

**Article X.—MAMMALS FROM VENEZUELA COLLECTED BY
MR. M. A. CARRIKER, JR., 1909-1911.**

BY J. A. ALLEN.

In July, 1909, Mr. Carriker left New York for South America, to be absent for several years on a collecting trip for birds and mammals, jointly for the Carnegie Museum of Pittsburgh and the American Museum of Natural History of New York; all of the birds were to go to the former and all of the mammals to the latter of these two institutions. Much more attention, however, appears to have been given to birds than to mammals, the latter thus far received numbering only about 450 specimens. Of these about 50 were collected in the Island of Trinidad and the remainder in Venezuela. Only those obtained in Venezuela are here recorded, and number 66 species.

Mr. Carriker's work in Venezuela was carried on in two quite different regions — (1) in the Rio Caura basin and eastward, September, 1909, to June, 1910; (2) in the northern coast region inland from Puerto Cabello, September, 1910, to March, 1911.

The principal localities at which mammals were obtained are the following:

Southern district. Maripa, Rio Caura; Rio Mato and Rio Mocho, tributaries of the Rio Cauca; Rio Yuruan and Rio Cuyuni.

Northern district. Valley of the Rio San Esteban and the mountain ranges to the southwestward. Principal localities: San Esteban, altitude 250 feet; El Hacha, 460 feet; Las Quiguas, 650 feet; Aroa, or Pueblo Nuevo, 730 feet; Lagunita de Aroa, 1820 feet; Tocuyo, 2190 feet, Guarico, 3602 feet; Anzoatequi, 4705 feet; Paramo de Rosas, 10,817 feet (at the crest where the trail crosses the paramo).

Mr. Carriker states, in connection with his notes on the mammals: "The San Esteban valley opens upon the sea near Puerto Cabello, and extends southeastward, flanked on either side by high ridges, and rising rapidly in its upper part to the crest of the coast range. The pass at its head has an altitude of 4443 feet, while the range rises on either side to about 6000 feet at the highest points. The vegetation at the lower end of the valley is a low, dense, scrubby growth with many cacti, which is gradually replaced higher up, as in the vicinity of San Esteban, by heavy forest. San Esteban is 5 miles from Puerto Cabello, at an altitude of about 250 feet. Above San Esteban the valley becomes narrower and rises more

rapidly. Las Quiguas is about 4 or 5 miles above San Esteban, with an altitude of 650 feet. At this point it is very humid, the virgin forest dense and damp. A trail leads up the valley and over the pass (La Cumbre de Valencia, altitude 5000 feet) to Valencia. The south side of the coast range is entirely different from the north side, which faces the sea. While the north slope is very humid and heavily forested, the south slope is all open savanna, from the crest downward."

From Mr. Carriker's "Descriptions of localities in western Venezuela at which Collections were made between November 20 and March 24, 1910 and 1911," received after the manuscript of this paper was sent to the printer, the following extracts are taken, which give welcome information respecting the general character of the districts he visited.

"*El Hacha* (altitude, 469 feet). *El Hacha* is a small station on the Bolivar Railway, 75 kilometers from Tucacas (on the coast) and 85 kilometers from Barquisimeto. It lies in the upper end of a wide, level valley drained by the Aroa River, the whole valley being covered with forest, mostly of a low tangled nature, which makes collecting very difficult, in fact impossible except in the more open parts of the forest or along the line of the railway. The rainfall is heavy, with no regular seasons, the precipitation being pretty evenly distributed throughout the year. The railway at this point runs along the east or rather the southern side of the valley and only about six miles from the foothills of a considerable range of mountains. This range of mountains extends northeastward from the central plateau nearly to the north coast, and attains an altitude of about 5000 feet at a point between [Aroa or] Pueblo Nuevo and Guama. The range is narrow, being not more than 15 miles in width at its highest part, and densely forested over the whole of the northwestern slopes and summit, but having extensive savannas on the lower slopes of the southeast side. With a few exceptions the bird fauna appears to be the same as that of the northern coast range, which extends from a point a little west of Puerto Cabello to the tip of the Paria Peninsula opposite Trinidad. I was not able to work in the higher portions of the range as it is absolutely uninhabited. The highest point reached was near Lagunita, on the west side, where some work was done on a ridge having an average altitude of 3200 feet. At this point I found most species to be the same as those taken on the Cumbre de Valencia.

"From *El Hacha* there extends a branch line of the railway to Pueblo Nuevo (or Aroa as it is called on the maps), a distance of six miles, which village lies just at the edge of the foothills. In working upward toward Pueblo Nuevo from *El Hacha* a change is at once noticed in the bird fauna; many species, found abundantly in the low, central part of the valley,

become scarce or disappear, while others more addicted to the hills begin to put in their appearance

"*Pueblo Nuevo* (altitude, 730 feet). Aroa is the name now used to designate the district of which Pueblo Nuevo is the center, but it was formerly applied to the copper mine situated about three miles up the gorge of the Aroa River. It is the headquarters of the Bolivar Railway. The whole surrounding country is, or was, forested, but there are now large tracts of 'rastojo' and considerable cultivated land, for it has been settled a long time on account of the copper mine which was discovered and operated by the Spaniards for many years. I found very little of interest there in the way of birds, while collecting was difficult and birds scarce. . . .

"*Lagunita de Aroa* (altitude, 1820 feet). This is the name of a small district up in the hills above Pueblo Nuevo on the road from that point to Guama. It consists of a few scattered houses and small coffee plantations owned for the greater part by poor people. At Lagunita most of the work was done between 1800 and 3000 feet, only a few birds being taken on the slopes below. The forest is dense here and fairly easy to penetrate, but the country very broken and the slopes precipitous. . . .

"*Tocuyo* (altitude, 2190 feet). Tocuyo is about fifty miles from Barquisimeto in a southwesterly direction and lies at the extreme southwestern end of the central plateau region of Venezuela. . . . There extends from Barquisimeto to Tocuyo a level, arid, cactus-covered plain, surrounded on all sides by mountains of varying height, but all absolutely barren and devoid of vegetation with the exception of the cacti and allied plants. To the west the mountains separate the plain from the lowlands along Lake Maracaibo, while to the east or southeast, they separate it from the great 'llanos' of the Rio Apure. On the southeastern side there are two parallel ranges of mountains, those next the plain being low and arid while the outside range is much higher, with the lower slopes, fronting the plain, consisting of savannas and the summits and outer slopes heavily wooded. It is in this higher wooded range that the numerous large tributaries of the Apure have their source. The plain at Barquisimeto has an altitude of 2000 feet, rising gradually to a point just beyond Quibor where nearly 3000 feet is reached, then dropping down to the valley of the Rio Tocuyo. The highest point in the eastern range is just about south of Quibor above Sanare, where I should judge the highest point to be nearly 8000 feet (highest point measured was at Guarice, 6000 feet, where it must be at least 1500 feet lower than at Sanare).

"All around Tocuyo is found the same arid condition, but not so intense as at Barquisimeto and Quibor, owing I suppose to the presence of the Tocuyo River and the large areas under irrigation along its banks. No

woodland is to be found there, only cacti and low thorny trees along the bottoms of the dry ravines running down from the hills.... Opposite Tocuyo, to the southwest rises a bold precipitous range of barren mountains, the terminus of the Venezuelan Andes, which extends in an unbroken chain south and southwest to the Sierra Nevada de Merida. The Sanare range is separated from the main Andean range by the deep valley through which flows the Rio Portuguesa (here very small). Opposite this cleft in the range rise two peaks, closely joined, to an altitude of nearly 9000 feet (which I have called Twin Peak Mountain in my notes), from which extends southward a low ridge of mountains around the head of the Rio Tocuyo and joins the main Andean range about twenty miles south of the Paramo de Rosas.

"Tocuyo and the immediate vicinity is very hot — a dry, desert heat — with almost no breeze, since the whole valley is completely surrounded by high mountains, except the narrow gorge through which the Tocuyo River escapes....

"*Guarico* (altitude, 3602 feet). Guarico lies about eighteen miles from Tocuyo, a little east of south, and at the foot of the main Sanare range, or rather in the valley between the inner arid foothills and the outer main range. It is a pretty little village of perhaps a thousand inhabitants and the center of a rich coffee district. I did no work in the valley around the village; for little was to be found there outside of the species taken at Tocuyo. Instead I moved up the mountain side to the hacienda of Dr. J. A. Perez Limardo (altitude, 4400 feet), and worked from there up to the crest of the Sanare range, which at this point reaches just 6000 feet. The lower slopes (below 5000 feet) are mostly sabana, while the whole crest and southeast slope is densely forested. Some collecting was done in the thickets and wooded ravines of the lower slopes, but most of the work was confined to the forest above.... The forest is very heavy, but not choked up with undergrowth to any extent. The clouds (the higher flying storm clouds) strike the range at about 5600 feet, and above that the forest is a mass of green moss, every trunk, branch and twig being covered with it. Palms are very abundant, and other trees not found lower down.... The whole mountain, down to near the village was almost constantly enshrouded in fog and mist, with a temperature of from 54° to 60° F.

"*Anzoategui* (altitude, 4705 feet). This little village lies almost due west of Guarico, a distance of perhaps fifteen miles (by the road, but much less as the crow flies). It is at the foot of Twin Peak Mountain (north side), and in the head of the valley in which rises the Rio Portuguesa. Just below the village, and occupying practically the whole of the valley at that point, is an immense marsh (altitude, 4447 feet), through the center of

which winds lazily the Rio Portuguesa, here but a creek. The marsh is known as Sabana Grande, and is about one and a half miles broad by three miles long. The hills rise rather steeply on both sides, coming together near the lower end and forming a narrow deep valley, with broken precipitous sides. Above the marsh the valley is broken and narrows rapidly as it ascends. It is covered with bits of sabana and low scrub, almost no agriculture being attempted. To the north of the valley (between it and the Tocuyo valley) rises a bold, rough range of hills, quite barren, while at the south are the steep slopes of Twin Peaks, thickly strewn with boulders and supporting only grass. The western side of the mountain is without forest up to nearly 8000 feet, but the summit and a deep valley running down the northeast slope are heavily forested. This forest extends down to 5500 feet in the valley. Collecting was done over the whole of the valley and up the mountain as high as 8000 feet, but not much above 7000 feet, for at that point the vegetation becomes so tangled and overgrown with moss that it is quite impossible to penetrate it to any purpose. Roads or trails are non-existent above 6000 feet, while birds are very scarce also....

"*Paramo de Rosas* (altitude of crest where the trail crosses the paramo, 10,817 feet). To reach the Paramo from Anzoategui, the trail follows up the valley in a southwesterly direction, curving around Twin Peak Mountain, and crossing over a shoulder of that mountain at an altitude of 6729 feet, then dropping abruptly down into the upper Tocuyo valley to Hume-caro Alto (altitude, 3430 feet). From this village it ascends steeply up the main Andean range in a westerly direction until 5350 feet is reached, after which it follows along the side of a gorge-like valley, up and down, in and out, higher and higher, until a little hamlet called Buenos Aires is reached (altitude, 6500 feet). Here it leaves the stream and climbs abruptly up toward the crest of the range in a southwesterly direction, attaining an altitude of nearly 11,000 feet where it crosses the crest. The whole of the lower slopes of the range below Buenos Aires are covered with a low thick scrub, with patches of sabana here and there, and a little fairly heavy woodland, but no real forest. But from Buenos Aires upward extends a fairly level slope, of from one half to a mile or more in width. This flat was originally densely forested, but it has all been cut away below about 7700 feet. The steeply rising ridges on both sides and the greater part of the backbone of the range is still in forest everywhere above 7000 feet, although there are many barren hog-back ridges, including the whole of the main crest in the part where the trail crosses it and for some distance to the south. I stopped first for a week at an altitude of 6800 feet, collecting between 6500 and 7500 feet, but mostly at about 7000 or 7500 feet. This region is mostly in pasture and tobacco fields or old *rastrojo*, although

I got up into the virgin forest several times during the week. Later I went up to 8400 feet, working from there both below and above, but I never went below about 8000 feet. At this point the forest extends up the mountain side to the foot of the Paramo, or to an altitude of 9000 feet, above that it is all open country, the ground thickly covered with vegetation like heather or gorse, with grass and low bushes in some places. For the first ten days I had splendid dry, clear weather, but after that there was much rain and mist. I had but one clear day on the Paramo, and during the last week the whole mountain down to about 7000 feet was enshrouded in fog and mist, rendering it impossible to penetrate into the virgin forest. . . . This is a magnificent field and should be thoroughly worked; in fact, this whole district proved to be surprisingly rich in species, while practically everything on the Paramo range is distinct from the closely adjoining Sanare range."

As would be expected, the mammal fauna of northwestern Venezuela is very different from that of the Caura region and elsewhere in eastern Venezuela south of the Orinoco. As shown by the subjoined lists, only a small proportion of the species are common to the two regions, these being indicated by an asterisk. On the other hand, many species found in the coast mountains of northern Venezuela occur also in the Sierra de Merida, and probably have a nearly continuous distribution through the intervening mountainous district.

Southern District.

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| Metachirus opossum opossum (<i>Linné</i>). | Nasua phaeocephala <i>Allen</i> . |
| Didelphis marsupialis marsupialis <i>Linné</i> . | Canis (<i>Carcinocyon</i>) thous <i>Linné</i> . |
| Bradypus tridactylus flaccidus (<i>Gray</i>). | * Rhynchiscus naso (<i>Wied</i>). |
| * Tamandua longicaudata (<i>Wagner</i>). | Saccopteryx bilineata (<i>Temminck</i>). |
| Mazama rufa (<i>F. Cuvier</i>). | " leptura (<i>Schreber</i>). |
| Dasyprocta lucifer <i>Thomas</i> . | * Peropteryx kappleri <i>Peters</i> . |
| Cavia porcellus venezuelæ subsp. nov. | Chilonycteris rubiginosa rubiginosa <i>Wagner</i> |
| Proechimys cherriei (<i>Thomas</i>). | * Micronycteris megalotis <i>Gray</i> . |
| Oryzomys (<i>Oligoryzomys</i>) messorius <i>Thomas</i> . | Chrotopterus carrikeri <i>Allen</i> . |
| Rhipidomys nitela <i>Thomas</i> . | Glossophaga soricina (<i>Pallas</i>). |
| Sciurus flammeifer <i>Thomas</i> . | * Hemiderma perspicillatum (<i>Linné</i>). |
| Sciurus (<i>Guerlinguetus</i>) æstuans gilvularis (<i>Wagner</i>). | Eptesicus hilarii (<i>Geoffroy</i>). |
| Pteronura brasiliensis (<i>Zimmermann</i>). | Promops milleri <i>Allen</i> . |
| * Tayra barbara barbara (<i>Linné</i>). | Molossus obscurus (<i>Geoffroy</i>). |
| | * Alouatta macconnelli <i>Elliot</i> . |
| | Ateles variegatus (<i>Humboldt</i>). |
| | * Cebus apiculatus <i>Elliot</i> . |

Northern District.

- Marmosa fuscata* Thomas.
Marmosa mitis costa Thomas.
Philander regina (Thomas).
 * *Tamandua longicaudata* (Wagner).
Tayassu torvum Bangs.
Sylvilagus cumanicus (Thomas).
Agouti sierræ Thomas.
Agouti paca (Linné).
Dasyprocta rubrata Thomas.
Proechimys gueræ Thomas.
Loncheres carrikeri sp. nov.
Heteromys anomalus (Thompson).
Oryzomys meridensis Thomas.
 " *modestus* Allen.
Oryzomys (*Oligoryzomys*) *tenuipes* Allen.
Oryzomys (*Melanomys*) *venezuelensis* (Allen).
Sciurus griseogenæ Gray.
Putorius affinis (Gray).
 * *Tayra barbara barbara* (Linné).
Conepatus marpurito (Gmelin).
Urocyon cinereoargentea venezuelæ
 subsp. nov.
- Felis pardalis* (subsp. incog.) Linné.
 * *Rhynchiscus naso* (Wied).
 * *Peropteryx kappleri* Peters.
 " *canina* (Wied).
Chilonycteris rubiginosa fusca
 subsp. nov.
Chilonycteris personata Wagner.
Pteronotus suapurensis Allen.
 * *Micronycteris megalotis* Gray.
Lonchorina aurita Tomes.
Mimon bennettii Gray.
Phyllostomus hastatus (Pallas).
Trachops cirrhosus (Spix).
Glossophaga longirostris Miller.
 * *Hemiderma perspicillatum* (Linné).
Sturnira lilium (Geoffroy).
Uroderma bilobatum Peters.
Artibeus cinereus (Gervais).
Desmodus rotundus (Geoffroy).
Phodotes tumidirostris continentis Thomas.
 * *Alouatta macconnelli* Elliot.
 * *Cebus apiculatus* Elliot.

Although the number of species represented in the collection is small relatively to the number probably occurring in the districts visited, they add not only many new forms to our collection of mammals but throw much light on the ranges of the species collected. Only five forms proved to be undescribed. Mr. Carriker's field notes on most of the species are a feature of interest. These are given in marks of quotation, followed by the initials, "M. A. C."

In a former paper (this Bulletin, XXVIII, 1910, pp. 145-149) a list of 14 species collected by Mr. Carriker in the Caura district in 1909 has already been published. These species are here included, with further records of additional specimens of most of them, and the field notes since kindly furnished by the collector.

All the external measurements here given were made by the collector from the animals while in the flesh. All measurements are in millimeters.

I am indebted to Mr. Gerritt S. Miller, Jr., Curator of Mammals, U. S. National Museum, and to Mr. Outram Bangs, Curator of Mammals, Museum of Comparative Zoölogy, for the use of specimens kindly loaned for examination in the present connection.

DIDELPHIIDÆ.

1. **Marmosa fuscata** Thomas.

One specimen, adult female, La Cumbre de Valencia (altitude 5000 feet), Oct. 20.

"Caught in a trap set for rats in half-rotted limbs and rubbish in heavy forest on the side of a mountain at an altitude of 5000 feet."—M. A. C.

2. **Marmosa mitis casta** Thomas.

Two specimens: San Esteban, 1 specimen, adult male (topotype), Nov. 14; Anzoategui, Estada Lara, 1 young male, March 1.

"Caught by a boy, among some banana stalks, on a hillside near San Esteban."—M. A. C.

3. **Philander regina** (Thomas).

One specimen, adult female, San Esteban, Nov. 15. Length, 501; tail, 305, hind foot, 33.

"Caught in a field of bananas and plantains near San Esteban."—M. A. C.

In 1900 (this Bulletin, XIII, p. 189) I suggested *Caluromys*, with *Didelphis philander* Linné as type, to replace *Philander* Brisson (1762), on the ground that *Philander* was a pure synonym of *Didelphis* Linné (1758), in as much as each was proposed originally to include all, and only, the marsupials,¹ although each of course included several modern genera. Under the rule of tautonymy, and recent rulings of the International Zoölogical Commission (see especially Opinions 9, 10, and 16), both names are available, and the genotype of *Philander* is *Didelphis philander* Linné by the rule of tautonymy. The designated genotype of *Caluromys* being the same species, *Caluromys* is a synonym of *Philander*.

4. **Metachirus opossum opossum** (Linné).

Ten specimens, 1 adult male, 5 adult females, and four young, Rio Yuruan, March 26 and 29, and April 6.

5 old females, length, 512.6 (503–533); tail, 274.7 (265–289); hind foot, 36.4 (35–38); total length of skull, 61 (59–62); zygomatic breadth, 31 (30–32).

1 old male, length, 543; tail, 286; hind foot, 40; total length of skull, 63; zygomatic breadth, 35.

¹ Cf. Merriam, Science, N. S., I, No. 14, p. 375, April 5, 1895; Allen, Bull. Amer. Mus. Nat. Hist., XIII, pp. 188, 189, Oct. 12, 1900.

"These were trapped both in the forest adjoining the clearing and in the gardens, where they came to eat anything palatable that could be found. They seemed to like ripe bananas as well as meat. The female with a litter of young was taken out of a hollow stump in a grass field in the clearing."—M. A. C.

These specimens are referred to the type form of the group, and Surinam is assumed as the type locality of *Didelphis opossum* Linné (cf. Allen, this Bulletin, XIII, 1900, p. 195). They differ from specimens from western Colombia, Central America, and Mexico in much smaller size. They agree in color very closely with the Mexican form (*pallidus*), from which they are separated geographically by the dark forms of Colombia and Central America.

The forms of this group at present recognized are the following:

1. *Metachirus opossum opossum* (Linné). Type locality, by subsequent designation (Allen, 1900), Surinam.
2. *Metachirus opossum fuscogriseus* Allen (1900). Type locality, Greytown, Nicaragua.¹
3. *Metachirus opossum pallidus* Allen (July 3, 1901). Type locality, Orizaba, Vera Cruz, Mexico.
4. *Metachirus opossum melanurus* Thomas (Oct., 1899). Type locality, Paramba, Rio Mira, northern Ecuador.

5. *Didelphis marsupialis marsupialis* Linné.

One specimen, adult female, Peru Mine, El Callao, May 11. Length, 798; tail, 410; hind foot, 55.

"This beast is common everywhere and a nuisance to the trapper, either by eating the bait and getting caught in the larger traps or by robbing the small traps of rodents already caught. I have caught it repeatedly from the Orinoco to the mountains back of Puerto Cabello up to 4000 feet."—M. A. C.

BRADYPODIDÆ.

6. *Bradypus tridactylus flaccidus* (Gray).

Rio Mato (this Bull., XXVIII, p. 145).

La Bomba, April 21, one specimen.

"This sloth was taken in a most unusual place, being found in a low shrub out in the savanna about 50 yards from a patch of low, tangled wood-

¹ The locality of the type is not certainly known but was presumed to be Colon, Panama, or "Central America" (cf. Allen, this Bulletin, XIII, 1900, p. 195). During the last ten years a large number of specimens, collected in Panama, Costa Rica and Nicaragua, have passed through my hands. As the second account of the subspecies (this Bulletin, XIII, 1901, p. 213) was based on specimens from the lower Bluefields River, the type locality may be established as Greytown, Nicaragua.

land. They are exceedingly hardy beasts and very tenacious of life. To kill them outright seems almost impossible, for even when shot through the brain or even *heart*, they still give evidence of life for some minutes, and if hanging, will not fall for some time. In fact they, like *Mycetes* and *Ateles*, will often cling after death until the passing of rigor mortis releases the contracted limbs.

"It has a doleful, yet not unpleasant crooning or 'cooing' cry which it utters as a rule about sunset for several minutes at a time." — M. A. C.

MYRMECOPHAGIDÆ.

7. *Tamandua longicaudata* (Wagner).

Maripa (Bull., XXVIII, p. 146).

El Hacha, Bolivar Railroad, one specimen, adult female, Nov. 28. Length, 940; tail, 470; hind foot, 84.

"This species seems more fond of the low tangled woodland bordering the savannas than the heavy forest. They are largely nocturnal, terrestrial, and very stupid. I met one beside a path digging, in the early morning, which was easily dispatched." — M. A. C.

TAYASSIDÆ.

8. *Tayassu torvum* Bangs.

One specimen, young female, Lagunita de Aroa, Dec. 20. Part of milk dentition still in situ.

"The peccary was not found to be common anywhere in western Venezuela, but is presumably common in some districts." — M. C. A.

CERVIDÆ.

9. *Mazama rufa* (F. Cuvier).

One specimen, adult female, Rio Yuruan, March 21. Length, 2057; tail, 152; skull, greatest length, 228; zygomatic breadth, 100; length of upper toothrow, 62.

"This deer was common in the heavy forest of the Rio Cuyuni, and differs considerably in color from the savanna species. They frequent the impenetrable jungles and wild cane patches, and are, needless to say, very difficult to shoot. The best way is still hunting early in the morning or late in the evening." — M. A. C.

LEPORIDÆ.

10. *Sylvilagus cumanicus* (Thomas).

Five specimens, 2 adult males, 2 adult females, and a two-thirds grown male, Tocuyo, Jan. 23-26.

2 males, length 405, 410; tail, 44, 50; hind foot, 80, 81.

1 female, " 410 " 40 " 85.

This species is very distinct from *Sylvilagus superciliaris* from the Santa Marta district of northeastern Colombia and from *Sylvilagus meridensis* from Merida, Venezuela, with topotypes of both of which it has been compared.

AGOUTIDÆ.

11. *Agouti sierræ* Thomas.

One specimen, male, Paramo de Rosas, March 22, 1911. Length, 565; tail, 21; hind foot, 98.

Agrees satisfactorily with the description of *A. sierræ* from Sierra de Merida, Venezuela. The pelage is very long and full, and the color very dark.

"The capabara taken at the Paramo de Rosas was caught under a great boulder on the mountainside at an altitude of about 8000 feet. It seemed to me to be different in some respects from the lowland specimens which I have seen." — M. A. C.

12. *Agouti paca* (Linné).

One specimen, female, El Hacha, Jan. 7. Length, 560; tail, 27; hind foot, 97.

"The agouti is very widely distributed, being found in *all* woodland (but preferring heavy forest) from sea level up to considerable elevations (I saw one at 5000 feet on the Cumbre de Valencia). It is largely nocturnal, living by day in hollow logs and under old roots. However, it is not uncommonly found at large during the day, especially early in the morning or at sunset, when they are fond of emerging from the forest to feed in fields and gardens. They are very shy and difficult to shoot, and harder to trap." — M. A. C. [These notes evidently refer in part to *A. sierræ*, especially the reference to the Cumbre de Valencia.—J. A. A.]

13. *Dasyprocta lucifer* Thomas.

One specimen, adult female, Rio Yuruan, April 14.

14. *Dasyprocta rubrata* Thomas.

Three specimens, an adult male, a young male and a young female, both of the latter in first pelage: San Esteban (adult), Nov. 5; Anzoategui, Estado Lara (2 young), Feb. 2. The adult male is not distinguishable from typical specimens of *D. rubrata* from Trinidad, the type locality of the species.

A series of 5 specimens from Trinidad indicates a wide range of what seems to be individual variation in color. Two of them agree strictly with the original description of *rubrata* (Thomas, Ann. and Mag. Nat. Hist. (7), II, Sept. 1898, p. 273); a third specimen is superficially like the two just mentioned, but the dorsal area is somewhat darker, and the hairs more narrowly ringed with rufous, the annulations extending uniformly to the base of the hairs without any basal area of orange or chestnut over the posterior back and rump, as in the type specimen of *rubrata* and the two mentioned above. These three specimens are all from the lowlands near Princetown. Two others from the interior of the island, at somewhat higher elevation, are both much darker than the other three. One of these is only a little darker than No. 3 just described, but the blackish tint is more predominant, the rufous annulations narrower and extending to the base of the hairs, including those of the lower back and rump. The other specimen is still darker, the general color being blackish, slightly relieved by narrow rufous annulations, confined posteriorly to the apical portions of the hairs, the remaining portion being blackish. The skulls show that these differences are not due to age, nor do they suggest either specific or subspecific differentiation. In coloration the 5 specimens show intergradation from the two like the type of *rubrata* to the very dark one last described.

The two young specimens (length only 250 mm.) from Anzoategui, both taken on the same date and probably from the same litter, may be fairly termed dichromatic, one having the lower back and rump dark rufescent, while the same parts in the other are entirely black.

"Fairly abundant in the San Esteban valley from a point where the heavy forest begins up to at least 5000 feet. It is very shy and hard to shoot." — M. A. C.

CAVIIDÆ.

15. *Cavia porcellus venezuelæ* subsp. nov.

Type, No. 30742, ♂ ad., Altagracia, Immatata district, Venezuela, June 9, 1910; coll. M. A. Carriker, Jr.

Similar in size and general appearance to *C. p. guianæ* Thomas from the Kanuku Mountains, southwestern British Guiana, but differing in details of coloration.

General color above gray, strongly varied with black, the hairs annulated near the tip with fulvous; darkest on the head and middle of the back posteriorly, lighter and more fulvous over the shoulders; underparts white with a slight grayish cast, the hairs not very appreciably darker basally; a broad band of gray across the fore-neck; feet gray with a slight tinge of fulvous, not "lightening to nearly white on the fingers and toes" as in *C. p. guianæ*; no light eyering, and ears blackish, not whitish as in *C. p. guianæ*; nose light gray or whitish.

Total length (head and body), 265; hind foot, c. u. 46. Skull, greatest length, 60; basilar length, 47; greatest breadth, 32.5; nasals, 20×8 ; diastema, 16.5; length of molar series (alveoli), 14.

Represented by the type only, an adult but not old male, taken in the Immataca district of eastern Venezuela, very near the British Guiana boundary. This is apparently the first record of the genus *Cavia* for Venezuela.

"Caught in an old outbuilding amongst some rubbish." — M. A. C. [When first seen it was mistaken by the collector for a young agouti.]

OCTODONTIDÆ.

16. *Proechimys cherriei* (Thomas).

Rio Mocho (Bull., XXVIII, p. 146).

Six specimens, Rio Yuruan, March 24–April 6. Two have only the basal two inches of the tail, the rest evidently having been shed during life.

"The spiny rats were trapped in the little garden patches of the laborers, to which they came from the forest to feed. It is curious how many of these without tails were caught." — M. A. C.

17. *Proechimys guiræ* Thomas.

Eleven specimens: Las Quiguas, 1, Sept. 14; San Esteban, 6, Oct. 28–31, Nov. 7 and 9, and Dec. 28; Laganita de Aroa, 4, Dec. 22–30.

"I caught only one of these rats at Las Quiguas; it was apparently more abundant about San Esteban. I caught them among the rocky cliffs along the river as well as in old second-growth." — M. A. C.

18. *Loncheres carrikeri* sp. nov.

Type, No. 31530, ♀ ad., San Esteban, Venezuela, Nov. 15, 1910; coll. M. A. Carriker, Jr. (orig. No. 8633), for whom the species is named.

Similar in size to *Loncheres punctatus* Thomas, from Caicara, Venezuela, but much darker, and with important cranial differences.

Head and sides gray; mid-dorsal region blackish mixed with rufous, the long stiff hairs and bristles being black-tipped, the coarser spines black with conspicuous

white tips, most abundant on the posterior half of the back, while the finer under hair is rufous showing at the surface between the bristles and spines; ventral surface gray washed with white, with a fairly distinct gray pectoral band; feet, outer surface of limbs and ventral surface of base of tail gray; ears brownish black; tail brown, well covered with short stiff hairs, through which, however, the annulations are clearly seen.

Total length, 467; head and body, 224; tail, 243; hind foot, 40. Skull, total length, 52; basal length, 46; zygomatic breadth, 26. The skull is narrow and slender, the rostral portion very narrow and somewhat tapering, the anterior nares much narrower than in *L. punctatus*.

Represented only by the type, a very old female with the sutures of the skull almost wholly obliterated. In external measurements it agrees with topotypes of *L. punctatus*, collected at Caicara by George K. Cherrie (measurements by Mr. Cherrie), but the skull is much smaller and slighter than in *L. punctatus* and the dentition is correspondingly lighter, but the teeth are similar in details of structure. In comparison with *L. punctatus* the posterior nares are much narrower and shallower, the basioccipital, relatively as well as actually, much shorter and narrower, and the more swollen bullæ are shortened in correlation with the shortened basioccipital region. The bullæ are nearly as broad as long, and are thus nearly spherical instead of elongate as in *L. punctatus*. The two species are thus not only strikingly different in coloration but also in important details of cranial structure.

"I shot this rat in the lower branches of a large tree by the road side near San Esteban. I had shot a bird in the same tree, and it seems the shot disturbed the rat from the trunk, from where it ran out on a long limb. It must be rare here, as none of the natives who saw it had ever seen one before." — M. A. C.

19. *Heteromys anomalus* (Thompson).

Two specimens, Las Quiguas, Sept. 6. Distinctly referable to *H. anomalus* rather than to *H. jesupi* of the Santa Marta region, Colombia.

"Trapped in a small clearing planted in corn, yucca, etc. Apparently less common than the spiny rats [*Proechimys guiræ*]." — M. A. C.

MURIDÆ.

20. *Oryzomys meridensis* Thomas.

Three specimens, all young adults, La Cumbre de Valencia (altitude 5000 feet), Oct. 19 and 20.

These specimens are doubtfully referred to *O. meridensis*. The older of the three is nearly adult, but the sides of the body are nearer fulvous than rufous, and there is no pectoral white spot in which the fur is white to the base. The other two, somewhat younger, have a small sharply defined V-shaped patch of white on the breast with the fur white to the base. These two specimens are indistinguishable from a Merida specimen of corresponding age identified by me some years since as a topotype of *O. meridensis*.

"Caught in forest at an altitude of about 5000 feet. They were living in the trunk of a fallen tree in a very damp spot."—M. A. C.

21. *Oryzomys modestus* Allen.

One specimen, San Esteban, Nov. 9.

This specimen is in bad condition, the ears and tail having been mutilated by ants, and the skull lacks the occipital portion. It agrees so well, however, in size, coloration and in cranial characters with the unique type of *O. modestus* from Campo Allegre, Cumana district, Venezuela, that it is confidently referred to this species.

22. *Oryzomys (Oligoryzomys) tenuipes* Allen.

Ten specimens, of which 8 are adult and two are young in the gray first pelage, La Cumbra de Valencia (elevation 5000 feet), Oct. 16–20.

"Abundant in cultivated and in old abandoned fields. Lives in fallen tree-trunks and under stumps."—M. A. C.

These specimens are clearly referable to *O. tenuipes* (this Bulletin, XX, 1904, p. 328) from the mountains near Merida (elevation 1630 meters). The present material shows that the least characteristic of the three original specimens was selected as the type, a young adult not quite in mature pelage, with the rufous of the upperparts not fully developed, and the buff on the underparts rather paler than in average specimens, or than in the paratypes. In adult specimens the upper parts are strongly rufous, faintly varied with black-tipped hairs, and the ventral surface varies in different specimens from cream buff to deep buff. Young specimens in first pelage are dark brownish gray above and mouse gray below, resembling closely in coloration an average young adult common house mouse.

It may be added here that *Oryzomys delicatus* Allen & Chapman, from Capara, Trinidad, is a typical member of the *Oligoryzomys* group, and is, as would be expected, closely related to *O. delicatus*.

The eight adult specimens (4 males and 4 females) measured in the flesh as follows: Total length, 181 (173–191); head and body, 81.6 (76–85); tail, 99.5 (93–103); hind foot, 21.4 (21–22).

The three original Merida specimens measured in the flesh: Total length, 183 (180–190); head and body, 80 (80–80); tail, 103 (100–110); ear, 21 (20–22).

23. **Oryzomys (Oligoryzomys) messorius** Thomas.

One specimen, Rio Yuruan, April 1. A young male with m_3 not fully exposed. Upperparts rufous, the plumbeous basal fur imparting a slight grayish cast; underparts white, the basal portion of the hairs faintly gray.

"This was the only mouse of this species caught. It was taken in the thatch of one of the laborer's huts."—M. A. C.

Oryzomys navus messorius Thomas, to which this specimen is referred, was described from the Kanuka Mountains, British Guiana (altitude not stated). It seems to be a smaller animal than true *O. navus* Bangs, from the Sierra Nevada de Santa Marta, Colombia (altitude 8000 feet), and in view of the wide geographical separation of the two forms it seems better to accord to *messorius* full specific rank.

24. **Oryzomys (Melanomys) venezuelensis** (Allen).

Four specimens, Le Cumbra de Valencia, Oct. 15–18.

Indistinguishable from the type series from Quebrada Secca, Cumana, Venezuela (this Bulletin, XII, 1899, p. 203).

"Caught in the little cultivated fields near the crest of the mountains. Apparently not very abundant, as few were caught. In some places the woodland extends over the crest and down the south slope for a short distance, and it is in these patches of woodland that the few people living on the heights make their gardens."—M. A. C.

25. **Rhipidomys nitela** Thomas.

Twelve specimens, including both young and adults, Rio Yuruan, March 19–24. The young in first pelage are gray above with a slight tinge of rusty brown, and clear white below; ears in all dark brown. Pelage very short and close on the upperparts, very short and velvety on the ventral surface, as in the small opossums (*Marmosa*).

"These mice live in the thatch roofs of the laborer's houses." — M. A. C.

SCIURIDÆ.

26. **Sciurus flammifer** Thomas.

Rio Mocho (Bull., XXVIII, p. 146).

El Llagual, 2 specimens, males, Jan. 8 and 15.

Length, 556, 570; tail, 280, 298; hind foot, 65, 70. One of the specimens is melanistic, being much suffused with blackish, which largely replaces the usual orange tint.

"This, as well as the other species of squirrel, was not common anywhere on the Caura. The present form varies greatly in color. I one day saw a specimen jet black in color while shooting in the hills at El Llagual. It is a forest resident, as is also the little red species [*Sciurus æstuans gilvicularis*]." — M. A. C.

27. *Sciurus* (*Guerlinguetus*) *æstuans gilvicularis* (Wagner).

Rio Mocho (Bull., XXVIII, p. 146).

28. *Sciurus griseogena* Gray.

Eight specimens: Las Quiguas, 3 specimens, Sept. 5 and 6; San Esteban, 3 specimens, Oct. 29 and Nov. 1; Guarico, 1 specimen, Feb. 4; Paramo de Rosas, 1 specimen, March 14.

These agree essentially in all particulars with two from San Julian, Venezuela, collected by Lieut. (now Captain) W. Robinson in July, 1900, and differ from a large series of topotypes of *S. g. meridensis* Thomas collected by S. Briceño and S. B. Gabaldon in the Montes del Escorial, near Merida, in shorter pelage and in having the red of the lower surface of the tail confined to the edges of the tail instead of heavily covering the whole lower surface. The single specimen from Paramo de Rosas, collected March 14, is the only one in the heavy long pelage of the Merida series, taken mostly in December and January (one in March). Doubtless the season, as well as elevation, has much to do with the length and fullness of the pelage in these two forms.

"This squirrel is abundant throughout the [San Esteban] valley, from the point where the forest begins to the top of the mountains. It is very destructive to the cocoa of the valley and many are shot. Squirrels were also abundant on the Paramo de Rosas and did great damage to the little farms and especially to the tobacco (of which there was a great deal planted), eating off the seed just before it was ripe enough to gather. I found it up to 9000 feet." — M. A. C.

MUSTELIDÆ.

29. *Pteronura brasiliensis* (Zimmermann).

Rio Mocho (Bull., XXVIII, p. 146).

"Otters are plentiful in most streams in Venezuela, and are notoriously so in the Rio Apure. I found them numerous in the Rio Mato and Rio Mocho, but very difficult to secure. They are not hard to shoot (I shot six), but as they are almost invariably in deep, swift water, as soon as shot they sink and are carried away. Trapping them seems to present insurmountable obstacles in these regions. They are often seen on the Caura, Mato and Mocho, swimming up or down in bands of 3 to 6 or 8, playing, diving constantly, and blowing like porpoises upon rising. Often they shoot straight out of the water until the whole chest is visible, when they offer a good target. They indulge at times in loud barking or roaring, thrashing about in the water at a great rate. I watched such an exhibition on the Caura, which continued for about fifteen minutes. The two secured on the Mocho River were two of a band of seven which were swimming into the mouth of a creek in front of my camp, where the water was deep and quiet. Three were shot before they could escape into the river, one being secured with the canoe as it floundered on the surface in its death struggles. The other two sank, but in twelve hours they rose to the surface. One was found at once, but the other rose under some rubbish and was not found until too late to save it. I never saw such large ones anywhere as those in the Caura region. Those seen on the Cuyuni were much smaller [probably a different species]." — M. A. C.

30. *Putorius affinis* (Gray).

One specimen, adult ♂, San Esteban, Nov. 9. Length, 443; tail, 165; hind foot, 52.

"Killed near the river above San Esteban; rarely seen, owing doubtless to its nocturnal habits." — M. A. C.

31. *Tayra barbara barbara* (Linné).

Rio Mocho (Bull., XXVIII, p. 146).

Two specimens; Las Quiguas, adult male, Sept. 14; El Hacha, adult male, Jan. 7. "Shot in forest above Las Quiguas at an altitude of 1400 feet. Common around La Hacha."

These specimens both entirely lack any trace of the usual yellow spot on the foreneck, but otherwise resemble typical *barbara*.

Length, 983, 1020; tail, 400, 380; hind foot, 104, 105.

"Found sparsely in all timbered regions from the sea up to low altitudes only (probably not higher than 2000 feet). It is diurnal as well as nocturnal, and a deadly enemy to poultry, capturing them in the day time when they stray some distance from the house." — M. A. C.

32. ***Conepatus marpurito*** (*Gmelin*).

One specimen, male (skull lost), El Hacha, Nov. 28. Length, 670; tail, 220; hind foot. 79.

PROCYONIDÆ.

33. ***Nasua phæocephala*** *Allen*.

Rio Mocho (Bull., XXVIII, p. 147).

"Fairly common in the low country where heavy timber abounds. It is largely nocturnal, but may be occasionally surprised in the early morning or evening rooting, like a hog, around fallen tree trunks and in damp places in the forest. Unless the tracks are examined in these rootings one would be led to think that they were the work of wild hogs." — M. A. C.

CANIDÆ.

34. ***Canis* (*Carcinocyon*¹) *thous*** *Linné*.

Three specimens, 2 adult males and 1 adult female, La Bomba, Rio Cuyuni, April 19, 20, 21.

These specimens are in exceedingly worn and faded pelage, the tails so greatly worn that the black tips to the hairs have nearly disappeared. Total length, ♂ 990, ♂ 895, ♀ 902; tail, ♂ 320, ♂ 285, ♀ 283; hind foot, ♂ 150, ♂ 140, ♀ 140 (collector's measurements).

"This animal abounds in the whole of the savanna country of Venezuela, I am told, and I certainly saw ample evidence of it on the Caura and in the El Callao district. The natives tell me that it is in the savannas around Valencia and all over the central plateau [where, however, no specimens were collected]. They are almost strictly nocturnal, although on two occasions I saw them abroad in the morning after sunrise. Those caught at La Bomba were trapped with heavy steel-traps placed under half putrid offal suspended from branches of chaparral beside paths. Two were brought into the house alive with a rope around their necks, and after a sharp battle, appeared

¹ Cf. *Mammals of Southern Patagonia*, Princeton University Expeditions to Patagonia, Vol. III, Part 1, 1905, p. 153.

quite subdued, lying down and panting like a dog. They live in the tangled woodland scattered about in the savannas or in holes under rocks."—M. A. C.

At present the Museum collection of mammals contains about 20 specimens of Canids of the *Canis thous* Linné (= *C. cancrivorus* Desmarest) group.¹ The larger numbers are from the vicinity of Bonda, Santa Marta district, Colombia, and represent "*Urocyon*" *aquilus* Bangs, which, as shown below, is only a fairly well differentiated subspecies of *Canis thous*. There are three specimens from the Rio Suarpure, a tributary of the upper Orinoco, and the three listed above from La Bomba, on the Rio Cuyuni, near the western border of British Guiana, all of which seem referable to *C. thous thous*. Three others from Maripa, on the upper Rio Caura, represent *C. thous melampus* Wagner. These were formerly erroneously referred by me to *C. thous savannarum* Thomas,² from the savannas of the low coast region of British Guiana, which is evidently a much smaller and stronger colored animal.

The following table of measurements of skulls from these several localities shows that the Bonda series has the skull reduced in length through the shortening of the rostral portion while the interorbital breadth remains unchanged, giving the effect of a shorter and broader skull than is seen in the more southern forms. In details of dentition and general cranial proportions, aside from the exception just noted, there is little differentiation. The coloration is, as is well known, extremely variable, this being well illustrated in the series from Bonda, Colombia, especially manifested in the color of the feet and ears and in the color of the underfur.

MEASUREMENTS OF SKULLS OF THE *Canis thous* GROUP.

				Total Length	Zygom. Breadth	Upper Toothrow	Interob. Breadth.	Nasals, Length	Nasals, Anterior Width
16926	♂	Suapure,	Ven.	148	80	52	27	52	12
16927	♀	"	"	146	76	52	27	53	12
21309	♂	Maripa,	"	134	74	48	25	50	11
21310	♂	"	"	137	76	44	26	47	12
30626	♂	Rio Cuyuni,	"	143	76	52.5	27	53	11.5
30627	♂	"	"	136	76.5	50	26	49	11.5
30628	♀	"	"	135	75	49	24.7	48	11
14623		Bonda,	Col.	132	70	47	24.5	45	10
14624	old	"	"	127	73	47.5	27.5	43.5	10
14625	old	"	"	134.3	74	49	27	47	10.5
14626		"	"	130	67.2	47	25	44	9.5
14627	old	"	"	139	79	45	27.5	45.2	10
14853	♂	"	"	138	74	51	27	47	10.5
23571		"	"	138	73	51	27	51	11
14851		"	"	—	—	51	28	51	11

¹ On the availability of *Canis thous* Linné in place of *C. cancrivorus* Desmarest, see Thomas, Ann. and Mag. Nat. Hist. (7), Oct. 1903, p. 461.

² *Canis (Thous) cancrivorus savannarum* Allen, this Bulletin, XX, Oct. 8, 1904, p. 342; not *Canis cancrivorus savannarum* Thomas, 1901).

35. *Urocyon cinereoargentea venezuelæ* subsp. nov.

Type, No. 32074, ♂ ad., Tocuyo, Venezuela, Jan. 17, 1911; coll. M. A. Carriker, Jr.

Similar in coloration to *U. c. guatemalæ*, but much smaller, chin and feet darker, and ears larger. External measurements: Total length, 610; head and body, 340; tail, 270; hind foot, 105. (The skull is unfortunately not available for examination, the collector's label bearing the legend "skull lost.")

In coloration this specimen is almost indistinguishable from specimens in similar pelage from Nicaragua, the only difference being that the chin and feet are darker, the upper surface of the feet more varied with dusky, and the sides of the feet blackish brown. The pattern of the white on the throat and cheeks is the same as in all the northern forms of the genus, and the ears are wholly fulvous with a slight mixture of black-tipped hairs apically. The ears are actually larger than in all but one of a series of specimens from Nicaragua, while the general size of the animal (so far as can be judged from a single specimen) is about one-fourth smaller.

This forms the first valid record for the genus *Urocyon* in South America, "*Urocyon*" *aquilus*¹ being really a subspecies of the widely distributed South American *Canis thous* (see above, p. 258). The previous most southern record of the genus known to me is Pozo Azul, Costa Rica (two specimens, also collected by Mr. Carriker),² while it is common in Nicaragua.³ On the probability that it will eventually be found in other parts of northern South America, and the close resemblance in general features of the present specimen to Nicaragua examples of *U. c. guatemalæ*, the Venezuelan form is assigned the rank of a subspecies of the *cinereoargenteus* group. The type locality, Tocuyo, is about 175 miles southwest of Valencia, at an altitude of about 2200 feet.

FELIDÆ.

36. *Felis pardalis* Linné (subsp. nov.?).

One specimen, adult male, Aroa, Bolivar R. R., Dec. 13. Length, 1060; tail, 335; hind foot, 143; total length of skull, 124; mastoid breadth, 53; molar-premolar series, 24.

Similar in size to *Felis sanctæmartæ* but darker and much more heavily spotted, the dark spots solid, not enclosing a lighter area.

"Ocelots were quite abundant in the hills about Aroa."—M. A. C.

¹ I am greatly indebted to Mr. Bangs for the opportunity of examining in this connection the type and paratype of his *Urocyon aquilus*.

² See this Bulletin, XX, 1904, p. 48.

³ *Ibid.*, XXIV, 1908, p. 668; XXVIII, 1910, p. 107.

EMBALLONURIDÆ.

37. *Rhynchiscus naso* (Wied).

Six specimens: Rio Yuruan, 3 specimens, March 4; San Esteban, three specimens, Oct. 25 and Nov. 15.

"This curious little species was found along the shores of the river [Rio Yuruan], clinging flat to old stubs and the limbs rising out of the water at an angle from the perpendicular. Sometimes a half dozen or more would be flushed from one old stub. They do not hang, but cling flat with wing suckers as well as feet. The same or a closely allied species was seen on the Caura, but none secured.

"[At San Esteban they] were living under the tiles of a house roof and one was caught as it came out at dusk."—M. A. C.

38. *Saccopteryx bilineata* (Tenn.).

Two specimens, Peru Mine, El Callao, May 13.

"I saw but three of this interesting species, two being secured, the third escaping wounded. They do not hang suspended, but cling flat to the rocks head down, on the side of a wall. They were just within the entrance to a shallow tunnel, and when disturbed, flew out and alighted on the rocky walls outside. I tried every way to catch them with a net but failed and finally had to shoot them."—M. A. C.

39. *Saccopteryx leptura* (Schreber).

Two specimens, Peru Mine, El Callao, May 13.

"Upon one of my last excursions I found this pair of bats hanging in a crevice in the roof of a hundred foot tramway tunnel where ore cars were continually passing. They were near the entrance where it was quite light."—M. A. C.

40. *Peropteryx kappleri* Peters.

Rio Mocho (Bull., XXVIII, p. 147).

Six specimens: Peru Mine, El Callao, May 13 and 14; Aroa, Bolivar Railroad, Dec. 12.

Five females measure: Length, 74.4 (72-77); length, 14.4 (13-16); expanse, 328.8 (319-334); forearm, 50.2 (50-51).

"[At El Callao], this peculiar species was very rare. I first found two clinging to a perpendicular wall in an old shed back of the house I worked in, and later caught one in a short prospect tunnel. It clings flat to per-

pendicular surfaces, and is the shyest of all the species found, flying away always before I could get near enough to net it.

"[At Aroa the specimen taken was] found in a crevice between boulders on the crest of a hill in the forest."— M. A. C.

41. *Peropteryx canina* (Wied).

Seventeen specimens: San Esteban, 12 specimens, Nov. 3–10; Aroa, 5 specimens, Dec. 8.

The males are smaller than the females, as shown by the following measurements:

6 males, length, 56.1 (55–61); tail, 12.7 (12–14); extent, 262.7 (260–265); forearm, 40.9 (40.5–41).

10 females, length, 63.4 (60–67); tail, 14.3 (13–17); extent, 275.4 (272–280); forearm, 43 (42–44).

"This species I first took at a small rocky cave near the coast about seven miles from Puerto Cabello (Las Canteras). They cling flat to the rocks and were not inside the cave but among the boulders at the entrance. When disturbed they flew into the cave, and when pursued outside they promptly returned to their former post. They are incredibly swift of wing and hard to catch. I afterwards found others among masses of limestone rocks on the crest of the ridge above San Esteban."— M. A. C.

PHYLLOSTOMIDÆ.

42. *Chilonycteris rubiginosa rubiginosa* Wagner.

Sixteen specimens: 6 males, 10 females, Peru Mine, El Callao, May 7–14.

This series is dichromatic, or at least presents a wide range of color variation that is neither sexual nor due to immaturity. Four specimens are bright reddish brown, four others are dark brown without tinge of reddish, while the rest are of a more or less intermediate shade — dark brown with a slight reddish cast.

The collector's measurements show practically no sexual difference in size, as follows:

6 males, length, 100 (94–103); tail, 24.2 (21–26); alar expanse, 411 (401–422).

10 females, length, 106.6 (92–103); tail, 24.1 (22.27); expanse, 409.2 (400–427).

"These bats were taken deep in the mine tunnels, never near the surface and never in company with any other species, nor were they ever found in

a tunnel less than 500 feet in depth. They are swift of wing and hard to catch and had to be driven to the ends of the tunnels whenever possible, and cornered. With respect to their distribution I found a peculiar state of affairs. You will notice in laying out the series that there are three different shades of color. These different colored specimens were taken in different tunnels which were not connected by stopes or other passage ways."—M. A. C.

43. ***Chilonycteris rubiginosa fusca*** subsp. nov.

Type, No. 31561, ♂ ad. Las Quiguas, 5 miles south of Puerto Cabello, altitude 650 feet, Venezuela, Sept. 7, 1910; coll. M. A. Carriker.

Similar to *C. rubiginosa* but smaller and darker and less suffused with rufous. The type is dark fuscous brown above with the hair barely perceptibly tipped with grayish; below similar but lighter, the minute grayish tipping of the hairs more evident; membranes blackish brown. Fifteen other specimens from Las Quiguas and San Esteban (near Las Quiguas) are similar and all very uniform in coloration, all being in the dark phase, but two additional specimens are in the fulvous phase; they are, however, paler and much less richly colored than specimens in the 'red' phase of *rubiginosa* from El Callao, eastern Venezuela.

The collector's measurements of the type are: Length, 93; tail, 24; extent of wings, 390. Forearm, from dry skin, 58; third metacarpal, 47.

Average external measurements of 12 specimens: Length, 89.8 (86–94); tail, 22.8 (20–25); extent 391.6 (383–401). Forearm, 18 specimens (from skin), 58.4 (57–60); third metacarpal, 48 (47–51).

Another series of 10 specimens, from Aroa, a short distance to the west, on the Bolivar railroad, is less dark brown and distinctly suffused with rufous; two of them are in the rufous phase and several others are strongly suffused with rufous. This series averages slightly larger, as follows: Length, 91.8 (88–95); tail, 22.1 (21–23); extent, 398.7 (384–404). Forearm, 58.3 (55–59); third metacarpal, 49 (47–51).

"The common species in the 'new' tunnel, where there were perhaps 150 present on my first visit. They prefer to lie flat on the ledges and in the cracks of the rock. This mine is very hot and damp, the temperature ranging from 103° to 108° F. where the bats were found. I found a temperature of 122° F. in some places, but no bats were present there; the highest temperature at which they were found was 110° F."—M. A. C.

The type locality of *Chilonycteris rubiginosa* is Caiçara, Upper Amazon, Brazil, from which locality no material is available for comparison in the present connection. It is assumed, however, that specimens from the Lower Orinoco region are likely to resemble the type form more closely than those from the northern coast region of Venezuela. A series of 10 specimens from El Callao, eastern Venezuela south of the Orinoco, prove to be much larger and much brighter colored, the dark phase being strongly suffused

with rufous and the rufous phase strongly reddish. *C. r. mexicana*, on the other hand, represented by 12 specimens from Amatlan, Terr. Tepic, is much smaller than the several lots from the coast region of northern Venezuela, and extremely pale, in striking contrast with any specimens thus far seen from South America, they presenting in comparison, a strongly bleached appearance.

The difference in size is indicated in the following table based on the length of the forearm and third metacarpal. The several series consist of a nearly equal number of males and females, all fully adult. There is no appreciable sexual difference in size.

		Forearm.	Third metacarpal.
El Callao,	16 specimens	60.8 (59.63)	51 (50-52)
Las Quiguas and San Esteban,	18 specimens	58.4 (57-60)	48 (47-51)
Aroa,	10 specimens	58.3 (55-61)	49 (47-51)
Amatlan, Mex.	10 specimens	55.3 (54-58)	45.4 (44-47)

The collector's measurements from fresh specimens, in the case of the Venezuela specimens (external measurements of the Mexican series are not available),¹ show corresponding differences in size, as follows:

	Length.	Tail.	Wing Expanse.
El Callao,	98.5 (94-103)	24.4 (22-27)	409.6 (401-417)
Las Quiguas and San Esteban,	89 (86-94)	22.8 (20-25)	391.6 (383-401)
Aroa,	91.8 (88-95)	22.1 (21-23)	398.7 (384-404)

The skulls of the El Callao and northern Venezuela series show corresponding differences in the measurements, the El Callao skulls averaging a total length of 23 mm., while those from northern Venezuela average a total length of only 22 mm.

A single specimen from Cacaqualito, Colombia (Santa Marta district), agrees in size and coloration with the specimens from the northern coast of Venezuela.

44. *Chilonycteris personata* Wagner.

Twelve specimens (8 females, 2 males, 2 without indication of sex), Aroa, Bolivar Railroad, Dec. 6.

Two (females) are in the bright rufous phase, 3 (1 male, two without indication of sex) are dark mouse brown with no tinge of rufous, and 7 are more or less suffused with rufous, some more strongly than others.

¹ The wing expanse for three specimens is given as 14½ inches = 360 mm.

Measurements.

		Length.	Tail.	Extent.	Forearm.	3d metac.
32124	♂	70	21	290	44.8	36
32132	♂	64	17	283	43	34.5
32112	?	67	17	292	44	35
32127	?	64	17	293	45.2	35
32123	♀	65	16	288	43.6	34
32128	♀	63	15	285	44	34
32129	♀	65	17	299	44	35
32130	♀	66	17	294	44	34
32131	♀	69	18	293	44	35
32133	♀	67	18	296	45	34.5
32136	♀	67	18	283	43	33
32137	♀	69	21	298	44	34
Average		66.3	17.7	291	44	34

This appears to be a rare species in collections, as Mr. Rehn, in his revision of the genus *Chilonycteris* in 1904,¹ had no specimen at hand and gave a transcript of Wagner's description of the species. Miller, in 1907,² mentions this as the only species of the genus he had been unable to examine. Dobson, in 1878,³ took his description from Wagner and Burmeister, there being then no specimens in the British Museum. He, however, described *Chilonycteris psilotis* as a new species, from an unknown locality, and compared it with *C. macleayi*, from which it differs in "the absence of the notch on the outer side of the ear," etc. In his "synopsis of the species" he grouped *C. psilotis* with *C. personata* as regards the structure of the ear. *C. psilotis* apparently may have been based on an orange-colored, rather small specimen of *C. personata*.

In 1902, Miller recognized ⁴ specimens of *C. psilotis* from the Isthmus of Tehuantepec, Mexico, stating: "Its characters agree in all respects with those given by Dobson, except that the forearm [44 mm. instead of 42 mm.] and tibia are somewhat longer than in the type." Mr. Miller's specimens thus agree in size with the average for 12 specimens of *C. personata* given above.

In order to settle, if possible, the relationship of Mr. Miller's Mexican specimens of *C. "psilotis"* to *C. personata* two specimens from the above described Venezuelan series were sent to Mr. Miller for direct comparison with the Mexican specimens. One of these specimens represented the red phase, the other the dark phase. Mr. Miller (*in litt.*, Sept. 14, 1911)

¹ A Study of the Mammalian genus *Chilonycteris*. By James A. G. Rehn. Proc. Acad. Nat. Sci. Philadelphia, 1904, pp. 181-207.

² The Families and Genera of Bats. By Gerritt S. Miller, Jr., 1907, p. 120.

³ Catalogue of Chiroptera in the British Museum, 1878, p. 451.

⁴ Proc. Biol. Soc. Washington, XV, 1902, p. 249.

says: "It seems to me that you are quite right in regarding *psilotis* and *personata* as essentially the same. Our specimens of the former, of which I am sending you a skin and two skulls, show slight differences from the South American form, and I should be inclined to keep them distinct (at least as subspecies) until much more material can be examined. You will see that there is a very perceptible difference in the size of the molar teeth and also in the color of the skins in the brown phase."

On comparing these specimens with the Venezuelan series of 12 specimens these differences prove to be inconstant and unimportant. The color of the Mexican skin is *exactly* matched by that of two specimens in the Venezuelan series, and the supposed difference in the size of the molar teeth does not prove to be diagnostic.

More material from Mexico may show the desirability of recognizing a Mexican subspecies, as in the case of *C. rubiginosa*, but in that event it would seem better to give it a new name rather than to employ for it the name *psilotis*, based on a specimen from an unknown locality, probably referable to true *C. personata*.

45. *Pterontus suapurensis* Allen.

Twelve specimens, 6 males, 6 females, Aroa, Dec. 6. "Taken in the tunnels of the copper mines."

This species, like *P. davyi*, is dichromatic, three specimens (2 males, 1 female) being of the deep fulvous phase like the type, the other nine being dark fulvous brown, of a much more fulvous cast than the dark (mouse-colored) phase in *P. davyi* and *P. d. fulvus*.

P. suapurensis was described as *Dermanotus suapurensis*, in 1904 (this Bull., XX, p. 229), from a single specimen collected by S. M. Klages at Suapure, Venezuela, which, until the present series was received, has remained unique. The character of large size, separating it at once from *P. davyi*, is amply established by these additional specimens, while the dark phase differs markedly in color in the two forms. The collector's measurements seem to show that the males are slightly smaller than the females, as follows:

Measurements.

		Length.	Tail.	Expanse.
32089	♂	85	24	335
32094	♂	81	22	352
32083	♂	80	21	338
32084	♂	82	23	354
32086	♂	80	22	335
Average of 5 ♂♂		81.6	22.2	345

		Length.	Tail.	Expanse.
32085	♀	85	26	344.5
32081	♀	81	23	349
32088	♀	81	22	339
32091	♀	85	24	357
32092	♀	84	23	353
32096	♀	85	22	345
Average of 6 ♀ ♀		83.5	23.3	354.6

The measurements of three specimens of *P. davyi* from Carengo, Trinidad, taken by the same collector, are:

		Length.	Tail.	Expanse.
29694	♀	74	22	310
29704	♀	76	21	303
29703	♂	76	21	315
Average		75.3	21.3	309

46. *Micronycteris megalotis* Gray.

Twelve specimens, 8 males, 4 females: El Callao (3 specimens), May 10-13; El Hacha (2 females), Nov. 28; San Esteban (4 males, 2 females), Nov. 10 and 14.

Several are young adults, with the phalangeal epiphyses not fully ossified. The male adults average slightly smaller in wing expanse than the females, as shown by the following:

4 females, length, 58.5 (58-60); tail, 11.5 (11-12); expanse, 239 (236-238 with one at 245); forearm, 32.4 (31-34); third metacarpal, 26.9 (26-27.5).

2 males, length, 58, 61; tail, 13, 15; expanse, 232, 233; forearm, 31, 32; third metacarpal, 26, 26.5.

"This was one of the rare species [at El Callao]. It is never found in deep tunnels, but in short prospect tunnels and open-face workings, where light enters freely. They were always hanging in a little cavity in the roof, just within the entrance, and were very wary, leaving the tunnel for the open air at the first alarm. I tried hard to find more of this handsome little species, but failed.

"[Those taken at San Esteban] were found hanging to roots under a small over-hanging bank by the road-side, from where they were shot. Others were taken under projecting banks along railroad cuts. Later a boy brought me three more which he said he caught in a cave. The cave was about 12 miles away and I had no time to visit it." — M. A. C.

47. ***Lonchorina aurita*** *Tomes.*

Three specimens, all males, San Esteban, Nov. 10. (No measurements nor notes are given by the collector.)

48. ***Mimon bennettii*** (*Gray*).

One specimen, female, El Hacha, Dec. 3.

"Taken in a hollow tree. There were several more in the same tree but they escaped and none returned to the same tree."—M. A. C.

49. ***Phyllostomus hastatus*** (*Pallas*).

Thirteen specimens, 11 males and 2 females, all from San Esteban, Sept. 15.

Eleven males measure: Length, 134 (128–140); tail, 18 (14–22); expanse, 611.5 (603–624, with one at 585); forearm, 84.8 (81–86, with only one below 84); third metacarpal, 77 (75–79). The two females are slightly smaller, as follows: Length, 130 (129–131); tail, 18 (16–20); expanse, 605.5 (594–617); forearm, 83.5 (81–86); third metacarpal, 74.5 (73–76).

"These bats were caught in the loft of a house in San Esteban."—M. A. C.

50. ***Trachops cirrhosus*** (*Spix*).

Three specimens (2 males, 1 female), San Esteban, Nov. 8 and 15.

An adult male and female measure: Length, ♂ 101, ♀ 99; tail, ♂ 61, ♀ 62; extent, ♂ 454, ♀ 461; forearm, ♂ 61, ♀ 62; third metacarpal, ♂ 49, ♀ 51. The other male is not fully mature and measures considerably less.

"I found this species *only* in two tunnels, one old and disused, the other new, through which the Puerto Cabello water main passes from the San Esteban valley to the low land back of Puerto Cabello. It is evidently rare, as I saw but two besides the three caught. The male of this species has a globular, subcutaneous musk gland in the middle of the fore-neck."—M. C. A.

51. ***Chrotopterus carrikeri*** *Allen.*

(Rio Mocho. (Bull., XXVIII, p. 147).

"These bats were all taken in an old hollowed-out termite nest, hanging from a vine in the forest at a height of about fifteen feet from the ground.

When I passed under the nest one flew out, which gave me the clue, and I fired into the nest on suspicion, with the result that it rained bats for a moment." — M. A. C.

52. *Glossophaga longirostris* Miller.

Nine specimens (4 males, 5 females): San Esteban (8 specimens), Nov. 3; Guarico (1 specimen), Feb. 7, 1911.

The females average larger than the males, as follows:

4 males, length, 65.2 (63–70); tail, 5.5 (5–7); extent, 275 (263–290), forearm, 36.5 (36–37); third metacarpal, 34 (33–35).

5 females, length, 66.6 (65–71); tail, 6.2 (6–7); extent, 280.5 (262–299); forearm, 37.8 (36–39); third metacarpal, 35.8 (34–37).

These specimens have been compared with topotypes of *Glossophaga elongata* Miller from the neighboring island of Curaçoa, as well as with topotypes of *G. longirostris*, with which latter they agree rather than with the former.

"One of the most abundant bats of this region; I found them in caves, tunnels, houses, etc. It is easily recognized by its long, round, extensile tongue." — M. A. C.

53. *Glossophaga soricina* (Pallas).

Eighteen specimens: 14 specimens (8 males, 6 females), Peru Mine, El Callao, May 7–13; 1 specimen, San Esteban, Nov. 7; 3 males, Aroa, Bolivar Railroad, Dec. 12.

The coloration is distinctly reddish brown in all the males and much less so in the females, which are dusky brown. There appears to be no appreciable sexual difference in size.

	Length.	Tail.	Expanse.
8 males:	62 (59–65);	7.3 (6–8);	260 (251–269).
5 females:	62.8 (58–67);	6.6 (6–7);	260.2 (250–265).

54. *Hemiderma perspicillatum* (Linné).

Series from three localities: Eleven specimens (5 males, 6 females), Peru Mine, El Callao, May 7–14. Twenty specimens (11 males, 9 females), San Esteban, Sept. 5–7, Nov. 3–9. Six specimens, El Hacha, Nov. 26, 30.

In each series the females exceed the males in size, as follows:

		Length.	Tail.	Expanse.
El Callao,	5 males,	61.1 (65-69);	7 (6-8);	319.6 (305-328).
"	6 females,	69 (65-72);	8.2 (7-10);	337.5 (335-346).
San Esteban,	11 males,	68.3 (65-71);	8 (6-10);	329.3 (311-345).
"	9 females,	68.2 (66-72);	8.6 (6.5-10);	335.5 (313-351).
El Hacha,	2 males,	66 (65-67);	7.5 (7-8);	329 (328-330).
"	4 females,	71.5 (68-74);	7.5 (6-9);	336.8 (316-348).

"This was the most abundant about the mines [Inca Mines, El Callao], being found in the lofts of houses as well as in the outer portion of the tunnels. They never penetrated very deep. I suppose the two shades of color in this form are due to age. The men at the mine nicknamed this species the 'drawingroom bat,' because in the mornings they were always found hanging to the ceiling of the draftsman's office."

"[The San Esteban and El Hacha series were taken] under culverts on the railroad and in a cave in the rocky cliffs along the river a short distance above Las Quiguas. The cave was small and damp, a mere hole in the cliff." — M. A. C.

55. *Sturnira lilium* (Geoffroy).

One specimen, El Hacha, Nov. 28.

"Taken in a hollow tree." — M. A. C.

56. *Uroderma bilobatum* Peters.

Two specimens, San Esteban, adult male, Oct. 31; Las Quiguas, young female (in first pelage), Sept. 22.

"[One of these specimens was] caught hanging to a banana leaf in a thick cluster of these plants. [The other] flew into a house at night and was caught. This species hangs on leaves in the forest or among bananas, etc.; it never enters caves or hollow trees." — M. A. C.

57. *Artibeus planirostris* Peters.

One specimen, male, Ciudad Bolivar, Sept. 17.

"Discovered hanging amongst a thick cluster of leaves in a roadside tree just outside of the town." — M. A. C.

58. *Artibeus cinereus* (Gervias).

One specimen, San Esteban, Nov. 9.

"A single specimen of this species was brought to me by a boy, who said he caught it in a small hole in the rocks by the river." — M. A. C.

DESMODONTIDÆ.

59. **Desmodus rotundus** (*Geoffroy*).

Eleven specimens, 3 males, 8 females: El Hacha, 1 (female), Nov. 30; San Esteban, 10 (3 males, 7 females), Nov. 8.

Seven adult females: Length, 81 (75-88); tail, 0; expanse, 414.7 (404-426); forearm, 60.1 (58-62); third metacarpal, 54 (51-55); thumb, 17.2 (17-18).

Three males: Length, 74.3 (73-76); tail, 0; expanse, 375.7 (369-379); forearm, 54 (54-54); third metacarpal, 46.5 (46-47); thumb, 15.3 (15-16). As shown by this series the males are much smaller than the females. The amount of individual variation is large.

"Two colonies of these repulsive creatures were found, one in the 'old' tunnel and one in a small cave on top of a ridge. They were very numerous in the old tunnel, probably 200 in all. They do not hang by the feet when it is possible to find a flat or sloping surface to lie on and frequent holes and cracks in the rock. They run about very rapidly, sometimes making short jumps. They are incredibly strong for their size and when caught become perfectly wild with rage, squealing and making every effort to bite. I can testify to their ability to fight, for I still bear a scar on one finger, where by a single snap my finger was slit to the bone and a small artery severed. The native name for the vampire is 'Chupa Burro,' although they do not distinguish between the real vampire and the other species."—M. A. C.

NATALIDÆ.

60. **Phodotes tumidirostris continentis** *Thomas*.

Seven specimens, San Esteban, Nov. 10.

Length (7 specimens), 98.7 (96-100); tail, 51.4 (50-54); extent, 280.4 (272-287); forearm, 39 (37-40); third metacarpal, 35.3 (33-36); tibia, 19.2 (19-19.4). There is no sexual difference in size, and the series is remarkably uniform in coloration.

"Taken *only* in the new water tunnel, and seen nowhere else. One end of the tunnel was closed (length about 200 feet) and these little bats always seemed to stay near the closed end. They hung to projections of rock along the sides of the tunnel, but *not* to the roof. They were not abundant."—M. A. C.

VESPERTILIONIDÆ.

61. *Eptesicus hilarii* (Geoffroy).

One specimen, male, Rio Yuruan, March 25. Length, 99; tail, 42; expanse, 303.

"Captured in the house at night."—M. A. C.

MOLOSSIDÆ.

62. *Promops milleri* Allen.

Eleven specimens, all adult except two, which are only about one-half grown. All are from Eldorado, Rio Cuyuni, April 14.

	Length.	Tail.	Expanse.
2 males:	133.5 (131-136);	44.2 (45-48);	434 (430-438).
7 females:	140 (135-148);	47 (44-50);	422 (412-444).

With the exception of the two young examples, which are deep black, the coloration of the whole series is very uniform sooty brown.

This series is from near the type locality (La Union, Venezuela) of my *Promops barbatus*, based on a single specimen, but this specimen is sharply distinct from any of this series, which, on the other hand, I am unable to separate from the series of *P. milleri* from Guayabamba, Peru.

"These bats were all caught in the loft of a house at Eldorado, where they were hanging in a great cluster on the side of a perpendicular timber. They had evidently occupied the place for some time for a great heap of excrement littered the floor below."—M. A. C.

63. *Molossus obscurus* (Geoffroy).

Rio Caura (Bull., XXVIII, p. 148).

One specimen, male, Eldorado, Rio Cuyuni, April 14.

"These bats are always found in the thatch of houses and they crawl about quite actively on a flat surface without attempting to fly."—M. A. C.

CEBIDÆ.

64. *Alouatta macconnelli* Elliot.

Rio Mato (Bull., XXVIII, 148).

Five specimens: El Llagual, 2 old females, Jan. 19 and 21; El Hacha, 2, male and female, Nov. 24 and Jan. 6; Paramo de Rosas, 1 male, March 20.

The 3 specimens from northern Venezuela do not differ appreciably in color or otherwise from 4 others from El Llagual and Rio Mocho. There is a noteworthy sexual difference in color, the males being much more intensely colored throughout than the females.

"Common on the Caura and on the Cuyuni, and in less numbers most everywhere from sea level up to 4000 feet (La Cumbre de Valencia), where heavy forest is found. Its presence is always quickly revealed in a locality by its tremendous roaring, which is really quite awe-inspiring. They are sluggish, morose brutes, impossible to tame, and are more often found in pairs or families than in troops. They will sit curled up for hours in the top of some giant tree, and as long as they believe themselves unseen, will not move, but even when disturbed, never move with the speed or agility of *Cebus* or *Ateles*.

"I have found them to be much troubled with 'screw worms,' especially around the neck. Other species seem to be able to remove them, as a rule. They are very tenacious of life, clinging to a branch after being riddled with shot, and even after death, only dropping after rigor mortis has passed and released the contracted muscles. They invariably howl at the first break of day and usually before a rain-storm. They are invariably very lean of body, being in that respect different from the other species, which at times are found exceedingly fat." — M. A. C.

65. *Ateles variegatus* Humboldt.

Rio Mato (Bull., XXVIII, p. 148).

Six specimens, 3 adult females, 1 nearly adult male, a young male and a young female a few weeks old, all from El Llagual (Caura district), Jan. 17 and 20, 1910.

The white on the forehead and cheeks is variable, being very strongly developed in two of the females and entirely lacking in the other; in the nearly adult male it is much less developed than in two of the females.

No.	30629,	ad.	♀,	total length,	1317;	tail,	810;	hind foot,	193.
"	30631,	"	♀,	"	1339;	"	874;	"	192.
"	30632,	"	♀,	"	1337;	"	880;	"	190.

No. 30629: "Soles black; vaginal appendage and ring about anus partly flesh-color; face black; edges of lips and upper eyelids slightly pale; iris brown."

The young differ from the adults in having no white on the forehead and cheeks and in having the limbs and tail wholly black. One of these specimens is the young of No. 30631, the other the young of No. 30632.

"The least abundant and hardest to shoot of the three species [of monkeys], ranging from sea level up to at least 2000 feet (El Llagual), but preferring the hills and inaccessible mountain sides. They are almost invariably seen in troops of from six to a dozen and are exceedingly shy, owing largely, I suspect, to the fact that they are pursued and shot by the natives for food. The speed with which they are able to travel through the tree tops is almost incredible, as with their long muscular legs and prehensile tails, they go leaping, swinging and crashing from tree to tree, catching now with one foot, now with the tail.

"They are as a rule very fat, and the flesh is really tender, sweet, and well flavored, providing one can forget what he is eating.

"The species is well distributed in Venezuela, but is not found in the scattered tracts of woodland in the savanna country, as are the other two species, but in heavily forested valleys, hills and mountains up to perhaps not more than 400 feet, probably less.

"I have never seen any species of monkey voluntarily descend to the ground in its wild state. All three species invariably carry the young on the back." — M. A. C.

66. *Cebus apiculatus* Elliot.

Maripa (Rio Caura), and Rio Mocho (Bull., XXVIII, p. 149).

Eleven specimens: El Llagual, 1 female, Jan. 22; La Bomba, 2 males, April 21; El Hacha, 4 males and 2 females, Nov. 5 and 24-28; Aroa, Bolivar Railroad, male and female, Dec. 14 and 16.

This fine series does not differ from our previous large series from the Rio Caura and Rio Mocho. There is the same wide range of individual variation noted in recording the Rio Caura specimens (*l. c.*, p. 149).

"This monkey I found to be by far the most abundant and least wary of the three species in all places visited on the Caura and in northeastern Venezuela. However they do not, as a rule, ascend to any great altitude, preferring the forest along the streams or anywhere in the comparatively low country. Almost invariably they will be seen in small troops of from a half dozen to twenty, very seldom a pair alone. While not as shy as the other species, they are nevertheless far from easy to shoot, and must be taken by surprise, or else they rapidly make their escape through the high tree-tops. They tame easily and make interesting and affectionate pets if not mistreated.

"Rare in the region of El Hacha and Aroa. They live up on the slopes above the valley, descending occasionally to feed on the corn, etc., planted on the lower slopes." — M. A. C.

