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DESCRIPTIONS OF NEW BIRDS FROM ECUADOR, COLOMBIA, PERU, AND BOLIVIA

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In reaching the conclusions presented in the following pages, I have, as therein indicated, been greatly assisted by the loan of specimens from the Museum of Comparative Zoölogy, The Academy of Natural Sciences of Philadelphia and the Carnegie Museum, and my thanks consequently are due Mr. Outram Bangs, Dr. Witmer Stone, and Mr. W. E. Clyde Todd, respectively, in charge of the birds of these institutions. All other specimens listed beyond are contained in the collection of the American Museum.

***Tyranniscus chrysops albigularis*, new subspecies**

SUBSPECIFIC CHARACTERS.—Similar to *Tyranniscus chrysops chrysops* (Sclater) of the Subtropical Zone of Ecuador and Colombia, and eastward, but much less yellow below, the breast gray, the throat whitish without or with but faint trace of yellow; yellow of the frontal and particularly orbital region paler, and less extensive; that of the wing-coverts slightly richer in tone.

TYPE.—No. 118,739, Amer. Mus. Nat. Hist.; ♂ ad.; Esmeraldas, northwest Ecuador; November 5, 1912; W. B. Richardson.

RANGE.—Tropical Zone, western Ecuador.

SPECIMENS EXAMINED

Tyranniscus chrysops albigularis.—ECUADOR: Esmeraldas, 1 ♂; Rio de Oro, Manaví, 1 ♂; below Mindo, 4 ♂, 2 ♀; Naranjo, Prov. Guayas, 1 ♂, 1 ?

Tyranniscus chrysops chrysops.—ECUADOR: Pallatanga, 1 ♂; El Chiral, 2 ♀; Punta Santa Ana, 1 ♂, 2 ♀; Guachanamá, 1 ♂; Las Piñas, 1 ♂, 2 ♀; Celica, 1 ♂; Pullango, 1 ♂; Cebollal, 7 ♂; Alamor, 11 ♂, 10 ♀; Zamora, 5 ♂, 2 ♀; Baeza, 1 ♂, 1 ♀; below Oyacachi, 4 ♀. COLOMBIA: West, Central, and East Andes, 11 ♂, 15 ♀, 7? VENEZUELA: Cristobal Colon, Paria Peninsula, 1 ♂.

Tyranniscus chrysops minimus.—COLOMBIA: Santa Marta, 4 (including type).

The comparatively low temperature prevailing on the coastal region of Ecuador induces numbers of Subtropical Zone species to descend to exceptionally low altitudes, in this instance to the Tropical Zone. The resulting change in environment is doubtless responsible for the development of the characters which distinguish this form.

***Myiozetetes similis pacificus*, new subspecies**

SUBSPECIFIC CHARACTERS.—Underparts wax yellow, deeper than in any other form of the species; resembling *Myiozetetes similis columbianus* Cabanis and Heine of Colombia, in the absence of ochraceous-tawny in external margins of wings or tail in the adult; larger throughout than *columbianus*, the upperparts darker, inner margins of inner wing-quills more buffy. Resembling *Myiozetetes similis connivens* Berlepsch and Stolzmann of eastern Peru to eastern Colombia, in the general color of the upperparts but the underparts deeper yellow, external margin of inner wing-quills greenish yellow; whitish or yellowish tips of wing-coverts more pronounced, inner margin or inner wing-quills less ochraceous; averaging larger. Three males: wing, 91–95; tail, 75–79; bill from nostril, 11–12 mm. Three females: wing, 85–89; tail, 67–74; bill from nostril, 10.5–11.5 mm.

TYPE.—No. 171,751, Amer. Mus. Nat. Hist.; ♂ ad.; Santa Rosa, Prov. del Oro, Ecuador; July 17, 1921; Cherrie and Gill.

RANGE.—Tropical Zone, northwestern Peru and western Ecuador.

SPECIMENS EXAMINED

Myiozetetes similis pacificus.—ECUADOR: Esmeraldas, 3; Chone, 1; La Chonta, 1; Santa Rosa, 6; Portovelo, 1; Zaruma, 1; Casanga, 1; Rio Pindo, 2; Alamor, 1; Cebollal, 4; Rio Pullango, 1. NORTHWESTERN PERU: Paletillas, 2; Milagros, 1.

Myiozetetes similis columbianus.—COLOMBIA: Santa Marta Region, 13; Chicoral, 2. PANAMA: Canal Zone, 4; Chiriqui, 6. VENEZUELA: Puerto Cabello, 2; Tucacas, Est. Falcon, 2; El Cuji, Est. Lara, 1; Las Trincheras, Est. Carabobo, 3; (four specimens from the lower Orinoco and northeastern Venezuela in their darker upperparts and slightly ochraceous-lined wings are near *connivens*).

Myiozetetes similis connivens.—PERU: Rio Chinchipe, 4; Perené, 6 (topotypical); Utcuyacu, 1; Idma, 1; (five specimens from southeastern Peru—Tavara, Astillero—have slightly more ochraceous in the wings than *similis*, but agree with *connivens* in the deeper yellow of the underparts). EASTERN ECUADOR: Zamora, 3; Rio Suno, 6. COLOMBIA: Villavicencio, 3. VENEZUELA: San Fernando, upper Orinoco, 1 (lower Orinoco specimens might be included here).

Myiozetetes similis similis.—BRAZIL: Montealegre, Rio Amazon, 1; Bahia, 2; Rio Janeiro, 4. BOLIVIA: Todos Santos, Rio Chaparé, 1.

Comparing series with series and the distinguishing characters of the four races above mentioned are as follows:

M. s. similis.—Underparts palest; external margins of remiges and rectrices and inner margins of the former with the greatest amount of ochraceous-tawny.

M. s. connivens.—Underparts deeper yellow and with less ochraceous-tawny in wings and tail, upperparts greener than in *similis similis*.

M. s. columbianus.—Size smallest, upperparts palest; no ochraceous-tawny in wings or tail; wing-lining buffy (maize-yellow).

M. s. pacificus.—Underparts deepest; size of *similis* and *connivens*; wings and tail externally as in *columbianus* but upperparts darker as in *connivens*.

These differences are fairly constant and diagnostic in topotypical series of comparable specimens but, as might be expected, in a species of

such generally uniform distribution, intergradation occurs and the resulting intermediates are difficult to name definitely, as I have indicated in the preceding list of specimens.

***Myiobius atricaudus portovelæ*, new subspecies**

SUBSPECIFIC CHARACTERS.—Similar to *Myiobius atricaudus atricaudus* Lawrence of Panama, but upperparts lighter, browner, Saccardo's olive rather than olive; underparts more richly colored, the throat and breast with olive-ochre rather than with ecru-olive, the abdominal region Pinard yellow rather than straw-yellow.

TYPE.—No. 171,801, Amer. Mus. Nat. Hist.; Portovelo, Prov. del Oro, southwestern Ecuador; August 6, 1921; Cherrie and Gill.

RANGE.—Tropical Zone; northwestern Peru to northwestern Ecuador.

SPECIMENS EXAMINED

Myiobius atricaudus portovelæ.—PERU: Tumbes, 1. ECUADOR: Alamor, 1; Cebollal, 2; Guainche, 1; Portovelo, 8; Santa Rosa, 4; Rio Jubones, 1; Puna Is., 1; Chimbo, 3; Bucay, 2; Naranjo, 2; Daule, 1; Chongon, 1; Rio de Oro, 2; Esmeraldas, 4.

Myiobius atricaudus atricaudus.—COLOMBIA: Barbacoas, 3; Caldas, 2; Rio Frio, 1; Malena, 1; Dabeiba, 1. PANAMA: El Real, Rio Tuyra, 1; Porto Bello Trail, 1; Canal Zone, 2 (types); La Chorrera, 1; Chiriqui, 3. COSTA RICA: Pozo del Rio Grande, 2.

Myiobius atricaudus modestus.—VENEZUELA, central Orinoco region: Caicara, 1; Rio San Felix, 75 miles south of Caicara, 1.

Myiobius barbatus barbatus.—BRITISH GUIANA: Potaro River, 10. VENEZUELA: Suapure, central Orinoco region, near mouth of the Caura, 2. COLOMBIA: Florencia, 3; La Morelia, 1. ECUADOR: Rio Suno, 1; Zamora, 2.

The characters of this race are most fully developed in that part of its range lying south of Guayaquil, whence all our eighteen specimens are separable at a glance from true *atricaudus*. From Guayaquil northward, an approach toward *atricaudus* begins and intergradation with that race is fully accomplished in northwestern Ecuador and southwestern Colombia.

I follow Mr. Todd¹ in treating *atricaudus* as specifically distinct from *barbatus*. Aside from the differences in color and proportions between these two forms, their occurrence on the south side of the Orinoco, within a comparatively short distance of each other without indication of intergradation, is evidence of their standing. On the other hand, the exceedingly close resemblance between specimens from localities as far apart as Zamora, Ecuador, and Baron Megalco, Matto Grosso leads me to believe that *barbatus* and *mastacalis* are intergrading races.

¹1922, Proc. Biol. Soc. Wash., XXV, pp. 26, 36.

***Myiochanes fumigatus zarumæ*, new subspecies**

SUBSPECIFIC CHARACTERS.—Very near *Myiochanes fumigatus fumigatus* (Lafresnaye and d'Orbigny)¹ of the Subtropical Zone of Bolivia, but smaller; in unworn plumage the upperparts grayer, less olivaceous, the cap blacker; underparts grayer, the throat, and especially abdomen, with less of a yellow tinge. Resembling *Myiochanes fumigatus ardosiacus* (Lafresnaye) of the Subtropical Zone of Colombia and eastern Ecuador, but underparts much paler and with a slight olivaceous tinge, the throat usually paler than the breast, the center of the abdomen paler than the throat, in some specimens nearly ivory-white; the under tail-coverts much like the center of the abdomen. Similar to *Myiochanes fumigatus cineraceus* (Lafresnaye)² of northern Venezuela, but underparts slightly darker and tinged with olive; the throat, abdomen and lower tail-coverts not so purely white, the outer vane of the outer rectrix not lighter than the inner; larger throughout.

TYPE.—No. 129,983, Amer. Mus. Nat. Hist.; ♂ ad.; above Zaruma, Prov. del Oro, western Ecuador; September 18, 1913; W. B. Richardson.

RANGE.—Subtropical Zone of western Ecuador and northwestern Peru.

SPECIMENS EXAMINED

Myiochanes fumigatus zarumæ.—ECUADOR: Pallatanga, 1; Huigra, 1; La Puente, Prov. del Oro, 1; El Chiral, Prov. del Oro, 2; Portovelo, Prov. del Oro, 2; Zaruma, Prov. del Oro, 9; Salvias, Prov. del Oro, 1; Alamor, Prov. Loja, 4; Cebollal, Prov. Loja, 1. NORTHWESTERN PERU: Palambra, 4.

Myiochanes fumigatus fumigatus.—PERU: Inca Mine, Santo Domingo, 1. BOLIVIA: Incachaca, Dept. Cochabamba, 1; Todos Santos, Dept. Cochabamba, 1; Mapiro, 4000 ft., 1; California, Dept. Santa Cruz, 1.

Myiochanes fumigatus ardosiacus.—PERU: Urubamba Cañon, 3; Chelpe, Vitoc Valley, 4; Utcuyacu (above Merced), 1; Rumicruz, (e. of Junin), 1; Chaupe, n. e. of Huancabamba, 5. EASTERN ECUADOR: Baeza, 4. COLOMBIA: West, Central and East Andes, 24. VENEZUELA: Mérida region, 2.

Myiochanes fumigatus cineraceus.—VENEZUELA: Lagunita de Aroa, Est. Lara, 5³; Cumbre de Valencia, 2.³

MEASUREMENTS

Locality	No.	Sex	Wing	Tail
Zaruma, Ecuador	4	♂	89-94	72-75
La Puente, Ecuador	1	♂	93	76
Cebollal, Ecuador	1	♂	95	74
Inca Mine, Peru	1	♂	96	79.5
California, Bolivia	1	♂	101	80
Zaruma, Ecuador	3	♀	85-88	72-73
Incachaca, Bolivia	1	♀	92	73
Todos Santos, Bolivia	1	♀	92	75

From the Mérida region of western Venezuela, south through all three Andean ranges of Colombia and eastern Ecuador to east central

¹See Hellmayr, 1913, Nov. Zool., XX, p. 245, where this form is revived in a review of the group.

²See Bangs and Penard, 1919, Bull. M. C. Z., LXIII, p. 28, where *Tyrannula cineracea* Lafresnaye is shown to antedate *Myiochanes ardosiacus polioptila* Todd.

³Collection Carnegie Museum.

Peru, *Myiochanes fumigatus* presents but little variation, and specimens from this area are all referable to *fumigatus ardosiacus*. In the interior of northern Peru, at Chaupe, it approaches *zarumæ*, the west Ecuador form, and this tendency is sufficiently pronounced at Palambra, on the Pacific slope of the Andes, in northwestern Peru, to place specimens from this locality under *zarumæ*. On the other hand, specimens from Ricuarte, in southwestern Colombia, are typical of true *ardosiacus*, suggesting that the species has reached western Ecuador by the Marañon route.

Proceeding southward along the Andes of eastern Peru, the characters of *fumigatus* are first shown in specimens from the Urubamba Valley, which, however, are nearer to the northern than to the southern race, but, as usual, a specimen from Santo Domingo, southeastern Peru belongs with the Bolivian rather than with the central Peruvian race.

Bolivian specimens, as said above, are exceedingly close to the west Ecuadorean race, and thus furnish an illustration of parallelism not unlike that shown by *Momotus momota argenticinctus* and *M. m. pilcomayensis*.

***Machæropterus striolatus antioquiæ*, new subspecies**

SUBSPECIFIC CHARACTERS.—Similar to *Machæropterus striolatus striolatus* (Bonaparte) of upper Amazonia, but male with the crown averaging darker or duller red, its feathers basally gray instead of basally white; the upperparts averaging yellowish green, particularly on the rump and upper tail-coverts, which are tinged with gold; white streaks on the underparts averaging wider.

TYPE.—No. 133,839, Amer. Mus. Nat. Hist.; ♂ ad.; Puerto Valdivia, lower Cauca River, Antioquia, Colombia; December 26, 1914; Miller and Boyle.

RANGE.—Humid Tropical Zone of the Magdalena, lower Cauca and lower Atrato Rivers, Colombia.

SPECIMENS EXAMINED

Machæropterus striolatus antioquiæ.—COLOMBIA: Puerto Valdivia, 1 ♂, 1 ♀; Alto Bonito, 1 ♀; La Frijolera, 1 ♂; near Honda, 8 ♂, 2 ♀.

Machæropterus striolatus striolatus.—COLOMBIA: Florencia, 1 ♂, 5 ♀. ECUADOR: Rio Suno, 3 ♂, 2 ♀; "Napo," 3 ♂, 1 ♀; Zamora, 2 ♂, 1 ♀.

This is a west of the Andes form which is apparently geographically segregated from the Amazonian race. It is interesting to observe that the latter agrees with the southeastern Brazilian form (*regulus*) in the color of the head.

***Chloropipo holochlora viridior*, new subspecies**

SUBSPECIFIC CHARACTERS.—Closely resembling *Chloropipo holochlora holochlora* Selater of eastern Colombia and eastern Ecuador, but averaging larger, the upperparts brighter, yellowish green, the yellow of the underparts slightly deeper in shade and more extensive in area.

TYPE.—No. 146,288, Amer. Mus. Nat. Hist.; ♂ ad.; La Pampa, southeastern Peru; October 22, 1916; H. Watkins.

SPECIMENS EXAMINED

Chloropipo holochlora viridior.—PERU: La Pampa, 1 ♂, 1 ♀; Rio Tavera, 1 ♀.

Chloropipo holochlora holochlora.—COLOMBIA: Villavicencio, 1 ♂ (topotype); Florencia, 1 ♂. ECUADOR: Rio Suno, 3 ♂, 2 ♀; Zamora, 1 ♀.

MEASUREMENTS				
Name	Locality	Sex	Wing	Tail
<i>C. h. viridior</i>	La Pampa	♂	79.5	48 mm.
" "	"	♀	73	45
" "	Rio Tavera	♀	72	46
<i>C. h. holochlora</i>	Villavicencio	♂	73	43
" "	Florencia	♂	71	42
" "	Rio Suno	♂	75	43
" "	" "	♀	71	43

Dr. Hellmayr¹ has called attention to the brighter colors of a female specimen of *Chloropipo holochlora* from southeastern Peru, a character which our three additional specimens indicate is of racial value.

Piprites chloris bolivianus, new subspecies

SUBSPECIFIC CHARACTERS.—Similar to *Piprites chloris chlorion* (Cabanis) of the Guiana region but breast and ventral region yellow, leaving only a band across the center of the abdomen gray; upperparts as in *chlorion* brighter, therefore, and with less gray on the nape than in *Piprites chloris tschudii* (Cabanis) of eastern Peru and eastern Ecuador.

TYPE.—No. 137,716, Amer. Mus. Nat. Hist.; ♂ ad.; Mission San Antonio, Rio Chimoré, 1300 ft., Dept. Cochabamba, Bolivia; August 11, 1915; Miller and Boyle.

SPECIMENS EXAMINED

(see below)

This is an intermediate between *chlorion* and *tschudii*, nearer the former in its characters but nearer the latter geographically. It is doubtless the form of which Dr. Hellmayr² states he has seen specimens from the upper Rio Madeira and Engenho de Gama, on the Rio Guaporé which were "exactly intermediate between *P. chloris tschudii* and *P. chloris chlorion*."

Piprites chloris antioquiæ, new subspecies

SUBSPECIFIC CHARACTERS.—Similar to *Piprites chloris tschudii* (Cabanis) of eastern Peru and eastern Ecuador, but upperparts brighter green, nape with less gray; underparts brighter, clearer yellow less suffused with olive.

¹1919, Archiv für Naturg., p. 60.

²1910, Wytsman's 'Genera Avium,' Pipridæ, p. 13.

TYPE.—No. 133,817, Amer. Mus. Nat. Hist.; ♂ ad.; La Frijolera, Antioquia, Colombia; December 30, 1914; Miller and Boyle.

RANGE.—Probably humid Tropical Zone of the Magdalena and Cauca Rivers, Colombia.

SPECIMENS EXAMINED

Piprites chloris antioquiæ.—COLOMBIA: La Frijolera (the type).

Piprites chloris tschudii.—Northern PERU: Huarandosa, Chinchipe Valley, 1 ♂. Eastern ECUADOR: Zamora, 1 ♀, 1 juv.; Rio Suno, 1 ♂, 1 ♀; below San José de Sumarco, 1 ♀.

Piprites chloris chlorion.—VENEZUELA: foot Mt. Duida, upper Orinoco, 2 ♀. BRAZIL: Cussarý, lower Amazon, 1 ♀.

Piprites chloris bolivianus.—BOLIVIA: Rio Chimoré, 1 ♂.

I have previously called attention to the characters of the specimen from La Frijolera on which this race is based, and the recent receipt of additional specimens of *P. c. tschudii* confirms my belief in its distinctness. In the coloration of its upperparts, *antioquiæ* almost exactly resembles *P. c. chlorion* but has the forehead and lores rusty yellow as in *tschudii*; it is thus, in a measure, intermediate between these two races. In describing it from one specimen I am influenced not only by the possession of a fair series of its nearest ally but also by the nature of its characters and the segregation of its range.

***Manacus manacus maximus*, new subspecies**

SUBSPECIFIC CHARACTERS.—Resembling *Manacus manacus leucochlamys* Chapman of northwestern Ecuador in color, but larger throughout; the wings and tail longer, bill and feet stouter; male with the white "cape" wider, its feathers and those of the "beard" longer.

TYPE.—No. 167,715, Amer. Mus. Nat. Hist.; ♂ ad.; Alamor, 4550 ft.; Prov. Loja, southwestern Ecuador; October 3, 1920; George K. Cherrie.

RANGE.—Tropical to Subtropical Zones of southwestern Ecuador.

SPECIMENS EXAMINED

Manacus manacus maximus.—ECUADOR: Alamor, 2 ♂ ad., 5 ♂ im., 2 ♀; Cebollal, Prov. Loja, 3100 ft., 1 ♂ ad., 2 ♀; Santa Rosa, 1 ♂ ad., 1 ♂ juv., 1 ♀; La Chonta, 3 ♀; Rio Jubones, 1 ♂; Rios Coco and Chimbo, 2 ♂ ad.; Chimbo, 2 ♀; Bucay, 5 ♂ ad., 2 ♂ im.; Naranjo, 1 ♂ im., 1 ?

Manacus manacus leucochlamys.—ECUADOR: Esmeraldas, 3 ♂ (including type); 2 ♂ im., 1 ♀; Manaví, 3 ♂ ad., 2 ♀.

In southwestern Ecuador *Manacus manacus*, a species elsewhere restricted to the Tropical Zone, occupies the Subtropical Zone, and as a probable corollary of this fact it here attains its largest known size. As it proceeds northward, its range returns to the tropics and there is a gradual decrease in size, the minimum being reached in northwestern Ecuador and southwestern Colombia. From this region two forms agree-

ing in size, but differing in color, occur, *M. m. bangsi*, a gray-bellied, narrow "caped" race from Colombia, and *M. m. leucochlamys*, a white-bellied, broader "caped" race from Ecuador.

MEASUREMENTS

Locality	No.	Sex	Wing	Tail
Alamor, 4550 ft.	7	♂	55-57.5	29-33
Cebollal, 3100 ft.	1	♂	57	32
Esmeraldas, sea-level	4	♂	51-52	25-27.5
Manaví, sea-level	3	♂	51-52	27-28
Bucay, 1000 ft.	5	♂	52-54.5	27-29
Coco and Chimbo, 3300 ft.	2	♂	54	28-28.5
Rio Jubones, sea-level	1	♂	54	29.5
Santa Rosa, sea-level	1	♂	54	28.5
Alamor, 4550 ft.	2	♀	58	31-31.5
La Chonta, 2000 ft.	3	♀	54-57	29-32
Esmeraldas, sea-level	1	♀	52	27
Manaví, sea-level	2	♀	51-53	25-27.5
Chimbo, 1200 ft.	2	♀	53-54	28-28.5

Between the races of northwest and southwest Ecuador there is no difference in color, but the difference in size is so great and so constant that they could not well be known by the same name. On the other hand, their intergradation is so gradual that a line separating their ranges can be drawn only arbitrarily, as will be clear on examining the accompanying tables of measurements.

***Heliochera rufaxilla antioquiæ*, new subspecies**

SUBSPECIFIC CHARACTERS.—Similar to *Heliochera rufaxilla rufaxilla* (Tschudi) of Peru but larger throughout, streaks below much wider and more numerous; chestnut areas averaging darker.

TYPE.—No. 133,904, Amer. Mus. Nat. Hist.; ♂ ad.; Santa Elena, 9000 feet, Antioquia, Colombia; December 2, 1914; Miller and Boyle.

RANGE.—Subtropical Zone. Central and West Andes of Colombia.

SPECIMENS EXAMINED

Heliochera rufaxilla antioquiæ.—COLOMBIA: Santa Elena, 1 ♂, 1 ♀; Cerro Munchique, 1 ♂, 1 ♀; San Antonio, 1 ♀. "Colombia," 1.

Heliochera rufaxilla rufaxilla.—PERU: Chaupe, 6100 ft., northeast of Huanca-bamba, northern Peru, 4 ♂, 2 ♀.

MEASUREMENTS

Name	No.	Sex	Wing	Tail	Culmen
<i>H. r. antioquiæ</i>	2	♂	122-124	83-85	18-18.5
<i>H. r. rufaxilla</i>	4	♂	112-116	75-78	17.5-18
<i>H. r. antioquiæ</i>	2	♀	118-120	78-79	18-19
<i>H. r. rufaxilla</i>	2	♀	112-116	67-72	17

The receipt of north Peruvian specimens of this species enables me to compare for the first time our Colombian examples with what I presume is essentially typical¹ material with the interesting result described above. In view of the pronounced stability of *Heliochera rubro-cristata* throughout a range extending from Bolivia to Venezuela, it is interesting to discover this geographic variation in the only other species in the genus. It may perhaps be assumed that the differences exhibited between the Peruvian and Colombian forms indicate prolonged separation, and we should also consider here the surprising fact that the species has not as yet been recorded from Ecuador.

***Neochelidon tibialis minimus*, new subspecies.**

SUBSPECIFIC CHARACTERS.—Resembling *Neochelidon tibialis tibialis* (Cassin), from an unknown locality, in color, but smaller throughout and with the tail less deeply forked.

TYPE.—No. 112,468, Amer. Mus. Nat. Hist.; ♂ ad.; testes enlarged; Juntas de Tamapá, Rio San Juan, western Colombia; December 19, 1914; A. A. Allen.

RANGE.—Tropical Zone. Western Ecuador to central Panama.

SPECIMENS EXAMINED

(see below)

***Neochelidon griseiventris*, new species**

SPECIFIC CHARACTERS.—Resembling *Neochelidon tibialis tibialis* (Cassin) in size but underparts mouse-gray rather than olive-brown; upperparts with much more pronounced metallic reflections.

TYPE.—No. 146,322, Amer. Mus. Nat. Hist.; ♂ ad.; "testes much enlarged"; Candamo, southeast Peru; December 10, 1916; H. Watkins.

DESCRIPTION OF TYPE.—Crown, back, longer upper tail-coverts and lesser wing-coverts black with metallic, bluish green reflections; rump, and all but longer upper tail-coverts mouse-gray; tail and wings fuscous-black, the greater wing-coverts and tertials with a suggestion of lighter tips; underparts essentially uniform mouse-gray, the longer lower tail-coverts black; the tibiae white; toes blackish brown; tarsi paler; bill black; tail deeply forked.

DESCRIPTION OF YOUNG MALE OR FEMALE.—Similar to adult male but upperparts duller; underparts slightly grayer; tail less deeply forked.

RANGE.—Tropical Zone; known from southeastern Peru to eastern Ecuador; (Brazil?).

SPECIMENS EXAMINED

Neochelidon tibialis tibialis.—Locality unknown; the type.

Neochelidon tibialis minimus.—COLOMBIA: Juntas de Tamapá, 1 ♂ ad.; San José, east of Buenaventura, 1 ♂ im., 2 ♀ ad.; Malagita, Choco,² 5 ♂, 4 ♀; El Tambo, Choco,² 1 ♂, 3 ♀; Cordova, Valle,² 1 ♂. ECUADOR: Rio Sapayoa,³ 1 ♀ im.³ PANAMA: Canal Zone, 1 ♂ ? ad., 1 ♀ ? ad.

¹The species was described from probably central Peru.

²Coll. Carnegie Museum.

³Coll. Museum Comparative Zoölogy.

Neochelidon griseiventris.—PERU: Candamo, 1 ♂ ad.; Tulumayo, 4000 ft., Vitoc Valley, 1 ? ECUADOR: Zamora, 1 ♀ ? ad. "BRAZIL": 1 ad. (♂?) cotype "*Hirundo brasiliiana*" Lafresnaye Ms.¹

MEASUREMENTS

Name	Locality	Sex	Wing	Tail	Fork of Tail
<i>N. tibialis tibialis</i> (type)		?	91.5	52	13
" " <i>minimus</i>	Tamaná, Col.	♂ ad.	85	41	9
" " "	Malagita, Col. ²	♂ ad.	84.5	39.5	10
" " "	" "	♂	82	41	10
" " "	" "	♂	86	39	7.5
" " "	San José, "	♂ im.	83	36	7
" " "	" "	♀	82.5	37	7
" " "	" "	♀	83	38	7
" " "	Malagita, Col. ²	♀	85.5	40	8
" " "	" "	♀	83	42	9
" " "	" "	♀	84	38	7
" " "	Panama	?	86.5	42.5	10
" " "	"	?	81	36	7
" <i>griseiventris</i>	Candamo, Peru	♂ ad.	96	55	16
" "	Tulumayo, Peru	?	91.5	45.5	11
" "	Zamora, Ec.	♀ ?	93	45	10
" "	Brazil ¹	?	...	52	14

Examination of our nine specimens of *Neochelidon*, when recording this genus from Ecuador, clearly showed that they represented two species, a small, dark-bellied one from Panama and western Colombia and a larger, gray-bellied one, with deeply forked tail, from eastern Peru and eastern Ecuador. Reference to the description of *Neochelidon tibialis* (Cassin) from an unknown locality, showed that it agrees in measurements with the bird of the interior of South America. This raised a doubt as to which of the two species in our collection Cassin's name properly belonged. An examination of Cassin's type, kindly sent me from the Philadelphia Academy of Sciences by Dr. Stone, shows that it belongs to neither. In other words, we have still to discover whence *Neochelidon tibialis tibialis* comes. In color it agrees closely with two skins collected by McLeannan and Galbraith in Panama not very many years after the publication of Cassin's description. These two birds are slightly browner than 18 specimens collected in western Colombia in 1911 and 1918 and the difference between these Panama and Colombian specimens evidently represents the amount of postmortem change in the former in a period of nearly fifty years.

¹Coll. Museum Comparative Zoölogy.

²Coll. Carnegie Museum.

Since there is no reason to believe that Cassin's type has changed more than the Lawrence Panama birds, it follows that its present color does not differ materially from that it exhibited at the time it was described. This belief is confirmed by Cassin's description of it as "inferior parts entirely smoky brown." These facts are stated as evidence that the differences in color between the type of *tibialis* and *griseiventris* are not due to any postmortem change in the former; nor, indeed, are these differences of a nature likely to be produced by such change.

Since the above was written, Mr. Bangs has sent me three specimens of *Neochelidon* from the Museum of Comparative Zoölogy. One is from northwestern Ecuador and is obviously *minimus*. The other two are from the Lafresnaye collection and are labeled "Brazil." One of these specimens is immature and molting. The other is an unsexed adult just finishing a complete molt. The outer primary is still in the sheath but the tail is fully grown. The wing to the tip of the second primary (from without) measures 95; the tail, 52; its fork, 14 mm. In size this specimen thus agrees with the larger rather than the smaller race of the genus, while in color it is unquestionably referable to *griseiventris* rather than to *tibialis tibialis*. Although as a specimen this bird is older than the type of *tibialis*, the upperparts are much more iridescent, indeed only a little less so than the type of *griseiventris*, while the underparts, though somewhat duskier than those of *griseiventris*, are decidedly grayer than in the type of *tibialis*. This specimen is labeled "cotype Mss. of '*Hirundo brasiliensis*' Lafr." If, as stated, it came from Brazil, it still further complicates the situation by extending the known range of *griseiventris* and correspondingly reducing the territory in which we may expect to find true *tibialis*.

The possibility of the race I have here described as *tibialis minimus* being based on small individuals of true *tibialis*, is, in my opinion, removed by the fact that at least the type of *minimus*, in which the testes were approximately four and a half millimeters in length, is evidently a breeding adult. With this bird one of the Panama specimens practically agrees in size and depth of tail-fork. The measurements of three unsexed specimens recorded by Ridgway (Bull. 50, III, p. 68) also nearly fall within the limits of those given in the preceding table.

Even assuming that the differences in length of tail and depth of its fork might be individual, we still have the difference in length of wing which is evidently not to be attributed to sex or age.

I have to thank my associate Mr. Waldron DeWitt Miller for making a wholly independent detailed study of the specimens above listed. It is

a pleasure to add that his conclusions in regard to their relationships agree with those I have here presented.

***Petrochelidon andecola oroyæ*, new subspecies**

SUBSPECIFIC CHARACTERS.—Similar to *Petrochelidon andecola andecola* (Lafresnaye and d'Orbigny) of the Temperate Zone of southern Peru and Bolivia, but upperparts with bluish, not greenish reflections, shafts of the primaries, except terminally, whitish not brown; bill larger and notably broader at the base, 7 mm. instead of 5.5 mm. as in *andecola andecola*.

TYPE.—No. 166,022, Amer. Mus. Nat. Hist.; ♂ ad.; testes "large"; Oroya, 12,500 ft., Dept. Junin, Central Peru; March 4, 1913; R. H. Beck.

SPECIMENS EXAMINED

Petrochelidon andecola oroyæ.—PERU: Oroya, 2 ♂, 1 ♀; Chipa, Dept. Junin, 13,000 ft., 1 ♂ im.

Petrochelidon andecola andecola.—BOLIVIA: Cuchacancha, 11,000 ft. Dept. Cochabamba, 5 ♀, 1 ♂; Guaqui, Titicaca, 12,500 ft., 2 ♀. PERU: Puno, Titicaca, 12,500 ft., 1 im., Tirapata, 12,700 ft., 4 ♂, 4 ♀.

The differences mentioned in the preceding diagnosis are constant in our series of twenty-one specimens and are shown by immature as well as adult birds.

The cliff swallows form such an obviously natural group that I hesitate to add to their genus a species that does not wear their distinctive pattern of marking and which is not known to build their peculiar type of nest. But the facts that I cannot find one good generic character separating this species from *Petrochelidon* and that in juvenal plumage *andecola* has the upper tail-coverts strongly tinged with ochraceous-tawny indicate that it may be placed in this genus without undue violence to either systematic or biologic ornithology.

***Petrochelidon rufocollaris æquatorialis*, new subspecies**

SUBSPECIFIC CHARACTERS.—Most nearly related to *Petrochelidon rufocollaris rufocollaris* (Peale) of the coast of Peru, but smaller and with the auburn or chestnut areas of the lower parts and sides of the head deeper and more extensive. Specimens of both races in juvenal plumage differ from each other much as do adults.

TYPE.—No. 171,963, Amer. Mus. Nat. Hist.; ♂ ad.; Alamor, Prov. Loja, southwestern Ecuador; August 23, 1921; Cherrie and Gill.

RANGE.—Southwestern Ecuador.

SPECIMENS EXAMINED

Petrochelidon r. æquatorialis.—ECUADOR: Alamor, 3 ♂, 1 ♀, 2 juv. (July 14); Guainche, 1 ♂; Pullango, 1 ♀ juv.

Petrochelidon r. rufocollaris.—PERU: Lima, 1 ♂; Huaral, Dept. Lima, 3 ♂, 4 ♀; Vitarte, Dept. Lima, 1 ♀, 1 ♀ juv.

MEASUREMENTS

Name	No.	Sex	Wing	Tail
<i>P. r. æquatorialis</i>	3	♂	93-95	40-42.5
<i>P. r. rufocollaris</i>	3	♂	97-99	42-44
<i>P. r. æquatorialis</i>	1	♀	93	40
<i>P. r. rufocollaris</i>	3	♀	98-100	44-45

A highly developed colonial habit is possibly in large part responsible for the extreme localization of the swallows of this genus, and to the resulting isolation we may no doubt attribute the development of the existing races.

While segregation and degree of differentiation may prevent intergradation by either contact or individual variation, it seems evident that, except *P. andecola*, all the American members of the genus *Petrochelidon* are representatives of one another.

This species has not before been recorded from Ecuador, and indeed seems to have been heretofore known only from Lima, Peru. Singularly enough it is not included by Taczanowski in his ornithology of Peru.

***Pheugopedius atriceps*, new species**

SPECIFIC CHARACTERS.—Not closely related to any known species of the genus; size large, wing and tarsi longer than in any described species; crown solid black; tail with only faint traces of bars.

TYPE.—No. 181,551, Amer. Mus. Nat. Hist.; ♂ ad.; Chaupe, 6100 ft., Subtropical Zone, northeast Huancabamba, northern Peru; February 27, 1923; H. Watkins.

DESCRIPTION OF TYPE.—Crown black, bordered by a conspicuous pure white superciliary; lores and a postocular streak black; auriculars gray, separated from the pure white throat by a narrow black line not reaching to the base of the bill and more complete on the right than on the left side; back bright amber brown; tail approaching Brussels brown, margined externally with the color of the back and with faint black terminal markings; wings fuscous margined externally with amber brown; breast gray slightly washed with ochraceous and with traces of small black spots; flanks, ventral region and lower tail-coverts between buckthorn and Dresden brown; feet brownish black; bill rather slender; maxilla blackish horn; mandible paler. Length (skin), 162; wing, 75; tail, 64; tarsus, 30.5; culmen, 21.5 mm.

Of this distinct, strikingly marked new species we have but one specimen. In its large size and long, slender bill, as well as in the color of the back, wings and tail, it resembles *Pheugopedius euophrys* of the Temperate Zone of Ecuador. The blackish marks below are on the lower breast not on the chest, as in *euophrys*, though some individuals of the latter have faint spots on the lower breast, as well as pronounced ones on the chest. In its faint malar stripe, black crown, gray underparts and long tarsi, *atriceps* differs strikingly from *euophrys*; nevertheless it appears to be nearer to that species than to any other known to me.

***Pheugopedius sclateri columbianus*, new subspecies**

SUBSPECIFIC CHARACTERS.—Throat and breast barred as in *Pheugopedius sclateri sclateri* (Taczanowski) of the Tropical Zone of northern Peru; but underparts posteriorly less barred than in *sclateri*, the sides and flanks buffy brown; the upperparts more olive-brown, less rufescent than in *sclateri* or any race of *Pheugopedius maculipectus*; bill shorter than in *sclateri*; stouter than in true *maculipectus*; feet as in *maculipectus*, smaller than in *sclateri*. Wing, 59; tail, 50.5; tarsus, 23; culmen, 18 mm.

TYPE.—No. 109,079, Amer. Mus. Nat. Hist.; ♂ ad.; Central Andes, east of Palmira, Colombia; April 29, 1911; Chapman and Richardson.

SPECIMENS EXAMINED

Pheugopedius sclateri columbianus.—COLOMBIA: east of Palmira, 1 ♂; Enconosa, near Bogotá, 1.

Pheugopedius sclateri sclateri.—PERU: Chinchipe Valley; San Ignacio, 4 ♂; Perico, 3 ♂, 1 ♀; Huarandosa, 1 ♂.

Pheugopedius paucimaculatus.—PERU: Palambla, 3 ♂, 3 ♀. Western ECUADOR: 18 ♂, 14 ♀.

Pheugopedius maculipectus maculipectus, *P. m. consobrinus*, *P. m. umbrinus*, topotypes.

With an excellent series of *sclateri* available, I am now able definitely to place two specimens of this group which we have long had from Colombia. (1917, Bull. Amer. Mus. Nat. Hist., XXXVI, p. 517.) They prove to resemble *sclateri* in the barring of the throat and breast, but in the color of the upperparts *sclateri* is nearer to *maculipectus* than it is to *columbianus* in which the back is olivaceous, only the crown showing a trace of rufescence.

The group has a discontinuous distribution, *maculipectus* with its races, *consobrinus* and *umbrinus*, being found only from southeastern Mexico to Honduras; *columbianus* appears to be known only from the two Colombian specimens on which this proposed new race is based; *sclateri* has been recorded only from the Marañon Valley of northern Peru, while in the coast region of northwestern Peru and southwestern Ecuador, it is represented by *P. paucimaculatus*. The latter is so near *consobrinus* that, except for their grayer tail, some Ecuador examples closely resemble others from Yucatan. It would indeed be quite as logical to rank *paucimaculatus* as a race of *maculipectus*, as it is to make *columbianus* a subspecies of *sclateri*. The case is one where lack of specimens or actual breaks in distribution make any treatment theoretical.

***Catharus fuscater caniceps*, new subspecies**

SUBSPECIFIC CHARACTERS.—Similar to *Catharus fuscater fuscater* (Lafresnaye) of Colombia and Ecuador, but crown grayer, more nearly the color of the back; breast paler and more sharply defined from the more extensively ivory-yellow abdomen.

TYPE.—No. 175,530, Amer. Mus. Nat. Hist.; ♂ ad.; Palambla, 5000–6500 ft., Dept. Piura, Peru; September 16, 1922; H. Watkins.

SPECIMENS EXAMINED

Catharus fuscater caniceps.—PERU: Palambla, 6.

Catharus fuscater fuscater.—COLOMBIA: Santander, East Andes,¹ 7; Bogotá, 1. ECUADOR: Cayandedel, 1 (type of *Catharus berlepschi* Lawrence); El Chiral, 3; above Zaruma, 1; Salvias, 2; San Bartolo, 2; Alamor, 1; Celica, 3; Puente del Río Quixos, 1. PANAMA: Mt. Tacarcuna (*C. f. "mirabilis"* Nelson), 13.

Catharus fuscater hellmayri.—COSTA RICA: Navarro, 2; Santa Cruz de Turrialba, 1; Aquinares, 1.

Catharus fuscater mentalis.—BOLIVIA: Yungas, 1 ♂. PERU: Rumicruz, Junin, 1 ♂.

The crown is grayer, the underparts whiter in this form than in any other race of the species. Specimens from western Ecuador have the crown not quite so intensely black as in eastern Colombian birds, but agree with them in the color of the underparts and are clearly to be referred to true *fuscater*. *Catharus berlepschi* Lawrence, the type of which is in the American Museum, proves to have been founded on a specimen in much worn plumage.

Twelve specimens from Mt. Tacarcuna, in eastern Panama, which I assume typically represent *C. f. mirabilis* Nelson³ average yellower below and with more black in the chin than Ecuador and Colombia birds, but so many birds in each series can be matched in the other that the status of the east Panama bird is in my opinion questionable. Dr. Nelson compared it with *hellmayri* of Chiriqui and Costa Rica from which, as he states, it differs markedly, but evidently lacked examples of true *fuscater*.

Cichlopsis chubbi, new species

SPECIFIC CHARACTERS.—A very distinct species most nearly related to *Cichlopsis gularis* Salvin and Godman of British Guiana, but larger, the throat chestnut-hazel, the ventral region ochraceous-orange, etc.

TYPE.—No. 180,610, Amer. Mus. Nat. Hist.; ♂ ad.; Mindo, Huila, western Ecuador; August 11, 1923; Olalla and Sons.

DESCRIPTION OF MALE AND FEMALE.—Crown and back rich Dresden-brown becoming more rufescent on the rump and upper tail-coverts; rectrices cinnamon-brown, the outer pair paler, all but the central feathers narrowly tipped with ochraceous; wings externally orange-tawny, their lower coverts, "bend" and "lining" ochraceous-orange; lores and throat rich chestnut-hazel, this color tinging the orbital and auricular regions; chest Sudan-brown, the lower breast drab, passing through ochraceous-tawny on the abdomen to bright ochraceous-orange on the ventral region and lower

¹Coll. Carnegie Museum.

²Coll. J. Dwight.

³1913, Smiths. Misell. Colls., LX, No. 3, p. 24 (Mt. Pirri, E. Panama).

tail-coverts; feet brownish black; maxilla black, mandible (in skin) apricot yellow. Male: wing, 107; tail, 90; tarsus, 26.5; culmen, 20 mm. Female: wing, 108; tail, 88; tarsus, 27; culmen, 20 mm.

SPECIMENS EXAMINED

Cichlopsis chubbi.—ECUADOR: Mindo, Huila, 1 ♂, 1 ♀.

Cichlopsis gularis.—BRITISH GUIANA: Merume Mts., 1 ♀; Roraima, 1 ♀.

The discovery of this striking new species extends the known range of the genus *Cichlopsis* from Guiana and eastern Brazil to western Ecuador. The locality "Huila" given by the collector is presumably below Mindo since other specimens from this station are of species known to inhabit the Tropical Zone, the zone in which we should expect to find the species here described.

Cichlopsis leucogenys, supposed to inhabit eastern Brazil, is known to me only from the plate (xix) in 'Exotic Ornithology.' It appears to be less like *C. chubbi* than is *C. gularis*, though evidently closely related to the latter. This opinion, I should add, is confirmed by Dr. Hellmayr who has seen our specimens of *chubbi* as well as specimens of *leucogenys*.

I have named this beautiful solitaire *Cichlopsis chubbi* as a tribute to the memory of the late Charles Chubb, an earnest student of tropical American birds who, as the author of the 'Birds of British Guiana' and (with Lord Brabourne) of 'A List of the Birds of South America' rendered notable service to neotropical ornithology, and to whom I am indebted for much valuable coöperation.