

**Article XV.—LIST OF MAMMALS COLLECTED BY
MR. WALTER W. GRANGER, IN NEW MEXICO,
UTAH, WYOMING AND NEBRASKA, 1895-96, WITH
FIELD NOTES BY THE COLLECTOR.**

By J. A. ALLEN.

During the seasons of 1895 and 1896 Mr. Granger was again associated (see this Bulletin, VII, p. 259) with the Museum Palæontological Expedition as a field assistant under Dr. J. L. Wortman, and was able to devote considerable time, especially during the season of 1895, to collecting the smaller mammals of the regions visited. The collections thus made number 500 specimens, representing 48 species and subspecies, several of which proved to be new to science and have been already described.¹ Although the collections were made at a number of widely separated localities, it seems best to present the general results under one title, with nominal lists of the species obtained at the principal points where collections were obtained.

The following general account of these localities is kindly furnished by Mr. Granger, to whom I am also indebted for field notes on many of the species.

"*Uncompahgre Indian Reservation, Utah.*—Altitude about 5000 feet. Consists for the most part of sandy bad-land country, rather thinly grassed, with a dense growth of 'grease-wood' and 'sage brush.' Both the White and Green Rivers pass through the Reservation, and are well wooded along the bottoms. A species of *Peromyscus* and a small species of *Tamias* [*T. minimus consobrinus*] were obtained along these rivers, but all the other specimens were collected in a large bad-land basin, ten miles west of the Colorado line, known as Kennedy's Hole."

¹ *Neotoma cinnamomea*, *Tamias wortmani* and *Spermophilus tridecemlineatus parvus*. See this Bulletin, VII, pp. 331, 335, 337.

Collections were made here from March 17 to June 4, 1895 (72 specimens), and include the following species :

<i>Lepus nuttalli</i> ,	<i>Cynomys leucurus</i> ,
<i>Thomomys clusius</i> ,	<i>Spermophilus 13-lineatus parvus</i> ,
<i>Perodipus longipes</i> ,	<i>Tamias wortmani</i> ,
<i>Neotoma cinnamomea</i> ,	<i>Tamias leucurus</i> ,
<i>Peromyscus auripectus</i> ,	<i>Tamias minimus consobrinus</i> ,
<i>Peromyscus texanus nebrascensis</i> ,	<i>Canis latrans</i> .

“*Diamond Mountain, Utah*.—Altitude, 7000 feet. Country well grassed and watered, but very open. The only trees are a few scattered pines and aspens, confined to the higher ridges. The few specimens obtained here were taken at Pot Creek, which runs into Loder Cañon, fifteen miles distant.”

The only species collected here was *Peromyscus texanus arcticus*.

“*Brown's Park, Utah*.—Altitude about 7000 feet. The only specimens secured here were taken in a rocky cañon along Green River, fifteen miles above the head of Loder.”

Three specimens were obtained, one of which is referable to *Peromyscus truei*, and the others to *P. texanus nebrascensis*.

“*Kinney Ranch, Sweetwater Co., Wyoming*.—Altitude, 7500 to 8000 feet; 25 miles south of Bitter Creek station, on the Union Pacific Railway. Exceedingly dry, sandy and barren; grease-wood and sage-brush grow thickly in certain localities. The country consists mostly of rough, rocky bad-lands, and long stretches of sandy, sage-covered alkali plains. In the immediate vicinity of Kinney Ranch is an alkaline marsh of some hundred acres or so in extent. This, aside from two or three other springs and a few water holes, is the only water found within fifteen miles of the ranch. The only mammal found in the marsh and not elsewhere was a species of *Microtus*.”

Collections were made here from June 7 to August 15, 1895; the 304 specimens taken represent the following 15 species :

<i>Lepus campestris</i> ,	<i>Microtus</i> , sp. inc.,
<i>Lepus nuttalli</i> ,	<i>Spermophilus elegans</i> ,
<i>Thomomys clusius</i> ,	<i>Sperm. 13-lineatus parvus</i> ,
<i>Perognathus fasciatus</i> ,	<i>Tamias wortmani</i> ,
<i>Neotoma cinnamomea</i> ,	<i>Tamias minimus consobrinus</i> ,
<i>Onychomys leucogaster brevicauda</i> ,	<i>Vespertilio ciliolabrum</i> ,
<i>Peromyscus texanus nebrascensis</i> ,	<i>Vespertilio chrysonotus</i> .
<i>Microtus pallidus</i> ,	

"*Rife's Ranch, Utah*.—Altitude, 8000 feet ; 20 miles south of Kinney Ranch. The country is practically the same as at Kinney Ranch."

During the single day's collecting here only *Spermophilus elegans* and *Onychomys leucogaster brevicauda* were taken.

"*Snake River, Colorado*.—Altitude, 7000 feet. This locality is 40 miles east of Kinney Ranch, at what is known as Cherokee Crossing of Snake River, 25 miles down the river from Bagg's post office. The river bottom is quite well wooded in places, and overgrown with brush. Otherwise the locality is much like the country at Kinney Ranch."

The only species taken here, during a short halt, was *Neotoma cinnamomea*.

"*Three Forks, Colorado*.—Altitude, 9000 to 9500 feet. This locality is 30 miles above Bagg's post office, on Snake River, in the lower edge of the pine belt. The river valley is thickly grown with deciduous trees. The specimens were taken near the river."

This locality is evidently on the edge of a fauna very distinct from that of the lower open country immediately to the westward. The 26 specimens taken during a day's stay at this camp represent the following species: *Tamias lateralis* (in place of *T. wortmani*), *Tamias quadrivittatus* (in place of *T. consobrinus*), *Neotoma orolestes* (in place of *N. cinnamomea*), and *Peromyscus texanus arcticus* (in place of *P. t. nebrascensis*). Also one specimen of *Onychomys leucogaster brevicauda* was taken.

Elk Mountain, Wyoming.—The five specimens collected at this camp represent *Neotoma orolestes* and *Peromyscus texanus arcticus*, and were taken on the overland stage trail at the base of the mountain, just at the edge of the pine belt.

"*Sherman, Wyoming*.—Altitude, 8900 feet. On the overland stage trail, 9 miles north of Sherman station, on the Union Pacific Railway. The specimens were taken in a grove of pines and spruces, except those of *Zapus* and *Microtus*, which were from a cultivated field in a clearing."

The 33 specimens taken here represent the following species :

<i>Lepus grangeri</i> ,	<i>Peromyscus texanus arcticus</i> ,
<i>Zapus</i> , sp. inc.,	<i>Tamias quadrivittatus</i> ,
<i>Microtus longicauda</i> ?	<i>Sciurus hudsonicus</i> ,
<i>Microtus</i> , sp. inc.,	<i>Sorex personatus</i> .
<i>Neotoma orolestes</i> ,	

"*Perch and Bassett, Rock Co., Nebraska*.—These localities are in the typical Nebraska sand hills. The specimens of *Microtus*, *Sorex* and *Blarina* were taken at a large marshy lake, near Perch post office."

The 132 specimens, collected Oct. 6–27, 1895, represent 12 species, as follows :

<i>Perodipus longipes</i> ,	<i>Peromyscus texanus nebrascensis</i> ,
<i>Perognathus fasciatus flavescens</i> ,	<i>Spermophilus obsoletus</i> ,
<i>Microtus pennsylvanicus</i> ,	<i>Spermophilus 13-lineatus pallidus</i> ,
<i>Microtus austerus</i> ,	<i>Scalops argentatus</i> ,
<i>Onychomys leucogaster</i> ,	<i>Blarina brevicauda</i> ,
<i>Reithrodontomys dychei</i> ,	<i>Sorex personatus haydeni</i> .

"*Chaco Cañon, New Mexico*.—Very dry and sandy 'grease-wood country,' with a few cedars on the higher ridges. The specimens were taken in the cañons, about 20 miles east of the Navajo Reservation."

The 34 specimens taken here (June 11–26, 1896) represent a fauna allied to that of the Uncompahgre Indian Reservation, Utah, the following species being represented :

<i>Lepus arizonæ</i> ,	<i>Peromyscus auripectus</i> ,
<i>Perodipus longipes</i> ,	<i>Peromyscus rufinus</i> ,
<i>Neotoma cinnamomea</i> ,	<i>Tamias leucurus</i> .
<i>Onychomys leucogaster brevicauda</i> ,	

Besides the above, the collection contains 8 specimens from Spring Creek, Nebraska (see this Bulletin, VII, p. 261), among which are 4 specimens of *Microtus haydenii*.

1. *Lepus campestris* Bach. PRAIRIE HARE.—One specimen, a half-grown male, taken at Kinney Ranch, July 15.

"Quite common in the vicinity of Kinney Ranch. Three specimens were seen on the Uncompahgre Indian Reservation, but none were met with in the intervening country, it being too mountainous."—W. W. G.

2. **Lepus arizonæ** Allen. ARIZONA COTTONTAIL.—A series of 5 specimens, from Chaco Cañon, northwestern New Mexico (head of San Juan basin), collected June 15-17, are referred to *L. arizonæ*.

3. **Lepus nuttalli** (Aud. & Bach.). SAGE HARE; SAGE COTTONTAIL.—A series of 7 adults from the Uncompahgre Indian Reservation, Utah (March 17-20 and May 4-6), and another series of 11 adults and 5 young (one-fourth to one-half grown) from Kinney Ranch, southwestern Wyoming (June 17-Aug. 1) seem nearly indistinguishable from another series from the Bad-lands (Corral Draw and vicinity) of South Dakota (May, July and August), previously recorded (this Bulletin, VII, p. 264) as *Lepus sylvaticus nuttalli*. They all have the long ears and greatly inflated audital bullæ of the *L. arizonæ* group, but are paler and of a more yellowish cast than true *L. arizonæ*, or than either of its subspecies (*minor* and *major*) lately recognized by Dr. Mearns (Proc. U. S. Nat. Mus., XVIII, 1896, p. 557). In general size, however, the Utah, Wyoming and South Dakota specimens are larger, and differ in coloration from *L. arizonæ* from the desert region of the Lower Colorado River in southeastern California, lacking the rufous tint of *arizonæ*, which is replaced by a very pale yellowish tint, shown even in the nape patch and legs. They also have the ears much more heavily clothed.

These specimens are provisionally referred to *Lepus nuttalli*, in the absence of material from the type locality of the latter for comparison.

The adults of the three series measure as follows :

	Length.	Tail Vertebræ.	Hind Foot.	Ear from notch.
Uncompahgre, 1 ♂ . . .	400	45	95	64
" 6 ♀ . . .	403 (386-420)	45 (40-55)	102 (100-110)	66 (61-67)
Kinney Ranch, 6 ♂ . . .	361 (335-380)	51 (49-55)	90 (85- 92)	55.3 (51-60)
" 5 ♀ . . .	410 (404-418)	46 (40-54)	96 (92-101)	63 (61-65)
South Dakota, 2 ♂ . . .	372 (305-406)	58 (44-71)	92 (89- 95)	56 (53-59)
" 3 ♀ . . .	397 (371-419)	58 (51-63)	92 (89- 95)	59 (55-60)

As usual in the Hares, the females exceed the males in size.

"Common at both Kinney Ranch and the Uncompahgre Indian Reservation. I have never seen Cottontails so abundant as at Kinney Ranch. On the Uncompahgre Reservation they were

confined to the rocks in spring while the snow remained, but later they were common enough in old burrows of Prairie Dogs and Badgers."—W. W. G.

4. **Lepus grangeri** *Allen*. GRANGER'S COTTONTAIL.—One specimen, ♂ ad., Sherman, Wyoming, Sept. 9. This example agrees well with the Black Hills form named by me *Lepus sylvaticus grangeri*. A further comparison with large series of the *L. sylvaticus* and *L. arizonæ* groups from various localities seems to show that *grangeri* is not intimately related to any other described form.

5. **Erethizon epizanthus** (*Brandt*). YELLOW-HAIRED PORCUPINE.—One specimen, skeleton, from Lost Cabin, Wyoming, Aug. 25.

"Three or four were seen at this locality. They frequent the vicinity of bad-lands, where they live in caves. To the north of Chaco Cañon, New Mexico, it was very common. In this locality nearly every piñon tree had had the bark eaten off from the upper limbs by these animals."—W. W. G.

6. **Thomomys clusius** *Coues*.—Two specimens, Uncompahgre Reservation (April 3 and May 3), both males; one is adult, the other slightly immature. They measure, respectively, total length, 193, 175; tail vertebræ, 58, 44; hind foot, 25, 23. Also 2 specimens, not fully grown, Kinney Ranch, July 21 and 23.

"Rather rare on the Uncompahgre Reservation, but fairly common at Kinney Ranch, where it inhabited the sandy stretches."—W. W. G.

7. **Perodipus longipes** (*Merriam*). MOKI KANGAROO RAT.—Represented by 23 specimens from the Uncompahgre Indian Reservation, Utah (collected March 20–May 5); 17 specimens from Kinney Ranch, Wyoming (July 25–Aug. 7); 15 specimens from Rock County, Nebraska (Oct. 8–22), and 3 specimens from Chaco Cañon, New Mexico (June 16).

I am surprised to find that the Nebraska specimens present no tangible differences from those from Utah and Wyoming; they differ decidedly, however, in much paler coloration from a large series of *Perodipus richardsoni* from Beaver County, Oklahoma (Oct. 12-26). The latter is probably merely a subspecies of *P. longipes*, which is the earlier name for the group.

Throwing out a few obviously immature specimens, the measurements are as follows:

	Total Length.	Tail Vertebrae.	Hind Foot.
Utah.....	11 ♂♂, 256 (243-275)	143 (139-151)	41.5 (39-43)
".....	8 ♀♀, 254 (235-271)	141 (130-144)	41.3 (40-42)
Wyoming....	6 ♂♂, 258 (235-278)	144 (138-159)	42 (40-44)
".....	4 ♀♀, 255 (243-272)	146 (138-160)	41.5 (39-43)
Nebraska....	10 ♂♂, 253 (240-272)	145 (134-158)	42 (41-43)
".....	3 ♀♀, 253 (240-261)	139 (135-142)	41.7 (41-42)

A small series from Custer County, South Dakota, previously referred to *P. richardsoni* (this Bulletin, VII, p. 265), evidently belong to the *longipes* type.

"Common throughout the Uncompahgre Reservation. At Kinney Ranch I found them only in the sand dunes, and associated with *Spermophilus parvus*."—W. W. G.

8. *Perognathus fasciatus* (Wied). MAXIMILIAN'S POCKET MOUSE.—Two specimens, ♂ and ♀, full grown but rather young, collected at Kinney Ranch, Wyoming, July 21 and 23, I am unable to distinguish subspecifically from Montana and South Dakota (eastern base of the Black Hills) examples of *P. fasciatus*. This extends the range of the *P. fasciatus* group far to the west of previously reported localities, and into the Green River basin.

These specimens measure: Total length, ♂ 126, ♀ 134; tail vertebrae, ♂ 68, ♀ 69; hind foot, ♂ 19, ♀ 18.

"Taken in the sand hills, and the only ones seen, although I trapped especially for them."—W. W. G.

9. *Perognathus fasciatus flavescens* Merriam. NEBRASKA POCKET MOUSE.—Represented by 8 full-grown specimens from Perch, and 2 from Basset, Rock Co., Nebr., collected Oct. 3-27. The 6 males measure: Total length, 122 (115-127); tail vertebrae, 61 (58-64); hind foot, 17 (16-18). The four

females are slightly smaller, measuring: Total length, 121 (117-125); tail vertebræ, 58 (57-59); hind foot, 16.5 (15-17).

10. *Zapus*, sp. inc. JUMPING MOUSE.—One specimen, ♀, Sherman, Wyoming, Sept. 10. Length, 211; tail vertebræ, 125; hind foot, 29.

This specimen is very unlike any described form of this genus, and differs from any specimens I have seen from any other locality, in having the sides of the body very light yellowish, in very strong contrast with the nearly black dorsal area.

11. *Microtus (Lagurus)* pauperrimus Cooper. PALLID MEADOW MOUSE.—Two specimens, collected at Kinney Ranch, July 23 and 24, seem referable here, agreeing closely with Dr. Merriam's description (N. Am. Fauna, No. 5, July, 1891, p. 64) of examples from the Salmon River Mountains, Idaho. These specimens measure respectively as follows: No. $\frac{11137}{9431}$, ♂ ad., total length, 118; tail vertebræ, 24; hind foot, 16. No. $\frac{11138}{9432}$, ♀ ad., total length, 108; tail vertebræ, 24; hind foot, 16.

"The two specimens were taken from the same burrow in a sand hill near Kinney Ranch."—W. W. G.

12. *Microtus (Pedomys)* haydenii (Baird). HAYDEN'S MEADOW MOUSE.—Four specimens, 3 adult males, 1 adult female, Spring Creek, Custer Co., South Dakota, June 12, Nov. 12 and Dec. 12. Although taken at different seasons, they all agree closely in coloration. They also agree with the single specimen previously recorded (this Bulletin, VI, 328) from the same locality. They measure as follows: Total length, 153 (132-164), tail vertebræ, 33 (27-37); hind foot, 20 (19-21).

13. *Microtus (Pedomys)* austerus (Le Conte). PRAIRIE MEADOW MOUSE.—Represented by 7 specimens from Perch, Rock Co., Nebraska, Oct. 26-28. The five adults (3 ♂♂, 2 ♀♀) measure as follows: Total length, 141 (135-154); tail vertebræ, 33 (31-35); hind foot, 20 (19-20.5).

"All were taken in dry sandy ground bordering a cornfield. It was common at that particular locality."—W. W. G.

¹ Cf. Merriam, Am. Nat., XXIX, p. 758, Aug., 1895.

14. *Microtus (Microtus) pennsylvanicus* (Ord). EASTERN MEADOW MOUSE.—A series of 19 specimens, from Perch, Nebraska, Oct. 5-20, do not differ appreciably from *M. pennsylvanicus* from the East. Of 19 specimens, 15 are in adult pelage, though doubtless not all fully adult in size. They measure as follows:

	Length.	Tail Vertebrae.	Hind Foot.
7 ♂ ♂	153 (138-161)	41 (34-48)	21 (20-22)
8 ♀ ♀	154 (140-179)	38 (35-49)	21 (20-22)

15. *Microtus (Microtus) longicauda*? (Merriam). LONG-TAILED MEADOW MOUSE.—Two specimens from Sherman, Wyoming, Sept. 11, are doubtfully referred to this species. One is a young adult, the other an old adult, with the tail mutilated.

16. *Microtus (Microtus)*, sp. inc.—The 12 specimens included under the above heading are from the following localities: Sherman, Wyoming, Sept. 10 and 11, 3 specimens; Laramie, Wyoming, Sept. 8, 5 specimens; Kinney Ranch, Wyoming, July 10-Aug. 15, 4 specimens. All but 4 are more or less immature, some being quite young. The 4 adults (3 ♀♀, 1 ♂) measure as follows: Total length, 139 (131-146); tail vertebrae, 36.5 (33-40); hind foot, 18.5 (17-20).

"The specimens from Kinney Ranch were all taken in the alkali marsh previously mentioned, and so were rather rare at this locality"—W. W. G.

17. *Neotoma cinnamomea* Allen. FULVOUS WOOD RAT.

Neotoma cinnamomea ALLEN, Bull. Am. Mus. Nat. Hist. VII, 1895, p. 331. (Separates published Nov. 8, 1895.)

As already stated (l. c.), this species is represented by 31 specimens from Kinney Ranch, Wyoming, taken July 6-Aug. 6; and 2 from Uncompahgre Indian Reservation, Utah, April 2 and 9. To the same species I refer 3 specimens since received from Chaco Cañon, northwestern New Mexico, collected June 18-23, 1896.

This species proves to be very different from *N. rupicola* of the Bad-lands of South Dakota, differing in important cranial char-

acters, as well as in size, though the two forms bear a very close resemblance to each other externally. It is also very different from *N. orolestes*.

"Found throughout the Washakie bad-lands and Uinta Basin, wherever the country is rough enough to suit their habits, which are the same as those of *N. rupicola*" (see this Bulletin, VII, p. 270).—W. W. G.

18. *Neotoma rupicola* Allen. BAD-LANDS RAT.—Three specimens, Spring Creek, South Dakota, Dec. 17 and Feb. 17 and 19. These, though in winter pelage, differ very little from September specimens, except that the pelage is fuller.

19. *Neotoma orolestes* Merriam. MOUNTAIN WOOD RAT.—I refer provisionally to this species 1 specimen from Elk Mountain, Wyoming (Sept. 7); 5 from Sherman, Wyoming (Sept. 9, 10); 4 from Snake River, northwestern Colorado (Aug. 25, 26); and 2 from Three Forks, northwestern Colorado (Sept. 2). They agree in much larger size, larger amount of black in the dorsal pelage, and grayer nose, in comparison with *N. cinnamomea*, and in these features they approach *N. orolestes*, described from a little further south in the mountains of Colorado (type locality of the species, Saguache Valley). While resembling this species in color, they average rather smaller than the measurements given for the type of the species. The 10 adults from the localities above named measure as follows:

	Length.	Tail Vertebrae.	Hind Foot.
6 ♂♂	392 (382-394)	167 (158-182)	43 (40-45)
4 ♀♀	357 (344-365)	154 (147-160)	41 (40-41)

The corresponding measurements for the same number of examples of *N. cinnamomea* are as follows:

	Length.	Tail Vertebrae.	Hind Foot.
6 ♂♂	364 (356-368)	158 (151-163)	41 (40-43)
4 ♀♀	343 (337-351)	148 (144-150)	39 (37-41)

"Apparently a common animal at the localities where specimens were taken."—W. W. G.

20. *Peromyscus truei* (Shufeldt). TRUE'S CLIFF MOUSE.—One specimen, ♀ adult, Brown's Park, northeastern Utah, June 15. Apparently identical with specimens from near the type locality in New Mexico.

"Taken from a nest of *Neotoma cinnamomea*, in a high cliff."—W. W. G.

21. *Peromyscus auripectus* Allen. SILKY CLIFF MOUSE.—Uncompahgre Indian Reservation, April 2 and 3 and May 10; 4 specimens, all adult. They are nearly indistinguishable in coloration and size from the type series of the species from Bluff City, southeastern Utah (May 8–17). Three of the four specimens have the fulvous pectoral spot strongly developed.

Chaco Cañon, San Juan region, northwestern New Mexico, June 7 and 8; 4 specimens, all adult males. These all lack the fulvous pectoral spot, but are otherwise like the Bluff City series in coloration, though slightly larger.

In measurements these three series compare as follows :

	Length.	Tail Vertebrae.	Hind Foot.
Bluff City.....	5 ♂♂, 5 ♀♀ .. 171 (167–181)	92 (85–98)	22.3 (22–24)
Chaco Cañon.....	4 ♂♂ .. 175 (171–180)	92 (90–95)	22.1 (22–23)
Uncom. Ind. Res..	4 .. 167 (159–176)	89 (86–92)	22.2 (22–23)

"Relatively much less common than the other species of *Peromyscus* which were found associated with it, the ratio, as determined by trapping, being about as 1 to 5. I have always found it confined to rocky places. In Chaco Cañon the Pueblo ruins were its favorite abode."—W. W. G.

22. *Peromyscus texanus nebrascensis* (Mearns). FULVOUS WHITE-FOOTED MOUSE.—This species is represented by a large number of specimens, from a wide range of localities, as follows : Uncompahgre Indian Reservation, Utah, May 1–June 1; 11 specimens, 8 adult and 5 young. Kinney Ranch, Wyoming, June 15–Aug. 5; 60 specimens, about one-half adult. Perch, Rock Co., Nebraska, Oct. 7–24; 14 specimens, 6 adult.

The Nebraska specimens have smaller ears than those from Utah and Wyoming, and are much brighter colored, but the color

differences may be in part due to season. The series, however, is too small for satisfactory comparison. The adults of these series measure as follows :

	Length.	Tail Vertebrae.	Hind Foot.
Uncom. I. Res. . . 4 ♂♂, 149 (142-160)		63 (59-70)	19.8 (19-20)
" " . . 2 ♂♂, 165 (159-170)		70 (60-75)	21 (20-22)
Kinney Ranch. . . 8 ♂♂, 159 (147-172)		71 (65-74)	19 (19-21)
" " . . 16 ♀♀, 159 (154-173)		76 (66-78)	19.8 (19-20)
Perch, Nebr. . . . 1 ♂, 161		65	19
" " . . . 2 ♀, 160 (156-165)		62 (61-63)	19 (19-19)

23. *Peromyscus texanus arcticus* (Mearns). NORTHERN WHITE-FOOTED MOUSE.—To this form are referred 3 immature specimens from Diamond Mountain, Utah, June 15 ; 8 specimens (all adult) from Three Forks, northwestern Colorado, Sept. 2 ; 5 specimens (adult) from Fort Steele, Wyoming, Sept. 2 ; 4 specimens (all nearly adult) from Elk Mountain, Wyoming, Sept. 7 ; 5 specimens (young adults) from Sherman, Wyoming, Oct. 10. They are not quite typical, but belong here rather than elsewhere. As they are nearly all young adults, it is hardly worth while to give the measurements.

24. *Peromyscus rufinus* Merriam.—A series of 13 specimens, all but 3 fully adult, from Chaco Cañon, northwestern New Mexico (June 11-22). They are the same as the Rowley series from practically the same locality, recorded first as *Sitomys sonoriensis* (this Bulletin, V, 1893, p. 74), and later (this Bulletin, VII, 1895, pp. 232-234) as *Peromyscus leucopus rufinus*. For comparison with the measurements already published (l. c., p. 234) the following may be added : 4 ♂♂, 6 ♀♀ = 10 ; length, 161 (150-173) ; tail vertebrae, 67 (63-77) ; hind foot, 19.7 (19-20).

"The Puerco ruins in Chaco Cañon, near our camp, were overrun with these mice. I have never seen any species of mouse so abundant at any other locality. They were associated with *P. auripectus*."—W. W. G.

25. *Reithrodontomys dychei* Allen. DYCHE'S HARVEST MOUSE.—A series of 23 specimens of *Reithrodontomys*, ranging in age from nursing young to adults, from Perch, Rock Co., Nebr., (Oct. 3-26), seem better referable to *R. dychei* than to the more western *R. dychei nebrascensis*.

"Very common, and found in all sorts of locations. I found nests of this species containing nursing young as late as Oct. 29."
—W. W. G.

26. *Onychomys leucogaster* (Wied). EASTERN GRASSHOPPER MOUSE.—Represented by 20 specimens from Perch, Rock Co., Nebraska, collected Oct. 3-25. All but three or four appear to be fully adult. The measurements are:

	Length.	Tail Vertebrae.	Hind Foot.
8 ♂ ♂	141 (139-148)	39 (36-41)	20.6 (20-21)
8 ♀ ♀	142 (135-146)	39.4 (36-45)	21 (20-22)

"A common mouse at Perch, where it was especially abundant in old fields."—W. W. G.

27. *Onychomys leucogaster brevicauda* Merriam. IDAHO GRASSHOPPER MOUSE.—A series of 22 specimens, all but 6 more or less immature (many are little more than half grown), is provisionally referred to this species. All but three were taken at Kinney Ranch, June 29 to Aug. 5—the others at Rife's Ranch, June 17. A specimen from Three Forks, northwestern Colorado, collected Sept. 1, is referred also to the same form. Also two examples from Chaco Cañon, northwestern New Mexico, taken June 16.

The chief difference between the above-mentioned specimens and typical *O. leucogaster* consists in their very noticeably larger ears.

Three adult males and 4 adult females from Kinney Ranch measure as follows:

	Length.	Tail Vertebrae.	Hind Foot.
3 ♂ ♂	136 (132-143)	37 (35-40)	20 (19-21)
4 ♀ ♀	132 (120-141)	37 (32-38)	20 (19-20)

Another specimen, in the same lot, but not included in the foregoing measurements, has a much longer tail, measuring as follows: Length, 146; tail vertebrae, 50; hind foot, 20.

"Very common at Kinney Ranch, and found in the same burrows with *Spermophilus elegans*. At Three Forks, Colorado, the single specimen taken was the only one seen, the locality apparently being not suited to the needs of this species."—W. W. G.

28. *Cynomys leucurus* Merriam. WHITE-TAILED PRAIRIE DOG.—One specimen, Uncompahgre Indian Reservation, ♀ ad., April 28.

"Quite common at Kinney Ranch and Uncompahgre Reservation. I also observed colonies at Baggs, Rawlins, Fort Steele, and Laramie City, Wyoming.

"The first examples of *Cynomys ludovicianus* met with on our wagon journey east were seen at the base of the Laramie Mountains, 25 miles west of Cheyenne."—W. W. G.

29. *Spermophilus elegans* Kennicott. WYOMING SPERMOPHILE.—A series of 35 specimens from Kinney Ranch, Bitter Creek, Wyoming, June 17–July 12, consists largely of immature examples, varying in age from less than one-quarter grown to nearly full size. The unquestionably adults of the series measure as follows:

	Total Length.	Tail Vertebrae.	Hind Foot.
7 ♂ ♂	270 (251–283)	69 (67–76)	41 (39–42)
6 ♀ ♀	268 (256–277)	68 (64–74)	40 (40–41)

"First observed at Brown Park. It is an exceedingly abundant animal, and a nuisance where any attempt at farming is made. It evidently retires to its burrows very early in the season, as I did not see a single individual after the 20th of August."—W. W. G.

30. *Spermophilus obsoletus* Kennicott. KENNICOTT'S SPERMOPHILE.—One specimen, ♂ ad., from Perch, Rock Co., Nebraska, Oct. 6.

"This was the only individual seen, and I was informed by residents at Perch that it was rare in this locality."—W. W. G.

31. *Spermophilus tridecemlineatus pallidus* Allen. PALE STRIPED SPERMOPHILE.—One specimen, ♂ ad., Perch, Rock Co., Nebraska, Oct. 6, 1895.

32. *Spermophilus tridecemlineatus parvus* Allen. SMALL STRIPED SPERMOPHILE.

Spermophilus tridecemlineatus parvus ALLEN, Bull. Am. Mus. Nat. Hist. VII, 1895, p. 337 (Separates published Nov. 8, 1895).

Represented by 2 specimens from the Uncompahgre Indian Reservation, Utah, and 9 from Kinney Ranch, Wyoming, as already recorded (l. c.).

"This species was restricted to the sand dunes in a bad-land basin near Kinney Ranch, and to a similar locality in Kennedy's Hole."—W. W. G.

33. *Tamias wortmani* Allen. WORTMAN'S CHIPMUNK.

Tamias wortmani ALLEN, Bull. Am. Mus. Nat. Hist. VII, 1895, p. 335 (Separates published Nov. 8, 1895).

As previously recorded (l. c.), this species is represented by a series of 58 specimens, collected at Kinney Ranch, Wyoming.

"Common throughout the Washakie bad-lands, but not generally distributed, being confined to rough and rocky places."—W. W. G.

34. *Tamias lateralis* (Say). SAY'S CHIPMUNK.—One specimen, ♀ ad., Three Forks, northwestern Colorado, Sept. 1. This is a quite typical example of the species.

35. *Tamias leucurus* Merriam. ANTELOPE CHIPMUNK.—Represented by 11 specimens, collected in the Uncompahgre Indian Reservation in Utah, March 17–May 19, mostly in worn breeding pelage. They seem quite indistinguishable from topotypes of this species, collected at corresponding seasons. They consequently differ markedly from a perfectly comparable series of *T. l. cinnamomeus* from the San Juan region of southeastern Utah, to which they would seem, on geographical grounds, more nearly allied. They measure as follows :

	Total Length.	Tail Vertebrae.	Hind Foot.
6 ♂ ♂	213 (203–221)	60 (50–68)	39.8 (38–42)
4 ♀ ♀	216 (205–232)	64 (62–68)	39 (35–40)

Four specimens from Chaco Cañon, New Mexico, June 17 and 18, are also referred to this form.

"Common on the Uncompahgre Reservation, and one of the most conspicuous animals at Chaco Cañon, New Mexico. I observed them from the Rio Puerco westward to the Navajo Reservation."—W. W. G.

36. *Tamias minimus consobrinus* Allen. WAHSATCH CHIPMUNK.—Represented by 46 specimens, all collected at Kinney Ranch, Wyoming, June 7–Aug. 8. Many of the July specimens were in molt when taken, portions of the old breeding pelage being mixed with the new coat. Most of the July and August specimens had completed the molt. The adults, before molting, become very much faded and worn, losing nearly all of the bright tints that characterize the post-breeding pelage. The males, as usual in this and allied genera, molt considerably earlier than the females. The adults of the series measure as follows :

	Total Length.	Tail Vertebrae.	Hind Foot.
14 ♂ ♂	186 (176–194)	86 (77–93)	29.3 (27–31)
22 ♀ ♀	191 (176–195)	86 (79–93)	29.5 (27–30)

“Common throughout the entire Washakie bad-lands. Occurs with *T. wortmani*, but the latter is not so generally distributed.”—W. W. G.

37. *Tamias quadrivittatus* (Say). COLORADO CHIPMUNK.—A series of 11 specimens, collected at Sherman, Wyoming, Sept. 9–11, are distinctly referable to this form of the *quadrivittatus* group. They measure as follows :

	Total Length.	Tail Vertebrae.	Hind Foot.
5 ♂ ♂	192 (186–195)	84 (78–90)	32 (31–34)
6 ♀ ♀	194 (191–197)	84 (78–89)	31.7 (30–33)

A series of 16 specimens from Three Forks, northwestern Colorado (30 miles above Bagg's Crossing), collected Sept. 1–2, are also referred to *T. quadrivittatus*, although not typical. They are a little larger, with a slightly smaller hind foot, considerably darker in color, and have a much narrower, slenderer tail. The dark stripes are blacker, and the median light stripes grayer (less white), and the sides are duller rufous than in true *T. quadrivittatus*. The differences, however, are hardly enough pronounced to render their recognition in nomenclature desirable. This series measures as follows :

	Total Length.	Tail Vertebrae.	Hind Foot.
10 ♂ ♂	190 (188–195)	85 (81–89)	29.5 (28–30)
5 ♀ ♀	198 (188–204)	88 (84–93)	30.7 (30–31)

“An exceedingly common Chipmunk at both Sherman and Three Forks.”—W. W. G.

38. *Sciurus hudsonicus* (Erxl.). CHICKAREE.—Three specimens from Sherman, Wyoming, collected Sept. 9–11, represent a pale phase of *S. hudsonicus*, not, however, sufficiently different from the eastern type to be separable as a subspecies. In some features the specimens grade slightly toward *S. h. richardsoni*.

39. *Vespertilio ciliolabrum* Merriam. LITTLE PALE BAT.—Two specimens, males, Kinney Ranch, Wyoming, Aug. 1 and 3.

“Small bats were fairly abundant about the spring at Kinney Ranch, but I am unable to say which of the species taken was the most common.”—W. W. G.

40. *Vespertilio chrysonotus* Allen. GOLDEN-BACKED BAT.—One specimen, Kinney Ranch, July 21. (See *antea*, p. 240.)

41. *Scalops argentatus* Aud. & Bach. SILVERY MOLE.—One specimen, ♂ ad., Perch, Rock Co., Nebraska, Oct. 6.

42. *Blarina brevicauda* (Say). SHORT-TAILED SHREW.—Four specimens, 2 adult males and 2 adult females, Perch, Rock Co., Nebraska, Oct. 6–26.

“A rather rare species along the lake at Perch.”—W. W. G.

43. *Sorex personatus* Geoffroy St. Hilaire. EARED SHREW.—Represented by an adult female, taken at Sherman, Wyoming, Sept. 9.

44. *Sorex personatus haydeni* (Baird). HAYDEN'S SHREW.—Represented by 4 specimens from Bassett (Oct. 4) and 10 from Perch (Oct. 9–15), Rock Co., Nebraska. About one-half are in winter coat, a few are still in summer coat, and the rest represent intermediate stages between the two pelages. The series measures as follows :

	Total Length.	Tail Vertebrae.	Hind Foot.
6 ♂ 96 (86–100)		35.5 (30–38)	12 (11.5–13)
7 ♀ 92 (88–98)		36.5 (29–38)	11.5 (11–12)

[December, 1896.]

"Found in the same localities as *Blarina brevicauda*, but much more common."—W. W. G.

45. *Taxidea taxus* (Schreber). BADGER.—One skull, Otto, Wyoming, Aug. 1.

46. *Canis latrans* Say. PRAIRIE WOLF; COYOTE.—A litter of 4 young, Uncompahgre Indian Reservation, Utah, March 22. Also 1 skull, Otto, Wyoming.

47. *Canis nubilus* Say. GRAY WOLF; TIMBER WOLF.—Two skulls, Otto, Wyoming.

48. *Lynx rufus* Raf. BAY LYNX.—Two specimens, Otto, Wyoming, Aug. 1.

"Very abundant in the Big Horn Basin. Individuals were seen along the creek and on the sage-brush flats nearly every day."—W. W. G.