

Article III.—ON A FURTHER COLLECTION OF MAMMALS FROM SOUTHEASTERN PERU, COLLECTED BY MR. H. H. KEAYS, WITH DESCRIPTIONS OF NEW SPECIES.¹

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The Museum has just received a third collection of mammals made by Mr. H. H. Keays, at the Inca Mines, near Juliaca, southeastern Peru. This collection contains nearly all of the species previously received from Mr. Keays, and eight additional, three of which appear to be undescribed. The species additional to the former list are nearly all from other localities, as San Antonio, Osila, and Tirapata, situated at much higher altitudes than the Inca Mines.

In this connection it is necessary to correct a misleading statement in my former paper in respect to the locality where the principal part of Mr. Keays's first collections were made. Mr. Keays's post-office address was Juliaca, and through lack of explicit information, it was inferred that the Inca Mines, where he collected, were in the immediate vicinity of Juliaca. In a later letter Mr. Keays informs me that the Inca Mines are situated about 200 miles northeast of Juliaca, on the east side of the Andes, on the Inambari River, a tributary of the Amazon, and at a much lower altitude than Juliaca. The altitude and geographical position were correctly given in the former paper, but in place of Juliaca, in the introduction and for the type localities, read Inca Mines. San Antonio and Tirapata have an altitude of 12,000 to 16,000 feet.

The species not recorded in the former list are indicated by a star prefixed to the number. All the external measurements given are the collector's measurements from the fresh specimens, except when otherwise stated.

1. *Didelphis pernigra* Allen.—A series of 5 adults—3 males and 2 females—collected at the Inca Mines, June 5–July 22, 1900, are exceedingly uniform in coloration, and agree perfectly

¹ For a report on the former collections see this Bulletin, Vol. XIII, 1900, pp. 219–227 published Nov. 16, 1900.

with the type and other specimens already described (this Bulletin, XIII, pp. 191 and 219). The small size of this species, for a member of the genus *Didelphis*, its intensely black pelage, wholly white ears, and prominent black eye-stripe serve at once to distinguish *D. pernigra* from any of its congeners.

2. **Thylamys keaysi** *Allen*.—Two specimens, ♂ and ♀ adult, Inca Mines, May 31 and July 2.

3. **Lagidium peruanum** *Meyen*.—One specimen, ♀ adult, Tirapata, Oct. 18, 1900. Mammæ 2, pectoral. Since sending his former field notes on this species (*l. c.*, p. 220), Mr. Keays has found it to inhabit "a part of the east slope of the Andes, where he found them quite common from 12,000 feet to 16,000 feet altitude." The female here recorded, he says, "contained one young; her teats, two in number, were large and situated on the upper breast."

4. **Dactylomys peruanus** *Allen*.—One specimen, male, Inca Mines, June 3, 1900. Although apparently fully adult, the last molar being fully grown and already somewhat worn, it is smaller than the female type (*l. c.*, p. 220).

This specimen is throughout a little brighter and richer colored than the type, and is doubtless in fresher pelage. The collector's measurements are as follows: Total length, 483 mm. as against 560 in the female; head and body, 228 (♀, 240); tail, 255 (♀, 320); hind foot, 44 (♀, 51). These measurements confirm the small size ascribed to this species in comparison with its congeners.

5. **Proechimys simonsi** *Thomas*.—The five additional specimens include 3 adult males, 1 adult female, and 1 half-grown female, all from Inca Mines. The young example is white below, like the adults, but uniform blackish above, with coarse sub-spiny hairs over the middle of the back. The adults are very uniform in coloration, with the median dorsal area distinctly blackish.

6. **Nectomys garleppii** *Thomas*.—Represented by a single half-grown female, dusky brown above with an olivaceous tinge, passing to yellowish olivaceous on the sides. Below buffy, as in the adults, but the buff is of a more olivaceous shade.

7. **Neacomys spinosus** (*Thomas*).—This interesting species is represented by 18 additional specimens, all adult, and all from Inca Mines. They vary greatly in color, in some specimens black

being the prevailing tint above, while others are uniform yellowish rufous above, with every intermediate stage.

8. **Oxymycterus juliacæ** Allen.—A second specimen, an adult male, closely resembles the type (*l. c.*, p. 223) from which only the species was previously known. Both were collected at Inca Mines.

9. **Oxymycterus apicalis** Allen.—An additional series of 9 specimens, all adult except one, which is only about one third grown. This is grayer below and less gray above than adults. In other respects the specimens are like those previously recorded. The white tip to the tail is a prominent feature in all.

10. **Oryzomys keaysi** Allen.—Five specimens, all adult, and like those previously described (*l. c.*, p. 225), and from the same locality.

11. **Oryzomys obtusirostris** Allen.—One specimen, adult male, Inca Mines, June 16. The faint yellowish wash on the upper parts is rather more pronounced than in the type, and the general coloration above is consequently less blackish than is indicated in the description of the species (*l. c.*, p. 225).

* 12. **Oryzomys stolzmanni** Thomas.—One specimen, an adult female, Inca Mines, May 5, 1900.

* 13. **Rhipidomys ochrogaster**, sp. nov.

Type, No. 16481, ♀ ad., Inca Mines, Peru (alt. 6000 feet), Sept. 14, 1900; coll. H. H. Keays.

Above dull yellowish brown, minutely varied with black-tipped hairs, paler and more yellowish on the sides; a slight dusky eyering; beneath pale ochraceous buff, the hairs at the extreme base pale gray; ears blackish brown, well haired externally, nearly naked within; upper surface of feet, including toes, dusky grayish brown, with longer whitish hairs at the base of the claws; tail uniform blackish, the proximal half scantily haired, the hairiness increasing apically, in some specimens wholly concealing the annulations, with a long bushy pencil at the end, the hairs extending as a heavy tuft 20 mm. beyond the vertebræ. Mammæ, 6,—4 inguinal, 2 pectoral.

Measurements.—Type, total length, 382 mm.; head and body, 154; tail to end of vertebræ, 228; hind foot, 35; ear (in dry skin) from notch, 19. Another specimen, also a female, measures, total length, 405; head and body, 164; tail, 241; hind foot, 38.

Skull (of type), total length, 37; basal length, 31; palatal length, 15; nasals, 14; zygomatic breadth, 19.5; interorbital breadth, 6; mastoid breadth, 10; palatal foramina, 8 x 3; upper tooth-row, 6.

This species is based on two females, both adult, but one a

little older and a little larger than the other. The smaller has been taken as the type, owing to the poor condition of the skull of the other. The specimens were collected at Inca Mines, Sept. 14 and Oct. 9, 1900.

Rhipidomys ochrogaster is one of the largest species of the genus, exceeded in size apparently by only *R. couesi* (All. & Chapm.) from Trinidad. All of the other buff-bellied members of the group are very much smaller, and otherwise obviously different. It differs from *Hesperomys (Rhipidomys) leucodactylus* Tschudi, the only other described Peruvian species, in being more than one third larger, and in its ochraceous instead of whitish ("subtus albescens") underparts.

* 14. **Phyllotis boliviensis** (*Waterhouse*).—Ten specimens, all adult, five of which are from San Antonio, collected Oct. 16, and five from Tirapata. The species was not met with at Inca Mines.

This species appears to be in part diurnal, as long since observed by Bridges (Ann. and Mag. Nat. Hist., XVII, 1846, p. 483). Mr. Keays obtained most of his specimens by shooting them while they were feeding on the grass, early in the morning and late in the evening.

The collector's measurements of these 10 specimens may be summarized as follows: Total length, 185 (177–216); head and body, 104 (95–114); tail, 82 (76–102); hind foot, 24 (23–25).

* 15. **Phyllotis osilæ**, sp. nov.

Type, No. 16503, ♀ ad., Osila, Peru (alt. about 12,000 feet), Oct. 19, 1900; coll. H. H. Keays.

Above fulvous gray, slightly darkened with black-tipped hairs, especially along the middle of the back; cheeks and sides pale dull fulvous (about 'cream buff' of Ridgway), sharply separated from the white of the ventral surface; sides of nose grayish white; lower parts white, the hairs plumbeous for the basal two thirds; pectoral region and median line posteriorly (for a short distance), and also a small area at base of tail, faintly tinged with buff; ears large, blackish-brown on both surfaces, nearly naked externally, clothed within with short fine dusky hairs; upper surface of hands yellowish white, of feet clear white; tail very long, slightly penicillate, dusky on the median line above, sides and below white, the lower surface thickly covered with soft silky white hairs, the upper surface sparingly clothed with dusky hairs, through which the annulations are plainly visible.

Measurements.—Type, total length, 232 mm.; head and body, 99; tail, 133;

hind foot, 25 ; ear (in dry skin), 24.5. A second specimen, 'young adult' female, is somewhat smaller, as follows : Total length, 191 ; head and body, 70, tail, 121.

Skull.—Similar in general features to that of *P. boliviensis*, but the interorbital and rostral portion slenderer and relatively longer, and the bullæ relatively smaller ; whole skull much smaller and more lightly constructed. Total length, 28 ; basal length, 22 ; palate, 12 ; nasals, 11.5 ; zygomatic breadth, 15 ; interorbital breadth, 4 ; mastoid breadth, 12.5 ; palatal foramina, 6 x 2 ; upper tooth-row, 5.7.

This species is based on two specimens, an adult female and a young adult female, the latter taken at Tirapata, Oct. 20, and the former at Osila, between San Antonio and Tirapata, Oct. 20. The collector states in his notes that they were taken at the same localities with *P. boliviensis*, and that they had the same habits. One was taken in a trap and the other shot while feeding late in the afternoon.

In size and proportions *P. osilæ* resembles the *P. amicus* group, especially *P. amicus montanus* Thomas, from Urumarca, northern Peru, from which it differs in being larger, with a longer tail, darker coloration, and dusky brown ears.

16. **Akodon caliginosus** (*Tomes*).—Represented by 19 specimens, 15 of which are adult and 4 young. All are from Inca Mines. The young examples include one about one half grown, one about one third grown, and one nursing. In coloration they scarcely differ from the darker adults. The olivaceous tint above in the adults varies somewhat in different specimens, being darker or lighter according to the extent of the yellowish rufous tipping the hairs.

* 17. **Akodon pulcherrimus** *Thomas*.—Five specimens, of which one is from Tirapata, and two each from Limbana and Crucero.

The collector's measurements of these specimens are as follows : Total length, 167 (162-176) ; head and body, 92 (89-96) ; tail, 76.5 (68-82) ; hind foot, 24 (22-25).

Mr. Thomas's description fails to mention the very prominent deep rusty fulvous spot on each side of the nose, but it otherwise exactly fits the present examples, except that his type considerably exceeds in size any of the specimens in this series. These specimens are, however, from near the type locality and are not likely to prove different from those described by Mr. Thomas.

* 18. *Akodon lutesens*, sp. nov.

Type, No. 16507, ♀ ad., Tirapata, Peru (alt. about 15,000 feet), Oct. 21, 1900; coll. H. H. Keays.

Pelage very soft and full. Above fulvous gray brown, mixed very slightly with dusky-tipped hairs; sides dull pale fulvous gray, passing gradually into the pale buffy gray of the whole lower surface; no distinct eyering; sides of muzzle and cheeks like rest of the head; ears very small, well haired, nearly concealed by the surrounding pelage, of the same pale fulvous gray tone as the rest of the dorsal surface; upper surface of hands dull dusky gray with a faint tint of fulvous; upper surface of feet dull yellowish gray; tail considerably shorter than head and body, scantily haired, with a faint median dusky line above, pale yellowish gray on sides, lighter, soiled gray below.

Measurements.—Total length (type), 140 mm.; head and body, 76; tail, 64; tarsus, 19; ear (in dry skin) 8.5. A second specimen; a young adult, has the same coloration and proportions, but is smaller (head and body, 70; tail, 57).

Skull.—The skull of the type is unfortunately much broken, but that of the topotype, though smaller, is perfect. The skulls seem to offer no special cranial distinctions. Total length, type, 24; basal length, —; zygomatic breadth (approximate), 12; interorbital breadth, 4; mastoid breadth, 10.5; upper tooth-row, 4.

This small, soft-haired, dull-colored species is based on two specimens, an adult female and a young adult male, taken at Tirapata, Oct. 21. The collector states they were "shot at 8 A.M. while feeding on the bark of a small sage shrub."

Akodon lutescens appears to resemble in a general way several other species of the soft-haired, dull-colored section of the genus, but agrees with none of the described species in respect to details of size, coloration, and proportions. It agrees quite nearly in size with *A. pusillus* (Philippi) from Valparaiso, Chili, but differs from it in the color of its ears, feet, and underparts. It differs much more widely from any of the other described species.

19. *Sciurus æstuans cucinus* *Thomas*.—Three specimens, all adult females, from the vicinity of the Inca Mines.

* 20. *Myotis*, sp.—Two specimens, representing a third species of this genus from Inca Mines (*l. c.*, p. 227), none of which is as yet satisfactorily determined.

* 21. *Lasiurus varius* (*Poeppig*).—One specimen, adult male, Inca Mines, June 16, 1900. "Taken from a woodpecker hole in a dead stub."—H. H. K.