Article XXII.— NEW SOUTH AMERICAN MAMMALS.

By J. A. Allen.

Dasyprocta fuliginosa candelensis subsp. nov.

Type, No. 33902, $\, \circ \,$ ad., La Candela (altitude 6500 feet), Huila, Colombia, May 11, 1912; Leo E. Miller.

Midline of back, from the shoulders posteriorly, deep black; rest of the upperparts with the hairs black for the greater part of their length, annulated near the tip with white or pale yellow, giving a grizzled gray general effect, the variegation varying in different specimens from slight (black prevailing) to profuse (gray prevailing); ventral surface grizzled with dusky and white, the base of the hairs dusky and the tips broadly ringed with white, with a broad mid-ventral line of clear white; feet wholly black or black with the tips of the hairs minutely punctated with white or yellowish white.

Field measurements (type), total length, 570 mm.; tail, 30; hind foot (c. u.), 130. Type and 3 paratypes, total length, 550 (530–570); tail, 25 (20–30); hind foot, 130 (all 130). Skull (type), total length, 122.7; condylobasal length, 116; zygomatic breadth, 52.5; interorbital breadth, 31; diastema, 32; maxillary toothrow, 21.5. The type skull is that of an old female, in which the basioccipito-basisphenoid suture is obliterated by ankylosis. A paratype skull of an old female, perfectly comparable in age with the type, is much shorter and less massive, the total length being 111, the condylobasal length 103.5, zygomatic breadth 53, interorbital 30, diastema 29, maxillary toothrow 29.3. An adult male skull (the basioccipito-basisphenoid suture still open) agrees closely with the last mentioned old female in all cranial measurements.

Represented by 4 adult specimens, all from near the type locality (altitudes of 3000 to 6500 feet), as follows: La Candela, 1; San Agustin, 1; Andalucia, 1; and 1 without definite locality (through loss of the collector's label), but doubtless from one of these three localities.

A furrier's skin from the Bogotá district is referable also to this subspecies, indicating that it ranges northward along the eastern slope of the Eastern Andes to the vicinity of Bogotá, a range common to various other rodents of this region.

D. fuliginosa candelensis is darker even than typical fuliginosa, to which it is more nearly related, both morphologically and geographically, than to any other known form of the genus.

The type locality of Dasyprocta fuliginosa Wagler 1 is not definitely

¹ Dasyprocta fuliginosa Wagler, Isis, 1832, p. 1220. "Habitat in Brasilia versus flumen Amazonum." Based on a young specimen obtained by Spix (apud Wagner, l. c., 1844, p. 48).

Dasyprocta nigricans Wagner, Arch. f. Naturg., 1842, I, p. 362. "Von Borba am Madairo und vom Rio Negro oberhalb des Cocuy."— Wagner, Schreber's Säug., Suppl., IV, 1844, p. 48.

Dasyprocta nigra Gray, Ann. and Mag. Nat. Hist., X, p. 264, Dec. 1842. "South America." — Gray, Voyage Sulphur, I, 1844, Mamm., p. 36, pl. xvi. "Tropical America."

indicated, but the type specimen, an immature animal, was obtained by the Spix Expedition (according to Wagner, l. c., 1844, p. 48), which spent much time exploring that part of the Amazonian region, which includes the lower Rio Madeira and lower Rio Negro. Wagner (l. c.) states that Spix's type came from the same region (Gegenden) as Natterer's specimens. Dasyprocta nigricans Wagner was based on specimens collected by Natterer in part at Villa de Borba, on the lower Rio Madeira, with which Wagner (l. c., 1844, p. 48) compared Wagler's type and considered it identical with Natterer's specimens, but he did not adopt Wagler's earlier name. The type locality of fuliginosa may therefore properly be designated as Villa de Borba, on the basis of the known type locality of nigricans. Five specimens collected by Leo E. Miller (Roosevelt Brazilian Expedition) at Calama, a short distance above Borba, on the lower Rio Madeira, are here regarded as typically representative of nigricans and hence also of fuliginosa.

The collector's measurements of an old adult male and an old adult female are as follows: Total length, \circlearrowleft 630, \circlearrowleft 590; tail, 30, 20; hind foot c. u., \circlearrowleft 135, \circlearrowleft 130. Skulls of the same specimens: Total length, \circlearrowleft 109.5, \circlearrowleft 114; condylobasal length, \circlearrowleft 101.5, \circlearrowleft 104; zygomatic breadth, \circlearrowleft 53.5, \circlearrowleft 47.5; interorbital breadth, \circlearrowleft 33, \circlearrowleft 32; diastema, \circlearrowleft 29.4, \circlearrowleft 28; maxillary toothrow, \circlearrowleft 29.4, \circlearrowleft 29.7.

This series shows some individual variation in coloration, but the average condition may be indicated as follows: Upperparts black, the tips of the hairs narrowly annulated with pale yellowish or white, with a broad band of black along the middle of the dorsal region; hairs of the lower back and rump greatly lengthened, intense black, with long white tips, forming a conspicuous veiling of the surface; ventral surface grizzled whitish and dusky, the midline whitish, the annulations of the hair-tips often tinged with pale yellowish.

The Dasyprocta fuliginosa group is evidently closely related to the D. variegata group, and it will probably be found that the two constitute a single large assemblage of local forms, ranging over the greater part of South America. Dasyprocta aurea Cope ¹ from Chapada, Matto Grosso, is the southeastern representative of the group, D. colombiana of the Santa Marta district and D. isthmica of Panama are the northern forms, D. variegata and D. yungarum of Peru and Bolivia the southwestern forms, with the two described below, from Ecuador and western Colombia, completing the western periphery of the area of distribution. D. colombiana seems to represent the maximum in size and to form the connecting link between the dark fuliginosa forms of the central Amazonian Basin and the lighter or more

¹ For further reference to this species see below, p. 633.

ochraceous forms of the western border of the range of the group. With a series of more than 20 specimens before me from Santa Marta, it is difficult to decide whether *D. colombiana* is more closely affiliated with typical variegata than with typical fuliginosa. In all probability *D. aurea* and *D. yungarum* will also prove to be closely related inter se through an intermediate form in southern Bolivia.

Dasyprocta variegata zamoræ subsp. nov.

Type, No. 36582, ♀ ad., Zamora (altitude 2000 feet), Ecuador, Nov. 1, 1913; Wm. B. Richardson.

Similar to *Dasyprocta variegata* Tschudi, but the annulations of the tips of the hairs much broader, more abundant, and of a more reddish tone — deep ochraceous tawney instead of yellow, and the rump hairs with rather long white tips in unworn specimens, instead of practically wanting as in *variegata*.

Represented by 4 adult females, all collected by Wm. B. Richardson, as follows: Zamora, 1; Naranjo, 2; another labeled "Quito" by the collector, but doubtless erroneously, although unquestionably from Ecuador.

Collector's measurements of the type and the two Naranjo specimens: Total length, type 620, Naranjo specimens 580, 650; tail —, 30, 30; hind foot, 120, 120, 120. Four skulls, total length, 109 (105–115); condylobasal length, 101 (96.5–103); zygomatic breadth, 48.6 (47–49.5); interorbital breadth, 29.8 (28.5–31.5); diastema, 26 (25–28); maxillary toothrow, 19.5 (19–20.5).

D. v. zamoræ differs from typical D. variegata as indicated above, and from D. v. yungarum especially in the color of the mid-ventral surface, which is "orange-ochraceous" in yungarum and white in zamoræ.

Although Zamora and Naranjo are situated respectively on the eastern and western slopes of the Andes, the specimens from these two localities do not differ appreciably in coloration or other features.

Dasyprocta variegata chocoensis subsp. nov.

Dasyprocta variegata variegata Allen, Bull. Amer. Mus. Nat. Hist., XXXI, p. 70, April 19, 1912.

Type, No. 32153, ♂ juv., Los Cisneros (altitude 600 feet), Chocó district, Colombia, March 9, 1911; Wm. B. Richardson.

Similar in general coloration to *Dasyprocta variegata zamoræ*, but with much longer white tips to the hairs of the rump, and the ochraceous annulations of the hairs of the back and flanks broader and more yellow, varying in different individuals from ochraceous buff to ochraceous orange.

Total length, type (σ juv.) 550 mm., topotype (σ ad.) 580; hind foot, 120, 130. Skulls of same specimens, total length, (type) —, (topotype) 111.5; condylobasal length, 100, 102; zygomatic breadth, 44.6, 49; interorbital breadth, 28.5, 29.3; diastema, 29, 29.6; maxillary toothrow, 22, 19.

Five specimens are referred to this form, representing the following localities, all in the tropical coast zone of western Colombia: Los Cisneros, 2; Rio Osculo, Baudo, and Bagado, each 1. The Bagado specimen is not typical, it differing from the others in having the top of the head and back of the neck to the shoulders very much darker than the others, but is otherwise similar.

This form is related on the one hand to subspecies zamoræ, as noted above, and on the other to subspecies colombiana. Indeed, in the large series of the latter from near Bonda (Santa Marta district), are specimens closely similar to some of the Chocó specimens, but the two series as a whole present well-marked color differences, colombiana being grayer, the annulations of the hair tips paler and narrower, the white tips of the hairs of the rump shorter, with a tendency to a conspicuous blackish area on the back anterior to the rump, which latter feature is absent in chocoensis and zamoræ. The skulls, however, show that colombiana is a much larger animal than either zamoræ or chocoensis, with a broader and much more massive skull.

Two half-grown specimens from Frijolera, Antioquia, closely resemble specimens of similar age from Santa Marta, and are here provisionally referred to *colombiana*.

D. v. chocoensis is not closely related to D. isthmica, the latter being paler with the long light tips to the hairs of the rump distinctly yellowish instead of white. So far as coloration is concerned, D. isthmica presents a striking similarity to D. aurea of the far away region of southern Matto Grosso.

Note on the Orange-rumped Agoutis.

The earliest available names for the orange-rumped agoutis appear to be Dasyprocta croconota Wagler for the Amazonian form and D. prymnolopha Wagler ¹ for the Guiana form. No definite type locality was given for either, but D. croconota was based on a specimen collected by Spix on the Amazon, and D. prymnolopha on specimens from Guiana. Two specimens in the American Museum collected by Leo E. Miller (Roosevelt Brazilian Expedition) at Calama, on the lower Rio Madeira, agree satisfactorily with Wagler's description of his D. croconota. As Spix spent a long time on the Amazon near its junction with the Rio Madeira and Rio Negro, and ascended the lower parts of both of these rivers, it seems not unreasonable to indicate

 $^{^1\,}Dasyprocta\ croconota$ Wagler, Isis, 1831, p. 618. "Brasilia ad flumen Amazonum." From Spix's Expedition.

Dasyprocta prymnolopha Wagler, ibid., p. 619. "Habitat in Guiana."

² Except that the incisors are not white. It is probable that the ascribed "dentibus primoribus toto niveis" is an exceptional condition. In over 100 Dasyprocta skulls now before me, not one has the incisors all white, but in three or four they are pale yellowish white, or mottled with pale yellow and white, giving a whitish general effect.

the immediate vicinity of the mouth of Rio Madeira as the type locality of Dasyprocta croconota.

The D. croconota group ranges northward to the Guianas and Venezuela (Orinoco basin), both of which regions are represented by specimens of this group in the American Museum. Some of the Venezuela specimens are practically topotypes of Dasyprocta lucifer Thomas, which form I believe should be known as Dasyprocta croconota lucifer. The Guiana specimens, a series of 6, are from northern British Guiana, and seem to be distinctly referable to D. prymnolopha. They also agree satisfactorily with Thomas's description of his Dasyprocta lucifer cayenna, with which I had identified them before I took up the case of D. prymnolopha. It seems to me now, however, that the "Guiana" form should be known as Dasyprocta croconota prymnolopha, unless more than one form should be found to exist in the Guianas, when it would be necessary to designate a definite type locality for Wagler's prymnolopha, which may or may not have come from Cayenne.

Proechimys kermiti sp. nov.

Type (and only specimen), No. 37124, Q ad., Lower Rio Solimoens, April 20, 1914; Leo E. Miller. Roosevelt Brazilian Expedition.

Named for Kermit Roosevelt, in recognition of his important contributions to the natural history results of the Roosevelt Expedition.

Similar in size to *Proechimys centralis*, but with the underparts buffy drab instead of clear white, and important cranial differences.

Upperparts ochraceous buff lined with black, paler on the head, shoulders, and outer surface of limbs, brighter on the sides, darker on the middorsal region where black prevails from a little behind the shoulders to the rump, forming a broad blackish band; lower parts pale buff on throat and middle of the ventral surface, passing into drab laterally, and thence merging into the color of the upperparts, without a sharp dividing line between the sides and the ventral surface; outside of limbs like sides of body; inside of fore limbs like the breast, inside of hind limbs with a broad longitudinal band of strong buff; feet dull brown, rather thinly haired.

Head and body, 310 mm.; tail absent, having been shed in life; hind foot, 55. Skull, total length, 65.5; zygomatic breadth, 29.5; interorbital breadth, 13.5;

parietal breadth, 22.3; length of nasals, 28 × 6; diastema, 13; maxillary toothrow, 9. Nasals very broad, bluntly pointed posteriorly and extending back to a line transverse to the anterior border of the orbital fossæ; frontals with a heavily thickened border, continued over the front half of the parietals; maxillary toothrows

perfectly parallel, not converging anteriorly as in most species of the genus.

This is one of the largest species of the genus, about equalling *P. centralis* in size, but differing from it externally in the upper parts being darker and paler with a much stronger dark median band, and in the underparts being mixed buffy and drab. The upperparts are nearly like the upperparts in

average specimens of *P. semispinosus*, which, however, is white below as in *P. centralis*, and a very much smaller species with markedly different cranial characters.

Oryzomys incertus Allen (preoccupied).

I am indebted to Mr. E. A. Goldman for kindly calling my attention to the preoccupation of the name *Oryzomys incertus* (this Bulletin, XXXII, p. 598, Dec. 3, 1913) by my previous *Oryzomys alfari incertus* (this Bulletin, XXIV, p. 655, Oct. 13, 1908). My later *O. incertus* is here renamed **Oryzomys mureliæ**, after the type locality.

Procyon (Euprocyon) æquatorialis sp. nov.

Type, No. 36458, & ad., western Ecuador, probably near the coast in Manavi Province, June, 1913; W. B. Richardson. (The collector's label was lost in transit, but the specimen was taken on his route from Manavi to Mt. Pichincha, via Gualea. The hispid character of the pelage indicates that it was taken in the tropical coast belt.)

Pelage very short and bristly. Similar in general coloration to specimens of *Procyon cancrivorus nigripes* from Corrientes, Argentina, but pelage very short, stiff and without underfur, the general tone much yellower, the black tipping of the hairs of the upperparts much shorter, the tail and feet with much less black. Frontal band on face broad and deep black, posteriorly enclosing the eyes; a whitish band above the eyes extending nearly to base of ears; top of head and nape gray strongly varied with black, the hairs being whitish at base with black tips; upperparts yellowish, the hairs tipped with black, forming a blackish wash; underparts maize yellow; forearm and ankles black; feet pale buffy brown; tail below light maize yellow, paler above with indistinct blackish half-rings; ears externally like the nape, edged with yellowish white, internally yellowish white.

Total length (in skin), 1070 mm.; head and body, 755; tail vertebræ, 315; hind foot, 95.

Skull, total length, 127; condylobasal length, 119; palatal length, 69; zygomatic breadth, 87; interorbital breadth, 26; postorbital breadth, 25; breadth of braincase, 54; mastoid breadth, 71; maxillary toothrow, 40.3.

The skull is that of an old male, with a low sagittal and heavy occipital crests. Dentition intermediate between that of *cancrivorus* ¹ and *proteus*—less massive than in the former and heavier than in the latter.

In coloration the Ecuador form is quite distinct from any of the previously described forms.

As already noted, the exact type locality is not known, but the short, hispid pelage seems to imply that it must be in the tropical coast region of Manavi.

¹ An adult male skull from Trinidad, Guiana specimens being unavailable for comparison.

Margay tigrina elenæ subsp. nov.

Type, No. 37788, & ad., Santa Elena (altitude 9000 feet), Antioquia, Colombia, Jan. 11, 1915; L. E. Miller and H. A. Boyle.

Similar in general coloration to Margay tigrina emerita (Felis pardinoides emerita Thomas) of the Venezuelan Andes (Merida district), but the palms and soles are strongly blackish instead of the feet being "scarcely darker below than above," and the skull is relatively shorter and broader. The ground color above is rather deeper tawny, but the markings are similar in all essential details.

Represented by the type only, an old male with the skull sutures wholly obliterated. A specimen from Almaguer (skin without skull) is provisionally referred to it.

There are no field measurements, but the skull measures as follows as compared with a topotype skull of *emerita* (measurements of the latter in parenthesis): Total length, 86 (86); condylobasal length, 79.3 (82.5); zygomatic breadth, 58 (57); breadth of braincase, 39 (37); interorbital breadth, 16 (15); postorbital constriction 28 (26); tip to tip of postorbital processes, 41.5 (41); length of upper toothrow (including canine), 24.5 (24.5); length of p⁴, 9.3 (9.6).

While the total length of the skull is the same in the type of elenæ as in a topotype of emerita, the condylobasal length is 3 mm. less in the type of elenæ than in the topotype of emerita, due to the more posterior position of the condyles in emerita. This gives a strikingly different aspect to the occipital region of the skull, especially when viewed in profile, the occipital plane in emerita being nearly vertical, in elenæ strongly oblique, owing to the more anterior position of the condyles. The two skulls are perfectly comparable in respect to age and sex.

Margay caucensis sp. nov.

Type, No. 14187 (skin only), Las Pavas (altitude 6000 feet), near San Antonio, upper Rio Cauca, Colombia; J. H. Batty.

The markings of the upperparts are intense black, sharply defined, and greatly exceed in area the deep fulvous ground color; similar in other respects to the color pattern of the margay cats. Underparts with the belly fulvous sharply spotted with black, the ground color lighter along the midline; chest, axillar regions and fore neck white or whitish, with the usual black bars behind the throat and on the lower fore neck; a well-marked yellowish white superciliary line; white ear spots small; tail with the strong black rings complete on the apical third; palms and soles brownish black.

Total length (measurements from skin), 760 mm.; tail vertebræ, 300; hind foot, 95. The skull is unfortunately lacking.

This specimen is strikingly different in coloration from any of the hitherto described margay cats of western South America, through the predominance of the intensely black markings over the ground color, and the deep fulvous tone of the latter.

Oncoides pardalis tumatumari subsp. nov.

Type, No. 36318, $\[\[\] \]$ ad., Tumatumari, British Guiana, Sept., 1913; Leo E. Miller.

A form of the pardalis group, distinguished especially by large size and dark coloration. Nape hairs reversed.

Upperparts with the dark markings very heavy, black greatly predominating; ground color tawny on back, passing into grayish white or whitish on the flanks and limbs; ventral surface and inside of limbs white heavily marked with black; upper surface of tail black, with five narrow white rings on the basal half, the apical half wholly black above with narrow half-rings of white on the under surface.

Field measurements: total length, 1230 mm.; head and body, 905; tail vertebræ, 325; hind foot, 130. Skull, total length, 151; condylobasal length, 139; zygomatic breadth, 97.5; interorbital breadth, 32; postorbital breadth, 32; breadth of braincase, 54; length of nasals on midline, 31.5, on border 40; maxillary toothrow, 32; upper carnassial, 16.5×8.5 .

Various names have been given to South American representatives of the *pardalis* group,¹ based on specimens from unknown localities, often living animals in menageries, and unidentifiable. In view of this fact it seems better to give a new name to the British Guiana form than to attempt a reference of it to any of the vaguely described forms from "Brazil" or "South America."

Eptesicus chapmani sp. nov.

Type, No. 37057, $\, \circ \,$ ad., Lower Rio Solimoens, April 30, 1914; Leo E. Miller. Roosevelt Brazilian Expedition.

Similar in coloration to *Eptesicus dorianus* (Dobson) but larger; smaller than *E. hilarii* (I. Geoffroy), and quite differently colored—less suffused with fulvous both above and below.

Upperparts uniform bistre, the extreme tips of the hairs barely perceptibly lighter; underparts similar but lighter, the tips of the hairs distinctly grayish buffy; membranes blackish.

External measurements (type), expanse, 292 mm.; total length, 95; head and body, 55; tail, 40; hind foot, 8; ear from crown, 10. Type and 5 topotypes, ex-

¹ Cf. Mearns, Proc. U. S. Nat. Museum, XXI, No. 1286, pp. 237–249 (especially, in this connection, pp. 237–241). The type locality of Felis chibigouazou Griffith ("South America") may be considered as Chapada, Matto Grosso, Brazil, on the basis of Mearns's detailed description of the species from Chapada specimens.

panse, 285.6 (275-294); total length, 93.5 (90-98); head and body, 49.3 (45-54); tail, 40.4 (38-43); foot, 8.2 (8-9); ear, 9.7 (9-10). Fore arm, type, 40; average of 6 specimens, 39.7 (39-40).

Skull (type), total length, 15.7 (15); zygomatic breadth, 11.6 (10); interorbital breadth, 4 (3.4); breadth of braincase, 6.8 (7); maxillary toothrow, including canine, 5.5 (5); palatal breadth from outside to outside of m³, 6.8 (6.2).

The series of 6 specimens on which the present species is based are remarkably uniform in size and coloration, the length of the forearm varying only from 39 to 40 mm. (4 of them each 40 mm.), and the color variation consists mainly in the underparts being a little more strongly washed with buffy gray in some than in others. Compared with *E. dorianus* the coloration is closely similar but the forearm is 3 mm. shorter in *dorianus*, and the skull is much narrower relatively to the length and much smaller.

With E. hilarii it hardly needs comparison, it being much smaller, and lacking the fulvous tone of color seen in hilarii; yet the skulls are quite similar. It is not closely related to Eptesicus diminutus Osgood, from São Marcello, Bahia.

Named for Dr. Frank M. Chapman, who has so ably planned and directed the Museum's recent zoölogical work in South America.

POSTSCRIPT.

Since the foregoing pages were made up for press I have received for examination, through the kindness of Dr. Witmer Stone, Curator of the Academy of Natural Sciences of Philadelphia, the type of Cope's Dasyprocta aurea,² an adult skin, without skull, collected by Mr. H. H. Smith at Chapada, Matto Grosso, Brazil, December, 1883 (collector's No. 293). This skin proves to be albinistic, not a white but a yellow albino, the pelage being everywhere deep yellow, mostly orange yellow on the upperparts, paler on the ventral surface; the long hairs on the rump are much paler than the rest of the dorsal surface, and paler basally than at the tips. None of the hairs are annulated, as in normal specimens of the genus. Before receiving the type of aurea I had referred to it a specimen collected by Leo E. Miller, during the Roosevelt Brazilian Expedition, at Urucum, about 20 miles south of Curumbá, and about 300 miles southwest of Chapada. I believe it may be a normal specimen of Cope's D. aurea, but it is impossible to decide the question at present, and probably impossible ever to determine.

 $^{^1}$ The measurements in parentheses are of an adult male skull of $\it Eptesicus dorianus$ from Supacay, Paraguay.

² Amer. Nat., XXIII, p. 138, Feb. 1889.

The long rump hairs indicate that aurea is not an albinism of D. azara, which is about all that can be said with certainty of its relationship. In referring above (p. 626) to Dasyprocta aurea I had in mind the form here described as

Dasyprocta variegata urucuma subsp. noy.

Type, No. 36918, ♀ ad., Urucum (near Curumbá) Matto Grosso, Brazil, Dec. 7, 1913; Leo E. Miller, Roosevelt Brazilian Expedition.

Upperparts dusky, the hairs annulated narrowly near the base with white, and apically broadly with yellow, the dark basal portion of the hairs more or less visible at the surface, particularly along the midline of the back; hairs of the rump lengthened, deep black with conspicuous yellowish white tips; underparts like the flanks, with a narrow midline of pale yellowish white; inside of limbs yellow, outside dusky, the hairs tipped with yellow; upper surface of hind feet deep black, of fore feet blackish, the hairs minutely tipped with yellow; soles of fore feet brown, of hind feet intense black.

Field measurements, total length, 570 mm.; tail, 20; hind foot, 120; ear, 30. Skull, total length, 102; condylobasal length, 93; zygomatic breadth, 48; interorbital breadth, 28.5; diastema, 26; maxillary toothrow, 17.6.

Represented by the type only, an old female, with the basal sutures of the skull ankylosed and the teeth greatly worn.

This form belongs to the D. variegata group, and hence requires no comparison with D. azarx. On the other hand, it is obviously more nearly related to D. variegata yungarum Thomas, from Yungas, Bolivia, than to any other described form, from which it appears to differ in somewhat smaller size and less ochraceous coloration.