

Article XLIII.—NEW SOUTH AMERICAN MONKEYS.

BY J. A. ALLEN.

In attempting to determine the large number of Monkeys (about 150 specimens) received at the American Museum from South America during the last four years, the following nine forms have been found which appear not to have been hitherto described.

The revision in this connection of our large collection of neotropical monkeys has been greatly facilitated by the recent publication of Dr. D. G. Elliot's 'Review of the Primates,' in which for the first time the scattered, voluminous literature of the subject has been carefully collated and exhaustively cited. The author of 'The Primates' has earned the deep gratitude of all future workers in this field, who will long profit by the years of arduous work he so persistently and conscientiously devoted to its preparation.

***Callicebus lugens duida* subsp. nov.**

Type, No. 36179,¹ ♂ ad., base of Mount Duida (altitude 700 feet), Venezuela, March 25, 1913; Leo E. Miller.

Similar to typical *lugens*, but hands yellow instead of white, white throat patch more or less strongly tinged with yellow, and back, especially anteriorly, with the black more or less suffused basally with brown, often giving a rufous brown tone to the surface.

Type, total length, 780 mm.; head and body, 340; tail vertebrae, 440; hind foot, 95. Four adults (type and 3 paratypes), total length, 765 (748–780); head and body, 345 (338–350); hind foot, 90 (85–95).

Skull (type), total length, 66; occipitonasal length, 60; basal length, 48; zygomatic breadth, 46; orbital breadth, 39.3; postorbital breadth, 33; breadth of braincase, 38; length of nasals, 10; maxillary toothrow, 15. Four adult skulls (type and paratypes), total length, 64.4 (64–66); occipitonasal length, 59 (58–60); zygomatic breadth, 43.7 (42–46); orbital breadth, 38.5 (37.5–39.3); postorbital breadth, 33.2 (31–33); breadth of braincase, 36.4 (35–38); length of nasals, 11.2 (10–12); maxillary toothrow, 15.2 (15–16).

Represented by 6 specimens, 5 adults and 1 quarter-grown young, all from the type locality. In several of the adults the throat is yellowish white. In the young

¹ The collector's numbers on the skulls were lost before the specimens reached the Museum. As these *Duida* specimens are the only specimens of *Callicebus* thus far collected on any of our South American expeditions, there is no doubt that they belong to the *Duida* skins. Furthermore, the specimen selected as the type skin is the largest of the series, and the skull is the largest of the skulls, so that both undoubtedly belonged to the same individual. The other skulls are assignable with some certainty on the basis of differences in size or age.

one it is clear white; the hands also are paler than in the adults, and the extreme tips of many of the hairs on the back are bright red. The dorsal pelage in the adults has a more or less rufous tone basally, which in strong light imparts a faint rufous tinge to the surface, from the nape to the middle of the back, more noticeable in some specimens than in others. In a dull light they all appear black.

The type locality of *Callicebus lugens* (Humboldt) is "les forêts qui avoisinent le Cassiquiare et le Rio Guaviaré, près de San Fernando de Atabapo." The mission of San Fernando, where Humboldt spent considerable time, may be taken therefore as the type locality. This mission is about 150 miles west of Duida on the Orinoco River. The type locality of E. Geoffroy's *Callithrix amictus* is unknown ("le Brésil?"). It was secured, with much other South American material, by E. Geoffroy on his visit to Lisbon in 1808, and hence probably came from Brazil, then a Portuguese colony. The type was still extant in the Paris Museum in 1851, according to I. Geoffroy's 'Catalogue méthodique de la Collection des Mammifères,' etc., of the Muséum d'Histoire naturelle of Paris, where it is thus recorded (p. 40): "♂ Type de l'espèce. Du voyage de M. Geoffroy Saint-Hilaire en Portugal en 1808." It is thus not likely to have come from the Upper Orinoco region of Venezuela. Yet the Duida specimens seem to agree well with the description of the type of *C. amictus*; but there may be a yellow-handed black *Callicebus* in some part of Brazil, for which the name should be reserved. It is therefore thought best to give a provisional name to the Duida form. It is also possible that *lugens* may not always have white hands, a point to be yet decided. At present very few specimens of the *lugens-amictus* group have reached museums.

***Alouatta seniculus bogotensis* subsp. nov.**

Type, No. 36476, ♂ ad., Subia (altitude about 7000 feet), Cundinamarca, Colombia (about 25 miles west of Bogota), July 25, 1913; Manuel Gonzales.

Similar in coloration to *A. s. caucensis* but head, nape, limbs, tail and underparts much lighter red, and the back orange red instead of yellow; tail mostly bright red, darker proximally; facial portion of skull much narrower.

Total length (type), 1100 mm.; head and body, 540, tail vertebræ, 660; hind foot, 370. Two adult female topotypes, total length, 1080, 1050; head and body, 530, 530; tail vertebræ, 550, 520; hind foot, 370, 350.

Skull (type), total length, 110; occipitonasal length, 100; basal length, 103; zygomatic breadth, 76; orbital breadth, 61; interorbital breadth, 11.5; postorbital breadth, 40; breadth of braincase, 51; nasals, 24×12 , maxillary tooththrow, 34.5. Two female topotypes, total length, 105, 104; occipitonasal length, 92, 87; zygomatic breadth, —, 53; interorbital breadth, 10, 9; orbital breadth, 61.5, 60; postorbital breadth, 44, 40; breadth of braincase, —, 47; nasals, 19×10 , 21×8.5 ; maxillary tooththrow, 33, 33.5.

Represented by five specimens, 3 skins with skulls, from the type locality, and two flat skins from "Bogota," the former collected by Manuel Gonzales. A single specimen from the Paramo de Rosas, Venezuela, apparently is referable to the same form, being much nearer this than to either *ursinus* or *macconnelli*. A single specimen from the southern base of Mt. Duida also closely resembles *bogotensis*.

In coloration this form is nearest to *A. s. caucensis*, from which it differs in the lighter red color of the limbs, head, and shoulders, and the darker or more reddish color of the back. The cranial differences, however, are much more important than the differences in color. In *bogotensis* the skull is relatively much longer and narrower throughout, both the zygomatic and orbital breadth being 5 mm. less in the male and 3 mm. less in the female than in strictly comparable skulls of *caucensis*, and there is a corresponding difference in the relative length of the skull in the two forms, *bogotensis* having much the longer skull in proportion to its breadth. But the most striking difference is in the facial region, which is greatly compressed in *bogotensis* as compared with *caucensis*; the breadth of the rostrum at the base of the canines is much less, and the nasals are narrower and longer, and in meeting form a much higher and more sharply angular ridge.

In this connection it is necessary to consider two earlier names for red howlers from "Colombia." The first is *Stentor chrysuros* I. Geoffroy (Mém. du Mus. d'Hist. nat. Paris, XVII, 1828 (1829), pp. 166, 171; Guérin's Mag. de Zool., 1832, Cl. I, pl. 7, text and colored plate), described from three specimens collected by M. Plée and believed to have come from "la vallée de la Madeleine." On geographical grounds they would seem referable to *Alouatta seniculus* (Linn.), the type locality of which is Cartagena, Colombia. Comparison is made by Geoffroy with "*Stentor seniculus*," but his specimens of *seniculus*, as he states, were from Guiana, as his comparison also shows, and hence with what is now known as *Alouatta seniculus macconnelli*. His principal character of *chrysuros* was the color of the tail, the apical half of which was "d'un fauve doré très brillant," like the color of the back, present in two of his three specimens and less pronounced in the third. As is well known, the color of the tail in the red howlers varies from red to yellow in specimens from the same localities, so that the alleged character obviously has no value. It seems best therefore to consider *chrysuros* as a synonym of typical *seniculus*, where it has usually been placed.

The second name is *Mycetes laniger* J. E. Gray (Ann. and Mag. Nat. Hist., XVI, p. 219, Oct. 1845), from "Colombia," and "purchased at Paris." As the description is inadequate for the identification of the species, and there is no definite type locality, the species is indeterminable without examination of the type, presumably extant in the British Museum.

***Alouatta seniculus caquetensis* subsp. nov.**

Type, No. 33882, ♀ ad., La Murelia (altitude 600 feet), Caquetá district, Colombia. July 18, 1912; Leo E. Miller.

Color of head, nape, shoulders, limbs, and tail dark chestnut red; back with the hair tips red, a little lighter than the limbs, the basal portion of the hairs with a broad median band of dull ochraceous, the extreme base tawny brown; pectoral region nearly naked; lower abdomen the color of the limbs. Another specimen, a young adult female, is similar but the coloration is still darker. The skulls of these specimens, through loss of the field numbers, cannot be positively correlated with the skins, but the skulls which, on the basis of exclusion, seem to belong to them present no features of distinctive value.

Total length (type), 110 mm.; head and body, 510; tail vertebræ, 590; hind foot, 135.

This form differs strongly in coloration from *A. s. caucensis* of the southern part of the Eastern Andes, represented by specimens from San Agustín (alt. 5000 ft.), and from *A. s. macconnelli* of the Lower Orinoco and Guiana, the two forms geographically nearest; it strongly resembles, however, the dark form of the northern coast of Venezuela (*A. s. ursinus*), from which it is widely separated not only geographically but by intervening forms of an entirely different phase of coloration.

***Pithecia milleri* sp. nov.**

Type, No. 33876, ♂ ad., La Murelia (altitude 700 feet), head of Rio Fragua, Caquetá district, Colombia, July 8, 1912; collected by Leo E. Miller, for whom the species is named.

Upperparts, limbs and tail black, the hairs with long pale yellowish white tips; face sparsely clothed with short whitish hairs; front half of head mars brown, the hairs short and coarse; underparts thinly haired, fore neck naked; hairs dark brown with whitish tips on the throat and belly and with yellowish brown tips over the pectoral region; hands yellowish white, feet whitish grizzled with black.

Total length (type, measured from skin), 880 mm.; head and body, 480; tail vertebræ, 400; hind foot, 120. Skull, total length, 82.7; occipitonasal length, 75.7; basal length, 63; zygomatic breadth, 57; orbital breadth, 43.2; postorbital breadth, 35; breadth of braincase, 43.7; breadth of rostrum at canines, 26; palatal length, 25; breadth of palate at m^1 , 14; nasals, 16×15 ; maxillary toothrow, 19.6.

A young male topotype is similar in coloration but smaller, being not full-grown.

Resembles *P. monachus* in coloration and in character of pelage, but the forehead is dull brown, forming a transverse band, instead of forehead and crown white as in *monachus*; it is, however, smaller with a relatively much shorter tail; skull much smaller.

***Cacajao roosevelti* sp. nov.**

Type, No. 36906, ♂ ad., Baron Melgaço, Matto Grosso, head of the Rio Gy-Paraná, March, 4, 1914; Leo E. Miller, Roosevelt Expedition. Named in honor of Colonel Theodore Roosevelt.

Uniform black throughout, except that upon close inspection in good light the hairs of the whole dorsal region are seen to be slightly tipped with pale buff, giving a faint buffy tone to the black of the dorsal surface. Pelage fine, silky and very long, forming an overhanging mantle along the sides of the body, and a heavy fringe on the outer edge of the limbs and sides of the tail.

Total length, 2 males, type and topotype; type, 850 mm., topotype 630; head and body, 470, 430; tail vertebrae, 380, 400; hind foot, 135, 130; ear from crown, 28, 28. The type is an old male, the topotype a young adult male.

Skull, type and topotype: total length, type, 87, topotype, 85; occipitonasal length, 76, 75; basal length, 64, 60; zygomatic breadth, 60.5, 58; orbital breadth, 46.6, 45.5; postorbital breadth, 39, 40; interorbital breadth, 5, 5; breadth of braincase, 51.5, 49.5; breadth of rostrum at canines, 28, 26; palatal length, 28, 27.5; breadth of palate at m^1 , 15, 15; nasals, 17×10 , 18×9 ; maxillary toothrow, 19, 18.

In addition to the type and topotype (skins with skulls), Mr. Miller obtained a skull of an old male taken a day's journey (about 40 miles) below the type locality. This skull (occipital region broken), is more heavily ossified, and probably much older, than either of the others, and is about one millimeter larger in the principal measurements.

Cacajao roosevelti may be easily recognized by its nearly uniform black color, large size, and relatively long tail, the tail being half the total length, instead of one third, or less than one third, as in the other species of the genus. The type locality of the species is far from the hitherto recorded range of the genus. That it is not simply a melanism would seem to be assured by the fact that Mr. Miller took the two specimens from a large troop, all of which were black like those collected.

This species is named in honor of Colonel Theodore Roosevelt in appreciation of the important services rendered by him to science and to the American Museum of Natural History through his recent Expedition to South America.

***Ateles longimembris* sp. nov.**

Type, No. 36909, ♀ ad., Baron Mulgaço, Matto Grosso, head of Rio Gy-Paraná, March 6, 1914; Leo E. Miller (Roosevelt Expedition).

Entire pelage intense dull black; face, hands and feet black. Tail and limbs excessively long, the tail length very nearly twice the length of head and body. Facial portion of skull narrow in proportion to the length of the skull; rostrum relatively narrow and long.

Type (collector's measurements), total length, 1403 mm.; head and body, 488;

tail vertebrae, 915; hind foot, 200. An old male topotype is slightly larger, with, however, the same proportions, as follows: Total length, 1500; head and body, 500; tail vertebrae, 1000; hind foot, 190.

Skull (type and topotype), total length (type), 116, (topotype), 125.5; occipito-nasal length, 100, 106.5; basal length, 86, —; zygomatic breadth, 62, 74; orbital breadth, 55, 62; interorbital breadth, 8, 10; postorbital breadth, 45.3, 49; breadth of braincase, 57, 62; breadth of rostrum at canines, 27, 34; nasals, 21×11.5 , 23×17 ; palatal length, 32, 39; palatal breadth at m^1 , 18, 19; maxillary toothrow, 27, 28.

The skull of the male topotype is very old and heavily ossified, and the region in front of the orbits is roughened and the bone porous from disease, as often happens in menagerie specimens but rarely in wild animals. The female has therefore been selected as the type.

In comparison with *Ateles robustus* of the Western Andes of Colombia, the great length of tail and limbs is striking, the tail being relatively about twice as long as in *robustus*, while the limbs are proportionately elongated. The type skull, in comparison with a skull of the same sex and age, and of the same general size of *robustus*, has the orbital region strikingly broader (about 5 mm.), and the palatal region correspondingly wider (about 3 mm.). The rostrum is 4 mm. shorter (measured from the front edge of orbital fossa), and the interorbital breadth nearly one fourth greater.

Unfortunately satisfactory material for comparison with *Ateles ater* (type locality, Guiana) is not at present available. Several specimens presumably true *ater* are without definite localities, but are probably from the Lower Amazon or Guiana. They differ from *longimembris* in having the tail and limbs relatively much shorter, the tail averaging only about as long as the head and body, and the limbs are correspondingly shorter than in *longimembris*, the proportions being not far different from those of *A. robustus*. The single skull of *ater*, however, is more like the type skull of *longimembris* than like that of *robustus*.

The few measurements available in the literature of *Ateles ater* bear out the above alleged differences between *ater* and *longimembris*. The type locality of *A. longimembris* extends the known range of what may be called the *Ateles ater* group far to the southward of any previous records.

***Ateles robustus* sp. nov.**

Ateles ater ALLEN, Bull. Amer. Mus. Nat. Hist., XXXI, p. 95, April 19, 1912 (Gallera, Colombia).

Type, No. 32354, ♂ ad., Gallera, altitude 5000 feet, Western Andes, Colombia, July 13, 1911; Leo E. Miller.

Entire pelage, face, hands, and feet intense black. Limbs and tail relatively short; skull relatively broad, in comparison with *Ateles ater*.

Collector's measurements, total length, 1220 mm.; head and body, 590; tail vertebrae, 630; hind foot, c. u., 160. Two topotypes, total length, ♂ 1150, ♀ 1260; head and body, 550, 510; tail vertebrae, 600, 750; hind foot, 160, 160.

Skull, type, total length, 112; occipitonasal length, 97; basal length, 76; zygomatic breadth, 73.6; orbital breadth, 61; interorbital breadth, 8.5; postorbital breadth, 45.3; breadth of braincase, 60; breadth of rostrum at canines, 28.6; nasals, 19×10 ; palatal length, 35; breadth of palate at m^1 , 20; maxillary tooththrow, 26. Three specimens, type and 2 topotypes (2 ♂♂, 1 ♀); total length, 112, 112, 115; occipitonasal length, 97, 96, 99; zygomatic breadth, 73; 69, 67; orbital breadth, 61, 61, 59; interorbital breadth, 8.5, 8.2, 9; postorbital breadth, 45.3, 44, 47.5; breadth of braincase, 60, 57, 62; breadth of rostrum at canines, 28.6, 28, 27.5; palatal length, 35, 35, 34; breadth of palate at m^1 , 20, 20, 20.5; nasals, 19×10 , 20×10.5 , 20×10.5 ; maxillary tooththrow, 26, 27, 25.

A young specimen, apparently about two or three weeks old, is colored entirely like the adults.

This is a short-limbed, heavy-bodied, broad-skulled form, with thick and long glossy black pelage. The tail is only a little longer than the head and body. The average total length of three adults is 1210 mm.; average length of the tail, 660 mm. The skull is broad in proportion to the length, especially the palatal and rostral portions.

Comparison of *A. robustus* has already been made with *A. longimembris*, and incidentally with *A. ater*, from both of which it differs in the broad form of the anterior half of the skull. Both differ from a skull, presumably of *ater*, in the greater posterior extension of the palate of the latter, in which it extends quite beyond the last molar, while in both *robustus* and *longimembris* it terminates on a line with the front border of m^2 .

***Cebus apella brunneus* subsp. nov.**

Type, No. 32052, ♂ ad. Aroa (Pueblo Nuevo), altitude 730 feet, Bolivar Railway, Venezuela, Dec. 14, 1911; M. A. Carriker, Jr.

Pelage very thick and long. General color of upperparts (type) hazel, darker along the middle of the back than on the sides, the hairs dusky at base, passing gradually through a broad zone of chestnut into blackish with long hazel tips; face and sides of head pale yellowish gray; top of head with a broad V-shaped crown patch of lengthened blackish hairs, about 50 mm. long and 50 mm. broad on the posterior border, narrowing to a point in front, from which a narrow black line runs forward to the nose; chin and lower part of cheeks whitish (clear white, grayish white, or fulvous white in different specimens); underparts thinly haired, blackish brown, the tips of the hairs hazel; throat lighter than chest and belly; upper arms from shoulders to elbow pale yellowish (about "maize yellow") to the base of the hairs; fore arms, externally, hairs blackish for most of their length with long yellowish tips; internally much darker; hands blackish with light tips to the hairs proximally; hind limbs nearly like the upperparts, but lighter on the outside of thighs; hind feet nearly black, the hairs with hazel tips proximally; tail colored nearly like the back but with a

tendency to a lighter median area above, due to the lighter tips of the hairs (exceptionally with a lighter median area below). The series of 12 specimens varies considerably individually in the intensity of the rufous tone on the upperparts, which is sometimes paler and more yellowish than in the type, which, however, fairly represents the average of the adults. A young adult from Cristobal Colon, Venezuela, is also referable to this form.

Total length (type, collector's measurements), 860 mm.; head and body, 420; tail vertebræ, 440; hind foot, 125. Four adult males (type and paratypes), total length, 882 (860-697); head and body, 423 (420-432); tail vertebræ, 130 (125-135). Three adult females (topotypes), 815 (811-890); 388 (351-418); 452 (425-472); 122 (120-124).

Skull (type), total length, 97; basal length, 66; zygomatic breadth, 68; orbital breadth, 58; interorbital breadth, 6; postorbital breadth, 40, 5; breadth at canines, 28; breadth of braincase, 53; nasals, 18×11 ; palatal length, 31; palatal breadth at m^1 , 19.5; maxillary tooththrow, 23. Adult female topotype, total length, 92; basal length, 60; zygomatic breadth, 4.3; postorbital breadth, 42.5; breadth at canines, 25; breadth of braincase, 55; nasals, 19×10 , palatal length, 30; palatal breadth at m^1 , 17.6; maxillary tooththrow, 22.

Cebus apella brunneus most nearly resembles *C. [apella] apiculatus* Elliot, from the Lower Orinoco, but has the hair-tips rufous instead of fulvous, the two contrasting strongly when compared in series (12 specimens of each are available for direct comparison), although one specimen in the *apiculatus* series is as richly colored as any in the *brunneus* series. Each series presents a considerable range of variation in both color and the texture of the pelage, but it proves on careful examination to be due mainly to difference in the age of the specimens. True *apella* from Guiana is much darker and less suffused with fulvous or rufous than either *apiculatus* or *brunneus*.

Cebus æquatorialis sp. nov.

Type, No. 34273, ♀ ad., Manavi (near sea-level), Ecuador, Jan. 17, 1913; Wm. B. Richardson.

Upperparts, from nape posteriorly, pale cinnamon rufous, darker along the mid-line of the back; front and sides of head pale yellowish white; a narrow black transverse line on the forehead, from which a narrow median black line descends to the nose, and an indistinct blackish line runs from the posterior border of the eye to the mouth; limbs externally like the body; hands and feet a little darker (more brownish) than the arms and legs; ventral surface a little paler than the flanks, the chest lighter than the belly; tail above dull wood-brown, darker than the body; under surface of tail much paler than the upper.

Total length (type, measured from the skin), 840 mm.; head and body, 445; tail vertebræ, 395; hind foot, 124. Adult male (from skin), total length, 930; head and body, 480; tail vertebræ, 450; hind foot, 130.

Skull, adult male and female (type), total length, 97, 88.3; basal length, 67, 60; zygomatic breadth, 68, —; orbital breadth, 58, 49; interorbital breadth, 6.2, 4;

postorbital breadth, 41, 38.6; breadth at canines, 28.5, 23.5; breadth of braincase, 53, 50; palatal length, 33, 29; palatal breadth at m^1 , 19.2, 18; nasals, 18×11 , 13×8.6 ; maxillary toothrow, 23.4, 21.

Represented by 4 adults (2 males, 2 females) and 1 young (half grown), all from Manavi, Ecuador. They are all very uniform in coloration except one old male, which is darker and less rufous than any of the others. Hence one of the females has been selected as the type.

Cebus æquatorialis appears to more resemble *Cebus unicolor* Spix than any other described species, the type locality of which is Egá, at the mouth of the Rio Teffé, Brazil, and thus too far from the arid coast region of Ecuador for the two forms to be very closely related.

A single specimen (an old male in faded worn pelage) from Gualea (alt. 7000 ft.) seems to be also referable to *C. æquatorialis*, although at first sight it looks quite different, but the paler coloration is doubtless due to the wearing and fading of the pelage, the Gualea specimen having been taken in July and the others in January.

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¹ Article XXX (pp. 391-493), 'A Preliminary List of the Coleoptera of the West Indies,' by Charles W. Leng and Andrew J. Mutchler, has its own index (pp. 482-493), and therefore is not reindexed in the Index to the Volume.

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