Article XV.—DESCRIPTIONS OF FIVE NEW NORTH AMERICAN MAMMALS.

By J. A. Allen.

As some time must elapse before the publication of the final reports on the Granger and Price Collections of Mammals, recently received by the Museum (see *antea*, p. 317), it seems desirable to place on record the following additional new forms contained in these collections.

Arvicola insperatus, sp. nov.

Apparently not readily distinguishable externally from Arvicola longicaudus Merriam, except that the tail is one-third shorter. In cranial characters the two species are widely different. In A. longicaudus M^2 has only four closed triangles, while A. insperatus has five, with a shorter and relatively narrower skull; the post-palatal notch is very narrow—little more than half as wide as in A. longicaudus, and the zygoma is much heavier—nearly twice as broad as in A. longicaudus. There are also many minor differences in the structural details of the skull and teeth, especially in the form of the trefoil of M^1 .

Measurements.—Two adult males measure as follows: Total length, 154 and 168; tail vertebræ, 43 and 41; hind foot, 19 and 20.5 mm.

Two adult examples of A. longicaudus, taken at the same time and place as the above, measure as follows: Total length, δ (rather young), 180, \Im (adult), 183; tail vertebræ, δ , 63, \Im , 62; hind foot, δ , 23, \Im , 21.

Type, No. $\frac{8108}{6781}$, \$ ad., Custer, S. D., August 9, 1894; W. W. Granger (Granger Collection).

This species is based on 5 specimens (2 33 ad., 1 \, 2 ad., and 2 33 juv., about one-third grown), taken at Custer, Black Hills, South Dakota, July 27 to August 11, 1894, by Mr. W. W. Granger.

Lepus texianus eremicus, subsp. nov.

Similar to *L. texianus* (as restricted by Dr. Mearns¹), but much smaller. No very obvious difference in coloration.

Type, No. $\frac{9.084}{15.27}$, \circ ad., Fairbank, Arizona, March 5, 1894; Price and Condit (Price Collection). Total length, 565; tail vertebræ, 74; hind foot, 123; ear from crown, 128 mm.

Dr. Mearns in his discussion (l. c.) of the proper application of the name *Lepus texianus* Waterhouse very properly, I think,

¹ This Bulletin, II, 1890, pp. 297-301.

restricted it "exclusively to the form west of the Rocky Mountains." In his diagnoses of Lepus alleni, L. callotis, L. texianus and L. melanotis, he took for his type and as the basis of his description of L. texianus specimen No. 2414, Am. Mus. Nat. Hist., Q ad., Fort Verde, Arizona, January 8, 1885 (Dr. E. A. Mearns; orig. No. 163). Fort Verde therefore becomes the type locality of the restricted L. texianus.

The Hares of the L. texianus group appear to be separable, principally on the ground of size, into two forms, a larger northern form, occurring in central Arizona and northward, and a small southern form, found in Southern Arizona (south of the plateau region) and southward into Mexico. Eleven specimens, mainly from Fort Verde, measured in the flesh by Dr. Mearns (see his table, l. c., p. 302) give the following: Total length, 640 (580-660); tail vertebræ, 106 (70-124); hind foot, 145 (130-153); ear from crown, 171 (155-183). Dr. Merriam has published (N. Am. Fauna, No. 3, p. 76) measurements of three specimens from San Francisco Mountain and vicinity which come very close to Dr. Mearns's average of 11 from Fort Verde.

Eight specimens from the southern border of Arizona (Fairbank, Huachuca Mountains, etc.), as measured in the flesh by the collector, give the following: Total length, 580 (535-610); tail vertebræ, 90 (73-104); hind foot, 129 (123-135); ear from crown, 160 (153-170).

Note on Lepus melanotis Mearns.—The reception of some 20 specimens of L. melanotis during the last few months enables me to correct an error made (this Bulletin, VI, p. 169) in reference to some specimens from Rockport, Texas. The Rockport specimens include examples of both L. callotis and L. melanotis; the latter, in late autumn pelage, were mistaken for the winter phase of L. callotis. The two forms are evidently distinct species, whose ranges in Texas overlap. L. melanotis, on the other hand, as stated by Dr. Mearns (l. c., pp. 299, 300), is closely related to L. texianus.

Lepus sylvaticus pinetis, subsp. nov.

Similar in size and proportions to Lepus sylvaticus arizonæ, but much darker in coloration.

Female adult, in worn breeding pelage.—Above as dark as L. s. floridanus, but with a rather different general effect. Underfur dark plumbeous at the base, the apical third dark russet brown; overhair dusky, subterminally broadly ringed with whitish and tipped with black, the color of the upper parts extending well on to the sides of the abdomen. Feet and ears much as in L. s. arizona, but darker and much more heavily clothed. Pectoral band very much darker, and the fur of the ventral surface much more plumbeous at the base.

Male adult, in fresh post-breeding pelage.—Color above about equally mixed black and whitish gray with a faint tinge of pale buff. Underfur very dark slaty plumbeous, tipped with blackish brown; overhair basally like the underfur, ringed subapically with soiled whitish and extensively tipped with black. Pectoral band plumbeous, the longer hairs tipped with fulvous gray. Fore feet externally reddish brown; hind feet much paler.

Measurements.—Total length, δ , 335, \Re , 425; tail vertebræ, δ , 40, \Re , 58; hind foot, δ , 100, \Re , 105; ear from crown, δ , 69, \Re , 64 mm.

Type, No. $\frac{9041}{7818}$, \$\delta\$ ad., White Mountains, August 14, 1894; B. C. Condit (Price Collection).

The two specimens on which the above description is based represent a small Hare of the *sylvaticus* group, very different from the ordinary pale form of Arizona and contiguous regions, known as *Lepus arizonæ*, not only in its extremely dark coloration, but in its larger and much more heavily clothed hind feet, and relatively smaller and much more hairy ears. One of the specimens is a female in worn breeding pelage; the other a male in fresh fall pelage.

Sciurus arizonensis huachuca, subsp. nov.

Similar to S. arizonensis, but upper surface nearly uniform gray, showing merely a slight trace of the broad median dorsal area of fulvous seen in arizonensis. There is a small nape patch of pale fulvous, and a tinge of fulvous below the surface of the pelage over the middle of the back. The fulvous area of the lower surface of the tail is slightly paler, and there is a greatly reduced amount of fulvous at the base of the hairs of the upper surface of the tail—these features correlating with the reduction in the amount of fulvous on the back.

Type, No. $\frac{90.91}{10.811}$, \circ ad., Huachuca Mountains, February 20, 1894; W. W. Price (Price Collection). Total length, 540; tail vertebræ, 265; hind foot, 70; ear, 34 mm.

This subspecies is based on 4 specimens, all adult (2 33, 299), from the Huachuca Mountains, taken January 28 to February 20, by Messrs. Price and Condit. They are very uniform in coloration, and differ widely from a large series of true *arizonensis*, including four January specimens from the type locality of the species.

Sciurus hudsonicus grahamensis, subsp. nov.

Similar to S. h. mogollonensis, but slightly yellower and less rufescent above, with the central area of the lower surface of the tail grayish white from the base to the end of the vertebræ, and the base of the hairs of the middle area of the upper surface of the tail yellowish ochraceous, forming a prominent median band of this color.

Type, No. $\frac{9018}{1808}$, \circ ad., Graham Mountains, Arizona, August 18, 1894; Price and Condit (Price Collection). Total length, 330; tail vertebræ, 132; hind foot, 53; ear, 28.

The three adult specimens from the Graham Mountains, on which this new form is based, measure as follows:

Sex.	Total Length.	Tail Vertebræ.	Hind Foot.	Ear.
	325	130	57	28
	325 340	140	56	27
	330	132	53	28

A few specimens from the San Francisco and White Mountains show a slight tendency to a grayish median area along the lower surface of the tail, but it is never so pronounced and conspicuous as in the specimens from the Graham Mountains. In true S. h. mogollonensis the basal portion of the hairs of the upper surface of the tail are more or less fulvous, but as a rule it is not at all pronounced, whereas in the Graham Mountains specimens it is a conspicuous feature.

While S. h. grahamensis is apparently not a very strongly differentiated form it seems to well warrant recognition, especially when considered in relation to its fairly isolated habitat. While the White Mountains form merely the eastern end of the elevated pine plateau extending westward to the San Francisco Mountains, the Graham Mountains are south of the plateau region, from which they are separated by a comparatively low arid plain. Mr. Price (in letter of Oct. 12, 1894) writes: "Finding Sciurus hudsonius var.? in the Graham Mountains was interesting. It could not possibly have come in recent times from the White Mountains, as the dry desert of the Gila River lies between. The Graham Mountains rise abruptly from the plain to about 10,500 feet above sea level, and are very isolated."