Letter Record
Concerning
The Migration of Birds

By Edgar A. Mearns,
Member of the Committee
on Migration of Birds,
Appointed by the American
Ornithologists' Union, and
Superintendent of the Rocky
Mountain District (Idaho,
Montana, Wyoming, Utah,
Colorado, Arizona, New
Mexico).
1. Mr. A. W. Anthony  
   Denver, Colorado  
   Feb. 7, 1884.
2. Capt. P. M. Shore  
   Capt. 22d Infantry, U.S.A.  
   Fort Lyon, Colorado  
   Feb. 25, 1884.
3. Mr. A. W. Anthony  
   Beaverton, Oregon  
   Feb. 27, 1884.
4. Mr. H. J. Smith  
   Cor. Hoyt & Delano Sts.,  
   Denver, Colorado  
   Feb. 27, 1884.
5. Dr. A. K. Fisher  
   Ping, Ping, New York  
   Feb. 27, 1884.
6. Dr. Walter W. R. Fisher  
   Fort Apache, Arizona  
   Jan. 12, 1885.

Wrote letter & mailed 1885.  
Blank and circular.
Indians of Arizona

Apache Souts
White River or Warm Spring
Navajo

Moqui
Tewa
Mojave
Yumas
Chimachaavi
Coopa Ah.

Cearo
2sts. of Gulf Cal.
-possibly Shark 2st., North Cal.
The are can.

Going East

Opata.

Papago.

Pima.

Mansa.

Navajo.

Wt's. Ext. H.E. Ariz.

Pirates Ext. H.A.

Domestic.

Copied from Journal Vol.1 p.115

7. Dr. Wm. E. Hoptune
   Fort Lowell, Arizona
   Sent one 1885 Circular and
   blanks on Jan. 12th, 1885

8. J. Willard Shultz
   Fort Conrad, via Fort Benton,
   Montana. Leve. Wrote Letter
   Sent 1 blank 1885 Cir. Jan. 12

   Fort Lyon, Colorado.
   Sent 4 blanks 1885 Circular on
   Jan. 12th, 1885, with letter

10. Mr. N. C. Evenson
    Boulder, Colo. Wrote a
    letter and sent 1 blank Cir. 1885
Oct. 26th.

2. Taggartia arctica. - One small flock, near the base of Fossil Creek. The flock I have seen this autumn.
4. Salvia arctica. - One small flock, near the base of Fossil Creek. The flock I have seen this autumn.
5. Eremophila alpestris, - Large flock near the Verde Valley.
7. Salvia oblonga. - Common.
8. Eremophila alpestris. - Large flock near the Verde Valley.
9. Dendroica canadensis.
10. Myiophaga towneyi. - Large flock, and several scattered individuals.
11. Phainopepla nitens. - One at

12. Regulus calendula.
13. Cercotrichia blegiaca. - In the Verde bottom.
15. Lonchura lacophrys.
17. Phipo oberti. - In the Verde bottom.
18. Phipo pusiae. - Sonolone.
19. Psectotes gymminus contem.
20. Calamotropha bicolor.
21. Eremophila alpestris. - Large flock and several scattered individuals.
22. Stenella neglecta.
23. Corvus frugivorus. - One large flock and several scattered individuals.
24. Corvus corax. - One or two pairs.
25. Apodornis woodhousei. - In the Verde Valley. The flock near "Old Saw-log."
27. Pipo grisii. - At Fort Verde.
28. Pipo ciner. - At Fossil Creek.
29. Pipo longipes. - At Fort Verde.
30. Pipo leucophysis. - At Fort Verde.

30. *Acipenser guevex.*
31. *Acipenser cooperi.*
32. *Butor hortalis calurus.*
33. *Scopus aei* - Serreiding all night & early in the morning on Fossil Creek.
34. *Peuceta* - A few on Fossel Creek.
35. *Scyphtrix gambilii.*
37. *Anca herodias* - Verde River.

Mammals:
1. Cotton Squirrel - Several seen on Fossil Creek and near the Saw-Fig.
2. *Lupus callotis tennesseus.*
3. *Lupus sylvaticus notialis.*
4. White Bear - Paw Creek saw a member & killed one bear.


5464. *Myotis trumundi* 5 ad.
    222; 3150; 112; 106; eul. 13;
    nom. 188; gape. 21; tarsus. 235
    gape. 23.5; el. 6.5. Ball black.
    Tarsi, feet & claws black, slightly
tinged with brown. Jades, Hazel.
3465. *Oreoscoptes montanul* 7 ad.
    222; 214; 96; 97; nom. 13;
    gape. 26; tarsus. 32; mite. 243
    el. 7. But Fossil Creek & Fort Verde.
3466. *Oreoscoptes montanul* 8 ad.
    233; 226; 101; 102; nom. 13;
    gape. 26; tars. 32; mite. 25;
    el. 7. Saw Yar, But Fossil
    Creek & Fort Verde, A.T.
Oct. 27.

Today, Two Rock Creek and nearby went back to Whipple; and I went twenty miles back on yesterday's trail after the deer Two Rock shot yesterday. On the ride, which kept the till late at night, the following birds and mammals were seen:

1. Harpactyonculus crassus. Verde Valley near the fort.
2. Chrysopterus montanus.
5. Eotrichon eumonotus.
7. Thryothreptes boudentii. List of number seen.
8. Cremophila alpestris. Large flock.
10. Carpodacus montanus.
11. Amphipodipsa helminota.
12. Loxorticlia aeophylus.
13. Loxotus socialis arizonae.

16. Scolopagrocygnyr cyanopraeculata. At Fort Verde has its tree and neck spotted with white.
17. Stenocilla neglecta.
18. Cnemps corax.
19. Gymnothya cyanopraeculata. Several immense flocks, contained from 500 to 1000 birds. They were in the cedar at the Pan-Lo. They probably feed on the berries.
20. Aphycolechia woodhousei.
22. Pretto borealis calicertus.
23. Scott's ass. Hard as we rode home at night.

Mammals:
1. Carya callosa texta
2. Chironomus multicolor
Oct. 27

11. Striped Squirrel. - Capt. in the meagre timber on Clear Creek.
5. Beaver Squirrel. - A number were seen on this trip.
6. Prairie Dog. - A low animal was seen running at a distance which I think was a prairie dog, although it may have taken an elk or mule and was a good way off.
7th. Verde to Clear Creek.
8. to Mud Tanks.
9. to Baker's Butte.
10. to General Springs.
11. to Min Lake Tanks.
12. to Tanks near head of Canon C.
13. to return Canon C. to Cibecue C.
14. to Cibecue C.
15. to Carrizo C.
16. to Forbestdale.
17. to Holbrook Road 4 miles from Apache.
18. to Fort Apache.
20. to Black River 2 miles above crossing.
21. to Camp on Ash Creek.
22. to one mile above Gila crossing at Sub- Agency.
23. to San Carlos Agency.
24. Remained in camp at San Carlos.
25. to Coyote Springs.
26. to Wheatfield.
27. to Salt River.
28. to Canon on Cibecue C.
29. to Canon on Chisos C.
Oct. 24th to the Natural Bridge on Pine Creek.
25th to Fossil Creek at Mr. Smpio at foot of Hardscrabble Hill.
26th to Fort Verde.
27th to the place where Pine Creek shot a deer, 3 miles south of the San Do, 4 back to Fort Verde. The other members of the party returned to Whipple Barracks.

October 18th, 1884.

I spent the greater part of the day in looking for birds on the San Carlos River. I walked from the junction of the San Carlos with the Gila up the river several miles. The following birds were seen:
1. Warnt. - These Worms have a note like the Ruby-crowned Kinglet. They inhabit the thickets along the River.
2. Salpingetes obsoletus.—Common along the San Carlos.
3. Ondvorea auduboniana.—Common.
4. Phoebus frictus.—Several.
5. Turdus ludovicianus acutipennis.—Singing.
6. Carpodacus fonalis.—Common.
7. Astigmus melania.
8. Melospiza fasciata.—Abundant.
10. Lonchura luteola.—Singing.
Oct. 18th

11. Amphinema gelidium - A few in the meagre thickets.
12. Calamospiza bicolor - A few only.
13. Cardinalis Virginianus - Four skins - cafe note exactly like the Eastern species.
15. Egleopus cyanoccephalus - In small flocks about Solano.
18. Amphipius poecilopus - A few.
21. Tachurius migratory - Common. They are often found in the brushwood along with Picis.
22. Cerutus clericius - Abundant.
23. Phlegmeus varius punctatus.
25. Sturnus neglecta - A few.
27. Rhamphotheca rhamphotheca - Slighter.
28. Phlegmophillus rhamphotheca - Slighter.
29. Sturnus neglecta - A few.
30. Butorides virescent - A few.
31. Sturnus neglecta - A few.
32. Vermivorus melleri - Common.
33. Rhamphotheca rhamphotheca - Slighter.
34. Phlegmophillus rhamphotheca - Slighter.
35. 18.2; 5.5; 58; most, 11; gape, 18.5; Tarred, 18.5 (also); vert, 16.5; el., 5; irides, hazel. Bell, with mandible flesh-color, shading near tip to dusky plum.
36. Manilla, blackish. Tarsi, feet, and claws, brownish-black.
37. Cardinalis Virginianus - 1/2. 238; 309; 96; 12, 4; cul., 19; gape, 19; depth of bill at base, 14.5; tan, 24.
38. Cardinalis Virginianus - 1/2. 238; 309; 96; 12, 4; cul., 19; gape, 19; depth of bill at base, 14.5; tan, 24.
Oct. 18.

3429. Centurus urenygialis f. ad.
264; 4 50; 138; 98; cul. 30.5;
gape, 35; tarsus, 24; mete, 30;
cl. 11.

3430. Centurus urenygialis f. ad.
239; 415; 129; 94; cul. 28;
gape, 33; tarsus, 22.5; mete, 27;
cl. 10.5.

3431. Centurus urenygialis f. ad.
248; 439; 183; 106; cul. 29;
gape, 33; tarsus, 24; mete, 27.5;
claw, 18.5.

3432. Pijilo aborti f. ad.
231; 284; 86; 118; cul. 16;
gape, 16; tars. 30; mete, 27;
cl. 9.

3433. Eothlypis trichas. 2 pair.
140; 188; 48; 7; most 19;
gape, 15; tars. 24.5; mete, 18;
cl. 6.

3434. Butides oreasent 3 pair.
Length to end of claw, 630;

Oct. 18.

565: 780; 210; 70; cul.
60; gap, 80; tuba, 23; tars. 56;
mute, 59; cl. 10.
3435. Cercus hudsonicus f. jun.
465; 1070; 353; 230;
cul. 1 cere, 29; cere, 12; cul. 18;
gape, 35; tars. 76; mete, 43;
cl. 15.

Oct. 19th.

We left San Carlos at 6 p.m. and camped 14 miles
on the trail to Globe, at Coyote
Springs. The trail was able
till fairly dry and a good way through
a little canyon with suspension
that clay banks. The south
side of the hills were studded
with the Saint Cactus. On one
of them I saw a Wagoner,
that so far as I could tell,
was not on an Indian track.
Several kinds of mountain a few
cedars in the Estancia, plenty of
sage, yucca bushes, and
a number of small hickory
sumacs, until we are
high up among the rocks all
we see a few large oaks and
several oaks were found.
1. Oreospectes montanus
2. Saltinites obsoletus. Abundant; singing
3. Phainopepla ona. Several
Its note is like a cow-calf
4. Sturnus ludovicianus exultator
5. Zonotrichia palmarum
6. Zonotrichia carolinensis
Singing delightfully.
7. Philecia socialis originanae.
8. Calamuspyra tricolor. - Pecos
cooks near Mr. Gila.
9. Pipilo albilus. - In Mr. Gila bottom
10. Pipilo alberti. - In Mr. Gila bottom

(Oct. 19.)
11. Anwthophila hilinaea Mr. Gila valley
12. Melospiza fasciata Mr. Gila valley
13. Seocephalus cyanoecephalus Mr. Gila valley
14. Xanthocephalus interocephalus Mr. Gila valley
15. Stunella neglecta
16. Manatus corvus Mr. Gila valley
17. Aphelocoma woodhousei Mr. Gila valley
18. Decapterus corvenguale Mr. Gila valley
19. Osbo virginianus Mr. Gila valley
20. Zophotyus gambelii (second)

The General saw two Whale
Leer, cornet.  Depressed.
3436. Limmunus flavus Mr. Gila valley
Fein: 277, 605, 187, 136.
cer, 14 cer, 4, cul, 11.
gale, 19, 37, mte, 33, el, 13.
37, Phainopepla ona Mr. Gila valley
200, 292, 90, 99, cul, 11.5.
most: 8, 37, gale, 16, tar, 20.
mte, 19, Skaro, 6.2. sides, red
Coyote springs.
(Oct. 19)
3438. Salpinetes absolitus, 9♂ 2♂.
150. 225, 68, 55, mts, 14♂.
9♂. 22♂. 120, mite.
18♂. 4♂. Near Coyote Springs.
3439. Calamosphygna bicolor 5♂
18♂. 297, 91, 78, cul, 15♂.
9♂. 15♂. 25, mite, 24♂.
3440. Calamosphygna bicolor 5♂
18♂. 297, 91, 78, cul, 15♂.
9♂. 15♂. 25, mite, 24♂.
San Carlos.
3441. Calamosphygna bicolor 5♂
18♂. 300, 93, 80, cul, 14♂.
9♂. 15♂. 25, mite, 24♂.
San Carlos.
22. Ecliptes auratus mexicanus
25. Junco brunus orogonus
26. Pipilo Maculatus megaloxygus

(Oct. 20)
We left Coyote Springs at 5:45 A.M., and reached the
city of Globe at 10:30 A.M., and disembarked on the stream,
rising through Globe at a place called the Wheatfield.
The distance travelled by
toe 7 miles. The Globe was through mesquite, jellberries, etc.
Globe. San Carlos was plentiful
air all the south sides
of hills after we left Globe.
Near Coyote Springs we passed
some rocky mounds of coarse gra-
line exactly like the Point of Rocks.
After we reached Globe found a
great deal of musk close
One whole mountain was filled
with large granite boulders, covered
with Giant Cactus. Some of the
Cactus grew right out of the
rocks. There were 55 miles to the
stream was lined with saltonwood
Oct. 20.

1. Merula migratoria Arpenagia
2. Harpophrynus cerasalis
3. Croceola montana
4. Phainopepla picta - Quite a number noted along the route. They skulked in bushes and uttered a shorter, lower and more explosive note than the call-note of the Robin.
5. Salpinctes obsoletus - Abundant
6. Zannia euripicae - Abundant
7. Corvus fronsalis - Full of song and abundant.
8. Oecetes immaculatus - A few.
10. Lonchura leucophaea
11. Junco h. oreganus
13. Cardinalis virginianus - A few.
14. Pipilo fuscus mesoleucus - Abundant; pugnacious; its cries are a little less harsh than Aphelocoma woodhousei. Not unlike them, save in loudness.
15. Pipilo aberti - One or two seen
16. Pipilo chlorurus - Common
17. Dolichonyx oryzivorus - Saw a flock, which may have been Rubolotes, flying over.
18. Sturnella neglecta - Abundant
19. Conus corax - Rather common.
20. Aphelocoma woodhousei. Common
21. Cyanocitta stelleri - Macrolophus. One pair near globe; this side.
22. Sturnus lucidi - One pair in globe about a dwelling and one or two seen this side.
23. Loxopus coccyclus - A few scattered along.
24. Picus scalaris - Several seen in magpie and Collinwood.
Oct. 20

25. Centursa uruguayensis. Common in the Cottonwoods. They quit all the way from globe to this camp. Usually found in two. Three shot were all males.

26. Asendorpia torquata. Abundant in the dead lots of Cottonwoods near this camp.


28. Bubo virginianus. One flew past camp just at daybreak.

29. Tympanucus phoebeus.

30. Aeliis. Several.


32. Zonotrichia gambeli. Extremely plentiful all along.

33. Zonaeundra carolinensis. Three were seen near globe. A letter side and larger flocks scattered ones this side. The first flock seen on this trip. I shot three at one shot.

34. Cirrocephalus imperialis.

35. Reogets. One seen near globe.

2. Nyphus callotis texianus. Several.


4. Camon Curnicul. One or two.
Oct. 20.

3442. Cardinalis virginianus 341. 245; 3/17; 102; 1321 cub. 19.5.
gape 20' depth of well at base 17'
width at base 14.5' ears 28
mite 26; el. 8.5; ledge hazel
bill pale red; ears; feet
claw brown. Globe City

3443. Caccydesmus longipes 5 346. 286; 555; 173; 114; cub. 30.
ears 26; mite 31
el. 11. Globe City on Pinal Cr.

3444. Caccydesmus longipes 8 3446. 272; 5.25; 160; 102; cub. 291
mite 33.5' ears 26; mite 30
el. 11. Wheatfield on Pinal Cr.

3445. Centurus uruguayensis 3448. 150; 249; 438; 132; 100
ear 29.5' face 34; ears 24
mite 29; el. 11

3447. Pipilo fuscescens rosaceus

345.0. Accipiter fuscescens 9 min. 35.5; 675; 207; 179
ear + cere 26' cere 9; cub. 13.5
face 19; ears 57' mite 45
el. 10. Globe City on Croft.

346. Pipilo chlorurus ad.

185; 263; 8; 99; cub. 13
face 14; ears 27; mite 23; el.
7.5; not skinned.
1. Merula migratoria propinquus
2. Prosepitos montanus
3. Minnie polyglocts - two seen together. They first on the top -
4. Regulus calendula - a few.
5. Sphynxita obsolus - abundant
6. White-throated Wren - singing
7. Campithylus Brunneifrons - quite a number seen among the giant cacti. Their presence was first announced to us by a series of shrill notes uttered in the act of chopping down the giant cactus. After a terrible clink I shot one of them and afterwards secured the hair of them, a few that were climbing about some Spanish fagoned
8. White bowled Wren - a number seen. Their note is wren-like and they also have a harsh cry.
9. Pliothila corulea
10. Enderocea dentata
11. Phaenophilus nitens - several call notes heard only
12. Cerapodaceus frontalisis
13. Porzites grammicus
14. Amphiphagia bilicinata - abundant
15. Phylloleuca aeneophrys - singing
16. Dumeo menalis oregonis
17. Spizella socialis ariostego
18. Pericola boucardi - quite a number seen in the scrub grass.
19. Plioto luculus mesicus
20. Pipilo aberti - abundant after we reach fall river
21. Pipilo maculatus pacificus
22. Pipilo olivaceus - this is the above common in Pac.
Oct. 21

23. Coleophaga euramoecephalus
Abundant on Salt River.


25. Cardinalis Virginianus


27. Gymnocitta euramoecephala
Our flock.

28. Aphelocoma woodhousei

29. Sagonius sarsi — A few
Scattered along

30. Sagonius uigtiensis — Our
on Salt River.

31. Mitrocoelus rubinus mexicanus
Two seen on Salt River.

32. Icterus vozeferans — A few

33. Icterus scalars — Rather common

34. Centurus ampliagalis — Very
Plentiful in Salt River Valley and
the adjacent region, where
they were found in meadows
with cacti.

35. Colaptes mexicanus — On
was seen going to roost
in a giant cactus.

36. Aythya americana — A
number seen in Cottomwood
along Salt River.

37. Acipiter jussus — Abundant

38. Acipiter cooperi — Abundant

39. Falco sparverius — Abundant

40. Buteo calurus — Abundant

41. Podocyclex californianus
Two seen on Salt River.

42. Leptonyx gambeli — Exceed.

Oct. 22

We found several Gila Woodpeckers going to roost in
holes in the cacti, and concluded
that no owls were in
those cacti, so gave it up
after cutting several down, and
finding both owl and Woodpecker
feathers in the hole.

We established our
search of Whitney's
Creek. We found several Gila
Woodpeckers going to roost in
holes in the cacti, and concluded
that no owls were in
those cacti, so gave it up
after cutting several down, and
finding both owl and Woodpecker
feathers in the hole.
Oct. 21.

43. Zonacidura americana - A cow on Salt River.
44. Colias herodias - Abundant on Salt River.
46. Beryle aleyeh - A cow on Salt River.
47. Zonacidura carolinensis.
48. Podiceps - The Funk saw the above on Salt River.
49. Hydrochus veridis, a Salt R.
50. Sinorhizus mackeanus, do.
51. Salamander bicolor, two.
52. Mammals.
Leptus sylvaticus mulalli. Abundant.
Canus ferris, Common.
Mouse - Caught one in a hole in a Giant Cactus chopped down for nuts. There were two in the hole.
Coyote - One spear.
3447. Mouse. fryer.
3450. C. americana.

Oct. 22.

3448 b. Mouse. fryer to eye 13.6.
Ear, 22; occipit, 28; root of tail, 110; end of outstretched hind leg, 140. Ear, height above skull, 18; above mucus, 16; width, 15; fore arm, 14; forearm, 9; el. 1; leg, 24; hind foot, 20; el. 1.5; and 10.5. Oct. 22, 1884.
3449. Campecephalus brunecephalus.
ad. 219; 287; 94; 87.
cul. 25; muzt, 17; 5; fula.
tars, 32; met. 28.
el. 7.5; toes black.
feet, black, hazel. Bill with maxilla, mandible - black. Mandible black, color on the
ohing to bill. Claws.
Tarsal. Salt River.
Claws, plumbeous - 87.
3450. C. brunecephalus.
ad. 214; 280; 85; 85 (both alike).
Met. 1.6; 1.84; 84; 85. Tass 30.
Oct. 21.
Between Wheatfield & Salt River. Winters (26), el. 7; color as above. 245-1. C. brunneiceps. 7. 210; 268. 82; 84; el. 17; gal 30; tars 28; mte 26; el. 7; colors like 3449.
3452. Whee-browed Wren. 7 ad.
139; 180; s7; 63; most, 10; 5; gal. 18; tars 18; mte 17. el. 45. - Act. Wheatfield & Salt River.
259; 430; 132; 64; ad (3); 37; tars 26; mte 29; el. 11; 45. act. Wheatfield & Salt River.
153; 262; 82; 64; most 9; 5; Gal. 15; tars 19; tars 17; 5; mte 15; 15; el. 1. 3; act. Salt River.

Oct. 22.
We rode from Salt River well on Donto Creek, where we encamped among some fine cottonwoods, but in a heavy rain storm that soaked everything.

1. Oryctes montanus
2. Regulus calenderula
3. Acanthocephalus bunneiceps. - A few when the Giant Cacti form after leaving camp on Salt River.
5. White-browed Wren.
6. Phainopepla antelena. - A few of both sexes. The males were all glaucous.
7. Sempervirens coronata.
8. Lamy's lindbergi. - 2xen.
11. Thruxton's 20 ceciles arizonae.
12. Hesper apicalis oregones.
13. Lonchinchia leucophrys.
15. Papilio chimonus. - Peare.
Oct. 22

17. Aspila fascia scutellaria
18. Euleodes magnus cyanacephalus
19. Sturnella neglecta - common
20. Corvus corax - a few
21. Saginio sayi - common
22. Lyreopsis toquerosa - common
23. Pityus scalaris - a few
24. Centurus mopsusalis - quite numerous both on Salt River and thence along Canyon Creek
25. Colaptes mexicanus - abundant
26. Acridides torquatus - quite a number on Sonto Creek
27. Acrotritus cooperi - common
28. Accipiter dorsalis - common
29. Buteo borealis calvaria - common
30. Ptiteus squamatus - one
31. Pardus melanurus - one on Sonto Creek
32. Amblymysis deserta
33. Zenaedura castellana
34. Ephoratus gambliciae one on the allory, over leaf

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Oct. 22

35. Oxyechus vesperius - common along Sonto Creek on flock of 12 flyin
36. Ardea herodias - one on Salt River and Sonto Creek
37. Jaimaodes maculatus on Sonto Creek
38. Caucalis - one of these fishies came close to me in a mesquite brush on Sonto Creek, where I had crawled under after a wounded Parascopius vitatus Old ghost seen
39. Melospiza fasciata - several seen on Salt River and on Sonto Creek.
The men caught large lizards of Bony-tails in both Salt River and Canon Creek, some weighing a couple of pounds. Frogs like those at Verde were found in both streams as well as in the Gila and San Carlos Rivers. One large Rattlesnake killed in the Fortino Creek. We passed through a large grove of bright green waxy bushes with large white and greenish circular or round flowers. Mammals: 1. *Lepus muttalli* — Common 2. *Lepus cal. tercinae* — Common 3. *Sylvilagus* — Our own species 4. *Vulpes vulpes* (fox — red fox)
Oct. 23.

17. *Proceritis montana*ns
18. *Eucosma* polyphloeus. 1 or 2.
22. *Sulphurites absolemus*. Common all along in suitable places.
24. *Dendroica nigriceps*. A few of these handsome Warblers were seen and heard in the cotton woods about our camp on Forts Creek. I shot one, but could not find it. Their note is shorter than *D. andersoni* and I at first thought it was "chirp" to be a soft note of the Cardinal Mocking.
27. *Astolgia trumis*. Heathly.

Oct. 25.

14. *Zonotrichia leucophrys*. Very abundant. Its song is very like that of *Z. albigularis*.
16. *Calamospiza bicolor*. A few
17. *Junco heermanni* or *j. p. A few.
18. *Pipto aberti*. A Forts Creek. It was an altercation of the Eastern Purple Finch. That is, a very common. Singing, Milton has a low note like the Harriet Finch; a call or a low note of a Blackbird.
21. *Convex convex*. In flocks of from 20 to 40 or more.
Oct. 23.

22. Gymnura cyanosephala. (not flock).
24. Phoropus vociferans. Several flocks. One was the largest I ever saw—about twenty mi. in it!
25. Pheas. scalitis. - A few on Fort Creek.
26. Centurus unguiculatus. - Common all along Fort Creek.
27. Coelopites mexicanus. - Common.
32. Parenchium effusus.
33. Aquila Chrysaotis Canadensis. (Fort Creek above).
Oct. 23,

Journo. Equest.

4. Myrtis. — One skull of a male collected.

Note. — At the store on Wild Rye, I learned that Red Burds are common there. They were described to me by a lady who fished me in professionally as "having long legs, knots, and red bills like a parrot."

Beavers. — I saw fresh Beaver signs on White River, the Gila, and on Salt River near Forto. Creek, and old signs on Pine Creek.


To-day we left camp on the Wild Rye at 7 o'clock and after following that stream for a considerable distance, started over the mountains, and soon came to a roadway at the foot of oak and a scattered growth of cedar, the country very rolling and broken by dark fieliters.

We crossed several little streams having a few colliered and Cedar Creek, a large stream with plenty of water, "black ash" (linden like beech), "box elder" and other shrubs. After starting Pine Creek a little way we crossed some more hills and took a trail leading down some steep hill sides, densely clothed with a species of evergreen tree which I never saw before, but gather some years ago.
Oct. 24th

I found a ranch at the foot of the Natural Bridge, over 100 feet high and a very grand thing. Beneath the bridge are some caves with ladders placed for entrance. They contain limestone stellactites and stellalites and beautiful line writings some of which I collected.

We encamped on the stream a mile or two above in a beautiful grove of large oaks.

Captive Baraka called it "Jerusalem Cypress." The bark is deep blue, manganite with strips of old gray bark. The trees are not found on the hillsides, but in large, handsome trees at the foot of the ravines.

There are large areas of these trees at the end of the trail.

Note of this kind is like the Catbirds, while that of the above is more harsh and
seem like Woodhouse's Jay.

Boat desk verycomfortable.

17. *Pheloconus woodhousei* - Common.
18. *Plectrocincla stelleri macrolopha*

Not seen till we struck the

expressed near the natural Bridge.

19. *Phoenicurus vitellinus* - Not seen till we reached the natural Bridge.

20. Colaptes auratus mexicanus

Common all along.

21. *Chrysokeus texanus decipiens*

seen; 100 ft. short.

22. *Acipiter cooperi* - Scares.
23. *Acipiter gerners* - Scares.
24. *Furnarius kimbo* - Scares.

Oct. 22.

3456. *Centurus uruguayalis* Fad.
237; 425; 130; 90; cul. 24;

gape; 30; toy. 24; mte. 29;

Clan - 11. Shot near camp on SaltRiver.

3457. *Phaeopsylla intensa* Fad.
200; 295; 91; 99; cul. 12;

mote: 7; gape; 17; toy. 20;

mte. 19; Cl 5:3. Shot on Fondo Creek.

3458. *Asynchesmus torquatus* Fad.
280; 535; 168; 106; cul. 27;

gape. 33; toy. 25; mte. 29;

Cl. 10:5. Shot on Fondo Creek.

Oct. 23.

3459. *Centurus uruguayalis* Fad.
243; 460; 19; 93; cul. 26:5;

gape; 31; toy. 23; mte. 29;

Cl. 11. Shot on Fondo Creek.

3460. *Centurus uruguayalis* Fad.
263; 465; 140; 102; cul. 33;

gape; 37; toy. 26; mte. 31; Cl. 11:5

Mounted with the above.
Oct. 25.

Today we left camp at 8 A.M. and after ascending some steep, rocky land, we reached the Juniata River for the first time on the return trip. We found straightening the banks which offered the Indians the best opportunity to pass through in their canoes. The settlement on Strawberry Valley was the last of which we were to see the ruins and their foundations the seats of both large and small-mammal species. After a while we reached Fossil Creek, where we went into camp, after traversing 14 miles.

Fossil Creek is in the bottom of a wide canyon containing many caves and cliff-dwellings and the margin of 15 miles is well wooded with handsome trees.

1. Juniperus communis, "black kah,"
2. Peckia mexicana
3. Gazella's species, "reginae,"
4. Juniperus communis, "heath,"
5. Juniperus communis, "heath,"
6. Salpininctes alpinus, "black bird,"
7. Laport seins, "white," - A few on the outskirts of the pine forests.
8. Juniperus tree.
9. Setta compositae, "aculeata, common in the forest.
10. Setta compositae, "aculeata, common in the forest.
12. Juniperus Communis, "heath,
13. Chiloptera species, "swarming," from Peru, Chile.
Oct. 25-

15. Cercops conca.-Two pairs.
16. Cercops frugivorus.-Several seen along the trail, chiefly near the cornfields at the settlements. Mr. male Cooper
Hawk attacked one, and compelled it to alight so often as it attempted to join
into others, so as to guard. At
length, however, of the Crow,
trans the tables and shot the
hawk, although it saved
his life and dashed at
the Crow.
17. Symphyla eganiscopa.-Several flock.
18. Symphyla heliopatra.-One small flock
among the rocks on the
outskirts of the
many 19. Sympyla lutea.-Concours
and 20. Heliopatra.}

Oct. 25-

on fossil Creek.
21. Parus villosus parisi.-In the
22. Melanerpes formicivorus.-Exceeding
abundant all the way through
the mines. I saw them going
with acorns in their bills,
hammering them into the bark,
23. Asyndesmus torquatus.-Very
abundant in the mines.
24. Calopteryx aurata mexicana
Common all along
25. Accipiter cooperi.-One
26. Butoros torquatus calurus.-Five
27. Cieurus mexicanus.
Oct. 25

Mammals:—

Quinn Squires.—Common on Habitat Creek.

Price Squirl.—Abundant in the same three last.

Pine are found in Habitat Creek.

Coons & Beards & Bears in

Coyotes are plentiful.

Skunk comes into T. Daniels.


346.1. Calamus frutescens. Red—L. (Lad.)

175. 292; 87; 72; cul., 14.5; 9.5; 14.5; Jan. 25; 23.6, 6.5

346.2. Aconitum coeruleum. 7 live.

49; 86; 269; 248; cul. bear.

26; cul., 11; cul., 18.5; gale. 27.5

346.3. Cucurbita maxima. Lat. 0

187; 295; 91; 55; cul., 19; inst. 12

gale. 25; 27.5; 31; 28.1

Indes, hazel. Bill mark matrix, yellow, bearing a dark grey.

Marinsale.

Oct. 25.


Nose to eye, 30; ear, 57; occiput, 69; root of tail, 280; end of outstretched hind leg, 435.

Ears, length above shield, 36

Measure 48

Tail from root to end, 234.

Hairs, 220; foot. arm. 58.

Ear tufts (short, mid. in height) 38


Nose to eye, 33; ear, 58; occiput, 71; root of tail, 290; end of outstretched hind leg, 440.

Ears, length above shield, 45; width 30.

Tail from root to end, 234.

Hairs, 320; foot. arm. 48; cul. 10.

Ear tufts, 40; width 36; chest 9th, 180.
Oct. 2

Mammals:
1. Mule Deer. Santa Creek shot one of three at 300 yards.
2. Lamia machairodus. Common in rocky places along the way.
3. Lepus californicus. Seen at Camp 2; was the only rabbit seen.
4. Peromyscus - fresh fig in meat seen at Camp 2.

Sitta carolinensis aculeata - One only at Camp 2.
1. Salpinctes obsoletus. Very abundant in rocky places; almost gregarious.
2. Phylloscopus inornatus. Several seen.
4. Cercomela aleutica. One or two small flocks.
5. Lanius ludovicianus exultratorides - One.
Measurements of Pecan trees
31 1/2 inches Under Pine, Cottonwood
21 1/2 
5 5/2 
36 
37/2 
59 
10. Spigella exsecta: argyronai. - Climbed along the oozite.
12. Cacalia cerverilae. - A number were found amongst the low rocks. A few "turtle.
12. Asteracoma woodhousei. - A few among the cedar trees in route.
13. Gymnocephalum cyanophyllum. - Pteridium fosteri were seen along the route.
14. Comus corax. - A few scattered along the interior.
15. Sayyona sayi. - A few at
16. Pheus scalaris. - In meadows.
17. Pheus villius tessellata. - At camp.
(Oct. 2.)

18. Coatis annulatus mexicanus, one seen at Camp 2.
19. Melanopterus formicivorus, not seen until we reached Camp 2, where we first struck pine trees. The deer was then abundant.
20. Arvicolus torquatus, Senl. Cook saw several on the way to Camp 2.
21. Pandion haliaetus, one seen on Clear Creek.
22. Buteo boroalis cal. Several seen.
23. Accipiter fulvus. Several seen.
25. Icterus 1. Several seen.
26. Sphyornis guttifer. Only saw one flock 1/2 way to Camp 2. Shot 1 at Em.
27. Coturnix massa. I killed three near together, each at my foot and killed them cold at Spirit Shot.
28. Ardea herodias. One on Clear Creek.

(Oct. 1.)

The hurdle party arrived at 10 a.m. at 3 o'clock. After dinner at Capt. Rudesil's, we started out to Camp 1, at Rudesil's on Clear Creek. We did not reach camp until after dark. The ladies went down to see our camp and as it was late Mrs. Rudesil Mrs. Weanes concluded to try staying in camp all night & go into Verdevy daylight. The only birds seen were-

1. Coatis annulatus
2. Icterus flavicollis
3. Morning Cynthia superba
4. Sturnus vulgaris
October 3

3364. Asymphronus torquatus
(Slimmed for Capt. Roberts) Bad.

3365. Falcated Columbarius Firn.
Shot at Camp 3, gape 2d.
322. 6685; 220; 148; cerc + cul., 18; cerc. 4 succ, 14 succ.
tars. 41; mtc. 46; cl. 12.

3366. Cereia guttatus griseus & griseus.
340; 640; 210; 178; cerc. +
cul., 18.5; cerc. 8.5; cul., 12.
gape, 218.5; tarsus, 5.5;
mtc., 43; cl., 11.5. Cerc. sable-grey.

Bill, with maxilla blue, bill at base and mandible blue at base; residue plumbeous-black.

3867. Pyrausta nebulosa, ad.

Rides hazel. Bill, with max + tip of mandible blackish; residue of mandible blackish.

Tarsi + feet dusty plumbeous.
33.6  |  *Corythosaurus longiceps*  |  2d.
    Shot at Camp 2. Sides, hazel.
    Bill, plumbeous - black, grayish at base of mandible. Tail and
    feet, plumbeous. Claws, plumbeous.
    Black, slight brownish at base.
    280; 534; 192; 110; cul. 30.5;
    gap. 36; tars. 25; met. 30;
    el. 11.

33.70  |  *Corythosaurus longiceps*  |  2d.
    252; 520; 167; 120; cul. 27;
    gap. 33; tars. 24; met. 30;
    el. 11. Colors as above.
Oct. 3 (Continued):

Before leaving Camp 2—thoroughly explored the pine woods in the vicinity and shot off, as follows:

* Lewis's Woodpecker.
* Long-crested Jay.
* Woodhouse's Jay.
* Crow.
* California Woodpecker.
* Sharp-shinned Hawk.
* Liver-colored Jayager.

Other Birds seen at Camp 2:

Parus montanus a large blue among the pines
Carpodacus frontalis
Philestria socialis arizonae
Sitta pygmaea
Sitta bar. aculeata
Pirrus vellosus harrisi
Cerinus canax—came about 3 miles from the huts.

To pick up the leaves of Symnocera cyanocyphala—
dozens of flocks about the camp, mostly flying over, but a few alighted.

Brises oculus, — Cala huir.
Toxophanes montanus. One
Colaptes curvatus marcanus
Scolecopterus cyanocyphalus.
Very few rats were seen after leaving Camp 2, and the last Woodhouse's Jay was seen at Camp 2. Feudal Myna was seen before we got quite to Camp 2.

After leaving Camp 2, the following species were seen:

1. Picoides mexicanus - Common
2. Phoebastes phoebus
3. Sitta mephistis
4. Sitta aculeata
5. Astragalus palteca
6. Podocarpus graminus conifer
7. Dryophthia leucophryl
8. Meleagris gallopar mexicana

Sgt. Martin shot one near Camp 3 from a flock.
9. Hales columbarius
10. Aecipter fusces
11. Buteo borealis calurus
12. Dryocetes stelleri macrolophtha
13. Dryocetes torquatus
14. Hyrnephila cyanophala
15. Pleis velodius harrisi
16. Melanops formicivorus
17. Junco haemalis dorsalis
18. Corvus corax
19. *Columba fasciata.* I saw one pair, flushed from the ground beneath some oak-trees, where they were eating acorns. Capt. Roberts also saw one pair.

Capt. Russell saw a large Pine murrell (Scirius aberti Wood). First seen on the 7th.

Bear killed by Mr. Crook.

Several bands of Deer seen.

*Lyons Calvus taxalis* 

*Thononup salpoidis nutricula*

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October 4th

**Bubo Virginianus**

One heard at Camp 3 before daylight.

29. *Buteo Bordey's calvus.*

38. *Accipiter fasciatus.*

46. *Falco columbarius.*

59. *Fennecmus, Granmars.*

20. *Buteo Swansoni.* First seen after we arrived at Camp 4.

47. *Falco peregrinus.* One was shot at sitting on the semi-rock beside Luego Beeleis.

8. *Macleago galapavo mexicana.*

Capt. Buckell shot one from a flock of twenty or more.

Sot. Martinez found a flock of 100. Shot one and wounded two others with his carbine. A third flock was seen near Camp 4 containing some fine old gobblers.

22. *Columba Fasciata.* I saw
Oct. 4th

3370. Sciurus Hudsonius fad.

Nose to eye, 24; ear, 44; occiput, 53; root of tail, 197; end of outstretched hind leg, 2 1/2. Between eyes, 26 3/4; forearm, 38; forefoot, 34; longest claw, 7; leg, 50; hind foot (cl.); 46; claw, 7; tail from root to end vert., 130; hairs 17 5/3. Ears height above skull, 20; meeting 24.

3370. Sciurus Hudsonius. fad.

Nose to eye, 23 1/2; ear, 46; occiput, 55; root of tail, 205; end of outstretched hind leg, 32 1/2. Between eyes, 28; forearm, 39; forefoot + cl., 35; cl., 7; hind foot + cl., 46; cl., 7; leg, 52; tail from root to end vert., 135; hairs 180. Between eyes, 28; Ears height from skull, 24 1/2; from metac, 26; mtmt, 23.
and flying. Allers of the party
\[\text{not visible}\]
on first flushed from the
ground, where they were
eating acorns beneath the
oaks. These acorns are as
dext as Chestnut, and the
mexican feed chiefly on them.

10. *lyamochita stellaris macrolopha*
  Very abundant + vociferous

11. *Symmaphila cyanoccephala*.
  At number of flocks were seen
  all the way from Camp 3 to 4.

12. *Dendroica decubunti*.
  The
  first time flocks were found near
  Camp 3.
  First seen:

13. *Junco mexicana dorcas*. Very abun-


15. *Pallis montanus*.

16. *Sialia mexicana*

17. *Estrildidae family*

18. *Sitta carolinensis aculeata*

19. *Sitta pygmaea*

20. *Calothraeacae pectoralis*. One
Oct. 4

3370°. Lammas 5
Rose to eye 17 ear 33 root of tail 140
and of outstretched hind leg 210.
Forearm 24; forefoot 18;
cl. 5; leg 3; hind foot 4 cl. 330; el. 4.5.
Between eyes 15
Ear
Height above skull 11
From wnter 17
Width 14
Hind, from root to end vert. 9.6
Hairs, 120; Ears, 8.

(20 continued)

Seen at Camp 4, the first since
before we arrived at Camp 2
21. Croes villosus harrisii
Very abundant.
22. Melanurus inventor
Abundant.
23. Aesindurus torquatus A
Number seen:
44. Echolophus auratus canus
Oct. 4

Several seen & heard.

33-129 mosci. dorialis 5° ad.
175 270 87 82 Oct. 13 Sept. 14

fas, 22 uinte, 20 26

Sis hazel
October 5 - Mt.


3. Deerus altii - Stew. Brook shot one of which was melanotic.

4. Deerus hudsonius fremontii - Squirrels were seen, always in ravines where the fir and spruce grow. All were gathering for food. The large cones of the spruce these squirrels have not been seen in other localities than these valleys, which are grown with Borden maple as bright and in autumn as the Eastern maple. There are Pyrola, Aspers, Solidago, with heads as large as Squares & others of Solidago, Smilacina, Usne, a plant like Smilacina containing in fruit as large as Cranberries of vivid, scarlet. Elders with large bunches of pleasant tasting fruit, a fruit like
Oct. 5

The Common wheelbarrow, but 
bad tasting. Violes of more 
than one species. The woods 
are a strong resemblance to 
the new Eng. Middle States. These 
woods in these scattered 
seams. The pine woods 
are like a park, with only 
grass + flowers of endless 
variety & beauty growing beneath 
the pine moss the best beauty. 
Then begins the Mountain, 
only genus in dimp seams. 

78 day I saw some large 
Coralberris 32 feet high. 

They were been yesterday near 
Camp. There were Blue 
Closed Gentians. 

4. George - Goofers very 
common throughout the State. 

But none of the animals 
seen. Only plenty of fresh 
eggs.
Oct. 5.

Birds:
1. Fluvicola pallasi andruboni. - The first bird shot after leaving Camp 4 was this, the only one I have ever seen. Shot in an oak in the pine woods.
2. Sciala minucula - Common, living in the thick pine woods.
3. Rupicola capuculata, Common, especially in the bushy ravines.
5. Sitta europaea - Abundant.
6. Sitta europaea capuculata. "
7. Carinina familiaris. One or two.
10. Zoster Curvirostra. - Several large flocks flying with much chattering amongst the trees near Cabin 5 at Camp 5.
12. *Sceloporus cyancephalus* only at Camp 4, so we were learning.


15. *Gymnocaecum cyancephala* Several hecks seen between Camps 4 & 5.


17. *Calefus maccatus mexicanus* One or two seen.

18. *Helantera armeniacum* A few seen.


Oct. 5.
25. Falco peregrinus. One adult shot. Beet fell down the cliff into Santa Ana where it could not be recovered.
27. Thulecanus galloprovincialis. Could not tell what a large flock. Bent. Cook shot one young one from a broad with the size of a hen.

73. Columba fasciata ad.
370 lb, 64 lb, 20 lb, 15 lb. Cul. 17.1 gal. 25 lb, dark 30 lb, light 40 lb. 11 in. bright band. Bill, orange yellow.
3373° Scirrhus aberris. bat. Male. Shot by Mr. Crook.

Oct. 5.

Shot by myself.
Nose to eye, 29; ear, 52; ocular part, 69; root of tail, 270; end of outstretched mid-foot, 425.
Humerus, 5.6; foot, 59; cl. 10.
Leg 80; half foot, 161; cl. 10.5.
Tail vert. 127; hands, 280; Ears, height above skull, 35.
Neck vert. 44; width, 28.
Between eyes, 36; Ears, rounded.
Chest girth, 180.

3373° Scirrhus aberris. bat. Male. Shot by Mr. Crook.

Oct. 5.

Nose to eye, 31; ear, 56; ocular part, 71; root of tail, 290; end of outstretched mid-foot, 233.
Humerus, 5.6; foot, 47; cl. 10.
Leg, 78; mid-foot, 64; cl. 11.
Tail, vert. 208; hands, 303.
Ears, height above skull, 44; width, 27.
Between eyes, 40.
Chest girth, 180.

3373° Scirrhus aberris. Male. Shot by Mr. Crook.

Now large, 22; ear, 46; feet, 55; root tail, 210; mid-foot, 330; fore arm, 3.9; foot, 35; cl. 7.
Leg, 55; foot, 51; cl. 7.
Tail vert. 127; hands, 168; Ears, height above skull, 21; necating, 26; width, 22; between eyes 29.
Ears, rounded.
Chest girth, 128; total. Length.

168
210
378
Oct. 5

3374 Clark's Crow 1 ad

In brown bill grey feet

4 claws black 320 380 997 128

Cul 42 gap 46 lane 36

nute 34 cl 13

3376 Myocichla calami 1 ad

195' 324' 108' 80' mont

11 5' gap 2 3' lane 3 1

nute 22 5' cl 5 3

2 ir hazel Bill brownish-shk

flesh-color on base of mand

tarsi flesh-color feet flesh

brown claws dusky.

3376 Parus montanus 1 ad

134 275 70 66 11

gape 12 lane 14 nute 13

cl 13 5' gri hazel

3377 Phoenicurus Williamsi

195 275 136 100 cul 25

gape 30 lane 23' nute

2 3' cl 7 5' tir ros reddish

brown bill plumzous black face

44 plumzous claws black
10th. St.  

33. 78. *Ruteo formicarius* Lesson. 

Yellow, with black at base. Bills greenish blue at base shading into black, brown black at tip. Tarsi and feet yellow. Claws black.

580, 1360, 1420, 260, 340; geese, 37; fowl, 15; bull, 26;  

M, 84; mule, 69; other, 24;  

*Phymatopusvarius* Lesson. 

1 m., 610, 386, 124, 80; bull, 215;  

goose, 25; tare, 23; mite, 23; el 9.
Oct. 6.

2. Regulus calendula
   Parus montanus
4. Sitta pygmaea
5. Parderidae auditors.
6. Carpodacus cassini. Several birds were seen at first. They were singing pleasantly.
7. Passerella savana. One seen near camp 6 mi. a little marsh surrounded by junct.
9. Spizella socialis arizonae. One seen near the river.
11. Tornus corax. One seen.
13. Tornus "corax". One seen.
Oct. 2

14. Gymnopica agamops - A few flocks seen crossing the road, feeding on seeds - 2.50
15. Picus villosus - seen with a flock 40 yards along a track - 0.50
16. Picus villosus - seen with a flock 40 yards along a track - 0.50
17. Colaptes auratus - seen with a flock 40 yards along a track - 0.50
18. Scoop of rock on the rim - 0.50
19. Bufo bufo - seen with a flock 40 yards along a track - 0.50
20. Bufo bufo - seen with a flock 40 yards along a track - 0.50
21. Falco tinnunculus - several
22. Melampros galloprovincialis - seen 40 yards along a track - 0.50
23. Columba livia - seen 40 yards along a track - 0.50
24. Buteo buteo - seen 40 yards along a track - 0.50
144 (Oct. 6)
3380 [Zonotrichia leucophrys] "ad.
110; 198; 62; 281; cul., 14.5'
gulp., 16.5'; tars., 14.5'; mtc.
5.5'; el., 6.
3381. Cyanoecitta stelleri macrolophus
'ad. 302; 458; 143; 133
cul., 28; gulp., 32.5; tars. 43
mtc., 32; el. 9.5
3382 Cyanoecitta stelleri macrolophus
& 310; 475; 143; 143; cul. 28
gulp., 33; tars., 45; mtc., 35; el. 11

145 (Oct. 6)
3383. Prenois jucunda, gardineri "ad.
179; 315; 101; 78; cul. 18
gulp., 22; tars., 17; mtc 19; el. 9
Brides reddish-brown, bill
plumage duller. Black. Stems and
feet plumage. Same, but no
3384. Carpodacus Cassini "ad.
163; 276; 86; 66; cul. 12
gulp., 15; cul. 19; mtc 20;
el. 16. Brides, hazzel.
3385. Carpodacus Cassini "ad.
162; 277; 86; 66; cul. 12
gulp., 16; tars. 20; mtc 20; el. 16.
Brides, hazzel
The action binomial, etc.
Thickly wooded with junipers
a few banks and, and then some.
White crown with bright blue
eyes. Not in our range.
3386. Zonotrichia leucophrys "ad.
170; 256; 81; 79; cul. 12.5; gulp.
13.5; tars. 24; mtc 23; el. 61.5
1. Sciura nivipes
2. Regulus calendula
3. Parus montanus
4. Sitta carolinensis
5. Dendroica auduboni
6. Junco hyemalis dorsalis
7. Corvus corax
8. Corvus alecton - A pair at the head of Cañon Creek in Tomo Bakedi
9. Pica melanoleucos harizi
10. Aemodira tricolor - Forms the feathers near Camp 6
11. Scircoidea auratus - Several seen at Camp 4
12. Perdicca fusca - One seen
13. Perdix perdix - Several at head of Cañon Creek
14. Phasianus colchicus
15. Phasianus colchicus
16. Phasianus colchicus

Memorials:
1. Male deer - An Indian guide shot at one at the head of the column.
2. Glacis - Everywhere on route
3. Long-needled B. t.
After marching Camp 7, June 18th, shooting and saw.

Campanula lasiophylla

Gyrospermum oreganum

Chimonocitta utricularia argentea

Campanula rotundifolia

Calyx of flower within a perfect cone, rising from branch to branch until I come almost house at an I lay on the ground.

Embourbonax difficilis

Gonocome limaciae descartii

Argyria socia arizonae

Rhipsalis coloradensis

Sitta caracarius

Melanocercus formosissimus

Cercidiphyllum virginianum

Sphyrapicus varius Wallis

Phasianus colchicus Wallis

Phasianus colchicus Wallis

Phasianus colchicus Wallis

Phasianus colchicus Wallis

Meleagris gallopavo mexicana

Meleagris gallopavo mexicana

The turkey (see David's

Conquest of N. Mexico) was
domesticated by the Aztecs in New Mexico and Arizona, not least. Bourgue to write it in

Bourguet's book calls turkeys by sucking air through the

radius of the bird:

Cyps asio - crying after
dark around camp 7.

Squacco heron Aracocephalus

tied about the ranch at the

head of Cañon Creek.
A species of Derris with slenderer habits than Vireo grows along the creek by Camp 7. It has been in rich, damp wooded district.

A new species of Asclepias has just been brought into the garden over the stream and the plants are being propagated. It has been found between Camps 2 and 3.

(Asclepias oblongifolia)

The small-leaved Clarkia is such a group of flowers we have not seen太多 as we got down into Utah. These are smaller flowers. The large-leaved oaks were found between Camps 2 and 3 where the scrub oak ended.

There are a few species here at Camp 7.

A new species of grape grows here, prostrate, small berries. It has large leaves, large bunches of grapes, with disagreeable methus flavor.

(A pretty purple flower called Conopodium).

A miniature hollyhock and a bright purple primrose, and some new begonias. The goldens are very fine.
(Oct. 7.)

V. 3972. *Phryganus varius megalus* Bad. 226; 408; 130; 94; enl. 25; 26. 28; tars., 2. 2; mt. 22;

Bill, dusky; plumbers; Tarsi + feet, plumbers; claws, dusky.

*Situt in Camp.*

33. *Merula migratoria fusingua*

\[ \text{w. no white on tail,} \]

265; 735; 146; 122;

most. 14; 28; 34; 30; 17.5; sides. hazel.

Bell, brownish-black; slight; yellow at base of mandible, legs; feet + claws; brownish-black; bottom of feet; yellowish.

33. *Indigo *inunalis oregana*

149; 238; 72; 69; enl. 11.5;

gale; 21.5; tars., 20; mt. 18; el. 615; sides. hazel; Bill, flesh-color;

\[ \text{vert. slightly tilted with blackish;} \]

Tarsi + feet, brown; claws, dusky.
Oct. 7.

_Empidonaux_

3.3
145: 234:172: 65: most: 8;
cape: 15: hare: 17: mite: 14: 3;
Cl. 5. Tarsus: eldest: Bill: brownish
black, with nasal 3/3 of mandible
hole flesh brown. Tarsus, feet, claw
black.

3382: Seminus aborti. ade. 66

Note to eye, 28; ear, 54; occiput;
post of tail, 263; and of outstretched
hand-foot, 443. Ballestan eyes
37 fore-arm, 54; fore-foot, 48;
longest claw, 10; leg, 80; hind
foot, 60; longest claw, 11
Tail from root to end of hairs
290 Verboeck. 210. Ears, breadth
above skull, 36; measure 44;
width, 28. Ears measure to
skin, having 7 above; Skin. Chest girth,
185.
(October 8.)

1. Thymus migratoria prostrata
   - Drove a number seen along
     - The route.

2. Sialia mexicana, Common.

3. Regulus calendula.

4. Pardus montanus.

5. Zophophanes migratorius. - Not
   - Seen till we got through the
     - Junipers near Camp 8. Among
     - Cedars & junipers, Pearce.

6. Sitta carolinensis aculeata
   - Abundant with junipers.

7. Sitta typica. - do.

8. Cuneata aurillata, Common.

   - A few at Camp 8.

10. Zonotrichia beccullu. - do
   - Camp 7.

11. Spizella socialis arizonae.

   - A few at Camp 71. Gradually
     - Growing abundant and,
     - Descended, While descendi
(October 8)
grew scarcer as we got out of the Avita.
   A few near Camp 7.
16. *Corvus frugivorus.* A few scattered individuals took
   large flock at 6.
17. *Grus /Grus caerulescens.*
   Large flocks alighting on
   the ground. The rear flock
   continually flying ahead
   and so progressing. The whole
   flock yelling like sixty.
   The attack hawks and produce
   an awful din.
18. *Achelata woodhousei.*
   One or two at Camp 7, and
   increasing in numbers all
   the way to Camp 8.
19. *Cyannocitta ultramarinus*
   *dizonae.* - A few at
164

Ardea herodias — Cry seen as Corps on the Cition Temple alone.

165

October 8

Camp 7

Hence to Camp 8

where a few occasionally seen. Their Cry is "Pee — fe we — me." They usually associated with long-crested Jays

20. Cyanocitta stelleri macrolophus

All along the route abundant

21. Ascendensius lorygnatus

Abundant all along the route

22. Melanerpes formicivorus

Fairy abundant.

23. Phlyagryicus muchalis

Common all along the route

24. Picaus villosus — Only one seen.

25. Geolaetes auratus mexicanus

Very Common

26. Butor borealis calurus

A few near Camp 8

27. Butor vinaceous

28. Aves at Camp 8

Mexicanus gladiator
Indians shot & with rifle
wanted me to buy them
for $1 each.

3388. Cyanocitta ultrainiana
arizonae. 7 as:
330; 6-17; 165; 15-2; cul.
29; 35; tars 4-5
mite 8 33- el. 1-1

Zides brown. Bill mottled
black & yellow. Tarsi feet &
Claw 1st black.

Some tail-feathers shot &

3389. Cyanocitta ultrainiana
arizonae:
340; 5-25; 168; 162; cul.
30; 36; tars 4-4
mite 13; 36; el. 1-1. Colors as above.

3390. Coccothraustes longicaudus
D'Orsay:
2-75; 5-35; 164; 100; cul. 27;
36; tars. 25- mite. 3-2
Claws 1-1.
168

3391. Cardenius trignatus
285' 5'50' 72' 10'9'; cul.
30; sally 35'4; lard. 29; mte 30;
El. 11
3392. Columba fasanata 2
635' 207' 146' cul. 15
gale. 24' ten. 29' mte. 37' 10
Colon. Like 29' 29' 10

169

October 7.

1. Turdus pallidus and black 
One seen half-way between it.

2. Oreopis montanus. - A few
penn + one shot

3. Gavia mexicana. - Abundant

4. Regulus calendula.

5. Aphanoecus monnalis

6. Petta carolinensis. - A few

7. Dendroica auduboni.

8. Pyrrhula ludoviciana - One
shot.

9. Myiarchus torquenda. - Several
seen in a little cayon; they
have a very clear sweet

call - note; and were singing
exquisitely. One that I shot

crawled underneath the root at
the bank of the little brook
in the cayon + could not be
got at. They make a whirring
sound like a woodpecker.
When flying from branch
to branch.
1. Lepus callotis texanus
   Shot. Several seen.
2. Yarnell — Several.
3. Rock Squirrel — Several.
4. Grounds — Signs everywhere.

10. Pycnoetes grammicus coniferii
    Common in some spots.
11. Peneus — Amongst oak
    leaves on mnt. beds.
12. Junco hemeralis oreganus
    Very abundant.
13. Spizella socialis arizonae
    Very common.
14. Pipilo maculatus megalops
    Abundant all along road.
15. Pomatostichus leucopterus
    Abundant in places.
16. Astragalus falbria, Pajaro
17. Agelastes phorinius — Male
    Female on a little stream.
18. Selecophalus cyanoccephalus
    Large flock, near Camp 8.
20. Corvus frugivorus — Flock
    at Camp S8. Seen or two seen
    on the road + at Camp 9.
21. Byrrhops cyanoccephalus
(Oct. 9)

Large flock seen well along the road. Some con- 

22. Gauvettia stellaris androsobia 
   exceedingly abundant all along 

23. Gauvettia altamanna arizonae 
   Abundant all along one shot 

24. Aphelecomia woodhousei, C. 
   Now all the way. 

25. Pieris philea var. harvardi, C. 

26. Phytophagus varius michalsis 
   Abundant 

27. Melanochryus formicium 
   Abundant 

28. Asendesmus longnatus 
   Quite plentiful 

29. Agelastes ephratae mexicanum 
   Abundant all the way 

30. Melanchoja micriaria, C. 
   Gomz 7 along the stream 


32. Haller culmarius, One
Oct. 9.

33. Columba fasciata. — In flocks of 25 to 100. More abundant than Killdeer in the marshes. They were single or in twos or threes. In the cedar and juniper lower down (yesterday), a few flocks of 3 and 10 were seen. To-play they three in large flocks.

The timber along this route was juniper, cedar, fir, a few pines and juniper abundant oak trees with small and large leaves.

34. Tyto cristata gambeli. One flock thirty Camp. Capt. Roberts Shot one.

35. ? Trochilus alexandri. — Zeml. Crook saw one. +

36. ? Florida Veris. Also a large flock. A few wood folk. This is where...
3393. Cyanocitta ultramarina
  Arizona. 20
  335; 510; 172; 158; cul. 30
  gal. 36; tars. 41; mtc. 36
  Oct. 11

3394. Piranga ludoviciana. 15
  145; 29.6; 92; 72; cul. 15
  most 11 gal. 19; tars. 17.5; mtc. 17
  cl. 5.3

3395. Psuedesmus longipes
  ad. 237; 527; 168; 104
  cul. 29.5; gal. 34; tars. 28
  mtc. 30; cl. 11
(Oct. 10.)

The Carrizo is about the size of Clear Creek. Shortly after 6 o'clock the Carrizo we came to a large branch of it called larchwood which flows through a deep, beautiful cainon, wooded with cottonwood, like those at Yuma. At another hand a large tree species of which is called Populus angustifolia, cottonwood, which is

the 1st "Cenecillo."

There were the 1st "Vairas"

in the mountain, and several species. Not bad, but small. (Pop = salix tremula).

Still on Camp 9. Rainy now.

1. Sciacophanes cyanoccephalus

The flock still here. Too

Crook said to come into the

birds, although he killed

several others.

2. Querquedula carolinensis

One seen on the CoxIsa (not

shuffled tonight, then "dry

Week"), this morning.

3. Muscipepla passerina, Sungri

Seeds beside Mr. Christ.

The tent concluded to start

at 8 o'clock, the weather soon

became fair. We reached Aricel

Dale soon after 6 o'clock.

4. Myiarchistes Townsendi. A fine

heard singing in a deep cainon

a beautiful song

5. Sciola musiva, - Common

6. Regular Carduelis. - A

7. Phoebus monatrix, - A
in true Cedars.
7. *Sitta frontalis.* - A few when we reached the creek near Camp 10.
11. *Astragalus pratensis.* - Large flowers in the creek bottom at Camp 9, feeding on sunflowers. Also some were found near the quartzites.
12. *Dactylis glomerata.* - Present in the grass along the mesa above the Rio Colorado. Note a small "chuck."
20. Hymenophora ayanocephala - Common all along the trail, but in small numbers.

21. Alethoceps woodhousii - Common until we got on higher ground; was at the bottom among the larger ones. I think we went down to the bottom. A stone struck me on the head and another on the shoulder, but did not injure me except to stiffen me up some.

22. Cynocephalus utrascaria - Quite a few seen before we crossed the...
26. *Acanthocinus antarcticus*
Common in the Furnes. These notes when playing in flocks are like a Squirrel.
27. *Caloptes auratus mysticinus*
Common all along.
28. *Halecolumbiviridis*, One
Saw Camp 10.
29. *Columba maccormicki*
General. Saw three.
30. Horse-chestnut, Three
at Camp Pump Carina + one
or two more before us.
reached the Oldbury Creek
31. *Cerle alcyon*
Several were
fishing in the Carino.
32. "Someone's says", One was
shot in the woods above Condoray.
As I was looking at it 10 it flew
and was circling about for
some minutes before it finally
disappeared in the distance.
(Oct. 10)

3396. Acendonius Lorquatus fad
272; 3-20; 165; 792; cul 27
3896. Acendonius Lorquatus fad
280; 5-40; 1757 10c; cul 29
jefe 36 48 26 mte 38 el 11
Left Camp 10 at 6:45 A.M.,
and got in to Camp 11, sixteen
miles from Ft. Apache, on the
Holbrook road at 1:30 P.M.
1. Nem树林 migratoria profuga
2. Sialia mexicana, Common
   in small slopes.
3. Regulara calendula - One or two
4. Sitta carolinensis aculeata
5. Sitta pygmaea, Both Sittas com.
6. Loganathus migratorius, A few
   near Camp 11.
7. Androceola arbuti - Common
8. Astragalus Psaltria - A few
10. James melalis ornatus
11. James melalis passerina
12. Lonchirris leucocephala
13. Scolopogonus aequalis, A
    few before two left Forest Grove
14. Corvus frugivorus - A few
15. Corvus corax. A few
Measured the largest oak seen to-day. Circumference a little over 3 metres. Estimate height 20 metres. Prunes were seen over a hundred feet in height and about 6 metres in girth.

The small leaved oak trees were seen during the last half of the way and are abundant with the large leaves hereafter.

6. Ceanothus occidentalis

A beautiful dark red stem was found, and a handsomely fragrant mustard-yellow strawbery (Fragaria) plentifully.

A small pine with little cones grows on the mountain. Fir trees were numerous.

16. Ceanothus stelleri macroleusa

Very common. It has a melodic whistle beside the various crickets.

7. Gymnopoea cyanoccephala

A few seen.

Sheldrake Jays are great fighters and jester all kinds of holsters, tailfeathers assembling in great flocks to amuse themselves. No wind. To-day they were worrying a Red-tail and a Sharp-shinned Hawk.

18. Empidonax

One was shot in the pines on the highest peak of the mountain over which we crossed.

19. Picea villosa lassini

After

20. Melanopsis formicivora

Common. Saw the holes bored by them to store acorns in dead trunks.
Mammals

10. Perognathus migratorius - Capt. Roberts
   Shot at on some rocks

2. Sciurus aberti - Capt. Roberts
   Shot three, shot one. Several times they have escaped me, but this one I scared after half an hour's work. He was at last discovered clinging to the very topmost branch of the tallest tree in the place. I had supposed they had holes in the living tree, they eluded me so completely, but I now think they were using safety to their cunning in concealing themselves in the tree tops.

3. Geomya as usual.
4. Deer seen near Camp 11.

21. Anas sp. - Torquatus
   Very common, they squeak like skippers and chatter. When playing exactly like squirrels.

22. Phryganops varius mutabilis
   Was seen once only.

23. Acanthis jucunda

24. Buteo buteo - colurus
   Several seen; one shot.

25. Coulteryx malmia - A flock of half-grown young; one old mall leading was seen at Camp 11 by Capt. Crook.

26. Columba fasciata

27. Zenaedina carolinensis
   Capt. Roberts saw one at Camp 11 near Ft. Apache.
3398. **Emphidonax**
137: 222; 66) 60; Nord. 7.

3399. **Melanerpes formicivorus**
Fad., 233; 456; 145; 89;
cul., 27; gape, 31; larse, 20.5;
mte., 25; claw, 9; shades, white;
Bill, blue-black. 1st winter,

3400. **Aegyptius torquatus** 2ad.

3401. **Aegyptius torquatus**, 2ad.
282; 845; 176; 108; cul. 30;
” nu, 36; tars 27; mte 30; ch 11
Mammals:

1. *Spermophilus aberti* - Lent Cook shot one & I shot one. Six species is abundant about Apache.

2. *Camelus* (donalis?)

(340) *Pallas'sulus ochraceophalus* F
- 148; 270; 82; 59; cul., 10.5; gape, 12.
- Tarsi, 20.5; nite, 19.3; el. 6.

(340.3) *Pallas'sulus ochraceophalus* F
- 152; 273; 81; 63; cul., 11; gape, 12.
- Tarsi, 20.5; nite, 18.6; el. 6.

(340.4) *Pallas'sulus ochraceophalus* F
- 152; 267; 79; 59; cul., 10.5; gape, 12.
- Tarsi, 20; nite, 18; el. 5.

(340.5) *Pallas'sulus ochraceophalus* F
- 148; 264; 82; 60; cul., 10; gape, 11.
- Tarsi, 19; nite, 18; el. 5.

Sides, hazel. Bill, white; maxilla above & tip of mandible, dusky-brown; residue, flesh-color. Tarsi & feet, brown; claws, dusky.

Oct. 12

1. *Scula migratoria* - Abundant
2. *Sitta mexicana* - Abundant
3. *Sitta carolinensis* carolinensis
4. *Sitta pygmaea*
5. *Lophophanes russatus*
6. *Junco torquatus* - abundant
7. *Pyrrhula pennsylvanica* confines
8. *Pallas'sulus ochraceophalus* - In good sized flocks in the chest ground by the roadside. They utter a harsh "chick" as they fly and keep in close flocks all together. They have very close hens. Pigeons very close before they fly.
9. *Junco torquatus* - abundant
10. *Junco torquatus* torquatus
11. *Pipilo maculatus* - abundant
12. *Scolopacidae* Lagopus cygnocephalus. Pigeons hooted by the roadside. Fine July - been Airs abundant
(Oct. 12)

13 Cyanocitta stelleri meridionalis
14 Gymnoglaux cyanoccephala
15 Bombycilla cristata - Very abundant about Apache.
16 Prunus villosa var. sigis
17 Acanthopanax densiflorus
18 Melanotus fominixorus abundant
19 Copicea urbus mexicana
20 Butea dorsalis calurus
21 Accipiter gentilis - A vecchii,
Brewer's Blackbird at Apache
22 Linnmaurus stravaenus
23 Centropyx massina, Angelina
24 Columba livia cinerea
25 Helioannus gallopavo mexicano
One cock crossed the road in front of the General.

At Fort Apache all day. Talked and held a grand pow-wow with the Apache Indians, and then spent the rest of the day fishing. In the afternoon I found the South Fork of the White River, entered the Canyon and climbed up a steep hill to get in front of the country, and a magnificent Panorama—a view to be remembered. The evening Quails could be found, but I saw no Gambel Quails either. The Massacuas are more abundant than Gambels at Apache. The Gambel Quail close more often than ever leave the valley. On the mountain for the mountains. Just at evening I heard some Turkeys but it was too dark to follow them.
The birds seen were
3. Recula calendula. A few
4. Symplophanes mormotus. Common
5. Sitta carolinensis acuticula
6. Ficedula aurantifrons
7. Promerops castaneiceps
8. Sialia socialis arizonae
9. Zonotrichia leucophrys
10. Chloris linearis. I saw a number of Lincoln's Finches on the S. Fork close to where you, Grook, was talking tokid Cindones, and on that account did not shoot any of them.
11. Junco haeviscens graysoni
12. Junco haeviscens leucurus
13. Pipo maculatus megalonyx
14. Scolecoptes cyanoccephalus
15. Corvus corax. Very common
16. Corvus frugivorus. A few
There are plenty of fish in the streams near Fort Apache; but only a very few small specimens were seen all along the South Fork. After the two forks united (near the Post Hospital) the suckers are found in abundance; and there are many trout there also.

(Cost. 13)

17. Cyanocitta stelleri macrocephala
18. Cyanocitta cyaneccephala
19. Symphorica cyanoccephala
20. Picus villosus humilis
21. Phrynopœus varius mexicanus
22. Melanopteryx formicivorus
Very abundant.
23. Cistopus auratus mexicanus
Exceedingly abundant.
24. Columba fasciata. A few
25. Accipiter fasciatus
26. Syninemus solitarius
27. Buteo calurus. One shot
28. Melanopteryx gallopavo mexicanus
29. Buto virginianus

No. 13406. Phrynopœus varius mexicanus fasciatus. Virgoe towards ear, puber:
225; 403; 128; 90; cul.; 26; gape.
28; tarsus, 21; mid.; 23; cl. 9.
34. 07. Symphorica cyaneccephala fasciatus
301; 486; 154; 126; cul.; 37; gape.
40; larv.; 39; mid.; 34; cl. 10; 5.
20; keel, bill, tarsi, feet, and
claws black.

3408. Gymnomeria cyanoccephala, 6 ad. 281; 462; 143; 112; cul., 34; gale, 37; tars, 37; mite, 30; el. 9.
Colors like 3407. Crop full of acorns from the small-leaved oak.

3409. Aphelocheira woodhousei, 6 ad. 297; 403; 122; 141; cul., 26.5; gale, 30.5; tars, 40; mite, 31.5; el. 10.

3410. Aphelocheira woodhousei, 3 ad. 315; 420; 130; 155; cul., 27; gale, 31; tars, 42; mite, 31; el. 9.5; cul., 340.

3411. Sturnus vulgaris, 1 ad. 272; 483; 92; 136; cul., 16; cul., 4.5; cul., 12.5; gale, 17; tars, 37.5; mite, 32; el. 10.

3412. Caudoptila mexicana, 1 ad. 325; 35; 165; 121; cul., 38; gale, 42; tars., 32; mite, 34; el. 11.5.

3413. Junco hyemalis, Oregonus, 6 ad. 157; 237; 74; 73; cul., 12; 12.5; tars., 21; mite, 20; el. 6.

(Oct. 14)

Dr. Broom asked me to stay behind and assist Dr. Fisher, the Post Surgeon to perform the operation of extirpation of both seminal glands for the cure of cancer. We did not leave the house until 2:15 p.m. The following birds were noted:

1. Merula migratoria proserina.
2. Sialia mexicana.
4. Lophophanes morrisonus.
5. Regulus calendula.
6. Dendroica auduboni.
7. Passerculus relaxus.
8. Various granivorus.
10. Lonchura leucophrys.
11. Pipilo maculatus metaltorus.
12. Vireo atricapillus.
13. Corvus cornix  
14. Symphocotus cyanocapilla  
15. Philodoma woodhousei  
16. Cyanocitta chloris macrolopha  
17. Pheus villosus - One seen upon a prostrate pine log  
18. Phlegmaticus varius nuchalis  
19. Melanerpes formicivorus  

Very abundant & busy engaged in carrying acorns and storing these in holes in the bark of pines and between the bark and the wood. I stripped the bark from the lower part of a dead pine tree, for the purpose of gathering the men of the acorns stored in holes in the bark. As I did so about a peak of acorns
Oct. 14

Sattled to the ground. They were small acorns from the small leaves gathered. I filled my pocket with them as sweet as chestnuts and very good eating. As high as I was able to collect the bark I found a layer of acorn between it and the trunk. These were soury and folicious, but withal very industrious and may always be seen carrying an acorn from the oak to the pine tree. The black and white colors are displayed to advantage in flight. The red crest gleams brightly.

20. Colaptes auratus mexicanus
   Very abundant

21. Symmcticus sprasserius
22. Accipiter species
23. Butor basiliscus calurus
Oct 14.

25. Contortyx massaia - full crook saw one flock.
26. Melangris galapavo - full crook shot two from a flock.
(October 15)

After rising at daylight, we tried to find the trail across the Canon to camp in time to feed our horses and ourselves. I had breakfasted yesterday in camp and eaten a lunch with Dr. Fisher. It was finished last night when I lay down to sleep, after riding all the afternoon and evening, and hunting part of the night for a trail across Black River Canon to camp, with only my saddle blankets for bed and covering of my saddle for a pillow. This morning I was horribly hungry, but we had much difficulty in finding the trail, and I became discouraged when I saw that Grose riding off on his mule, knowing that Mr. Command would arrive at follow
and it would be too late to feed as the grain and
obsions would all be hucked
on the mules. I thought the
train would of necessity have
to follow the main road to
San Carlos, and so turned
and retraced my steps,
leaving my horse back up
the rocky Malpai hillsides
to the camp where Steward and
myself had slept last
night. I saw a magnificent
Wildcat (Lynx rufus) while
looking for the San Carlos
road. It ran towards me
and crossed within a few
rods of my horse, so near
that I might easily have shot
it dead if I had been provided
with a heavy charge of Shot
but as I only had five Buckshot
I did not shoot at all, but
Oct. 15—

Last night I watched the motions of this handsome, graceful, and familiar animal which I have seldom seen alive before. I soon got on the road and reached Black River at the bottom of the Canon, about 2 or 3 miles below the Genoa Camp. I intended to keep the road and ride slowly until the column overtook me; but when I reached the foot of the Canon it occurred to me that the General might not choose to strike the road at all, so I concluded to take my hungry horse and let him graze while I followed the crest of the hill and met the column. I obtained information concerning the route, but I was too late to be of much use at least. Last night I camped near the Genoa.

Grain, hack, mules, & Jackson of my Hospital Steward, Dan, who had found the trail while I left him & had waited for me. Thehackers had no knowledge about the route to be travelled & only said they were going to follow the old crooked trail to the Commandery. The Steward had reached camp first as Mr. Cooper's were leaving & gotten a little cord & rope & other things with me. He had eaten dinner with an outfit of Mormons who passed by while he was holding the horses & I was looking for a way to camp, so was not too startled at it. He advised me to go back & get my horse & follow the General's trail. I did
Oct. 15

but it was an awful struggle + my horse was tired and balked when I tried to lead him down the last malapai hill to the steward's house trail. At length I got him down to the river. I found there a magnificent drake of moccasins s擦it that could have taken shot had not the steward taken charge of my gun + coat when I went back. Black Run is the handsomest stream I have seen in Arizona. it is filled with beautiful trout + haunted by wildfowl. After grazing our mules horses + without any fear notes, we followed the trail. Large flocks of Maximilian's Jays and a good number of other species of Jays + a multitude of blackbirds + Carpenters were seen as we rode over the rough malapai hills. The steward's horse had lost two shoes & consequently preferred walking & leading his horse a foot past all the way. A flock of fowl trails was released by the steward within a few feet; but they flew when I reached them + scattered, uttering a loud note as they left the ground with a whirring sound. I flushed our of them again while the steward was trying to fasten on a shoe to his horse's foot with a couple of stones in lieu of a hammer, but only short ones, a young...

We presently struck the San Carlos road & I had the mortification of knowing that had I followed my original plan & followed the road I would have ridden into camp at the heat of the procession and saved myself four hours of desperately hard work.

The timber along the road was juniper, fruit & oak, until we got to the bottom of Rocky Canon & found only junipers & oak & then we passed out of the Canon upon a wide Prairie through which Oak Creek bordered with junipers & oaks & some deciduous trees. We reached Camp 14 just at dark. On the Prairie we found Doves.

Oct. 15.

And some tall cacti growing in a tree form & bearing yellow fruit. I saw while passing through New Mexico the Balds deer were

1. Merula migratoria Profugus.
2. Sialia mexicana.
3. Regulus calendula.
4. Phosphoresces melomelas.
5. Junipers.
6. Parus montanus. In flocks on the highest ground.
7. Sitta carolinensis acuticaull. A few flocks amongst the firs.
8. Hendrolyca indubus.
Oct. 15—

after leaving Rocky Canon
11. Agnes liminalis oregoneus
12. Agnes liminalis dorsalis
13. Pygella domestica arizoneae
14. Euphonia alaeedict
15. Dusolo maculatus megalonyx
16. Stenella neglecta, one near Black River, the second seen on the trib.
17. Conus corax, -common-
18. Cyanoscitta stelleri macrolophus
19. Aphelocoma woodhousei
20. Cyanoscitta ultramarina
21. Hymenoptera cyanoccephala

All four of the Jays were abundant on Black River and were seen hi the same source of trees together. All were numerous as long as we were in the timber. Aphelocoma woodhousei and cyanocru alata ultramarina

are partial to the oaks. The other two to the willows.
22. Pycis villosus harri
23. Euphoniae mokalisi
24. Melodys incus
25. Colaptes mexicanus
26. Gymle alayon - One or
27. Bubo virginianus - One on Black River
28. Lymnolepis Chaparrii
29. Heter Accipiter fuscus
30. Bubo calurus
31. Zenaida Carolinonis

Abundant after we left the Rocky Canon trees 1 along the road.
Not seen before.
32. Hystrix gambeli - One
33. Aphelocoma woodhousei at the bottom of Rocky Canon.
34. Ciplystis Masane
35. Cart Roberts saw one
Oct. 15.
Flock near Black River. Hunted Crook saw two flocks + shot the head of an old male. I saw stockflock + shot one young one.
34. Ardea herodias - Egret on Black River.
35. Tetrao bota - The male saw 4 in Black River.
36. Merops meruender - The herd saw a 14 + I saw a male on Black River.
37. Pluvialis californica - One seen during the migration after leaving Rocky Mountain. Mammals: saw one.
1. Wild Cat. See note above.
2. Coyote, Hunt Crook shot one.

Oct. 16.
We left camp 14 on Ash Creek at 6 o'clock A.M. and made Camp 15 on the Gila River at 1:30 P.M. Capt. Bourke found a wounded Loom (Ely's whipsort) near the Gila, when inspecting some ditches along by the Indian. A large species of mulefoot grape about the Gila. It has small, little Kobe leaves. On way here we saw hundreds of Prick Cactus, none of which were much branched and at least 4 feet high. They are corrugated longitudinally with the crest of the cactus shredded with smaller spines. Many of them had nests bored in them by Wood Peckers, and the holes were very possibly inhabited by Whitney's Chucks. The Bristle's cache at large are pointed caches as high as man.
Oct. 16—

Mammals: Caceron or Rock Cenid. - Caseau.

A large Rattlesnake was shot in the rocky foot-hills of the Gila.

Carnivora: Cossalicus. - A few were heard singing in the lower foot-hills.

2. Orocopis montanae. - Common in the foot-hills & Gila bottoms.


5. Erechthia aldrichii. - A few large flocks in the prairies near Ash-Creek Camp.

6. Carpophaga fowlkissi. - Abundance at Camp 140 on Ash Creek & Thence to the Gila.

7. Pallererus savana. - One near Ash Creek Camp & a few others seen on route.

8. Pallererus dunlopia. - One seen.

9. Porcetes grammipes caudatus. - First seen about crossing Verde. They
Oct. 16

11. Pipilo aberti. — First seen since leaving Verde. Several seen and the foot hills; the species became abundant as we got down to the Gila bottom.

12. Pipilo maculatus megalympus. A number were seen in the foot hills.

13. Longirostria lucida longis. — Sides of the valley extended to eye. Not brown on the head but a brown on the nape. There were very few adult males. The young ones that were with the adults.

14. S. nebulosa cyanophrys. In large flocks in camp on Oak Creek. One was found at a water-hole which was so gentle that it was almost impossible to raise it.

our horses for a mile or more; continually alighting beside us on the road. We suspected that it had been a recent bird. We saw several other flocks on our ride to the Gila.

15. Cuculus corax. — Number about Camp 14 as we were leaving. I settled about the camp while the leavings from meals as soon as the cook.

They often alighted close to our horses and mules along the road.

16. Aphelocoma woodhousei. — Crimson all through the foot hills wherever there was vegetation enough to suit it.

17. Gymnostoma cyanoptera. — These were seen all along the route until we reached the lower foot hills.
Oct. 16.

18. Zayornis sepi. - One seen in the foot hills.
19. Grecocyx californiana. - One seen by Dr. Crook.
22. Immumeus lasius. - A number seen.
23. Fulmarus columbarius. - One seen in a rocky canon.

24. Lophotryx gambelii. - One flock seen in the foot hills.

After we reached the Gila I had to attend to business and callers (Capt. Crawford & Dr. Davis). The Dr. gave me a good many interesting facts in zoology. These things prevented my exploring the banks of the Gila where we were encamped, but when I went to bathe I saw plenty of Gambels, Dougl. and Long Sparr. and heard Flickers all the afternoon. In the evening Dr. Crook called out to me as I sat talking to Dr. Davis: "Say, Doctor, did you hear that noise? That was the Gila Woodpecker!" I searched all my gun and after waiting among the scattered cottonwoods a little while I shot the first specimen I ever saw. I some Ducks were seen in the Gila.

25. Melopsittacus fasciata
26. Geocolaptus auratus mexicanus
27. Centurus mephalias.

3414. Geocolaptus torquatus. Tjur. length to cul. of toes 935; 780; 1425; 35-5; 8-5; cul. 71, gap. 107; width of bill opposite base of nostril 12-5; depth of same pedec. 22-5. Body tarsus 92; after below 12-5.
Oct. 16.

3416. Lonothoeia Juncophyta, 175; 260; 79; 81; cul. 12; gape, 13.5; legs 23; mte. 23; cul. 6.5; iris, hazel; bill brownish-yellow, with maxilla slightly tipped with dusky; barb. pl. & claws, brown.

3417. Carpodacus frontalis. Cad. 15.5; 25; 67; 69; cul. 10; gape, 10.5; legs 18; mte. 17; cul. 5.5; not skinned.

3418. Cit. Hensy. 22.3. 3419. Cit. Sabreeus Savanna Trip. 149; 245; 71; 58; cul. 10.5; gape, 11.5; legs 21.5; mte. 20; cul. 5.

(Protopterus montanus ad.) 2.30; 320; 99; 100; most 12; gape, 25; legs 32; mte. 26.0.

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Oct. 16.

3416. Lonothoeia Juncophyta, 175; 260; 79; 81; cul. 12; gape, 13.5; legs 23; mte. 23; cul. 6.5; iris, hazel; bill brownish-yellow, with maxilla slightly tipped with dusky; barb. pl. & claws, brown.

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(Protopterus montanus ad.) 2.30; 320; 99; 100; most 12; gape, 25; legs 32; mte. 26.0.

[Handwritten notes and observations]
236 (Oct. 17.)
3420. Centurus xerophagiæs. fusc.
241: 418: 130: 91: cr. 26
gale, 31: tarsus, 21: 5: mite 27: 5
Cele. 10: Jula 12 m. fr. S. Carlos,
3421. Centurus xerophagiæs. fusc.
265: 45: 4: 138: 100: cr. 32
Gale, 37: Tarsus, 24: Mite, 32
Cult. 12: Tarsi dark red. Bill
black. Tarsi yellow.
Numberous green claws.
3422. Centurus notturnus. s. ol.
271: 45: 5: 140: 9. 9: cr. 33
Gale, 37: 5: Tarsi 25:
Cult. 11: 6: Jula R. 10 m. fr. S. Carlos
3423. Centurus melocephalus.
259: 44: 5: 132: 98: cr. 32
Gale, 37: Tarsi 25: Mite 30
Cele. R. 10 m. fr. S. Carlos
3424. Phyllogenes anachaloidis. s.
221: 400: 124: 91: cr. 24
Gale, 27: Tarsi, 21: Mite, 23: 5
Cult. 8: 5: Jula R. 10 m. fr. S. Carlos

237 (Oct. 17.)
3425. Angolodes macularius.
1. 188: 328: 99: 5-1
Cult. 24: Gales, 26: Tarsi, 24: 3
Mite, 24: Seen at 4. 5: Base till, 12
3426. Simulans flavus. a. s.
267: 565: 179: 13: 2: cr. 1
Cere, 14: 5: Seen R. 10 m. fr. S. Carlos
Gale, 16: 5: Tarsi, 37: Mite, 31
Cult. 10: 5: Basis hazel. Cere, cylindrical
from (inside) of bell (Tarsi 1). Far
orange yellow. Claws, black.
3427. Noturus flavus. a.
242: 7: Noturus flavus. a.
Length to end of claws, 4. 50
363: 660: 205: 84: cr. 5-5
Gale, 62: Base tibial, 41
Tarsi, 6: 3: Mite, 44: Cr. 6: 5
Sides, hazel. Bell, black.
Legs feet deep yellow.
Claws, black.
Jula R. 10 m. fr. S. Carlos
Oct. 17.

Gila River 7 m. for San Carlos

Length to head of 6 m., 1310
1016, 1640; 1445, 172; cul., 126, 8; mex., 15-9, 7; tub., 92;
Tus., 15-5; mte., 108; oly. 16.

The following birds were seen on the way to San Carlos from our camp on the Gila near the crossing at the Sub-Agency (Camp 15):

1. Merula migratoris juxtinguisa. - Common
2. Laropyrhynchus trissalis. - Singing
3. Prootaphalus montanus. - Common
4. Salpinetus obsolete. - In the Conors near San Carlos.
5. Coremophila alpista. - A few
6. Lanyrea auduboni. - Common
7. Lanyrea oldoriciensis. - A few
8. Coremophila frontalis. - Very abundant. Singing in early morning
9. Asturagallis melba. - Singing. I did not shoot any and do not know whether they are typical melba or var. mexicana.
10. Amorpusa bilineata. - Common and singing
11. Lonostrobila vireoephrygia. - Exceedingly abundant + singing - a song that resembles the note of albicollis
12. Melospiza fasciata. - Common
13. Pinus socialis arizonica. - A few
14. Pipilo aberti. - Very abundant
15. Eolacophaga zoneocephala. - In large flocks everywhere
16. Xanthocephalus interocephalus. - In large flocks
17. Clamella figolata. - In small flocks
18. Convis corax. - Abundant
19. Tyrannus poepeanus. - Abundant
20. Zapirosius suscians. - A few
21. Vermilion Flycatcher. - Obscure
22. Cerulea aleuton. - Common
23. Pleur scalaris. - Common
24. Colaptes auratus mexicanus. - Seen
25. Convesus loquatus. - Just seen
Oct. 17.


34. *Penelope carolinensis*. Fourteen.

27. *Centurus ruficapillus*. Slightly common among the cottonwoods along the Gila. They are often seen peeking at the lower part of the tree trunks as well as in the tree tops, and I even saw one fly down and alight upon the ground and pick up some insect. They often perch upon the topmost branch of a cottonwood in the manner of the Flicker. Their cry is a succession of harsh sounds.


29. *Circus badius*. One seen.


31. *Aquila argentata*. Ver_.


The following Mammals were seen:

*Tamias* sp. *Tephroadontidae*. Among the mesquites on the San Carlos flat at the Agemon. *Cyanis variegatus* and *Thylogale stigmatica*.

*Lycaeus callotis*. Two seen.

*Coyote*. Abundant and yelling all night about camp. In the tomato I saw one in the trail that in front of my horse; but was impressed to shoot it before it got out of range.
Castor sile. - This animal is abundant in the Gila, & I saw many cottonwoods cut down and gnawed by them.

The Gila is little if any larger than the Verde River. It can be forded almost any where.

The cottonwoods are not as plentiful nor as large & healthy trees as on the Verde. There is a good deal of brushwood along the banks, making good cover for small birds. In fact I saw myriads of little birds, chiefly sparrows, but did not take the time to hunt them up closely, as most of them were common sparrows, & the cover so close that they had to be shot in order to identify them.
# 8. Begin with p. 94, go to end (p. 242), then to p. 50 and go to p. 93; then to p. 40 and go to p. 47.