road as far as the Indian Reservation. This is the Organ Pipe approach road and gives us a new highway within four miles of the boundary. The Sonoita road through the monument is becoming quite rough and washboardy due to lack of maintenance. All other side roads in the area are hardly passable with many high centers and deep washes.

The survey by the highway department of the new Ajo-Sonoita road through the monument is getting along toward completion. The new line will follow the old road for about eight miles, then parallels it for 11 miles, then back to the original road. This change is due to drainage problems and I believe gives the monument a more scenic route.

Weather

It has been very dry here since the September rains with a few quite warm days until last night when we had another good shower which has freshened things up considerably.

Visitors

Visitors of note to the monument other than mentioned before included Dale King and Charlie Steen from headquarters, Ed. Haught, warden for the Biological Survey in charge of the Cabeza Prieta reserve, and Mr. Jones of the Arizona State Highway Department.

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## WALNUT CANYON

By Paul Beaubien, jr. park archaeologist, Flagstaff, Arizona

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Visitors this month, 725; travel year to date, 725.

Of the 725 visitors, 164 were not contacted. Some were contacted more than once, giving a contact record of 126 percent. On a number of days it was impossible to watch the campground, so no record of campers and picnickers was kept.

CCC guide force has been cut, and with the decrease in visitors it doesn't seem practical to have a guide on Saturday and Sunday when two special trips would have to be made each day between the Canyon and the camp.

The first snow of the season fell October 8, and there were a few other days of cold, windy weather. But taken altogether, the weather for the entire month was very good for visitor travel. On the 14th and 15th, I made a trip to the Navajo Tribal Fair at Window Rock, and all the deciduous trees from Gallup to the San Francisco Peaks were in the height of their glory.

The only Park Service visitors to whom I talked were Superintendent Thomas E. Whitcraft of Grand Teton, Jim Hamilton and Hugh Miller. One day when I was in town trying to contact the City Clerk about a water agreement, Perry Brown of Grand Canyon was here with a party. Only Brown and Herbert E. Kahler registered. Today Tom Vint, Al Kuehl,

## WALNUT CANYON (CONT.)

H. H. Cornell and Stanley Abbott inspected the projects with Bill Stevenson.

On the 16th, I took Dr. Hammond, dean of the graduate school, University of New Mexico, to Walnut Canyon, Museum of Northern Arizona, Sunset Crater, Wupatki and Tuba City. At Tuba City, he joined Dr. H. E. Bolton and others to search for a reported inscription supposed to have been made by Escalante in 1776.

I am still trying to get all the required papers concerning the water pipeline to Walnut Canyon. In checking the diary, I find that trips were made to Flagstaff on eight different days during the last month. This is some improvement over other months when I had to spend more time than that away from the monument.

For "MAINTENANCE, NEW CONSTRUCTION AND IMPROVEMENTS" see Project Superintendent Stevenson's report.

SWNM

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## WALNUT CANYON CCC

By Wm. Stevenson, project superintendent, Flagstaff, Arizona

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### WALNUT CANYON NATIONAL MONUMENT

All plumbing and wiring has been completed on Residence No. 2. Metal lath is in place and interior is ready for plastering crew. Cabinets are being fabricated in carpenter shop.

Masonry walls are 75 percent complete on Residence No. 1. Air ducts for the heating plant are now being installed.

Masonry walls are 60 percent complete on the Exhibit Room of the Administration Building.

Excavation has been completed for the headquarters sewer line and forms are now in place for the septic tank. Dirt is being hauled to line the sewer trench.

One half mile of trench has been excavated on the water line and walls and floor of the 1,200 sump have been poured.

Work continued throughout the month in the rock quarry.

### WUPATKI NATIONAL MONUMENT

The roof has been completed on the Custodian's Residence. Work is progressing on plumbing and wiring.

Five miles of the entrance road has been maintained.

Park Service visitors for the month included Inspector Taubert, Assistant Superintendent Hugh M. Miller, Assistant Engineer Tovrea and Architects Al Kuehl and Trent Thomas.

Fifty-two enrollees arrived October 13, bringing company strength to 206.

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## NAVAJO

By James W. Brewer, custodian,  
Tonalea, Arizona.

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Visitors this month, 31; travel year to date, 31.

### Travel

We closed our travel year October 1 with a count of 441 visitors



## NAVAJO (CONT.)

as compared to 411 last year. There is an increase greater than the figures show. Last year the Rainbow Bridge-Monument Valley Expedition was in the field and raised our attendance 30 or 40; also, in checking the October, 1938, monthly attendance I find 50 recorded for the travel figure and the register shows fewer. Probably this was an estimate and a bit on the long side.

It looks as though we have had a substantial increase in travel to this national monument not on or near a Fair-to-Fair highway.

We feel that this increase is accounted for in two factors: improved road signs; and the attraction of this monument to former visitors -- most of our parties are composed of one or two visitors who have been here before and are bringing first time visitors with them -- thus the ever-increasing number of visitors return and bring with them friends who are glad of the opportunity of having an "experienced guide" to a monument this far from the well-traveled road.

### Personnel

Pursuant to the above increase in travel, add the additional time required to guide each party since the contact station is now on the rim and throw in a 12-trip increase over last year to Keet Seel (one full day for each trip), stir in the fact that more and more of our visitors who have seen Betatakin will return to see Keet Seel, the largest cliff ruin in Arizona, and we find the mixture adds up to a loud cry for a temporary ranger during the latter half of June, all of July and August, and the first half of September.

### Park Service Visitors

Engineer Bradley on three occasions on business regarding the Navajo water system.

### Improvements

The southwest (back) side of Residence No. 1 is on the up-hill side of the house, and so are the basement light wells and windows. The heavy rains running off the slope, on two occasions, have run into the light wells and threatened to flood the basement. To correct this condition a retaining wall has been built around the back of the house to deflect the drainage. The wall was constructed in masonry exactly the same as the house and placed to form a patio against the rear of the house. Incorporated into the corner of the retaining wall, I built a fireplace and grate for outdoor barbecues. (This stone house and shingled roof hit us too suddenly; after five years with roofs of mud, canvas, or none at all, we feel too shut in in the house and want to get out on a camp basis once in a while.)

The water supply system remains as reported last month. The ore-finder did not operate accurately under ground or under damp conditions, the bottom end of the well-hole has not yet been found from the tunnel.

We were in Coolidge expecting to return to the monument

to meet Jim Hamilton on the 26th when Jim's revised itinerary arrived advancing the date two days. We rushed off to meet Jim in Flagstaff and found that he was prepared to go to the monument and attempt to locate the well-hole with an ore finder, the same as we

## NAVAJO (CONT.)

reported using last month (unfortunately our September report could not include our lack of results as the work followed the deadline). It was decided in Flagstaff that some other means should be employed.

Six man-days were spent on trails and coincidental to our coal hauling we constructed a drag and improved the road to the turnoff by reducing the high centers and leveling most of the roughness. During the month the Indian Service CCC worked on the Shonto hill and repaired a couple of washouts on this side. The roads are now in excellent condition (comparatively.)

### Weather

Maximum: 72 degrees on September 24; minimum: 29 degrees on October 4, 5, and 9. Precipitation totalled .22; on October 8 there was snow and hail falling for most of the day; since then the weather has been more pleasant than at any time since spring. By October 10th the aspens in the canyon were turning yellow, the oaks a red-brown, and shrubs often a brilliant red; by the 20th a good many of the aspen leaves had fallen, but enough remained to make the canyon bottom a brilliant splash of gold; by the 23rd all the leaves had fallen and the canyon needed only a blanket of snow to present the winter scene. There has been no killing frost as yet.

### SWIM

## CHACO CANYON

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

Visitors this month, 221; travel year to date, 221.

Chaco Canyon is looking pretty hard and dry, since there is no moisture in the ground to speak of. Our summer rains almost missed us completely. And the Old Man Winter has begun to stick his fingers in the pie, with a low temperature of 27 degrees and a maximum of 85 degrees, with only .03 inch of precipitation through the month.

The superintendents' party making the 1,200-mile inspection trip reached the Chaco Canyon turn-off too late on the afternoon of the 11th to reach Chaco and see anything before dark that afternoon. They continued on to where they spent the night and attended a Navajo Indian dance, put on for their benefit. Carroll and Homer from Aztec came over to help me out with this party, and we waited at the Chaco turn-off until almost sundown. Cal and Homer went back to Aztec; I also went over so I could help them out with this party on the morning of the 12th. After the party had seen the Aztec Ruins, 19 of them decided they should see some real ruins, so I brought them to Chaco where they spent most of the day.

Scoutmaster Jackson and Asst. Scoutmaster Pierce (Mrs. Vivian's brother), and a group of 22 boy scouts spent the 21 and 22 in the Chaco Canyon.

Five new Chaco Canyon road markers were erected this month. The front room of the custodian's residence was patched with mud plaster where the rain had washed it out the past summer before the roof was repaired, and the entire room was re-calced. A little more work was done on the gas installation, and some of the electrical wiring

## CHACO CANYON (CONT.)

in the custodian's residence was changed in order to have a safer installation.

The water pump has been worked on several times during the past month but as yet we haven't received the parts we ordered some two months ago. Maybe it will snow pretty soon and we can eat snow, instead of depending on this hay-wire pump.

The north and south approach roads are both in pretty good condition at present.

The CCC camp has done quite a lot of maintenance work on the south road, and the highway department has done some blading on the north road. The highway department has promised us several culverts for the north approach road, also they will do quite a little work on the sand hill and some blading on the balance of the road.

221 people visited the monument this month coming in 79 cars. 18 states, and Washington, D. C., were represented.

Something seems a bit hay-wire with these measurements on Threatening Rock, but we measured it three times with the same result each time.

West end, 4  $27/32$  inches. Center, 5  $30/32$  inches. East end, 5  $11/32$  inches. Last month's measurements were, West, 4  $27/32$  inches. Center, 5  $20/32$  inches. East 5  $11/32$ .

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## MOBILE UNIT

By Gordon Vivian, archeology  
foreman, Chaco Canyon, N. M.

Some time this summer we admitted having excavated a little site up in the area that is now under NP-2N. Lest it appear that we dug and ran, we wish to note that we are putting a little of our spare time on the report and material from this. So far we have reconstructed 13 pieces of pottery from our little dig. Incidentally we wish someone would give us a name for it. We are thinking of calling it after Dale, or Steen. Somehow it turned out when NM2N came in that we got a couple of boys from there to help Foreman Boone with his HABS. Now, Boone strangely enough figured that it would be easier to get a couple of English speaking boys to learn to take and record the measurements of Bonito in Navajo, - queer people, the architects. So we have the boys, and one who turned out to be an artist, or something, is making (when he isn't measuring) copies of the designs of the pottery mentioned a way back up there. They are pretty good even if we do say it. So some of this work on our reports is really in progress - a little tatting that we take up from time to time.

Repair and capping of one kiva and 23 rooms in the area around the great kiva in the plaza have been completed. There remains a little surface drainage to be done as soon as some bitudobes we've made for slating have hardened up. One hundred 18 yards of capping have been done here this month. As we noted before, this job is called capping but a lot of little pieces of this wall have to be brought up from ground level and some other pieces have nothing much between them and the ground. Below the capping we have gone over roughly some 160 yards, of wall surface with spotty patching and repointing.

## MOBILE UNIT CCC (CONT.)

Over on the east side, the flight of concrete steps leading up to the second story level at Kiva C have been replaced with more stone and less concrete, and minor patching done on the wall areas adjacent to them.

Repairs are now under way on Kiva F, and Room 264. Three eroded wall areas are being patched and the bench stabilized in the kiva. In 264 a doorway and the top of the west wall are being straightened up and the remaining three walls repointed and capped.

We found a funny one when we came to work on the bench of the kiva. An area on the southwest curve some feet from the regular niche had caved in. In clearing out this caved area we found that it had been part of a passage. This passage started in the center of the bench, it did not run through the bench, but started in the center of it, passed under the wall and under the adjoining kiva corner to come up like a regular ventilator shaft against the opposite wall of the kiva corner. It was roughly a foot and a half wide, two and a half feet deep, and roofed over its full length with a double layer of small poles. There could not have been any opening from the passage into the kiva proper and yet from its position in the bench and the ceiling of poles over it, the poles extending back well into undisturbed and unslumped portions of the bench and well, it seems certain that it was constructed at the same time as the bench and is a feature of it. That's what it looks like but it also seems to be another case of "you name it and I'll feed it." It looks like the contractor just found a way to charge them for two ventilator shafts in place of one without disturbing the time honored arrangement of the kiva.

We seem to be having a run of queer shafts. Over in B which we have finished we have the regular arrangement with the niche in the bench, under which the shaft always runs. But in this case there was no place for the shaft to go since the south wall is square up against a room wall. So instead of running the shaft up through the Jones' living room they just took off, built the passage up above the floor level instead of below it and went out through the lower one-third of bench to the east and then up.

There is practically nothing published on the structural arrangements of the kivas in the large ruins here. I expect that these things are nothing special nor aberrant forms built by the village idiot but simply the effects of rebuilding in cramped quarters and the practical necessity of having to utilize limited space. Tradition probably often gave way to convenience.

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## CHACO CCC

By Wm. Chauvenot, project superintendent, Chaco Canyon, N. M.

Job 528 - Building earthdikes across gullies was completed on October 18, 1939.

Job 517 - This job is progressing satisfactorily and should be completed by the middle of November.

Work on the south approach road is going forward slowly. Worst rock humps have been taken off. The road is still quite rough and



sandy in spots but is more passable. The County is considering donating some used culvert pipe which is very much needed.

The Highway Department made one round trip with a grader on the north approach road. This work did not stand up very well because of the absolute lack of drainage structures. However, if the Department is able to furnish the culvert pipe they plan to, this road should be in good shape by spring.

Jobs 506 and 514 - Boundary fence and maps and models have had two boys working on them with one boy on Job 509, Guide and Contact. Trucks still are a cause of trouble but they have managed to get all the boys out to work and back.

All trees for telephone poles have been cut and it is expected that they will be delivered to Chaco by the end of the month.

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## TUMACACORI

By Louis R. Caywood, custodian,  
Box 797, Nogales, Arizona

Visitors this month 370; travel year to date, 370.

### Weather

Fall weather has been ideal. The days are cool with a few cool nights. Rain fell October 7 and 22 and added to the already large amount of rain that has fallen during the past summer. At this writing the weather is very unsettled and portends the beginning of cold days and nights.

### General

The custodian and HCWP returned from annual leave on the 10th of this month to find that the monument had been very ably cared for by the HCWP and Ranger Markins.

During our absence a very serious automobile accident occurred on the afternoon of October 1 just north of Tubac on the Tucson-Nogales highway. Ranger Markins attended the scene of the accident and did what he could to relieve the suffering. Two cars collided almost head-on with six deaths resulting out of ten who were in the collision.

Mr. John East has been confined to his ranch home near here, seriously sick. For a time we almost gave up hope, but now Jack is improving and we wish him complete and early recovery.

### Visitors

Total visitor count this month amounted to 370 of which 318 were paid admissions and 52 were children or waivers. Toward the end of the month a decided increase was noted in travel in spite of bad weather.

October 2, Mr. and Mrs. J. H. Towra inspected the monument grounds.

On October 15, Superintendent Pinkley brought five Park Service officials; Thos. C. Vint, H. H. Cornell, J. M. Abbott, Jerome C. Miller, and Lyle E. Bennett. Mr. Pinkley, guided the party through the old mission ruins and gave a delightfully interesting talk.

William R. Supernaugh, newly appointed custodian at Organ Pipe



## TUMACACORI (CONT.)

Cactus National Monument, Ajo, Arizona, brought two Flamo cabinets on October 19 and incidentally took his first look at the mission.

Mr. and Mrs. Charles Wyatt and children from Casa Grande dropped in October 24 for their first view of the mission. Mr. Wyatt has recently been appointed ranger at Casa Grande.

### Administrative

After returning from annual leave the custodian thoroughly inspected the monument plant and found the following conditions: the sheet iron roof of the old office east of the mission is in very bad repair. The nails have torn out leaving the iron sheets loose and subject to being blown off by the wind. The sheeting is not galvanized and is so rusty that it will hardly hold when nailed. The walls of this old building are also in very bad shape at the ground line where moisture has penetrated the entire back wall. This building is now being used for storage because of the lack of a proper storage shed.

The old residence of Tom Beaurgeois is in almost as bad shape as the old office building. A severe wind storm could very easily lift off the roof. The walls at the ground line are in a bad condition. This building is now used for the storage of cement, lime, excavated artifacts from the 1935 excavation, and a few household goods.

The museum roofs were inspected and considerable water was found to have collected on two roofs from stopped drains. The drains had been clogged by asbestos that washed off the roofs. These drains were cleaned.

The Mass diorama in the museum burns so much electricity that it should be on a circuit of its own. As it is now the load of the diorama and all of the other cases in Room III is so great that the switch contacts have become burned and must be replaced shortly.

Carbon in the burners of the museum furnace must be cleaned before the furnace can be used. This seems to be a special job and should be done by a furnace man.

The entire wood supply was used up last year and has been replenished by the purchase of six cords of mesquite at a very reasonable cost.

The residences are in good condition except for the long needed outside plastering. The severe summer rains have cut deeply into the unprotected adobe just below the plastered tops of the house walls.

The septic tank was opened and found to be in good condition.

### Grounds

Because of the heavy summer rains the driveway to the residences have been badly washed and should be filled with about fifteen yards of clay dirt. A drainage ditch should be dug to one side of the driveway and lined so that future storms would not wash the dirt away.

Approximately three yards of sand have been scraped up from the parking area. This washed in and was deposited during the summer floods. The driveways leading from the highway to the parking area act as funnels to bring in the water from outside the monument.

The woods have finally dried and are being 'harvested'. They are cut, raked into piles, and burned when thoroughly dry. Much time

## TUMACACORI (CONT.)

has been spent this month on ground work.

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## CANYON DE CHELLY

By Theodore Cronyn, custodian,  
Chin Lee, Arizona

Visitors this month, 277; travel year to date, 277.

### Weather

Maximum temperature, 79; minimum, 24. Precipitation, 0.06 inch. Frosts commenced early in the month. Most of the month has been Indian summer, with warm sunny days, cool nights, and little wind. The measured rain fell on one day, the 8th, with a trace of rain on two other days.

### The Canyons, the Navajos

The canyons are gay with autumn colors of cottonwood, oak, other trees, and vines. This is the time of most striking natural color. Yet it is a little lonesome. Most of the Navajos have either moved out on top for the winter, or have gone to gather pinyon nuts, of which there is a good crop this year. The Navajos harvested their corn early this month, stored the fodder in caves and niches of the canyon wall, husked the ears and laid them out in the sun to dry, just as they laid out the peaches in September. These were colorful days; the women in their velvet jackets sitting near the corn piles, the vari-colored corn, the natural colors mentioned above, the mellow sunshine, the melons and squashes among their vines soon to be bitten by the frost. The squaw dances that held away in September ceased with that month; a Yeibichai dance is under way near Chin Lee at this writing.

### Visitors

As noted above, the visitor count for the month is 277. This compares with 131 in 1938, 149 in 1937, 119 in 1936, and with 292 in September of this year. This count follows the erratic increasing trend of previous months of the present year. October has been a month of good weather and good roads, favorable to travel; it is not anticipated that the winter months will show so large an increase over previous years. Arizona had 93 visitors (45 walked in, and three rode horses); New Mexico had 73 visitors; California, 30. Other states had less numbers, and there were two from England.

The high-light of the month was the visit of the touring party of the Park Service and the American Planning and Civic Association. Fifteen of these visitors came late in the afternoon of the 15th, and as many more came back from Ganado the next morning. The afternoon visitors snatched a quick look at the canyon from the rim, the later group went to the White House and Antelope House in the CDC pickup and one visiting car. Included in this party were: Mr. Tolson, Ward Yeager, Mr. and Mrs. and Mrs. May of Olympic, Herbert Kahler, Jesse Nusbaum, Superintendent and Mrs. Franke of Mesa Verde, Mrs. Addison Parker of Des Moines, Miss Harlean James, George Collins, Superintendent and Mrs. SOUTHWESTERN NATIONAL MONUMENTS 284 MONTHLY REPORT FOR OCTOBER 1939

## CANYON DE CHELLY (CONT.)

Tomlinson of Rainier, Assistant Superintendent Holt of Acadia. These were the only Park Service visitors for the month.

Other noteworthy visitors were a party of faculty and students from the Sandia School in Albuquerque. One evening the custodian had picnic supper with 11 campfire girls from the Chin Lee Navajo School, and their matron. On another day, 45 Navajo girls had a picnic supper on the canyon rim, but the custodian missed this party by going to Gallup and to see the Navajo Tribal Fair.

### Interpretational

Guided field trips totaled 34, with 145 visitors; museum-office contacts were 28, with 74 visitors.

### Roads, and Canyon Travel

Roads have been in uniformly good condition in the area. The canyons have been passable throughout the month. Water is running now in del Muerto for five miles below Mummy Cave, and for a short distance below Spider Rock in de Chelly. But almost throughout the canyons, the water is coming closer to the sand surface in the low spots; it won't be long now.

### General

The Navajo Tribal Fair was held near Window Rock in the middle of the month. There were many exhibits of farm products, blankets, silver, turquoise; educational exhibits arranged by schools and other departments of the Navajo Service; a model double hogan with various inexpensive fixtures; all-Navajo rodeo; several thousand Navajos in all their finery. The show was fine, whether you mean the exhibits, or they that went.

### Maintenance

The comparatively large number of visitors kept the custodian pretty busy on contact work, and at that there were a large percentage of unattended visitors. The drains out of kitchen and service room, which have been below par in their functioning for some time, were flushed out with all our water pressure, and are now in proper condition. In an endeavor to locate a sewer clean out near kitchen or service room, the custodian and a laborer did considerable digging beside the walls, but to no avail. An open end of 1½" pipe was found projecting six feet out from the foundation of the service room, but its reason for being is not apparent. The septic tank was emptied completely. The lower end of sewer line, which is partly filled with fine sludge, was flushed out with water. This treatment did not clear the line entirely; that would take cleanout equipment which is not available here.

We uncovered the sewer line in several places between the residence and the first manhole, to locate where the line lies; and the custodian made some measurements for the record, as to point of emergence from the house, and location of a bend. While working at the septic tank, we noted that the inlet and outlet baffles were interchanged, and that one of them was loose. So they were secured in their proper places.

## CANYON DE CHELLY (CONT.)

The central baffle is still on the wrong side of the partition, and the partition itself is reversed. The reconstruction work necessary to rectify this condition did not seem justified under the circumstances, so these particular conditions were not changed.

Appearance of dampness on the ground surface near the tool shed indicated a possible leak in the water or sewer lines. By excavation we discovered and tightened a leaking union on the water line. I made measurements to locate this union; there is at this point a stub riser on the water line, which may be utilized for a surface outlet, whenever this may be thought expedient.

In September and October, the custodian submitted to the local CCC-ID superintendent a list of nine projects for tentative inclusion in the CCC program for 1940 - 1941. Participation by the CCC-ID in the project of erosion control at the White House has finally been approved by the Navajo Service, and it is planned to carry out that project this winter, if approval is obtained for the plans.

The governor on the water pump motor broke again while in operation, and the motor ran wild until Cozy McSparron heard its accelerated exhaust and sent this man to stop it. Now the throttle is wired in fixed position, and we plan to install a rod with adjustable length, to control engine speed. The Thunderbird Ranch sewer line got out of kilter; they cleaned out their septic tank entirely and now the line appears to be OK again.

On October 1, the water meter on the Thunderbird service line was found to be not recording. I took it apart, found no sand and no other apparent reason for non-performance; changed a couple of adjustments, but still it does not work. I shall give it another work-over, and if no can do, we shall have to send it to the factory. The custodian and Ranger Spuhler did some plastering on the residence wall during the summer; more spots are loosening, and I do more plastering occasionally.

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## WUPATKI

By David J. Jones, custodian,  
Star Route, Flagstaff, Arizona.

Visitors this month 279; travel year to date, 279.

### General

While visitor travel to Wupatki shows a considerable increase over the same period for preceding years, our travel season is over until next summer. Yet this is probably the most delightful season of the year - pleasant fall days with but little wind. Vandalism at one of the ruins forebodes the coming of the "pothunter season", and the more frequent inspection of the ruins within the monument. In this same category falls the entry of a Navajo hogan by CCC enrollees, but the stolen property has been returned. With the end of the travel for this year it has been possible to tend to matters which have been piling up over the summer, and to making plans for the winter season, including stabilization of ruins, museum development, and several other projects which should be completed before spring.



## WUPATKI (CONT.)

### Vandalism

Activities of the "pothunters" increase during the winter months in the region of Wupatki. The first evidence on the monument this year was at Ruin J in the Citadel Group. They had worked in one room and two small storage bins, but apparently did not find enough to warrant returning to do further work. It is planned to inspect the more accessible ruins once a week, and those in the isolated parts of the monument at least twice a month. More publicity should be given to the law preventing vandalism. A number of individuals from Flagstaff were not acquainted with this law even after they had passed two signs which are supposed to bring this to their attention. Our boundary signs are not read by many of the visitors due to their wordiness.

### Stabilization

It is again urged that the stabilization of the east wall of Room 41 be considered seriously. This wall is one of the finest examples of prehistoric masonry to be found in the ruin of Wupatki, and should be conserved. Slowly it is being destroyed by the weather. Another urgent bit of work can be found at the prehistoric watchtower of Wukoki. Samples of soils have been sent to the American Bitumuls Company to determine the proper mix, and their results should be available soon. As to labor, it will not be long before a number of the CCC enrollees are available from the house construction.

### Plans

In contemplation of a plan being drawn for the administration building at Wupatki, suggestions from the field are being submitted for items such as storage, work space, and museum. Only a small museum is planned for Wupatki, one which will deal with the story of this area alone. However, it is urged that adequate storage space for the study collections be included in the building. All too often this is an item which is overlooked, rendering a serious hardship on the field man. Here at Wupatki we shall have to provide space for the storage of the collection found during the CWA excavation in 1933-34, and for any materials to be added in the future.

### CCC Guides

In accordance with instructions from your office only one CCC enrollee has been retained as guide. Actually neither of the boys have been doing contact work, except during emergency. Their duties were confined to assisting with the maintenance and with the study collections. For example, it was reported last month that the two guides were being trained to help with the botanical collections. One of the guides proved very capable in this work, and to date has mounted practically all of the plants collected this summer. Duplicates of the 82 specimens will be sent off for identification as soon as a mimeographed label is made available from headquarters. In addition, valuable accessions have been made to the reptile and the fossil collections by the CCC enrollees. Most of this work could not have been accomplished without their assistance.



Antelope

Last month it was reported that with the coming of the rainy season antelope were more commonly seen within the monument. This month very few have been observed. Probably this is due to the fact that the rainy period was confined to the first part of September, and we have had no precipitation since. What is probably the finest report on this monument which has been made by any of our technicians was received this month from Wildlife Technician A. A. Nichol. Not only did he deal with the antelope and certain interesting botanical aspects, but he proved to be very encouraging and helpful in the problems of interest to me.

Special Activities

Upon your request I attended the "opening" of Tuzigoot National Monument on the 8th of October to assist Ranger Alberts with the expected crowds. As it turned out, certain conditions arose which prevented the attendance of more than a normal Sunday crowd, which one man could have handled adequately. However, we thoroughly enjoyed the opportunity to visit with the Alberts and the Jacksons at Montezuma Castle.

Use of Monument Facilities by the Public

1939 - 279; 1938 - 230; 1937 - 85.

Of the 279 visitors to the monument 219 registered at the Citadel Ruin whereas at Wupatki there were 105; 45 individuals registered at both places. Approximately 30 percent of these visitors were contacted.

Newsworthy Visitors

Superintendent and Mrs. Whitcraft of Grant Teton National Park were visitors on the 13th. We thoroughly enjoyed the short time we could spend with them; they were our only visitors from the Conference in Santa Fe.

Dr. G. P. Hammond accompanied by Junior Park Archeologist Beaubien visited the Pueblo on the 16th.

Engineer Hamilton came in on the 25th to inspect the spring development for the new residence.

Art Woodward, accompanied by Miss Hollenback, was a most welcome visitor on the 21st. From Art we got several very valuable ideas for the proposed museum at Wupatki.

Navajos

Seldom have we had any trouble with the Navajos of Wupatki Basin taking anything which does not belong to them. It seems to me that for the past twenty-five years these Navajos have had to watch the white man constantly. The most recent case developed when two CCC enrollees broke into one of Clyde Peshlakai's hogans and stole property in the form of baskets, silver, turquoise, and "medicine" equipment. Fortunately we were able to return the stolen property. To be regretted, however, is this "black mark" in the fine relationship between the Navajos and the CCC which resulted from the burial of Peshlakai Etsedi by the two CCC enrollees last spring.

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## SUNSET CRATER

By David J. Jones, in charge  
Flagstaff, Arizona

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Visitors this month, 540; travel year to date, 540.

### Travel

A total of 540 visitors were at Sunset Crater during the month of October this year, assuming that only 50 percent register. Only 270 people registered as compared to 447 in 1938. I am sure that the travel to the Crater has not dropped, but that the individuals just have not registered.

### General

The small hot dog stand which was constructed by one of the farmers near the highway entrance went out of business in the latter part of September. The owner was not particularly encouraged about entering this business again next year, as people wanted more information than anything else.

In the report for this month last year the installation of a new register was mentioned. It was neat looking and contained a picto-map of the crater with information regarding the points of interest. Always before this individuals had defaced the register box, but this one is still free of names and carving one year later. I mention this to show that if an exhibit is carefully prepared it is more likely that there will be but little vandalism, in spite of that fact that it is not attended.

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## BANDELIER

By C. A. Thomas, jr. park archaeologist, Box 669, Santa Fe, N.M.

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Visitors this month 695; travel year to date, 695

As travel began to slack off in September, we were looking for a rather quiet month in October. Contrary to our expectations the past month has been one of continual activity. Many problems have come up to call for solution, our help has been cut off, and travel has picked up for this time of year.

The superintendents' conference in Santa Fe and the visit of the delegates to the American Planning and Civic Association were the highlights of the period. Your custodian drove to San Ildefonso the morning of October 11, and met the group at the pueblo and escorted them to the monument. Lunch was served at noon in our new lodge. After lunch the party was taken on a brief tour of the ruins and departed at 1:30 for Aztec. We were very sorry that they did not have more time allotted to spend with us. The group was made up of officials of the Park Service and visiting superintendents and their wives. among them were:

Arthur E. Demaray, associate director of the National  
Park Service.

## BANDELIER (CONT.)

Former Director Horace Albright, now president of the American Planning and Civic Association.

Oscar Chapman, assistant secretary of the Department of the Interior.

Dr. Carl P. Russell, supervisor of Research and Information, NPS.

Thomas C. Vint, chief of the Branch of Plans and Design.

John Magle, superintendent of Memorials

Miss Isabelle F. Story, editor-in-chief.

Mr. R. Tillotson, regional director, Region I

Hillory Tolson, regional director, Region III

Frank Kittredge, regional director, Region IV

Frank Pinkley, superintendent, Southwestern National Monuments.

Supt. Jennipher, Death Valley National Monument

Supt. Canfield, Rocky Mountain National Park

Supt. Rogers, Yellowstone National Park

W. W. Thompson, general manager of properties of Mammoth Cave National Park.

Supt. Paul Franke, Mesa Verde National Park

Jesse Musbaum, archeologist-at-large for Department of Interior.

Dr. Botton, University of California

William Bravet, superintendent, Platt National Park

B. L. Hadley, superintendent, Acadia National Park

Dr. Bryant, superintendent, Grand Canyon National Park

Supt. E. P. Leavitt, Crater Lake National Park

S. A. Abbotts, superintendent, Isle Royale National Park

Supt. Malcolm Gardner, Natchez Trace Parkway.

### Administrative

Superintendent Frank Pinkley visited and inspected the monument October 11, 12, and 13th. Assistant Superintendent Hugh Miller spent October 7, 8, and 9th with us. Dr. McDougall, Region III wildlife technician, came October 16 on wildlife problems. Frank Hammond, U. S. Public Health Service, in company with Regional Engineer Jack Dichl spent October 5 inspecting the water and sanitary systems. Charles Ritchie, Region III landscape architect and Dichl were in September 27. Ritchie spent the day going over the ground and locating signs with the custodian. Dichl and H. E. Chase went over the entrance road. Jesse Musbaum, archeologist-at-large, Dr. Aubrey Neasham, and R. G. Camalier, secretary of the Public Lands Committee inspected the area September 28. C. D. Monteith, public utilities engineer of the National Park Service, Washington, D. C. accompanied by Dichl were in the monument September 27. Dr. Gould, regional geologist, accompanied by J. W. Hendron, were checking the geology of the Frijoles on October 16. Ritchie returned to Bandelier, October 24, to give us a location on the new checking station and the large entrance sign. Lyle Bonnett inspected the building program October 10

#### New Equipment

As our light plant went out of commission about the first of September, we decided it would not be worth while to repair it. In order to solve our light and power problem, we decided to junk the old engine and attempt to drive the old generator with a new automobile engine. We accordingly purchased a Ford Mercury 95-horsepower engine and are now engaged in figuring out how to connect it to the generator. It offers a host of problems, but when we have it working it promises to make us a fine power unit.

The CCC camp finally moved from the canyon to their new camp on Water Canyon October 21 and work has commenced on wrecking the old buildings. We hope the first of the year will see the old barracks entirely gone and the site landscaped.

#### Plans

Work has been begun on the new museum lobby and plans are laid to commence work on the checking station soon. In the near future it is hoped that a crew will start the stabilization of our fire trails and another crew will start building two miles of boundary fence. The plan is that we will start the project by building two miles of fence and the Forest Service will finish it with our service furnishing the material and the Forest Service furnishing the labor. It may be that spring will see the monument fenced on the west and south sides. It will then be possible to discourage stock grazing and poaching in the monument. A location was chosen for a campfire circle and the CCC engineer prepared the countour map for a plan. A CCC crew started the 18th to do some improvement on Otowi Hill road in the Otowi section of the monument.

Our surfaced entrance road has been giving trouble and it will be necessary to scarify the oiled surface and relay the mat. This work was attempted under Mr. Underhill's supervision, but the Wehr Grader refused to pull and it will be necessary to perform an overhaul job before this matter can be taken care of. We hope to get it done early next month. The water supply failed on the 10th and it was necessary to make temporary repairs. The high waters of the summer damaged the intake dam and it will be necessary to rebuild a portion of it before we have a trouble free system again.

#### Character of Service

Word was received the 10th of the month to change our system of fees collection from the 25¢ per person fee to 50¢ per car seasonal permit system. The new system was put into effect October 11 and met with great popularity among local and out-of-state people alike. Our collections are not so heavy in money but the fees are paid more cheerfully and it seems it will be far more satisfactory than the old system. October 19, the custodian went to Los Alamos Ranch School to give a lecture on the National Park Service and its work in preserving and protecting natural features and ruins in the Southwest. Forty-five students and instructors attended. An hour lecture was given and the speaker held for another hour answering questions and leading discussion.



Museum Service

Arthur Woodward of the Southwest Museum, Los Angeles, with Park Naturalist Stagner of Petrified Forest and Regional Archeologist Reed of Santa Fe inspected our museum October 19. Mr. Woodward very kindly gave us the benefit of his wide museum experience in making suggestions and helpful criticisms of our museum. We only wished he might have stayed longer.

Temporary Ranger Philp has been utilizing what time he could from his many other duties in collecting and preparing study skins of birds common in this section of the country. It is hoped to build up a complete collection that will prove useful in the future in connection with bird banding and other study activities. The bird banding station is being operated at such times as possible and a good many birds have been banded during the month.

Use of Monument Facilities by the Public

As the weather has been warm and sunny, visitors continue to come to Bandelier. During the month 695 people came in 197 cars. The car permit system is encouraging many local people to come out on Sundays as long as the weather is nice and the roads are good.

As Temporary Ranger Onstott left on the first to resume his studies at the University of Arizona and the enrollment period ran out on two of our CCC guides we have been hard pressed for guides. Some new enrollees are now trying out. As soon as they can be trained, the situation will be relieved somewhat. Temporary Ranger Philp is due to leave the last of the month and it looks as tho all guiding must be done by CCC men as the custodian must stick close to headquarters to collect fees. This is not all desirable as most of the native boys here in camp cannot speak English and the average visitor cannot understand Spanish. If travel continues throughout the winter, your custodian is going to have his hands full.

Signs

The CCC sign project has completed some beautiful hand carved signs, part of which have been located and set up. New directional signs have been placed at the junction of the road on the Otowi Section and at the junction of our entrance road and Highway No. 4. A number of signs has been put up around the administration area and on the ruins trails. They are much more sightly and give information that visitors require without having to hunt up a ranger and ask. This simplifies our contact work a great deal and makes it easier to put our regulations across.

Frank Harmond, United States Public Health Department, San Francisco inspected our water supply system and sewage disposal plant on October 5. Harmond recommended that our stream be closed to fishing as numbers of fishermen above our intake gate in summer are bound to contaminate our water supply. He also recommended some change in our sewage disposal line to take care of the drainage from the septic tank. At present the drainage flows into the creek and contaminates it badly below headquarters.



Archeology

We finally got the Civil Service to okay Bob Lister for ruins stabilization foreman. Bob is now engaged in doing some nice work in stabilizing the caves at Tsankawi. His report is attached. Mr. Andron is busy in the Regional Office working under the direction of Regional Archeologist Erik Reed in preparing his final report on the archeological work he did at Bandelier two years ago. His report should give us some badly needed information about Frijoles Canyon.

After almost learning to do without a maintenance man we were pleasantly surprised when we awoke one morning to find the Civil Service Commission had acted and appointed A. D. McGillivray of Santa Fe to fill the vacancy created by the promotion of George Shelly to ranger at White Sands. Mac and his family are getting located at headquarters and are fast taking their places as Park Service personnel.

October 14, MacGillivray and the custodian delivered our Chevrolet dump truck to El Morro for Budlong's use in construction of his new trails. Hugh not only talked us out of our shiny new truck, but had to rub it in by making us deliver it. If that isn't adding insult to injury! Anyway we had a most interesting trip to El Morro and were royally entertained by Custodian and Mrs. Budlong. Their hospitality and intensely interesting monument made it worth while losing the truck so we don't even hold a grudge against Hugh anymore.

Newsworthy Visitors

Dr. Reginald Fisher and group of 17 university students on the 21st. E. F. Mayes, director of Missouri State Parks, Jacob Babler of St. Louis, and Erik Reed, on the 4th. John Will Faris, White Sands, spent a few pleasant hours on September 25. He blew in and out just like a "Tourist" "Got to make 700 miles before dark!" It's surely a pleasure to have a chat with Faris. I suppose you old custodians take such visits as a matter of course, but to a newcomer who doesn't know all the monument men, a session with an old hand at the game is a real experience. I'd give a lot to be able to make the acquaintance of all the men in the monuments and if any of you get close to Bandelier without stopping in, I'm going to see what can be done about having your salary cut.

SWMM

## BANDELIER RUINS STABILIZATION

By Robert Lister,  
archeologist foreman

The first job on resuming the stabilization work at Bandelier was to take a number of "After" pictures of work done last spring. Camera film did not arrive in time last May so that the pictures could be taken. After all pictures had been taken, a survey of cave ruins on the monument was made. The results of the survey show that after a rain, water runs into many of the caves and sometimes stands several inches deep in the caves after a hard shower. The caves at

## BANDELIER RUINS STABILIZATION (CONT.)

Tsankawi appear to be in the worst condition, so work has been started there.

Before the actual work of arranging the drainage around the cave mouths was begun, a map was prepared showing the 181 cave ruins on the south side of the Tsankawi mesa. In front of a great many of the Tsankawi caves, dirt and rocks have accumulated so that the debris is much higher than the cave fill. Where this condition exists, water easily flows into the caves, damaging the walls and any cultural material that might be in the cave fill. Some of the dirt from in front of many of the caves is being removed so that the water will flow away from, and not into, the caves; in other cases, drainage ditches or small diversion dams are employed to keep the water out of the caves. To date, 70 cave fronts and entrances have been cleared.

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SWMM

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## BANDELIER CCC

By H. B. Chase, project superintendent,  
Camp NP-4-N, Santa Fe, N. M.

During the past two months the new camp buildings have been completed and this company moved to its new location, approximately nine miles from the old site to a point on the mesa near the west boundary of the monument. During this construction and move practically all enrollees formerly turned to this Technical Service were utilized in the moving process. During the moving period the few enrollees released to the technical service together with the supervisory personnel completed considerable work with reference to our equipment by installing new floors in the trucks, installing tarps, bows, and seats, painting equipment, and necessary upkeep items to put the equipment in first class shape for the transportation of enrollees. Since the move has been completed and a larger number of enrollees assigned to the technical service, the following work has been completed on the work projects:

The stables project, together with pole and wire corrals, is now complete ready for occupancy by the hotel operator.

A number of directional signs both in and around the headquarters area and along the entrance road to the monument have been completed and installed. The carpenter crew has also completed the assembly of 20 wood boxes for installation in the hotel guest room, there remaining only a small amount of carving and staining for final completion.

The road betterment project on the Otowi section has been started, two of the four turnouts completed and considerable surface work executed. The project is approximately 50 percent complete at this time.

A large crew is now in the timber on Sawyer Mesa cutting and preparing aspen ceiling material, vigas, and lintels to be used in the construction of the Museum Lobby.

A small crew has been working under the direction of Robert Lister stabilizing and repairing the ruins on the Otowi Section.

The carpenter crew has completed and assembled the entrance sign for Capulin Mountain National Monument, it now awaiting delivery instructions.

## BANDELIER CCC (CONT.)

Final trim and painting has been completed in connection with the garage heater room, the project now being 100 percent complete.

The water service line and sewage disposal system carried in connection with the stables project is now complete and both servicing the stables building.

\*\*\*SWNM\*\*\*

## NATURAL BRIDGES

By Zeke Johnson, custodian  
Blanding, Utah

Visitors this month, 69; travel year to date, 69.

All visitors were contacted except two and they came while I was hiking with another party. Two young men from New York stayed and hiked every day for eight days.

We have finished the work on the approach road, and it is a good job. You'll never hear me call it Tumble In any more. We are now working on the trails and will soon have them in extra good shape for the spring. It has rained now for two days so we are both free for a few days now, and I can put in all my time along with Junior on the trails.

It has not frozen yet at camp and corn, beans, watermelons and muskmelons are growing in many places on the campground where mice have buried the seeds. All vegetation is green and many flowers still beautiful. So much rain lately makes it look like we may have a long, open fall, so I will be on the job until the last moment and will stay in Blanding this winter.

So far this has been the most interesting season at the Bridges and I am sure many more will come later. The open season on deer is in full blast now and many deer and fawns are under cover all around the monument and especially near Mossback Mesa. No hunter has tried to break through my blockade.

SWNM

## EL MORRO

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

Visitors this month, 131; travel year to date, 131.

October has gone with amazing speed, November is upon us, bringing reminders of few shopping days until Christmas, and as soon as the winter's snows arrive and leave with the first spring thaw we'll be rushing around getting ready to take care of the summer's visitors. All of which is meant to indicate that tempus is fugiting up in these higher altitudes. There is much to be done, and little time in which to do it.

### Weather

This couldn't have been much better. Days have been mostly clear and warm, with nights growing colder. We had our first killing

## EL MORRO (CONT.)

frost on the 2nd; maximum temperature was 76 on the 6th, minimum 14 on the 28th; we had .48 inch of rain, and our first flurry of snow the night of the 8th. Farmers are busily engaged thrashing their few beans and many children, the poplars in the town of Ramah have lost their leaves, and thick ice forms nightly on exposed small pools of water.

### Visitors

We had 131 visitors during the month, arriving in 43 cars. Many of our visitors found the north side a bit too cool for comfort, and before long the trip around the inscriptions will probably be confined to the sunny south side.

Mr. and Mrs. Tillotson and daughter paid us a brief visit during the month; Jim and Mrs. Hamilton made an inspection of the monument and donated three great bundles of issues of Life Magazine to the community library; Custodian Chester Thomas and Argyle MacGillivray of Bandelier delivered a ton-and-a-half dump truck to the monument and stayed overnight.

### Roads and Trails

Let us draw a veil over the subject of roads, and the horrific language visitors use in describing them, and dwell more at length on trails. At this writing the work of constructing the new trail from the new residence to the inscriptions and return is approximately 10 percent complete. It is very doubtful that the trail can be completed this winter, since it is being surfaced with bitumuls, and this material will freeze. We have been fortunate in having mild weather, and as long as it continues, the trail work can go forward. At this writing a bridge is being constructed across the arroyo near the residence, and it is thought that it will be a solid structure. The two pine logs from which it is being built weigh over six tons each, and had to be brought some twelve miles to the monument, with the aid of the truck and half a dozen men. The hills for miles around can bear witness to the fact that this was a difficult job. The proper name for these trees is *Pinus ponderosa*, but only improper names for them have been heard, and they will not be mentioned here.

After receipt of the dump truck from Bandelier, Andy Clark and the custodian spent most of one day trying to arrange for storage of our carload of bitumuls - 4400 gallons of it. Temporary storage space was very kindly provided by the Indian Irrigation Service in their warehouse in Gallup, and then began the work of opening the freight car and moving 82 barrels, each weighing 450 pounds, into the warehouse. Three men using the truck accomplished this in just two hours.

### Quarters

The new residence was officially occupied by the custodian and HCWP on October 12th. Laurels to the architect who designed it, and to the contractor who built it. Water and sewer connections have been made, coal has been delivered, and the custodian spends spare



moments filling the coal bin with 11 tons of coal and one small shovel. Due to excellent insulation and general construction, a low furnace fire suffices to keep the living quarters very comfortable; the office is not heated by the furnace, and it will be necessary to install an oil heater. Until the bridge across the arroyo is completed, it is necessary to spend the daylight hours at the old cabin, visitors using the present north entrance; but when the bridge is completed the north road will be closed, the new east entrance put to use, and visitors will come to the new office at the residence. This will greatly simplify matters, as the present arrangement is most inefficient.

The custodian has spent many hours working on the new residence, giving the hardwood floors many and frequent coats of wax to build up a surface that will do them justice, cleaning the windows of paint, oil, and putty, and so on. These windows! The plan shows 19 windows and doors with glass panes, and perhaps cleaning them of paint and chunks of putty sounds simple. After an hour or two of work with razor blades and Bon Ami it was realized that windows have two sides, making not 19, but 38 surfaces to be cleaned laboriously. By next afternoon it was found that there are exactly 100 separate glass panes, but with two surfaces to be cleaned the count mounts to 200. The work was finally completed, and the custodian heaved a long sigh of relief. He should have known better, of course. Now, with below-freezing temperatures, it is time to remove the screens and put up the storm sash, and the custodian is faced with the appalling fact that there are, accordingly, another 200 glass surfaces to be cleaned, making a grand total of 400 separate glass surfaces. This office, therefore, strongly favors houses with no windows. Another problem about the house is the key situation. Specifications called for all doors to be keyed alike; they were. Also three keys were specified. The contractor did a noble job, furnishing three separate keys for each door, so we have 15 keys, all alike. El Morro goes in for things in a big way these days.

#### Education

In addition to a few "office visits" or lectures covering history, inscriptions, etc., the custodian held an illustrated lecture on public health during the month, with an attendance of 18 local persons. Materials were furnished through the kindness of the State of New Mexico Public Health Service, and the subjects covered were: rickets in children, sanitation, child health and care, fly menace, prevention of disease, and congenital syphilis. The lecture took 2½ hours, and was in the nature of a preliminary experiment. It was pronounced highly successful, and some of the people came a distance of nearly 20 miles; a general discussion was held afterwards and requests were made for more of these illustrated lectures. This office has been leading up to this sort of thing for some time, and the reception given the experiment was more than the custodian had hoped for. This is a real stride forward in local education, this office having long maintained that individual offices of the Service owe to their communities every educational facility they can command.



Outside the thermometer indicates 24 degrees, and the night is yet but a pup. Colder weather is on its way, and we hope it will hold off long enough for the trail surfacing to be completed on the south side of the rock, at least. We continue to lay in food supplies for the winter; wood for the cookstove has been ordered, we have in most of our coal supply, and can look forward to a winter of comfort, in a well-insulated and spacious house.

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## PHOTO RECORD BOARD

By Robert Lister

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During the ruin stabilization program at Bandelier National Monument, a board with interchangeable letters is being used to identify photographs. The proper label is composed on the board and the board placed so that it will appear in the photograph. It is believed that boards of this type would be of use to many individuals who find it necessary to label photographs. By having the label in the photograph, rather than taking notes on each exposure, it is much easier to keep ones photographic record straight especially when many pictures are taken of similar items as is the case in ruins stabilization work.

There is a set of paper letters and numbers manufactured by the Fototype Company of 629 Washington Blvd., Chicago, which has been found to be very satisfactory. The letters are especially made for titling home movies. Set No. 172 contains at least 30 of each letter and number, and a composing board that is used in forming words. The letters are one inch high, printed in black on cardboard two inches high.

The board upon which the label is placed may vary according to needs. In our case a board 16 inches high and one-eighth inch deep, is used. The board is painted white and has a two-inch black border. The letters in words that are to be used again and again are held together by placing Scotch tape on the back of the letters, but words and especially numbers that are to be changed frequently are merely placed in the grooves and not stuck together with tape.

Boards using celluloid letters have been in use for some time, but are somewhat expensive to use in the field where letters are apt to be lost and are subjected to rough treatment.

\*\*\*SWM\*\*\*

# HEADQUARTERS

## BRANCH OF HISTORIC SITES

By Dale S. King,  
park archeologist,  
Coolidge, Arizona

### STAFF ACTIVITIES

Archeologist King was on duty at Southwestern National Monuments Headquarters for the entire month with the exception of the first day. He made one short trip to Organ Pipe Cactus and another to Tonto in connection with the break-in of new personnel. Work mainly consisted of routine and continuing projects.

Archeologist Steen entered on annual leave October 16, spending the rest of the time at headquarters except for accompanying King on the above-mentioned two trips.

Compiling data and preparing the Superintendent's Annual Report to the Director was the project which occupied two-thirds of Jr. Naturalist Dodge's time during the month. Since the report period covered 15 months instead of the customary 12 (the report ending September 30 instead of June 30 as in the past), this was a larger task than usual. In addition, Dodge assisted in giving instructions to the five new men taking over field positions. Another report handled by Dodge was the Annual Wildlife Census, which was compiled and sent in to Washington to meet the October 10 deadline.

Dodge made one talk, on birds, illustrated by color slides to the Coolidge Cub Scouts.

### RESEARCH AND SURVEY

Headquarters bird-banding activities were started on October 2, and supplies were sent out to several of the field stations requesting them. Several very interesting returns occurred, and these will be written up in future nature notes.

A very interesting bird report on Bandelier National Monument was received from Temporary Ranger Gil Philp, and it will be found in the Supplement of this report.

Archeologist Steen compiled quite a bit of historical information in the process of issuing a publicity article during the month.

### STATUS OF HISTORICAL AND ARCHEOLOGICAL PROJECTS

Definite arrangements have not yet been made for the ruins stabilization program at Tonto National Monument, certain developments having hindered progress.

Ruins stabilization projects at Bandelier and Chaco Canyon continued as usual.

### EDUCATIONAL ACTIVITIES

On September 25 Dodge gave a talk on birds to the Cub Scouts of Coolidge, Arizona. Their mothers also attended, making a total of 21. A surprising amount of interest was elicited, and it is

## BRANCH OF HISTORIC SITES (CONT.)

believed that a few more talks of the same kind may further the cause of conservation in this area.

### PUBLIC RELATIONS

The normal amount of informational requests were answered.

Steen prepared, in line with publicity for the Quarto Centennial celebration, an article to be issued by the Washington Office "Spanish Padres of New Mexico."

### ROUTINE AND CONTINUING PROJECTS

The photograph filing project surged forward through the able assistance of Ranger William Supernaugh who was able to spend five days on it during his break-in period at headquarters. Unless additional help is received, it is difficult to see how this project will ever be placed under control. The usual monthly report was issued, and an unusually difficult annual report also was prepared. In addition to these reports the following others were compiled: Complaints, Service Records of Ranger Naturalists, and Wildlife Census.

### PROJECTS FOR ENSUING MONTH

King will spend the first 10 days of the month on the monthly report, and then will begin work on interpretational base maps, the Casa Grande Museum Plan, or Southwestern Monuments Association affairs, whichever proves to be most feasible at the time.

Steen will remain on annual leave until November 15, and then will start either the stabilization of the upper ruin at Tonto National Monument, or the installation of museum exhibits at White Sands National Monument.

Dodge has been asked to prepare an article on bird-banding for the Region III Review. He will then continue work on Bulletin No. 2 of the Southwestern Monuments Association.

### EXHIBITS

Further shipment of artifacts were made to the Western Museum Laboratories in connection with the preparation of exhibits for White Sands.

A number of printed labels were received for the Casa Grande National Monument museum and will be installed in the near future.

### TECHNICAL AID IN DEVELOPMENTS

The working drawings for the museum lobby at Bandelier were reviewed and commented upon. The Branch of Plans and Design is to be complimented upon the fine plan which they developed, very kindly inserting items requested by the Southwestern Monuments staff.

### NOTABLE OBSERVATIONS

Observations made at various monuments should be consulted in the Supplement.

Gambel sparrows and House Finches have arrived at Casa Grande in quantity for the winter season.

Custodian Ricknell and Naturalist Dodge noted a large flight of

## BRANCH OF HISTORIC SITES (CONT.)

vultures on October 7 over the monument, counting at least 50, and estimating approximately 150.

A pair of domestic pigeons have established residence in the Casa Grande shelter, and shall have to be removed as exotics.

Mesquites at Casa Grande are in very bad condition, many apparently have died, although no census has been taken. Recent winds have broken limbs off the dead portions of the trees, and it is remarkable how many new rodent holes are to be found in the rather insufficient shelter afforded by the fallen branches. This observation again stresses the value of National Park Service policy in avoiding clean-up methods used in municipal parks, and thus enhancing values for wildlife.

### ACCESSIONS

40 racks for 2 x 2 inch Kodaslide were received from the Western Museum Laboratories, and the Kodachrome library placed in reasonable order for the first time. Slides were made up into sequences, and arranged by subject. Old lantern slides were transferred to Tumacacori National Monument where they are being used in public contact by Custodian Caywood.

Three models of pueblos, Hano, Acoma, and Taos were received from the Western Museum Laboratories and will be distributed to various monuments.

Other accessions were: six bird traps, 25 x 8 inch file drawers, six vasculums, and 1,000 collapsible cartons, all from the Western Museum Laboratories.

### SOUTHWESTERN MONUMENTS LOAN LIBRARY

12 books and 30 periodicals were received by the library during the month. Library of Congress catalogue cards for 30 publications were prepared and filed.

### SOUTHWESTERN MONUMENTS ASSOCIATION

Routine bookkeeping activities were kept current, and a considerable number of publications were issued to the new personnel. Sales seem to be holding up well among several custodians, although others are making sub-normal efforts, according to reports.

### NEWSWORTHY VISITORS

William Supernaugh, Charles Wyatt, William Stevenson, John Peavy, Henry G. Schmidt, Thomas Vint, Harvey Cornell, Lyle Bennett, Landscape Architect Abbott, Superintendent and Mrs. Whitcraft of Grand Teton National Park, Miss Isabelle Story, Dr. J. P. Harrington, Frances Elmore, Ted Smiley, Jimmie and Sallie Brewer, and Cozy and Inja McSparron.

### MISCELLANEOUS

The new room in the utility area is nearing completion, and possibly will be occupied by the Casa Grande museum collection, a work room, a dark room, and possibly other activities in the next month.



## BRANCH OF HISTORIC SITES (CONT.)

### PERSONNEL

The Southwestern National Monuments were very pleased to welcome into their ranks six new and promising men during the past month. Ranger Bowen went on duty directly at Montezuma Castle, but the rest of the men were enabled to enable to receive some training at Headquarters before reporting to their duty stations. Custodians Supernaugh, Peavy, and Schmidt will administer Organ Pipe Cactus, Tonto, and Arches, respectively. Ted Smiley, on temporary status, will hold down Tuzigoot National Monument pending the appointment from a Civil Service register. Personnel, money, and time have been so limited in the past that it was almost impossible to give new men much training before they were sent out on their own to their monuments. Headquarters staff men poured much information into the ears of the somewhat bewildered new men, and feel that these fellows got off to a flying start. It is felt that our outfit has been very lucky in the type of men which it drew, and our hope is that the new members of the Boss' family will find as much interest and enjoyment in Southwestern National Monuments work as have the men who preceded them.

### DEPARTMENTALIZATION

With 23 monuments now assigned permanent men who meet the public, the increased load thrown upon the Headquarters interpretational staff has caused us to "departmentalize" our work into two divisions: (1) those monuments whose features are archeological or historical; and (2) those monuments in which the natural history features predominate. Formation of the Branch of Historic Sites has crystallized our thinking until we now clearly differentiate and allot interpretational work as follows:

#### BRANCH OF HISTORIC SITES

Under Archeologists Dale  
King and Charlie Steen

##### Monuments with full-time or reporting custodians

Aztec Ruins, Bandelier, Canyon  
de Chelly, Casa Grande, Chaco  
Canyon, El Morro, Gran Quivira,  
Montezuma Castle, Navajo, Pipe  
Spring, Tonto, Tumacacori,  
Tuzigoot, Walnut Canyon,  
and Wupatki.

##### Monuments with no custodians

Gila Cliff Dwellings,  
Hovenweep and Yucca House

#### BRANCH OF RESEARCH AND INFORMATION

Under Naturalist Natt Dodge

Arches, Saguaro,  
Capulin Mountain,  
Chiricahua,  
Natural Bridges,  
Organ Pipe Cactus,  
Sunset Crater,  
and White Sands.

\*\*\*SWM\*\*\*

Visitor Statistics for October, 1939  
SOUTHWESTERN NATIONAL MONUMENTS

STATION	Employees		Field Trips				Museum Talks				Un-attended	In-formation Contacts	Total Travel	% Com-ment
	PermtEmp	No	Attend	Time	Ave. Attend	Ave. Time	No	Attend	Time	Ave. Attend	Ave. Time			
Arches	-	1	2	7	130	3.5	65.0	-	-	-	-	148	7	155
Aztec Ruins	2	1	144	669	6425	4.6	44.6	160	648	3545	4.0	22.1	1317	667
Bendelier	1	4	103	567	6815	5.5	66.1	38	203	1325	5.3	34.8	128	695
Canyon de Chelly	1	-	34	145	5420	4.2	159.0	28	74	890	2.6	31.7	132	217
Capulin	1	-	-	-	-	-	-	-	-	-	-	-	3500	3500
Casa Grande	2	3	228	696	10409	3.0	45.6	200	598	4633	2.9	23.1	-	696
Chaco Canyon	1	2	58	221	3053	3.8	52.5	29	221	760	7.6	26.2	-	221
Chiricahua	1	3	100	397	3200	3.9	32.0	-	-	-	-	-	36	433
El Morro	1	-	37	129	2755	3.4	74.4	3	18	455	6.0	152.	2	131
Gila Cliff	-	-	-	-	-	-	-	-	-	-	-	-	10	10
Gran Quivira	-	1	53	282	2685	5.3	50.6	-	-	-	-	-	16	298
Hovenweep	-	-	-	-	-	-	-	-	-	-	-	-	10	10
Montezuma	1	1	134	498	6491	3.7	37.1	82	280	1614	3.4	19.6	3	501
Natural Bridges	1	-	-	67	-	-	-	-	-	-	-	-	2	69
Nevado	1	-	-	-	-	-	-	-	-	-	-	-	2	31
Organ Pipe Cact.	1	-	-	-	-	-	-	-	-	-	-	-	410	410
Pipe Spring	1	-	-	-	-	-	-	19	46	585	2.4	30.7	-	46
Rainbow Bridge	-	-	-	-	-	-	-	-	-	-	-	-	20	20
Saguaro	1	-	15	52	427	3.4	28.4	-	-	-	-	-	114	166
Sunset Crater	-	-	-	-	-	-	-	-	-	-	-	-	540	540
Tonto	1	-	31	86	1590	2.7	51.2	47	92	615	1.9	13.0	379	471
Tuacacuari	2	-	105	313	2720	3.0	25.6	107	317	2775	2.9	25.9	35	370
Tuzigoot	-	1	41	204	1399	5.0	34.1	59	314	1679	5.3	28.7	46	360
Walnut Canyon	1	2	244	629	5817	2.5	23.8	109	285	2042	2.5	18.7	164	725
White Sands	3	-	63	285	1085	4.5	17.2	202	864	3295	4.2	16.3	951	1815
Wupatki	1	1	34	88	1960	2.5	57.6	-	-	-	-	-	191	279
TOTAL	24	20	1427	5335	62378	3.7	43.7	1083	3960	24213	3.6	22.2	6,877	9,324
Last month	22	18	1608	7574	77303	4.1	63.0	1102	4971	22549	3.9	36.7	12,913	13,333
Last year	24	19	1326	6711	65714	5.0	49.5	955	4774	17999	4.9	18.8	14,679	11,718

# BRANCH OF ACCOUNTING

By Parke W. Soule, chief clerk,

Coolidge, Arizona

Vouchers prepared during the month, regular appropriations . . .	134
Vouchers prepared during the month, CCC . . . . .	220
Purchase Orders issued, regular appropriation, hdqrs . . . . .	47
Purchase Orders issued, CCC . . . . .	181
Allotment ledger sheets prepared, regular appropriation. . . . .	227
Allotment ledger sheets prepared, CCC . . . . .	120

Expenditures:	Total for Month	To Date
1401000 National Park Service, 1940	\$ 13,442.03	39,190.65
149/01000.061 N.P.S., 1939-40	76.07	255.91
14X1010.001 Roads and Trails , NPS	806.36	937.90
14-408/00514 PMA	1,930.04	6,959.80
Civilian Conservation Corps	11,716.95	36,001.46

## Mail Count for October, 1939:

Official mail, incoming . . . . .	4,084	pcs
Official mail, outgoing . . . . .	3,636	"
Official telegrams, incoming. . . . .	31	"
Official telegrams, outgoing. . . . .	27	"
Personal mail, incoming . . . . .	1,078	"
Grand total mail handled. . . . .	8,856	"

# MAINTENANCE

By F. L. Stonehocker, general mechanic,  
Coolidge, Arizona.

During the month of October the following jobs were completed by the General Mechanic:

USDI 1221 was painted and given a general check up and was assigned to the Roving Ranger.

General overhaul of USDI CCC 91-039 so that it could be used to transport the grader to Chaco Canyon.

Repaired the grader and loaded on USDI CCC 91-039 for transfer to Chaco Canyon

Replaced water pump belts and checked and lubricated sewer pump.

Prepared for overhaul, ordered parts, ground valves, and overhauled commutator on the Westinghouse power plant.

Installed new water tank and heater in laundry.

Equipment transferred from this monument included: 2 Flamo cabinets to Tumacacori; 1 mimeograph machine to Bardolier; 1 heater, 1 gas range, 1 fire extinguisher, 1 Underwood typewriter, several small tools, and 1 Chevrolet coupe body USDI 8,114; to Saguaro National Monument.

\*\*\*SWM\*\*\*

## PERSONNEL

Written by the Boss and the others around the office about all the folks in our outfit - and some others.

October was a busy month yet, looking over the office desk, it is hard to account for all that time and explain where it went and how it left so little to show for its going.

The Boss and Hugh and Christine went to the Santa Fe Conference of course and that accounts for a large slice out of the month which, however yielded some very worth while results. The Boss found out that he could get along in the high country for awhile if he was quiet and careful and didn't get into any more than the usual number of arguments which come up at a Conference. Patraw, by the way, raised a laugh one day when he was defending his committee's action by saying; "and no one who has ever been on a committee with Pinkley will say he is a rubber stamp."

Considerable business was transacted and the general spirit of the meeting was good. It was a pretty steady grind with little time left for individual decision and I heard some low murmurs from the ladies who were requested to wear evening gowns to all evening affairs and the men as usual rebelled against evening dress and went informal, so it was very much like the other conferences in its minor details.

Hugh and Chris got away at the end of the Park Service part of the conference and came home by way of Bandelier, Chaco Canyon and Flagstaff Camp MM-5-A, but the Boss stayed over for the meeting with the American Civic and Planning Association, which was fine, and then went out to Bandelier and saw all the things which he hadn't been able to see these last three years, and visited with Art and Mrs. Thomas and Hub and Ruby Chase and Mrs. Frey and had a grand time. Thence, Hub and Ruby took him to the train at Lamy and so he came home overnight in order to catch a brass hat or two from the east and some small fry from the Regional Office, all of whom wanted to know a lot of things about the Southwestern Monuments.

The next day this aggregation, consisting of Tom Vint, Harvey Cornell, Lyle Bennett, Jerry Miller, Buck Abbott, Tov and the Boss, all went to Tumacacori and back to Tucson for the night. The next day was spent in Organ Pipe Cactus with the night at Ajo. The next day the party broke up and the Boss came home.

Later in the month the Boss went to Chiricahua overnight and attended a road meeting at San Simon the next day and then came home. On this trip he met Jerry Miller and Assistant Regional Director McCollm at San Simon.

Hugh, after the trip to the Conference, made a later trip to Chaco Canyon and Flagstaff, so we at headquarters have a pretty good first hand idea of how things went during the month out in the district.

Dale King made a trip to Organ Pipe Cactus during the month, taking Charlie Steen and Bill Supernaugh along for a study of some of our problems down there.

Bill Supernaugh comes to us from the high country of Colorado and is now in charge of Organ Pipe Cactus National Monument. The desert gods have taken Bill to their heart because, before he has been on the job his first month we got word that we have the funds to fence about 12 miles of his north boundary and explore for water at the proposed site of the administration area. It looks like Organ Pipe is on its way and all  
SOUTHWESTERN NATIONAL MONUMENTS 305 MONTHLY REPORT FOR OCTOBER 1939



## PERSONNEL NOTES (CONT.)

Bill has to worry about now is whether he, from the 9,000 level in Colorado, can live through the next summer on the Mexican border. He has already expressed the opinion that he has the finest monument in the Southwest.

Another of the finest monuments in the Southwest is now under the charge of John Peavy, who, with Mrs. Peavy and the girl baby are living at Tonto National Monument. He writes about the lovely view from the back door down into the valley and across to the mountains fifteen or so miles away. As soon as that puddle out in the back yard, which was the lake behind the Roosevelt Dam, fills up again they will have a lovely water view in their picture.

Still another of the finest monuments of the Southwest went under the charge of Henry Schmidt who went to Arches during the month. Snitty writes that Moab is a lovely little town and that he and Mrs. Schmidt are going to be very happy there. He is, by the way, a brother of Carl Schmidt whom a great many of the Southwestern Monuments personnel will recall as working for the engineers.

This means that Harry Reed is relieved of his duty at Arches and is now one of our high grade Counselors Without Pay in connection with the future development of Arches. He has two fine companions in that degree; Dr. Williams and Bish. Taylor. The three of them have brought the Arches thus far on the way to its development, and it is nothing more than fair for us to give them proper credit.

When I returned from the Santa Fe Conference I had trouble recognizing the office force. The American Legion had planned a 49er celebration over in Coolidge and everybody was growing hair for the big occasion. Goody and Luis and Ray and Howard and Larry and Parke looked for all the world like tramps who had just come up out of the jungles. Hugh took out some sort of permit whereby upon the payment of a couple of dollars he was allowed to appear on the streets of Coolidge clean shaven.

Incidentally Howard Rieber is settling down at the desk vacated by Bob Petrie and is already turning out a good volume of work. As one of those things which prove how small the world is, we might mention that the Boss hired Howard's father to bring him and his camp outfit from Phoenix over to the Casa Grande Ruins in a two-horse wagon thirty-nine years ago. At that time it took two days to make the trip one way; now we make it in an hour and a half.

At this writing Charlie and Mary Steen are on annual leave over on the coast attending grand opera and doing several other things they don't do in Coolidge. He are expecting them home in a few days.

Matt and Hap Dodge and the kids are settled in their larger quarters over in Coolidge and Charlie and Mrs. Wyatt and the kids have the old Dodge quarters at the headquarters area.

Ed. and Carey Alberts have moved the Flying Dutchman from Tuzigoot up to Canyon de Chelly and are relieving Ted Cronyn who is taking annual leave during November.

Ted Smiley is handling Tuzigoot until we can get a full-time man off the Civil Service list.

Jimmie and Sallie Brewer were down from Navajo during the month to report on that monument, visit at headquarters and see what they

## PERSONNEL (CONT.)

could pick up in the way of equipment. Their visit was much enjoyed by every one, the only fly in the ointment being that the Boss had to lose the last day with them on account of a road meeting at San Simon which demanded his presence.

Eugene Stonchocker had the misfortune to smash a thumb during the month and will be out of the shop four or five weeks. He is coming along all right but the doctor wants plenty of time for it to heal.

Utility man J. L. L. Baehr, has been having a heavy cold mixed with asthma and was complaining the other morning that he was tired of alternately sleeping two hours and sitting up one through the night. We hope he gets relief soon.

Joe Hobbs and the CCC side camp at Casa Grande did good work during the month.

At this writing Tov and Polly are on annual leave in the east and will purchase a car which they will drive home by way of New Orleans.

Hugh reports great activity at the Flagstaff camp when he came through there the other day. The army has moved Harry Kieling up there and Harry and Bill make a grand team to keep a camp well fed and working on its toes.

Don Eggermayer reports a busy time with the hunters around Saguaro during the game season and he had to arrest one party. The CCC camp which has been working in the State Park part of the monument is back in Tucson and work will continue this winter on roads and buildings.

A letter from Tom Charles says he is doing a right good business under his permit at White Sands and is very well satisfied with his first months total. We are very glad to hear it and hope things continue to come Tom's way.

A note from Corky Jones says: "My rug is finished at last, but I don't know whether it deserves an article. I will try to write it up for you though, Boss, when I get a little more time. I had to have Sallie Peshlakai come over for the day to help me finish the last couple of inches."

And here is another extract from the mail bag which is given for the especial benefit of the Brass Hats and Small Fry who object to the stabilization of the floor at Tumacacori: "We did so enjoy our visit to Tumacacori. Mr. Harkins showed us all around through the very much improved museum. It was a real treat to see things in their proper cases, all neat and tidy. Last summer when we were down, some of the exhibits weren't in place, and of course the plaster work around the cases wasn't completo. It was the first time, too, that we had seen the new floor in the mission. You have no idea what a vast improvement it makes in the looks of things, Boss. We stood at the altar end of the church and looked back at the door--you'd be surprised how much more impressive the whole thing is, and what a length and breadth it gives to the brick flooring in position. Aside from just merely the conservation angle, it puts new life and beauty into an already beautiful structure, ruined as its condition is. I think these people who go around giving loud yelps and saying the floor spoils the effect ought to be properly spanked!"

We are glad to have some one agree with us that the job looks all right.

ANNUAL VISITOR STATISTICS - October 1, 1938 to September 30, 1939.

FIELD TRIPS					GUIDED PARTIES BY MONTHS								
MONTH	Number	Attended	Time	Ave. Attd.	Av. Time	Number	Attended	Time	Ave. Attendo.	Ave. Time	Education	Total	Unattended
Oct. 1937	1,114	5,836	49,039	5.2	44.0	559	3,270	12,016	4.5	18.2	9,151	20,459	11,080
Nov. 1937	1,097	5,643	44,374	5.1	40.4	722	3,478	13,227	4.8	18.3	9,033	17,805	11,546
Dec. 1937	1,054	4,539	37,012	4.3	35.1	775	3,227	15,437	4.1	19.9	7,868	11,503	7,012
Jan. 1938	1,274	8,472	51,594	6.6	40.4	736	5,593	16,428	7.5	22.3	14,065	19,191	10,609
Feb. 1938	1,511	8,465	52,381	5.6	34.6	692	4,469	15,148	6.4	21.8	12,934	20,224	11,734
Mar. 1938	1,221	7,237	44,314	5.9	36.2	499	3,812	11,739	7.6	23.5	11,049	16,159	8,214
Apr. 1938	1,591	11,243	70,188	7.0	44.1	880	5,260	19,780	6.0	22.4	15,754	31,720	20,074
May 1938	1,519	7,680	70,293	5.0	46.2	804	4,751	19,253	5.9	23.9	16,032	22,649	10,795
June 1938	1,965	9,267	92,680	4.7	47.1	1,226	5,546	27,015	4.5	22.0	14,813	28,178	17,739
July 1938	1,952	10,252	102,285	5.2	52.4	1,388	8,031	30,500	5.7	21.9	17,359	42,282	30,050
Aug. 1938	2,155	12,422	118,652	5.7	55.0	1,488	8,340	31,767	5.6	21.3	28,981	52,156	28,285
Sept. 1938	2,272	10,298	105,701	4.5	46.5	1,176	5,796	23,287	4.9	19.8	16,068	36,838	26,180
TOT. 1938	18,725	101,344	838,513	5.4	44.7	11,044	61,673	235,597	5.5	21.3	173,107	319,164	143,718
Oct. 1938	1,326	6,711	65,714	5.06	49.5	955	4,774	17,999	4.9	18.8	11,718	21,970	14,679
Nov. 1938	1,172	5,721	48,754	4.8	41.5	828	4,748	13,955	5.7	18.8	10,439	17,320	11,098
Dec. 1938	1,033	5,644	38,012	5.2	36.7	746	4,536	17,646	6.0	23.6	9,945	13,364	7,934
Jan. 1939	1,133	7,230	40,044	6.3	35.3	852	5,991	18,828	7.0	22.0	13,221	18,860	11,350
Feb. 1939	1,097	5,998	34,453	5.4	31.4	851	5,107	18,068	6.0	21.2	11,107	15,261	8,919
Mar. 1939	1,177	6,764	44,120	5.7	37.4	952	5,729	20,925	6.0	21.9	12,493	16,392	9,136
Apr. 1939	1,505	9,638	66,095	6.3	43.9	1,216	8,369	23,078	6.8	18.9	17,977	32,671	21,767
May 1939	1,280	5,634	66,308	4.4	51.8	856	4,087	19,538	4.7	22.8	10,177	16,173	6,611
June 1939	1,738	7,732	88,382	4.4	50.8	837	3,625	18,637	4.3	22.2	11,364	19,137	9,258
July 1939	2,020	10,063	109,772	4.9	55.5	968	4,180	20,049	4.3	20.7	14,875	27,190	16,131
Aug. 1939	2,392	11,383	119,609	4.7	50.0	1,127	5,120	26,477	4.5	23.4	15,691	28,861	17,546
Sept. 1939	1,608	7,574	77,303	4.1	63.0	1,102	4,971	22,549	3.9	36.7	13,333	22,522	12,913
TOTAL 1939	17,481	90,062	798,576	5.1	45.6	11,290	61,237	237,753	5.4	21.0	152,340	249,721	146,342

## ANNUAL VISITOR STATISTICS

OCTOBER 1, 1938 - SEPTEMBER 30, 1939

## Attendance By Months and Monuments

STATION	OCT. 1938	NOV. 1938	DEC. 1938	JAN. 1939	FEB. 1939	MAR. 1939	APR. 1939	MAY 1939	JUNE 1939	JULY 1939	AUG. 1939	SEPT. 1939	TOTAL	LAST YEAR
Arches	55	100	65	50	0	7	400	400	75	166	225	292	1,835	1,448
Aztec Ruins	1,349	962	631	578	328	554	3,648	800	1,068	1,771	1,967	1,532	15,188	20,214
Bandelier	613	275	215	158	79	237	718	894	1,709	2,305	2,547	1,298	11,048	14,619
Canyon de Chelly	131	48	46	46	21	45	182	208	384	358	364	292	2,128	1,573
Capulin Mountain	3,100	1,000	500	400	600	800	1,200	1,800	3,300	7,500	8,000	6,500	34,700	30,200
Casa Grande	2,471	2,818	2,605	3,633	3,217	3,313	3,358	1,081	707	446	592	668	25,109	23,761
Chaco Canyon	403	430	182	76	0	79	503	732	221	427	303	262	3,618	6,271
Chiricahua	484	412	272	456	271	376	1,060	715	1,104	1,221	686	718	7,975	9,145
El Morro	274	115	47	57	0	7	119	167	423	500	771	159	2,735	3,208
Gila Cliff Dwelling	10	0	0	0	0	0	0	10	10	30	20	10	90	105
Gran Quivira	259	70	147	95	10	55	136	192	271	502	48	343	2,518	3,113
Hovenweep	10	0	0	0	0	0	18	0	25	34	48	33	168	168
Montezuma Castle	601	584	425	453	203	604	906	726	793	940	835	691	7,887	10,645
Natural Bridges	91	23	40	0	0	0	2	78	274	198	220	118	1,044	741
Navajo	50	21	6	8	0	8	36	31	65	89	64	57	435	411
Organ Pipe Cact.	500	500	700	700	700	700	840	150	250	500	375	685	7,000	6,200
Pipe Spring	268	237	205	199	150	156	413	173	480	547	305	59	3,192	2,245
Rainbow Bridge	20	0	0	0	0	0	14	10	30	25	35	11	175	222
Saguaro	1,300	1,500	1,500	2,240	2,350	1,500	2,524	1,500	1,100	500	350	1,276	18,000	20,422
Sunset Crater	447	164	0	100	0	28	400	570	1,393	2,540	1,495	1,434	8,779	6,922
Tonto	274	218	220	526	448	640	641	300	230	345	300	218	4,500	4,985
Tumacacori	916	1,375	1,723	2,335	2,294	2,145	4,850	1,416	363	354	260	347	18,388	15,289
Walnut Canyon	964	528	333	251	12	164	814	940	1,892	1,562	2,272	1,118	11,050	13,526
White Sands	6,720	5,760	3,500	6,254	4,461	4,457	9,610	3,000	2,423	3,321	5,406	3,555	58,955	110,805
Wupatki	230	160	0	31	17	76	272	260	353	502	746	443	3,122	2,754
Yucca House	30	20	0	0	0	0	0	0	10	7	12	3	82	172
TOTALS	21,970	17,320	13,364	18,860	15,261	16,392	32,671	16,173	19,137	27,190	28,861	22,522	249,721	315,164
Last Year	20,453	17,305	11,503	19,151	20,324	16,155	31,720	22,645	28,173	42,282	52,156	36,506	315,164	291,426
Two Years Ago	14,859	14,283	13,021	15,577	15,637	19,345	22,719	21,463	23,342	34,791	40,257	28,806	291,426	



# ANNUAL VISITOR STATISTICS

Guided Parties By Monuments

SOUTH-EASTERN NATIONAL MONUMENTS

October 1, 1938 - September 30, 1939

STATION	FIELD TRIPS					MUSEUM TALKS					Inform- ational Contacts	Total Travel
	Number	Attend.	Time	Ave. Attend	Ave. Time	Number	Attend	Time	Ave. Attend	Ave. Time		
Arches	38	141	--	--	--	--	--	--	--	--	--	1,835
Aztec Ruins	1,985	11,151	81,341	5.6	40.9	2,063	11,240	46,465	5.4	22.5	22,394	15,188
Bandelier	1,095	8,200	87,083	7.4	74.9	453	2,364	13,895	5.2	29.3	10,574	11,048
Canyon de Chelly	429	1,645	50,640	3.8	118.0	265	810	5,766	3.0	21.7	2,379	2,128
Capulin Mountain	44	200	--	4.5	--	--	--	--	--	--	--	24,700
Casa Grande	3,339	20,971	125,881	6.2	37.7	2,492	17,773	59,354	7.1	23.8	36,643	25,109
Chaco Canyon	569	1,893	45,395	3.3	79.7	447	1,681	8,344	3.7	18.6	3,811	3,618
Chiricahua	1,080	5,593	58,247	5.1	53.9	5	83	150	16.3	30.0	3,676	7,975
El Morro	551	2,493	31,695	4.5	57.5	31	107	2,560	3.4	23.5	3,600	2,735
Gila Cliff Dw.	--	--	--	--	--	--	--	--	--	--	--	90
Gran Quivira	606	2,493	29,745	4.1	49.0	--	--	--	--	--	2,630	2,518
Hovenweep	--	--	--	--	--	--	--	--	--	--	--	168
Montezuma Castle	1,499	6,666	74,835	4.4	49.9	1,115	4,987	17,573	4.3	15.7	11,553	7,887
Natural Bridges	188	950	14,840	5.0	78.9	7	107	540	15.3	77.1	1,055	1,044
Navajo	121	338	23,729	2.7	196.0	--	--	--	--	--	307	435
Organ Pipe Cact.	--	--	--	--	--	--	--	--	--	--	--	700
Pipe Spring	145	524	4,235	3.6	29.2	59	175	1,560	2.9	26.4	760	3,192
Rainbow Bridge	--	--	--	--	--	--	--	--	--	--	--	175
Saguero	206	1,078	10,834	5.2	29.2	108	704	1,793	6.3	15.6	1,833	18,000
Sunset Crater	--	--	--	--	--	--	--	--	--	--	17	8,779
Tonto	363	1,252	15,197	3.4	41.8	124	392	2,635	3.1	21.2	1,862	4,500
Tumacacori	2,336	14,427	53,270	6.1	22.8	2,443	15,314	50,035	6.2	20.4	29,741	18,388
Tuzigoot	--	--	--	--	--	--	--	--	--	--	--	--
Walnut Canyon	2,233	7,399	65,556	3.3	29.3	1,327	4,094	22,583	3.0	17.0	11,528	11,350
White Sands	231	1,246	4,495	5.3	19.4	351	1,346	5,095	4.4	14.5	2,792	58,955
Wupatki	423	1,400	26,558	3.3	62.7	--	--	--	--	--	1,385	3,122
Yucca House	--	--	--	--	--	--	--	--	--	--	--	82
TOTAL	17,481	90,062	798,576	5.1	45.6	11,290	61,237	237,753	5.4	21.0	152,340	249,721
LAST YEAR	18,725	101,344	838,513	5.4	44.7	11,044	61,373	235,597	5.5	26.3	173,107	319,164

# \$ The Supplement

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# Monthly Report

# SUPPLEMENTAL OBSERVATIONS

CASA GRANDE GLEANINGS

By Don Egermayer

During the last week in August and all through the month of September, the barrel cacti on the monument continued blooming.

Ranger Ed. Alberts reports observing a Western Red Racer, black phase, in the act of swallowing one of the Casa Grande bats, tail foremost. This is the first time this year that such an incident has been reported, although it was seen several times during August a year ago, but all bats seen in this undignified position in the past have been swallowed head-foremost.

On September 5, Ranger Egermayer noted a flight of approximately 100 bats leaving the middle of the east wall issuing from a crack near the north room partition, but coming from the outside of the crack. Investigation disclosed Archeologist Steen, and a large Western Red Racer inside the building. Inasmuch as the snake was in the crack from which the bats were coming, and Steen was not, it is probable that the first conclusion as to the cause of the bats' fright is erroneous. The majority of the bats were seen returning to the building within five minutes, and it was noticeable that the greater number went to a different section of the ruin walls.

During four days of the month, the custodian's office became a hospital for an injured ground squirrel (Citellus tereticaudus arizonae) which had been hit by a car, knocked insensible, but later recovered to the extent that it was kept in an effort to heal up a cut across the head and also an eye injury. After four days of feeding with milk administered with an eye-dropper, and sugar offered on the tip of a finger, the rodent appeared to be about back to normal except for tenderness around the right eye. However, the eye was open, at least part of the time, and the animal clearly had some use of the eye, so he was released at the front of the Administration Building. He promptly selected an abandoned ground squirrel hole and seems to be well contented in his new home. While not exactly tame, he can be approached to within



## SUPPLEMENTAL OBSERVATIONS (CONT.)

### CASA GRANDE GLEANINGS (CONT.)

three or four feet, and does not seem to fear humans unduly. It was rather amusing to note that he lost no time in robbing the food cache of, or from, one of the other nearby occupied holes, and carrying a quantity of Creosote Bush (Larrea tridentata) seeds to his own new residence.

\*\*\*SWNM\*\*\*

### SIFTINGS FROM THE SANDS

From the vicinity of the White Sands comes a story of another blond animal but not, this time, an inhabitant of the sands. Frank Andregg, a sheep rancher who lives in the San Andres Mountains, went into Geronimo Cave with a friend several years ago. Geronimo Cave is a fairly large cave in the limestone well up in the San Andres. Andregg's friend picked up some sort of peculiar rock and started to show it when both men noticed a large white spider on his hand. The spider had a "leg spread" of about two inches. He quickly shook it off. It is quite possible that there are some undescribed species awaiting the biologists in the caves of the San Andres.

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### BIRDS AT MONTEZUMA CASTLE

By Betty Jackson

Birds seen during September on the monument were: Arizona Cardinal, Yellow-billed Cuckoo (feather), Western Mourning Dove, House Finch, Red-shafted Flicker, Desert Sparrow Hawk, Red-tailed Hawk, Hawk sp., Anthony's Green Heron, Treganza Blue Heron, Arizona Jay, Eastern Belted Kingfisher, Western Ruby-crowned Kinglet, Texas Nighthawk, Arizona Hooded Oriole, Western Horned Owl, Black Phoebe, Western Wood Pewee, Gambel Quail, Swallow Sp., Bridled Titmouse, Crissal Thrasher, Canyon Towhee, Turkey Vulture, Cactus Woodpecker, Gila Woodpecker, Baird's Wren, Canyon Wren, Rock Wren.

On September 1 Earl was attracted by the buzzing of a cicada, and saw it fly out of a bush with an Arizona Jay in hot pursuit. Just as the Jay captured it he saw Earl, and was distracted enough so that the cicada got away.

On the 3rd we heard what we thought was a cat miaowing near the house after supper. We stalked it with flashlight and gun, but with no success. Then Earl decided it was a bird, because, though the sound came from under the brush, it didn't "stay put". Also as we listened, the sound became less cat-like, and occasionally turned into a sort of agonized screech. Finally we heard it from a sycamore, turned the beam up, and there sat a Great Horned Owl on a dead branch. It continued the sound while we watched. It was all new to us, but



## SUPPLEMENTAL OBSERVATIONS (CONT.)

### BIRDS AT MONTEZUMA CASTLE (CONT.)

apparently quite familiar to the authors of bird books, who only disagree about the age that the owls should be who make the noise.

The first half of the month one or two Green Herons roosted every night with the quail in the hackberry across the creek.

And speaking of quail, they have been moulting this month, and it is a very ugly condition for birds which are usually so dapper. They are quite self-conscious about it, and don't like to be seen. And I have noticed more places than I ever saw before where they have dusted. Vanity, or comfort?

On the 7th I was glad to welcome back the Canyon Towhee, not seen for two years, and one of the Ruby-crowned Kinglets who have been vacationing elsewhere this summer.

Mourning Doves were still nesting on September 9. Earl flushed one who did the broken-wing act, which usually means young in the nest.

I received an interesting letter from J. J. Hickey of the Hawk and Owl Society, who is taking a census of Duck Hawks. He asked if these birds were still nesting where Dr. Mearns had found them, in "the lowest ruins of the Cliff Dwellers on Beaver Creek". Jesse Jennings (I think) reported seeing one here, but he wasn't dead sure, and I've lost my note on that. I had never seen one to know it. But since the letter I've kept alert, and have seen two birds that might be Duck Hawks. Only they won't allow me within half a mile. One spends a lot of time around the mouth of Beaver Creek at the Verde, the other I saw today disappearing over the cliff below the Lower Ruins. Somebody tell me if this was the Duck Hawk: falcon shape, size correct for any of the three larger ones, tail crossed by six or eight bars as near as I could tell, wings tan or grey underneath, marked with darker, rump noticeably whitish.

The Yellow-billed Cuckoo seems to be back again. I haven't seen him, but heard him once, and found two fresh tail-feathers, with the distinctive "thumb marks", one by the museum, the other about a mile up the creek.

Fall is coming, and several of the summer birds have left us already. Among them are the Mockingbirds, Phainopeplas, and nighthawks. These last left some time during the month, the others were gone before.

### MONTEZUMA MUSINGS

By Earl Jackson

Plants are throwing out a riot of flowers this month, because we had a lot of rain. From the way they are blossoming out now, some of them much later than usual, one would almost think some plants can aestivate during dry months. A list of these blooming plants which we can name, is as follows: Sunflowers, Daisies (several kinds), Water Moody, Mentzelia, Four-o'clock, Gnat Wood, Hog Perseloy, Creosote Bush, Burro Brush, Polanisia, Rocky Mountain Bee

## SUPPLEMENTAL OBSERVATIONS (CONT.)

plant, Mallows, Aster, Anderson's, Aster (a yellow variety), Redroot, Prostrate, Datura Lily, Nightshade, Silverleaf, Snakeweed, Thistle Poppy.

On September 13, in the custodian's house, I saw my first Black Widow spider on this monument. It was an immature specimen, female, but could not be doubted, even though the black color was not yet developed.

Rattlesnakes are still much in evidence. On September 14 a young Northern Black-tailed Rattlesnake was killed in the garage, and on the 20th one was killed in front of the Castle. On September 21 a female Western Diamond Rattlesnake about three feet long was killed on the entrance road.

SWNM

### CHIMINCS FROM THE CHACO

By Carolie McKinney

Several new species were seen here in the Canyon ~~by~~ Carolie McKinney this month. A pair of lark buntings, several small birds believed to be bush-tits, and a group of small song birds, presumably Western Yellow Warblers, were noted. Pinon Jays were seen on three different occasions; their visits in the canyon being quite short each time.

There are a few Gambel Sparrows in evidence, however they not seem to be interested in the bait in the traps. The Green-tailed Towhees are also quite numerous in the canyon at present, and have been repeating in the traps as often as the Canyon Towhees.

I discovered a colony of Broad-tailed Hummingbirds, at least 50 in number, in a small sheltered canyon on the monument. There are several springs under a large projecting rock, and a profuse growth of sumac, Lycium, and wild currant bushes in this canyon. I looked for old nests, but didn't find any.

The few birds banded during the summer follows:

	New	Repeat	Return
Shrikes, White Rumped. . . . .	6	0	0
Towhee, Canyon . . . . .	12	18	1
Towhee, Green-tailed . . . . .	16	14	0
Quail, Arizona Scaled. . . . .	18	23	0
Phoebe, Say . . . . .	1	0	0
Mocking Bird, Western . . . . .	1	0	0
Sparrow, Desert black-throated . . . . .	1	0	0
	55	55	1

SWNM

### BIRD NOTES FROM BANDELIER

By Gordon G. Philp

Having just come from Tonto National Monument and written rather briefly of the bird life therein; having watched the numerous species going about their everyday living and accordingly, having had

## SUPPLEMENTAL OBSERVATIONS (CONT.)

### BIRD NOTES FROM BANDELIER (CONT.)

my trend of bird thoughts bent in the direction of those individuals that inhabited this rather arid region, it is then only natural that Bandelier should rouse sufficient stimulus to prompt the noting of how rigorously most species confine their lives to the environment best suited to their welfare. Bandelier, with its lush green, cool shaded canyons is in such contrast to Tonto's cacti-covered slopes and dry arroyas that an obvious difference is as sure to exist between the fauna of the two respective areas as is so evident between the flora.

Man is perhaps the most able of all animals in coping with a variety of environmental conditions. In the tropics, in the jungle, on the plains and deserts, in the mountains, in the arctic; in fact, few indeed are the places where our kind cannot eke out a living and thrive. We have, through the medium of our highly developed power of reason and ingenuity, learned to fashion countless objects that have aided us immeasurably in the art of living. Were it not for such abilities, we would be advanced but little beyond the countless lower forms of life which surround us.

Man, the world over, is pretty much the same anatomically speaking. An Eskimo doesn't differ greatly from an Arab in so far as appendages and tactile organs are concerned. They are alike in such respects, although their problems of life are opposite extremes, simply because both races fashion tools, etc., and devise means of doing their everyday respective tasks. Though their problems are different, their minds are keen and adeptly guide their hands in countless channels of endeavor. So we see, man, generally speaking, copes with his environment through the medium of his intellectual power, with the results that his anatomical make up is surprisingly similar.

Such comparable similarity between the different orders of birds does not exist, however. Many species have undergone evolutionary changes in order that they might better fit the challenge of their chosen environment. Such evolutionary changes as the size and shape of beak, feet, legs, mouth, tongue and the contour lines of the bird itself have been greatly effected by the conditions under which the problems of food getting must be met. The woodpecker's long chisel-like beak and lengthy, minutely barbed tongue, stiffly spined tail feathers, and short sturdy legs armed with needle sharp claws, differs markedly from, say, the hawk. Although both feed extensively upon animal matter, their methods of acquiring such food are outstandingly different. With his powerful wings and masterful flight control, talons with a vise-like grip, eyes capable of telescopic vision, and a flesh tearing, hooked beak, the hawk, ecologically fits well into his scheme of things. The woodpecker is admirably equipped to cling securely to a tree, brace his body rigidly by means of his heavily ribbed tail feathers, and chisel with all his worth. The Creator has provided him with an extremely tough and heavy skull in order that the beak may be securely anchored and able to withstand the triphammer action it is so often put to. When the burrow of a grub is broken into, the rubber-like tongue shoots into the cavity, often to the extent of two inches or more, the prey is ensnared, retracted and swallowed. The hawk, on

## SUPPLEMENTAL OBSERVATIONS (CONT.)

### BIRD NOTES FROM BANDELIER (CONT.)

the other hand, fits as well into his environment. His food getting appendages are excellently well adapted to their purpose. While hunting, many of this order, falconiformes, are able to tread air and remain for many seconds over a promising looking spot, while keenly alert and remarkably able eyes scan the ground for a sign of movement. When detected, a rushing swoop follows. Upon nearing the victim, legs are extended to their limit, neck and head are lowered preparatory to striking an almost simultaneous blow along with the clutching talons, and the catch is made.

To their particular type of environment through their specialized organs of attack, both birds manage nicely to cope with the problems of everyday living. But neither could effectively exchange with the other. And so it goes--almost as numerous as the orders themselves are the specially adapted birds. The goatsuckers, of which the well-known and common poor-will is a family member, the swifts and swallows, are all aerial feeders and possess broad gaping mounts, ideal insect scoops. The heron with his stilted legs, lancetlike beak, and eyes with a downward tilt is a match for the swiftest of small fry. Wading in the shallows, head poised in death-like stillness, he scans the water through eyes so set that the field of vision below is simultaneous on either side of the head. No need here to cock the head and lose the effectiveness of one hunting eye or the other. The crossbill, whose beak is in just such a shape as his name implies -- crossed at the tip; the snipe with his highly sensitized, almost fleshy bill tip; the merganser or often called saw-bill, with his arrangement of saw-like teeth along the biting surfaces of the upper and lower mandible, all exemplify just how well the Creator has fitted his many offspring to their specific problems of living.

Birds that are voracious eaters and partake of large quantities of food at rather indefinite intervals (hawks, owls, etc.) and birds which habitually feed upon hard substances such as seeds (grouse, pigeons, etc.) possess what is known as a crop or craw. This auxiliary stomach as it might well be called, secretes juices which soften and prepare otherwise indigestible food for the function of the true stomach. From the stomach the food passes into the gizzard, an organ often so closely akin to the stomach itself (where digestive juices are secreted) that the former is only with difficulty distinguished from the latter. In the chicken and most other gallinaceous birds, this gizzard is a heavy muscular organ lined with a callous-like wall of great toughness. This lining is of a corrugated nature and when assisted by tiny rough pebbles which are consciously swallowed by these birds, and the two walls contracted in conflicting directions, a grinding motion results. In rather direct contrast to this type gizzard, is that of the carnivorous birds whose food requires little else to break it down than the reaction of the gastric juices. Here it is not much more than a membranous sack and has no need, through the bird's systematic regime, to be otherwise.

Thus it is quite evident and understandable why the make up of a bird's body is influenced by the specialized life he leads, and why on the other hand, different races of men, often leading lives at ecological extremes are, barring racial characteristics, almost identical in respect to hands, arms, feet, legs, mouth, tongue, etc. An ability



SUPPLEMENTAL OBSERVATIONS (CONT.)

BIRD NOTES FROM BANDELIER (CONT.)

to comprehend his needs and fashion tools to meet them, has kept him strikingly similar in these respects the world over.

The following check list of birds includes only those which I have personally encountered from June 1, 1939, to August 5, 1939. In view of the fact that no opportunity has been available in which to collect cabinet skins and thus infallibly establish identity, only those species not followed by an asterisk (\*) should be considered justifiably correct. Where dates are indicated, the species has been seen only once.

- |   |  |
|---|--|
| 1. Bunting, Lark 8/9/39*                      | 13. Hawk, Sharp-shinned 6/25/39                |
| 2. Bush-tit, Lead colored                     | 14. Hawk, Desert sparrow 7/19/39               |
| 3. Chat, Long-tailed* (heard only)            | 15. Hummingbird, Broad-tailed                  |
| 4. Dove, Western mourning                     | 16. Jay, Long crested                          |
| 5. Flicker, Red-shafted                       | 17. Jay, Pinon                                 |
| 6. Flycatcher, Ash-throated                   | 18. Jay, Woodhouse                             |
| 7. Flycatcher (genus empidonax)*              | 19. Nighthawk, Western*                        |
| 8. Gnatcatcher, Plumbeous*                    | 20. Nuthatch, Pygmy                            |
| 9. Goldfinch, Green-backed                    | 21. Oriole, Bullock(fleeting glimpse)* 8/23/39 |
| 10. Grosbeak, Black-headed                    | 22. Ouzel, Water                               |
| 11. Hawk, Cooper                              | 23. Owl, Mexican spotted                       |
| 12. Hawk, Red-tailed                          | 24. Owl, Western horned                        |
| 25. Pewee, Western wood (heard only)* 8/25/39 |  |
| 26. Phoebe, Say 8/1/39                        |  |
| 27. Pigeon, Band-tailed 6/20/39               |  |
| 28. Raven, American                           |  |
| 29. Robin, Western                            |  |
| 30. Siskin, Pine 8/10/39                      |  |
| 31. Swift, White-throated                     |  |
| 32. Swallow, Violet-green                     |  |
| 33. Tanager, Western                          |  |
| 34. Titmouse, Grey                            |  |
| 35. Turkey, Merriam                           |  |
| 36. Vireo, Western warbling*                  |  |
| 37. Vulture, Turkey                           |  |
| 38. Warbler, Virginia 8/22/39                 |  |
| 37. Vulture, Turkey                           |  |
| 38. Warbler, Virginia 8/22/39                 |  |
| 39. Woodpecker, Rocky Mountain                |  |
| 40. Wren, Canyon                              |  |

## CHIRICAHUA SUMMER FLORA

By Ora M. Clark

The Chiricahua National Monument is situated in the northwest part of the Chiricahua mountains at an elevation ranging from about 5,000 to over 7,000 feet. The drainage is mainly to the westward through the Picket, Bonita, Rhyolite, and Pinery canyons, and their tributaries, into the inland basin known as the Sulphur Springs Valley. A small portion of the northeastern part is drained by the White Tail Canyon and its tributaries into the San Simon Valley to the eastward.

The area comprises nearly 11,000 acres and has a variety of soils and topographical conditions which make for a very varied flora. Most of the area lies in the Transitional life zone with the foothills along the western border reaching into the upper Sonoran.

The entire mountain mass, of which the monument is a part, is completely surrounded by low, semi-arid areas which makes it an island of luxuriant green set in the midst of a hot, semi-desert country. For some reason, perhaps both tectonic and climatic, it is also a biological island. Coming into the area are parts of the biota of the North, South, East and West and species of all these regions, varied to some extent of course, are frequently found.

There is no single or group of publications that cover the area completely and this lack of literature makes a comprehensive and complete study of the area a difficult matter.

This Check List of the Summer Flora is not to be considered complete by any means. The short time it was worked, the lateness of the summer rains, and the early departure of the author at the season when the vegetation is coming into its best are responsible for the incompleteness. The list of trees is believed to be complete, the shrubs fairly so, with a greater number of the herbs, especially the annuals, as yet uncollected and undetermined.

The author has been ably assisted in the collecting by Custodian Frank L. Fish and Enrollees Ray Harden, Jack Chaschin, and Olan Ragsdale. Much assistance in the determination of specimens was rendered by Dean John J. Thorner and Professor Layman Benson of the University of Arizona, for which the Park Service is very grateful.

The List contains 77 families with a total of 197 genera aggregating 333 species. Several genera with an aggregate of 50 or more species have been collected but are undetermined at this time. A total of 446 collections have been made.

Headquarters, Chiricahua National Monument  
Douglas, Arizona. August 31, 1939

SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

PTERIDOPHYTES

1 - Polypodiaceae (Fern Family)

- 1 - *Asplenium trichomanes* - L. (Rock Spleenwort).
- 2 - *Cheilanthes entoni*-Baker. (Eaton's Woolly Lip Fern)
- 3 - *Cheilanthes feci*-Moore. (Lip Fern).
- 4 - *Cheilanthes lindheimeri*-Hook. (Hairy Lip Fern).
- 5 - *Cymnogramme hispida*-Mett. (Copper Fern).
- 6 - *Pellaea intermedia*-Mett. (Cliff-Break Fern).
- 7 - *Pellaea longimucronata*-Eat. (Wirey Cliff Fern).
- 8 - *Pellaea ternifolia* - (Cav) Link. (Cliff Brake).
- 9 - *Pteris aquilina* - L. (Bracken Fern).
- 10 - *Woodsia scopulina*-Eat. (Mountain Woodsia).

2 - Equisetaceae (Horsetail Family)

- 1 - *Equisetum laevigatum*-Br. (Scouring Rush).

3 - Pinaceae (Pine Family).

- 1 - *Cupressus arizonica*-Greene. (Arizona Cypress).
- 2 - *Juniperus monosperma*-Sarg. (White Juniper).
- 3 - *Juniperus pachyphloea*-Torrey. (Checker Bark Juniper).
- 4 - *Pinus apachea*-Sarg. (Apache Pine).
- 5 - *Pinus arizonica*-Engelm. (Arizona Pine).
- 6 - *Pinus cembroides*-Zucc. (Nut Pine).
- 7 - *Pinus edulis*-Engelm. (Pinon Pine).
- 8 - *Pinus leiophylla*. (Chihuahua Pine).
- 9 - *Pseudotsuga taxifolia*-Britt. (Douglas Spruce).

4 - Typhaceae (Cat-Tail Family).

- 1 - *Typha latifolia*-L. (Common Cat-Tail).

5 - Gramineae (Grass Family)

- 1 - *Agrostis hiemalis*-Nutt. (Tickle Grass).
- 2 - *Agrostis verticillata*-Vill. (Bentgrass).
- 3 - *Agropyron arizonicum*-Scribn. (Arizona Cheatgrass).
- 4 - *Aristida longiseta*-Steud. (Dogtown Grass).
- 5 - *Bouteloua hirsuta*-Lag. (Hairy Grama).
- 6 - *Bouteloua rigidiseta*-Steud. (Mesquite Grass).
- 7 - *Bouteloua trifida*-Thurb. (Grama Grass).
- 8 - *Bouteloua uniflora*-Vasey. (One-Flowered Grama).
- 9 - *Bromus pungens*-L. (Canada Brome Grass).
- 10 - *Digitaria sanguinalis*-(L) Scop. (Crabgrass).
- 11 - *Eragrostis intermedia*-Nutt. (Creep Grass).
- 12 - *Koeleria cristata*-(L) Pers. (Koelearis Grass).

SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 13 - Muhlenbergia dubia-Fourn. (Pine Muhly).
- 14 - Muhlenbergia emerslevi-Vasey. (Bullgrass).
- 15 - Muhlenbergia pauciflora-Buckl. (N. Mex. Muhly).
- 16 - Pennisetum bulbosum-H.B.K. (Bulb Pennisetum).
- 17 - Pennisetum obtusum-H.B.K. (Grapevine Mesquite).
- 18 - Piptochaetium fimbriatum-Hitch. (Pineon Rice).
- 19 - Polypogon monspeliensis-(L) Desf. (Annual Beardgrass).
- 20 - Setaria grisebachii-Fourn. (Grisebach Bristlegrass).
- 21 - Setaria viridis-(L) Beauv. (Green Fox-Tail)
- 22 - Sitanion hystrix-Rott. (Smith, Long - bristled wild rye).
- 23 - Stipa emmons-Cov. (Noddinggrass).

6. Cyperaceae (Sedge Family).

- 1 - Eleocharis palustris-R & S (Slender Spike Rush)
- 2 - Fimbristylis capillaris-L (Hair Sedge).
- 3 - Hemieria occidentalis-Gray. (Little Sedge).

7. Commelinaceae (Spiderwort Family).

- 1 - Commelina dianthifolia-DeLile. (Day Flower).
- 2 - Tradescantia pinetorum-Greene. (Spider Lily).

8. Juncaceae (Rush Family)

- 1 - Juncus balticus-Willd. (Wire Rush).
- 2 - Juncus caniculata-Torr. (Slender Rush).
- 3 - Juncus interior-Weig. (inland rush).
- 4 - Juncus longistylus-Torr. (Stream Rush)

9. Liliaceae (Lily Family)

- 1 - Allium cernuum-Roth. (Nodding Wild Onion)
- 2 - Anthericum torreyi-Baker.
- 3 - Asparagus officinalis-L (Common Asparagus).
- 4 - Dasylirion wheeleri-Rots. (Western Dasylirion).
- 5 - Hillia biflora - (Star of Chiricahua)
- 6 - Molina microcarpa-Wats. (Mountain Molina).
- 7 - Smilax stellata-(L) Desf. (Smilax).
- 8 - Yucca elata-Engelm. (Valley Yucca)
- 9 - Yucca shottii-Engelm. (Mountain Yucca).

10. Amaryllidaceae (Amaryllis Family).

- 1 - Agave parryi-Engelm. (Parry's Century Plant).
- 2 - Agave palmeri-Engelm. (Palmer's Century Plant).

11. Orchidaceae (Orchid Family).

- 1 - microstylis monophylla - (L) Lindl. (Adder's Mouth)



SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

12 - Salicaceae (Willow Family)

- 1 - *Populus arizonica*-Sarg. (Arizona Cottonwood)
- 2 - *Salix bonplandiana*-HBK (Silver Leaf Willow).
- 3 - *Salix nigra*-(L) (Black Willow).
- 4 - *Salix taxifolia*-HBK. (Yew Leaved Willow).

13 - Juglandaceae (Walnut Family)

- 1 - *Juglans rupestris* major (Mountain Black Walnut).

14 - Fagaceae (Beech Family).

- 1 - *Quercus arizonica*-Sarg. (Arizona White Oak).
- 2 - *Quercus emoryi*-Torr. (Mexican Black Oak).
- 3 - *Quercus utahensis* (Gambel's Oak).
- 4 - *Quercus hypoleuca*-Engelm. (Silver-Leafed Oak).
- 5 - *Quercus reticulata*-HBK. (Reticulated Oak).
- 6 - *Quercus toumeyi*-Sarg. (Arizona Scrub Oak).
- 7 - *Quercus wilcoxii*-Rydb. (Scrub Maul Oak).

15 - Ulmaceae (Elm Family).

- 1 - *Celtis reticulata*-Torr. (Mountain Hackberry).

16 - Santalaceae (Sandalwood Family).

- 1 - *Comandra unbellata*-(L) Nutt. (Pale Comandra).

17 - Loranthaceae (Mistletoe Family).

- 1 - *Arceuthobium campylopodum*-Engelm. (Lesser Mistletoe).
- 2 - *Phorodendron bolleanum*-Seem, Eichler. (Little Mistletoe).
- 3 - *Phorodendron juniperinum*-Engelm. (Juniper Mistletoe).
- 4 - *Phorodendron orbiculatum*-Engelm. (Oak Mistletoe).

18 - Polygonaceae (Buckwheat Family).

- 1 - *Eriogonum abertianum*-Torr. (Mountain Buckwheat).
- 2 - *Eriogonum pinetorum*-Greene.
- 3 - *Rumex crispus*-L. (Curly Dock).

19. - Chenopodiaceae (Goosefoot Family).

- 1 - *Chenopodium album*-L (Lamb's Quarter).
- 2 - *Salsola pestifer*-A. Nels. (Russian Thistle).

20 - Amaranthaceae (Amaranth Family).

- 1 - *Amaranthus hybridus*-L. (Green Pigweed).

SUPPLEMENTAL OBSERVATIONS (CONT.)

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SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 2 - *Froelichia gracilis*-Moq. (Winter Plumes).
- 3 - *Gomphrena nitidus*-Roth. (White Amaranth).
- 4 - *Gomphrena caespitosa*-Torr.
- 5 - *Guilleminea densa*-Moq.
  
- 21 - *Phytolaccaceae* (Pokeweed Family).
  - 1 - *Phytolacca decudua*-L. (Pokeweed or Ink Berry).
  
- 22 - *Nyctaginaceae* (Four-o'clock Family).
  - 1 - *Allonia melanotricha*-Standl.
  
- 23 - *Aizoaceae* (Carpet-Weed Family).
  - 1 - *Mollugo verticillata*-L (Indian Chickweed).
  
- 24 - *Caryophyllaceae* (Pink Family).
  - 1 - *Arenaria saxosa*-Gray. (Rock Sandwort).
  - 2 - *Silene laciniata*-Cav. (Fire Pink).
  
- 25 - *Portulacaceae* (Purslane Family).
  - 1 - *Portulaca grandiflora*-Book. (portulaca).
  - 2 - *Portulaca lanceolata*-Engelm. (lanceol-leaved Purslane).
  - 3 - *Portulaca oleraceae*-L. (Hog Pursley).
  - 4 - *Portulaca pilosa*-L. (Hairy Portulaca)
  - 5 - *Portulaca retusa*-Engelm.
  - 6 - *Talinum parviflorum*-Nutt. (Rock Moss).
  
- 26 - *Ranunculaceae* (Crowfoot Family).
  - 1 - *Aquilegia elegans*-Greene. (Scarlet Columbine).
  - 2 - *Thalictrum fendleri*-Engelm. (Mountain Rue.).
  
- 27 - *Berberidaceae* (Barberry Family).
  - 1 - *Berberis aquifolium*-Pursh. (Oregon Grape).
  
- 28 - *Papaveraceae* (Poppy Family).
  - 1 - *Argemon platyceras*-Link & Otto. (Prickly Poppy).
  
- 29 - *Fumariaceae* (Fumitory Family).
  - 1 - *Corydalis montana* - Engelm. (Mountain Corydalis).

SUPPLEMENTAL OBSERVATION (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

30 - Cruciferae (Mustard Family).

- 1 - *Erysium asperum*-DC. (Wall Flower).
- 2 - *Lepidium therberi*-Woot. (Peppergrass)
- 3 - *Thelepodium linearifolium*-(Gray) Wats.
- 4 - *Thelepodium micranthum*-(Gray) Wats.

31 - Saxifragaceae (Saxifrage Family).

- 1 - *Fendleralla cymosa*-Greene.
- 2 - *Heuchera perrillifolia*-Nutt
- 3 - *Philadelphaeus nitidus*-A. Nels. (Small Mock Orange).
- 4 - *Philadelphaeus occidentalis*-A. Nels. (Western Mock Orange).

32 - Plantanaceae (PlaneTree Family)

- 1 - *Platanus Wrightii*-Wats. (Western Sycamore).

33 - Rosaceae (Rose Family).

- 1 - *Cercocarpus montanus*-Raf. (Mountain Mahogany).
- 2 - *Cercocarpus paucidentatus*-Britt. (Mountain Mahogany).
- 3 - *Pallugia paradoxa*-Don Endlich. (Apache Plume).
- 4 - *Holidiscua dumosus*-(Nutt\* Hell. (Mountain Cream Bush).
- 5 - *Prunus virens*-Shrive. (Mountain Choke Cherry).
- 6 - *Rosa Fendleri*-Crepin. (Fendler's Rose).
- 7 - *Rubus deliciosus*-James. (False Thimble Berry).

34 - Leguminosae (Pea Family).

- 1 - *Acacia angustissima*-(Mill) Ktze. (Prairie Acacia).
- 2 - *Amorpha fruticosa*-L (Indigo Plant).
- 3 - *Cassia bauhinioides*-Gray. (Plains Cassia)
- 4 - *Cassia chamaecrista*-L. (Partridge Pea).
- 5 - *Clitoria mariana*-L. (Butterfly Pea).
- 6 - *Colognia lommomii*-Gray. (Woods Pear).
- 7 - *Colognia longifolia*-Gray. (Slender Woods Pea).
- 8 - *Crotalaria lupulina*-HBK. (Rattle Box).
- 9 - *Desmanthus cooleyii*-(Eat) Bon & Cav.
- 10 - *Dolicholue texanus*-Vail. (Foothills Pea).
- 11 - *Hoffmannzeggia falcata*-Cav. (Hoffmannsciggia).
- 12 - *Krameria secundiflora*-DC. (Clay Burr).
- 13 - *Lupinus palmeri*-Wats. (Lupine).
- 14 - *Meibomia batocaulis* - (Gray) Kuntz. (Stick-tight).
- 15 - *Mimosa biuncifera*-Benth. (White Mimosa).
- 16 - *Mimosa dysocarpa*-Benth. (Pink Mimosa).
- 17 - *Oxytropis campestris*-DC. (Loco Weed).
- 18 - *Petalostemon candidus*-Michx. (White Prairie Clover).
- 19 - *Petalostemon compactum*-Spreng. Swezy.

SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 20 - *Phaseolus grayanus*-Woot. & Standl. (Gray's Pea).
- 21 - *Phaseolus macropoides*-Gray. (Ground Pea).
- 22 - *Phaseolus rufus*-Benth. (Trailing Pea).
- 23 - *Prosopis juliflora*-DC. (Mesquite).
- 24 - *Psoralea tenuiflora*-Parsh. (Prairie Psoralea).
- 25 - *Robinia neo-mexicana*-Gray. (New Mexico Locust).
- 26 - *Vicia melilotoides*-Woot. & Standl. (Mountain vetch).
  
- 35 - Linaceae (Flax Family).
  - 1 - *Linum lewisii*-Pursh. (Slender Blue Flax).
  - 2 - *Linum neo-mexicana*-Greene. (New Mexico Flax).
  
- 36 - Oxalidaceae (Wood Sorrel Family).
  - 1 - *Oxalis divergens*-Benth. (Mountain Wood Sorrel).
  - 2 - *Oxalis stricta*-L. (Lady Sorrel).
  
- 37 - Geraniaceae (Geranium Family).
  - 1 - *Geranium incisum*-Mutt. (Pink Geranium).
  
- 38 - Zygophyllaceae (Caltrop Family).
  - 1 - *Kallistromia grandiflora*-Torr. (Golden Caltrop).
  - 2 - *Kallistromia parviflora*-Nutt. (Caltrop).
  - 3 - *Tribulus terrestris*-L. (Buffalo Bur )
  
- 39 - Polygalaceae (Milkwort Family).
  - 1 - *Polygala alba*-Mutt. (White Milkwort).
  - 2 - *Polygala puberula* - Gray. (Winged Milkwort).
  - 3 - *Polygala scoparia*-HBK.
  
- 40 - Rutaceae (Rue Family)
  - 1 - *Ptelea trifoliata*-L. (Hop Tree).
  
- 41 - Euphorbiaceae (Spurge Family).
  - 1 - *Acalypha gracilens*-Gray.
  - 2 - *Acalypha lindheimeri*-Muell.
  - 3 - *Euphorbia albamarginata*-Torr. (Milk Purslane.).
  - 4 - *Euphorbia montana*-Engelm. (Mountain Spurge).
  - 5 - *Tragia ramosa*-Torr. (Stinging Nettle).
  
- 42 - Anacardiaceae (Sumac Family).
  - 1 - *Rhus chloriophylla*-Woot. & Standl. (Green Sumac).



SUPPLEMENTAL OBSERVATIONS (CONT.)

FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 2 - *Rhus cismontana*-Green. (Mountain Smoothe Sumack).
- 3 - *Rhus microphylla*-Engelm. (Desert Sumac).
- 4 - *Rhus rydbergii*-Sm. (Poison Oak).
- 5 - *Rhus trilobata*-Nutt (Skunk Brush).
  
- 43 - Celastraceae (Staff-Tree Family).
  - 1 - *Pachystima myrcinites*-Roth. (Mountain Lover).
  
- 44 - Sapindaceae (Soap Berry Family).
  - 1 - *Sapindus drummondii*-Rock & Arn. (Wind China Tree).
  
- 45 - Rhamnaceae (Buckthorn Family).
  - 1 - *Ceanothus fendleri*-Gray. (Mountain Deer Bush)
  - 2 - *Ceanothus greggii*-Gray. (Buckthorn.).
  - 3 - *Rhamnus purshiana*-DC (Western Indian Cherry).
  
- 46 - Vitaceae (Vine Family)
  - 1 - *Vitis arizonica*-Engelm. (Arizona Grape).
  
- 47 - Malvaceae (Mallow Family)
  - 1 - *Sphaeralcea ambigua*-Gray. (Globe Mallow).
  
- 48 - Fouquieriaceae (Kendlewood Family).
  - 1 - *Fouquieria splendens*-Engelm. (Octillo or Coachwhip).
  
- 49 - Violaceae (Violet Family).
  - 1 - *Viola canadensis*-L (Canada Violet)
  
- 50 - Loasaceae (Loss Family).
  - 1 - *Mentzelia multiflora*-Gray (Stick Leaf).
  
- 51 - Cactaceae (Cactus Family).
  - 1 - *Coryphantha aggregata* - (Engl). Britt & Rose.
  - 2 - *Echinocereus fendleri*-Engelm. (Hedge Hog Cactus)
  - 3 - *Echinocereus rigidissimus*-(Engel) Rose. (Rainbow Cactus)
  - 4 - *Echinocereus rosei*-Woot & Standl. (Rose Cactus)
  - 5 - *Opuntia chloratica*-Engelm. (Green Nopal).
  - 6 - *Opuntia delicata*-Ross.
  - 7 - *Opuntia engelmannii*-Salm-Dyck. (Nopal).
  - 8 - *Opuntia phaeacantha*-Engelm. (Prickly Pear)

SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 9 - *Opuntia Spinosia* - Tounaey (Cholla)
- 52 - *Lythraceae* (Loosestrife Family).
- 1 - *Lythrum linears* - L (Slender Loosestrife).
- 53 - *Onagraceae* (Evening Primrose Family).
- 1 - *Epilobium adenocaulon* - Hauesk. (Willow Herb).  
2 - *Gaura parviflora*-Torr.  
3 - *Gaura suffulta*-Engelm.  
4 - *Oenothera hartwegi*-Benth. (Evening Primrose).  
5 - *Oenothera hookerii* - T & G (Large Evening Primrose)  
6 - *Zeuschneria Arizonica*, Dav.
- 54 - *Umbelliferae* (Parsley Family).
- 1 - *Pseudocymopterus Montanus* - (Gray) Col & Rose.  
2 - *Pseudocymopterus tenuifolius*-Gray Rydb.
- 55 - *Garryaceae* (silk tassel Family).
- 1 - *Garrya Wrightii*-Torr. (Silk Tassel)
- 56 - *Ericaceae* (Heath Family).
- 1 - *Arbutus arizonica*-Sarg. (Arizona Madrone)  
2 - *Arctostaphylos Pringlei*-Parry. (Manzanita).  
3 - *Arctostaphylos Pungens*-HBK (Manzanita).
- 57 - *Primulaceae* (Primrose Family)
- 1 - *Anagallis arvensis*-L (Poor Man's Scather Glass).
- 58 - *Cleaceae* (Olive Family).
- 1 - *Fraxinus standleyi*-Rehd. (Canyon Ash).  
2 - *Fraxinus valutina*-Parr. (Mountain Ash).
- 59 - *Gentianaceae* (Gentian Family)
- 1 - *Centurium arizonica*-Gray. (Arizona Prairie Pink)  
2 - *Frasera speciosa*-Grisb. (Frasera).
- 60 - *Apocynaceae* (Dogbane Family).
- 1 - *Apocynum androsimifolium*-L. (Indian Hemp).
- 61 - *Asclepiadaceae* (Milkweed Family).
- 1 - *Asclepias galicoides*-HBK. (Slender Milkweed).

SUPPLEMENTAL OBSERVATIONS (CONT)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 2 - *Asclepias mexicana*-Cav. (Whorled Milkweed).
  - 3 - *Asclepias quinquedentata*-Gray.
  - 4 - *Asclepias tuberosa*-L. (Butterfly Weed).
  - 5 - *Philibertia crispa*-Benth. (Vining Milkweed).
- 62 - Convolvulaceae (Morning-Glory Family).
- 1 - *Evolvulus sericeus* - Swartz.
  - 2 - *Ipomoea hederifolia* - L. (Rock Morning-Glory).
  - 3 - *Ipomoea hederacea*-Jacq. (Morning-Glory).
- 63 - Polemoniaceae (Phlox Family).
- 1 - *Gilia macombii*-Torr. (Blue Gilia).
- 64 - Hydrophyllaceae (Waterleaf Family).
- 1 - *Nema hispidum*-Gray. (Hispid Nema.)
- 65 - Boraginaceae (Borage Family).
- 1 - *Lappula subdecumbens*- (Parry) A. Nels. (Forget-me-not).
  - 2 - *Lithospermum cobrense*-Greene. (Puccoon).
  - 3 - *Lithospermum multiflorum*-Torr. (Many-Flowered Puccoon.)
- 66 - Verbenaceae (Verbena Family).
- 1 - *Verbena bipinnatifida*-Nutt. (Prairie Verbena)
  - 2 - *Verbena bracteosa*-Michx. (Ground Verbena)
  - 3 - *Verbena remota*-Benth.
  - 4 - *Verbena officinalis* - L. (European Vervain).
- 67 - Labiatae (Mint Family).
- 1 - *Agastache urticifolia*-Benth) Ktze. (Hyssop).
  - 2 - *Hedeoma dentata* Torr. (Mock Pennyroyal).
  - 3 - *Hedeoma hyssopifolia* - Gray. (Mock Pennyroyal).
  - 4 - *Marubium vulgare*-L. (Common Horehound).
  - 5 - *Monarda menthaefolia*-Graham. (Western Wild Bergamot).
  - 6 - *Monarda tenuiristata*-(Gray) Sm. (Horse Mint).
  - 7 - *Nepta cataria*-L. (Catnip).
  - 8 - *Salvia coccinea*-L. (Scarlet Sage).
  - 9 - *Salvia Lemmonii*-Gray. (Lemmon's Sage).
  - 10 - *Salvia subincisa* - Benth.
- 68 - Solanaceae (Nightshade Family).
- 1 - *Datura meteloides*-DC. (Thorn Apple).
  - 2 - *Solanum elaeagnifolium*-Cav. (White Horse Nettle).

SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT)

- 3 - *Solanum fendleri*-Gray. (Wild Potato).
- 4 - *Solanum heterodexum*-Dunal. (Bull Nettle).
- 5 - *Solanum jamesii*-Torr. (Wild Potato).
- 6 - *Solanum nigrum*-L. (Deadly Nightshade).
- 7 - *Solanum rostratum*-Dunal. (Buffalo Burr).

69 - Scrophulariaceae (Figwort Family)

- 1 - *Castilleja lanata*-Gray. (Indian Paintbrush).
- 2 - *Maurandia wislizeni*-Engelm. (Vining Pentstemon).
- 3 - *Pentstemon barbatus*-Mutt. (Scarlet Beardtongue).
- 4 - *Pentstemon linarioides*-Gray. (Slender Pentstemon).
- 5 - *Pentstemon pinifolius*-Greene. (Pine Leaved Pentstemon).
- 6 - *Pentstemon pseudospectabilis*-Jones. (Pink Beardtongue).
- 7 - *Scrophularia occidentalis* - (Fydb) Eickm. (Mountain Bee Balm).
- 8 - *Verbascum blattellae*-L. (Moth Mullein).
- 9 - *Verbascum thassus*-L. (Common Mullein).

70 - Bignoniaceae (Bignonia Family).

- 1 - *Chilopsis linearis*-DC. (Desert Willow).

71 - Martyniaceae (Martynia).

- 1 - *Martynia proboscidea* - Glox. (Unicorn Plant).

72 - Acanthaceae (Acanthus Family).

- 1 *Calophanes linearis* - 'T & G) Gray.

73 - Plantaginaceae (Plantain Family).

- 1 - *Plantago major*-L. (Great Plantain).

74 - Rubiaceae (Madder Family).

- 1 - *Bouvardia glaberrima*- Engelm. (Bouvardia).
- 2 - *Diodia teres*-Walt. (Barren Soil Reed).
- 3 - *Galium aprine*-L. (Bedstraw).
- 4 - *Galium coloradense*-Wright. (Colorado Bedstraw).
- 5 - *Galium fendleri*-Gray. (Slender Bedstraw).
- 6 - *Galium microphyllum*-Gray. (Small-leaved Bedstraw).
- 7 - *Houstonia wrightii*-Gray. (Western Houstonia).

75 - Caprifoliaceae (Honeysuckle Family).

- 1 - *Lonicera ciliosa*-Pursh. (Mountain Honeysuckle).



SUPPLEMENTAL OBSERVATIONS (CONT.)

SUMMER FLORA CHECK LIST AT CHIRICAHUA (CONT.)

- 2 - *Cucurbita foetidissima*-HBK. (Poited Wild Gourd).
- 3 - *Cucurbita palmata*-Wats. (Palm-leaved Gourd).

77 - Compositas (Composite)

- 1 - *Artemisia canadense*-Michx. (Canada Sage Brush).
- 2 - *Artemisia vulgaris*-L. (Common Mugwort).
- 3 - *Aster Bigelovii*-Gray. (Woods Aster).
- 4 - *Aster ericaefolius*-Torr. (Heath-Leaved Aster).
- 5 - *Baccharis glutinosa*-Pers. (Arrow Weed).
- 6 - *Baccharis thurberianae*-HBK. (Mountain Mulefat).
- 7 - *Bahia dissecta*-(Gray) Britt.
- 8 - *Berlandiera lyrata*-Benth. (Compass Plant).
- 9 - *Centaurea mollis*-L. (Mope Thistle).
- 10 - *Chrysopsis resinolens*-A. Nels. (Tar Weed).
- 11 - *Cirsium Rothrockii*-Gray. (Canyon Thistle).
- 12 - *Erigeron canadensis*-L. (Bale Tail).
- 13 - *Erigeron Divergens*-T.&G.
- 14 - *Erigeron flagellaris* (Trailin' Fleabane).
- 15 - *Erigeron macranthus*-Nutt. (Large Flowered Fleabane).
- 16 - *Erigeron Neo-mexicana*-Gray. (New Mexico Fleabane.).
- 17 - *Eupatorium fendleri*-Gray. (Mountain Boneset).
- 18 - *Gnaphalium wrightii*-Gray. (Cud Weed).
- 19 - *Gutierrezia longifolia*-Greene. (Hitch Wood).
- 20 - *Gymnosperma corymbosa*-DC.
- 21 - *Haplopappus gracilis*-Nutt. & Gray.
- 22 - *Heterotheca subaxillaris* - (Lam) Britt. (False Aster).
- 23 - *Hymenoxys barchynactis*-Woot. & Standl.
- 24 - *Kuhnia rosmarinifolia*-Benth. (Mountain Boneset).
- 25 - *Lactuca scariola*-L. (Prickly Lettuce).
- 26 - *Laphamia reamoni*-Gray (Reel Lover).
- 27 - *Sanvitalia abertii*-Gray
- 28 - *Senecio douglasii*-LC. (Shrubby Senecio).
- 29 - *Solidago arizonica*-Gray) Woot & Standl.
- 30 - *Solidago elongata*-Nutt. (Goldenrod).
- 31 - *Verbesina exauriculata*-Rob. & Greene. (Western Grownbeard).
- 32 - *Villanova dissecta* - (Gray) Rydb.
- 33 - *Xanthium canadense* - Mill (Common Cocklebur).
- 34 - *Zinnia grandiflora*-Nutt. (Large-Flowered Zinnia)

\*\*\*G.M.\*\*\*

# RUMINATIONS

On the matter of comparisons  
By The Boss

Here's a request for information which has drifted in from some very good park service friends and has set us to ruminating. The request runs as follows:

"We need some information badly, as we are sadly confused and somewhat mystified. Here is how 'tis. When we were in Death Valley we were solemnly assured that it was the 'finest monument in the country'. The Boulder Dam Recreational Area, we found out, was equally, 'The finest area of its kind in the system'. The Grand Canyon is, and this, we are assured, is the Gospel Truth, 'The finest park in the National Park Service'. No foolin! By the time we get through visiting the Southwestern Monuments we plan to see this year, you can readily see the condition we will be in; ready picking for any alienist. What would you suggest?"

Far be it from us to suggest that somebody is lying, though that dark thought may ooze up out of the swamp of doubt as you go from place to place in the Southwest and hear the chant of that refrain.

We might point out that Guy Edwards and his trusty men are exempted from this general charge and stand forth as honest men, tried and tested in the fire of truth, for, their's being the only Recreational Area in our system, they just naturally must have the best.

As to the rest of them; bear with them as they climb up on the highest post in their respective barnyards, flap their wings and lustily crow that the sun rises finer over each of their respective fences. After they get well seasoned in the Service and get shifted around to four or five different monuments, like some of our more case hardened veterans of the Southwestern Monuments, they will be afraid to flap their wings at all for fear they will cackle.

Of course it is entirely without question, Ruth and Millard, as you go around the Southwestern Monuments this summer, that you might hear, here and there, spoken in a low tone and not above a whisper, that the individual addressing you has a monument under his charge which is about sixteen grades above the average, but he will scarcely ever brag about it except in his waking hours, and then only when he is not eating. We wish you would note how modest all our men are about this particular matter and also how the Honorary Custodians and Rangers Without Pay back them up in it.

In general there is no more comparison between good parks and good monuments than there is between good jewels and good books, yet you may constantly hear of attempts being made at such comparisons. I have spoken elsewhere of the beautiful lady who stood beside me on the rim of the Grand Canyon and made the comparison with another unit in our Service. Sweeping that breath-taking view from east to west and back again through her lorgnette, she remarked it was so strange that there was not a single geyser in it! That is about the net result of an individual trying to compare two parks.

I did, however, once get a fine comparison of two parks from an unexpected source over in the Zion country.

Dave and I had been out together for two or three days. He was a horse wrangler in those days in Zion; had been born and raised near the mouth of the Canyon and loved it with almost the pride of personal possession.

## RUMINATIONS (CONT.)

session. As we were coming down that west trail the last evening we were to spend together, with all that beauty and glory spread out before us, I felt we were good enough friends to say, "Dave, I know how you must love this canyon after you have lived and worked here in it. You tell me you have been in the Grand Canyon too with many parties, yet you don't explain about it as you do about Zion. Tell me, why is that; what is the difference to you between them?"

"Why", he said, "That's easy. Zion Canyon is man's size and the Grand Canyon is God's size!"

And what, my Lords and Ladies, straight from the mouth of a Mormon lad raised in Little Dixie, who loved both canyons and figured them out as he rode them, comes just as near being a perfect comparison as any polished writer ever wrote in a goodly sized chapter.

I am also reminded of that comparison problem in the Southwest which I have never been able to solve; why is it that the Carlsbad Caverns practically never fail to register on a visitor, whereas the Grand Canyon fails on a fairly large percentage? Crack that nut if you can.

Of course in this matter of comparisons, I don't dare have any preferences or make any comparisons as I go about among the Southwestern National Monuments; I wouldn't be able to go back if I didn't admit that each one was the finest of its kind in the whole Park Service, and, on the whole, I am inclined to believe that it is true!

Maybe these fellows are right after all; maybe that is the final conclusion to come to; maybe this fall, Ruth and Millard, you will be agreeing with all of them.

*The Boss*