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STUDIES OF PERUVIAN BIRDS. NO. 51

THE GENERA *CHLOROTHRAUPIS*, *CREURGOPS*, *EUCOMETIS*, *TRICHOThRAUPIS*, *NEMOSIA*, *HEMITHRAUPIS*, AND *THLYPOPSIS*, WITH ADDITIONAL NOTES ON *PIRANGA*

By JOHN T. ZIMMER

I am indebted to Messrs. James Bond and Rodolphe M. de Schauensee of the Academy of Natural Sciences of Philadelphia and to Mr. William H. Phelps of Caracas, Venezuela, for the loan of critical material used in the following studies; also to Dr. Herbert Friedmann of the United States National Museum and to Mr. Emmet R. Blake of the Chicago Natural History Museum for courtesies enabling examination of specimens in their respective institutions.

Names of colors are capitalized when direct comparison has been made with Ridgway's "Color standards and color nomenclature."

Chlorothraupis carmioli frenata Berlepsch

Chlorothraupis carmioli frenata BERLEPSCH, 1907 (Feb.), *Ornis*, vol. 14, p. 349—Marcapata, Perú; ♂; Frankfurt Mus.

Río Távora, 4 ♂, 1 ♀; La Pampa, 2 ♂, 2 ♀; Candamo, 1 ♂, 1 ♀; Pozuzo, 1 ♀.

The wide separation of the range of this form from that of the other members of the species is curious, especially in view of the occupation of the intervening terrain by *C. olivacea* and *C. stolzmanni*. Both of these last-mentioned forms appear to be specifically distinct from *carmioli* with which no intergradation of characters has been discovered at any point. The three species are undoubtedly quite closely related. The pale lores of *frenata* might be considered as suggesting the bright yellow lores of *olivacea*, although the equally conspicuous yellow eye ring of *olivacea* is not similarly suggested, and the re-

semblance in the color of the lores is not very striking, quite aside from the fact that *olivacea* and *carmioli lutescens* occur very near to each other in eastern Panamá.

Two females of *frenata* from Pozuzo and La Pampa, respectively, stand out from the general series of both sexes by reason of their much lighter under parts. The throat is clear light yellow, without any dark stripes or spots; the auriculars are lighter than usual; the lores are as yellow as the throat; the breast is relatively light green; and the belly is broadly yellow without any dark clouding. There is still no suggestion of a circumocular ring, and the characteristics of these birds apparently are due to immaturity. The tips of the rectrices are somewhat more acute than in obviously adult birds, and the remiges and rectrices both lack the firm texture of adult plumage.

Records of *frenata* are from Marcapata, Cosñipata, Yahuar Mayo, San Gabán, and Chaquimayo.

Creurgops verticalis Sclater

Creurgops verticalis SCLATER (J. Verreaux MS), 1858, *Proc. Zool. Soc. London*, vol. 26, p. 73, pl. 132, fig. 2—Río Napo, eastern Ecuador; type in collection of J. and E. Verreaux, now lost.

Chaupe, 1 ♂, 1 [? ♂], 1 ♀; La Lejía, 1 ♀; Cushi Libertad, 2 ♀.

There seems to be no differentiation in the species from its northern range in Colombia to the Junín region of central Perú.

The only other Peruvian locality of record is Ropaybamba.

***Creurgops dentata* (Sclater and Salvin)**

Malacothraupis dentata SCLATER AND SALVIN, 1876, Proc. Zool. Soc. London, p. 353, pl. 31—Bolivia; [♀]; British Mus.

Malacothraupis gustavi BERLEPSCH, 1901 (Jan.), Jour. für Ornith., vol. 49, p. 85—Chaco, Yungas of La Paz, Bolivia; ♂; Berlepsch Coll., Frankfurt.

Malacothraupis castaneiceps CHAPMAN, 1901 (Sept. 12), Bull. Amer. Mus. Nat. Hist., vol. 14, art. 19, p. 225—Inca Mine, Perú; ♂; Amer. Mus. Nat. Hist.

Inca Mine, 1 ♂ (type of "*castaneiceps*"); Santo Domingo, 1 "♀" = ♂.

Bond and de Schauensee (1941, Proc. Acad. Nat. Sci. Philadelphia, vol. 94, pp. 376–377) have given the evidence on which they based their conclusion that "*gustavi*" is the male of the same species of which *dentata*, as described, is the female—a concept which Berlepsch (*loc. cit.*) and Hellmayr (1936, Field Mus. Nat. Hist., zool. ser., vol. 13, pt. 9, p. 346, footnote 3) both considered a possibility. The evidence appears to be sound. Both were collected at Sandillani, Bolivia, a few days apart, and both have been found at Inca Mine, Perú. The Sandillani birds, as sexed by the collector, show the suggested allocation of the two names correctly, in agreement with the types of "*gustavi*" and "*castaneiceps*." The arguments against such arrangement consist solely of a bird in the Academy of Natural Sciences collection from Inca Mine, in the plumage of *dentata* (*sensu stricto*) but sexed as a male, and the bird from Santo Domingo recorded above, in the plumage of "*gustavi*" but sexed as a female. Thus, two of the six known examples with given sex (the type of *dentata* and one Sandillani bird are not sexed by the collectors) must be wrongly sexed, a rather high percentage but perhaps not unduly so considering the paucity of all material. The differences between "*gustavi*" and the description of *dentata* strongly suggest no more than sexual distinctions.

Inca Mine, equivalent to Santo Domingo, is the only Peruvian locality known for this species.

Chapman, in describing "*castaneiceps*," pointed out the close similarity between *Creurgops* and the supposedly distinct

"*Malacothraupis*." Carriker (1936, Proc. Acad. Nat. Sci. Philadelphia, vol. 86, p. 332) formally proposed the generic union, and Bond and de Schauensee adopted this proposal, with which I am in full accord.

***Eucometis penicillata penicillata* (Spix)**

Tanagra penicillata SPIX, 1825, Avium species novae . . . Brasiliam, vol. 2, p. 36, pl. 49, fig. 1—no locality; Fontebôa, Brazil, suggested by Berlepsch, 1908; Munich Mus.

A study of a good series of Amazonian birds confirms the fact that there is a certain lack of uniformity in the present species throughout the course of that stream. Hellmayr early pointed out (1912, Abhandl. K. Bayerischen Acad. Wiss., Math.-Phys. Kl., vol. 26, pt. 2, pp. 12, 13) that the birds from the lower Amazon have somewhat greater measurements than those from the upper part of the stream, and this has subsequently been commented on by other authors, most of whom concurred in the suggestion of possible subspecific distinction.

The problem is, however, complicated by the fact that measurements of the type of *penicillata* have not been recorded, so far as I can determine, although Hellmayr (1910, Novitates Zool., vol. 17, p. 278) remarks that specimens from the Rio Madeira agree with the type in the Munich Museum. Since this was prior to his comment on the larger birds from the mouth of the Amazon, it is not certain that the type may not have been large and hence possibly from farther downstream than Fontebôa which Berlepsch proposed as the restricted type locality for Spix's bird. Until it is possible to examine the type, Berlepsch's restriction will have to be accepted as valid.

There is a certain amount of differentiation shown by the birds of Perú, Ecuador, and southeastern Colombia in comparison with those of the Rio Madeira, Brazil, but it is not very clear-cut. The Rio Madeiran examples have the throat usually whiter and the malar region sometimes invaded by this pallor, while the Peruvian, Ecuadorian, and Colombian examples show more grayish suffusion on the sides and

posterior border of the gular area, with the center of the throat duller than in the Rio Madeiran series. The size is the same in the two series. Since Spix ascended the Amazon beyond Fontebóia, it is possible that his type of *penicillata* actually came from the upper limit of his travels in that direction and would perhaps be assignable to the darker-throated section of the population. His original description calls the throat "albo brunnescenti" while Hellmayr, in his review of Spix's types (1912, Abhandl. K. Bayerischen Akad. Wiss., 2 Kl., vol. 22, no. 3, p. 671) says that the type has the throat white, barely clouded with gray, which is not exact enough to permit restriction to one portion or other of the population. For the present, therefore, it is inadvisable to attempt to break up the upper Amazonian series, although the possible distinctions are worth recording.

The disposition of the birds from the Tocantins and eastward, also, is not at all satisfactory. There is no question that the population in this eastern area averages distinctly larger in dimensions of wing, tail, and bill than the population from the Rio Madeira and westward. Taking available figures from other authors and the measurements of the material at hand, the eastern population shows the males to have the wing 91-99 mm. (average, 94.8); tail, 81-89 (average, 85.4); culmen from base, 19.1-20.2 (average, 19.7); females, wing, 87.5-95 (average, 91.4); tail, 79-87 (average, 91.4); culmen from base, 19.1-20.2 (average, 19.6). For the upper Amazonian population: males, wing, 84-95 (average, 89.8); tail, 71-84 (average, 76.8); culmen from base, 15.8-19.8 (average, 18.3); females, wing, 82-91 (average, 86.2); tail, 72-82 (average, 74); culmen from base, 16.8-19.8 (average, 18.1).

If arbitrary lines of demarcation are set at the following places: male, wing, 92.25; tail, 81.5; culmen from base, 19.3; female, wing, 89.5; tail, 79.5; culmen from base, 19—not over one-quarter of the series will fail to stay within the established limits. The actual overlap of extremes is somewhat greater, and from one-third to

one-half of the total series falls within the zone of dimensions common to both regions. Consequently, although the tendency to greater size at the mouth of the Amazon should be appreciated, the taxonomic distinction of the birds from that area is not assured.

The only Peruvian records not covered by the localities in the series before me are from Iquitos, Pebas, and "Upper Ucayali." The records from Loretoyacu are now transferable to the Colombian list.

SPECIMENS EXAMINED

E. p. penicillata.—

COLOMBIA:

Bogotá, 1 (?);

Loretoyacu, 1 ♂, 1 ♀.

ECUADOR:

Upper Río Suno, 1 ♂.

PERÚ:

Puerto Indiana, 1 ♂;

mouth of Río Curaray, 1 ♀;

Santa Cruz (Hullaga), 1 ♂;

Sarayacu, 2 ♂, 1 ♀;

Lagarto, 2 ♀;

"Ucayali," 1 ♂.

BRAZIL:

Rio Madeira (Humaythá, Calamá, Rosa-

rinho, Santo Antonio de Guajará, Borba,

Igarapé Auará), 24 ♂, 17 ♀, 3 (?);

Villa Bella Imperatriz, 2 ♂, 1 ♀, 1 (?);

Rio Tocantins (Ilha Taiuna, Bocca de

Manapirí), 3 ♂, 3 ♀;

Maranhão, Ilha Itauna, 1 ♂; 1 ♀;

Rio Negro, Igarapé Cacao Pereira, 1 ♂, 1 ♀.

E. p. albicollis.—

BRAZIL:

Matto Grosso (Chapada, Urucum de Co-

rumbá, Descalvados, Tapirapoan, Belve-

dere de Urucum, and São Lorenzo River),

23 ♂, 17 ♀, 3 (?).

BOLIVIA:

Todos Santos, 1 ♂.

E. p. affinis.—

VENEZUELA:

(Las Trincheras, San Carlos, Cumbre

Chiquitos, and Las Quiguas), 3 ♂, 3 ♀, 1

(?).

E. p. cristata.—

COLOMBIA:

(Río Lima, Guevara, El Consuelo, "Bo-

gotá, and "Colombia"), 1 ♂, 2 ♀, 9 (?);

Santa Marta (Donama, Bonda, Cacagua-

lito, and Onaca), 3 ♂, 2 ♀, 3 (?).

PANAMÁ:

(El Real, savanna near Panamá, Tocumé,

Cape Garachiné, Gatún, Darien, and

Lion Hill), 4 ♂, 13 ♀, 1 (?).

E. p. stictothorax.—

PANAMÁ:

(El Banco, Bogava, Bugaba, Chiriquí,

Jicarón Is., Sevilla Is., El Villano, Santa

Fé, La Marea, Wilcox Camp, and La Colorada), 20 ♂, 7 ♀, 2 (?)

COSTA RICA:

(Paso El Boruca, Boruca, Volcán de Oso, El Pozo, and Puerto Jiménez), 6 ♂, 3 ♀.

E. p. spodocephala.—

COSTA RICA:

(Las Cañas, Nicoya, and Miravalles), 5 ♂, 4 ♀.

Nicaragua:

(Volcán Chinandega, Tuma, MuyMuy, Chinandega, Volcán Viejo, and Río Grande), 3 ♂, 6 ♀.

Trichothraupis melanops (Vieillot)

Muscicapa melanops VIEILLOT, 1818, Nouveau dictionnaire d'histoire naturelle, nouv. éd., vol. 21, p. 452—based on "Lindo pardo copete amarillo" Azara, No. 101; Paraguay.

Tachyphonus quadricolor VIEILLOT, 1819, *op. cit.*, vol. 32, p. 359—"Brésil."

Tanagra auricapilla WIED, 1821, Reise nach Brasilien, vol. 2, p. 212—Arrayal de Conquista, Bahia, Brazil; [♂]; Amer. Mus. Nat. Hist.

Muscicapa galeata LICHTENSTEIN, 1823, Verzeichniss der Doubletten des Zoologischen Museums der Berliner Universität, p. 56—São Paulo, Brazil; Berlin Mus.

Tachyphonus suchii SWAINSON, 1825 (Oct.), Quart. Jour. Sci., Litt., Arts Roy. Inst., vol. 20, No. 39, p. 66—southern parts of Brazil; Univ. Mus., Cambridge, England.

This species has been recorded from Huambo, Amable Maria, Ropaybamba, and Pumamarca, but I have seen no Peruvian examples. There is a slight possibility that distinctions might be found in Peruvian specimens as compared with Paraguayan and Brazilian material, but the range of variation in the species is so great (126 specimens examined) that little is to be expected. Two adult males from Bolivia (Province of Sara) have a greater posterior extension of the black area on the sides of the face than any other males at hand from any locality, but there is considerable variation within this extreme limit. These two males also have the longer upper tail-coverts decidedly blackish, with narrow olive tips, but this character is present in a small number of Brazilian and Argentine birds, also, and is of doubtful taxonomic value. The relatively pale yellow crest of the Bolivian specimens is likewise valueless since it occurs irregularly in other parts of the specific range. Hellmayr at one time (1906, Abhandl. Bayerischen Akad. Wiss., 2 Kl., vol. 22, no. 3, p. 674) proposed to

recognize a separable form, *auricapilla*, on this basis (and several others), but later found the characters to be instable. Curiously enough, the type of *auricapilla*, which Hellmayr appears not to have seen, has a deeply colored crest.

Nemosia pileata nana Berlepsch

Nemosia pileata nana BERLEPSCH, 1912 (Feb.), Verhandl. 5 Internatl.-Ornith. Kongr., Berlin, pp. 1084, 1141—Río Samiria, northeastern Perú; ♂; Frankfurt Mus.

This small, dark form ranges somewhat more widely than has been recorded. A single male from Rosarinho, left bank of the Rio Madeira (near its mouth), Brazil, is a little larger than any Peruvian male at hand, agreeing with the smallest examples of *N. p. pileata* which appears to occupy the region between the Madeira and the Tapajoz and to cross the Madeira to its western side near Marmellos, some distance above Rosarinho.

Study of a large series of birds from all parts of the specific range has indicated the desirability of further breaking up the species, since certain definite segregation of characters is evident in different parts of the population. In order to provide names under which the characters may be discussed, it may be well to define two new forms that require naming. These may be known as follows:

Nemosia pileata interna, new subspecies

TYPE: From Igarapé Cacao Pereira, lower Rio Negro (left bank), Brazil. No. 313348, American Museum of Natural History. Adult male collected January 21, 1930, by the Olalla brothers.

DIAGNOSIS: Similar to *N. p. pileata* of French Guiana in coloration, but smaller. Size about like that of *P. p. nana* of northeastern Perú, but dorsal coloration lighter gray.

RANGE: Left bank of lower Rio Negro to the upper Rio Branco region, northern Brazil.

DESCRIPTION OF TYPE: Top of head and sides of head behind and under the orbit glossy black; a small dusky bar on lower part of lores from orbit to base of bill; upper part of lores white; hind neck

and back Deep Green-Blue Gray. Under parts largely white with the black of the sides of the head continued onto the sides of the breast, and the flanks and thighs distinctly grayish; thighs deeper gray. Remiges black, with outer margins of primaries, except outermost, narrowly Cadet Gray, becoming obsolete distally; outer margins of secondaries slightly deeper in hue and progressively broader, being supplemented on the inner feathers by a narrow exterior line of white near the tips; tertials a little duller with the gray portion reaching the shaft and crossing to the inner web at least distally where there is also a narrow terminal whitish edge, most conspicuous on the two longer feathers; the longest tertial also has a fairly strong whitish outer margin on the outer web; greater upper wing-coverts a little duller than the back, with narrow white outer margins on some of the outer feathers; median and lesser series near Delft Blue; alula and primary-coverts black with narrow blue outer margins; under wing-coverts white, with a blue area along the carpal margin. Median rectrices like the back; remainder blackish, with outer margins of all but outermost pair bluish; outer pair with a white inner margin, also present but more restricted on subexternal pair. Bill (in dried skin) black; feet yellow. Wing, 66 mm.; tail, 42.5; exposed culmen, 11; culmen from base, 12.4; tarsus, 17.

REMARKS: The five adult males in the series measure: wing, 62.5–67 (average, 65.5); tail, 40–42.5 (average, 41.1); culmen from base, 11.8–12.4 (average, 12.0). Two females measure: wing, 62.5, 63.0; tail, 40.0, 41.0.

In comparison, 10 males of *p. pileata* measure: wing, 66–70.3 (average, 67.5); tail, 42–45.5 (average, 44.3); culmen from base, 11.1–12.9 (average, 12.0). Eight females measure: wing, 63–68 (average, 66); tail, 40–44.8 (average, 42.5).

***Nemosia pileata surinamensis*, new subspecies**

TYPE: From near Paramaribo, Surinam. No. 511112, American Museum of Natural History. Adult male collected May 14, 1899, by W. A. Penard.

DIAGNOSIS: Similar in coloration to *N. p. nana* of northeastern Perú, but larger. Averaging slightly larger than *N. p. pileata* of French Guiana but with dorsal coloration darker.

RANGE: Surinam and British Guiana.

DESCRIPTION OF TYPE: General pattern as for *N. p. interna* described above, but back deeper in hue, somewhat clearer than Payne's Gray; outer margins of primaries Pale Windsor Blue; white outer edges of inner secondaries and tertials obsolete but those on greater upper wing-coverts present; white inner margins of outer rectrices obsolete; median and lesser upper wing-coverts Tyrian Blue. Wing, 70 mm.; tail, 46; exposed culmen, 11.1; culmen from base, 12.1; tarsus, 18.4.

REMARKS: Eleven males from Surinam and British Guiana show a wing measurement of 67.5–74 (average, 70); tail, 43.5–48 (average, 45.1); culmen from base, 11.1–12.9 (average, 12.3). Four females measure: wing, 66–68.5 (average, 66.9); tail, 43–44 (average, 43.2).

Paraguayan birds were named *paraguayensis* by Chubb (1910, Ibis, ser. 9, vol. 4, p. 629) on account of larger size in comparison with *pileata* from "Guiana." While Paraguayan and northwest-Argentine birds are at the maximum in regard to measurements, there is little distinction between them and the birds of southeastern Brazil, from the Tapajoz to São Paulo. Three Paraguayan males have the wing 76–77.5 mm. in length; a fourth, 74; and a male from Embarcación, Salta, Argentina, 75.5. One male from Urucum, Matto Grosso, also has the wing 74 and one from Viçosa, Ceará, only 69, but 29 other males from southeastern Brazil have this member 70–75.5. The tail measures 42.5–50, no longer in the Paraguayan series than in the remainder. Culmen from base, 12–14.2.

On the other hand, 10 males of *pileata*, from the Guianas, the north bank of the lower Amazon, and from a portion of the Madeira and between this stream and the Tapajoz, have the wing but 66–70.3; the tail, 40–45; and the culmen from base, 11.1–12.9. It seems best, therefore, to as-

sociate the southeast-Brazilian bird with the Paraguayan, not with *pileata pileata*.

This necessitates the use of another name for the large southern form. Examples from Bahia were named *H[ylophilus] caeruleus* (based on the female) and *H. cyanoleucus* (male) by Wied (1831, *Beiträge zur Naturgeschichte von Brasilien*, vol. 3, pt. 2, pp. 731 and 734, respectively). I adopt the name *caerulea* for this form, under which *paraguayensis* should be listed as a synonym. The types of Wied's supposed two forms unfortunately were not among the specimens of his collection received by the American Museum of Natural History, but the application of the names is unquestionable.

It may be suggested that the few examples from the upper Rio Madeira and between that stream and the Tapajoz could be considered as intermediates between *caerulea* and the small, dark *nana* of northeastern Perú. While this is a possibility, these characters are those of *pileata pileata* from which the skins in question cannot be distinguished. A single male from the left bank of the lower Madeira, on the other hand, is typical *nana*.

As noted in the description of *interna*, there is a small, relatively light-backed form on the lower Rio Negro and north to the upper Rio Branco. This might be expected to pass into the characters of the British Guianan population, but the distinction there is quite pronounced since the British Guianan and Surinam birds are quite dark and nearly as large as *caerulea*. Females of all these forms are not clearly distinguishable in coloration, although they tend to match the distinctions of the males both in color and size.

The north-Colombian *hypoleuca* is much more widely distributed than has been recorded. Hellmayr (1936, *Field Mus. Nat. Hist., zool. ser.*, vol. 13, pt. 9, p. 369) assigns north-Venezuelan records to typical *pileata*, although (p. 371) he recognized the existence of *hypoleuca*. Through the kindness of Mr. William H. Phelps of Caracas, I have been able to examine seven males and five females from various parts of northern and eastern Venezuela which Mr. Phelps had identified as *hypoleuca*, and I

find myself in accord with this assignment. One male in worn plumage from Cerro Tomasote, El Palmar, Bolívar, a little south of the lower Orinoco, might have been expected to approach either *surinamensis* or *interna*, but it agrees with the other Venezuelan examples as nearly as can be determined from its worn plumage.

To recapitulate: *caerulea* is the largest and dorsally palest form; *pileata* is somewhat smaller and slightly darker; *hypoleuca* is about the same size as *pileata* but has more purely white flanks; *surinamensis* is larger than *pileata* and smaller than *caerulea*, and is relatively dark above; *interna* is small and light backed; *nana*, small and dark.

SPECIMENS EXAMINED

N. p. pileata.—

FRENCH GUIANA:

Cayenne, 3 ♂, 2 ♀;
Mana, 1 ♂, 1 ♀.

BRAZIL:

Faro, 2 ♂, 2 ♀;
Monte Alegre, 1 ♂;
Rio Madeira, Igarapé Auará, 1 ♀;
Marmellos, 2 ♂, 2 ♀;
Villa Bella Imperatriz, 1 ♂, 1 ♀.

N. p. surinamensis.—

SURINAM:

Near Paramaribo, 9 ♂ (including type),
2 ♀;
Little Wanica, 2 ♀.

BRITISH GUIANA:

Demerara, 2 [♂].

N. p. hypoleuca.—

COLOMBIA:

Cartagena, 1 ♂, 1 ♀;
Lorica, 1 ♀;
Jaraquiel, 1 ♂.

VENEZUELA:

Zulia, Villa del Rosario, 1 ♂¹;
Mene Grande, 2 ♂¹, 1 (♀)¹;
Santa Barbara, 1 ♂¹;
Perijá, San Rafael, 1 [♂]¹;
Machiquez, 1 ♀¹;
Lara, Quebrada Arriba, 1 ♂¹, 2 ♀¹;
Guarico, Altagracia de Orituco, 1 (♀)¹.

N. p. interna.—

BRAZIL:

Rio Negro, Igarapé Cacao Pereira, 1 ♂
(type), 1 ♀;
Rio Surumú, Frechal, 4 ♂.

N. p. caerulea.—

BRAZIL:

Marajó, Bôa, Vista, 1 ♂;
S. Natal, 1 ♀;

¹ Specimens in collection of William H. Phelps, Caracas.

Rio Tocantins, Baião, 1 ♂;
 Maranhão, Flores, 2 ♂;
 Riachão, 1 ♂;
 Baião de Grajau, 1 ♂;
 Ceará, Viçosa, 1 ♂, 1 ♀;
 Piauí, Corrente, 3 ♂, 2 ♀;
 Urussuhy, 1 ♀;
 Bello Horizonte, 1 ♀;
 Bahia, "Bahia," 4 ♂, 4 ♀;
 Jaguaquara, 2 ♂;
 Santa Ritta, 4 ♂, 5 ♀;
 Orobo, 1 ♂, 1 ♀;
 Iracema, 1 ♂, 1 ♀;
 Jequié, 1 ♂;
 Morro de Chapéu, 1 ♀;
 Espírito Santo, Lagôa Juparaná, 1 ♀;
 Minas Gerais, Pirapora, 1 ♂;
 São Paulo, Itapura, 1 ♀;
 Matto Grosso, Chapada, 3 ♂, 3 ♀;
 Urucum de Corumbá, 2 ♂, 6 ♀;
 Belvedere de Urucum, 1 ♀.

PARAGUAY:

Trinidad, 2 ♂;
 La Fonciere, 1 ♂;
 Ypané River at Niu Pona, 1 ♂, 1 ♀.

ARGENTINA:

Salta, Embarcación, 1 ♂.

BOLIVIA:

Todos Santos, 2 ♂, 1 ♀;
 Prov. Sara, 750 m., 1 ♀.

N. p. nana.—

PERÚ:

Sarayacu, 2 ♂, 1 ♀;
 "Upper Ucayali," 1 ♂;
 mouth of Cahuapanas, 1 ♂.

BRAZIL:

Rosarinho, 1 ♂.

Hemithraupis guira guirina (Scater)

Nemosia guirina SCLATER, 1856, Proc. Zool. Soc. London, vol. 24, p. 110—New Grenada, Bogotá, and eastern Perú; restricted to Bogotá by Berlepsch, 1912; British Mus.

There is some uncertainty with regard to the strict application of the name *guirina*, since two different forms are represented in Bogotá collections, although only one of them is known to reach Perú. Hellmayr (1936, Field Mus. Nat. Hist., zool. ser., vol. 13, pt. 9, p. 378, footnote) has stated the problem. The original description was based on three specimens—two Bogotá trade-skins and one example from "Guaunco" [= Huánuco], Perú. These Scater found to differ from "*guira*" (with which he included specimens now assignable to *nigrigula*) by larger size, darker ("deep chestnut tinge") breast, and absence of the post-gular yellow band, together with a supposedly greater development of yellow on the sides of the neck.

This last character is not worth consideration, since the preparation of the skin affects the appearance of this yellow marking which is variable in all populations. The absence of post-gular yellow is definitive as between *guira* and *nigrigula* together in comparison with the whole Andean series, but it does not help in the restriction of the name *guirina*. The size (wing, 2.9 in.; tail, 2.0) is not definitive so far as the tail is concerned, but the wing measurement is larger than that of any Andean specimen I have, with the nearest approach in specimens from the Central Andes of Colombia, as discussed below. Some Peruvian birds are not far below it, and most "Bogotá" birds are intermediate in this respect. Scater's birds can thus hardly be placed accurately by the measurements given in the original description.

The use of the term "deep chestnut tinge" would seem, however, to be definitive enough for the purpose. The Bogotá birds show two extremes of coloration of the breast, one of which is near Raw Sienna, as it is in *guira* and *nigrigula*, while the other is much darker, a little lighter than Amber Brown which Scater might have called "chestnut" although he could hardly have applied the term to the lighter hue.

Hellmayr lays stress on Scater's use of the word "*flavis*" for the superciliary stripe which is brownish in the dark-chested birds and yellower in the others, as it is in *guira* and *nigrigula*. Some of the darker-breasted examples have this stripe distinctly yellowish, in any case. Scater also says that the yellow cervical and superciliary areas meet, but this factor requires confirmation since it is not apparent in any of the Andean birds I have seen or in *nigrigula*. It is a character of the various forms found in Brazil south of the Amazon and other countries to the southward, but not in the Andean region.

For these reasons, therefore, I believe the name *guirina* should be restricted to the darker-breasted population as represented in Bogotá collections, the range of which actually occupies central and western Colombia and possibly western Ecuador

and extreme northwestern Perú, and to establish the distributional facts, I propose Antioquia, Colombia, as a restricted type locality, more definitive than "Bogotá" where the bird does not occur.

This western population may deserve still further subdivision, but it is difficult to say where a line of separation should be placed. The central Colombian males and two dark-breasted Bogotá-skins have the wing 69–71.5 mm.; the tail, 52.9–58. The largest bird is from near Honda. Three west-Colombian males have the wing 69–71; tail, 50.5–55. A male from Chimbo, western Ecuador, is recorded by Taczanowski (1884, *Ornithologie du Pérou*, vol. 2, p. 554) as having the wing 64; tail, 50.

The maximum figures are thus above those available for the east-Colombian birds and those from eastern Ecuador and north-central Perú, but the difference is not great. This eastern population shows the males with wing 62–72; tail, 45–55. Excluding doubtful specimens, of which more will be said later, the average would be larger, with the wing 66.3–72; tail, 48–55. The largest specimen in this series is a Bogotá-skin; the next largest is from northern Perú.

My west-Colombian males all have the superciliary stripe very weak and brownish, and a male from Río Frío, Cauca River, and one Bogotá-skin are very similar. Taczanowski's description of the Chimbo male shows it to have been of the same nature. A male, collected by Goodfellow and Hamilton in Ecuador and said to have come from Archidona, east of the Andes, agrees quite closely, but this last specimen probably was obtained in western Ecuador; Goodfellow and Hamilton's localities are notoriously unreliable.

One other Bogotá-skin, a specimen from near Honda, one from "Antioquia," and a fourth from La Frijolera have the superciliary stripe broader and yellower than the west-Colombian examples, but still not so clear yellow as in more eastern examples. The assignment to *guirina*, as I have restricted that name, is indicated by the dark color of the breast.

We have, then, the birds of the Central Andes of Colombia diverging from the east-

Colombian birds by showing the superciliary stripe deeper yellow or sometimes distinctly brownish and sometimes greatly reduced in size, while the wing and tail average very slightly longer than in the more eastern population. In western Colombia, the character of the obsolescent superciliary stripe is emphasized, while the wing and tail return to lengths more nearly as in the average eastern birds. In western Ecuador, however, the superciliary stripe remains inconspicuous, while the wing and tail become even shorter. A long series from the western Andes of Colombia and Ecuador may show some definite preponderance of characters in parts of the area that will permit the delimitation and naming of a separate form. For the present, I hesitate to define such form. In particular, I am unable to separate the west-Colombian birds from *guirina* at the present writing.

Taczanowski (*loc. cit.*) included in his account of *guirina* the description of a female from Santa Lucia, extreme northwestern Perú, which supplies the only record that is likely to be assignable to *guirina* (or a still smaller west-Ecuadorian form). This female is said to have the wing 63 mm.; the tail, 50. A female at hand from Chimbo, western Ecuador, has the wing 60; tail, 47. This is the smallest bird in the whole Andean series. The Santa Lucia bird appears to have been larger than the minimum of north-central Peruvian females but a little smaller than any of the central and west-Colombian birds of that sex now at hand. Obviously, more material is needed from the far western region. In the meantime, I refer the Santa Lucia record tentatively to *guirina*.

Hemithraupis guira huambina Sztolcman

Hemithraupis guira huambina SZTOLCMAN, 1926 (Dec. 31), *Ann. Zool. Mus. Pol. Hist. Nat.*, vol. 5, p. 233—Huambo, Perú; ♂; Warsaw Mus.

The three dubious specimens mentioned above are very similar to the other specimens I refer to *huambina* except that they are somewhat smaller. One is from W. E.

Moore's "Napo" collection, but may not have come from the Napo (see discussion of *Tachyphonus surinamus napensis* in Amer. Mus. Novitates, no. 1304, pp. 20-21, 1945); another is from Loretoyacu, Colombia; the third is labeled "Ecuador Wallace" though without an original label. With them may be placed a male from Sarayacu, Perú, and one from Rosarinho, Brazil. In the order mentioned, the wing measures: 62, 64, 67.2, 61.8, 63.9; tail, 45, 53, 48, 46.5, 47.5. The Loretoyacu bird is certainly from north of the Amazon, but the "Napo" and "Ecuador Wallace" examples may not be since they agree best with the Sarayacu and Rosarinho skins in their smaller size. This small dimension shows an approach toward the form from the south bank of the lower Amazon of which more will be said below.

The pattern of these five birds is not decisively different from the general series of *huambina*. All of them have the yellow superciliary stripe narrowly separated from the cervical patch. The series of *huambina* varies in the degree to which this separation is shown, but in no case are the two yellow areas quite confluent. There is always a small greenish patch in the interspace. The Rosarinho bird has a minimum of this as might be expected from the position of the locality, but the yellow is still not quite continuous. In some cases the hiatus is relatively broad, but both extremes, short of continuity, are found from eastern Colombia to northern Perú.

In spite of the smaller size of four of the five birds, therefore, I believe they should be referred at present to *huambina* and their shorter measurements ascribed to a trend toward the lower Amazonian population which is similarly small.

All Peruvian records, with the possible exception of that from Santa Lucia which may be *guirina*, thus appear assignable to *huambina*, including Perico, Yurimaguas, Huánuco, and Huambo.

Hemithraupis guira guira (Linnaeus)

Motacilla guira LINNAEUS, 1766, *Systema naturae*, ed. 12, vol. 1, p. 335—based on "Guiraguacu-beraba" Marcgrave; northeastern Brazil = Pernambuco (Berlepsch, 1912).

Descending the Amazon to the Pará region, it appears that birds from the Rio Tocantins eastward and southward through Goyaz, Piauí, Maranhão, Ceará, and northwestern Bahia are fairly uniform and may be associated in the subspecies *guira*, whose type locality was restricted by Berlepsch in 1912 to Pernambuco (although recent collectors appear to have failed to secure examples in that state).

This form is easily distinguished from *nigrigula* of Cayenne. A new extreme is reached in the paleness of the color on the breast and, although the darker examples of *guira* can be matched in the series of *nigrigula*, most of them are definitely paler on breast and uropygium. The olive color of the back also is lighter and brighter in most of the examples of *guira*. The yellow post-gular band is not so prominent as in *nigrigula* and is often absent. The superciliary stripe and the cervical patch, broadly separated in *nigrigula*, and moderately to broadly in *huambina*, are strongly confluent in *guira*, making a complete yellow border behind the auriculars. The size of the two forms is about the same.

Farther up the south bank of the Amazon, near the Tapajoz and Madeira rivers, the birds retain the small size of *guira* and, in the males, the yellow border behind the auriculars, but the dorsal coloration is darker olive and the breast and rump are somewhat deeper colored, while the yellow post-gular band usually is more prominent than in most *gularis*. They are thus closer to *nigrigula* than is *gularis*, being distinguishable from *nigrigula* by the post-auricular yellow lunule. Since no name is available for this population, it may be known as follows:

Hemithraupis guira amazonica, new subspecies

TYPE: From Tauarý, Rio Tapajoz (right bank), Brazil. No. 288048, American Museum of Natural History. Adult male collected April 14, 1931, by Alfonso M. Olalla.

DIAGNOSIS: Similar to *H. g. nigrigula* of the Guianas and Brazil, north of the Amazon, but differing in the male sex by having the yellow superciliary stripe and cer-

vical patch broadly confluent behind the auriculars. Differs from *H. g. guira* of the region from the Rio Tocantins to north-western Bahia by the darker olive back, deeper brownish breast and rump, and usually more prominent yellow post-gular bar.

RANGE: South bank of the Amazon from the right bank of the Tapajoz westward to the east bank of the Madeira.

DESCRIPTION OF TYPE: Top of head and mantle Dark Citrine \times Warbler Green; lower back Mars Yellow \times Sudan Brown, becoming more yellowish in a very limited area adjacent to the upper tail-coverts which are like the mantle. A broad stripe of Lemon Chrome from the sides of the forehead over the orbit and around the back of the auriculars where it connects, still more broadly, with an area of the same color on the sides of the neck; chin, throat, auriculars, upper eyelid, and lores Chaetura Black, extending narrowly to the nostrils in front of the anterior end of the superciliary stripe; breast and sides near Raw Sienna, noticeably tinged with yellow at the upper border, forming a sort of continuation of the yellow cervical area; the brown color is prolonged posteriad well down the middle of the belly where it is bordered broadly by Lemon Chrome; flanks grayish, washed with yellowish green; under tail-coverts deep Lemon Chrome with the shorter feathers broadly tipped with Raw Sienna. Remiges blackish brown, exteriorly edged with green a little more yellowish than the color of the back, broadest on the tertials where the margins are still paler toward the tips; exposed portions of greater, median, and lesser coverts like the back; primary-coverts largely sooty with very narrow greenish outer margins; under wing-coverts and inner margins of remiges whitish; carpal margin greenish. Tail dark brown, with outer margins (and inner margins of median pair) greenish; inner margins of others than the median pair narrowly yellowish. Bill (in dried skin) with maxilla blackish brown with a pale area at base of commissure; mandible flesh colored; feet dull grayish. Wing, 64.5 mm.; tail, 51; ex-

posed culmen, 11; culmen from base, 14; tarsus, 16.

REMARKS: Although this form is, in a sense, intermediate between *guira* and *huambina*, it is not easily assigned to either. It is closer to *guira* than to *huambina* but represents an extreme of coloration that is quite noticeable in series and in most cases in individual skins.

Whereas *guira* frequently has a broad yellow band across the forehead as in the more southern *fosteri*, there is no more than a suggestion of it in any of the specimens of *amazonica*, nor, for that matter, in the majority of *guira*. In *fosteri*, however, the reverse is true, and most of the males of that form have a pronounced frontal band of yellow, sometimes 10 or 12 mm. in width. The yellow post-gular area, present in *guira*, is lacking in *fosteri* which, in addition, has the pectoral and uropygial areas deeper rufous brown than in *guira*, *amazonica*, or *huambina*, though not so dark as in *quirina*.

These characters, therefore, serve to distinguish the known forms in this part of the continent. Circling back north-eastward from Paraguay, the type region of *fosteri*, there is encountered another combination of characters that is not in agreement with those of the forms mentioned. This combination is most constant in the birds at hand from northeastern Bolivia which I have chosen as the distributional focus of a new form to be known as follows:

***Hemithraupis guira boliviana*, new subspecies**

TYPE: From Todos Santos, Province of Cochabamba, Bolivia; altitude 1300 feet. No. 138449, American Museum of Natural History. Adult male collected July 21, 1915, by Leo E. Miller and Howarth Boyle; original no. 13041.

DIAGNOSIS: Similar to *H. g. amazonica* described above, but averaging larger; back averaging lighter green; breast darker brown but rump averaging paler; post-gular yellow area usually lacking, rarely pronounced. Differs from *H. g. fosteri* of Paraguay and extreme southeastern Brazil

by having darker dorsal coloration and lacking the yellow frontal band; throat averaging more deeply blackish.

RANGE: Northeastern Bolivia; possibly also the Matto Grosso region of western Brazil.

DESCRIPTION OF TYPE: General pattern as described above for *amazonica* but back Warbler Green × Pyrite Yellow; breast and sides dark Raw Sienna with a very slight tinge of yellow on the upper border; rump near Mars Yellow, passing into clear yellow on the shorter upper tail-coverts; under tail-coverts yellow. Wing, 68.2 mm.; tail, 51; exposed culmen, 11; culmen from base, 14; tarsus, 16.

REMARKS: The specimens from Bolivia are relatively uniform, but there is some question about the series from various localities in Matto Grosso, Brazil. This region appears to be a mixing bowl for the characters of all the surrounding populations of this species. The birds from Chapada are large and, with one exception, without the yellow frontal band of *fosteri*, but they are lighter in color than the Bolivian skins, again with one marked exception—the same bird that has a certain amount of yellow on the forehead.

Four males from Urucum de Corumbá and Belvedere de Urucum, although the localities are between Chapada and Paraguay, do not approach *fosteri* except that one of the specimens has a little yellow on the forehead. The Urucum bird is very like typical *guira* in its very pale breast with noticeable yellow adjacent to the throat. The three birds from Belvedere are darker and are more like *amazonica*, although not certainly referable to that form because of geographical complications. They agree well enough with the Bolivian birds in coloration, although one of them has a tinge of yellow on the front, but they are small, like *guira*, having the wing 63.7–66.6; tail, 48–52.5. The Chapada males, perhaps because more are available for measurement, average larger, with wing 64.5–69.2; tail, 49.1–54.5. The Bolivian males measure: wing, 60.5–66.2; tail, 44.5–52. Males of *fosteri* show: wing, 60.8–70.7; tail, 51–57.

The mixture of characters in Matto

Grosso birds thus prevents a clear assignment of the population to one form or another, and equally prevents any separation as a distinct form. It seems best, therefore, to place the population at least temporarily in *boliviana* with which there is better agreement in one way and another than is shown with any other single form.

Considerable attention has been given to the possibility of uniting the *ruficapilla* and *guira* groups. There is no doubt that they are very closely related and, as far as I am able to demonstrate, they replace each other geographically. Some of the localities of record of one group or the other come very close together, but I can find no positive conflict where the record is based on males. Any records based solely on females is questionable, since the females of these two groups are virtually inseparable. Females of *guira fosteri* at hand are relatively bright yellowish on the under parts, those of *guira guira* a little less so, and those of the *ruficapilla* aggregation duller and often markedly grayish in tone, but there are exceptions in all parts of the ranges.

The continuity between *guira guira* and *g. fosteri* appears to be effected through the valleys of the Rio São Francisco and the Rio Paraná and their upper affluents, and the ranges ascend the lateral affluents, such as the Paranapanema, for a considerable distance toward the coastal highlands. On the other hand, while *ruficapilla* and its Bahian representative are found on the coastal side of these highlands, they also occur on the western slopes, apparently above the points reached by the *guira* group. On the meeting ground, there is no obvious barrier to intermingling of the populations or any demonstrable intergradation of a gradual sort, although a number of hybrids are extant, two of which are now before me. Both have the head pattern of *ruficapilla* but with the brown color of that region considerably darkened though not so blackish as in the *guira* group. One of the birds, from Coredeiras, São Paulo, has the head darker than the other and, in addition, has a suggestion of lighter brown on the forehead and a prominent brownish yellow supra-auricular

stripe. The other bird is from Jequié, Bahia.

Several other skins show peculiar characteristics that are not so certainly ascribable to hybridization. A Bahia trade-skin has the brown of the head darker and duller, less warmly hued, than either *ruficapilla* or its Bahian representative, while there are slight suggestions of olive tips on some of the feathers in that area. Without a definite locality to indicate the proximity of *guira*, the possible influence of that species cannot be determined. A bird of uncertain sex, but presumably a male, from Jiquy, Bahia, has the pattern of *guira* but with a washed-out appearance due to the reduction of the intensity of yellow pigment throughout, but this is certainly not due to hybridism.

The combination of characters noted in these curious birds gives the impression of hybridization rather than true intergradation, and I prefer, therefore, to keep *guira* and *ruficapilla* specifically distinct.

One other fact of interest has come to light in the examination of *ruficapilla* and its Bahian representative, usually considered under the name *ruficeps*. Wied (1831, Beiträge zur Naturgeschichte von Brasilien, vol. 3, pt. 2, pp. 725-729) described *Hylophilus ruficeps* in great detail and remarked that he had observed it in the interior of Bahia and the neighborhood of Cabo Frio [Rio de Janeiro]. Allen (1889, Bull. Amer. Mus. Nat. Hist., vol. 2, no. 3, p. 221) identified the single specimen of the species in Wied's collection as *Nemosia ruficapilla* Vieillot and claimed for it the general locality "Province of Bahia," although there was no original label on the skin. Hellmayr (1915, Verhandl. Ornith. Gesellsch. Bayern, vol. 12, p. 131) discovered differences between examples from Bahia and Rio de Janeiro and applied Wied's name, *ruficeps*, to the Bahian population without, however, examining the type.

Unfortunately, the example from Wied's collection proves to belong to the larger and darker-headed form from Rio de Janeiro, and is most likely to have come from near Cabo Frio. The measurements given in the original description of *ruficeps* (wing, 2''5''''; tail, about 1''10'''), when con-

verted from the "Old French" standard,¹ show the wing as 65.5 mm. and the tail, 49.6, whereas the specimen shows the actual measurements to be 66.5 and 52, respectively. The published measurements and the dimensions of the specimen at hand are not thoroughly definitive, although agreeing better with those of the Rio population than with those of Bahian birds. Incidentally, the difference shown in the measurements of the tail as recorded and as shown by the example in hand may possibly be accounted for by the fact that the specimen, once mounted, has a projecting wire through the tail which may have obstructed the instrument used for measuring if, indeed, the figures were obtained from the mounted specimen and not from the freshly killed bird. Seventeen adult males of *ruficapilla* have the wing 64.1-69.5 (average, 65.9); tail, 49.8-56 (average, 52). Eight Bahian males have the wing 58-65.2 (average, 62.9); tail, 47-50.5 (average, 50).

Wied presumably had a young male, as well as an adult, which he described as duller and smaller than the adult. Possibly the smaller size may have been due, in part, to the young bird's having come from Bahia and not from Cabo Frio, although there is no assurance of it. Wied does not state where he collected the form, but merely where he observed it, so it is possible that he had only Cabo Frio specimens from which to prepare his description. The specimen now at hand is the only tangible evidence that remains beyond the published account.

Aside from the dimensions, the specimen has the dark head of the Rio de Janeiro population, obvious in comparison with both old and more recent examples of both forms. Its assignment to the more south-

¹ It is sometimes overlooked that there were several standards of measurement used by early ornithologists. Perhaps the most common on the Continent was the "Old French" inch, equivalent to 27.06 mm., but there was also the "Old Prussian" inch of 26.15 mm. that was used by some writers. The English inch, of course, is 25.4 mm. Unfortunately, no one has tabulated the various ornithologists who used the different standards, but it is important to realize that apparent discrepancies in recorded measurements of an early date may be due to a different scale than is supposed. A comparison of Wied's figures with the measurements of various of his existing types indicates that he used the "Old French" inch of 27.06 mm.

ern form is clear. Either of two courses, then, is open to the student. Hellmayr's virtual restriction of the type locality of *ruficeps* to Bahia can be accepted, even though it seems to have been based principally upon Allen's unsupported assumption that the existing specimen in Wied's collection came from that state, which is now untenable; or the identity of this specimen should be accepted as determining the application of the name *ruficeps* and the type locality altered to accord with the known range of the pertinent form. The latter course will necessitate the proposal of a name for the Bahian population, but it will accomplish two objects. The sole existing cotype of *ruficeps* will remain available as a criterion of that name (the converse situation could be the cause of continuing confusion), and the Bahian population will be provided with an unquestioned Bahian type specimen and restricted type locality, both desirable. Accordingly, I propose the following name for Bahian birds:

***Hemithraupis ruficapilla bahiae*, new subspecies**

TYPE: From Jaguaquara, central-eastern Bahia, Brazil; altitude 2000 feet. No. 245618, American Museum of Natural History. Adult male collected by Emil Kaempfer on September 1, 1927; original no. 6134.

DIAGNOSIS: Similar to *H. r. ruficapilla* from Espirito Santo and southern Minas Gerais south to Paraná, but the brown of the cap in the male sex lighter; wing and tail averaging longer.

RANGE: Known only from southeastern Bahia and as "Bahia" trade-skins.

DESCRIPTION OF TYPE: Top and sides of head Sanford's Brown × Raw Sienna; mantle near Warbler Green; uropygium Ochraceous-Tawny × Mars Yellow, passing into brighter yellow on the lower edge; upper tail-coverts a little lighter green than the back. Throat Russet × Tawny, changing to Mars Yellow × Raw Sienna on the breast; sides of neck Primuline Yellow; lower breast and upper abdomen Barium Yellow, becoming paler on the lower belly and grayer on the flanks;

under tail-coverts Citron Yellow. Wings dark brown with exposed outer margins (except of outermost primary) green like the back; inner margins and under wing-coverts white, with a yellow stripe along the carpal margin. Tail with median rectrices green; remainder brown with light green outer margins; shafts brown above, whitish beneath. Bill (in dried skin) with maxilla blackish brown, dull yellowish along the commissure toward the base; mandible dull yellowish. Feet dull blackish. Wing, 64.5 mm.; tail, 50; exposed culmen, 11; culmen from base, 14; tarsus, 17.

REMARKS: There appears to be more variation in the color of the throat and breast than in that of the crown, possibly because in skins the under side is more frequently exposed. On average, however, *bahiae* has a paler breast than *ruficapilla*.

The measurements of the series of adult males have been given under *ruficapilla*.

It may be added that the series now at hand furnishes the first definite localities for the species in the state of Bahia. I am grateful to Mrs. W. W. Naumburg for permission to select the type from the authentic material in the Kaempfer Collection.

SPECIMENS EXAMINED

H. g. guira.—

BRAZIL:

Bahia, Santa Rita [do Rio Preto], 1 (?);
Giguy, 1 ♂;
"Bahia," 1 ♂;
Goyaz, "Goyaz," 1 ♂; 1 ♀;
Ceará, Joazeira, 1 ♂;
Piahy, (Therezina Peoriano, Gilbues, Corrente, Rio Juruena, Rio Julgua), 11 ♂, 3 ♀;
Maranhão, As Mangueiras, 5 ♂, 1 (?);
São João dos Patos, 1 ♀;
Rio Tocantins, Baião, 5 ♂, 3 ♀;
Mocajuba, 2 ♂, 2 ♀;
Cametá, 1 ♂;
Arumatheua, 1 ♀.

H. g. amazonica.—

BRAZIL:

Rio Tapajoz, Tauary, 1 ♂ (type);
Aramanay, 1 ♂;
Piquiatuba, 2 ♂;
Caxiricatuba, 4 ♂;
Rio Madeira, Borba, 3 ♂, 2 ♀;
Igarapé Auará, 1 ♂.

H. g. nigrigula.—

BRAZIL:

Rio Negro, Igarapé Cacao Pereira, 1 ♂, 2 ♀.

FRENCH GUIANA:

Cayenne, 4 ♂, 2 ♀.

DUTCH GUIANA:

Paramaribo, 5 ♂, 2 ♀;
"interior," 1 ♂.

VENEZUELA:

(El Pilar, Colonia Tovar, east of Caracas,
El Limón, San Esteban Valley, Río
Neveri, and "Venezuela"), 2 ♂, 6 ♀.*H. g. roraimae*.—

VENEZUELA:

Roraima, 2 ♂, 2 ♀.

H. g. guirina.—

COLOMBIA:

Antioquia, 1 ♂;
near Honda, 1 ♂;
La Frijolera, 1 ♂;
Río Frío, 1 ♂, 1 ♀;
San Isidro, 1 ♂;
La Candela, 1 ♀;
Media Luna, 1 ♂;
"western Colombia," 1 ♂;
"Bogotá," 2 ♂.

ECUADOR:

Chimbo, 1 ♀.

H. g. huambina.—

COLOMBIA:

Loretoyacu, 1 ♂;
"Bogotá," 4 ♂, 1 ♀.

ECUADOR:

Río Suno, 1 ♂;
below San José, 1 ♂;
Macas region, 1 ♂;
Napó, 1 ♂;
"Ecuador," 1 ♂;
"Archidona" (*errore*), 1 ♂;
Colimba, 1 ♂.

PERÚ:

Río Seco, 2 ♂;
Huarandosa, 5 ♂, 3 ♀;
Perico, 1 ♀;
San Felipe, 1 ♂;
Sarayacu, 1 ♂, 1 ♀;
Santa Rosa, Ucayali, 1 ♂.

BRAZIL:

Río Madeira, Rosarinho, 1 ♂.

H. g. boliviana.—

BOLIVIA:

Todos Santos, 11 ♂ (including type), 3 ♀;
Mission San Antonio, 1 ♂;
Vermejo, 1 ♂;
Mapiri, 1 ♂, 1 ♀;
Prov. Sara, 2 ♂.

BRAZIL:

Matto Grosso, Chapada, 12 ♂, 8 ♀;
Urucum de Corumbá, 1 ♂;
Belvedere de Urucum, 2 ♂, 1 ♀.*H. g. fosteri*.—

PARAGUAY:

Sapucay, 5 ♂, 1 ♀;
east of Caaguassú, 2 ♂;
Colonia Independencia, 1 ♂, 1 ♀;
Zanja Moroti, 2 ♂, 2 ♀;
La Foncière, 2 ♂, 1 ♀;
Niu Poná, 1 ♂, 1 ♀.

BRAZIL:

Rio Grande do Sul, Sinimbú, 3 ♂;
São Paulo, Fazenda Cayoá, 1 ♂, 1 ♀;
Paraná, Foz de Iguassú, 3 ♂, 4 ♀, 1 (?);
Guayra, 3 ♂, 5 ♀, 1 (?);
Porto Mendez, 1 (?).*H. r. ruficapilla*.—

BRAZIL:

São Paulo, Victoria, 1 ♂;
São Sebastião, 2 ♂, 2 ♀;
Paraná, Roca Nova, 1 ♂;
Tibagy, 1 (?);
Minas Gerais, Rio Caparão, 2 ♂;
Rio de Janeiro, Therezopolis, 1 ♀;
"Rio de Janeiro" (trade-skins), 10 ♂;
no locality [? = Cabo Frio], 1 ♂ (type of
ruficeps);
Espírito Santo, Baixo Guandú, 1 ♀;
Santa Barbara de Caparão, 1 ♀;
Lagôa Juparaná, 1 ♀.*H. r. bahiae*.—

BRAZIL:

Bahia, Tambury, 1 ♂;
Jaguaquara, 1 ♂ (type);
Boa Nova, 2 ♂;
"Bahia" (trade-skins), 5 ♂.*H. r. ruficapilla* × *H. g. fosteri*.—

BRAZIL:

São Paulo, Coredeiras, 1 ♂.

H. r. bahiae × *H. g. guira*.—

BRAZIL:

Bahia, Jequié, 1 ♂.

Hemithraupis flavicollis peruana

Bonaparte

Hemithraupis peruana BONAPARTE, 1851, Rev. Mag. Zool., ser. 2, vol. 3, p. 173—"Pérou"; type lost.

This form, with the yellow wing-bar, is found in Perú only north of the Marañón, whence it ranges northward across eastern Ecuador to the eastern side of the Eastern Andes of Colombia. Still farther eastward in Colombia, on the Venezuelan boundary, *aurigularis* occurs, but the meeting ground of the two forms is still to be learned.

Peruvian records not shown by the material in hand are from Pebas, Iquitos, and possibly "E. Perú" and "Upper Amazon."

South of the Marañón in northern Perú, the records have been assigned heretofore to *aurigularis* (from the Caura River, Venezuela), but I believe they represent an undescribed subspecies which may be known as follows:

Hemithraupis flavicollis sororia, new
subspecies

TYPE: From Chamicuros, Perú. No. 511173, American Museum of Natural History. Adult male collected August 15, 1867, by Edward Bartlett; original no. 2647.

DIAGNOSIS: Similar to *H. f. auricularis* of southwestern Venezuela and adjacent parts of Brazil and Colombia, but males with throat paler yellow.

RANGE: Northern Perú south of the Maraón, in the Tropical Zone.

DESCRIPTION OF TYPE: Top of head, mantle, and scapulars dark brown (probably blacker when freshly killed); lower back a little deeper than Lemon Chrome; upper tail-coverts like the mantle. Sides of head like the crown but with the yellow of the throat invading the lower part of the lores and extending backward to the middle of the lower portion of the orbit; whole chin and throat near Lemon Chrome; breast and sides white with subterminal sooty lunules, strongest on the sides; belly white; flanks slightly grayish; thighs brown; under tail-coverts yellow like the throat. Wings and upper wing-coverts dusky brown with a small white speculum on the inner primaries at their bases; under wing-coverts white with a dusky patch at the bend of the wing. Tail sooty brown. Bill (in dried skin) with maxilla dark brown, a little paler along the commissure; mandible flesh, slightly brownish at tip; feet dark brownish. Wing, 66 mm.; tail, 48; exposed culmen, 11; culmen from base, 14.6; tarsus, 15.

REMARKS: Female not certainly distinguishable from that of *auricularis*.

It might be suspected that the paler color of the throat in the Peruvian males of this form that are at hand is due to the age of the specimens. The dark color of the cap and mantle and of the wings and tail undoubtedly has faded and may have been much more blackish when the skins were fresh. Similar fading is easily demonstrable in good series of various other forms of varying dates of collection, although there is some variation in this particular, even in freshly collected material.

Similar fading of the yellow parts of the plumage is not comparably demonstrable; in fact, there is some possibility that the yellow color may deepen with age. In 45 adult males of *auricularis*, seven are about 30 years older than the others and include the darkest-throated individuals. Only one of the fresher males is as light throated as the two Peruvian skins. An equally great difference in dates of collection is shown in the series of some other forms, and no fading of the yellow color is shown by the older birds. Consequently, I believe that the north-Peruvian birds here described are naturally paler throated than the southwestern Venezuelan population.

It may be mentioned that Taczanowski described the throat of males from the Peruvian area in question as lemon yellow. It is also true that the other two Peruvian forms of the species (*peruana* and *centralis*) have the throat similarly paler yellow than that of *auricularis*. While not conclusive evidence in the present instance, the fact is suggestive. Finally, the range of *auricularis* is, as far as can be determined, quite cut off from that of *sororia* and apparently interrupted by the interposition of *peruana* on the north bank of the upper Amazon. These remarks are detailed in view of the lack of Peruvian examples in fresh male plumage.

Peruvian records that are apparently assignable to *sororia* are from Yurimaguas, Jeberos, Chayavitas, Moyobamba, Río Ucayali, and Río Javari.

Hemithraupis flavicollis centralis
(Hellmayr)

Nemosia flavicollis centralis HELLMAYR, 1907, *Novitates Zool.*, vol. 14, p. 350—Humaytá, Rio Madeira, Brazil; ♂; Amer. Mus. Nat. Hist.

A single male from Río Cosireni, southeastern Perú (one of two reported by Chapman, 1921, *Bull. U. S. Natl. Mus.*, no. 117, p. 121) agrees well with the type and other specimens from western Brazil and northern Bolivia. The series of males does not show all of the characters ascribed to the subspecies, since the alar speculum is well developed and the chest only slightly more strongly barred than in *flavicollis*. The back is deeper black than in fresh examples

of the other forms, as far as I can determine, the throat is paler yellow than in *flavicollis* and *aurigularis*, being about as in *peruana*, and the size is relatively large, as in *insignis* and *melanozantha*.

I am not sure of the distinction of *melanozantha* from *insignis*, since I have fresh material only of *insignis* males and one female of *melanozantha*. The remainder of the material at hand consists of trade-skins. Some of these have been labeled "Rio-skin" which I suspect are "Bahia-skins" and vice versa. In any case, either with the arrangement as labeled or with what I consider the correct assignment, I can find no clear distinctions in the males. The females, as I have rearranged them, show that sex of *insignis* to be noticeably browner above than the more olivaceous *melanozantha*, but fresh material in series may discredit this apparent difference. Consequently, I give but tentative status to *melanozantha* and refer to it the Bahian material at hand.

SPECIMENS EXAMINED

H. f. flavicollis.—

FRENCH GUIANA:

"Cayenne," 1 ♂, 2 ♀.

BRAZIL:

Faro, 2 ♂.

H. f. hellmayri.—

BRITISH GUIANA:

Potaro Landing, 3 ♂, 1 ♀;

Tumatumari, 1 ♂.

H. f. aurigularis.—

VENEZUELA:

Suapure, 6 ♂ (including type), 3 ♀;

Nichare, 3 ♂;

Mt. Duida (Playa del Río Base, Campamento del Medio, Caño León, Pie del Cerro, Valle de los Monos, and Río Pescada), 12 ♂, 14 ♀;

Boca de Sina, 1 ♂;

Río Cassiquiare (Solano, mouth of Río Ocamo, Buena Vista, and Río Huaynía), 14 ♂, 6 ♀, 1 (?).

COLOMBIA:

Río Uaupés, opposite Tahuapunto, 1 ♂, 2 ♀.

BRAZIL:

Río Uaupés (Tahuapunto and Iauarete), 3 ♂, 2 ♀, 1 (?);

Río Negro (San Gabriel, Santa Maria, Yucabí, and Tatú), 13 ♂, 7 ♀.

H. f. melanozantha.—

BRAZIL:

Bahia, Rio Gungogy, 1 ♀;

"Bahia," 4 ♂, 4 ♀.

H. f. insignis.—

BRAZIL:

Espirito Santo (Baixo Guandú and Lagôa

Juparaná), 5 ♂, 1 (? ♀);

"Rio de Janeiro," 5 ♂, 1 ♀.

H. f. centralis.—

BRAZIL:

Humaytá, 1 ♂ (type);

Calamá, 1 "♂" [? = ♀];

Rio Roosevelt, "Camp 1," 1 ♂;

"Camp 21," 1 ♂;

Uturity, 1 ♂; 1 ♀.

BOLIVIA:

Yungas, 1 ♂.

PERÚ:

Río Cosireni, 1 ♂.

H. f. sororia.—

PERÚ:

Chamicuros, 2 ♂ (including type), 1 ♀;

Orosa, 1 ♀.

H. f. peruana.—

PERÚ:

Pomará, 3 ♂, 2 ♀;

Apayacu, 2 ♂, 1 ♀;

mouth of Río Santiago, 1 ♂, 1 ♀;

mouth of Río Curaray, 1 ♂.

ECUADOR:

Río Suno, above Avila, 1 ♂;

lower Río Suno, 2 ♂, 2 ♀;

below San José, 1 ♂;

Chivinda, 3 ♂;

"Napo," 2 ♂.

COLOMBIA:

Florencia, 1 ♂;

"Bogotá," 3 ♂, 2 [? ♀].

H. f. albicularis.—

COLOMBIA:

Puerto Valdivia, 1 ♀;

"Bogotá," 2 ♂, 2 ♀.

H. f. ornata.—

PANAMÁ:

Boca de Cupe, Río Tuyra, 1 ♂.

Thlypopsis sordida chrysopsis (Sclater and Salvin)

Nemosia chrysopsis SCLATER AND SALVIN, 1880, Proc. Zool. Soc. London, p. 155—Sarayacu, eastern Ecuador; British Mus.

Thlypopsis amazonum SCLATER, 1886, Catalogue of the birds in the British Museum, vol. 11, p. 229—part; type from lower Ucayali, Perú; British Mus.

The Peruvian population is not divisible, nor is there any apparent distinction along the south bank of the Amazon as far as the eastern side of the Rio Madeira in Brazil.

Young birds of both sexes are green above, more yellowish on the head, and yellow beneath, with greenish margins on the wing and tail. Some of the colors of immaturity appear to be carried past the post-juvenile molt, both in this form and in

typical *sordida*, and there is thus an occasional specimen with a greenish patch on the occiput, possibly some green suffusion on the back, though the wings and tail are adult gray.

Peruvian records are from Río Perené, La Merced, lower Ucayali, Pebas, Nauta, Santa Cruz, and Tambillo.

The record from Tambillo is not entirely satisfactory, since it was based on a specimen said to be exactly like the type of *sordida* and hence must have been immature. Further discussion of this record is given below in the account of *T. inornata*.

Two specimens from Baião, Rio Tocantins, Brazil, belong to the buff-breasted *sordida sordida*. One of them (both birds are without indicated sex) has the entire under parts below the throat rather uniform buff, without any white on the belly. The other matches the least white-bellied examples from eastern Brazil and around to Bolivia. With only the two birds, it is impossible to say if a new form is likely to be involved. The locality is new to the record.

Study of birds from Bolivia, Argentina, and Brazil shows a slight decrease in size in the east-Brazilian part of the population as compared with the series from Matto Grosso, Argentina, and Bolivia. The difference is not striking. Fourteen males from the southwestern area have the wing 68–72 mm. in length; three males from Pernambuco have the wing 66–68; and six trade-skins from "Bahia" and "Rio de Janeiro," presumably including some males, are 59–67. Similarly, 10 females from the southwest have the wing 64–70; two from eastern Brazil, 64 and 66.5. The smallest trade-skins from the east show that some of the eastern birds, probably females, may go as low as 63.5. The relatively few sexed specimens from the eastern region should be supplemented by much more material before there will be assurance that there is a positive difference in size in this region. I can find no clear color characters to differentiate the birds from the two areas. If separable, the name "*fulvescens*" (Strickland, 1844, Ann. Mag. Nat. Hist., vol. 13, p. 420—"Brazil") may be available for an eastern form.

In this connection, it may be stated that the two skins from the Rio Tocantins are relatively large, having the wings 67.2 and 69 mm., respectively. These measurements would place them in closer association with the topotypical *sordida* than with an eastern form.

SPECIMENS EXAMINED

T. s. sordida.—

BOLIVIA:

- Mission San Antonio, 1 ♂, 3 ♀;
- Todos Santos, 4 ♂, 4 ♀, 1 (?);
- Prov. Sara, 1 ♂;
- Monos, 1 ♀.

ARGENTINA:

- Taff Viejo, 3 ♂, 1 ♀;
- Taff trail, 2 ♂;
- San Vicente, 1 ♂;
- above San Pablo, 1 ♀.

BRAZIL:

- Chapada, 8 ♂, 7 ♀;
- Agua Blanca de Corumbá, 1 ♀;
- Pernambuco, Palmares, 1 ♂, 1 ♀;
- Bello Jardim, 1 ♂, 1 ♀;
- Brejão, 1 ♂;
- Garanhuns, 1 (?);
- Minas Gerais, Rio Caparaó, 1 ♂, 1 (?);
- Piahy, Extremas, 1 ♀;
- Parnagua, 1 ♀;
- Ceará, Quijada, 1 ♀;
- Bahia, Bahia, 1 ♀;
- Jaguaquara, 1 (?);
- "Bahia," 3 (?);
- "Rio de Janeiro," 3 (?);
- Rio Tocantins, Baião, 2 (?).

T. s. chrysopsis.—

ECUADOR:

- Mouth of Lagarto Cocha, 1 ♂.

PERÚ:

- Puerto Indiana, 3 ♀;
- mouth of Río Curaray, 4 ♂, 2 ♀;
- Lagarto, 2 ♂, 2 ♀;
- Santa Rosa (Ucayali), 1 ♂;
- Chanchamayo Valley, 1 ♂;
- San Ramón, 1 ♂.

T. s. orinocensis.—

VENEZUELA:

- Capuchín, 1 ♂;
- [Isla] El Fraile, 1 ♀;
- Altigracia, 1 ♂, 1 ♀.

Thylopsis inornata (Taczanowski)

Nemosia inornata TACZANOWSKI, 1879, Proc. Zool. Soc. London, p. 228—northern Perú = Tambillo, Dept. Cajamarca; ♂; Warsaw Mus.

Lomo Santo, 1 ♂, 1 ♀; Perico, 1 ♂, 2 ♀; Saucos, 1 ♀; Jaén, 2 ♀; San Ignacio, 3 ♂, 1 ♀, 2 (?).

This species is wholly Peruvian and restricted to a limited part of the country.

There are some features that suggest close relationship to *T. sordida*, but both birds are recorded from Tambillo and more evidence is needed. The Tambillo record of *sordida* [*chrysopsis*] was based on an immature skin which, however, Taczanowski (1884, *Ornithologie du Pérou*, vol. 2, p. 509) said was exactly like the type (also an immature specimen), so confusion with *inornata* seems hardly likely though not impossible. Taczanowski's description of "*sordida*" is a virtual transcription of the original characterization of that Bolivian form, from which the Tambillo specimen is said to differ only by somewhat more extensive rufous coloration on the sides of the crown. Presumably the belly was white and the anterior under parts extensively yellow which is not the case in *inornata*, although there may be a slight tendency in that direction as noted below. The locality, Tambillo, is some distance away from the nearest place where *sordida chrysopsis* has been found, although it is in the heart of the range of *inornata*. Until it is certain, however, that there is some error in the record, the coexistence of *sordida chrysopsis* and *inornata* at Tambillo must be accepted.

There are various points of resemblance between *sordida* subsp. and *inornata*. The proportions are much the same, including the heavy bill which serves at once to distinguish these two species from the other Peruvian congeners. The nearest approach is in *fulviceps* which does not occur in Perú. At any rate, I should place *sordida* and *inornata* immediately adjacent without the interposition of *fulviceps* as Hellmayr has arranged matters.

The full cinnamon buff under parts of *inornata* are reflected in extreme examples of *s. sordida* such as the specimen from the Río Tocantins discussed on a previous page under *sordida chrysopsis*. The white belly of most *sordida sordida*, on the other hand, is indicated by extreme examples of *inornata* in which that area is distinctly paler than the flanks though not pure white except basad of the pale buff tips of the feathers. Occasional examples of *sordida* have the rufous cap as dark as it is in *inornata*, but there is always a strong yellow-

ish coloration on parts of the sides of the head and on the throat which does not appear in adult *inornata*. Nevertheless, two immature examples of *inornata* have a noticeably yellow tinge on the throat which is suggestive.

These two young birds agree well enough with the description given by Taczanowski (1884, *loc. cit.*) of the female plumage, except that there is there no mention of a yellowish-tinged throat. One of the birds in hand is a female and the other is without given sex, but both are very slightly more lax plumaged than adults and may be in their "first-winter" dress. Five other birds before me, sexed as females, are like the adult males, from which I judge that Taczanowski's female was not adult.

To make matters more confusing, a male specimen with very fluffy plumage and only half-grown bill has the full pattern of the adult male, with the whole top of the head rufous (lighter than in the adult), the throat and breast pale cinnamon buff, and the belly quite pale buff, inclined to whitish. This bird is obviously younger than the two immature individuals discussed above, but it is difficult to imagine a transition from its coloration to that of the two older immature birds. Taczanowski (*loc. cit.*) describes a young male as much like the bird he thought was an adult female—in other words with a large coronal area of olive, only tinged with rufous, and with a strongly marked superciliary stripe. I have no other equally young specimens of any of the species of the genus, but in none of the immature examples of any of them is there such close similarity to the adults. I judge, therefore, that the present young male is abnormally "advanced" in its coloration.

Other Peruvian records of *inornata* are from Tabaconas, Bellavista, Tambillo, Callacate, Hacienda Limón, and Río Utubamba. The last named is the only locality east of the Marañón. Chapman's record from San Miguel Bridge, Urubamba Valley, was based on a misidentified immature example of *T. ornata macropteryx*.

Thlypopsis ornata media Zimmer

Thlypopsis ornata media ZIMMER, 1930 (Dec. 10), Field Mus. Nat. Hist., zool. ser., vol. 17, p. 452—Culleui, Río Marañón, Perú; ♀; Chicago Nat. Hist. Mus.

This form was originally described in comparison with certain material to which I was given access which had been misidentified as *T. o. macropteryx* but which was in reality *T. pectoralis*. In the absence of authentic *macropteryx*, the error was not detected at the time. Consequently the characters given for the separation of *media* from *macropteryx* are non-existent, although they serve for the distinction of both *media* and *macropteryx* from *pectoralis*.

The question then arises as to the separation of *media* and *macropteryx*. I have only one adult *macropteryx*, and in coloration it does not differ from typical *ornata* or the birds I called *media*. It is, however, larger than any female of *media*, and the recorded measurements of male *macropteryx* are greater than those of the same sex of *media*, so it seems possible to maintain the two forms as distinct on the basis

teryx that is, in part, filled by the allied *T. pectoralis* which may possibly prove to be a representative form of the same species. The matter is discussed further under *pectoralis*.

As will be noted from the localities listed for material examined, *media* occurs on the western side of the Western Andes as well as in the Marañón Valley. Records are from Tambillo, Cutervo, and Paucal.

Thlypopsis ornata macropteryx

Berlepsch and Stolzmann

Thlypopsis ornata macropteryx BERLEPSCH AND STOLZMANN, 1896, Proc. Zool Soc. London, p. 345—Maraynioc, Perú; ♂, ♀ cotypes in Warsaw Mus. (? and Amer. Mus. Nat. Hist.).

The distinction of this form from *media* is discussed under *media*.

This is apparently a rare bird in collections. Numerous good collectors have visited the Maraynioc region, but Kalinowski's original specimens seem to remain the only examples known with the exception of a young bird of uncertain sex from the Urubamba Valley erroneously recorded as *T. inornata* (Chapman, 1921, Bull. U. S. Natl. Mus., no. 117, p. 121).

MALES

	WING	TAIL	CULMEN FROM BASE	TARSUS
<i>ornata</i>	55-61.5	44-50.5	13-14	18-20
<i>media</i>	64-68	49-55	13.5-14.5	19-22.2
<i>macropteryx</i>	67.7-71.5	56.5-61	—	20.5-21.7

FEMALES

	WING	TAIL	CULMEN FROM BASE	TARSUS
<i>ornata</i>	56-60	43-46	12.5-14	20-21
<i>media</i>	62-64	47-51	14-14.5	20-20.5
<i>macropteryx</i>	66-70	54	14.9	21

of size alone. A series of *macropteryx* might show some additional feature, but *macropteryx* appears to be extremely rare in collections, and no other material is available except a young bird from the Urubamba Valley which is useless for the purpose.

The above figures show the difference in size among the three forms. I accept the measurements given by Berlepsch and Stolzmann for additional *macropteryx*.

An added reason for the recognition of *media* is that there is an apparent hiatus between the ranges of *media* and *macropteryx*

One of Kalinowski's birds, now before me, is labeled "typus" on the original label and "co-type" on the label of the Rothschild Museum. It is a female, collected on January 7, 1893, whereas Berlepsch and Stolzmann do not list this date for any of the five examples on which they based their description of *macropteryx*. Since they presumably had the entire Maraynioc collection of Kalinowski before them, the omission of this date may have been unintentional. In any case, the bird

is a positive topotype and probably a co-type as labeled.

***Thlypopsis pectoralis* (Taczanowski)**

Nemosia pectoralis TACZANOWSKI, 1884, Ornithologie du Pérou, vol. 2, p. 508—Acancocha, Perú; ♀; Warsaw Mus.

The similarity of this form to the *ornata* group is so great that it would be easy to consider it no more than a subspecies were it not for an apparent overlapping of ranges. Both *pectoralis* and *o. macropteryx* occur in the highlands of the Junín region of central Perú, and although *pectoralis* has been found only in the more northern part of this area and *macropteryx* more to the southward, both have been found at Auquimarca which is a little north of the most southern locality for *pectoralis*. Until more is known of the precise local distribution of both forms, it will be necessary to keep them specifically distinct.

Thlypopsis pectoralis, in spite of its close resemblance to *macropteryx*, is readily distinguishable in all specimens examined by having the rufous color of the head deeper in tone, without the yellowish element present in *macropteryx*, although one young bird shows a slight tinge of yellow on the throat (not so strong as in young *ornata media*). The flanks are grayish olive instead of rufous, although there is a suggestion of rufescence in several specimens. The white area of the belly is broader than in the *ornata* group, and the rufous chest is more broadly defined from the white belly; also the definition between the rufous cap and the olive gray back is somewhat sharper than in the forms of *ornata*. For measurements of *macropteryx* I am dependent on Berlepsch and Stolzmann's original account of that form, except for a single female (? cotype), and it appears that *pectoralis* agrees fairly closely with *macropteryx* in the dimensions of tail, bill, and tarsi but has a shorter wing, on average, in closer approximation to that of *o. media*. It is thus, in a sense, intermediate in dimensions between *o. macropteryx* and *o. media* as its intermediate range would suggest if it were conspecific.

The sole record of a member of the *ornata* group from Auquimarca is that made

by Jelski and recorded by Taczanowski (1874, Proc. Zool. Soc. London, p. 515), based on a male and a female. He maintained this assignment at the same time that he described *pectoralis*, and it is difficult to prove an error without an examination of the specimens, now presumably destroyed. An error in the labeling of the material is equally difficult to determine. If future investigation should show that *macropteryx* is not of regular occurrence at Auquimarca, the labeling of Jelski's specimens could be questioned with some justice, and *macropteryx* and *frontalis* considered as geographically representative. In the meantime, their specific separation must be maintained.

SPECIMENS EXAMINED

T. o. ornata.—

ECUADOR:

Ibarra, 1 ♀;
Mindó, 1 ♂;
Intac, 1 ♀;
Huigra, 3 ♂¹;
Chunchi, 2 ♀¹;
Cayandeled, 1 ♀².

T. o. media.—

ECUADOR:

Taraguacocha, 1 ♂;
Loja, 1 (?).

PERÚ:

Taulis, 1 ♂;
Seques, 1 (?);
Levanto, 1 ♀;
San Pedro, 1 ♂, 2 ♀, 1 ♂², 1 ♀²;
Leimebamba, 1 ♂, 3 ♂¹, 1 ♀¹;
Llui (Luy), 1 ♂¹;
Chira, 1 ♂¹;
Yánac, 1 ♂¹;
Cochabamba, Dept. Libertad, 1 ♂¹;
Porculla, 1 ♂¹;
Culcui, 1 ♀ (type)³.

T. o. macropteryx.—

PERÚ:

Maraynioc, Pariayacu, 1 ♀ (? cotype);
San Miguel, Urubamba Valley, 1 (?).

T. pectoralis.—

PERÚ:

Chipa, 1 ♂;
Rumicruz, 3 ♂, 2 ♀, 1 (?);
Auquimarca, 3 ♂¹, 1 ♀¹;
above Huánuco, 5 ♂³, 2 ♀³;
above Pano, 1 ♀³.

¹ Specimens in Academy of Natural Sciences of Philadelphia.

² Specimens in United States National Museum.

³ Specimens in Chicago Natural History Museum.

Thlypopsis ruficeps (D'Orbigny and Lafresnaye)

E[uphonia] ruficeps D'ORBIGNY AND LAFRESNAYE, Mag. Zool., vol. 7, cl. 2, "Syn. Av.," [1], p. 30—Yuracares, Bolivia [= near Palca, Prov. Ayopaya (between Cochabamba and Incasivi)]; ♂; Paris Mus.

Oconeque, 1 ♂; Santo Domingo, 1 ♂, 1 ♀, 1 (?) ; Marcapata, 2 ♂, 1 ♀ ; Limbani, 1 ♂, 1 ♀ ; Inca Mine, 1 ♂, 1 ♀ ; Idma, 1 ♂ ; Santa Rita, Urubamba, 2 ♂, 1 ♀ ; Torontoy, 1 ♀ ; San Miguel, 1 ♂ ; Calca, 1 ♀ .

There is no observable distinction between this series and Bolivian specimens, and northwestern Argentine birds are in similar agreement. There is some individual variation in the depth of color on the head, the extent of invasion of the sides of the throat by the rufescence of the head, and the invasion of the occiput by the green of the mantle. I am not certain of the full significance of the last-named feature. Several males that show the character of green occiput are in process of molt in which the area is becoming rufous like the crown, but three females and one male, none of which is molting or showing obvious signs of immaturity, have this characteristic well marked. Another female has the occiput green with only a slight tinge of rufescence at the tips of the feathers. Eight females are indistinguishable from the males. Young birds (? first winter) have the whole top of the head green, sometimes with a slight golden tinge and with a yellow or golden superciliary. Perhaps the birds with the green occiput are in an intermediate stage peculiar to the second year.

One male from Limbani (the apparently adult male with the green occiput) is further distinguished by having a suggestion of a rufous necklace at the lower border of the throat. The rufous color of the crown is at the maximum depth of saturation, adding weight to the assurance that this bird is beyond its first year.

Additional localities of record in Perú are Huaynapata, Quispicanchis, and Uruhuasi ("Chuhuasi").

Piranga rubriceps (G. R. Gray)

Piranga rubriceps G. R. GRAY, 1844, The genera of birds, vol. 2, p. 364, pl. 89, lower fig.—no locality; type a "Bogotá-skin" in the British Mus.

Piranga rubriceps rufistigmata LÖNNBERG AND RENDAHL, 1922, Ark. Zool., vol. 14, no. 25, p. 86—above Baeza, eastern Ecuador; Stockholm Mus.

San Pedro, 1 ♂, 1 ♀ ; La Lejia, 5 ♂, 1 ♀ .

I can find no differences in birds from Ecuador, Colombia, and northern Perú to justify the recognition of "*rufistigmata*."

Other Peruvian records are from Cuzco and Cumpang, while Chira is to be added from the collections of the Academy of Natural Sciences of Philadelphia.

Piranga leucoptera ardens (Tschudi)

Ph[oenisoma] ardens TSCHUDI, 1844, Arch. Naturgesch., vol. 10, no. 1, p. 287—central Perú; Vitoc suggested by Hellmayr, 1936; type in Mus. Neuchâtel.

This subspecies ranges from the Cochabamba region of Bolivia northward through Perú to southern Ecuador and on the western side of the Andes to southern Colombia. A single male from Sabanilla furnishes the only record from the eastern side of the mountains in Ecuador.

Throughout this range, there appears to be little distinction, although the Ecuadorian birds have the lower wing-bar a little wider, in some cases, than the average Peruvian specimen.

Still farther north, especially in northern Venezuela, there is developed a noticeably wider wing-bar that is sufficiently constant to warrant the taxonomic separation of the northern population which may be known as described below.

Peruvian records of *ardens* are from Achamal, Chirimoto, Huambo, Vista Alegre, Huachipa, Garita del Sol, Río San Miguel, and Huaynapata.

Piranga leucoptera venezuelae, new subspecies

TYPE: From Galipán, Cerro de Avila, Venezuela. No. 510292, American Museum of Natural History. Adult male collected December 30, 1913, by S. M. Klages; original no. 1579.

DIAGNOSIS: Similar to *P. l. ardens* of Perú, Ecuador, northwestern Bolivia, and

(at least) southern Colombia, but with the white lower wing-bar broader, colors not certainly different.

RANGE: Northern Venezuela from the states of Lara and Falcón eastward to Sucre and Monagas; doubtfully across central Colombia to the Cauca Valley.

DESCRIPTION OF TYPE: General color Scarlet Red; lores, malar apex, a narrow post-nasal bar, and a narrow circumocular ring black; rump a little brighter than the top of the head; mantle a little duller with the feathers away from the midline showing an increasing amount of subterminal black which entirely replaces the red on the outermost feathers and the scapulars. Remiges black with narrow white inner margins; greater upper wing-coverts black with a broad white tip on the outer web (as much as 10 mm. in length along the shaft on some of the inner feathers but narrower on the outer ones), and crossing the shaft to the outer web near the tip; median coverts broadly (about 8 mm.) tipped with white on both webs; lesser series without white; under wing-coverts white except for area adjacent to the carpal margin. Tail black. Bill and feet (in dried skin) blackish; mandible basally slaty. Wing, 75 mm.; tail, 59; exposed culmen, 14; culmen from base, 17; tarsus, 19.

REMARKS: Females are much like those of *ardens*, but the yellow of the under parts is usually lighter and clearer, and the top of the head reaches a somewhat brighter extreme of yellow coloration, but the difference is not constant. As with the males, the width of the lower wing-bar is the best character, but even that is not so satisfactory a criterion as it is in the males.

There is some suggestion of difference in coloration between *ardens* and *venezuelae*, but it is too inconstant to be included in the diagnosis. In the series of *venezuelae* there are proportionately more males of a light or rosy red than in the series of *ardens* in which there are relatively more deeply colored males. The females similarly show a tendency toward lighter coloration in the north and darker in the south. It would be impossible, however, to allocate any large proportion of the specimens on this basis.

Colombian birds are not assignable to this form or *ardens* without some question. Additional material will be needed to settle the question. Two adult males labeled, respectively, "Colombie" and "Bogotá," and a subadult male also labeled "Bogotá," although none of the three is of the typical "Bogotá-make," are certainly referable to *venezuelae*. They have the appearance of Salmon's skins from Antioquia and may have come from that region. Two adult males and a female from Ricaurte and a female from east of Palmira are somewhat equivocal, but the two Ricaurte males are closer to *ardens* than to the new form and their assignment to *ardens* is further recommended by the geographical position of the locality. The female from east of Palmira is tentatively assigned to *venezuelae* in view of the probable occurrence of that form farther north in the Cauca Valley. Larger series of authentic males may necessitate the revision of this assignment.

Two presumed females, labeled "Bogotá," are even more uncertain. One of them has the grayish rump of typical *leucoptera* and may be assigned to that form in spite of the locality indicated on the label, since it is not a "Bogotá-skin" and the origin is, therefore, most uncertain. The other example is of the ordinary "Bogotá-make" and, although it has a relatively narrow wing-bar, it can be matched by north-Venezuelan examples of the same sex.

Ecuadorian specimens of both sexes are, as might be expected, closest to *ardens*, although some intermediacy is apparent. Most puzzling are two males from Mt. Roraima, Venezuela. Both birds show some traces of immaturity and have the plumage rather abraded, so, although the lower wing-bar appears to be relatively narrow, it cannot be taken as convincing evidence. Fortunately, I have been able to examine two males from Mt. Ptari-tepui, in the collection of Mr. William H. Phelps, and have found more evidence of value than in the Roraima specimens. One of the Ptari-tepui birds shows traces of immaturity, but the other is fully adult and has the lower wing-bar as broad as in north-Venezuelan examples. I have no

hesitation, therefore, in referring the Ptari-tepui birds to *venezuelae* to which the Roraima examples quite certainly also belong. This whole southeast-Venezuelan population is isolated from the north-Venezuelan or east-Colombian populations by the llanos of the Orinoco Valley, and subspecific distinction would not have been surprising. I am unable to discover any basis for such distinction in the meager material available at present.

SPECIMENS EXAMINED

P. l. leucoptera.—

MÉXICO:

(Orizaba and Jalapa), 2 ♂.

GUATEMALA:

(Chimoxan, Finca Cipres, Finca Carolina, Finca Sepacuite, San Felipe, and "Guatemala"), 20 ♂, 8 ♀, 3 (?).

NICARAGUA:

(Ocotal, Quilali, San Rafael del Norte, and San Juan, Talpaneca), 8 ♂, 1 ♀.

P. l. latifasciata.—

COSTA RICA:

(Monte Redondo, Guayabo, Bonilla, Navarrito, Navarro, Aquinares, Estrella de Cartago, Azahar de Cartago, and "Costa Rica"), 13 ♂, 3 ♀, 4 (?).

PANAMÁ:

(Boquete, Chiriquí, Veraguas, Cerro Flores, and Jicarón Is.), 13 ♂, 2 ♀, 1 (?).

P. l. venezuelae.—

COLOMBIA:

East of Palmira, 1 ♀;
"Colombie," 1 ♂;
"Bogotá," 1 (? ♂), 1 (? ♀).

VENEZUELA:

Galipán, 2 ♂ (including type), 2 ♀;
El Limón, 3 ♂;

Loma Redonda, 1 ♂, 1 ♀;
Cumbre de Valencia, 1 ♂, 1 ♀;
Valley of Santa Ana, 1 ♂;
Campos Alegre Valley, 1 ♂, 2 ♀;
Los Palmales, 2 ♂, 1 ♀;
Los Dos Ríos, 1 ♂;
Quebrada Seca, 5 ♂; 1 ♀;
San Antonio, Bermúdez, 1 ♂;
Galipán, 2 ♀;
Caripe, 1 ♀, 1 ♀¹;
El Cerrón, 2 ♂¹, 4 ♀¹;
El Cogollal, 1 ♂¹;
Altamira, Barinas, 7 ♂¹, 1 ♀¹, 1 (?)¹;
Cubiro, Lara, 1 ♂¹;
San Luís, Falcón, 1 ♂¹, 5 ♀¹;
Curimagua, Falcón, 7 ♂¹;
San José de las Caracas, 2 ♀¹;
La Sabana, Perijá, 1 ♀¹;
Quebrada Bonita, Anzoategui, 2 ♀¹;
El Peonía, Anzoategui, 1 ♀¹;
San Juan, 1 ♀¹;
Colonia Tovar, 1 ♀¹.

P. l. ardens.—

COLOMBIA:

Ricaurte, 2 ♂, 1 ♀.

ECUADOR:

Cocó, 1 ♂, 1 ♀;
Zaruma, 1 ♂;
Paramba, 1 ♂;
Nanegal, 1 ♂.

PERÚ:

Utcuyacu, 2 ♂;
Chaupe, 1 ♂;
Cushi Libertad, 1 ♀;
Río Huacamayo, 1 ♀;
Eneñas, 1 ♂²;
Río Jelashte, 1 ♂², 1 ♀²;
San Ignacio, 1 ♂², 1 ♀².

BOLIVIA:

Palmar, Cochabamba, 1 ♀².

¹ Specimens in collection of William H. Phelps, Caracas.

² Specimens in Academy of Natural Sciences of Philadelphia.

