

Article XV.—DESCRIPTIONS OF TWO NEW OPOSSUMS OF THE GENUS *METACHIRUS*.

By J. A. ALLEN.

The Opossums of the genus *Metachirus* of Mexico and Central America had been referred to *D. quica* of Temminck, the type locality of which is the coast region of southeastern Brazil (*cf.* Allen, this Bulletin, XIII, 1900, p. 195), until in October of last year I separated the Central American form as *Metachirus fuscogriseus* (*J. c.*, p. 194), on the basis of a specimen supposed to have come from Colon. Through the kindness of Dr. C. Hart Merriam, Chief of the Biological Survey, U. S. Department of Agriculture, I have recently had opportunity to examine large series of specimens from Nicaragua and various localities in Mexico, numbering altogether 42 specimens. As probably no large series of examples of the genus *Metachirus* has ever before been brought together, it seems desirable to give a somewhat detailed account of this important collection.

***Metachirus fuscogriseus* Allen.**

Metachirus fuscogriseus ALLEN, Bull. Am. Mus. Nat. Hist., XIII, 1900, p. 194.

A number of specimens from Greytown and Bluefields, Nicaragua, agree well with the type of this species, supposed to have come from a point somewhat further south on the coast. There is, therefore, little to add to the original description of the species beyond noting the variations in the specimens of the present series due to age, season, etc.

The present material consists of 4 specimens, two adult males and two adult females, collected at Greytown, Feb. 7-10, 1892, by Dr. C. W. Richmond, now Assistant Curator of Birds at the U. S. National Museum; and 3 adults, 3 young adults, and 5 half-grown young, collected 50 miles above Bluefields on the Escondido River at various dates from May to November of the same year, also by Dr. Richmond, making in all 15 specimens from these two localities.

Three of the Greytown specimens are quite uniform in coloration, while the fourth is of a duller, browner black above and more strongly buffy below. The Bluefields adult and young

adult specimens are similar in coloration to those from Greytown, except in the case of one very old male, distinguished by its large size and a strong orange-rufous tinge on the cheeks, sides of the neck, and throat. This series shows, as in the case of *Didelphis*, that the animal increases greatly in size after reaching maturity. In the younger specimens the buff color of the ventral surface is restricted to the chest and the lower abdominal region, the two areas being connected by a narrow buffy median band, the sides of the abdomen being more or less plumbeous, with the tips of the hairs lighter, a condition often seen in various species of Muridæ, especially in *Neotoma*, *Oryzomys* and allied genera. The adult males are distinguished in the breeding season by a pale yellowish patch on the sides of the lower abdomen just in front of the thighs, the corresponding area in the female being whitish, and the hair at these points is of a little different texture from that of the surrounding parts.

EXTERNAL MEASUREMENTS.

Nat. Mus. No.	LOCALITY.	Sex.	Total length.	Head and body.	Tail.	Tarsus.	Tail ratio.
51442	Greytown, Nicaragua.....	♂	586	282	304	45	108
51443	" " ".....	♂	530	257	273	40	107
51444	" " ".....	♂	529	261	268	41.5	103
51445	" " ".....	♂	519	245	274	40	112
51446	Near Bluefields, ¹ Nicaragua.....	♂	625	305	320	46	105
50877	" " ".....	♂	562	265	297	41	113
51380	" " ".....	♂	518	243	275	41	113
	Average, 3 males.....		580	281	299	44	106
	4 females.....		532	254	279	41	109.8

¹ Fifty miles from Bluefields, on the Escondido River.

MEASUREMENTS OF SKULLS.

Mus. No.	LOCALITY.	Sex.	Total length.	Basal length.	Nasals.			Zyg. breadth.	Postorb. proc.	Postorb. constr.	Mastoid breadth.	Palate.		Upper toothrow.	Molar series.
					Length.	Gr. breadth.	Least br'dth.					Length.	Br'dth at m ⁴ outside.		
51442	Greytown, Nicaragua	♂	77.3	65	34.6	9.0	5	38.5	14.3	0	40	21.4	26	14	
51443	" " "	♂	66	60	32.3	8.3	5	34.5	12.5	23	38	20	25	14	
50877	Bluefields,	♂	66	60	32.3	8.3	5	33	12	18	38	20	25	14	
51444	" " "	♂	79	70	35.3	9	5.6	40.5	15	0	43	25.3	31.6	14	

Metachirus fuscogriseus pallidus, subsp. nov.

Type, No. 58158, U. S. Nat. Mus., ♂ adult, Orizaba, Vera Cruz, Mexico, June 24, 1894. Collected by E. W. Nelson and E. A. Goldman.

Similar to *M. fuscogriseus*, but the coloration is much lighter, the eye spots are larger, and the black of the head less intense and more restricted in area posteriorly; size and proportions apparently the same as in *fuscogriseus*.

Measurements.—Type: Total length, 627; head and body, 315; tail, 312; tarsus, 47 (collector's measurements in the flesh). The skin measurements show different proportions. While the total length is the same as above given, the length of the head and body is 310, and of the tail 317, which would give about the normal tail ratio. For further measurements see table of measurements below.

Skull.—The skull presents no appreciable difference from skulls of corresponding age of *M. fuscogriseus* from Nicaragua. The measurements of the type skull are as follows: Total length, 77; basal length,¹ 69; length of nasals, 37; zygomatic breadth, 39; postorbital processes, 14.3; postorbital constriction, 9; mastoid breadth, 25; palatal length, 42; palatal breadth at mm⁴ (including teeth), 22.5; upper toothrow, 27; upper molar series, 15. The specimen selected for type is much above average size, as shown by the measurements tabulated below.

EXTERNAL MEASUREMENTS.

Nat. Mus. No.	LOCALITY.	Sex.	Total Length.	Head and body.	Tail.	Tarsus.	Tail ratio.	
100189	Montecristo, Tabasco, Mex.	♂	555	267	288	44.5	108	
100028	Frontera, " "	♂	556	265	291	46	110	
100027	" " " "	♂	508	254	254	43.5	100	
100034	Teapa, " "	♂	585	275	310	47	111	
100031	" " " "	♂	582	280	302	47	107	
100033	" " " "	♂	542	253	289	42.5	110	
100032	" " " "	♂	542	254	288	41.5	112	
100030	" " " "	♂	505	241	264	41	109.5	
100029	" " " "	♂	558	265	293	43	110	
77908	Huehuetan, Chiapas, " "	♂	545	264	281	46	106	
78003	Chicharras, " "	♂	524	254	270	43	106	
58158	Orizaba, Vera Cruz, " "	♂	627	315	312	47	99	
58157	" " " "	♂	490	250	240	38	96	
63664	Montzorongó, " "	♂	488	220	260	40	118	
65403	Tuxtepec, Orizaba, " "	♂	580	265	315	46	119	
65404	" " " "	♂	580	280	300	45	107	
92992	Metaltoyuca, Puebla, " "	♂	517	240	277	43	115.4	
92993	" " " "	♂	527	245	282	44	115	
92994	" " " "	♂	578	298	280	48	94	
92995	" " " "	♂	585	283	302	46	106.7	
92991	" " " "	♂	475	222	253	40	114	
Average {		Teapa, etc., Tabasco,	4 ♂♂	569.5	272	298	46	109
		" " " "	5 ♀♀	535	254	277.6	42.5	108.3
		Tuxtepec, Orizaba,	2 ♂♂	580	272.5	307.5	45.5	113
		Metaltoyuca, Puebla,	4 ♂♂	551.5	266.5	285	45.2	110.3

¹ From posterior base of incisors to front border of foramen magnum.

MEASUREMENTS OF SKULLS.

Nat. Mus. No.	LOCALITY.	Sex.	NASALS.					PALATE.				Molar series.			
			Total length.	Basal length.	Length.	Gr. br'dth.	Least br'dth.	Zygom. br'dth.	Postorb. proc.	Postorb. constr.	Mastoid br'dth.		Length.	Br'dth at m ^s , outside.	Upper toothrow.
58156	Orizaba, Vera Cruz, Mex.	♂	74	62	36	8	5	32.5	13	9	24	40	21	25	14
58158	"	♂	77	69	37	9.3	5	30	14.3	9	25	42	22.5	27	15
63663	Chichicaxtle, "	♂	71.3	65.5	34	8	4.5	38	14	8.5	22.3	40	20.7	25	13.5
65405	Catemaco, "	♂	73	67	34	8	4.3	37	13.5	8.5	22.5	40	21	26	14.3
63664	Motzorongo, "	♂	60	55	28	7	3.5	30	10.5	8.5	18	35	18.5	23.3	13
93001	Papantla, "	♂	64	57.5	30	7	4.5	32	11.3	8.6	19	36	19.5	25	14
93002	"	♂	64.5	57.5	30	6.6	4	31.5	11.3	8.5	19	36	19.5	24	13.3
65404	Tuxtepec, Oaxaca,	♂	69	61.5	32	7.6	4	34	12.5	8.3	21	38	21	25.3	14
77908	Huehuetan, Chiapas,	♂	69	61.7	32	7.3	4	35	12.7	8.2	20	39	20	25.5	14
78003	Chicharras,	♂	67	59	33	7.5	4.2	32.2	11.3	8.4	20	38	19	24	13.5
92991	Metaltoyuca, Puebla	♂	61	54	27	7	3.4	30	10	8	18.2	34	19	23	13
92992	"	♂	62	57	30.2	7.5	4	33	11.2	8.7	19.5	36	20	23.5	13
92993	"	♂	61.6	60	30	6.5	4	32	10.5	8.2	20	38	20	24.6	13.5
92994	"	♂	74.3	68	35	8.2	5.4	41	16	9	23	41	21	24	13
92995	"	♂	69	63.5	33	7	4	35.5	12	8.5	22	39	21	25	13
100027	Frontera, Tabasco,	♂	66.3	61	32.2	8	4.3	33	12	8.5	20	38	20	25	14
100030	Teapa, "	♂	64.5	59	29	7	4	32.3	11.4	8	20	37.3	20	25	13.6
100032	"	♂	63	57.5	30.5	7.2	4	32	11.2	8	19.5	36	19.7	24	13.2
100033	"	♂	64	58.4	30.2	7	4	33	10.7	8.2	19.5	36	20.3	25	13
100031	"	♂	74.5	67.5	35.5	8	5	38	13	8	22	41	21	26	14.2
100028	Frontera, "	♂	70	63	35	7.3	4.3	35	12.5	7	21	39.5	20	25.5	14

This pale northern form of *Metachirus fuscogriseus* is represented by a considerable number of specimens from the States of Tabasco, Vera Cruz, Oaxaca, and Puebla. They vary a little in coloration above, some being darker than others, but the difference is slight and partly seasonal. The lower surface varies in general tone from yellowish white to deep buffy white. Young specimens show gray areas on the sides of the abdomen, as in *M. fuscogriseus*. All the adult males show more or less strongly a sulphur yellow patch on the sides of the abdomen in front of the thighs, this tint varying from pale yellowish to strong greenish yellow. Several specimens differ from the average style through the intensity of the buff coloration on the throat and sides of the neck, which tint sometimes prevails as a strong buff wash over most of the lower surface. The greenish yellow patch in front of the thighs is characterized by a slightly different texture of the hair, and is represented in the female by a clearer white than the surrounding parts. Apparently it is a glandular area, and most active in the breeding season, corresponding doubtless to the glandular area on the lower throat and chest in *Didelphis*.

As shown in the tables of measurements, there is considerable variation in size, and some in proportions, in animals that have reached maturity, measurements being given of no specimens in which the last molar has not come into use, with other evidences of maturity. The largest specimen, which has perhaps unfortunately been taken for the type, is equalled in size by a single specimen from Greytown, also an old male. The ratio of length of tail to length of head and body varies in specimens from the same locality, as at Metlaltoyuca, Puebla, from 94 to 115, with a total range of variation in this respect from 94 to 119, the average being 109. In young and middle-aged skulls there is barely a trace of a sagittal crest, but in old males it attains a height of 2 to 3 mm. The postorbital processes are but slightly developed in early life, reaching only a moderate development even in old age. The postorbital constriction is much less than in the allied genus *Didelphis*, to which in many respects the skull is closely similar. The nasals, however, are more pointed, both posteriorly and anteriorly, terminating at both extremities in attenuated points. The large series from Teapa and Frontera, Tabasco, appear not to show any average difference, either in coloration or size, from specimens from Metlaltoyuca, Puebla, and further subdivision of the material seems at present unnecessary.

***Metachirus grisescens*, sp. nov.**

Type, No. 15072, Am. Mus. Nat. Hist., ♀ adult, Rio Cauca, Colombia, June, 1899; J. H. Batty.

Somewhat similar to *Metachirus fuscogriseus pallidus*, but much paler throughout with the tail uniform dark brown, not light at the tip as in the *M. fuscogriseus* group. General coloration above gray, varied with black; below whitish, with a slight buffy suffusion; eye spots and head markings as in *M. fuscogriseus*, the black, however, less intense, and much less extended posteriorly. While the general coloration above is blackish varied with gray in *M. fuscogriseus*, in the present species it is gray varied with blackish.

Measurements (from the dried skin).—Total length, 510; head and body, 260; tail, 240; tarsus, 38; tail ratio, about 91. These measurements are only approximate, as the tail is not wholly filled out and the specimen is not well prepared, the skin evidently being much shrunken. The ears are small, about 20 by 17 mm. in the dry skin.

Skull.—The skull differs from that of *Metachirus fuscogriseus* in the great expansion of the posterior portion of the nasals, which maintain a uniform

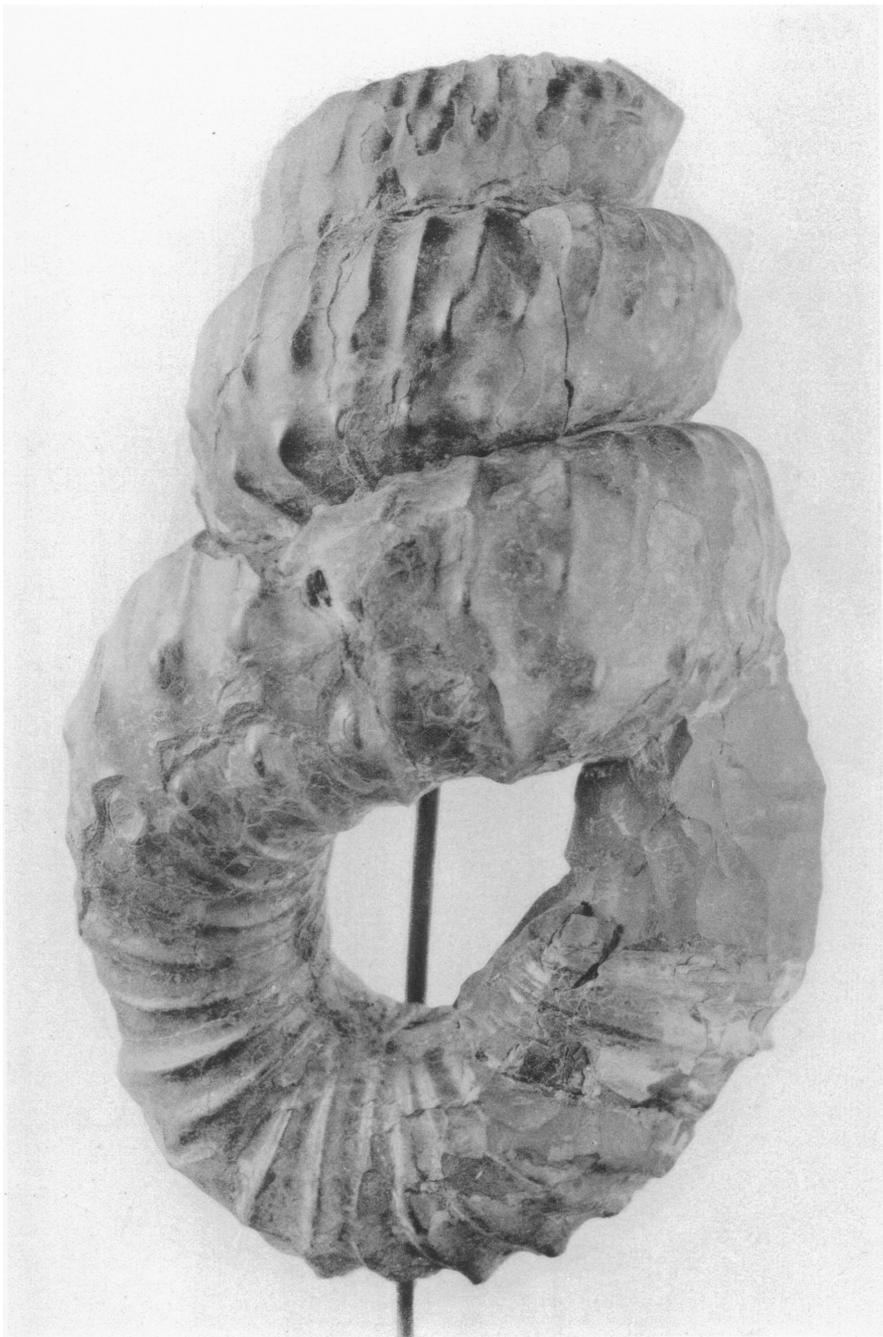
breadth for about 4 mm. beyond the point of greatest expansion, then taper suddenly and end abruptly, instead of converging evenly to a slender point. The palatal vacuities are also unusually developed, as much so as is ordinarily the case in *Didelphis*. The skull is large for the size of the skin, which is sexed by the collector as a female. Total length, 68; basal length, 62; length of nasals, 33; zygomatic breadth, 36; postorbital processes, 15; postorbital constriction, 9; mastoid breadth, 37.6; breadth across mm ⁴, 19.5; length of upper toothrow, 23; upper molar series, 13.

This species is based on a single specimen from Rio Cauca, Colombia, collected by Mr. J. H. Batty, June, 1899. It differs from the Mexican and Central American forms in its very light coloration and in the tail being uniformly blackish brown without the usual light tip. The skull is peculiar for a member of this genus in the large size of the palatal vacuities and in the great breadth of the posterior third of the nasals, which have more the form of the nasals in *M. nudicaudatus*. It differs, however, from this species through its much larger size and different coloration, and in the basal two inches of the tail being furred.



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HELICOCERAS STEVENSONI, N. SP.
Front View, Nat. Size.



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HELICOCERAS STEVENSONI, N. SP.

Back view, Nat. Size.