

**Article XL.**— DIAGNOSES OF APPARENTLY NEW COLOMBIAN  
BIRDS. III.

BY FRANK M. CHAPMAN.

PLATE XIII, SKETCH MAP OF SOUTHWESTERN COLOMBIA.<sup>1</sup>

This is the third paper based on the American Museum's recently acquired collections from Colombia. Like its predecessors<sup>2</sup> it contains descriptions of proposed new species and subspecies which are published at this time to secure the types for this Museum and to invite criticism which may be embodied in the final report on our work in Colombia.

Continued study of our now very large Colombian collections has revealed the need of specimens from both Antioquia and eastern Panama, particularly in solving the very complex distributional problems which have arisen as examination of the material at hand progresses. Mr. L. E. Miller has therefore returned to Colombia taking with him Mr. Howarth Boyle, to make a section across the Central and Western Andes from Puerto Berrio on the Magdalena to the Atrato Valley, and to determine the character of the Tropical Zone and its fauna at the northern end of these chains of mountains, and Mr. W. B. Richardson has gone to eastern Panama to make the preliminary arrangements for an expedition to the Espiritu Santo Mountains, on which he will be joined later by Mr. H. E. Anthony.

The explorations of the last-named gentlemen should go far toward ascertaining to what extent the mountains of eastern Panama have served as a connecting link between those of Chiriqui and northwestern Colombia, and in what measure they have separated the streams of life that have flowed into Panama from the east and south.

The satisfactory determination of many of the forms described beyond would not have been possible had not fellow ornithologists promptly and generously met my requests for the loan of specimens for comparison. For such loans I am indebted to Dr. C. W. Richmond of the United States National Museum, Mr. E. W. Nelson of the Biological Survey, Mr. Witmer Stone of the Academy of Natural Sciences of Philadelphia, Mr. Outram Bangs of the Museum of Comparative Zoölogy, Mr. C. B. Cory of the Field Museum, Mr. W. E. C. Todd of the Carnegie Museum, and Mr. Thomas E. Penard of Arlington, Mass.

<sup>1</sup> Reproduced from Art. XII, this volume.

<sup>2</sup> Bull. Amer. Mus. Nat. Hist., XXXI, July 23, 1912, pp. 139-166; XXXIII, Mch. 19, 1914, pp. 167-192.

As in the preceding papers of this series, I have used the color terms contained in Mr. Ridgway's 'Color Standards and Nomenclature.'

**Streptoprocne zonaris altissima** subsp. nov.

*Char. subsp.*— Agreeing in size with *S. z. zonaris* of southern Brazil, but bill heavier, the ridge of the culmen more prominent, general color, particularly of the inner wing-quills and wing-coverts greener, forehead averaging paler, the breast-band broader with the terminal half, rather than the terminal third, of its feathers white, the edge of the wing, as far as the primary coverts and some of the lesser coverts, distinctly margined with white; differs more pronouncedly from *S. z. albicincta* in the characters named, and in its larger size.

*Type.*— No. 111521, Am. Mus. Nat. Hist., ♂ ad., Laguneta, alt. 10,300 ft., near Quindio Pass, Central Andes, Colombia, Sept. 11, 1911; A. A. Allen and L. E. Miller.

*Range.*— Temperate (and Alpine?) Zone of the Andes of Colombia and Ecuador southward, doubtless, to northern Argentina.

*Remarks.*— The discovery that even birds of such exceptional power of flight as the large Swifts may have representative forms in zones separated by a few thousand feet is one of the most interesting results of our studies of zonal distribution in Colombia. *Streptoprocne zonaris albicincta* is distributed throughout the Tropical Zone of Colombia and ascends to at least the lower border of the Subtropical Zone. We have taken it from San Antonio in the Western Andes to Buena Vista in the Eastern Andes, securing in all 16 specimens. The form here described, however, we have taken in Colombia only at Laguneta, in the Temperate Zone (one specimen) and on Mt. Pichincha, Ecuador (3 specimens). The differences between *altissima* and *albicincta* are more striking than those which exist between *zonaris* and *albicincta*. There is no indication of intergradation among our 20 Colombian and Ecuadorian specimens of both forms and it is not probable, in my opinion, that *albicincta* and *altissima* intergrade *inter se*, but that their connectant is true *zonaris*. The intergradation of *altissima* with *zonaris* may reasonably be looked for at some point where increasing south latitude brings the Temperate Zone to the altitude at which *zonaris* occurs, let us say northwestern Argentina, while the intergradation of *albicincta* with *zonaris* may be looked for in that region south of the Amazon where the Amazonian forests merge into or interdigitate with the highlands of southern Brazil.

The proper application of the name *zonaris* must be considered in connection with this proposed new form. In describing his *Hirundo zonaris*

Shaw gave no type locality. As Mr. Ridgway states, however, the type-locality of this form "is assumed to be Brazil," and under this assumption he gives the range of this race as "Southern Brazil and northern Argentina," while the range of *albicincta* is said to be "Northern South America to Costa Rica."<sup>1</sup> This arrangement appears to have correctly expressed our knowledge of the distribution of the South American forms of this species at the time it was written. Nevertheless Brabourne and Chubb (Bds. S. A., I, 1912, p. 102) give only "British Guiana" as the range of *albicincta*, while that of *zonaris* is said to be "Colombia; Venezuela; Ecuador; Peru; Bolivia; Brazil," and they "suggest" "Colombia" as the type-locality of this form. It does not seem to me, however, to be desirable to adopt this suggestion and for the following reasons: (1) As Ridgway has said the type-locality of *zonaris* has heretofore been considered to be Brazil. (2) Ridgway's (*l. c.*) restriction<sup>2</sup> of the name *zonaris* to the form of "Southern Brazil and northern Argentina" antedates Brabourne and Chubb's suggestion. (3) No definite locality in Colombia is named and the presence of two races of *zonaris* in that country makes it uncertain, under their restriction of *albicincta* to British Guiana, to which one they would apply the name *zonaris*. (4) The smaller and heretofore only recognized race from Colombia has already been described as *Hemiprocne minor* by Lawrence and examination of his type, in the American Museum, shows it to be a specimen of the small Tropical Zone bird which Ridgway refers to *albicincta*. I have seen no topotypical (Guiana) specimens of this bird but it is unlikely that they differ materially from those of tropical Colombia. If they do, the Colombian bird may stand as *S. z. minor* without materially affecting the case. (5) It is most unlikely that Shaw, writing in 1796, had specimens of the Swift of the High Andes. I should, therefore, arrange the South American races of *Streptoprocne zonaris* as follows:

1. *S. z. zonaris* (Shaw). Southern Brazil and northern Argentina (Chapada, Matto Grosso, Brazil, proposed as type-locality). Wied's type of "*Hirundo collaris*" agrees with Chapada specimens.

2. *S. z. albicincta* (Cab.). Northern South America (from the southern limits of Amazonia?) to Costa Rica. (Type locality, Guiana.)

3. *S. z. altissima* Chapm. Temperate (and Alpine?) Zone of Colombia and Ecuador, and southward. (Type locality, Laguneta, Central Andes, Col.)

<sup>1</sup> Bull. U. S. N. M. 50, v, 1911, p. 697.

<sup>2</sup> Such restriction was in effect made by Cabanis in describing (*J. f. O.*, 1862, p. 165) "*Hemiprocne albicincta*" the range of which was said to be from "Mexico to Guiana" while *zonaris* is referred to as "Brazilian."

## Measurements of Males.

	Locality	Wing	Tail	Tarsus	Culmen	Width of bill at base
<i>S. z. albissima</i> ,	Laguneta, Col.	212	70.5	25	11	8
" "	Pichincha, Ecu.	210	68	25.5	10.5	8
" "	" "	212	67.5	25.5	11.5	8
" "	" "	215	73	25	11	8
<i>S. z. zonaris</i> ,	Chapada, Matto					
	Grosso, Brazil	212	71	25.5	11	7.5
" "	" "	212	70	25.5	10	7
" "	" "	210	70	25.5	10	7.5
<i>S. z. albicincta</i> ,	Las Lomitas, Col.	196	71	20	9	6
" "	San Antonio, "	200	65	21.5	9	7
" "	Chicoral, "	201	67	20.5	10	7
" "	Quetame, "	193	69	22	10	7
" "	Buenavista, "	200	73	21	9	6.5
" "	Villavicencio, "	205	74	23.5	9.5	7.5

**Trogonurus curucui cupreicauda** subsp. nov.

*Char. subsp.*— Male most nearly resembling *T. curucui curucui*<sup>1</sup> but exposed upper portions of six inner tail-feathers rich copper-bronze (as in *T. ambiguus*), in some specimens with, in others without, greenish reflections; bars of three outer pairs of tail-feathers wider, as in *T. c. tenellus*; wing-coverts more broadly barred; no white evident at the junction of green breast with orange abdomen; resembles *T. c. tenellus* in the barring of the outer tail-feathers and wing-coverts, but differs in its copper-bronze tail, absence of white pectoral band, and more deeply colored abdominal region.

Female most like *T. c. curucui* but wing-coverts apparently more widely barred; the abdomen more deeply colored than in *T. c. tenellus*, the wing-coverts more broadly barred, the breast, at junction of brown and orange, without, or with but slight indication of the conspicuous white or grayish pectoral band.

*Type.*— No. 123,271, Am. Mus. Nat. Hist., ♂ ad., Bagado (alt. 1000 ft.), Choco, Colombia, Sept. 25, 1912; Mrs. E. L. Kerr.

*Range.*— Tropical Zone of the Pacific coast of Colombia, south to Western Ecuador<sup>2</sup> (?); east to the Magdalena Valley.

*Remarks.*— Of this well-marked race we have the following specimens: Baudo (2500 ft.), 1 male ad., 1 female, ad.; Bagado (1000 ft.), 1 male ad.; Juntas de Tamaná, 1 female ad.; San José, 1 male im.; Barbacoas, 2 males ad., 2 males im., 2 females ad.; west of Honda, 1 female ad.

While the last-named specimen agrees closely with others from the Pacific coast, the extension of the range of this form to the Magdalena Valley

<sup>1</sup> Cf. Ridgw., Bull. U. S. N. M., 50, V, 1911, p. 764.

<sup>2</sup> Cf. Salvad. & Festa, Boll. Mus. Tor., XV, 368, p. 317.

would be more satisfactory if based on males. *Trogon atricollis*, however, is recorded by Sclater and Salvin (P. Z. S., 1879, p. 535) from Remedios and Neche in Antioquia, and the faunal affinities of this and the Pacific coast region would lead us to believe that the form here described was common to both.

For the same reason it seems probable that the bird recorded by Salvadori and Festa (*l. c.*) from the Rio Peripa in western Ecuador is also referable to *cupreicauda*.

Of true *curucui* we have four males and a female, all adult from British Guiana, while *T. c. tenellus* is represented by the following specimens: Panama R. R., 3 males ad., 2 females, ad.; Boruca, Costa Rica, 1 male ad., 2 males, im., 1 female, ad.; Ottiro, C. R., 1 male, ad.; Matagalpa, Nicaragua, 2 males, ad.; Chontales, Nic., 1 male, ad.; Rio Grande, Nic., 1 male ad.

I am in doubt as to the identity of an adult male from La Murelia in the Caquetá region. It has the tail more coppery than in the most extreme specimen of *cupreicauda*, there is a more evident white pectoral band, and the wing-coverts are less broadly barred, but in other respects it agrees with the Pacific coast bird.

### ***Chrysotrogon caligatus columbianus* subsp. nov.**

*Char. subsp.*—Resembling *C. c. caligatus* (Gould) of Central America in the vermiculation of the wings and feathering of the tarsus, but with the head blue or purplish as in *C. violaceus* (= *meridionalis*) and *C. ramonianus*; size, particularly of bill, smaller than in allies.

*Type.*—No. 121664, Am. Mus. Nat. Hist., ♂ ad., Opon, Central Magdalena River, Colombia, Jan. 27, 1913; Geo. K. Cherrie.

*Range.*—Tropical Zone of Colombia between the Western and Eastern Andes, (Honda, Opon, Puerto Berrio, Santa Marta, Remedios, Antioquia; Naranjo, near Bucaramanga).

*Remarks.*—Colombian specimens of this species have heretofore been referred to *caligatus*,<sup>1</sup> but the five adult males in our collection have the blue or purplish, which in true *caligatus* is confined to the nape, extended forward to the forehead or at least to a point opposite the center of the eye. They therefore agree in this character with average specimens of *violaceus* but in other respects except size, including the feathering of the tarsus, are like *caligatus*.

<sup>1</sup> Wyatt, *Ibis*, 1871, p. 374 (Naranjo, alt. 2500 ft., near Bucaramanga); Sclater and Salvin, P. Z. S., 1879, p. 535 (Remedios, alt. 2360 ft., Antioquia); Allen, *Bull. A. M. N. H.*, XIII, 1900, p. 135 (Cagualito, Minca, Santa Marta; specimens in Am. Mus.); Ridgway, *Bull. U. S. N. M.*, 50, V, p. 789 (20 miles w. of Honda; specimen in Am. Mus.).

Not one specimen in our series of males of *caligatus* from Yucatan, southern Mexico, Nicaragua, Costa Rica, Panama (including the type of *T. concinnus* Lawr.), and Esmeraldas, Ecuador, has the bluish of the nape so developed anteriorly as in any of the Colombian specimens which, therefore, cannot be properly referred to the Central American and west Ecuadorian form. It should be noted that *caligatus* has not as yet been recorded from the Pacific coast of Colombia.

It will be observed that the proposed new form to some extent bridges the gap between *caligatus* and *violaceus* and in spite of the differences in the feathering of their tarsi it seems not improbable that these two forms will be found to intergrade. As the appended measurements show there is less difference in size between specimens from Nicaragua and Ecuador than there is between those from the Caribbean Coast of Colombia at Santa Marta and the Magdalena Valley. The Santa Marta birds, however, are geographically interposed between Panama and Trinidad, while the Magdalena River form (true *columbianus*) is an isolated offshoot removed from the direct line of geographical intergradation.

*Measurements of Males.*

Locality	Wing	Tail	Bill from Nostril
Nicaragua	120	123.5	12.0
"	118.5	121.	12.
"	117.5	126.5	11.5
Panama R. R.	112.5	121.5	11.5
"	110.5	115.0	11.5
Esmeraldas, Ecuador	116.7	119.0	11.
" "	113.	115.5	12.5
" "	110.5	117.0	12.0
Santa Marta, Colombia	117.0	127.5	11.
" " "	114.5	120.5	10.5
Magdalena River	105.5	114.	10.0
" "	110.5	118.0	10.0
" "	104.5	114.5	10.5
Trinidad	117.0	115.	12.0
"	116.	113.5	12.
"	112.5	117.5	12.5

***Eubucco bourcieri occidentalis* subsp. nov.**

*Capito bourcieri* (nec Lafr.) SCL. & SALV., P. Z. S., 1879, p. 538 (Frontino, Antioquia).

*[Capito] salvini* (nec Shelley) DALMAS, Bull. Soc. Zool. France, 1900, p. 180 (Las Cruces = San Antonio, Col.).

*Capito bourcierii salvini* (nec Shelley) HELLM., P. Z. S., 1911, p. 1199 (Loma Hermosa, R. Jamaraya, Pueblo Rico, Col.).

*Eubucco bourcierii æquatorialis* (part, nec Salvad. & Festa) RIDGW. Bull. U. S. N. M., 50, VI, p. 315 (northwestern Colombia).

*Char. subsp.*— Similar to *E. b. salvini* but more richly colored and averaging larger; red of throat slightly deeper and more clearly defined or more sharply contrasted with the tawny orange of the breast, this last-named color deeper and of greater extent both laterally and posteriorly; flanks and abdomen appreciably yellower.

*Type.*— No. 107955. Am. Mus. Nat. Hist., ♂ ad., San Antonio (6600 ft.), Western Andes, above Cali, Colombia, Jan. 6, 1911; W. B. Richardson.

*Remarks.*— After comparison of six adult males from San Antonio with fifteen from western Panama and Costa Rica I cannot follow Hellmayr and Dalmas in referring the west Colombian bird to the form found in Chiriqui and Costa Rica. The differences between males from these two regions have already been pointed out by Ridgway who, in default of specimens from Ecuador, referred west Colombian birds to *æquatorialis*. The latter, however, as shown by two males in our collection from Gualea and Rio de Oro, western Ecuador, is a quite different form without tawny orange on the underparts.

With the race which Ridgway has wrongly identified as *shelleyi*, and for which I below propose the name *orientalis*, the west Colombian bird requires comparison. Among other differences, however, the male of *occidentalis* has the sides of the breast tawny orange, not sulphur yellow, while the female lacks the blue frontlet of the east Ecuadorian bird.

### ***Eubucco bourcierii orientalis* subsp. nov.**

*Eubucco bourcierii shelleyi* (nec Dalmas) RIDGW., Bull. 50, VI, U. S. N. M., 1914, p. 315.

*Char. subsp.*— Similar to *E. b. salvini* but male with the sides of the breast sulphur-yellow; female with the posterior margin of the black frontlet blue.

*Type.*— No. 129576, Am. Mus. Nat. Hist., ♂ ad., Zamora (2000 ft.), Prov. Loja, eastern slope of Andes, Ecuador; Nov. 5, 1913; W. B. Richardson.

*Remarks.*— After an examination of the type, Hellmayr (P. Z. S. 1911, p. 1200) has shown that *Capito shelleyi* Dalmas (Bull. Soc. Zool. France, Nov. 1900, p. 179) is based not on the bird of the Napo region, as Dalmas erroneously believed, but on the bird of western Ecuador, which Salvadori and Festa (Boll. Mus. Zool. Torino, XV, 368, Feb. 1900, p. 22) had already described as *Capito æquatorialis*, and of which, therefore, *shelleyi* is a synonym.

Ridgway (*l. c.*) misled by the locality given by Dalmas, and lacking specimens of *æquatorialis*, has identified a 'Napo' skin of *orientalis* in the American Museum as *shelleyi*, but in doing so states that it has the breast tawny-orange, and in this respect does not agree with Dalmas' description.

'Quito' skins, like those from Bogotá, are usually without definite locality and may come from either the Amazonian (Napo) or Pacific (Gualea, Nanegal, etc.) slope of the Andes.

Salvadori and Festa, and Hellmayr have shown that the form from western Ecuador is "immediately recognizable by the crimson of the throat and foreneck being abruptly contrasted with the clear sulphur-yellow belly without any orange tinge" (Hellm.) and their observations are confirmed by two males collected by Richardson at Gualea and Rio de Oro, Manavi, respectively. Three females collected by Richardson at Gualea and one at Naranjo, Prov. Guayas, further show that in *æquatorialis*, as in *salvini* and *occidentalis*, this sex has the frontlet black without a posterior band of blue. On the other hand, three females of *orientalis*, collected by Richardson at Zamora, the type-locality, have a blue band at the posterior margin of the frontlet. The case seems to be complicated by Dalmas' (*l. c.* p. 180) statement that the female of *shelleyi* has the "front terminé d'une bande bleuâtre." Here again, however, the inaccurate or indefinite data accompanying native-made skins has led to incorrect conclusions, and it is evident that Dalmas after describing as *Capito shelleyi*, a male which he believed to have come from the Napo region but which, as Hellmayr has shown, represents the form of the Pacific slope, referred to his proposed new species a female which actually did come from the Napo region, but which in truth belongs not to "*shelleyi*" but to the race for which I have suggested the name *orientalis*.

In spite of its close resemblance to *E. b. salvini*, its distribution and the coloration of the female indicate that the relationships of *orientalis* are actually with *E. b. bourcierii*, the only form of this bird inhabiting the Eastern Andes of Colombia, whence we have specimens from as far south as Andalusia and San Agustin. The females of *bourcierii* and *orientalis* agree and differ from the other members of the group in having a blue band on the forehead, while the male of *orientalis* has the sides of the breast sulphur-yellow as in *bourcierii*. In the male of *bourcierii*, however, the red of the throat extends over the breast to the abdomen and there is little or no tawny orange on the underparts, while in *orientalis* the amount and disposition of red and tawny orange below is much as in *salvini*.

If I have correctly determined the specimens in our collection the following forms of *Eubucco bourcierii* may be recognized:

1. *Eubucco bourcierii salvini* (Shelley). Subtropical Zone in Costa Rica and western Panama.
2. *Eubucco bourcierii occidentalis* Nob. Subtropical Zone of the Western Andes of Colombia.
3. *Eubucco bourcierii æquatorialis* (Salvad. and Festa). Subtropical and upper border of the Tropical Zones of the Pacific slope of the Ecuadorian Andes.



4. *Eubucco bourcierii bourcierii* (Laftr.). Subtropical Zone of the eastern slope of the Central Andes and western slope of the Eastern Andes of Colombia.

5. *Eubucco bourcierii orientalis* Nob. Subtropical and upper border of the Tropical Zone of the Atlantic slope of the Ecuadorian Andes.

*Measurements of Males.*

	Locality	Wing	Tail	Culmen
<i>E. b. salvini</i>	Chitra, Chiriqui	71	48	19
" "	" "	69.5	45	19
" "	Boquete, "	73	50	19
" "	" "	67	—	19
<i>E. b. occidentalis</i>	San Antonio, Col.	75.5	51	21
" "	" " "	75	50	20
" "	" " "	76	51	19
" "	Lomitas "	75.5	51	20
<i>E. b. aequatorialis</i>	Gualea, Ecuador	74	51	21
" "	Río de Oro, "	75	49.5	21
<i>E. b. bourcierii</i>	San Agustín, Col.	72.5	50	19
" "	La Palma, "	73	51	17.5
" "	Andalucía, "	74	49	19
<i>E. b. orientalis</i>	Zamora, Ecuador	71	50	17.5
" "	" "	72	51	18
" "	" "	69	50	18

***Chrysoptilus punctigula striatigularis* subsp. nov.**

*Char. subsp.*— Differs from all other described forms of *Chrysoptilus punctigula*, except *C. p. uhjelyi*, in having the throat white streaked with black instead of black spotted with white; differs from *C. p. uhjelyi* in being darker, with the spots below, particularly on the flanks, larger, the upperparts and wings with clearly defined broad black bars (much narrower and nearly obsolete, dorsally, in *uhjelyi*); differing from *C. p. punctipectus* in the pattern of the throat, as described above, in being browner above and in having the spots of the underparts larger, more numerous, and extending to the flanks and abdominal region.

*Type.*— No. 108291, Am. Mus. Nat. Hist., ♀ ad., Cali, 3500 ft., Cauca Valley, Colombia, May 11, 1911; L. E. Miller.

*Range.*— Tropical Zone of Colombia west of the Eastern Andes and south of the semi-arid Caribbean coastal region.

*Remarks.*— The occurrence of *Chrysoptilus punctigula punctipectus* in the Tropical Zone of the eastern slope of the Eastern Andes and of *C. p. striatigularis* in this zone on the western slope of the same range brings both forms into the Bogotá region and hence into 'Bogotá' collections. In default of proper data their well-marked racial differences have evidently been considered to represent individual variations and we have therefore an additional illustration of the confusion wrought by the use of unlabeled skins from a region containing at least two distinct faunas and double the number of zones.

Our specimens of *striatigularis* are from the following localities:

Near Honda, 1; Puerto Berrio, 2; Río Frio, 1; Cali, 2; Noanamá, 1.

The last-named specimen, a male, has the throat and cheeks tinged with yellow; and the red of the crown extending to the base of the bill and nearly concealing the black of the anterior portion of the crown. These markings may indicate high plumage rather than racial variation since a male of *uhjelyi* has the crown similarly colored.

Thanks to the National and Field Museums and to Mr. T. E. Penard, I am in possession of specimens topotypically representing all the recognized forms of *Chrysoptilus punctigula*, the characters and distribution of which may be summarized as follows:

1. *Chrysoptilus punctigula punctigula* (Bodd.). Throat black, each feather with two subterminal, rounded white spots, upperparts antique-brown; size small; male, wing, 105; tail, 61; culmen, 22.5 mm. Parimaribo, Surinam, 3 specimens (Penard).

2. *C. p. punctipectus* Cab. & Hein. Throat as in *punctigula* but back much greener, nearly warbler-green; underparts paler; larger, male, wing, 112; tail, 69; culmen, 23 mm. Venezuela, Cumana, 1; (Field Museum); lower Orinoco, 1; Colombia, Barrigon, 1; Villavicencio, 2; Buena Vista, 1.

3. *C. p. guttatus* (Spix). Described from the river Amazon. I assume that this form is represented by two specimens from Santarem (Nat. Museum) and three from northeastern Peru (Moyobamba, Huallaga; Field Museum). These five birds appear to be inseparable and in general coloration and the markings of the throat they do not differ materially from the Paramaribo specimens. They are, however, larger (wing, 109; tail, 68, culmen, 23 mm.), but so far as the material at hand goes this difference in size is not sufficient to warrant the recognition of an Amazonian race.

4. *C. p. uhjelyi* Madar. A pale form from the Caribbean coast region of Colombia with the throat white striped with black, the bars of the upperparts broken, narrow and dorsally almost obsolete; male, wing, 105; tail, 63, culmen, 23. Santa Marta, 1; Calamar, 1; near Cartagena, 1.

5. *C. p. striatigularis* Chapm. With characters and range as above; male, wing, 110; tail, 68; culmen, 23.5.

It will therefore be seen that my conclusions in regard to the forms of *Chrysoptilus punctigula* are at variance with those presented by Hellmayr (Abhandl. Akad. Wiss. 1906, p. 607) who refers specimens from northeast Peru, Bogotá collections, Barranquilla and Cartagena to *C. p. speciosus* (Malh.) a name which I believe to be a synonym of *guttatus* (Spix), and of the validity of this latter form I am by no means convinced.

#### **Veniliornis oleaginus aureus** subsp. nov.

*Char. subsp.*— Similar to *V. o. fumigatus*, but back richer, more golden, auricular region averaging paler, wing averaging shorter, bill longer; resembling *V. o. sanguinolentus* in general color but wings and their coverts externally with less golden wash and more as in *fumigatus*; white spots on wing-quills larger, the short outer primary usually showing trace of white, the second (from without) primary with three instead of two white spots; size, larger.

*Type*.—No. 116143, Am. Mus. Nat. Hist., ♂ ad., La Sierra (6800 ft.), Central Andes south of Popayan, Colombia, March 2, 1912; A. A. Allen and L. E. Miller.

*Range*.—Subtropical Zone of Western Andes and western slope of Central Andes of Colombia southward into Ecuador.

*Remarks*.—This form is in large measure an intermediate between *V. o. fumigatus* and *V. o. sanguinolentus*. In the golden coloration of the back it agrees with the latter, but the wings and their white markings are as in the former; in size it is nearer *fumigatus* but the bill averages longer, and the wings shorter.

Of *sanguinolentus* I have an excellent series of nine specimens from Nicaragua; of the proposed new form fourteen specimens from throughout the range given, and of *fumigatus* ten from the Bogotá region taken by ourselves, a female from Inca Mine, southeastern Peru and a male from Yungas, Bolivia. The two specimens last-named may be considered typically to represent *fumigatus* and, so far as they go, they indicate that our specimens from the vicinity of Fusugasugá, in the heart of the Bogotá region, may be referred to that form.

*Measurements of Males.*

Locality	Wing	Tail	Culmen
San Rafael del Norte, Nicaragua.	85	48	20
“ “ “	90	53	21
“ “ “	90	48	20
Salencio, W. Andes, Colombia.	93	52	21
Las Lomitas, “ “	96	53.5	21
San Antonio, “ “	94	50	22
Popayan “ “	98	54.5	22.5
La Sierra, Cen. Andes, Colombia.	101	57	23
La Candela, “ “ “	99	57	20
San Agustin, “ “ “	97	55	21
Fusugasugá, E. “ “	99	51	20
Yungas, Bolivia	100	52	20

*Measurements of Females.*

Locality	Wing	Tail	Culmen
Rio Coc, Nicaragua	87	51	20
“ “ “	89	—	20
Las Lomitas, W. Andes, Col.	94	54	20
San Antonio, “ “	95	54	21
“ “ “	97	54	22
Popayan “ “	95	51	21.5
Miraflores, Cen. Andes, “	98	56	21
La Candela, “ “ “	102	57	20.5
Fusugasuga, East. “ “	99	58	20
“ “ “ “	102	—	21
Enconosa “ “ “	100	57	20
Inca Mine, Peru	96	52	20

**Thamnistes anabatinus intermedius** subsp. nov.

*Char. subsp.*—Similar to *T. a. coronatus*<sup>1</sup> Nels. but upperparts, wings and tail darker, the crown between russet and argus-brown instead of cinnamon-brown, and more distinctly defined from the back, the back with a russet tinge, the tail hazel rather than cinnamon-rufous.

*Type.*—No. 117805, Am. Mus. Nat. Hist., ♀ ad., Barbacoas, Colombia, Sept. 6, 1912; W. B. Richardson.

*Remarks.*—This form, based on but one specimen, is clearly an intermediate between *T. æquatorialis* of eastern Ecuador and southeastern Colombia, and the quite different *T. anabatinus* group of Panama to Mexico. Its crown and back closely agree in color with those of *æquatorialis* while the underparts are similar to those of *T. a. coronatus*; the tail and wings externally are intermediate but nearer to those of *coronatus*. Being forms of the Tropical Zone the ranges of *æquatorialis* and *intermedius* are apparently separated by the Andean system, but the near relationships of *æquatorialis* and *anabatinus* are indicated by the discovery of this southwest Colombian race. North of Barbacoas, *Thamnistes* has not been recorded from Colombia. If its range is not interrupted, its intergradation with *coronatus* is assured. Of the latter race I have the five specimens to which Mr. Nelson referred in his description of it showing that it ranges from eastern to western Panama. Its intergradation with the Costa Rican *T. a. saturatus* is evidently proven by a specimen from Calobre, Veragua, which has the rufescent back of *saturatus* and the rufous crown of *coronatus*, as well as by a specimen, showing intermediate characters, from Paso del Pital, Rio Naranjo, Costa Rica. Three other Costa Rican specimens differ so slightly from two from Mexico that, so far as this material is concerned, one questions the desirability of recognizing a Costa Rican form. Ridgway refers the rufous-capped Calobre, Veragua specimen to *saturatus* (Bull. U. S. N. M., 50, V, p. 24; see also Nelson, Smiths. Miscell. Coll. 60, 3, p. 10) and it is evident from his description that in separating a form under the name *saturatus* he was influenced by the characters exhibited by this specimen.

**Myrmopagis schisticolor interior** subsp. nov.

*Char. subsp.*—Male like the male of *M. s. schisticolor* (Lawr.), female very different from the female of that race, the back slate-gray, not brownish or buffy olive, the crown grayer, the tail and wings grayish margined externally with olivaceous instead of russet; size somewhat larger.

<sup>1</sup> Smiths. Miscell. Coll., 60, No. 3, 1912, p. 10.

*Type*.— No. 121897, Am. Mus. Nat. Hist., ♀ ad., Buena Vista (alt. 4500 ft.), east slope Eastern Andes, above Villavicencio, Colombia, March 3, 1913; F. M. Chapman.

*Range*.— Subtropical zone of the eastern slope of the Central Andes and of both slopes of the Eastern Andes in Colombia, and eastward through the Tropical Zone to the Orinoco.

*Remarks*.— A series of 38 females and 45 males covering the greater part of the range of *Myrmopagis schisticolor*, satisfactorily shows the characters and indicates the range of the forms of this species. *Myrmopagis s. schisticolor* (Lawr.) extends from western Ecuador (Zaruma) northward to Guatemala. In Colombia it ranges as far eastward as the western slope of the Central Andes and occupies the Subtropical Zone. I can distinguish no racial differences in our series of 19 females and 27 males of this form. In the male the black below extends well down the breast and in some cases centrally reaches the abdomen. The females have the upperpart essentially concolor; the head averages browner than the buffy olive back but is never clearly defined from it. There is much variation in the intensity of color of the underparts but it appears to be individual.

*Myrmopagis s. sanctæ-martæ* (Allen)<sup>1</sup> inhabits the Caribbean Coast region from at least Santa Marta eastward to northeastern Venezuela. A male from Tumatumari, British Guiana, and another from the Mt. Duida have no more black on the throat than the type of *sanctæ-martæ* but are somewhat paler and have the rectrices lightly tipped with white.

The female of *sanctæ-martæ* (= *Hylophilus brunneus* Allen, Bull. A. M. N. H., XIII, 1900, p. 171, Los Nubes, Santa Marta) agrees in general with the female of *schisticolor*, but our specimens have the front more ochraceous. A female from Cristobal Colon at the extreme eastern point of the Paria Peninsula, is somewhat grayer than two from Santa Marta, but the difference is well within the range of individual variation shown by our series of *schisticolor*. I have no females from British Guiana but one from Suapure, and another from the Mato River in the Lower Orinoco, show in their grayer backs a decided approach toward *M. s. interior*, while three females from the foot of Mt. Duida are even nearer that form.

So far as females are concerned it seems apparent, therefore, that the area of intergradation between *sanctæ-martæ* and *interior* is in the Orinoco region. This supposition is supported by the fact that males of *interior* from Buena Vista have, as a rule, less black on the breast than males of true *schisticolor*.

<sup>1</sup> *Myrmotherula sanctæ-martæ* ALLEN, Bull. A. M. N. H., XIII, 1900, p. 160 (Valparaiso, Santa Marta. Type in Am. Mus.); consult also Hellmayr and Seilern, Archiv. für Naturg., 1912, p. 124.

While, as just remarked, males from Buena Vista have less black on the breast than most specimens of *schisticolor*, the race is to be distinguished only by the female, which has the back and rump slate-gray clearly defined from the grayish olive head, and is thus strikingly different from the female of either *schisticolor* or *sanctæ-martæ*.

To the eastward *interior* evidently intergrades with *sanctæ-martæ* or an undescribed form of it. Females from the foot of Mt. Duida are nearer *interior*, but a male from the same place is nearer *sanctæ-martæ*.

Our collection contains specimens from the following localities:

*Guatemala*, 1 female; *Nicaragua*, 6 females, 10 males; *Costa Rica*, Boruca, 1 female; *Panama*, Chiriqui, 2; *Colombia*; Las Lomitas, 2 males; San Antonio, 3 males; Ricaurte, 1 male; Miraflores, 2 males, 1 female; *Ecuador*; Esmeraldas, 1 female; Rio de Oro, 5 females, 2 males; Naranjo, 2 males, 1 female; Santa Rosa, 1 male; Zaruma, 3 males, 2 females; *Colombia*; Santa Marta, 2 males, 2 females; *Venezuela*; Las Palmales, 1 male; Cristobal Colon, 2 males, 1 female; *British Guiana*; Tumatumari, 1; *Venezuela*; Suapure, 1 female; Mato River, 1 female; foot of Duida, 1 male, 3 females; *Colombia*; Buena Vista, 6 males, 6 females; La Murelia, 1 female; Aguadita above Fusugasugá, 1 male; La Palma, 1 male, 1 female; La Candela, 1 male, 3 females.

### ***Microrhophias grisea hondæ* subsp. nov.**

*Char. subsp.*—Very closely related to *M. g. alticincta* Bangs of San Miguel Island, Panama Bay, but upperparts in both sexes slightly paler, browner, less fuscous; the female differing in the color of the upperparts from the male of *M. g. grisea*, much as it does from the male of *alticincta* but the longer rectrices without or with but faint white tips; the female, like the female of *M. g. grisea*, *unspotted below*, but with the upperparts slightly paler, the underparts very much paler, white faintly tinged with light buff, except on the throat, instead of rich ochraceous-buff.

*Type.*—No. 111914, Am. Mus. Nat. Hist., ♀ ad., Chicoral (alt. 1800 ft.), upper Magdalena Valley, Colombia, Oct. 8, 1911; A. A. Allen and L. E. Miller.

*Remarks.*—The material at my command indicates the specific distinctness of the Caribbean coast region representative of this group, hitherto known as *Microrhophias* (= *Formicivora*) *grisea intermedia*. Males of this form differ from those of *M. g. grisea* from British Guiana chiefly in having a larger and whiter superciliary, but females are strikingly unlike these of *M. g. grisea*, *M. g. hondæ*, and *M. g. alticincta* in having the jugulum and breast with large central black areas which are partly concealed by the whitish margins of the feathers. This character is well shown by our series of 34 females from the following localities: Bonda, Santa Marta, 29; Puerto Cabello, Ven., 1; San Antonio, Bermudez, Ven., 1; Cristobal Colon, Ven., 3.

In the female of the race which I should call *Microrhophias intermedia orenocensis* (Hellm.), of which we have five topotypical specimens, the

breast is even more strongly spotted than in *M. i. intermedia*. On the other hand, not one of our eight specimens of *hondæ* from the upper Magdalena, shows the slightest indication of spots, nor are these marks present in *alticincta* (cf. Thayer and Bangs, Bull. M. C. Z., XLVI, 1905, p. 150) or in any of the specimens of *grisea* which I have examined.

In Colombia, *M. g. hondæ* appears to be known only from the upper Magdalena Valley whence we have eleven specimens from near Honda, seven from Chicoral, and one from Andalucia (alt. 3000 ft.) near the head of the valley. A 'Bogotá' female is referable to this form and Sclater's description (Cat. B. M. XV, p. 250) of the female of *intermedia* as "nearly pure white beneath" indicates that he had in hand a specimen of *hondæ* rather than of *intermedia*.

Berlepsch (J. f. O., 1884, p. 308) states that Bucaramanga specimens agree with those from Bogotá but are perhaps smaller, hence we may believe that his specimens are also referable to *hondæ*.

Beyond these records, the form in which the female is unspotted below appears to be unknown to the westward until we reach San Miguel Island in Panama Bay, whence Bangs has described *Formicivora* (= *Microrhopias*) *alticincta* (Proc. N. E. Zool. Club, III, 1902, p. 71). In spite, however, of the geographic isolation of this race I should rank it as a subspecies under the name *Microrhopias grisea alticincta*. While intergradation by contact is, under the circumstances, impossible, this form is so near *hondæ*, that I believe intergradation by individual variation is possible.

To the eastward *hondæ* appears to be separated from *grisea* by the spotted breasted *M. i. intermedia* and *M. i. orenocensis* with which it is not known to intergrade. Possibly these intervening forms may actually cut it off from *grisea*, when if it does not merge into *intermedia* the upper Magdalena form would stand as *Microrhopias alticincta hondæ*.

### ***Hylopezus dives barbacooë* subsp. nov.**

*Char. subsp.*— Similar to *H. d. dives* Salv., but crown darker, its color extending little if any on to the back, which is dark olivaceous rather than slaty; back, as a rule, without fulvous shaft-streaks, exposed margins of the wing-quills averaging less cinnamonous, dresden-brown rather than tawny.

*Type.*— No. 117883. Am. Mus. Nat. Hist., sex?, Barbacoas, Nariño, Colombia, Sept. 8, 1912; W. B. Richardson.

*Remarks.*— This is evidently an intermediate between *H. d. dives* and *fulviventris* from the eastern base of the Eastern Andes. It is based on four specimens from the type-locality and one from San José, W. Colombia, which have been compared with a single specimen of *fulviventris* from La

Murelia and eight of *dives* from Nicaragua. In *fulviventris* the back is more purely olivaceous and it is furthermore, easily distinguished by whitish lores.

There is no geographical reason why *dives* and *barbacoæ* should not intergrade, but *fulviventris* is effectually isolated from the latter by the intervening Andes.

Mr. Ridgway has proposed for *Grallaria dives* and other allied species the genus *Hylopezus* (cf. Bull. U. S. N. M., 50, V, p. 152), but the characters assigned to it appear to be shared in part by certain of the smaller species of *Grallaria* and it is possible that *Hylopezus*, with certain other recently proposed genera, should be accorded subgeneric rather than generic rank.

### ***Synallaxis azaræ media* subsp. nov.**

*Char. subsp.*— Most closely resembling *S. a. azaræ* d'Orb., of Bolivia and south-east Peru, but underparts generally paler, abdomen, particularly, whiter, flanks grayer, frontal band grayer and wider. Similar to *S. a. elegantior* Sel., of the restricted Bogotá region, but lores gray, not white, postocular stripe grayish olive not pale ochraceous-buff; underparts less white, the breast gray, not white, with or without a faint grayish wash; throat showing more black, flanks and under tail-coverts grayish olive rather than buffy olive; back averaging more ochraceous.

*Type.*— No. 112055, Am. Mus. Nat. Hist., ♀ ad., Salento (7000 ft.), Central Andes, Colombia; Sept. 27, 1911; A. A. Allen and L. E. Miller.

*Range.*— Upper parts of the Subtropical and lower part of the Temperate Zone (7000 to 10,500 ft.) in the Western and Central Andes of Colombia and southward into Ecuador (Pichincha).

*Remarks.*— With 53 specimens of this group from Colombia and Ecuador before me, I have no difficulty in recognizing two well-marked forms. Their distribution, however, is peculiar and its satisfactory explanation requires a more intimate knowledge of local climatic conditions than I possess.

Four 'Bogotá' skins and five adults from Chipaque about 12 miles east of Bogotá, and two specimens from Merida, Venezuela, agree in characters and obviously represent *S. a. elegantior* (Sel.). While this bird may be a representative form of *frontalis* Pelz., it appears to me to be too unlike that species to stand as a geographic race of it. From *frontalis* (of which we have 24 specimens from Chapada, Matto Grosso) it differs in having a more graduated, much longer tail (95 as compared with 79 mm.), with more pointed rectrices, paler coloration throughout, an ochraceous-buff postocular stripe, and a longer bill (12.5 instead of 11 mm.). In size and in the form of the tail *elegantior* more closely resembles the geographically farther removed *ruficapilla* Vieill., than it does *frontalis*. It also possesses, though in a less developed degree, the ochraceous-buff postocular stripe of that species



but differs from it in its olive-gray instead of chestnut-rufous front, less rufous back and whiter underparts.

Two of our Matto Grosso specimens of *frontalis* have practically the entire crown, including the forehead, chestnut-rufous as in *ruficapilla*, nevertheless the differences between them, particularly in the form and size of the tail, seem to indicate their specific distinctness.

The comparatively short tail and rounded remiges of *frontalis* in addition to well-marked color characters, make it difficult to believe that it intergrades with *azaræ* d'Orb. of Bolivia and southeastern Peru. Of this form I have two specimens from Inca Mine, Peru, and one<sup>1</sup> from Yungas, Bolivia. They have the underparts and sides of the head between mouse- and deep mouse-gray, the flanks washed with the brownish olive of the back the throat blackish tipped with gray and the buffy postocular stripe is wanting. This bird, therefore, differs conspicuously from *elegantior* in color; but in size, in the length of bill and tail, and shape of rectrices the two birds agree and, so far as specimens are concerned, the evidence at hand strongly indicates their intergradation through the race for which I have here proposed the name *Synallaxis azaræ media*.

Of *media* we have thirty specimens from the Central and Western Andes, as listed below, and three from the vicinity of Quito. The characters distinguishing this form from *azaræ* and *elegantior* have already been given. Its intergradation with the latter is indicated by a specimen from La Candela at the head of the Magdalena Valley in which a suggestion of the buffy postocular stripe is present and which, furthermore, is comparatively pale below.

Although I have no specimens of *media* from south of Quito intergradation of that form with *azaræ* is indicated by their general close resemblance. In fact, *media* more nearly resembles the Bolivian *azaræ* than it does the Colombian *elegantior*, with which its intergradation seems to be proven.

It might be expected then, that specimens from south of Quito would be intermediate between *media* and *azaræ*, but the whole case is greatly complicated and the distributional problem much involved by the fact that seven specimens from Zaruma (6000 ft.), one from Loja (7000 ft.), and one from Naranjo (2000 ft.) in southern Ecuador, are all clearly referable to *elegantior* of Bogotá! It is sufficiently surprising to find in this group identical forms occupying the Temperate Zone in the Bogotá region and the Tropic Zone near Guayaquil, but the case is rendered still more puzzling by the occurrence between these points of another form with which, at least from the north, intergradation with the first-named form appears to be proven.

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<sup>1</sup> Type of *Synallaxis griseiventris* Allen (Bull. A. M. N. H., 1889, p. 91) said by Berlepsch (Proc. Int. Cong., 1905, p. 363), on the authority of Hellmayr, to be the same as *S. azaræ*.

The status, in this connection, of *S. fruticicola* Tacz. I am unable to determine, but the description "*Striga postoculari flavicanti-cervina*" (Tacz. P. Z. S., 1879, p. 670) in connection with other characters indicates its close affinity with *elegantior*; indeed Sclater's reference of "an authentic specimen of *S. fruticicola*" (Cat. B. M. XV, p. 40) to *frontalis* (not of Pelzen) suggests that possibly they are the same.

The case is unusual and its satisfactory treatment requires far more material than is now at my disposal. As a contribution towards its solution I append a list of the localities at which our specimens were taken.

*Synallaxis azaræ elegantior.*

*Venezuela*: Culata (near Merida), 1; near Merida, (alt. 9700 ft.), 1; *Colombia*: Chipaque (9000-9500 ft.), 6; 'Bogotá' skins, 3; *Ecuador*: Loja (7000 ft.), 1; Zaruma (7000 ft.), 7; Naranjo (2000 ft.), 1.

*Synallaxis azaræ media.*

*Colombia*: El Eden (8300 ft.), 6; above Ibague (7000 ft.), 1; Laguneta (10,300 ft.), 3; Salento (7000 ft.), 5; Miraflores (6600 ft.), 4; La Candela (6500 ft.), 2; La Palma (5500 ft.), 3; Valle de las Pappas (10,000 ft.), 7; Cerro Munchique (8300 ft.), 6; *Ecuador*, vicinity of Quito, 3.

***Synallaxis mæsta obscura* subsp. nov.**

*Char. subsp.*—Similar to *S. m. mæsta* Scl. but darker throughout, the upperparts browner, the white streakings of the throat more restricted, the remainder of the underparts nearly one color, the breast of the same olivaceous shade as the sides and flanks instead of being grayer, the abdomen with little or no grayish.

*Type.*—No. 116367, Am. Mus. Nat. Hist., ♂ ad., La Murelia, R. Bodoquera, alt. 600 ft., Caquetá, Colombia, July 12, 1912; L. E. Miller.

*Remarks.*—This race, based on the comparison of two specimens from La Murelia with eleven topotypical specimens of *S. m. mæsta*, exhibits the darker coloration incident to the comparatively more humid region of southeastern Colombia. Evidently it ranges southward along the base of the Andes since Sclater (Cat. B. M., XV, p. 41) records "*Synallaxis mæsta*" from Sarayacu, Ecuador.

***Synallaxis gujanensis columbianus* subsp. nov.**

*Char. subsp.*—Similar to *S. g. gujanensis* (Gm.), but the forehead grayer the underparts much whiter, the breast very faintly tinted with grayish instead of strongly washed with warm buff; the sides and flanks rather warm grayish olive instead of tawny olive; auricular region grayer.

*Type.*—No. 121987, Am. Mus. Nat. Hist., ♂ ad., Buena Vista (alt. 4500 ft.), Colombia, March 7, 1913; F. M. Chapman.

*Remarks.*— This form, founded on thirteen specimens from Buena Vista and Villavicencio, is the palest, just as *S. g. inornata* (Pelz.) is the most highly colored race of *S. gujanensis*. The Guiana, North Brazil, and southern Venezuela representative of the group (two specimens from Surinam, Penard Coll., and one from La Union, Caura, Venezuela) is in a measure intermediate between the two but is nearer *columbianus*. Only the throat and center of the belly are white or whitish in this form, while in *columbianus* the underparts are largely white the breast being slightly, if at all tinged with smoke-gray while the sides and flanks are grayish olive. *Synallaxis g. inornata* (seven specimens Urucum, Matto Grosso; San Lorenzo, R. Madeira, Roosevelt Expd.) as Hellmayr has shown (Nov. Zool., XIV, 1907, p. 13) has only the throat white, the rest of the underparts being ochraceous-buff, paler on the center of the abdomen. The back, in this race, is much more ferruginous than in either *gujanensis* or *columbianus*. The latter have the back alike in color but in *gujanensis* the crown, though perhaps slightly more olivaceous, is nearly concolor with the back, while in *columbianus* the forehead is distinctly grayer than the crown and back.

***Synallaxis rutilans caquetensis* subsp. nov.**

*Char. subsp.*— Similar to *S. r. amazonica* Hellm., but the rufous areas much deeper (mahogany-red rather than cinnamon-rufous) less extensive below and more extensive above, where they occupy most of the crown and back; flanks and abdominal region olive-fuscous with a slight tint of the color of the breast, rather than buffy brown.

*Type.*— No. 116376, Am. Mus. Nat. Hist., ♂ ad., Florencia (alt. 1000 ft.) Caquetá, Colombia, June 27, 1912; L. E. Miller.

*Remarks.*— This very strongly marked race is based on three specimens from the type-locality. They have been compared with three topotypical specimens of *amazonica* (from Santarem) and four of *rutilans* from near Mt. Duida and Suapure, Venezuela. The most important characters of the proposed new form are its rich mahogany red color and the extent to which this color spreads over the back. In a female the entire foreback and scapulars are mahogany red of the same color as the breast, and the crown is similarly colored except for a brownish olive tinge on the hindhead.

The type is similarly colored but has slightly more olive on the back and less on the hindhead; the rump and upper tail-coverts are blackish.

The third Florencia specimen is immature. The mahogany red, though not quite so intense, is spread uniformly over the head and back with but slight traces of olive-brown, the breast has considerably less mahogany red and, correspondingly more olive-brown than in the adult.

**Synallaxis pudica caucæ** subsp. nov.

*Char. subsp.*—Similar to *S. p. pudica* Scl., but the crown paler, cinnamon-rufous rather than chestnut-hazel; the back mouse-gray without the olivaceous wash of *pudica*, the rump and upper tail-coverts deep grayish olive, paler than in *pudica*.

*Range.*—Cauca Valley, Colombia.

*Type.*—No. 108942, Am. Mus. Nat. Hist., ♂ ad., La Manuelita (alt. 3500 ft.) near Palmira, Cauca Valley, Colombia; April 11, 1911; F. M. Chapman.

*Remarks.*—This, the palest of the three forms of *Synallaxis pudica*, is apparently confined to the Cauca Valley. The characters on which it is based are shown by six adult specimens taken at or near the type-locality. Ten adult specimens from the Magdalena Valley (San Agustín, Andalucía, Fusugasugá and Anolaima) represent true *pudica*, while 17 from the Pacific coast of Colombia (upper Atrato to Barbaçoas) and a series from western Ecuador, I refer to *S. p. nigrifumosa* Lawr. This form is typically represented by three specimens from Nicaragua and two from Costa Rica. It is more richly colored throughout than *pudica*; the crown and the wings, basally and externally, are deeper, more chestnut, the back darker, more olivaceous, the underparts more sooty gray.

The west Colombian birds are to some extent intermediate between *nigrifumosa* and *pudica*. The back and underparts are not quite so deep in most specimens as they are in *nigrifumosa* but the crown and wings agree closely in color with that of the Nicaragua and Costa Rica specimens. In short, the form of the west Pacific coast, as might be expected, is nearer the Central America than it is to the Bogotá race. It follows then, that the race of the Cauca Valley is less like the race to which it is geographically nearest than it is to the form east of the Central Andes. This, however, is merely another way of stating that the climatic conditions of the Cauca Valley are less like those of the Pacific coast than they are like those of the Magdalena Valley.

**Sclerurus mexicanus andinus** subsp. nov.

*Char. subsp.*—Above closely resembling *S. m. mexicanus* but with the chestnut of the rump area averaging slightly darker and more restricted; below tawny-rufous of throat paler, more restricted and more sharply contrasted in color with the abdominal region which is more olivaceous, less rufous in tone than in *mexicanus*; outer margins of wing-quills less rufous than in *mexicanus*, the quills themselves darker, the outer web of the primaries differing but little from the inner; the tail longer.

*Type.*—No. 122059, Am. Mus. Nat. Hist., ♀, Buena Vista (4500 ft.) above Villavicencio, Eastern Andes, Colombia; F. M. Chapman.

*Remarks.*— This form is based on four specimens from the type-locality for comparison with which I have two birds from Mexico (Jalapa and Orizaba) and three from Loma del Leon, Panama. These specimens from Panama (loaned me by Mr. Bangs) appear to be essentially typical though the occurrence of the species near sea-level and within range of the darker form of *mexicanus* (*S. m. pullus*) is surprising.

Since the proposed new form so nearly resembles true *mexicanus* above, comparison with neither *pullus* nor *obscurior* is necessary..

*Measurements.*

Locality	Sex	Wing	Tail	Tarsus	Culmen
Jalapa, Mex.	♀	79	57.5	21.5	24.5
Orizaba, "	?	80	56	20.3	24.5
Panama	♂	79	55	22	23
"	♂	79	51	22	24
"	♂	81	54	23	23.5
Buena Vista, Col.	♀	79	60	23	25
" " "	♀ ?	79	59.5	23	24
" " "	?	84	62	23.5	24.5

***Pipra leucocilla*<sup>1</sup> *minor* subsp. nov.**

*Char. subsp.*— Similar to *Pipra leucocilla anthracina* (Ridgw.) but much smaller, the lower tail-coverts not always tipped with grayish. Wing, 54; tail, 22.5–25; culmen, 8–9; breadth of bill at nostril, 4–5 mm.

*Type.*— No. 109842, Am. Mus. Nat. Hist., ♂ ad., Cocal (alt. 4000 ft.), Andes west of Popayan, Colombia, June 10, 1911; W. B. Richardson.

*Measurements of Males.*

Name	Locality	Wing	Tail	Culmen	Width of Bill at Posterior margin of Nostril
<i>P. l. minor</i>	Cocal, Col.	54	25	9	5
" " "	" "	54	23.5	9	4
" " " (Type)	" "	54	22.5	8	4
<i>P. l. anthracina</i> ,	Guayabo, Costa Rica,	62	29	10	5.5
" " " (Type)	Moravia, " "	62	27	10.3	6
" " "	Veragua, Panama	60	27	9	5
" " "	" "	60	25	10	5.7
" " "	" "	59	25	10	5.3
<i>P. l. coracina</i>	Buena Vista, Col.	64	28	9	5.7
" " "	" " "	69.5	30	—	5

*Remarks.*— The differences in size between two Costa Rican specimens of *Pipra leucocilla* and three from Cocal, Colombia, appear to be sufficiently

<sup>1</sup> For a statement of the claims of this specific name over that of *pipra* see Berl. & Hart., Nov. Zool., IX, 1902, p. 53.

great to warrant the separation of the Cocal form on the basis of size alone. Veragua specimens, as might be expected show an approach toward the west Colombian form. Between Veragua and Cocal no representative of this species seems to have been recorded.

Two of the Cocal birds have the lower abdomen as well as the under tail-coverts tipped with grayish. The third has these parts black with no trace of grayish. It thus resembles *P. l. coracina* in color but is distinguished from that race, as it is from *anthracina*, by its small size.

### **Manacus manacus interior** subsp. nov.

*Char. subsp.*— Resembling *M. m. abditivus* in color but wing and tail averaging slightly longer, the wing more pointed, the chin feathers ('beard') shorter, broader, and less stiffened; differing from *M. m. manacus* in its grayer underparts, unbarred nape and more pointed wing.

*Type.*— No. 122373, Am. Mus. Nat. Hist., ♂ ad., Villavicencio, Colombia, Mch. 9, 1914; George K. Cherrie.

*Range.*— Interior of northern South America from the lower Orinoco to the base of the Andes and southward into Amazonia.

*Remarks.*— The identification of our specimens of the small group to which this form belongs was expected to be a comparatively simple matter, but greatly to my surprise I have found it necessary to describe as new all three races contained in our recently acquired collections from Colombia and Ecuador.

The characters distinguishing the races of *Manacus manacus* appear not to have been fully understood. But the excellent series now at my command enables me to ascertain the limits of individual variation and I can therefore determine what variations are truly racial.

For example, the adult male of *Manacus manacus manacus* (Linn.), for which we may certainly accept Surinam as type-locality (*cf.* Bangs, Proc. N. E. Zool. Club, I, 1899, p. 34) has invariably been described as having a white nape, whereas only two of my 19 adult male specimens are without more or less fine black barring on this area or on the post-auricular region. This character is not shown by any of the 49 adult males of the other forms of the group, but it is shown in an exaggerated degree by Edwards's figure (Edwards, pl. 260) on which the name *manacus* is based. This gray-naped form ranges at least from Cayenne to Trinidad. We have adult males from the following localities: Cayenne, 1 (the bars are more highly developed in this than in any of the other specimens); Para, Surinam, 4; Paramaribo, Surinam, 1; Demarara, British Guiana, 1; Wismar, British Guiana, 4; Rockstone, British Guiana, 3; Princetown, Trinidad, 4.

Specimens from Trinidad have slightly larger bills than those from Surinam, but I am unable to see any other difference in size and none in color. The characters attributed to *M. m. trinitatis* (Hart.) (Bull. B. O. C., XXIX, 1912, p. 311) are not therefore supported by our specimens.

It is somewhat surprising to note, however, that while Trinidad birds agree in color with topotypical examples of *manacus*, the abdominal region being fully as white in the latter as in the former, five specimens from Rockstone on the Essequibo River, and three from Wismar on the Demarara River, are decidedly grayer below than those from Surinam and Trinidad. These British Guiana birds were taken in September while the Surinam and Trinidad series was taken in March and April, and it is possible that the differences in color shown may be seasonal. The British Guiana as well as the Surinam and Trinidad birds, have the nape or postauricular region, or both, with the fine blackish bars which appear to characterize *manacus*; and all possess a more rounded wing than any other form in the group, except *gutturerosus* (see measurements beyond).

As remarked in the diagnosis, *M. m. interior* (of which we have 5 adult and 1 immature males and 2 females from Maripa or lower Orinocan Venezuela, and 1 adult male and 2 females from Villavicencio) resembles *M. m. abditivus* in color, the abdominal region being decidedly grayer than in true *manacus*, but it differs from that race in averaging slightly larger and in having a more pointed wing, and, chiefly, in having the chin-tuft softer, shorter and broader. Our excellent series of 14 topotypical adult males of *abditivus* show that in this form the feathers of the chin range from 17 to 22 mm. in length and are not only longer but narrower and somewhat stiffer than in any of the other races. This feature is shown by two native skins from Antioquia, to which region we may therefore extend the range of *abditivus*. It is especially interesting to observe that in this character of elongate chin-plumes *abditivus* resembles the very differently colored *M. vittellinus* of Panama and that portion of western Colombia from which no race of *manacus* has been recorded.

Southward of Antioquia we have found no representative of *Manacus manacus* until we reach Barbacoas in southwestern Colombia, where occurs a well-marked race for which I propose the name

#### ***Manacus manacus bangsi* subsp. nov.**

*Char. subsp.*—Resembling *M. m. gutturosus* (Desm.) in color, the throat and jugulum white clearly demarked from the deep gull-gray breast and abdomen, but wing longer and more pointed, tail shorter, outer primaries narrower less regularly curved and projecting 8 to 10 mm. beyond the tips of secondaries.

*Type.*—No. 118038, Am. Mus. Nat. Hist., ♂ ad., Barbacoas, Nariño, Colombia, Aug. 24, 1912; W. B. Richardson.

*Remarks.*— So far as color is concerned this new form (of which we have 3 males and 4 females all from Barbacoas) requires comparison only with *M. m. gutturosus*. It agrees with that race, and differs from all other described races, in having the breast and abdomen comparatively deep gray clearly defined from the white jugulum and throat. In *gutturosus*, however, the tail is long the wing short and rounded, while the longest primaries do not extend more than 5 mm. beyond the secondaries in the closed wing. Furthermore, the outer primaries are broader and are regularly curved or falcate from base to tip, whereas in *bangsi* as well as in the remaining members of the group, the 'curve' is more angular, the feathers being boomerang-shaped rather than falcate.

It gives me pleasure to name this well-marked race for Mr. Outram Bangs in recognition of his numerous and important contributions to our knowledge of Tropical American birds, including a review of the group to which it belongs.

*Manacus manacus bangsi* appears to have a very restricted range. No representative of this species has been recorded from the west coast of Colombia north of Barbacoas nor have we met with one in the Cauca Valley. To the south it can extend but a few miles since, much to my surprise, the form of *Manacus manacus* occurring in Western Ecuador, from at least Esmeraldas to Santa Rosa, is quite different. It has been referred by various writers, with or without comment, to *Manacus gutturosus* or *abditivus* but our excellent series (8 adult and 4 young males; 5 females) plainly shows that it possesses distinctive characters and I propose for it, therefore, the name

***Manacus manacus leucochlamys* subsp. nov.**

*Chiromachæris manacus* (nec Linn.) SCL., P. Z. S., 1860, p. 279 (Babahoyo), p. 296 (Esmeraldas); BERL. & TACZ. P. Z. S., 1883, p. 559 (Chimbo); HARTERT, Nov. Zool., V, 1898, p. 488 (Paramba, Chimbo, Cachavi); SALVAD. & FESTA, Boll. Mus. Tor., XV, 1899, No. 362, p. 15 (part; Rio Peripa).

*Char. subsp.*— In the whiteness of the underparts resembling *M. m. manacus*, but differing from that form in its shorter tail, more pointed wing, much wider, unbarred white nuchal area and narrower black dorsal band.

*Type.*— No. 118799, Am. Mus. Nat. Hist., ♂ ad., Esmeraldas, Ecuador, Oct. 19, 1912; W. B. Richardson.

*Range.*— Tropical Zone of western Ecuador from at least Esmeraldas to Santa Rosa.

*Remarks.*— The width of the white nuchal band, or 'cape,' which distinguishes this race has been previously commented on (*cf.* Berl. and Tacz. *l. c.*) but lack of sufficient material has evidently heretofore made it difficult to determine whether this character was individual or racial. Comparison



of our nine adult males with 58 adult males representing other forms of the group shows that the characters given above are at all times diagnostic. The posterior extension of the nuchal band, without regard to the manner in which the skin is prepared, so reduces the black dorsal band that in none of the specimens examined does it exceed 15 mm. in width while in some it measures only 10 mm. across. In other races of *manacus* it is apparently never less than 20 mm. in width and averages about 25 mm.

The only specimen I have seen from eastern Ecuador (Zamora) is closely related to the form for which I have proposed the name *M. m. interior*.

According to my interpretation of the material examined the races of *Manacus manacus* may be determined by the characters given in the following key:

*Key to Males of Manacus manacus.*

- I. Under tail-coverts white. . . . . *M. m. purus* (Santarem, Brazil).
- II. Under tail-coverts gray.
  - 1. White of nape usually more or less marked with fine blackish bars.
    - M. m. manacus* (Guianas, Trinidad).
  - 2. White of nape without bars.
    - A. Abdominal region distinctly and uniformly gray clearly defined from white breast and throat.
      - a. Tail under 30 mm.; primaries extending at least 8 mm. beyond secondaries. . . . . *M. m. bangsi* (Southwestern Colombia).
      - b. Tail over 30 mm.; primaries extending less than 6 mm. beyond secondaries. . . . . *M. m. gutturosus* (East Brazil).
    - B. Abdominal region more or less white, at least anteriorly, not clearly defined from white breast.
      - a. Nuchal band broad reaching to nearly middle of back, black dorsal band averaging less than 15 mm. wide.
        - M. m. leucochlamys* (W. Ecuador).
      - b. Nuchal band narrower, not reaching to middle of back; black dorsal band wider than 15 mm.
        - a'. Breast and belly whiter, throat plumes longer, stiffer and narrower. . . . . *M. m. abditivus* (North Colombia).
        - b'. Breast and belly grayer, throat plumes softer, and shorter.
          - M. m. interior* (Orinoco region, E. Colombia; ?E. Ecuador).

*Measurements of Males.*

Name	Locality	Wing	Tail	Primaries beyond Secondaries
<i>M. m. gutturosus</i>	Bahia, Brazil	47	32	5
" " "	San Paulo	49.5	34	3.5
" " "	Minas Geraes	47	34.5	4.5
<i>M. m. manacus</i>	Cayenne	52	31	5
" " "	Surinam	49	30	5
" " "	"	47	28	4

## Measurements of Males.—(Continued).

Name	Locality	Wing	Tail	Primaries beyond Secondaries
<i>M. m. manacus</i>	Surinam	51	30	5
" " "	"	51	33	5.5
" " "	Demerara	52	31	5.
" " "	Wismar, Brit. Guiana	50	31	6
" " "	" "	50.5	32	5
" " "	Rockstone, " "	52	32	6
" " "	Prinestown, Trinidad	51	31.5	6
" " "	" "	50	32	6
" " "	" "	51	31	5.5
" " "	" "	51	33	6
<i>M. m. interior</i>	Maripa, Venezuela	53	31	9
" " "	" "	52	31.5	8
" " "	" "	52	30	9.5
" " "	" "	52	30.5	9
" " "	" "	53	30	9
" " "	Villavicencio, Col.	54	31	8.5
" " "	Zamora, Ecuador	53	31.5	9
<i>M. m. abditivus</i>	Minca, Santa Marta, Col.	53	29.5	7
" " "	" " " "	52	29.5	8
" " "	Cagualito, " " "	51.5	31	7
" " "	" " " "	50.5	29	7
" " "	Don Diego, " " "	49.5	30	6
" " "	Bonda, " " "	52	29.5	7
<i>M. m. bangsi</i>	Barbacoas, Col.	53	27	10
" " "	" "	50	25.5	8.5
" " "	" "	51	27	9
<i>M. m. leucochlamys</i> ,	Esmeraldas, Ecuador	51.5	27	8
" " "	" "	52	27.5	12
" " "	" "	51	25	10
" " "	" "	52	26.5	10
" " "	Rio de Oro " "	51	27	8.5
" " "	" " " "	52	27.5	11.5
" " "	Santa Rosa " "	53	28.5	9.5

***Pachyrhamphus castaneus saturatus* subsp. nov.**

*Char. subsp.*—Similar to *P. c. intermedius* Berl., but much darker throughout; the back deep hazel, or between amber brown and argus brown, the underparts ochraceous tawny, the nape slate-gray; the crown of nearly the same shade as the back.

*Type.*—No. 116760, Am. Mus. Nat. Hist., sex?, La Murelia, (alt. 600 ft.) Caquetá, Colombia; L. E. Miller. Wing, 73; tail, 54; tarsus, 17; culmen, 13 mm.

*Remarks.*—Although I have but a single specimen of this proposed race, its characters are so pronounced that I do not hesitate to describe it. Mr.

Todd has loaned me three essentially topotypical specimens of *P. c. intermedius* from Aroa, northern Venezuela, and I have three specimens of *castaneus* (Jard. & Selb.) (= *rufus* Auct. not of Bodd.) and this material shows, as might be expected, that the relations of *saturatus* are with the former rather than the latter. It presumably agrees with *intermedius* in size, the measurements of the type being approximately those of a female from Venezuela. The much paler colors of *intermedius* are such as might be expected in a bird from the comparatively arid Caribbean slopes of northern Venezuela, while the intense, deep colors of *saturatus* are a natural accompaniment of the humid forest region in which the type was taken. The crown in *intermedius* is noticeably darker than the back, but in the type of *saturatus* it is of essentially the same color and is restricted in area posteriorly by the encroachments of the slate gray nuchal band. The latter character, however, may be only individual.

Two specimens recorded by Chubb (*Ibis*, 1910, p. 604) from Sarayacu, Ecuador, may belong to the form here described, but a specimen from La Paz, Bolivia, in our collection (No. 30747, Rusby Coll.) is nearer to *intermedius* than to *saturatus*. Doubtless it represents an undescribed race.

### ***Pachyrhamphus magdalenæ* sp. nov.**

*Char. sp.*— Resembling *P. cinnamomeus* but much paler, the back browner, less rufous, sayal brown rather than rufous-tawny; the crown-cap more clearly defined from the back, the wing-coverts much browner and with pronounced lighter margins; the underparts white washed with warm buff; the bill smaller, the mandible browner.

*Type.*— No. 122383, Am. Mus. Nat. Hist., ♂ ad., Algodonal, Magdalena River, Jan. 23, 1913, George K. Cherrie.

*Description of Type.*— Crown deep hazel, clearly defined from the much less rufous back of sayal brown; rump and upper tail-coverts brighter more tawny than the back; tail rich tawny or pale rufous tawny, the feathers somewhat lighter at the tip, the shafts of essentially the same color as the vanes, the outer feather 12.5 mm. shorter than the longest; outer wing-quills fuscous narrowly margined with mikado brown externally, except at the end; inner quills largely cinnamon to sayal brown, the inner webs of primaries and secondaries margined basally with pale cinnamon increasing in extent and richness inwardly; wing-coverts light cinnamon-brown tipped and externally edged with pale cinnamon; under wing-coverts cinnamon-buff; lores pale gray, supra-loral line whitish, well-defined and reaching from the nostril to the back of the eye; auricular region pale cinnamon-buff; underparts pale buffy, washed in places with pale cinnamon-buff; thighs cinnamon-buff; under tail-coverts pale buffy; feet dark plumbeous; maxilla blackish, mandible fuscous-brown. Length (skin), 142; wing, 76.5; tail, 55.5; tarsus, 20.5 culmen, 13 mm.

*Remarks.*— This species is based on a single adult male (the correct sexing of which is confirmed by the presence of the short ninth primary)

in fresh, unworn plumage. Its specific distinctness from *P. cinnamomeus* is indicated by the circumstance that the range of *cinnamomeus* appears to surround that of *magdaleneæ*, and also by the fact that the much paler coloration of *magdaleneæ* cannot be attributed to climatic conditions since the type was taken in the heavily forested, humid portion of the Magdalena Valley.

***Euchlornis riefferi occidentalis* subsp. nov.**

*Char. subsp.*— Similar to *E. r. riefferi* but head, throat and breast blacker, the black of the head more sharply defined from the green back; closely resembling *E. r. melanolæma* in the color of the parts named but the wing-coverts and tertials less conspicuously tipped, black areas of these feathers less clearly defined and differently shaped.

*Type.*— No. 108271, Am. Mus. Nat. Hist., San Antonio (alt. 6600 ft.), Western Andes, Col., Jan. 25, 1911; W. B. Richardson.

*Remarks.*— At first glance our series of 26 specimens of this form from the Western Andes appeared to be referable to the Venezuelan form *melanolæma*, which it resembles in the blackness of the head and neck, but a closer examination reveals well-marked differences which are summarized in the preceding diagnosis. Stated in detail, the greater wing-coverts in *melanolæma* are black, bordered externally and apically with green which, near the tip of the outer border, is itself margined with yellow. The black area is sharply defined and, except at the tip, occupies all the inner vane and more than half the outer vane of the feather. In *occidentalis* (as well as *riefferi*) the black area is smaller and less sharply defined; in some specimens it is confined to the inner vane of the feather or if it extends to the outer vane it narrows toward the tip and thus makes the black area sharply pointed apically. A somewhat similar but more striking difference is seen in the tertials which in *melanolæma* have the black area larger and more strongly marked, occupying all the inner vane of the feather and a continuous strip of varying width along the shaft on the outer vane. The tertials in this form are, therefore, black margined externally with green and tipped with white, whereas in *occidentalis* (as well as *riefferi*) the outer web is largely green and if the black of the inner web extends to it, it occupies only a narrow area which does not reach the white terminal band. This band, as well as the yellow margin on the greater coverts, averages wider and more conspicuous in *melanolæma* than in *occidentalis* and *riefferi*. In short, *occidentalis* possesses the head and neck of *melanolæma* and the wing-pattern of *riefferi*. While the differences distinguishing these forms are rather difficult of exact definition, they are well-marked and readily appreciated when specimens are compared.

The characters presented by the greater-coverts and tertials are equally well shown by both sexes, and the female of *melanolæma* appears to have the marking of the breast and sides more squamate than in *occidentalis* or *riefferi*. Females of the last two, however, cannot be distinguished.

The range heretofore attributed to *melanolæma* has never seemed to be in accordance with the laws usually governing the distribution of geographic races. I find, for example, that a specimen from Gualea, Ecuador has the black head and breast of the Venezuelan bird to which it would doubtless be referred if one did not recognize the characters which characterize the bird here described as *occidentalis*. As a matter of fact the Gualea bird agrees with the West Andean form and it is not improbable that other specimens from Ecuador and Peru, which have heretofore been called *melanolæma*, should be known as *occidentalis*. The former, therefore, should properly be restricted to the Venezuelan Andes.

In addition to the 26 specimens of *occidentalis* our collection contains 17 topotypical specimens of *riefferi* from the Bogotá region and seven specimens of *melanolæma* from Merida, Venezuela. Two males from El Eden, in the Central Andes, have the breast as green as in *riefferi* but the crown somewhat darker than average specimens of that form to which, however, they should be referred.

#### ***Pyroderus scutatus occidentalis* subsp. nov.**

*Char. subsp.*—Similar to *P. s. orenocensis* (Lafr.) but abdominal region and under wing-coverts darker, hazel rather than cinnamon-rufous or Sanford's brown, ventral region, thighs and lower tail-coverts blacker, upperparts, wings and tail blacker and more glossy, the margins of the feathers more iridescent, frontal feathers longer and softer and showing no tendency to form a frontal crest. Differing from *P. s. masoni* Ridgway in having the brown of the abdominal region paler, deep hazel rather than chestnut-bay, and more extensive.

*Type.*—No. 109074, Am. Mus. Nat. Hist., ♀ ad., San Antonio, alt. 6600 ft., W. Andes, Colombia, April 7, 1911; F. M. Chapman and W. B. Richardson.

*Remarks.*—In Western Colombia this by no means uncommon bird is restricted to the heavy forests of the Subtropical Zone in both the Western and Central Andes, where it ranges from an altitude of 5000 to 7500 feet. This fact led me to believe that Lafresnaye's type, said to have come from "l'embouchure de l'Orénoque," was in reality collected in the mountains of Venezuela. Thanks, however, to the kindness of Mr. Outram Bangs, the Museum of Comparative Zoölogy has loaned me Lafresnaye's type, while through the courtesy of Mr. W. E. Clyde Todd, the Carnegie Museum has sent me a specimen of *Pyroderus* actually collected at Altagracia, on the Orinoco, by M. A. Carriker, Jr., June 8, 1910.

When it is remembered that Lafresnaye's type was secured about 1846,

and for the greater part of the time since that date has been mounted and on exhibition, it is not only in excellent condition but is practically identical with the fully adult male collected by Carriker. The cinnamon-rufous of the abdominal region is slightly paler in the type than in the Carnegie Museum bird, but aside from this, the birds are essentially alike. Both have the grayish black ventral region and lower tail-coverts, and both have the upperparts of the same comparatively dull, lustreless black, and the frontal feathers stiff and more or less produced into a median crest.

It seems, therefore, fair to assume that Lafresnaye's type did come from the Orinoco, and also that it still typically represents the form for which it stands. The amount of red in the breast-shield shows both birds to be fully adult, while measurements indicate that the type, like the *Altagracia* bird, is a male. The underparts, from the posterior margin of the breast-plate quite to the ventral region, are uniform cinnamon-rufous, except for a narrow blackish area on each side of the breast-patch.

For comparison with these two Orinoco birds I have 23 specimens from the mountains of the Cauca region all of which, aside from differences due to age, are most uniform in color and hence agree in possessing the characters which readily separate the proposed new race from true *orenocensis*.

So far as *P. s. orenocensis* is concerned, therefore, the case is clear and the Carnegie Museum specimen both confirms the locality and the character of the type. Let us now consider *Pyroderus masoni* Ridgw.

Thanks to Dr. C. W. Richmond, the National Museum has sent me the type and 'co-type' of this bird. Both were attached to some ethnological specimens from South America, the exact locality being unknown. Both are immature. The type lacks a tail, one wing, the primaries of the other, the feet and terminal third of the bill. The second specimen agrees with the first in condition but lacks part of the abdominal feathers of the right side. It, however, possesses a tail. These specimens agree in having the abdominal region deep chestnut-bay, a darker color than that of any specimen in our entire series. The fact that the skins are not stuffed makes it difficult to determine accurately their pattern, but it is obvious that the chestnut color is not so continuous as in *orenocensis* and *occidentalis*, and the black mark which is present on each side of the breast in the last-named forms appears to cross the breast in *masoni*.

Evidence which indicates that this richly colored race inhabits eastern Peru is supplied by Mr. Louis Agassiz Fuertes. Mr. Fuertes has in his possession a Peruvian Indian girdle which was presented to him by Mr. A. F. Larco, of Trujillo, Peru, to which is attached a portion of a skin of *Pyroderus*. That this girdle came from Peru is beyond question, though the exact locality is unknown. It can, however, have come only from the Amazonian slope.

The fragment of skin in question has been loaned me by Mr. Fuertes. It is of an adult and consists of head, neck, throat and anterior part of the back and breast. Fortunately enough of the breast is present to show that in the depth of the chestnut color of this part the bird agrees with *masoni* rather than with *orenocensis* or *occidentalis*. It also resembles the type of *masoni* in the richness of the basal color of the red-tipped throat feathers which are apically deeper in shade than in the other two brown-bellied forms. A further point of resemblance is shown by the extension of the black marks present in each side of the breast in *orenocensis* and *occidentalis* to form a nearly complete band across the lower breast. In short, this fragment from Peru appears to be undeniably referable to *P. s. masoni*, which consequently we may believe to inhabit eastern Peru.

In this connection it is important to recall that Taczanowski (Orn. du Pérou, II, p. 392) records *Pyroderus granadensis* from the "Montanas del Mayro (Coll. Raimondi)" on the Amazonian slope of the Peruvian Andes at about s. lat. 10°. It is obvious, however, from Taczanowski's description — "Pectore abdomineque rufis; fascia pectorali crissoque nigris"— that he had a bird of the *orenocensis* type rather than of the black-bellied *granadensis* form. His reference to a black band on the breast is also significant, since it appears to describe a character shown by the type and co-type of *masoni*, and the Peruvian fragment I refer to that form.

In the more detailed description following the diagnosis the underparts are given as "roux brunatre, avec une bande noire a travers la poitrine." The facts in the case, therefore, all strongly point toward Peru being the home of *Pyroderus scutatus masoni*. It seems probable, however, that the bird is by no means common since beyond the record of Taczanowski, I find no other mention of the occurrence of *Pyroderus* in Peru.

I have seen too little material from the mountains of Venezuela to determine the status of the forms of *Pyroderus* in that region. A fully adult male taken by Carriker in the Cumbre de Valencia, and loaned me by Mr. Todd, has the brown of the underparts darker and much less extensive than in *orenocensis*. Possibly it may be regarded as an intermediate between the brown-bellied and black-bellied races. The rufous appears only on the lower breast and upper abdomen and is there largely confined to the median area.

A specimen from Merida, Venezuela, is clearly referable to *granadensis*, though the few brown tips to several feathers on the centre of the breast are paler than in Bogotá specimens of that bird. In the Bogotá region proper we secured but one specimen of *granadensis*, taken south of Fusugasugá. We have also two specimens of this race from San Agustin and La Palma at the head of the Magdalena Valley.

In addition to the specimens above mentioned, von Berlepsch (J. f. O., 1884, p. 306) records *granadensis* from Bucaramanga, and Wyatt (Ibis, 1871, p. 334) from Canuto (alt. "about 6000 ft.") north of the city of Bucaramanga. Although *P. s. "orenocensis"* is recorded from "Bogotá" it is probable that 'Bogotá' skins of this form are from Antioquia and hence should be referred to *occidentalis*. This is true of a skin labelled "Bogotá" in our collection.

If it be true, as the records indicate, that *granadensis* is the only form occupying the Eastern Andes of Colombia, then we have this race geographically interposed between the brown-bellied races, *orenocensis* of Venezuela and *occidentalis* of western Colombia. Add to this the wide gap in the range of *P. s. scutatus*, of southeast Brazil and Paraguay, and its northern representative *P. s. granadensis*, of the Andes of Eastern Colombia and Western Venezuela, and the fact that no form of this genus has yet been recorded from Ecuador, though it is known from Peru, and we have a singularly perplexing problem in distribution.

Our series of *P. s. occidentalis* shows no sexual difference in color, but adult males can usually be distinguished by their larger size. Immature birds are much smaller than adult ones. A table of measurements is appended.

Table of Measurements.

Locality	Sex and Age	Wing	Tail	Tarsus	Bill	
					Length from Nostril	Breadth at Nostril
San Antonio, W. Andes	♂ ad.	250	145	48	27	16.3
" " "	♂ ad.	235	145	47	26.5	17
" " "	♂ ad.	254	154	49	26.5	15
" " "	♂ ad.	250	148	47.5	27	15
La Florida, "	♂ im.	228	153	42	27.5	16
" " "	♂ im.	232	147	40.5	26	16.7
El Roble, Cen. Andes	♂ ad.	250	156	45	29	15
" " " "	♂ ad.	245	151	44	28.5	16
Salento, " "	♂ im.	242	157	44	30	15
Las Lomitas, W. Andes	♀ im.	225	154	43	26	15
San Antonio, "	♀ ad.	220	140	41	26	15
" " "	♀ ad.	225	143	40	25.2	15.4
" " "	♀ ad. <sup>1</sup>	235	142	41.5	26	14.5
" " "	♀ ad.	230	142	41	28	15.5
Cerro Munchique, W. Andes	♀ ad.	225	146	40	25	14
Miraflores, Cen. Andes	♀ ad.	226	145	41	28	15.3
" " "	♀ ad.	224	143	41	26	16
" " "	♀ ad.	225	144	39	25.5	13
"Orinoco"	ad. ♂ ? <sup>2</sup>	242	148	46	26	14
Altigracia, Orinoco, Venezuela	♂ ad.	238	151	44.5	29.5	15

<sup>1</sup> Type of *occidentalis*.<sup>2</sup> Type of *orenocensis*.



***Cistothorus apolinari* sp. nov.**

*Char. sp.*— Similar to *Cistothorus æquatorialis* (Lawr.) but very much larger, feet particularly larger and heavier, color throughout paler, the dorsal streaks and bars in tail and wings broader; the outer pair of rectrices unbarred; outer margin of three outer primaries unbarred, wing quills much broader.

*Type.*— No. 130590. Am. Mus. Nat. Hist., ad., Suba Marshes (alt. 8600 ft.) four miles from Bogotá, Colombia, February 7, 1914; Hermano Apolinar Maria.

*Description of Type.*— Crown uniform Saccardo-umber, the feathers so colored nearly to their bases; lores dusky, a barely evident buff postocular line, a rather obscure postocular mark slightly darker than the crown; anterior part of nape to rump black with broad whitish and light buff shaft-streaks; rump brighter than crown, tawny-olive, the feathers gray basally and with no indication of concealed markings; upper tail-coverts like rump but with a faint suggestion of blackish bars; tail much like rump, or a little darker, the central feathers with distinct and broad black bars which become fainter on the next to the outer pair, outer feathers unbarred and with small or no trace of black markings; wing-quills fuscous, the outer margin of the three outer primaries, pale buffy unbarred, the buff on the outer margin of remaining quills becoming deeper in color inwardly and with black bars or marks which cross both webs of the tertials; underparts unbarred, washed with tawny olive, strongest on the sides and flanks and under tail-coverts, the throat and median line to the vent paler; feet pale brownish; bill brownish black, the mandible whitish horn.

*Description of Juvenal Plumage.*— Two immature birds taken at the type locality January 19, 1913, differ from the adult in having the crown deep fuscous, the back cinnamon-brown with obscure blackish markings and faint buffy streaks barely wider than the shafts of the feathers; the brownish areas of wings and tail, sides and flanks, are deeper, more cinnamon, the white of the throat and belly is clearer and more extensive, the maxilla is straw-yellow; the outer tail-feathers and outer margin of the third primary, from without, are barred.

*Remarks.*— So far as I am aware no form of the genus *Cistothorus* has been recorded from the Bogotá region. Hellmayr has described a species (*Cistothorus platensis meridæ*) from Merida, Venezuela, but no other species of this genus appears to be known until one reaches southern Colombia where *Cistothorus æquatorialis* Lawr. is found. The presence of some form of this Wren was therefore to be expected in the Bogotá region and I was not surprised when Mr. Cherrie secured a specimen of an obvious representative of *æquatorialis* at an altitude of 10,000 ft. in the mountains twelve miles east of Bogotá above Chipaque.

When, however, we discovered through a native collector, that there was a second form of *Cistothorus* in the Suba Marshes on the Savanna of Bogotá, four miles from the city, there was reason for surprise, not only at the occurrence of two forms of this group within a few miles of each other, but that the Savanna species had previously escaped local collectors, or, at any rate, ornithologists.

After purchasing two native-made skins collected in the Suba Marshes January 13, 1913, in February, of that year, we took a city hack as the quickest means of transport, and drove to this locality. The season, however, had advanced and large areas which a month before had been marsh were now dry. We did not therefore succeed in finding additional specimens of *Cistothorus* but did collect the types of *Ixobrychus exilis bogotensis* and *Agelaius icterocephalus bogotensis!*

While measurements alone showed these immature birds to differ from any described form of *Cistothorus*, it was deemed advisable to secure, if possible, adult examples before attempting to characterize the species. To this end the coöperation of Hermano Apolinar Maria, Director of the Instituto de la Salle of Bogotá, was enlisted and thanks to him three adult birds in fresh (postnuptial?) plumage were taken in the Suba Marshes February 7, 1914, and forwarded to the American Museum. It therefore gives me much pleasure to dedicate this interesting species to Brother Apolinar not only as a mark of our appreciation of his assistance on this and on other occasions, but also in recognition of the important service he is rendering science as Director of the Instituto de la Salle of Bogotá.

It is to be noted that *æquatorialis* inhabits the upper life zone, or páramo, above timberline. In the Central Andes we have not found this species below 10,000 feet. Our single specimen from the Bogotá region was taken at the last-named altitude, here at the junction of the Temperate with the Paramo or Alpine Zone. The Bogotá Savanna with an altitude of about 8600 ft. is in the Temperate Zone, and the bird here described is therefore evidently a zonal representative of the *æquatorialis* group, and appears to be isolated on the Savanna. This fact, in connection with its strongly marked characters and the occurrence of *æquatorialis* in the zone above and distant but a few miles, indicates, in my mind, the segregation and specific distinctness of the Savanna bird. In fact, *apolinari* more nearly resembles in color specimens from the Central Andes than it does the specimen taken above Chipaque. The latter is more cinnamomeus above, has the dorsal stripes narrower and browner, and the underparts, including the throat, more heavily washed with rich cinnamon-buff. A topotypical specimen from Pichincha (June 1, 1913) is much like those from Valle de las Pappas and Santa Isabel in the Central Andes, but another from Chimborazo (July 1, 1913) is almost as richly colored as the Chipaque bird. Additional material is required to determine the status of this as well as the Central Andean form but of the distinctness of the Bogotá Savanna bird there seems to be no doubt.

*Cistothorus platensis meridæ* Hellm. (Bull. B. O. C., XIX, 1907, p. 74) taken at an altitude of 3000 meters in the mountains of Merida, is unknown to

me. It is described as having the side and under tail-coverts with "numerous narrow but very distinct, blackish crossbars," the wing measures 48, the tail 35 mm., and these characters, in connection with others, show that it has no close relation to *apolinari*.

The measurements given below clearly reveal the comparatively large size of *apolinari*. The disproportionately greater width of the wing-quills is indicated by the measurement across the second primary, taken at the end of the outer primary.

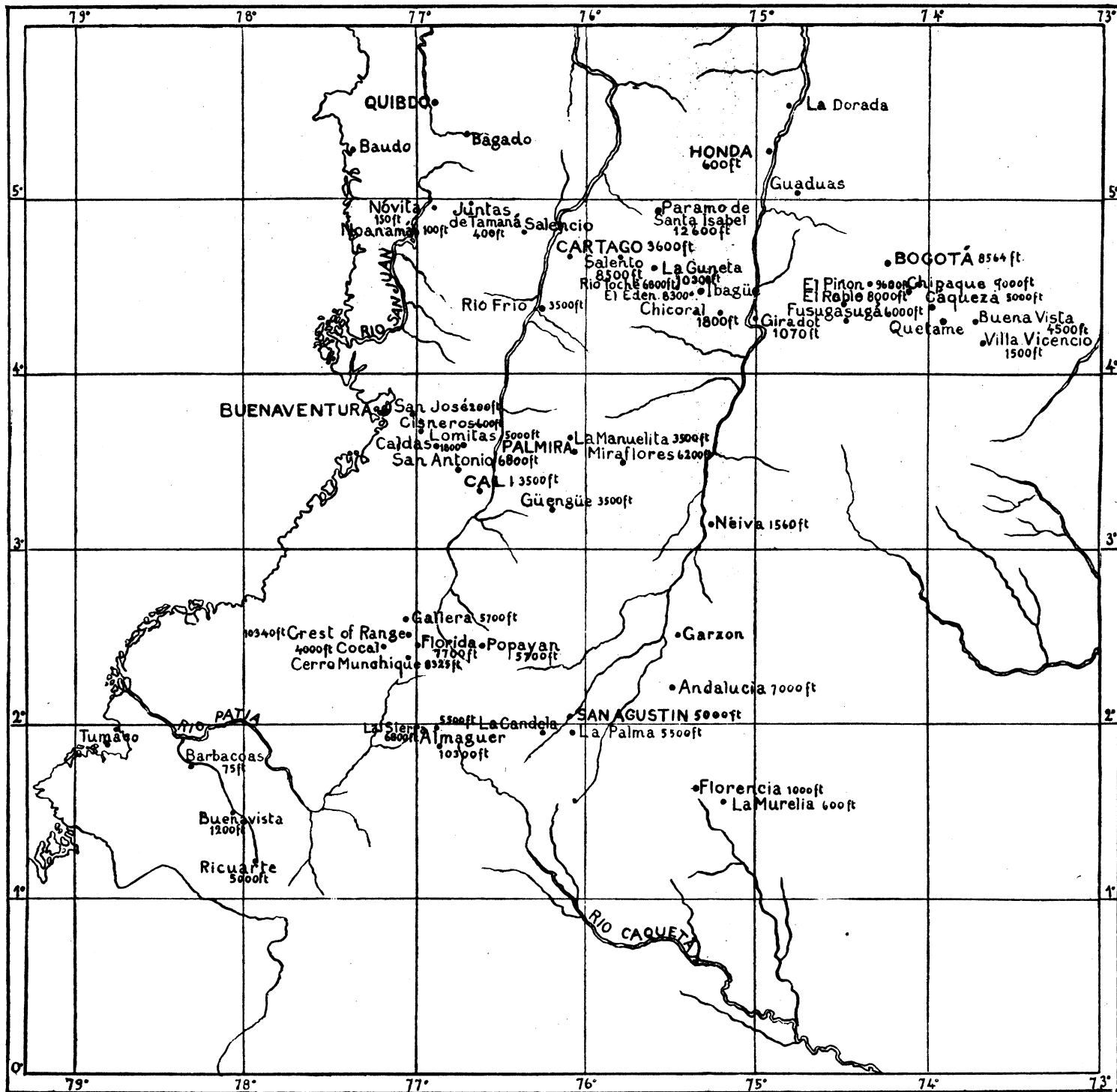
*Measurements.*

Locality	Sex	Wing	Tail	Tarsus	Middle Toe and Claw	Culmen	Breadth Second Primary
Bogotá, Col. <sup>1</sup>	ad.	55	46	23	16.5	13.3	7 mm.
" "	ad.	55	46.5	24	17.5	13	7.5
" "	ad.	56	47	24	16.3	13.3	7.3
Chipaque, <sup>2</sup>	♀ ad.	48	41	19.5	14	11	5
Valle de las Pappas, Col.	♂ ad.	51	46	20.5	14.5	13	5.5
" " " " "	♂ ad.	49	46	19.5	14	13	5.3
Pichincha, Ecuador	♂ ad.	48	44	19.5	14.5	13	5.5
Chimborazo, "	♂ ad.	48	44	20	13	12	5.5

<sup>1</sup> *Cistothorus apolinari* (type).

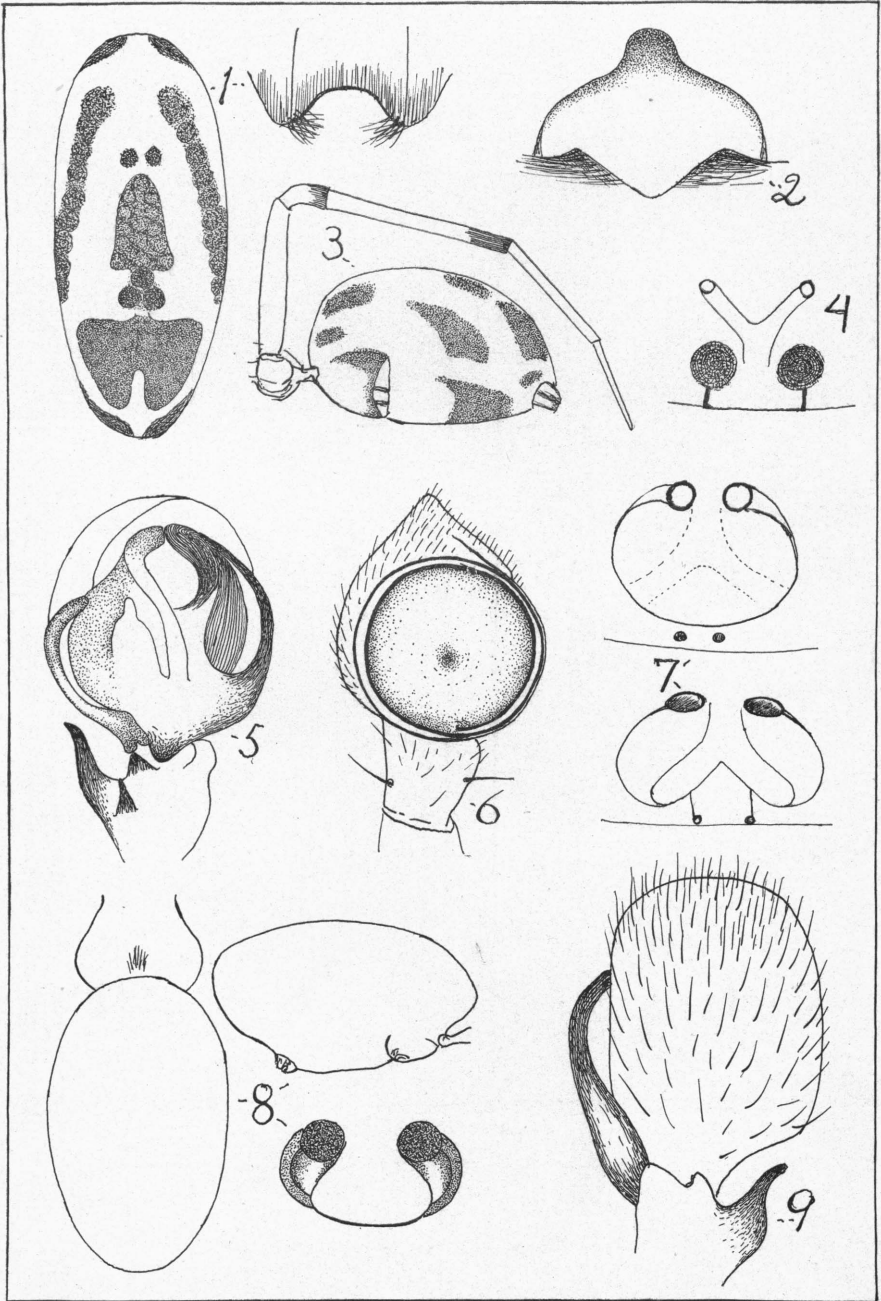
<sup>2</sup> *Cistothorus aquatorialis*.





SKETCH-MAP OF SOUTHWESTERN COLOMBIA SHOWING LOCALITIES VISITED BY AMERICAN MUSEUM EXPEDITIONS.





NEW WEST INDIAN SPIDERS.

