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ARTICLE XII.—*Description of a New Species of Big-eared Bat, of the Genus Histiotus, from Southern California.* By J. A. ALLEN.

The finding of a Big-eared Bat, of the South American genus *Histiotus* Gerv., in Southern California, is a most unlooked for occurrence, exceeding possibly in interest the recent discovery in the same region of a species of *Molossus*, allied to *M. perotis* of Brazil, by Dr. Merriam.* •

The specimen on which the present description is based was "caught on a fence," at Piru, in the western part of Ventura County, California, in March, 1890, by Mr. Thomas Shooter. I am indebted to the kind offices of Mr. E. C. Thurber, of Alhambra, California, for the specimen, through whom it was secured for the American Museum of Natural History.

On attempting to remove the skull from the skin, the specimen proved to be mummified, having been simply eviscerated and allowed to dry. By careful treatment it yielded not only a good skin, but the greater part of the skeleton and skull. Unfortunately the sex of the specimen could not be determined, owing to mutilation in the process of evisceration. The skull and dentition show it to have been a rather young though doubtless full-grown individual.

Histiotus maculatus, sp. nov.

Ears joined at the base, foliaceous, very large, twice as long as the head, about one-half as broad as long, well fringed with whitish hairs along the inner border, but elsewhere naked; expanse from tip to tip, 76.2 mm. (3.00 in.). The ears are convex on the inner border, broadly rounded at the tip; outer border convex on the basal half, slightly hollowed toward the tip. The inner border near the base forms an obtuse angle; the outer border is continued as a low fold to a point below the angle of the mouth. The tragus expands abruptly on the outer border at the end of the basal fourth, at which point it also has an abrupt lateral deflection, the inner border forming an obtuse angle about opposite the beginning of the basal third. The upper three-fourths of the tragus is straight on the inner border, convex on the outer, and very obtusely rounded at the top. Nostrils prominent, at the end of a narrow, low, naked disk, divided by a slight groove, and narrowing posteriorly to a point. Rest of the face well

* Description of a New Species of Molossus from California (*Molossus californicus*). By Dr. C. Hart Merriam. North American Fauna, No. 4, Oct. 8, 1890, p. 31.

haired, blackish, apparently (judging from the dry skin) without warts or tubercles. Thumbs with a small basal pad. Toes thinly haired. Wing membranes from the base of the toes, pale brown, everywhere wholly without fur. About half of the last caudal vertebra free.

Pelage long, full, and soft. Whole dorsal surface deep black, the fur uniform from the surface to the base, except on the rump, and a large patch on each shoulder, where the apical half of the fur is *pure white*, the basal portion being black. The white rump patch has a length of about three-fourths of an inch, by a width of half an inch. The shoulder patches are symmetrical in form and position, being directed obliquely backward and inward, about half an inch wide by nearly an inch in length. The black of the dorsal surface extends downward on the sides of the neck in front of the shoulders, forming a broad lunate patch on each side. Posterior base of the ears, the whole throat and sides of fore neck to the ears, pure white, the fur dusky at the base. Rest of the lower surface with long white tips to the hairs, which over the breast are so long as to wholly conceal the dusky underfur.

Measurements.—Length of head and body, 62 mm. (2.45 in.); tail, 49.5 mm. (1.95 in.); length of ear, 38.1 mm. (1.50 in.), width across the middle, 27.9 mm. (1.10 in.); height of tragus, 12.7 mm. (.50 in.), breadth at middle, 5.6 mm. (.22 in.); humerus, 29.7 mm. (1.17 in.); fore arm, 50.8 mm. (2.00 in.); thumb, 6.9 mm. (.27 in.); third finger: metacarpal, 49.3 mm. (1.94 in.), 1st phal., 15.75 mm. (.62 in.), 2d phal., 27.9 mm. (1.10 in.)=95.5 mm. (3.76 in.); fourth finger: metacarpal, 46.2 mm. (1.82 in.), 1st phal., 14 mm. (.55 in.), 2d phal., 16 mm. (.63 in.)=76.2 mm. (3.00 in.); fifth finger: metacarpal, 45.7 mm. (1.80 in.), 1st phal., 11.4 mm. (.45 in.), 2d phal., 10.2 mm. (.40 in.)=67.3 mm. (2.65 in.); femur, 43.7 mm. (1.72 in.); tibia, 22.9 mm. (.90 in.); hind foot, 7.6 mm. (.30 in.).

Skull and Dentition.—Basilar length, 16.5 mm. (.65 in.); total length, 19 mm. (.75 in.); zygomatic width, 10.9 mm. (.43 in.); height, 7.6 mm. (.30 in.); length of lower jaw, 12.7 mm. (.50 in.); height at condyle, 33 mm. (.13 in.); height at coronoid process, 3.8 mm. (.15 in.); length of upper tooth row, 6.86 mm. (.27 in.); length of lower tooth row, 7.6 mm. (.30 in.). Dental formula: incisors, $\frac{2}{6}-\frac{2}{6}$; canines, $\frac{1}{1}-\frac{1}{1}$; premolars, $\frac{3}{2}-\frac{3}{2}$; molars, $\frac{3}{3}-\frac{3}{3}=\frac{14}{18}=32$.

The skull is thin and papery, being evidently that of a young animal. The facial portion is narrow and pointed; the brain case is quadrate, flattened above, but rises abruptly at the frontal border, the forehead being suddenly depressed.

The lower border of the zygomatic arch is curved upward; the upper border is greatly expanded vertically, the upper border of the malar forming a high angular process at the middle of arch; the zygomatic process of the squamosal is short, and, with the malar, passes forward in a line nearly parallel with the axis of the skull, with only a very slight outward cuvature. The tympanic bullæ are enormously expanded, having an antero-posterior length of 5.84 mm. (.23 in.) and a transverse breadth of 3.3 mm. (.13 in.), their length fully equaling one-third of the length of the skull. In other respects the ventral aspect of the skull

presents nothing peculiar. The lower jaw is narrow, the coronoid process small, rising but little above the condyle; the angle is well developed.

The dentition is weak, the incisors and canines being very small, relatively to the molar series. The outer upper incisor is about one-half the size of the inner; both have a small outer cusp at the base. The upper canine is about equal in size to the anterior half of the upper premolar. The molars present nothing distinctive. The lower incisors are slightly double-notched (trifid); the lower canines are very small; the first premolar is about half the size of the second.

The present species appears to bear a general resemblance to *Histiotus velatus* and *H. macrotus* of Brazil and Chili, as regards general size and the form and size of the ears. It is, however, larger than either, with the ears relatively as large as in *H. macrotus*, and differs from both in the form of the tragus, which instead of being narrowed apically and subacutely pointed, is broad towards the tip and obtusely rounded. In *H. macrotus*, according to Dr. Peters,* the outer upper incisor is minute as compared with the inner, while in the present species the upper incisors are comparatively subequal. There is also a striking difference in coloration, the present species being particolored, black and white, the others yellowish brown above and whitish gray below.

The coloration of the present species is striking and almost unique among bats. The white patches are possibly in part due to albinism, but this does not seem at all probable. The spots are symmetrical in form and position, and the white is confined to the surface, the under fur being blackish, like the under fur on the rest of the body, whereas in white spots due to albinism the white extends to the base of the fur.

Explorations recently made in Southern California present in striking relief the ignorance of its mammalian fauna which prevailed to within a recent date, and warrant the supposition that further novelties still await discovery. Just three years ago Dr. Merriam described from San Bernardino County a new fox (*Vulpes macrotis*) † with remarkably large ears, and very unlike anything previously known from North America. The species was based on a single specimen, but subsequently others were

* Monatsb. Akad. Wissen. Berlin, 1875, p. 788, pl., fig. 2.
† Proc. Biol. Soc. Washington, Vol. IV, 1886–88, pp. 5–7. Extras issued Feb. 18, 1888.

obtained, and its known range extended eastward into Arizona. The wonder now is that so conspicuous an animal should have so long escaped observation.

It is of course not remarkable that among the comparatively inconspicuous burrowing mammals many new forms should come to light, including some with very strongly pronounced characters ; or that some form of *Nyctinomus*, known for many years as Californian on the basis of a single record, should prove common, as has now been recently found. This, although a tropical genus, is well represented near our southern border and thence southward. The case, however, is quite different with the *Promops* section of the genus *Molossus*, where *M. perotis* finds a geographical representative in Merriam's *M. californicus* of Southern California. This immense bat, one of the largest known from America, is now represented by numerous specimens (I have myself examined nine), and proves to have no very close relation to *M. perotis ;* though of equal size, it differs widely in coloration, and more or less in various points of structure, as shown by direct comparison with Wied's type of *M. perotis*, preserved in this Museum.

The present species adds another to the many surprises this general region has recently supplied to the mammalogist, finding as it does its nearest allies at far remote points on the opposite side of the equator.