BibKey
16519

BIOLOGICAL SURVEY REPORTS

VERDE VALLEY

1916

Walter P. Taylor & Hartley H.T. Jackson

Sections:

Verde Valley Physiography				Jackson		5 pp.
Camp Verde & Montezuma Well			Mammals	"	July 11-Aug. 10	8 pp.
"	"	"	"	Taylor	July 11-Aug. 9	17 pp.
"	"	"	Birds	Jackson	July 11-Aug. 10	15 pp.
"	"	"	"	Taylor	July 11-Aug. 9	23 pp.

[Copied from reports loaned March 7, 1958 by John W. Aldrich, Staff Specialist, Zoogeography, Branch of Wildlife Research, Fish and Wildlife Service, Washington, D.C.]

Montezuma Castle Nat'l Monument,
Camp Verde Arizona.

ARIZONA: Verde Valley (Camp Verde, Montezuma Well and Clarkdale).

Physiography: July 11-August 11, 1916

Hartley H. T. Jackson.

Itinerary

We left Fort Whipple, Arizona, the morning of July 11, 1916, in an automobile for Camp Verde, Arizona. The road leads through a rolling country slightly south or east to Dewey, Arizona, thence slightly north of east to Cherry Creek, then down the southeast slope of the south end of the Black Hills to Camp Verde. Camp was made the afternoon of July 11 about 1½ miles north of Camp Verde, on Beaver Creek about ½ mile above its mouth. Work was conducted here until the morning of July 20 when we moved by auto through Camp Verde to Bell's Ranch, 3 miles southeast of Camp Verde, and on the east side of the river. Work was continued at Bell's Ranch until July 31. On that date we again moved camp going by auto to Montezuma Well, 12 miles northeast of Camp Verde. Camp was made on Wet Beaver Creek, about 1½ miles above the well, and about ¼ mile upstream from Robert Finnie's ranch house. Work was continued from here as a base until the morning of August 10, when we left by auto for Clarkdale, following the Flagstaff road back to Camp Verde, and from there up the Verde Valley, 25 miles to a point 1½ miles northeast of Clarkdale, where camp was made the afternoon of August 10.

General Features

The Verde Valley in the section studied is enclosed on the west by the Black Hills and their southerly extension the Verde Range, and on the east by the foothills of the Mogollon Plateau. Many of the creeks draining the Mogollon Plateau flow westerly into the Verde River, amont the more important being Clear Creek, Oak Creek, Sycamore Creek, and Beaver Creek. The drainage from the Black Hills and Verde Range is largely through washes, the distance between the river and the summits of these ranges being too short and the drainage too abrupt for permanent streams in a poorly watered country. The Black Hills are of granitic structure with a basal formation of limestone. The general formation of essentially all hills and mesas throughout this portion of the valley is limestone,--a soft, chalk-like limestone, easily weathered and often forming lime (calcium oxide), which reunites with water, imbedding stones therein, into a mortar-like substance. This formation is frequently seen mixed in sections in limestone cliffs, particularly in the region near Montezuma Well. The Verde Valley itself covers a river plain which has in most places a deep fertile soil, which when irrigated is capable of producing good crops of alfalfa and fruit. The fertile section of the plain varies in width from a few rods to 3 or 4 miles (near Bell's Ranch), the actual valley varying in width, but averaging some 15 miles, including the section between the base of the Mogollons and the base of Black Hills. Between the Verde River and the base of the Mogollon Plateau the country is much broken by mesas: west of the river, however, the talus slope of the Black Hills and Verde Range extend well towards the river. The slopes and mesas are very scantily clothed with vegetation, and it is only on the low flats and immediately along streams that any extensive growth is formed, and even there it is only in patches,--mesquite-catclaw type on the flats, cottonwood-sycamore type along streams.

The altitude of Camp Verde is approximately 3,200 feet. Montezuma Well, which lies near Wet Beaver Creek about 12 miles northeast of Camp Verde is some 400 feet higher. The well is situated on the crest of mesa near the edge of the canyon occupied by Wet Beaver Creek. The well is about 100 feet higher than the mesa, and is of limestone-sink formation, set in a sink the limestone walls of which stand some 60 to 75 feet above the water-surface in the lake. The lake as well is about 300 feet in diameter, nearly circular, and although reported "bottomless," its structure is such that the water in it is probably about 75 feet deep. The outlet is a small stream which passes through a cave on the east side of the well, and is now run into an irrigation ditch, as it was formerly by the ancient cliff-dwellers. The banks of the lake-basin have a vegetative growth in keeping with the species characteristic of the region as a whole. Cattails, rushes, and Potomegeton (27) grow along the edge of the lake, and on shore grew Baccharis emoryi (50) and Thelypodium wrightii (53), the latter observed in no other place in this region.

Life Zones

Upper Sonoran Zone

Passing from Prescott to Camp Verde, by way of the Dewey, the Upper Sonoran Zone is seen to cover the entire area along the road to a point within 5 miles of Camp Verde, and at an altitude of about 4,000 on northeast slopes. This zone in general occupies the southwest side of the Verde at about 4,000 feet and approaches the river at distances varying from 2 to 5 miles. The Upper Sonoran Zone covers the steep slope (southwest) of the

Mogollon "Rim", and extends back on the "Rim" at distances of from 4 to 8 miles. It also is in considerable evidence on mesas as low as 3,800 feet in the vicinity of Montezuma Well, and on north slopes at 4,000 and summits at about 4,500, there is a strong and predominant element of it, in the form of scrub oaks and juniper.

Another element of Upper Sonoran extends down the valleys in the bottoms of rivers and creeks as low as 3,200 feet; this element is the ash-cottonwood-sycamore type.

Characteristic plants of this zone are: Juniperus monosperma, Pinus monophylla (Black Range), Pinus edulis (Black Range), Juglans major, Plantanus wrighti, Populus wislizeni, Salix nigra, Alnus oblongifolia (Wet Beaver Creek, near Montezuma Well), Negundo interius, Fraxinus attenuata, Celtis reticulata, Schmaltzia trilobata, Schmaltzia pumila, Vitis arizonica, and Nolina microcarpa.

Mammals of this zone include Peromyscus truei (Montezuma Well), Cynomys ludovicianus arizonensis (observed only near Dewey, west of Black Hills, and not in Verde Valley. Reported to occur locally on Verde Valley side of range), and Eutamias dorsalis.

Characteristic birds include Aphelocoma woodhousei, Pipilo fuscus mesoleucus, Salpinctes obsoletus obsoletus, Baeolophus wollweberi, and Psaltriparus plumbeus.

Lower Sonoran Zone

The Lower Sonoran Zone covers the entire area occupied by the Verde Valley proper, extending 2 to 5 miles from the river towards the southwest, and on the opposite side of the river extending 10 to 15 miles towards the northeast. It occupies in general all south slopes up to about 4,800 feet, summits up to 4,400 or 4,500 feet, and north slopes up to 4,000 or 4,200 feet. This zone extends north up the valley and is well-characterized as far as Clarkdale.

Characteristic plants of the Lower Sonoran Zone include: Covillea glutinosa, Prosopis velutina, Strombocarpa pubescens (48), Acacia constricta, Acacia greggi, Zizyphus lycioides canescens, Chilopsis linearis, Berberis trifoliolata, Hymenoclea monogyra, Gutierrezia glomerella, Peritoma luteum (46), Yucca elata (47) (photo), Atriplex canescens (45). (45), and Condalia spathulata (44).

Among the characteristic mammals are Ammospermophilus harrisi 490-91, Onychomys 186-87, Fiber zibethicus pallidus, Perodipus ordi chapmani, Sigmodon hispidus arizonae and Lepus californicus eremicus.

Representative birds include: Lophortyx gambeli, Melopelia asiatica trudeaui, Chaemepelia passerina pallescens, Geococcyx californianus, Centurus uropygialis, Colaptes chrysoides mearnsi, Chordeiles acutipennis texensis, Calypte costae, Tyrannus verticalis, Icterus cucullantus nelsoni, Amphispiza bilineata deserticola, Melospiza melodia saltonis (147), Cardinalis cardinalis superbus, Guiraca caerulea lazula, Piranga rubra cooperi, Lanius ludovicianus excubitorides, Vermivora luciae and Toxostoma curvirostre palmeri.

Montezuma Castle Nat'l Monument,
Camp Verde Arizona.

ARIZONA: Camp Verde and Montezuma Well July 11-August 10, 1916

Hartley H. T. Jackson

MAMMALS:

Odocoileus hemionus Mule Deer

Reported to have been numerous in the foothills of the Mogollons some 20 years ago and previous thereto. Now rarely seen below the Mogollon Plateau. Antlers of bucks killed among the hills near the foot of the plateau were seen at Bell's Ranch and Finnie's Ranch.

Antilocapra americana Antelope

Mr. Don Bell tells me that an antelope was seen on their ranch (3 miles southeast of Camp Verde) in January 1916. He reports that they occur more frequently in winter farther (25 miles) up the Verde Valley.

Eutamias dorsalis Cliff Chipmunk

Common, but very wild, in the brush along hillsides and canyons in the vicinity of Montezuma Well. They seemed to be confined to no particular timber though apparently preferring mixed groves. They were observed on several occasions feeding upon mesquite beans, and on two occasions were noted feeding upon walnuts (Juglans major). (542-544; 553)

Citellus grammurus grammurus Ground Squirrel (Rock Squirrel?)

This species was common at all places visited, and at Montezuma Well was abundant. Near Bell's Ranch, 3 miles southeast of Camp Verde, they were living under mesquite trees, where they had their burrows, on a mesquite plain. Another family at Bell's Ranch inhabited a hay shed filled with straw, in which they made burrows, and upon which they were observed to feed. Near the mouth of Beaver Creek they were seen only in rocky canyons, and were particularly plentiful around cliff dwellings. They occurred in normal situations at Montezuma Well, around rocky and brushy hillsides, and were very abundant, and destructive to crops. Several were observed climbing in mesquite trees and feeding upon mesquite beans (August 4, 6-7). (468, 530, 539, 548-549)

Ammospermophilus harrisi Harris's ground squirrel

Harris's ground squirrel was frequently seen on the mesquite flats near the mouth of Beaver Creek. At Bell's Ranch, 3 miles southeast of Camp Verde, they were abundant. They were seen regularly near Montezuma Well, but were less abundant there than at Bell's Ranch or Beaver Creek.

Cynomys gunnisoni zuniensis Prairie dog

Prairie dogs are numerous in the vicinity of Dewey (between Prescott and Camp Verde) where numbers were seen, July 11. A very small colony is reported on the west side of the Verde River, not far from Camp Verde.

Castor canadensis frondator Beaver

Beavers are reported to occur on the Verde River near the mouth of Oak Creek, about 18 miles above Camp Verde. Another colony is reported to occur on the Verde River some 25 miles below Camp Verde. They are said to have been formerly common on Beaver Creek, but to have been exterminated by ranchers on account of their damage to crops through interference with irrigation.

Mus musculus House mouse

Three or four house mice were caught (not saved) near Bell's Ranch, 3 miles southeast of Camp Verde. One was caught along a road near Finnie's Ranch (Montezuma Well), August 4.

Onychomys _____ Grasshopper Mouse

This species was apparently moderately common on a mesquite flat near Bell's Ranch, 3 miles southeast of Camp Verde. None was taken near Montezuma Well, and only one (463) near the mouth of Beaver Creek. (463, 486-487, 497, 499, 506-507, 515, 522)

Peromyscus truei Piñon Mouse

A single specimen (559) was trapped under oak brush in a wash near Montezuma Well, August 6.

Peromyscus _____ white-footed mouse

A miscellaneous lot of Peromyscus collected in the Verde Valley contain two or three forms impossible to separate in the field. Some of these were trapped under brush along the river but the majority were taken among rocks and brush along hills and canyons. (464-466; 469, 476-477, 4820483, 533, 535, 538, 551-552, 558-559, 568-575, 582-583)

Sigmodon hispidus arizonas Arizona Cotton Rat

Sigmodons were found both near Bell's Ranch, 3 miles southeast of Camp Verde, and near the mouth of Beaver Creek. They made rather indistinct runways through grass and weeds in moist places, in which places most of the specimens were collected. Several were trapped in runway sets with unbaited traps, and others apparently were not attracted by the bait, probably due to their preference for green vegetation. Several, however, partook of oatmeal and walnut meat with which traps were baited.

Neotoma albigula Whitethroat Woodrat

Not abundant at any localities visited. Found principally among rocks along hillsides overgrown with Thamnosma montana, or Opuntia. They were more abundant in the vicinity of Montezuma Well than near the mouth of Beaver Creek, or at Bell's Ranch, 3 miles southeast of Camp Verde.

Fiber zibethicus pallidus Muskrat

In the vicinity of Camp Verde and the Verde River, muskrats were found sparingly inhabiting the irrigation ditches. They were said to have formerly inhabited a slough across the river from Camp Verde, but a visit to the place showed that the slough had been filled with sand and debris from the high water of February 1916. The muskrats had habits typical of the species in the west, digging holes along the irrigation ditches, and showing greatest activity in the mornings and evenings, being crepuscular in habit. At Montezuma Well they were frequently seen, even late in the morning (9 a.m.), but under protection from direct sun rays by the walls surrounding the lake. They were observed here to feed largely upon Potomogeton. Others fed in the bushes over the water's edge, eating Baccharia glutinosa leaves and twigs. (495-496, 505, 531-532)

Thomomys fulvus Pocket Gopher

Common in the Verde Valley being particularly numerous in alfalfa fields. Reported to do damage to sweetpotatoes at Bell's Ranch, where gophers are very abundant. A few were located in the alfalfa fields at MontezumaWell, but they are much less numerous there than along the Verde River. (472, 484-485, 498, 503-504, 518, 529)

(Dipodomyd)

Perodipus ordii chapmani Chapman kangaroo rat

This species was found in few numbers near our camp near the mouth of Beaver Creek, but occurred more plentifully in the vicinity of Bell's Ranch, 3 miles southeast of Camp Verde. The majority of specimens collected were trapped under Prosopis and Acacia. (470, 478, 488-489, 492-494, 500-502, 508-511, 516-517, 519-521, 523-526)

Perognathus _____ Pocket mouse

A few specimens were trapped along a rocky, brushy hillside at Montezuma Well. (540, 550, 566-567)

Erethizon epixanthum couesi Porcupine

Signs (foeci) of porcupines were seen among the rocks at Montezuma Well, August 6 and 8.

Lepus californicus eremicua Jack rabbit

Jack rabbits were frequently seen near Bell's Ranch, 3 miles southeast of Camp Verde, where they are reported to do considerable damage to growing corn (July 21-30). They are less abundant near the mouth of Beaver Creek, and at Montezuma Well.

Sylvilagus auduboni arizonae Arizona Cottontail

Moderately common at all points, but not occurring in the immense numbers sometimes prevalent in Lower Sonoran Zone. Near mouth of Beaver Creek, July 11-20; near Bell's Ranch, 3 miles southeast of Camp Verde, July 21-31; near Montezuma Well, August 1-9. (475)

Mephitis b. varians skunk

Frequent signs--tracks, foeces, and odor--of skunks were encountered at Bell's Ranch, 3 miles southeast of Camp Verde, and near the mouth of Beaver Creek. The animals seemed to prefer the vicinity of water, most signs being noted along the river and Beaver Creek, or along ditches. Less plentiful near Montezuma Well. A young female with developed mammae was caught in a Schuyler rat trap set for Sigmodon in a patch of weeds along an irrigation ditch, July 17. (471)

Procyon lotor pallidus raccoon

Tracks of raccoons were occasionally observed near the mouth of Beaver Creek, and along Wet Beaver Creek near Montezuma Well. Several were reported killed during the last winter (1915-16) near Montezuma Well.

Myotis (557) lucifugus type Little Brown Bat

A single specimen was shot in a sycamore grove near Montezuma Castle, August 5.

Myotis incautus San Antonio Little Brown Bat

Two specimens of this species were shot among sycamores along Wet Beaver Creek, near Montezuma Well. (534, 581)

Pipistrellus hesperus Canyon Bat

Common at all places: near mouth of Beaver Creek, July 11-19; near Bell's Ranch, 3 miles southeast of Camp Verde, July 20-30; near Montezuma Well, August 1-9. The earliest bat to fly in the evening, at first flying high over the trees, but later descending among the trees and over the brush. (563-565)

Eptesicus fuscus Common Brown Bat

This bat was seen flying near the mouth of Beaver Creek the evenings of July 12, 17-19, and on Wet Beaver Creek, above Montezuma Well, the evenings of August 7 and 8.

Nycteris borealis teliotis Western Red Bat

A single specimen of this bat was shot in a sycamore grove on Wet Beaver Creek above Montezuma Well, August 6. It is reported to occur quite frequently in the orchards near Montezuma Well. (562)

Corynorhinus megalotis pallescens Pallid Lump-nosed Bat

Common in the cave at the east side of Montezuma Well, where there were probably 25 or 30 bats. During the day until about 3 p.m. they occupied crevices in the interior dark parts of the cave. Late in the afternoon they hung head downward from the ceiling of the cave in the partially lighted section near the entrance. They were unusually wild and would retire to the deeper parts of the cave upon the slightest noise or shadow (545-546, 555-556).

ARIZONA: Camp Verde and Montezuma Well July 11 to August 9, 1916

W. P. Taylor

MAMMALS

Eutamias dorsalis (306) cliff Chipmunk

Observed daily at Montezuma Well, August 1-9. The oak brush, sycamore trees with tangles of Vitis arizonica draping about them, junipers and the rocks at the rims of the omnipresent mesas seemed to be favored as habitat places. On August 2 a pair were seen playing about in a juniper in a rocky wash, chasing each other delightedly up, down, and about the tree. Sometimes it appeared that they came together a bit roughly. They were often out and active before sunup. Apparently they were shyer at Montezuma Well than at any locality at which I have observed them. On August 7 one was noted on the trunk of a Celtis reticulata 4 feet above ground. They commonly climb up to 30 feet in appropriate trees. On August 8 an individual was shot from this height in a Juglans major. The chipmunks did not seem vociferous. I watched one pair about sunrise on August 8 playing about the rim rock in complete silence. An individual dissected on this date contained 5 embryos 10 mm. long.

Citellus g. grammurus (307) Rock Squirrels

Abundant in all directions from Camp Verde. Least conspicuous about Bell's Ranch camp July 20-31. They were living commonly along the road at the junction of Beaver Creek and the Verde River July 11-19, as well as on the banks of Beaver Creek in the vicinity of Montezuma Castle, July 17. In the vicinity of the mesas, hills, and fields of Montezuma Well (Aug. 1-9) rock squirrels became more abundant, and usually 3 to 6 were seen and heard whenever one ventured forth to his trap-lines. Three Schuyler rat traps were lost through their agency presumably, on the rocky walls of the Well itself, where the traps had been set for wood rats. Mr. Finnie of Montezuma Well complained of their depredations in his fields. Mr. Brown, his hired man, said many rock squirrels were killed yearly by them.

Ammospermophilus h. harrisi (231) Harris Ground Squirrel

Fairly abundant all about Camp Verde and at Montezuma Well. Burrows were noted on the open mesquite desert, but more commonly perhaps at the summit or near the summit on the slope of some convenient sandy creek bank. On July 19 (near Camp Verde) one was seen perched in an awkward appearing position on an upright dead mesquite stub 6 feet above the ground; and on July 21 another was seen in a similar situation. The species was seen between Camp Verde and Montezuma Well on July 31, and was fairly common at the latter locality.

Cynomys sp. Prairie dog

A fairly heavy infestation of prairie dogs noted July 11 in the vicinity of Dewey, Yavapai County, between Prescott and Camp Verde. A neighbor at our Bell Ranch Camp, 3 miles south of Camp Verde, reported a single colony of prairie dogs in the Verde Valley. I saw no evidence of their presence.

Castor c. frondator? Beaver

Beaver were formerly common on Beaver Creek and the Verde River; on the latter stream they still occur in scattered situations, one locality being far down the Verde River below the town, another being somewhere between Camp Verde and Clarkdale. Mr. W. B. Back of Montezuma Well said the farmers found it necessary to kill off the beavers, since their operations interfered with farming. Another point emphasized by Mr. Back was that whereas formerly there were great numbers of willows along Beaver Creek and the Verde River, now there were not nearly so many, since cattle had tramped and eaten them out. The lack of food supply, he implied, was partly responsible for the diminution of beavers. Several persons about Camp Verde said there used to be beavers near Camp Verde on the Verde River.

Mus musculus musculus (275) House Mouse

On July 26 a specimen was taken beneath catclaw brush near Camp Verde (Bell Ranch camp); on July 30 another was secured in the open close to a big irrigating ditch at the same locality. Evidently incursions of this pest into the open country have taken place at Camp Verde as elsewhere.

Onychomys ssp. (248, 249) Dark-browed grasshopper mouse

Fairly abundant at Bell Ranch, Camp Verde, where several examples were secured on the desert by the mouths of burrows beneath Prosopis velutina. Practically all specimens taken by me were trapped close to or beneath brush. Kangaroo rats and (at Camp Verde) the Perognathus favored the open country more. Other than by this general location, I could not work out any way to tell Onychomys burrows.

Peromyscus e. eremicus (311) Desert mouse
Peromyscus b. rowleyi (310) Rowley White-footed Mouse

I found myself unable to distinguish satisfactorily these forms in the field. At our Beaver Creek camp, Camp Verde, Peromyscus were secured beneath catclaw (Acacia greggii) on the desert, as well as in tall grass at the border of an alfalfa field close to an irrigating ditch. On July 26 at Bell Ranch camp, Camp Verde, a Peromyscus was taken on a rocky hillside beneath Gutierrezia, Zizyphus, and Prosopis velutina where Thamnosma is the dominant plant. The next day another specimen was taken on the same rocky hillslope, beneath Thamnosma brush. On August 2 at Montezuma Well one was taken beneath Quercus brush on a rocky hillslope. On August 3 one example was secured in a rocky situation beneath brush near lake (Montezuma Well), another in green grass at base of cattails (Typha) at the margin of the lake and a third by a fence at the border of an alfalfa field. On August 4 a Peromyscus was taken on a very rocky hillside beneath a Thamnosma bush, and two others in situations similar to those described for August 3. On August 8 an adolescent Peromyscus was trapped on an ill-defined runway beneath a berry tangle and another in the brush and rocks. The animals were decidedly not common anywhere in the Verde Valley.

Peromyscus t. truei (305) Piñon mouse

A single specimen taken August 2, beneath oak brush on a rocky hillside at Montezuma Well, altitude 3,500 feet.

Peromyscus maniculatus spp. (326) white footed mouse — deer mouse

A single example taken at Montezuma Well on August 6.

Sigmodon h. arizonae (237) Arizona Cotton Rat

After trapping in vain in clumps of brush along the Verde River-Beaver Creek camp--Sigmodons were discovered in the thick grass and other vegetation (Holcus halopensis, Lactuca integrata, Solanum elaeagnifolium, Atriplex canescens, Oenothera hookeri) bordering an alfalfa field. On July 17 a juvenal was taken in a runway through the tall grass. Apparently it had not taken the bait, but had simply run into the trap. On successive dates up to July 19 Sigmodons were captured at Beaver Creek camp, and from July 25 to 29 at the Bell Ranch camp. Although I trapped assiduously for the animals in the most favorable situations I could find at Finnie's Ranch, Montezuma Well, I was unable to capture any. Mr. Finnie said when he first came there thirty years or so ago, there were none at his ranch. Later they immigrated. Since then the house cats and other predators have extirpated them, in his opinion.

Many of the Sigmodons taken had their tails bitten off, apparently signifying a fighting tendency among them. Young animals, not much if any more than half-grown, had testes large, signifying, apparently that they begin to breed very early. One Sigmodon taken July 18 contained eleven embryos nearly ready to be born, 80 mm. in length. On this same date five Sigmodons were taken during the daytime or early evening hours, between the time we ran the traps in the morning after daylight considerably, and 8:00 p.m. (when it was still light). Sigmodon h. eremious is either crepuscular, or may even run about in broadday, like some Microtus. I should add, however, that the majority of all the specimens I collected were taken at night.

Sigmodon apparently does not make runways like some Microtus, but traverses ill-defined paths through the thick grass. No feces and few cuttings did I observe. Some situations, which are grassy and apparently present all the Sigmodon requirements, apparently are not inhabited at all. I got no direct evidence that Sigmodon takes any bait--walnut meats, rolled oats. I had as much success with a half-dozen unbaited traps one night as with an even larger number of baited ones.

Usually the Sigmodons prefer thick, tall grass and similar vegetation. Some were taken by an irrigating ditch in sweet clover 6 feet high, and very thick. Always they were taken in damp situations, though there was no running or even standing water near the immediate plots where most of my trapping was done.

Reithrodontomys m. megalotis (272) Desert Harvest Mouse

A single Reithrodontomys, taken on July 26 beneath a tangle of Zizyphus, Gutierrezia, and Acacia greggi, on a rocky sloping hillside, near our Beaver Creek Camp, Camp Verde, was the only one noted.

Neotoma a. albigula (282, 304) White-throated Wood Rat

Signs of wood rats and of Peromyscus were abundant about Montezuma Castle, July 17. On July 27 a wood rat was taken beneath Thamnosma montana on a steep rocky hillside near the Bell Ranch, Camp Verde, the trap having been set on a typical runway. Another was trapped in an adobe house on the Bell Ranch on July 30. Mr. Bell said it had been there sometime. The old adobe was evidently in use for a storehouse, and all sorts of equipment was piled in there. This particular individual (or pair?) had been very troublesome, having taken away half a big of corn, for example. Wood rats, their stick houses and their runways appeared to be fairly abundant on a Thamnosma montana slope on the southwest side of the Verde River near Bell's Ranch. The Bells said that the Indians take dogs and clamber over the foothills after the rats, sometimes gathering in 40-50. The wood rats are then stewed up, skins and all, and serve as food.

I noted few signs of wood rats about our Beaver Creek Camp, Camp Verde, July 11-19. Scattered feces and sticks in some old cliff dwellings, and very scattered stick houses in the brush were observed.

At Montezuma Well on August 2 feces of wood rats were noted about an alfalfa field. On August 8 a specimen was taken on an ill-defined runway beneath a berry tangle. On August 9 two more were secured in the rocks of a low limestone cliff along Wet Beaver Creek.

Neotoma a. albigula--Continued Wood rat

Mrs. Bell said a wood rat once entered the cabin of an aunt of hers through a stovepipe hole in the roof, and stole a set of false teeth from the floor where they had fallen from a table during the night.

Neotoma l. stephensi (329(Stephens Wood Rat

An adult of this species was taken at Montezuma Well on August 6 at the uppermost rim bounding the mesa south of Wet Beaver Creek. The rocks of this upper rim were 100 to 200 feet above the creek, and at not infrequent intervals wood rat sign was noted. On August 9 a very young specimen of the year was taken. It is perhaps significant that no Neotoma l. stephensi were taken low down along the creek, and no N. a. albigula high on the upper rim rocks.

Fiber z. pallidus (300-301) Arizona muskrat

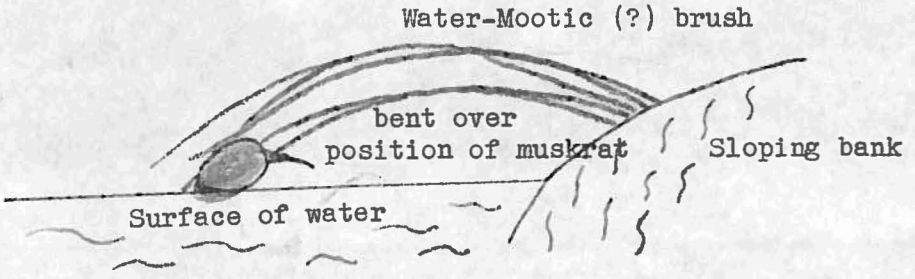
When residents reported to us at Camp Verde that the February flood had filled up the muskrat sloughs and extirpated the muskrats our hopes sank. But they rose when, in the vicinity of the Bell Ranch, Camp Verde, muskrats were reported to be living on the amin irrigating ditch. On July 23 the first one was actually seen, swimming along in the ditch shortly after sunrise at 5:55 a.m. I shot two on the same ditch, in another place, where the ditch broadens out, between 7:45 and 8:00 p.m. The two were first sighted about 7:45; it was about half dark. One diving, appeared again in three or four minutes. One swam along within 15 feet of me, head above water and tail flipping rapidly laterally close to the surface. I could not make out the exact motion. The animals did

Fiber z. pallidus--Continued

not appear to be especially alert, nor even especially shy when danger was seen or suspected. The ditch, at this point, is not sheltered by vegetation, except for a few scattered mesquites along its banks. On July 27 Mr. Bell reported a muskrat in his spring close to our camp. But we failed to find it.

On our first visit to Montezuma Well, August 1, we saw muskrats swimming about in broad daylight, somewhere about 9 a.m. The evening was spent in a muskrat hunt at the Well. They were found to be active at 6:30 p.m., and from then until too dark to see. One swam across the lake at about 7:45 and I obtained it.

The next morning I got to the lake about 5:45 a.m., and saw a muskrat at once. at 6 o'clock I secured a muskrat. It was eating a green water plant (Potamogeton ? No. 78, W.P.T.), which, from watching them at other times, I take to be an important, perhaps the chief, item in their diet. The animal shot was supporting itself on some bent over water-mootic?



branches, just where they entered the water; it was about half in the water.

A pair were later seen and studied for some moments on the shore of the lake. The bank beneath overhanging vegetation and the water closeby seems to be a favorite place. The pair went round and round almost in circles, several times climbing over the same inclined branch which entered the surface of the water, and often plunging off with something of a splash.

Fiber z. pallidus--Continued

I heard more of their activity than I could see. Once there was a sound as if someone had rolled a heavy ball through the grass and it had tumbled into the water.



A typical swimming position

Thomomys fulvus ssp. (245) Pocket Gopher, Fulvous Group

A number of gophers were taken at Beaver Creek Camp and Bell Ranch Camp, Camp Verde, and at Montezuma Well. On July 18 alfalfa stems 2 inches long neatly and recently cut were dug out of a filled up burrow mouth.

Most of the gophers I caught were taken at night, but on July 21 two were secured in the daytime.

Two gophers taken at the Bell Ranch camp in the apparently less favorable (than nearby alfalfa fields) soil of a mesquite flat, were both young. Possible the young are forced into the less favorable environments.

Gophers must often travel for some distance without giving any surface evidence of their presence at all. More than once I have seen a single working, with no other signs of gophers apparent for yards. One such instance was observed in a rocky wash near our camp at Montezuma Well, August 8.

(Dipodomys)

Perodipus o. chapmani (229) Chapman Kangaroo rat

Occurs very scatteringly over the mesquite deserts in the vicinity of Camp Verde. The soil or something must be decidedly less favorable to the small rodents, at least, than that, say of Congress Junction, for none was present in any numbers. All I secured were the result of assiduous and extensive trapping. A little more abundant about the Bell Ranch camp than at the Beaver Creek camp. Sand that might be described as aeolian has most of it been washed over by Beaver Creek. A few Perodipus were obtained in loose white sand along the creek in Hymenoclea monogyra. Apparently the closing of burrows with sand is a quite common practice with Perodipus o. chapmani. What appeared to be this was noticed several times; and on one or two occasions the closure appeared to be due to the trap's presence at the mouth of the burrow. On July 29 one Perodipus was taken in a gopher trap set in a burrow where a gopher had previously worked. What the kangaroo rat was doing in the gopher burrow remains to be explained!

Perognathus sp. (287, 288, 303) Pocket Mouse

After trapping in vain for nearly three weeks for any sort of pocket mouse at Camp Verde, on July 28 two young were trapped by burrows looking like typical Perodipus burrows in the open, not far from an irrigating ditch. On July 30 another young one was secured in the same general place.

Perognathus sp. (313, 317, 318) Chaetodipus pocket mouse

A Chaetodipus pocket mouse occurred fairly commonly at Montezuma Well, August 1-9, where it was taken in traps set at the base of rim rocks and in rocky soil generally, though never, in my experience, down along the creek (Wet Beaver Creek). On August 4 one was taken beneath oak brush on an exceedingly rocky hillside. On August 6 a Perognathus found in one trap had been rained on, so was caught fairly early in the evening, as it had rained at a little after 9:00 p.m. the previous evening.

Sylvilagus a. arizonae (324) Arizona Cottontail

Abundant--comparatively to other mammals--at our Beaver Creek camp, north of Camp Verde, July 11-19, at our Bell's Ranch Camp, south of Camp Verde, July 20-31, and at Montezuma Well, August 1-9. They were possibly more numerous north of Camp Verde between our Beaver Creek camp and Montezuma Castle than elsewhere--on July 17 I saw 8 or more in this vicinity, a larger number than I saw elsewhere in any one day.

Lepus californicus eremicus Arizona Jack Rabbit

Seen sparingly at all the camps. Beaver Creek camp, north of Camp Verde, July 11-19; Bell Ranch camp, south of Camp Verde, July 20-31; and Montezuma Well, August 1-9. At our Beaver Creek camp they were noted on rocky washes, on alfalfa fields, along the rocks of Beaver Creek wash, and along the bluffs by the river. Nowhere were they so abundant as the cottontail.

Felis aztecus browni Mountain lion

Mr. Robert Finnie, a rancher near Montezuma Well, said he killed a mountain lion across the creek (Wet Beaver Creek) some years ago. Formerly deer ranged commonly down to his place, he says, which doubtless accounts for the presence of the lion.

Felis domesticus Feral cat

Every rancher has several cats, which find in their alleged squirrel, gopher, and rat-catching activities their chief justification according to the farmers. Two were taken in steel traps at Bell Ranch camp, one by an irrigating ditch, another in a rocky wash perhaps a mile from the nearest white man's ranch. That the cats forage about widely is conclusively shown.

Lynx baileyi Bobcat

We were told that bobcats occur at all three of our camps. One has been a pest at the Jones place, one mile north of Camp Verde. They were said to occur in a white chalk cliff canyon across the river from the Bell Ranch, three miles south of Camp Verde. Mr. Robert Finnie of Montezuma Well reported that bobcats come in his field across the river quite frequently. His hired man, Mr. Brown, reported seeing tracks during our stay.

Canis mearnsi Mearns Coyote

Apparently not abundant or even common about the Verde Valley. I heard none, nor did I see any evidence of their presence. They were usually reported by residents, however.

Urocyon c. scottii Arizona Gray Fox

Foxes were reported as occurring occasionally along Beaver Creek near Camp Verde, and also south of town in the neighborhood of the Bell Ranch. Mr. W. B. Back of Montezuma Well said they occurred there, and said two were recently killed in the Well.

Procyon pallidus ssp. Desert Raccoon

A ranch dog at Robert Finnie's place near Montezuma Well is said to have treed 19 coons one fall. One time 5 coons were put up the same tree. The animals doubtless occur scatteringly all along the Verde River and its tributaries, at least in the vicinity of Camp Verde.

Taxidea taxus berlandieri badger

Large burrows, apparently the work of badgers, were not infrequently noted in the vicinity of our Beaver Creek camp just north of Camp Verde. Badgers were said by Mr. W. B. Back to occur on the mesas about Montezuma Well.

Mephitis sp. (228) Striped Skunk

By far the commonest skunk. Bob Gaddes, who has been in the country for many years (since 1875), says the Mephitis carry hydrophobia just as the Spilogales do. Several specimens of Mephitis were taken at our Beaver Creek camp close to Camp Verde, north of town, along the wash of Beaver Creek. One young one was taken in a Schuyler rat trap set for Sigmodon in the tall grass bordering an alfalfa field on the Jones place.

Mephitis sp.--Continued

At 8:15 p.m. on July 24 a Mephitis was seen on the road near the Bell Ranch. It trotted slowly and deliberately along the road, tail elevated like a banner. Apparently as soon as it had opportunity it turned off into an alfalfa field and disappeared.

Skunk tracks were fairly common along Wet Beaver Creek west of Robert Finnie's ranch at Montezuma Well.

Spilogale ambigua Spotted Skunk (Chihuahua)

From all we could gather from residents hydrophobia skunks are not abundant about Camp Verde. A Mr. Price, resident of Camp Verde for 15 years, says they are common about Marsh's mine, 8 miles from town. The Bell boys said one was killed under their house four or five years ago, but that none have been seen since. Several persons reported them common about a certain prospect cabin, now deserted, on Squaw Peak, south of Camp Verde. Mr. V. C. Hutcheson of Camp Verde reported killing one or two on his ranch near Camp Verde recently, and promised to try to get some for us. Some persons of whom we inquired did not at once or at all recognize the animal, though most people did.

Lutra c. sonora otter

I saw no signs of otters anywhere in the Verde Valley. Mr. W. B. Back, owner of the Montezuma Well 30 years ago, he knew of none in the vicinity. He did say, however, that there were otter, very scattered, on the Verde River.

Pipistrellus hesperus (338) Canyon Bat

Noted at all the camps: Beaver Creek, 1 mile north of Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and Montezuma Well. After 7:30 on August 1 they became numerous flying over Montezuma Well. On August 4 they were first noted about 7:40 p.m. flying about the grove of sycamores in which our camp was at Montezuma Well. On August 5 they were still flying about at about 5:30 a.m. On August 8 I was impressed with a high flight of the bats at 7:30 p.m., when I first noted them. Later they descended to the level of the treetops or below. I noticed this same phenomenon at Congress Junction, as well as at other localities on previous field trips.

Eptesicus fuscus (230) Common Brown Bat

Large bats seen nightly flying about among the trees at our Beaver Creek camp, July 11-19, just north of Camp Verde were doubtless of this species. One secured July 13 proved to be--and appeared to be one of a pair foraging together.

Corynorhinus m. pallescens (271) Pallid Lump-nosed Bat

On July 26 an individual of this species was secured in an abandoned mine tunnel in a chalky rock bank on the southwest side of the Verde River near Bell's Ranch, 3 miles south of town. The bat was hanging to the roof in the half-light, and I picked him off with my hand. The cave at the Montezuma Well seemed a favorite habitat for a few bats of this species. Here they were very shy. A small cave on Wet Beaver Creek produced one bat on August 8. Hanging by one foot in a fairly well lighted place, the bat was so sound asleep apparently that I had no difficulty in picking him off.

? Antrozous p. pallidus (322) ? Big-eared Bat - Pallid Bat, etc.

On August 4 a bat tentatively identified as above was shot at 8:00 p.m. It was a comparatively slow straight flier.

Supplement

Odocoileus hemionus canus Mexican Mule Deer

Formerly ranged commonly down to Mr. Finnie's place near Montezuma Well. Now practically unknown west of the rim, several miles to the eastward.

Antilocapra americana Pronghorn

Formerly ranged common in the vicinity of Robert Finnie's Ranch, near Montezuma Well. Now unknown in that locality.

ARIZONA: Camp Verde and Montezuma Well July 11-August 10, 1916

Hartley H. T. Jackson

Birds:

Phalacrocorax _____ Cormorant

A cormorant was reported by Donald Bell to have been Killed on the Verde River about ten years ago.

Ardea herodias treganzai Great Blue heron

Common along the Verde River and on Beaver Creek at least to a point 2 miles northeast of MontezumaWell. Five birds and a Swainson hawk were seen perched in a single cottonwood along the Verde River the early morning of July 22. Others were seen along the Verde daily from July 20 to 31; on lower Beaver Creek July 12, 14, and 17; and on upper Wet Beaver Creek above Montezuma Well, August 1-4; 6-9.

Butorides virescens anthonyi Green heron

Two birds of this species were seen in the trees bordering a slough near Camp Verde, July 14, What were probably the same birds were seen afterwards on several occasions up to July 18.

Nycticorax nycticorax naevius Black-crowned night heron

Common along the Verde River in the vicinity of Camp Verde. A flock of five was seen flying up the lower part of Beaver Creek, July 13, Others were seen July 12-15, 20, 24. A large proportion of the individuals seen were young of the year. They are reported to breed in the vicinity, and an egg collected 3 miles below Camp Verde several years ago was seen at Bell's Ranch.

Oxyechus vociferus Killdeer

Common everywhere along the Verde River and Beaver Creek. Seen daily July 11-August 10.

Lophortyx gambeli Gamble's quail

Relatively not common, though seen daily when one is in favorable environment. A number of families containing young up to one-half grown were seen. About 15 young one-third grown, July 12; 8 to 10 half-grown young, with parents, July 13; recently hatched young, about one dozen, with parents, July 21; about 10 half-grown young with parents July 24.

Zenaidura macroura marginella Mourning dove

Abundant everywhere, breeding in considerable numbers particularly in mesquite brush. Nests with fresh eggs were found near Camp Verde July 12, 14, 21, and 23--all in mesquites. A set of incubated eggs was found in a hackberry near Bell's Ranch July 27. Nests containing nearly fledged young were found in mesquites near Bell's Ranch July 26 and 28, and from another nest found July 28 the young birds flew upon my approach. At Montezuma Well a nest containing nearly fresh eggs was found in a hackberry, August 8, and nearly fledged young were in a nest in a mesquite, found August 3.

Melopelia asiatica trudeaui White-winged dove

Seen and heard daily at Bell's Ranch, 3 miles below CampVerde, but not noted elsewhere. July 20-31.

Chaemepelia passerina pallescens Mexican ground dove

One seen on a mesquite flat near the mouth of Beaver Creek, July 14.

Cathartes aura septentrionalis Turkey vulture

Frequently seen along the Verde River (July 11, 14-16, 20-22, 26) but not as abundant as general in Lower Sonoran Zone of Arizona. Less common near Montezuma Well (August 1-2, 5).

Accipiter cooperi Cooper's hawk

A pair of these birds with one young one, fledged and well able to fly, was frequently seen near our camp near the mouth of Beaver Creek, July 11-16. A pair had a nest, which the young had vacated, in tall sycamore on Wet Beaver Creek, 2 miles above Montezuma Well, August 9. Two young nearly full grown were seen with the adults near the nest.

Buteo borealis calurus Red-tailed hawk

One seen near the mouth of Beaver Creek, July 13. Other individuals were noted near Montezuma Well, August 3 and 5.

Buteo swainsoni Swainson's hawk

Quite common along Verde River below Camp Verde where they were seen on several occasions perched in cottonwoods or on the ground along the bank of the river. July 21-23, 26-28.

Falco sparverius phalaena Sparrow hawk

Seen near the mouth of Beaver Creek, July 12, 14, 18: along Verde River, 3 miles below Camp Verde, July 23; near Montezuma Well, August 4, 6-9.

Aluco pratincola Monkey-faced owls

Judging from local reports "monkey-faced owls" are not uncommon in the Verde Valley, occurring both above and below Camp Verde, and extending up Beaver Creek at least to the vicinity of Montezuma Well. Mr. Hutcheson of Camp Verde had five young barn owls in captivity July 31; three of these were seen and identified by Taylor, July 19.

Otus asio gilmani Screech owl

Screech owls are quite common in the timber along the streams, often frequenting the immediate vicinity of our camp during the nights. They were noted near the mouth of Beaver Creek (July 14, 16-18), at Bell's Ranch (July 20-24, 26-29) (149), and on Wet Beaver Creek near Montezuma Well (August 2-4, 7, 9).

Bubo virginianus pallescens Horned owl

Horned owls were frequently heard calling at all points visited;-- near mouth of Beaver Creek, July 11, 14-16; at Bell's Ranch, 3 miles below Camp Verde, July 20, 24; on Wet Beaver Creek near Montezuma Well, August 1, 6, 8.

Geococcyx californianus. Road-runner

Roadrunners are apparently not common in the Verde Valley. Individuals were seen near the mouth of Beaver Creek, July 18-19; near Bell's Ranch, 3 miles below Camp Verde, July 22; and near Montezuma Well, August 2.

Coccyzus americanus occidentalis Yellow-billed cuckoo

Cuckoos are common in the timber along streams their range extending up Beaver Creek to a point at least 2 miles above Montezuma Well. They were observed feeding on cicadas at Bell's Ranch, 3 miles southeast of Camp Verde, July 28 and 29, and near Montezuma Well, August 4, eating only the abdomen in the cases observed. Numbers of dead cicadas, which had the abdomens eaten by birds, were seen, but they may not have all been killed by cuckoos. The cuckoos apparently destroy considerable numbers of them, however.

Dryobates s. cactophilus Cactus woodpecker

This small woodpecker was frequently seen both in mesquite brush and in the cottonwoods and sycamores. Seen at Camp Verde (July 13, 16, 21) and at Montezuma Well (August 2 and 6). (144)

Centurus uropygialis Gila woodpecker

A few of these birds made themselves conspicuous at each of our camps, and although seen nearly every day they were not common (in number of individuals). They were confined almost exclusively to the cottonwoods and sycamores along streams. Seen near mouth of Beaver Creek, July 12-14, 16-19; at Bell's Ranch, 3 miles southeast of Camp Verde, July 20-22; 25-26, 28; at Montezuma Well, August 2-4, 6, 9.

Colaptes chrysoides mearnsi Mearn's gilded flicker

I was somewhat surprised to find Mearns' gilded flicker common outside of the giant cactus belt. It was met with almost daily at all points in the Verde Valley, and was apparently confined to the timber along the river and larger streams. Several specimens were shot for positive identification. Observed near the mouth of Beaver Creek, July 13-14; near Bell's Ranch, 3 miles below Camp Verde, July 21-30; along Wet Beaver Creek near Montezuma Well, August 2, 4; 6-9. (148)

Phalaenoptilus nuttallii nuttallii Nuttall's Poor-will

Apparently uncommon in the Verde Valley. Heard calling near the mouth of Beaver Creek the evenings of July 13, 15-16, 19, and the morning of July 16.

Chordeilea acutipennis texensis Texas nighthawk

This species was seen daily at all points (mouth of Beaver Creek) (July 11-19); Bell's Ranch, 3 miles southeast of Camp Verde (July 20-30); and Montezuma Well (July 31-Aug. 9). They were not only seen flying evenings, mornings, and cloudy days, but were frequently flushed among mesquite brush.

Aeronautes melanoleucus white-throated swift

A few white-throated swifts were seen flying over Montezuma Well the mornings of August 8 and 9.

Archilochus alexandri Black-chinned hummingbird

Seen at Bell's Ranch, 3 miles southeast of Camp Verde, July 25, 28-29.

Calypte costae Costa's hummingbird

Noted near the mouth of Beaver Creek, July 13, 18; and at Bell's Ranch, 3 miles below Camp Verde, July 25.

Selasphorus rufus Rufous hummingbird

A few birds seen among thistles in an old field (July 26, 28).

Tyrannus verticalis Western kingbird

The western kingbird is common and was seen daily at all points visited: Mouth of Beaver Creek (July 11-20); Bell's Ranch, 3 miles southeast of Camp Verde (July 20-31); Montezuma Well (July 31-Aug. 10).

Myiarchus cinerascens cinerascens Ash-throated flycatcher

Common along the bluffs near the mouth of Beaver Creek (July 12-13; 15-19) especially among Thamnosma montana. Observed at Bell's Ranch (3 miles southeast of Camp Verde) among mesquite (July 21, 23, 28), and near Montezuma Well (August 5).

Sayornis nigricans Black phoebe

Quite common along streams,--both the Verde River and Beaver Creek,--wherever there is permanent water. Observed near the mouth of Beaver Creek (July 12-16,18), near Bell's Ranch, 3 miles southeast of Camp Verde (July 21, 24-26, 28), and at Montezuma Well (Aug.4).

Myiochanes richardsoni richardsoni Western wood pewee

Noted near Bell's Ranch, 3 miles southeast of Camp Verde (July 24-28, 30-31), and near Montezuma Well (July 31, Aug. 1-10).

Pyrocephalus rubinus mexicanus Vermillion flycatcher

Several birds of this species were seen daily near our camp in a cottonwood-sycamore-ash grove near the mouth of Beaver Creek (July 11-20). They were less often noted at Bell's Ranch, 3 miles southeast of Camp Verde (July 22, 24, 26-27), and near Montezuma Well only one was seen (Aug. 6).

Aphelocoma woodhousei Woodhouse's Jay

A single bird seen in Oak brush about 3 miles north of Montezuma Well, and about 200 or 300 feet higher, the morning of August 8.

Corvus corax sinuatus American Raven

A single bird seen flying over Bell's Ranch, 3 miles southeast of Camp Verde, July 27.

Molothrus ater obscurus Dwarf cowbird

Common around most of the ranches along Verde River; usually seen in flocks of three to seven or eight. Seen near the mouth of Beaver Creek (July 13-18, 20) and at Bell's Ranch, 3 miles southeast of Camp Verde (July 21-24; 27). At the latter place, July 22, a pair of yellow warblers was seen feeding a young cowbird nearly grown, the cowbird being in bulk fully twice as large as the warbler. (Specimens of each were saved by Taylor.) Two were seen near Montezuma Well, August 3, and another August 6.

Agelaius phoeniceus sp.(145; 146) Red-winged blackbird

Red-winged blackbirds were abundant in the brush and timber along a slough near the Verde River (July 14-18) about 1 mile above Camp Verde. They were frequently seen along irrigation ditches both near the mouth of Beaver Creek (July 11-20) and near Bell's Ranch, 3 miles southeast of Camp Verde (July 20-31).

Icterus cucullatus nelsoni Arizona hooded oriole

Seen frequently in timber along streams at all points visited; near mouth of Beaver Creek (July 12-13; 15-19); at Bell's Ranch, 3 miles southeast of Camp Verde (July 21-28); near Montezuma Well (Aug. 1-2; 5-9).

Carpodacus mexicanus frontalis Common House Finch

Abundant at all places visited; seen individually, in pairs and in flocks. Observed near mouth of Beaver Creek (July 11-20); at Bell's Ranch, 3 mi. southeast of Camp Verde (July 20-31), and near Montezuma Well (July 31-August 10).

Passer domesticus English sparrow

Common and seen daily around ranch buildings near the mouth of Beaver Creek (July 11-20); near Bell's Ranch, 3 miles below Camp Verde (July 20-31), and near Montezuma Well (July 31-August 10).

Astragalinus psaltria hesperophilus Green-backed goldfinch

Common in the Verde Valley and frequently seen in pairs and small flocks. Noted near the mouth of BeaverCreek (July 12-13, 15-18); near Bell's Ranch, 3 miles below Camp Verde (July 20, 22, 27); near Montezuma Well (Aug. 1-3;7,9).

Ammodramus cavannarum bimaoulatus Grasshopper sparrow

Quite common in the alfalfa fields near Bell's Ranch, 3 miles southeast of Camp Verde, where they were frequently heard and seen, particularly in the early morning (July 21; 23-25; 27).

Chondestes grammacus strigatus Lark sparrow

Fairly common at Bell's Ranch, 3 miles southeast of Camp Verde, where they were seen daily (July 20-31).

Amphispiza bilineata deserticola Desert sparrow

This species was not particularly common near the mouth of Beaver Creek where it was observed July 13; 15; 18-19. A few were seen near Bell's Ranch, 3 miles southeast of Camp Verde (July 21,24). In the vicinity of Montezuma Well they were more plentiful and were seen daily on bushy mesas (Aug. 1-9).

Melospiza melodia saltonis Desert song sparrow

Common in the brush along Verde River and the lower portion of Beaver Creek (July 11-17; 19; 22; 24-26; 28). Apparently less abundant on Wet Beaver Creek, near Montezuma Well (August 4; 7). (147)

Pipilo fuscus mesoleucus Canon Towhee

A few seen in the mesas near the mouth of Beaver Creek (July 14; 17). More common near Montezuma Well, but not plentiful (Aug. 3, 6-8).

Cardinalis cardinalis superbus Arizona cardinal

Several birds of this species were seen daily about our camp near the mouth of Beaver Creek (July 11-20). They were less frequently noted at Bell's Ranch, 3 miles southeast of Camp Verde (July 22-23, 26), and none was seen at Montezuma Well.

Guiraca caerulea lazula Blue grosbeak

Occasionally observed near the mouth of Beaver Creek (July 11, 13-15, 17-19). Seen on two occasions near Bell's Ranch, 3 miles southeast of Camp Verde (July 21, 24), and near Montezuma Well (August 1, 4).

Piranga rubra cooperi Cooper's tanager

Seen occasionally near the mouth of Beaver Creek (July 12, 15, 17-18), frequently near Bell's Ranch, 3 miles southeast of Camp Verde (July 21-23, 25-26, 28), and almost daily near Montezuma Well (July 31, Aug. 1-4, 7-9).

Progne subis hesperia Purple martin

A few western martins were observed flying about Montezuma Well, August 1, 4, 6.

Petrochelidon lunifrons tachina cliff swallow

Several cliff swallows were seen flying over the mouth of Beaver Creek, July 14. Abandoned nests were found in a cliff-dwelling near the same locality July 16, and other abandoned nests were numerous on the cliffs near Montezuma Castle (4 miles up Beaver Creek), July 18. Several birds were noted over Montezuma Well (Aug. 1, 3-6).

Riparia riparia Bank swallow

Several birds of this species remained near the mouth of Beaver Creek (July 12-17). The dusky breast-bands were distinctly visible, making identification positive.

Phainopepla nitens Phainopepla

Of regular occurrence, though not abundant, at all points visited. Near the mouth of BeaverCreek (July 13, 15); at Bell's Ranch, 3 miles southeast of Camp Verde (July 21, 25), and near Montezuma Well (July 31-August 10). At the latter locality 5 nearly full-grown young with their parents were observed August 3, 5-7, and another family of 3 young, of like age, with parents, was seen August 8.

Lanius ludovicianus excubitorides White-rumped shrike

Seen at Camp Verde (July 11), and at Bell's Ranch, 3 miles southeast of Camp Verde (July 21-23, 26, 29).

Vermivora luciae Lucy's warbler

Quite plentiful both in mesquite and bottomland timber near the mouth of Beaver Creek (July 12-14, 16, 18) and noted also at Bell's Ranch, 3 miles southeast of Camp Verde (July 22, 25-26).

Dendroica aestiva sonorana Sonora yellow warbler

Common throughout the Verde Valley at all points visited. Near the mouth of Beaver Creek (July 12-14, 17-19); near Bell's Ranch, 3 miles southeast of Camp Verde (July 21-30), and near Montezuma Well (August 1-10).

Icteria virens longicauda Long-tailed chat

Chats, many of them yet in full song, were frequently heard and seen at all points visited. Several were caught in mouse and rat traps set in damp weedy places. This species was noted near the mouth of Beaver Creek (July 12-16; 18; 20); near Bell's Ranch, 3 miles southeast of Camp Verde (July 21, 24, 26-27), and near Montezuma Well (Aug. 3, 4-5, 8).

Mimus polyglottos lencopterus western mockingbird

Seen daily in the Verde Valley; near mouth of Beaver Creek (July 11-20); near Bell's Ranch, 3 miles southeast of Camp Verde (July 20-31); near Montezuma Well (July 31-August 10). Less common at Montezuma Well than elsewhere. Young about one-half grown were seen near Bell's Ranch, July 26th.

Toxostoma curvirostre palmeri Palmer's thrasher

Apparently rare. Individual birds were seen near the mouth of Beaver Creek, July 14, 18-19.

Toxostoma crissale Crissal thrasher

A single bird observed in mesquite-catclaw thicket near Bell's Ranch, 3 miles southeast of Camp Verde, July 23.

Salpinctes obsoletus obsoletus Rock wren

A few rock wrens were noted on the mesas near the mouth of Beaver Creek (July 14, 17-18). In the vicinity of Montezuma Well they were more plentiful, and were met with almost daily (August 2-4; 6-9).

Catherpes mexicanus conspersus Canon wren

Observed in a rocky wash near the mouth of Beaver Creek, July 14. Frequently seen and heard at Montezuma Well (August 1, 3-9).

Thryomanes bewicki eremophilus Bewick's wren

Noted near the mouth of Beaver Creek once (July 18); at Bell's Ranch, 3 miles southeast of Camp Verde (July 21, 26). Seen on several occasions near Montezuma Well (August 2, 4, 6-8).

Baeolophus wollweberi Bridled titmouse

Near the mouth of Beaver Creek and near Bell's Ranch, 3 miles southeast of Camp Verde, this species was frequently seen among the cottonwoods on the bottoms (July 16, 18; 21-30). At Montezuma Well they occurred both in the bottomland timber and amongst oak brush (August 2, 4-10).

Psaltriparus plumbeus Lead-colored Bush-tit

A few lead-colored bushtits were observed in oak brush on the higher mesas, near Montezuma Well (August 7-9).

ARIZONA: Camp Verde and Montezuma Well July 11-August 9, 1916

W. P. Taylor

BIRDS

Ardea h. treganzai Treganza's heron

Noted on Beaver Creek, near Camp Verde, almost daily July 11-19; along the Verde River, between Camp Verde and the Bell Ranch, July 20-31; and along Wet Beaver Creek in the vicinity of Montezuma Well, August 1-9. On the morning of August 2, when I was quietly hunting muskrats in a boat on Montezuma Well, a Great Blue Heron came winging in, half-circling, it came to rest on a cliff and looked down over the lake, part of the time with neck extended, part of the time with neck much curved, and head back on shoulders. After a few moments, perhaps discovering me in the boat, it winged rapidly off in the direction it had come.

Butorides v. anthonyi Anthony's green heron

A pair were flushed from the willows near a slough near the Verde River at Camp Verde on July 18 after 7:30 p.m., well along in the twilight. Two were seen in the same place on July 14.

Nycticorax n. naevius Black-crowned night heron

Not infrequently observed along the Verde River in the neighborhood of Camp Verde. Often, as on July 13, 6 to 8 were noted at one time, flying or circling about over the river and uttering the usual "Squawk" note.

Oxyechus vociferus Killdeer

Abundant at all the camps along streams: our Beaver Creek Camp near Camp Verde, July 11-19; Bell Ranch camp, 3 miles south of Camp Verde, July 20-31; and our Finnie's Ranch camp near Montezuma Well. On July 28 a flock of eight were seen near the Bell Ranch.

Lophortyx gambeli Gambel's quail

Less abundant, apparently, in the Verde Valley, than at other localities visited, for example, Congress Junction. Families of two adults and many young of various sizes were sometimes observed in the vicinity of Beaver Creek, near Camp Verde, July 11 to 19. A covey of quail noted in a Vitis-Fraxinus tangle on July 17. Heard from Montezuma Castle on that date. Abundant, in large flocks, as many as 12 adults seen in one covey, along the Verde River near Bell's Ranch, 3 miles south of Camp Verde, on July 20. The heavy mesquite brush was preferred. Covies of adults and young also commonly observed.

The oak brush and Thamnosma montana about Montezuma Well sheltered some quail. At this locality they were observed daily. On August 2 a big flock, 10-20, apparently adults, noted. In one particular place at a turn of the road near Finnie's Ranch, one was almost sure to see a covey of young quail with their parents. At this point there was heavy oak-brush. On August 7 a covey of 20-40, apparently made up of young and old, was seen. On August 8 a quail with a brood of small young was seen.

Zenaidura m. marginella Mourning dove

Fairly abundant, and mostly nesting apparently, at all the camps. Noted abundantly on July 11 between Prescott and Camp Verde. Between Cherry Creek and Camp Verde, along the streams, and in the Black Hills, they were especially abundant.

At Beaver Creek camp, near Camp Verde, doves were singing and were seen carrying nest material on July 12. A nest, 4 feet up in a willow, was found July 14, two eggs. The next day, a dove was flushed from a nest 20 feet up in a cottonwood. Doves were numerous about Montezuma Castle on July 17. One was flushed from a nest 10 feet up in a small hackberry tree on that date. This bird persistently feigned an injury. On July 18 a nest was found, two eggs, 4 feet up in a mesquite. On July 20, at Bell Ranch Camp, 3 miles south of Camp Verde, doves were abundant, July 20-30, particularly in the heavy mesquite along an irrigation ditch and the Verde River. A nest, 6 feet up in a mesquite, containing one heavily incubated egg was found on July 20. Another nest, 4½ feet up in a mesquite, contained two young. The parent bird feigned an injury. On July 28 a flock of 6 or 7 doves were seen. Perhaps made up of post-breeders.

Mourning Doves were common also at Montezuma Well, July 31-August 9. On August 7 one was flushed from a nest 12 feet up in a sycamore; and another from a nest 6 feet up on an oak, in a grapevine tangle, containing one egg and one young. On August 8 a dove was taken with an egg in its oviduct nearly ready to be laid.

Melopelia a. trudeaui White-winged dove

Abundant at our Bell Ranch camp, 3 miles south of Camp Verde, July 20-31. Singing. Not heard elsewhere.

Cathartes a. septentrionalis Turkey vulture

Seen circling about Montezuma Castle, near Camp Verde, on July 17. Noted at intervals at all our camps--Beaver Creek, near Camp Verde, July 11-19; Bell Ranch, 3 miles south of Camp Verde, July 20-31; Montezuma Well, July 31-August 9.

Accipiter cooperi Cooper's hawk

On July 11-12 we found a family of these hawks living in a cottonwood tree close to our Beaver Creek camp, near Camp Verde. Frequently two birds were seen perched in this tree. They did not seem shy, but would allow of close approach. Suspecting them of depredations on the chickens Bryan Jones of the nearby ranch shot two. One of their call-notes is a "Yip! yip! yip! yip! yip!" rapidly repeated, and possessing a flicker-like quality.

On August 6 a Cooper Hawk flew rapidly through the trees at our Finnie's Ranch camp near Montezuma Well.

Buteo b.calurus Red-tailed hawk.

Not common in the Verde Valley, in my experience. Noted on July 12 at Beaver Creek camp, close to Camp Verde, and on August 1, at Finnie's Ranch, near Montezuma Well.

Falco s. sparverius (109) Eastern sparrow hawk

Fairly common at our Beaver Creek camp, near Camp Verde, July 11-19, and at our Finnie's Ranch camp, near Montezuma Well, July 31-August 9. Heard on one or two occasions only at Bell Ranch camp, 3 miles south of Camp Verde. On July 12 a hummingbird was seen vigorously pursuing a Sparrow Hawk.

Aluco pratincola Monkey-faced owls

The people we talked with in the vicinity of Camp Verde all know the Monkey-faced Owl, in spite of the fact that it has a reputation here for its rarity. They also seem to take a most extraordinary interest in it, just as a matter of curiosity. V. C. Hutcheson of Camp Verde, has captured five to seven of these owls, keeping them in captivity, and selling or otherwise disposing of them. I saw three young ones at his camp. He had taken them from a hole in a dirt bank. Although fully fledged, they made no effort to fly, but took hold of gloved hands put near them with great animosity. Their claws and beaks held on strongly. They were being kept in a small pen inclosed by chicken-wire two and a half or three feet high, nothing over the top, and spent the day in the dark of a cave-like dugout place Hutcheson had fixed up for them.

Otus asio ssp. (135) screech owl

On the night of July 18-19, at our Beaver Creek camp, I awoke to find that several screech owls were just outside the tent. I finally made one out on a dead branch in the darkness, and shot it. Screech owls were especially abundant at our Bell Ranch camp, 3 miles south of Camp Verde, being heard nightly, and several secured. At 4:45 a.m. on July 22 one was noted close to camp, and there were at least three others in the nearby cottonwoods, apparently all discussing the propriety of our being in the country. On the evening of August 6, just after dark, I descried an owl on a low dead branch near our Finnie's Ranch camp, Montezuma Well. It did not seem shy, but cocked its head about and looked me over with as much interest, apparently, as I was giving it.

Bubo v. pallescens (110) Horned owl

On July 12, on Beaver Creek, 2 miles northeast of Camp Verde, a pair of Great Horned Owls were noted on some limestone cliffs. One was shot. The other flew to a point nearby and seemed curious to learn what had happened.

On July 22 I frightened a Bubo from its place in a cottonwood, at Bell Ranch, 3 miles south of Camp Verde. Immediately a number of Western Kingbirds set up a great uproar, which enabled me easily to locate the owl in the tree in which it had taken refuge. It was shot from about 30 feet up in a cottonwood.

July 31-August 9, at our Finnie's Ranch camp near Montezuma Well, horned owls were heard at intervals.

Geococcyx californianus Road runner

On July 17, on an open mesa between Montezuma Castle and Camp Verde, I saw a Roadrunner in the shade of a barberry. On August 4, near the rim of a mesa close to Finnie's Ranch, Montezuma Well, an unfamiliar call proved to be that of a Roadrunner. Plaintive and Zenaidura like in quality, the call may best be rendered by the syllables: "Whoo-woo! Whoo-woo! Woooo! Wooo! Woo!" There is a suggestion of the horned owl in this call note, too. I both saw and heard the bird uttering this call. It is low and dove-like, but somewhat heavier, and there is a beak-snapping which accompanies it. When one hears this "beak-snap" call and does not see the bird one might mistake the snapping for that of an insect. There were evidently three birds, at least, in the party under observation. All seemed to be moved by curiosity as to my status. Two were perched on dead junipers, while a third was somewhere in the low brush or on the ground. As it perched watching me one of the birds wagged its long tail slowly from side to side. The white patch on the side of the face and the black crown show up particularly strongly. Finally both birds flew to the ground and disappeared. Later in the morning they were again heard in the same region.

Coccyzus a. occidentalis Yellow-billed cuckoo

Heard daily at Bell's Ranch, 3 miles south of Camp Verde. They appeared to count the cicada as a chief item in their diet. We frequently heard cicadas buzzing sharply, with a different sound from normal. I finally saw a cuckoo carrying away a buzzing cicada, which explained the different buzz.

Dryobates p. homorus (130) Batchelder woodpecker

One of the commonest woodpeckers in the region. Noted at Beaver Creek, close to Camp Verde, July 11-19; at Bell Ranch, 3 miles south of Camp Verde, July 20-31; and Montezuma Well, August 1-9. They were observed both in willows, cottonwoods, and other trees along the washes, and in mesquites on the nearby deserts, being perhaps more often noted in the mesquites than elsewhere.

Centurus uropygialis Gila woodpecker

One shot from a sycamore on July 13, at Beaver Creek camp, near Camp Verde. Fairly abundant at this camp, July 11-19; at Bell Ranch camp, July 19-31; and at Montezuma Well, August 1-9.

Colaptes c. mearnsi Mearn's gilded flicker.

One noted on July 14 at Beaver Creek camp, near Camp Verde. Concerning the identity of the flickers I saw and recorded, aside from this one, I am uncertain. I put them all down, when seen, for Red-shafted Flickers. Colaptes was noted almost daily, not only at Beaver Creek, July 11-19, but at Bell Ranch, 3 miles south of Camp Verde, July 19-31, and at Montezuma Well, August 1-9.

Phalaenoptilus n. nuttallii Nuttall's Poor-will

On July 13, while hunting over the top of a hot Thamnosma ridge near Camp Verde, I flushed a pair of Poorwills. These were the only ones positively identified by me in the Verde Valley.

Chordeiles a. texensis Texas nighthawk

Seen abundantly at all three camps: Beaver Creek, July 11-19, near Camp Verde; Bell's Ranch, 3 miles south of Camp Verde, July 19-31; and Montezuma Well, July 31-August 9. They were particularly abundant in the twilight at Beaver Creek. At the lake in Montezuma Well they were a conspicuous feature as twilight came on, four to half-a-dozen usually seen. On July 17 a nighthawk was flushed from the mesa north of Camp Verde; and on July 21 three, adult (?) and young (??) were flushed from the open desert at 11 a.m., near the Bell Ranch. They were resting in the shade of a small bush when scared up. The adult (?) flew in one direction, feigning an injury. The two others flew in two other directions. On August 5 nighthawks were flying about at 5 a.m., through the trees at our Montezuma Well camp.

Aeronautes melanoleucus white-throated swift

On August 9 a procession of circling, curvetting White-throated Swifts was observed apparently flying southward. The birds were well-scattered out, but there were many of them; and as I watched for several minutes, more kept coming from the north. Perhaps a hundred passed by while I watched. The birds seemed to be accompanied by swallows identified as Riparia riparia. This was at Finnie's Ranch, near Montezuma Well.

Selasphorus sp. (145) hummingbird

On July 24 ten to twenty reddish hummers were noted in an alfalfa and thistle-field near Bell's Ranch, 3 miles south of Camp Verde. Very day thereafter the birds were observed. Their arrival forecasts the beginning, apparently, of the fall migration. Other hummers, not certainly identified were seen in the Verde Valley. Calypte costae and Archilochus alexandri are probably to be numbered among these.

Tyrannus verticalis Western kingbird

One of the most abundant and conspicuous birds at all the camps. Beaver Creek, north of Camp Verde, July 11-19; Bell's Ranch, south of Camp Verde, 3 miles, July 20-31, and Montezuma Well, August 1-9. A pair with young were seen in an ash on Beaver Creek, July 13. On July 14 a pair of birds were seen fighting. Apparently they do not find outlet for all their pugnacity on outsiders.

Myiarchus c. cinerascens Ash-throated Flycatcher

Seen practically every day at Beaver Creek camp, near Camp Verde, July 11-20. On July 15 a pair were seen apparently fighting. On July 17 I watched an Ash-throated Flycatcher while it chased an insect and lost it. This was one of the birds common about Montezuma Castle.

Sayornis nigricans Black phoebe

Generally distributed along Beaver Creek and the Verde River. Noted at all the camps nearby every day: Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; Montezuma Well, August 1-9. On July 21 two were noted singing the "Too-wheet! Too-whew!" song.

Myiochanes r. richardsoni Western wood pewee

Noted July 11 between Dewey and Cherry Creek, and between Cherry Creek and Camp Verde. Noted thereafter daily; one of the most abundant birds along streams in the Verde Valley. Observed at Beaver Creek near Camp Verde, July 11 to 19; at Bell's Ranch, July 20-31; at Montezuma Well, August 1-9. A common bird at Montezuma Castle, July 17.

Pyrocephalus r. mexicanus Vermilion flycatcher

Fairly common at all the camps in Verde Valley: Beaver Creek near Camp Verde, July 11-19; Bell's Ranch, July 20-31; and Montezuma Well, August 1-9. On July 17 I saw a male fly at a female as if he were going to copulate with her in a mesquite bush. The call-note most often heard may be rendered "Peep!" or "Pseep!"; it somewhat resembles the "peep" of a small chicken. On July 18 a family of four Vermilion Flycatchers was noted in the mesquite, three young birds, fully fledged, following up the female, and pestering her continually for food, chasing her persistently with fluttering wings.

Aphelocoma woodhousei Woodhouse's Jay

Heard once between Deming's Ranch, near Prescott, and Dewey, Arizona, on July 11. Next noted on July 24, from a Thamnosma montana slope on the southwest side of the Verde River, at Bell's Ranch, 3 miles south of Camp Verde. The jay was apparently in the pinyons above. On August 2 one was noted in a juniper on a mesa near Montezuma Well; and on August 8 the species was twice heard in the same general locality.

Molothrus a. obscurus (141) Dwarf cowbird

Noted at Beaver Creek camp, near Camp Verde, nearly every day July 11-19, as well as at the Bell Ranch camp, 3 miles south of Camp Verde, July 20-31. Five seen in the cottonwoods near camp on July 12; one was whistling from the top twig of a dead sycamore on July 17. On July 22, at Bell Ranch two young cowbirds were taken which were worrying two Yellow Warblers for food, evidently having been brought up by these same warblers. A more incongruous sight than that afforded by the big bullying cowbirds pursuing and being carefully and diligently fed by the diminutive warblers one would look far to see.

Xanthocephalus xanthocephalus Yellow-headed blackbird

A flock of eight seen on July 19 on a fence by the road and in the wet pastures adjoining close to the village of Camp Verde.

Agelaius phoeniceus ssp. (115) Red-winged blackbird

Abundantly noted along the Verde River, and the adjoining alfalfa fields, irrigating ditches and pastures. Seen at Beaver Creek and vicinity near Camp Verde, July 11 to 20, and at Bell's Ranch, 3 miles south of Camp Verde, July 20-31.

Sturnella sp. Meadowlark

Meadowlarks were heard at intervals both at Beaver Creek, near Camp Verde, July 11-19, and Bell's Ranch, 3 miles south of that place, July 20-31. But they were excessively shy, and none was taken.

Icterus c. nelsoni Arizona hooded oriole

Abundant at all the camps. Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and Montezuma Well, August 1-9. One seen also between Cherry Creek P.O. and Camp Verde, on July 11. On July 17, watching an oriole, I was impressed with its labored flirty flight. One bird seen sang while in flight. This oriole was noted in the immediate vicinity of Montezuma Castle, July 17.

Carpodacus m. frontalis Common House Finch

Abundant, apparently, all over the Verde Valley. Noted commonly at Beaver Creek, near Camp Verde, July 11-19; at Bell's Ranch, 3 miles south, July 20-31; and at Montezuma Well, August 1-9. On July 11 linnets were commonly observed between Dewey and Cherry Creek P. O., as well as between that station and Camp Verde. The house finch was one of the commonest birds about Montezuma Castle on July 17.

Passer domesticus English sparrow

Present about Camp Verde and at least some of the neighboring ranches.

Astragalinus p. hesperophilus Green-backed goldfinch

Fairly common at all the camps: Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; Montezuma Well, August 1-9. At the latter locality they were abundant in the orchards and along the creek.

Ammodramus s. bimaculatus (137) Grasshopper sparrow

Encountered at Bell's Ranch, 3 miles south of Camp Verde, only. Heard daily, singing their weak grasshopper-like (?) song, in the alfalfa fields. The likeness of the song in question to the buzz of a grasshopper is not, to my ear, very close.

On July 21, as I was hunting the mesquite desert near Bell's Ranch, a sweet tinkling song with which I was not familiar struck my ear. Soon I discovered the author. Rising up from a perch on the ground or on some bush the bird would mount to a height of 15 feet to 30 feet and come fluttering down singing. Its graceful movements and liquid song elected it the fairy of the mesquite waste, the personification of the attractiveness of the desert. Several seen were all alone. Once, at least, I saw two together. It seemed to be found, not only in the alfalfa fields, but also in the mesquite, both along the river and on the open desert. I tried to get one singing its attractive song, but found it elusive. Rising up here, it would come fluttering down over there, singing as it came down. Next thing it would be heard in some other quarter a rod or two from where one expected it.

Ammodramus s. bimaculatus--Continued

I ought to mention one strange thing--I never heard the grasshopper-like weak song outside the alfalfa fields, nor did I hear the brilliant song anywhere but in the mesquites. This suggests that what I take to be the same species of bird may be two species (for I did not collect one while singing). Dr. Jackson asserts, however, that the brilliant song (if he and I heard the same one) is much like that of the grasshopper sparrow of the East.

Chondestes g. strigatus Lark sparrow

Seen commonly all along the route between Deming's Ranch, near Prescott, to Camp Verde, that is, between Deming's and Dewey, Dewey and Cherry Creek, and Cherry Creek and Camp Verde. Commonly seen along the roads and fences near Camp Verde, July 11-31. One was seen in a Zizyphus bush near Beaver Creek on July 17. Seen at intervals about Finnie's Ranch at Montezuma Well, August 1-9. One flock of four seen in the catclaw (Acacia greggii) brush, August 7.

Spizella p. arizonae Western chipping sparrow

One individual noted in the Mimosa brush and a Juglans tree at Finnie's Ranch, August 3; this is near Montezuma Well.

Amphispiza b. deserticola Desert sparrow

Abundant at all the camps, in the proper stations: Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles below Camp Verde, July 20-31; Montezuma Well, August 1-9. Noted July 11 between Cherry Creek and Camp Verde. Usually flocks of four to six individuals--families or true flocks? were encountered. On July 17 they were heard singing rather imperfectly; heard singing on July 20, also. On August 3, toward evening, terrific crashing thunderstorms were raging to the east and west, while at Montezuma Well the Black-throated Sparrows were singing as if nothing was happening at all.

Melospiza melodia ssp. (113, 114) Desert song sparrow

Noted abundantly in the water-mootic (Baccharis) and willow brush along Beaver Creek and the Verde River July 11-19. The specimens noted (nos. 113-114) may represent two forms. On August 7 and 8 Song Sparrows were heard along Wet Beaver Creek at Finnie's Ranch near Montezuma Well, one being secured on the latter date.

Pipilo f. mesoleucus Canon Towhee

Represented at camps in the Verde Valley in about their usual abundance (Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; Montezuma Well, August 1-9). On July 16 a pair were seen chasing each other vigorously in the willows along Beaver Creek. On July 25 a Canyon Towhee was heard giving its Cardinal-like "tsew! tsew! tsew!" call, sometimes preceded by a "chuck" or "cluck". On August 2 a pair were heard scolding in the neighborhood of an old school-house near Finnie's Ranch, Montezuma Well.

Pipilo f. mesoleucus--Continued

My lack of familiarity with Pipilo f. mesoleucus and Pipilo aberti may have led me to confuse the two. A Pipilo aberti was taken at Clarkdale in the Baccharis along the Verde River on August 16. It seems likely that some of the towhees here recorded as Pipilo f. mesoleucus are really Pipilo aberti. Thinking back, I would place a pair of Pipilos seen in the vegetation along the Verde River on July 21 as probably P. aberti.

Cardinalis c. superbus Arizona cardinal

Heard daily at Beaver Creek camp, near Camp Verde, July 11-19. Noted also at Montezuma Well, where a pair was seen on August 9. They were uttering a "Pssst" call-note. Doubtless the species is common in that vicinity.

Zamelodia m. melanocephala Black-headed grosbeak

One noted on the tip of a tall cottonwood at Montezuma Well (Finnie's Ranch) on August 2; on August 8 a female was observed on a fence post at the same locality. Possibly they were more common than these records indicate.

Guiraca c. lazula Blue grosbeak

Abundant at all the camps in the Verde Valley (Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; Montezuma Well, August 1-9). Seen on a mesquite flat July 12. Very commonly noted along the roads and about the borders of the alfalfa fields. One heard singing its linnet-like song on July 24. In fact, nearly every day they were heard singing.

Passerina amoena Lazuli bunting

One seen in a sycamore close to camp (Beaver Creek, near Camp Verde) on July 12. Heard at intervals during our stay in the vicinity of Camp Verde, July 11-31; I am morally certain I heard the Lazuli Bunting nearly every day at Montezuma Well, August 1-9, but shot none, and did not get a good chance to look closely at one.

Piranga r. cooperi Cooper's tanager

An abundant and conspicuous bird in the Verde Valley (Beaver Creek, near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and Montezuma Well, August 1-9). Its call-note was often in evidence. Its Zamelodia-like song, too, was not infrequently heard—I noted it more frequently July 11-19 than later.

Progne s. subis Purple martin

A pair of Purple Martins were seen at Montezuma Well August 1. Thereafter, nearly every day, from two to five martins were seen circling about above this locality.

Petrochelidon l. lunifrons cliff swallow

Suitable localities about Camp Verde had their quota of Cliff Swallows. Nests were noted at Montezuma Castle on July 17. On July 31 swallows were noted between Camp Verde and Montezuma Well. They were perhaps the most conspicuous bird flying over Montezuma Well (August 1-9), in the caves on the wall of which they had nested. They started flying in the morning (at the Well) at 6 a.m. or before, and were noticed until nearly 8 p.m.

Riparia riparia Bank swallow

Abundant on BeaverCreek near Camp Verde, at which point the creek joins the Verde River. Seen daily, July 11-19. On August 9 a number of swallows, which I took to be this species, were noted flying about, seemingly in company with White-throated Swifts (this was at Montezuma Well).

Phainopepla nitens Phainopepla

Noted between Deming's Ranch and Dewey, July 11. A few seen at intervals July 11-19 at Beaver Creek, near Camp Verde. Abundant in the oak brush near Finnie's Ranch at Montezuma Well, August 1-9. On August 6 20-30 in one company were seen in the oak brush at this locality.

Lanius l. excubitorides white-rumped shrike

A couple of Shrikes were seen along the road July 11 as we entered the Verde Valley. Seen or heard daily at BeaverCreek camp, July 11-19, often giving the "Where! where! where!" call. Seen also nearly every day on the fences by alfalfa fields at Bell's Ranch, 3 miles south of Camp Verde, July 20-31. On August 1 a Shrike was noted on a fence between Finnie's Ranch and Back's Ranch at Montezuma Well. Doubtless the species was as common there as at the other localities.

Lanivireo solitarius ssp. (136) solitary vireo

A pair of these birds were seen in an ash on Beaver Creek near Camp Verde on July 19, one being taken (no. 136). On August 8 a single individual was noted in a cottonwood before sunrise near our Montezuma Well Camp.

Vireo b. arizonae (112) Arizona least vireo

Abundant at all the Verde Valley camps (Beaver Creek, near Camp Verde. July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; Montezuma Well, August 1-9). The mesquite brush is by all odds the most preferred habitat, though it frequently ranges into hackberry or even oak brush (as was commonly the case along Wet BeaverCreek above Montezuma Well). Occurred abundantly in the immediate vicinity of Montezuma Castle.

Vireo vicinior (147) Gray vireo

Fairly common in the oak brush in the vicinity of Finnie's Ranch, Montezuma Well. A pair were noted in oak and juniper brush on August 2. Nearly every day thereafter until and including August 8 at least one was heard. Usually the bird was betrayed by its song. Occasionally one was heard singing a subdued song, but the song ordinarily heard was full-voiced and normal.

Vermivora luciae (106) Lucy's warbler

Fairly abundant, traveling usually in companies of four to six, in the mesquite brush near Beaver Creek, near Camp Verde, July 11-19, and Bell's Ranch, 3 miles south of Camp Verde, July 20-31.

Dendroica aestiva ssp. (132) Sonora yellow warbler

Abundant and much in evidence, through their songs, in the cottonwoods and sycamores along Beaver Creek near Camp Verde, July 11-19; Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and Montezuma Well, August 1-9. At Bell's Ranch, on July 22, what appeared to be a pair of Yellow Warblers were caring for two juvenal cowbirds (see nos. 139-140).

Icteria v. longicauda Long tailed chat

Abundant along Beaver Creek, near Camp Verde, July 11-19; along the Verde River near Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and along Wet Beaver Creek, near Montezuma Well, August 1-9. Several Chats were taken in traps set for mice at this locality.

Mimus p. leucopterus Western mocking bird

Fairly abundant at Beaver Creek near Camp Verde, July 11-19; at Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and at Montezuma Well, August 1-9. Inconspicuous because not singing very much, though I recorded them as singing about Bell's Ranch on July 21. Two birds seen between Prescott (Deming's Ranch) and Dewey, and seven between Cherry Creek and Camp Verde, on July 11. One of the birds of the immediate vicinity of Montezuma Castle (July 17). Noted in the mesquites and cottonwoods at Montezuma Well.

Salpinctes o. obsoletus (154) Rock wren

Found at Beaver Creek, near Camp Verde, July 11-19; at Bell's Ranch, 3 miles south of Camp Verde, July 20-31; and at Montezuma Well, August 1-9. Observed on July 11 between Cherry Creek and Camp Verde. Noted in the rocky cliffs and boulders about Montezuma Well itself, as well as in the rim rocks and others in the neighborhood. One was trapped on August 7, in a trap set for a mouse.

Catherpes m. conspersus (159) Canon wren

One of the birds that old King Montezuma used to listen to, probably, as he sat in the doorway of his Castle. Noted there (Montezuma Castle near Camp Verde) on July 17. Observed also in the walls of Montezuma Well during our stay, August 1-9. One Canyon Wren dived into a limestone cave at the well on August 4, and I heard it singing the trill song inside the cave. I noticed that the bird sometimes stops off short in the course of the trill song, failing to finish out the scale. Sometimes it stops with completing the scale. At others it utters several Bewick wren-like notes after completing the trill.

Thryomanes b. eremophilus Baird's wren

Noted rather commonly at Beaver Creek, near Camp Verde, July 11-19, and at Montezuma Well, August 1-9. At this camp I was struck particularly by the variations in its song. "Too-pit-swee!" seems to be a susal rendition. The bird was noted at Montezuma Castle on July 17. Seen more often, perhaps, than in any other situation, where Vitis tangles itself over some sycamore or other tree, and driftwood has caught about the base.

Baeolophus i. griseus (149) Gray titmouse

A company of four were noted on August 4 working through the junipers near Finnie's Ranch, near Montezuma Well.

Baeolophus wollweberi Bridled titmouse

Abundantly represented at Beaver Creek (July 11-19), near Camp Verde; at Bell's Ranch (July 20-31), 3 miles south of Camp Verde; and at Montezuma Well, August 1-9. At these localities they were heard at intervals in cottonwoods or sycamores. On July 15 one was seen in mesquite brush. On August 4 a company of three was noted traveling together through the foliage of a cottonwood.

Psaltriparus plumbeus Lead-colored bush-tit

On July 11 between Deming's Ranch, Prescott, and Dewey 20-30 seen. Doubtless occurred also in the foothill region near our Finnie's Ranch camp at Montezuma Well, August 1-9, but I obtained no definite records.

Polioptila sp. Gnatcatcher

Heard on August 4 in the juniper country near Finnie's Ranch, at Montezuma Well.