

ARTICLE XV.—*On a Collection of Mammals from Southern Texas and Northeastern Mexico.* By J. A. ALLEN.

The series of mammals forming the basis of the present paper has been presented to the American Museum of Natural History by Mr. George B. Sennett, the well-known ornithologist, together with many specimens from Pennsylvania and Minnesota. The portion of the collection here especially considered was mainly gathered by Mr. Sennett and his collectors in Southern Texas and in the State of Tamaulipas, including, however, a few specimens from the States of Nuevo Leon and San Luis Potosi. The Texan specimens are principally from Presidio, Bee, Nueces, and Cameron Counties. They number about 90 specimens, representing 31 species. Two are apparently new to science, and much light is thrown upon the geographical range of many others.

1. *Lynx rufus maculatus* (Horsf. & Vig.).—A single specimen, skin and skull, ♀ ad., from near Brownsville, Texas, March 12, 1888, J. M. Priour. The specimen is already in the red summer coat.

2. *Canis latrans* Say.—One specimen, skin and skull, Aransas Co., Texas, Oct. 20, 1888, J. M. Priour.

3. *Putorius brasiliensis frenata* (Licht.).—A young male, Corpus Christi, Texas, May 15, 1882, George B. Sennett. This specimen has the distinctive features of coloration of *frenatus*, which does not appear to have been before recorded from the coast of Texas north of the mouth of the Rio Grande.*

4. *Spilogale indianola*?

? *Spilogale indianola* MERRIAM, N. Am. Fauna, No. 4, Oct., 1890, p. 10.

Mr. Priour collected a single specimen of *Spilogale* during his trip through Tamaulipas, but the exact locality and date seem not to have been recorded. It differs from all other examples of the genus I have seen in its very dark colors, the light markings being very much restricted and of a deep creamy white. The skull unfortunately is imperfect, consisting of only the facial portion.

* As this paper goes to press a specimen has also been received from Brownsville, through Mr. C. K. Worthen, collected Jan. 3, 1891.

It indicates a full-grown but not old individual, apparently a male, so far as can be determined from the skin. The specimen may be described as follows :

Size large ; pelage coarse. Length of head and body (approximate from the skin), 330 mm. ; tail vertebrae, 135 ; tail to end of hairs, 146 ; hind foot, 44. Color black or brownish black, with the usual white areas and markings very much restricted, as follows : The light spot on the forehead is pale creamy white, about the size of an ordinary pea ; the lunate spot in front of each ear pale creamy white, very small, less than half an inch in extreme length, very narrow, and widely separated from the light area on the side of the neck ; the two inner dorsal white stripes begin at the usual point, but are mere lines of creamy white, in places irregularly obsolete ; the outer dorsal stripe begins behind the ear as a broad, clavate, deep cream-colored patch, narrowing posteriorly ; the flank stripe, like all of the body markings, is deep cream color, and while of the usual pattern is very narrow, being only about one-half as wide as the black stripe above it, instead of much wider, as in *S. putorius* and allied forms. The thigh patches are little more than small tufts of creamy white hairs, and a mixture of such hairs with black at the base of the tail represents the usual rump patch. The white in the tip of the tail forms a broad terminal pencil, which extends forward on the lower surface of the tail for about an inch.

The buffy tint of the light markings may be merely individual, since a similar phase occurs in allied forms.

According to Mr. Alston* the genus *Spilogale* ranges southward to Yucatan and Guatemala, whence specimens are represented in the collections of M. Boucard and the British Museum, but I find no descriptions of these specimens. Dr. Merriam, in his recent revision of the genus,† has described a species based on two skulls from Indianola, Matagorda Bay, Texas, as *S. indianola*, the skins, and therefore the external characters, being unknown. Unfortunately the skull of the Tamaulipas specimen is too imperfect to furnish any basis for comparison with the Indianola specimens. For the present it may be best to provisionally refer this specimen to *S. indianola* Merriam, since he suggests that it is "probably a Mexican tropical species extending north along the Gulf coast of Texas."

5. *Dicotyles tajacu* (Linn.).—Several specimens from various localities in Texas and Tamaulipas.

* Biol. Centr.-Am., Mam., p. 83.

† North Amer. Fauna, No. 4, Oct., 1890, pp. 1-16, pl. i.

6. *Vesperugo georgianus* (*F. Cuv.*).—Two specimens, Bee Co., Texas, April, 1887, J. M. Priour.

7. *Vesperugo hesperus* (*H. Allen*).—One specimen, skin and skull, sex ?, Presidio Co., Texas, Sept., 1887, Wm. Lloyd. One specimen, skin and skull, sex ?, Monterey, Mexico, May 30, 1889, J. M. Priour.

This species, originally described from Southern California (Posa Creek and Fort Yuma), has since been recorded by Dr. Merriam* from the little Colorado River, Arizona. The present specimens show that it ranges eastward to Western Texas, and southward to Monterey, Nuevo Leon.

8. *Antrozous pallidus* (*Le Conte*).—Two specimens, skins, without labels, but probably from Presidio Co., Texas, or Nuevo Leon.

9. *Scalops argentatus texanus*, subsp. nov.

Much smaller than either *S. argentatus* or *S. aquaticus*, and bronzy chestnut brown instead of silvery plumbeous, or brownish plumbeous. Above uniform pale chestnut brown, with a decided bronzy lustre; below darker, irregularly varied with lighter areas,—rather strong chestnut with patches of rufescent ash.

Measurements (approximate from skin): head and body, 100 mm. (3.94 in.); tail, 24 (.95); hind foot, 16.5 (.65); fore foot, length, 18.8 (.74), breadth, 15.2 (.60).

Type $\frac{3488}{118}$, sex ?, Presidio Co., Texas, Sept., 1887, Wm. Lloyd.

This is apparently a small southern form of *S. argentatus*, from which it differs markedly in its smaller size (nearly one-third smaller), and its strong bronzy chestnut coloration. The single specimen is an adult, with the teeth much worn. The skull when removed from the skin was found to be imperfect, the part posterior to the middle of the orbits having been cut away. The dentition in both jaws is intact, and the portion of the skull remaining presents nothing peculiar except small size.

Since *S. aquaticus* is represented by a similar small form in Florida (of which I have seen a number of specimens), and *Scapanus townsendii* by a corresponding form in Southern California (though neither of them have as yet been characterized), it seems reasonable to consider the present specimen as a fair representative of the Texan form of *S. argentatus*.

* N. Am. Fauna, No. 3, p. 45.

10. *Sciurus aureogaster* *F. Cuv.*—Six specimens, as follows : ♂ and ♀ ad., Tampico, Mex., June, 1888, Wm. B. Richardson ; ♀ ad., Tampico, May 21, 1888, J. M. Priour ; ♂ ad., and ♀ juv., Valles, San Luis Potosi, May, 1888, Wm. B. Richardson ; ♀ ad., Rio Corono, Tamaulipas, April 7, 1888, J. M. Priour. (These are the specimens previously mentioned in this Bulletin—II, p. 166, and III, p. 181.)

11. *Sciurus deppei* *Peters.*—Four specimens, as follows : 2 ♂ ad., Victoria, Tamaulipas (alt. 5000 ft.), April 16 and May 1, 1888, J. M. Priour ; ♂ ad., Valles, San Luis Potosi, May, 1888, Wm. B. Richardson ; also one specimen without label.

These specimens vary in the color of the upper surface from olive-gray to rusty brown, and in the color of the lower surface from pale buff to ochraceous buff.

12. *Sciurus arizonensis* *Coues.*—One specimen, skin and skull, ♀ ad., San Pedro Mines, Nuevo Leon, Mex., May 7, 1889, J. M. Priour. Also one specimen, skin and skull, ♂ juv., labeled as from Brazoria Co., Texas, May 22, 1887, J. M. Priour ; if this locality is not erroneous, it carries the range of the species far to the eastward of its previous known range, it not having been previously reported in the United States from east of Arizona. Mr. Priour's note-book shows that a squirrel was taken on this date at this locality (about fifteen miles above the mouth of the Brazos River, in Bee County). The skin, in all features of coloration, resembles a common phase of the Southern Gray Squirrel (*Sciurus carolinensis*), the species that would be naturally expected to occur in Bee County, but the skull lacks all trace of the small premolar almost invariably present in this species.

13. *Sciurus hypopyrrhus* *Wagler?*—In addition to the specimens of *Sciurus* above recorded are four skins without skulls, all received, Mr. Sennett informs me, from Mr. Wm. B. Richardson, but only one of them has a label, inscribed, in Mr. Sennett's hand-writing, "Tampico, Mexico, Richardson, 1888." They are all intense glossy black throughout, of large size, with very long heavy tails, and high pointed ears. They resemble a melanism of *S. hypopyrrhus*, but this species has not been reported from north of the southern border of Mexico. In three of the speci-

mens the pelage at the extreme base, on the dorsal area, is tinged with rufous, in one strongly so.

14. *Spermophilus grammurus* (Say).—One specimen, Presidio Co., Texas, Sept., 1887, Wm. Lloyd. This specimen represents the ordinary phase of true *grammurus*.

15. *Spermophilus mexicanus* (Licht.).—One specimen, ♀ ad., Pecos City, Texas, June, 1887, Wm. Lloyd. One specimen, Corpus Christi, Texas, G. B. Sennett; two specimens, ♂ ad. and juv., Xecotencatl, Tamaulipas, May, 1888, J. M. Priour.

16. *Spermophilus tridecemlineatus* (Mitchell).—Two specimens, Bee Co., Texas, April 30, 1887, J. M. Priour. In coloration they are not distinguishable from Minnesota examples.

17. *Mus musculus* Linn.—Two specimens, adult and young, Victoria, Tamaulipas, April, 1888, J. M. Priour.

18. *Ochetodon mexicanus* (De Saussure).—Two specimens, ♂ and ♀ adult, skins and skulls, Bee County, Texas, January, 1887, J. M. Priour. Also two specimens, ♂ and ♀ young, skins only, Santa Teresa, Tamaulipas (about fifty miles southwest of Matamoras), March 23, 1888, J. M. Priour.

The two young specimens from Santa Teresa are less than half grown, but in general coloration above exactly resemble the adults from Bee County, Texas. Below they are like a young house mouse. The Bee County specimens, in midwinter pelage, are superficially nearly pure white below, with the fur plumbeous for the basal half. Above they are mouse gray strongly suffused with yellowish brown, passing into pale orange brown on the sides. A conspicuous feature in all of the specimens is the color of the inner surface of the ears, which is strong yellowish brown, or brownish orange.

This species has been recorded from Duval Co., Texas, by Mr. Thomas,* and also from as far north as Grand Coteau, La., by Dr. Coues.†

19. *Neotoma floridana mexicana* (Baird).—One specimen, ♀ ad., Presidio Co., Texas, Oct. 15, 1887, William Lloyd. "Head and body, 11.75 in.; tail, 5.00."

* P. Z. S., 1888, p. 447.

† Mon. N. Am. Roden., 1877, pp. 128 and 130.

20. *Neotoma micropus* Baird.*—Three specimens, San Fernando de Presas, Tamaulipas, March 30, 1888, J. M. Priour.

21. *Sigmodon hispidus berlandieri* Baird.—Three specimens: ♂ ad., Corpus Christi, Texas, May 23, 1887, J. M. Priour; ♀ juv., Corpus Christi, Texas, Jan. 12, 1887; ♀ ad., San Fernando de Presas, Tamaulipas, March 26, 1888.

22. *Oryzomys palustris* (Harlan).—One specimen, ♂ ad., Wharton Co., Texas, May 27, 1887, J. M. Priour.

This specimen is provisionally referred to *O. palustris*, though paler and grayer than any example in a large series from Florida and Louisiana. It is much nearer this, however, than to *O. couesi* from further south.

23. *Vesperimus leucopus texanus* (Woodhouse).†—One specimen, Bee Co., Texas, ♀ ad., April 21, 1887, J. M. Priour.

24. *Vesperimus leucopus sonoriensis* (Le Conte).—Four specimens, Presidio Co., Texas, ♂ and ♀ ad., and two immature specimens in the blue pelage, Oct., 1887, Wm. Lloyd.

A single specimen from Tampico, Mexico, April, 1888, W. B. Richardson, is also provisionally referred here. It lacks the skull, and nothing is left of the tail but the unfilled curled-up skin.

25. *Geomys personatus* True.

Geomys personatus TRUE, Proc. U. S. Nat. Mus., 1888, p. 159.

In 1888 Mr. F. W. True described a new species of *Geomys*, based on two specimens from Padre Island, Texas. Mr. Sennett's collection contains four specimens, from the same locality, collected in February, 1887, by Mr. Priour. They include two very old breeding females and a half-grown young one, and a very young one taken apparently when not more than a week or ten days old. The two adults agree fairly well with Mr. True's description, but are apparently rather paler and more of an ashy ecru tint above than his description seems to imply. The half-grown example appears to agree exactly with his description. In all the specimens the lower parts are white, as described by Mr.

*The status of this form will be discussed at length in a later paper in the present volume of this Bulletin.

† See Mearns, Bull. Am. Mus. Nat. Hist., II, No. 4, Feb., 1890, p. 285.

True, this feature forming their most striking external difference from *G. busarius*, although the blackish frontal region is also in a measure distinctive.

There are also two specimens, about two-thirds grown, from Corpus Christi, that seem referable to this species.

The skull of *Geomys personatus* differs from the skull of *G. busarius* and *G. tuza* in being much heavier, with heavier dentition; while of the same length it is broader, the rostral portion being especially thickened.

26. *Perognathus flavus* Baird.—One specimen, skin, without skull, Presidio Co., Texas. Provisionally referred to this species.

27. *Perognathus paradoxus spilatus* Merriam.

Perognathus paradoxus spilatus MERRIAM, N. Am. Fauna, No. 1, Oct., 1889, p. 25.

Two specimens, ♀ ad., skin with skull, and skin of a young specimen about two-thirds grown, Bee Co., Texas, April, 1887, J. M. Priour. Also ♀ ad., skin, and skull, Padre Island, Nueces Co., Texas, Feb. 24, 1887, J. M. Priour.

These specimens were at first presumed to be *P. hispidus* Baird, but on comparing them with the type of that species, kindly loaned me for this purpose by the authorities of the U. S. National Museum, they prove to have no near relationship with that species. They are therefore provisionally referred to Dr. Merriam's *P. paradoxus spilatus*, based on specimens from Gainesville, Texas, though presumably different, Bee County and Gainesville being separated by nearly the whole length of the State of Texas, and are, furthermore, in very different faunal districts. The type being in Dr. Merriam's private collection, his absence in the field renders its examination for the present impracticable. Judging from his descriptions, measurements and figures of *P. paradoxus* and *P. paradoxus spilatus*, these specimens belong to the same group. While they seem to scarcely differ from the latter in coloration, they are much smaller, though two of them are fully adult (the female had evidently suckled young), as shown by the skulls. No. $\frac{3480}{2735}$ measures as follows:

Measurements (approximate from skin): head and body 91.5 mm.; tail vertebrae, 78.7; hind foot, 23; ear from crown, 8.

Skull: total length, 29.2; basal length (condyle to incisors), 22.9; greatest mastoid breadth, 14; least intermastoid breadth, 7.6. These measurements in *paradoxus* and *spilotus* are respectively as follows: 32, 31; 26.6, 25.2; 15.7, 14.5; 9, 8.6.

The Bee County specimens are thus more than one-tenth smaller than even *P. p. spilotus*; the fore limbs are not fulvous to the wrists (except partly so in the young specimen), while the lower surface of the tail is strong fulvous, like the flanks, instead of white or yellowish-white, as in *paradoxus* and *spilotus*.

28. *Dipodops compactus* (True).

Dipodomys compactus TRUE, Proc. U. S. Nat. Mus., 1888, p. 160. (Padre Island, Texas.)

Three specimens, Padre Island, Nueces Co., Texas, skins with skulls, Feb. 19–22, 1887, J. M. Priour. One of the specimens is very pale ashy gray above, apparently albinistic.

29. *Dipodops sennetti*, sp. nov.

Pattern of coloration as usual in the group. Above strong yellowish ochraceous-buff, very much mixed with blackish, the dark tint almost prevailing over the middle of the dorsal region from the crown to the base of the tail, lessening insensibly on the sides and passing into nearly unmixed strong buffy yellow on the flanks. Upper tail stripe dusky brown; the lower similar but paler, both extending the whole length of the tail. Lateral tail stripes white, continued considerably beyond the vertebræ. Tail slightly crested and penicillate.

Measurements (approximate from skin): Total length, 210 mm. (7.20 in); head and body, 100 (3.94); tail vertebræ, 110 (4.33), pencil, 20 (.79); hind foot, 35 (1.46); ear, from crown, 9 (.28), from anterior base, 13 (.51).

Skull, total length, 38.8 mm.; greatest width, 23.7; nasals, 13.6, as against, respectively, 41, 25.5, and 15 in *D. ordii*, and 26, 21.3, and 14 in *D. compactus*.

Type No. $\frac{3478}{2738}$, ♂ ad., near Brownsville, Cameron Co., Texas, March 9, 1888, J. M. Priour.

This form is nearest to *D. ordii*, which it much resembles in coloration, but is rather darker and less golden, the cheeks more mixed with blackish and the dusky eye ring broader, and the tail very differently colored. Compared with one of Dr. Merriam's El Paso specimens (No. $\frac{18142}{25040}$, U. S. Nat. Mus., kindly loaned me by the Department of Agriculture), forming one of the series of specimens from which Dr. Merriam recently redescribed* the

* N. Am. Fauna, No. 4, Oct., 1890, p. 45.

species, the following differences are to be noted. Besides the general difference in coloration already noticed, the tail in *D. sennetti* is broadly and continuously blackish both above and below, with the white lateral stripes sharply defined; in *D. ordii* the basal half of both the upper and lower surfaces of the tail is so much mixed with whitish as to produce a general grayish effect; the ears in *D. sennetti* are broadly edged with blackish on the outer anterior border, of which marking there is barely a trace in *D. ordii*. But these differences may be seasonal, the El Paso specimen having been taken in December and the Cameron County example in March. There is apparently but little difference in general size or proportions, except in the size of the ears, which are much the larger in *D. sennetti*. A comparison of the skulls, however, shows surprising differences. In *D. ordii* the skull is more triangular, the rostral portion being narrow, pointed and rather short, while the mastoid portion is greatly swollen. Just the reverse of this occurs in *D. sennetti*, the rostral portion being both elongated and broadened, while the mastoids are much less inflated and widely separated by an interparietal area three times as broad as in *D. ordii* and of an entirely different shape. The interparietal in *D. ordii* is subtriangular, and nearly three times broader at its anterior than at its posterior edge; while in *D. sennetti* the interparietal is slightly hour-glass shaped—quadrate, slightly hollowed on the lateral margins—with the anterior and posterior width about equal. The expanded orbital bridge of the maxillary is broader and much more developed in *D. sennetti* than in *D. ordii*. The lower jaw is also very different in the two species, in *D. sennetti* the condylar portion being much more depressed and the condyle itself longer and very different in form from the same part in *D. ordii*, while the angle is much broader and its plane less oblique to the vertical plane of the ramus.

D. sennetti differs from *D. compactus* in being about one-third larger (judging from the skulls), and in its very much darker coloration. In other words, *D. compactus* is a small, pale form, probably restricted to Padre Island.

30. *Tatusia novemcincta* (Linn.).—One specimen, Tampico, Mex., June 1, 1885, J. M. Priour.

[May, 1891.]

31. *Didelphys virginana californica* (Bennett).—Three specimens, Corpus Christi and Brownsville, Texas, G. B. Sennett.

In general color specimens of the Opossum from the Lower Rio Grande are nearly black, the surface of the pelage being deep brownish black or black, the under pelage yellowish white.