

AMERICAN MUSEUM NOVITATES

Published by

Number 1160 THE AMERICAN MUSEUM OF NATURAL HISTORY
New York City

January 30, 1942

STUDIES OF PERUVIAN BIRDS. NO. XLI¹

THE GENERA *HYLOPHILUS*, *SMARAGDOLANIUS*, AND *CYCLARHIS*

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As in other papers of this series, names of colors are capitalized when direct comparison has been made with Ridgway's "Color Standards and Color Nomenclature."

I am greatly indebted to the authorities of the various institutions from which comparative material has been obtained at one time or another for use in the accompanying study.

Hylophilus thoracicus aemulus (Hellmayr)

Pachysylvia thoracica aemula HELLMAYR, 1920 (Oct. 15), Anz. Orn. Ges. Bayern, I, No. 3, p. 15—Yahuarmayo, Carabaya, southeastern Perú; ♂; Munich Mus.

A male from La Pampa, Perú, is a virtual topotype of *aemulus* and shows the characters of the form excellently. There is no question that it is conspecific with *griseiventris* but a little doubt that both of these belong with *thoracicus*. Since I have only a single specimen of *thoracicus* I do not feel qualified to revise the present classification of the group and hence I accept Hellmayr's arrangement.

Of a number of specimens of *griseiventris*, one from the Rio Uaupés, northwestern Brazil, presents a very slight extension of known range for the subspecies and has the back a little darker green than the remainder of the series.

A young *griseiventris* from Tumatumari, British Guiana, has the whole top of the head gray as in *H. muscicapinus*, with a faint yellowish buffy tinge across the forehead and with more pronounced buff over the eye. The auriculars are dull, with a

faint tinge of brownish, much as in typical *thoracicus*, but the under parts are the normal gray and greenish yellow of adult *griseiventris*.

Peruvian records of *aemulus* are from Yahuarmayo and Rioja. These localities are far apart but the next (and only other) locality of record, Bogotá, Colombia, is equally isolated, as are various populations of *griseiventris*. Much remains to be learned of the species.

SPECIMENS EXAMINED

H. t. thoracicus.—

BRAZIL:

Rio de Janeiro, La Raiz, Organ Mts., 1 ♂.

H. t. aemulus.—

PERÚ:

La Pampa, 1 ♂.

H. t. griseiventris.—

BRITISH GUIANA:

Rockstone, 1 ♂, 1 ♀;

Tumatumari, 1 (?).

DUTCH GUIANA:

"Interior," 1 ♀.

VENEZUELA:

Suapure, 1 ♂ (type), 1 ♀;

Río Mato, 1 ♂;

Maripa, 1 ♀;

La Prición, 1 ♂.

BRAZIL:

Rio Uaupés, Tahuapunto, 1 (?);

Rio Jamundá, Faro, 1 ♂, 1 ♀;

Rio Jarý, São Antonio de Cachoeira, 1 ♂.

[*Hylophilus semicinereus viridiceps* (Todd)]

Pachysylvia semicinerea viridiceps TODD, 1929 (July 16), Proc. Biol. Soc. Wash., XLII, p. 191—Pied Saut, French Guiana; ♂; Carnegie Mus.

I find little difficulty in separating birds from Faro and the lower Rio Negro from examples of *semicinereus* collected in the region between Pará and the Rio Tapajoz. The latter are brighter green above but with more obvious gray on the hinder part

¹ Earlier papers in this series comprise American Museum Novitates, Nos. 500, 509, 523, 524, 538, 545, 558, 584, 646, 647, 668, 703, 728, 753, 756, 757, 785, 819, 860, 861, 862, 889, 893, 894, 917, 930, 962, 963, 994, 1042, 1043, 1044, 1045, 1066, 1095, 1108, 1109, 1126, 1127, and 1159.

of the head and neck and more strongly yellow on the sides of the breast. The wing and, more particularly, the tail average longer and the yellow of the wing-lining averages deeper in tone. Some care is needed in discarding (for comparative purposes) birds that are not fully adult since they may have more gray on the head than the adults, sometimes sufficient to extend well toward the bill. As a rule, young birds have the rectrices distinctly narrower and more acute than the adults and the bill rather darker in hue, even quite blackish in certain specimens.

Specimens from both banks of the Rio Madeira near its mouth are assignable to *viridiceps* though examples from a little farther east are a little closer to *semicinereus* as are two skins from the upper Rio Madeira and one from Matto Grosso.

Four birds from the vicinity of Mt. Duida, Venezuela, perhaps represent a separable form, but a larger series should be examined before separation is proposed. Three of the skins, of which one is immature, are somewhat darker on the upper surface, especially the top of the head, than the series of *viridiceps* and are duller on the under parts, with a minimum of yellow on the sides. The fourth skin, an adult female, is darker, less grayish, green above and rather strongly yellow on the sides. For the present I refer the four birds to *viridiceps*.

This species does not occur in Perú but is included here since the study was made in the course of comparative work on the Peruvian forms.

I have not seen the recently described *H. s. juruanus* Gyldenstolpe (1941, Ark. Zool., 33 B, No. 12, p. 3) from Santo Antonio, Rio Eirú, Brazil.

SPECIMENS EXAMINED

H. s. semicinereus.—

BRAZIL:

Prata, Pará, 2 ♂;
Rio Tocantins, Baião, 2 ♂;
Cametá, 2 ♂;
Mocajuba, 1 ♂, 2 ♀, 1 (?);
Rio Xingú, Porto de Moz, 2 ♂;
Rio Tapajoz, Igarapé Brabo, 1 ♂, 1 ♀;
Igarapé Amorin, 1 ♂, 1 ♀, 1 (?);
Tauary, 1 ♂, 1 ♀;
Aramanay, 1 ♂, 1 ♀;
Caxiricatuba, 1 ♀, 1 (?);

Piquiatuba, 1 ♂, 1 ♀, 1 (?);
Santarem, 1 ♂;
Rio Preto, Santa Isabel, 2 ♂;
Matto Grosso, Barão Melgaço, 1 ♂;
Rio Amazonas, Villa Bella Imperatriz, 1 ♂,
1 ♀, 2 (?).

H. s. viridiceps.—

BRAZIL:

Faro, 5 ♂, 9 ♀, 1 (?);
Rio Negro, Muirapinimá, 1 ♂, 1 (?);
Igarapé Cacao Pereira, 2 ♂, 3 ♀, 2 (?);
Manaos, Campos Salles, 2 ♂;
Flores, 1 ♂, 1 (?);
Rio Madeira, Borba, 4 ♂, 4 ♀, 1 (?);
Igarapé Auará, 2 ♂;
Rosarinho, 3 ♂, 2 ♀;
Santo Antonio de Guajará, 2 ♀.

VENEZUELA:

Rio Orinoco, Lalaja, 1 ♀;
Caño Deshecho (above Ihuapo), 1 ♂;
Rio Cassiquiare, Solano, 1 ♂;
(western) foot of Mt. Duida, 1 ♀.]

Hylophilus hypoxanthus flaviventris Cabanis

Hylophilus flaviventris CABANIS, 1873, Jour. für Orn., XXI, p. 64—Monterico, Dept. Ayacucho, Perú; type formerly in Warsaw Mus., now lost.

There has been a great deal of confusion respecting the various forms of the present species but, with the material at hand, I believe the answer is in sight. There are four well-defined subspecies, all of which have been named and described, but to get a clearer picture of the species it may be well to characterize each of them again briefly.

H. h. hypoxanthus Pelzeln (Rio Içanna and Rio Vaupé=Uaupés, Brazil) is quite dark on the upper surface, with the mantle earthy brown, the top of the head somewhat darker and warmer, and the rump greener. The throat is buffy whitish or pale buff, the breast distinctly buff (sometimes as deep as Pinkish Buff), and the belly light greenish yellow.

H. h. fuscicapillus Sclater and Salvin (Sarayacu, Ecuador) is much browner on the upper parts, with the back Dresden Brown and only the uropygium greenish, and with the top of the head nearly the same as the mantle. The throat is pale yellowish and the rest of the under parts strongly yellow, Barium Yellow medially and greener on the flanks but only occasionally with a trace of buffy color on the breast.

H. h. flaviventris Cabanis (Monterico, Perú) is a little duller brownish on the upper parts, with the back tinged with citrine and the top of the head near Hair Brown, in some contrast to the mantle. The throat is rather clear whitish (very faintly smoky), tending to spread over the anterior part of the chest; the belly is nearly as strongly yellow as in *fuscicapillus*.

H. h. albigula Chapman (Santa Julia, Rio Iriri, Brazil) has the upper parts not unlike those of *fuscicapillus* though the top of the head averages darker and more contrasting with the back. The under parts are very pale, with the throat noticeably white and with whitish flammulations over the breast; belly pale yellowish; sides and flanks dull, pale grayish green.

Todd (1929, Proc. Biol. Soc. Wash., XLII, pp. 200, 201) refers specimens from the Rio Purús and Caviana to *albigula* with the comment that the under parts are richer and purer yellow than in "*hypoxantha*" with which he identified birds from Tonantins and Manacapurú though he notes that the Manacapurú bird was darker and duller than the Tonantins specimens. From the material at hand, without examining the skins in question, I suspect that the Purús and Caviana birds belong to *flaviventris*, the Manacapurú bird to true *hypoxanthus*, and the Tonantins specimens to *fuscicapillus*.

On the other hand, Todd's discussion of "*inornata*" (t. c., p. 202) must certainly refer to *albigula*. His description and his conclusion that the form in question is specifically distinct from *brunneiceps* and more closely related to *hypoxanthus* are quite in accord with this supposition. In contradistinction, Hellmayr (1935, Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 8, p. 169) discusses *inornatus* as being only a slightly differentiated subspecies of *brunneiceps* and fails to find any but a superficial resemblance to the *hypoxanthus* group. At the same time he refers to *inornatus* six birds from the Tapajoz which, from Todd's detailed description of the same skins, are certainly *albigula*. He had not, however, as he now writes me, compared the type of *inornatus* directly with *albigula* nor with the Tapajoz specimens.

The matter is not improved by consulting the original description of *inornatus*. This form is there characterized as having the top of the head sepia brown, the back similar but brighter, passing gradually into the olive of the rump, the chin and throat light gray, the breast grayish olive, the belly light gray washed with olive and both breast and belly mixed with yellow, and the tail brownish, washed with olive. Except for the brown tail, this description applies fairly well to some examples of *albigula*. However, in a letter accompanying the Cametá specimen which was described by Chapman as *albigula*, Madame Snethlage says that this is not her *inornatus* "which lacks the brownish colouring of the back and head and is not so yellowish on the under parts," a statement not entirely in agreement with the original description.

There is a good possibility, therefore, that *albigula* and *inornatus* are the same, as Hellmayr is now willing to concede, but an equal chance that there is a form of *brunneiceps* on the Tocantins, unrelated to *albigula* and the other members of the *hypoxanthus* group. An examination of the type of *inornatus*, now in Berlin, will be required to reach a satisfactory conclusion. In the meantime I adopt the name *albigula* for the Tapajoz birds.

There are at hand two examples rather certainly referable to *flaviventris*. The type of this form has disappeared but was examined at various times by different ornithologists who have discussed its characters in some detail. Furthermore, one of our specimens, a female from La Merced, has been examined by Hellmayr who reports (in litt.) that it agrees closely with his manuscript notes on the type. In the same communication he expresses the belief that *flaviventris* is conspecific with *hypoxanthus* and *fuscicapillus*, a belief with which I am fully in accord.

Hellmayr, in the same letter, mentions a specimen of *flaviventris* in the British Museum, collected at Chamicuro by E. Bartlett. I can find no reference to this specimen in literature, although it was collected in 1867. It, together with the type and the two examples now before me, makes

four Peruvian specimens known, each from a different locality. The related form, *fuscicapillus*, occurs in Perú on the other side of the Marañón, as discussed below.

Hylophilus hypoxanthus fuscicapillus

Sclater and Salvin

Hylophilus fuscicapillus SCLATER AND SALVIN, 1880, P. Z. S. London, p. 155—Sarayacu, Ecuador; British Mus. according to Hellmayr; not listed by Gadow in the Cat. Birds Brit. Mus.

There is a record of "*hypoxanthus*" from Pebas, Perú, and a specimen at hand from Apayacu, both localities north of the Marañón, in frequent zoogeographical association with eastern Ecuador, in the range of *H. h. fuscicapillus*. The Apayacu specimen bears out this logical assignment, agreeing well with five east-Ecuadorian birds.

The characters of the present form are discussed in the account of *flaviventris*.

SPECIMENS EXAMINED

H. h. hypoxanthus.—

BRAZIL

Rio Uaupés, Tahuapunto, 5 ♂, 4 ♀, 1 (?);
Iauarete, 1 ♂;
Rio Negro, Tatú, 2 ♂, 1 ♀, 1 (?);
Yucabí, 1 ♂;
Mt. Curycuryari, 2 ♂.

VENEZUELA:

Rio Huaynia, junction of the Cassiquiare,
2 ♂, 1 ♀, 1 (?).

COLOMBIA:

opposite Tahuapunto, 1 (?).

H. h. albígula.—

BRAZIL:

Rio Iriri, Sta. Julia, 1 ♀;
Rio Jamauchim, Sta. Helena, 1 ♂;
Rio Tapajoz, Santarem, 1 ♂;
Igarapé Brabo, 2 ♂, 1 (?);
Tauary, 2 ♂, 1 ♀;
Caxiricatuba, 1 ♂, 3 ♀;
Piquiatuba, 1 ♂, 2 ♀, 1 (?).

H. h. flaviventris.—

PERÚ:

La Merced, 1 ♀;
Rio Ucayali, Santa Rosa, 1 ♂.

H. h. fuscicapillus.—

PERÚ:

Apayacu, 1 ♂.

ECUADOR:

Rio Suno, above Avila, 1 ♂, 2 ♀;
below San José, 1 ♀;
mouth of Rio Curaray, 1 ♀.

H. b. brunneiceps.—

BRAZIL:

Rio Negro, Muirapinimá, 1 ♂, 1 ♀;
Javanari, 1 ♀;

Mt. Curycuryari, 1 ♀.

COLOMBIA:

opposite Tahuapunto, Río Uaupés, 1 (?).

VENEZUELA:

Rio Cassiquiare, Solano, 2 ♂, 1 ♀;
Buena Vista, 2 ♂, 1 ♀, 1 (?);
Río Huaynia, junction of the Cassiquiare,
1 ♀;
Rio Orinoco, mouth of Río Ocamo, 1 ♂, 1 ♀;
opposite mouth of Ocamo, 1 ♀;
San Fernando (de Atabapo), 1 ♂;
Mt. Duida, Savana Grande, 1 ♀;
Valle de los Monos, 1 ♀;
Playa del Río Base, 1 ♂, 2 ♀.

Hylophilus flavipes olivaceus Tschudi

H(ylophilus) olivaceus TSCHUDI, 1844, Arch. Naturg., X (1), p. 284—Perú (eastern slope of the Peruvian Andes) = Junín region; Mus. Neuchâtel.

I have no Peruvian specimens of this form but follow other authors in referring to it certain east-Ecuadorian specimens. A comparison of two east-Ecuadorian birds with the various forms of *flavipes* shows no fundamental differences that I consider of specific value. The upper side is less different from that of some examples of typical *flavipes* than these are from other specimens of the same form, and the under parts, though more greenish than those of the other forms, are more like those of *flavipes* than the latter are like those of *viridiflavus*. Proportions and pattern are those of the other members of the *flavipes* group.

Peruvian records are from Huambo, Chirimoto, and the unspecified locality on the eastern side of the Andes in the Junín region where Tschudi obtained his type.

I am not satisfied with the allocation of practically all Colombian examples to *fusciceps fusciceps* since the series at hand shows some distinctions that are not quite clear. Five birds from Villavicencio are darker and clearer green on the upper parts and more extensively and clearly whitish on the lower belly than a few specimens from the Magdalena Valley and a large series from Santa Marta. Some of the latter are nearly as pale and dull above as *acuticauda* from Venezuela though yellower and not so buffy below as that form. Bogotí skins (as is the type, although different precise localities may be involved) are not so dark above as the Villavicencio birds.

nor in some cases so pale as the Santa Martán examples, and some of them show considerable buff on the chest and belly and sometimes noticeable brownish on the head, but they may have undergone post-mortem change. Furthermore, the Santa Martán series is older than the Villavicencio birds and may have changed somewhat in the same way although lower Magdalena examples, contemporary with the Villavicencio skins, are near the coloration of the Santa Martán birds. Possibly more than one form is involved which a series of fresh specimens will be needed to clarify.

A single male from Cúcuta, collected by Hermano Nicéforo María in 1940, is in fresh condition and different from all the other Colombian specimens at hand, being referable to *acuticauda*. The back is darker than in the old Venezuelan skins but the under parts are distinctly buff, without yellow. The "Bogotá" skins with a certain amount of buff on the under parts are not of this character.

SPECIMENS EXAMINED

H. f. flavipes.—

COLOMBIA:

- "Bogotá," 7 (?);
- Villavicencio, 1 ♂, 3 ♀, 1 (?);
- Chicoral, 2 ♂, 1 ♀;
- near Honda, 2 ♀;
- Carthagena, 1 (?);
- Calamar, 1 (?);
- Santa Marta, Bonda, 11 ♂, 3 ♀, 17 (?);
- Quebra Concha, 1 (?);
- Gairaca, 1 ♂.

H. f. acuticauda.—

VENEZUELA:

- Falcón, Tucacas, 1 ♂, 2 ♀;
- Lara, El Cují, 1 ♂;
- Carabobo, Las Trincheras, 1 ♂;
- Cumaná, San Felix, 1 ♀;
- Plain of Cumaná, 1 ♂, 1 ♀;
- Puerto Cabello, 1 ♂;
- Cristóbal Colón, 1 ♂;
- Bermúdez, San Antonio, 1 ♂, 1 ♀;
- Río Orinoco, Ciudad Bolívar, 3 ♂, 6 ♀;
- Agua Salada de Ciudad Bolívar, 1 ♂, 1 ♀;
- Altigracia, 4 ♂, 1 ♀;
- Las Barrancas, 1 ♂, 1 ♀;
- Caicara, 4 ♀;
- "Venezuela," 1 (?);
- Margarita Island, 1 ♂.

COLOMBIA:

- Cúcuta, 1 ♂.

H. f. insularis.—

TOBAGO:

- "Tobago," 1 ♂;
- Mondiland, 1 ♀;

Castare, 4 ♀ (? incl. type);

Lecito, 1 ♀.

H. f. viridiflavus.—

PANAMÁ:

(Corozal, Chiriquí, Boqueron, Bogava, Santa Fé, El Villano, Remedios, Agua Dulce, and La Colorado), 12 ♂, 5 ♀, 1 (?).

COSTA RICA:

(Pozo Azul, Buenos Aires, and El Zapotal), 3 ♂, 1 ♀.

H. f. olivaceus.—

ECUADOR:

Oyacachi, 1 ♂;

below San José, 1 ♀.

Hylophilus ochraceiceps ferrugineifrons Selater

Hylophilus ferrugineifrons SCLATER, 1862, P. Z. S. London, p. 110—Bogotá, Colombia; British Mus.

I have been unable to get any Bogotá specimens of this species for comparison and hence am unable to bring into the following discussion any critical notes on the proper application or restriction of the name *ferrugineifrons*. The figure given by Selater in the Ibis, 1881, Pl. XI, fig. 2, is green enough on the back to be a representation of *viridior*. Beside the type, Selater had at that time two specimens from Sarayacu, Ecuador, and one skin from "Oyapok, Cayenne" (the last received from Madame Verdey, and, like others from the same source, extremely doubtful as to locality), and I do not know which specimen formed the basis for the illustration. If the figure is an accurate representation of the type, further study of Colombian birds is required.¹

In any case, the name has been applied to the population ranging from eastern Ecuador to Venezuela and the Rio Negro, Brazil, and must remain thus inclusive for the present. In the meantime, certain variations are to be noted.

In the series at hand, the birds from the Rio Negro, Brazil, show the greatest extreme of positive brown coloration on the back and of deep rufescence on the anterior part of the head. The back of the head is variable in hue, sometimes greenish or brownish, sometimes more rufescent, ex-

¹ Since this was penned, Dr. Hellmayr writes me that a mounted Bogotá specimen in the museum at Geneva, Switzerland, has the back decidedly brown and by no means greenish.

hibiting a transition between the color of the crown and that of the back. The exact extent of rufous on the crown is thus inconsistent. Skins from the region of Mt. Duida are a close second although, perhaps, fewer of them reach the full warmth of coloration exhibited by the Rio Negro birds and more of them show a lighter cap and a greener back. Skins from the Orinoco and Caura rivers reach a lighter extreme, sometimes greenish, sometimes brownish on the back and usually with lighter rufous on the head, although some examples agree well with certain of the Rio Negro birds. The Orinoco-Caura series is twenty or thirty years older than the rest of the series and such differences as it exhibits may be due to post-mortem fading. Specimens from Mt. Auyan-tepui, near the Guianan boundary, are as dark as the Mt. Duida birds.

Specimens from eastern Ecuador are more greenish dorsally than most of the rest of the series although some of them are within the range of variation of the Rio Negro birds. Aside from the possibility that these Ecuadorian specimens represent typical *ferrugineifrons* (as may be determined only by comparison with Bogotá specimens), their greener hues may be ascribed to their approach toward *viridior* whose range immediately adjoins their own and which shows perfect intergradation with *ferrugineifrons*.

Two birds from near the mouth of the Napo, in northeastern Perú, are exactly like the east-Ecuadorian specimens. Three skins from the Ucayali are equivocal. The color of the back is lighter and less brownish than in the east-Ecuadorian series and may be matched in certain specimens from Bolivia, but the rufous on the cap is closer to that of the northern birds, being deeper than in most *viridior*, and the tail is dark and rufescent rather than greenish. I note that Hellmayr (1935, Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 8, p. 180) has referred a specimen from the Rio Juruá to *ferrugineifrons* while Todd earlier (1929, Proc. Biol. Soc. Wash., XLII, p. 194) made similar disposition of specimens from the Rio Purús, so the assignment of the

Ucayali birds to *ferrugineifrons* is supported by corollary evidence.

Two of the Ucayali birds, both from Lagarto, are brighter and more yellowish on the breast and flanks than any other specimens at hand and even have a wash of yellow on the throat although there is considerable variation in these respects without regard to locality. Hellmayr (*loc. cit.*) reports a very yellowish bird from the Rio Negro.

I can find no earlier records from Perú that are likely to be assignable to this subspecies.

Hylophilus ochraceiceps viridior (Todd)

Pachysylvia ochraceiceps viridior TODD, 1929 (July 16), Proc. Biol. Soc. Wash., XLII, p. 194—Rio Surutú, Bolivia; ♂; Carnegie Mus.

Hylophilus ochraceiceps viridissimus CARRICKER, 1935 (Oct. 25), Proc. Acad. Nat. Sci. Phila., LCCCVII, p. 356—Moyobamba, Perú; ♂; Acad. Nat. Sci. Philadelphia.

In its extreme development, *viridior* is noticeably greener on the back than even the east-Ecuadorian representatives of *ferrugineifrons* and has the rufous area on the top of the head lighter in tone. The back of the head sometimes is green like the back, sometimes tinged with rufous as it is in *ferrugineifrons*. The under parts may have the belly distinctly grayish or distinctly tinged with greenish yellow, and one skin from La Pampa, southeastern Perú, has a slight tinge of yellow on the throat. The exact hue of green on the back is variable, sometimes having a slight golden tinge, sometimes not. The tail lacks the pronounced rufescent color of *ferrugineifrons* and is more definitely greenish on the outer margins although there is sometimes a slight trace of warmer tone that is noticeable only by comparison with the greener specimens; it is definitely greener than on the tail of *ferrugineifrons*.

This form appears to occupy a range nearer to the base of the Andes than *ferrugineifrons* which inhabits the upper Amazonian plain. Both ranges are within the Humid Tropical Zone. Peruvian records are from Amable Maria, YahuarMayo, and Huacamayo.

As noted under *ferrugineifrons*, three

specimens from the Río Ucayali are intermediate between that form and *viridior* but are closer to *ferrugineifrons*.

SPECIMENS EXAMINED

H. o. ochraceiceps.—

MEXICO:

- Motzorongo, 1 ♂;
Mexico City, 1 (?).

GUATEMALA:

- no other locality, 5 (?);
Vera Paz, 1 (?).

COSTA RICA:

- [Boruca, Bonilla, Miravalles, Pozo del Río Grande, Parismina, El Pozo (Río Térraba), Volcan de Oso, Lagarto, and Puerto Jiménez], 9 ♂, 7 ♀.

NICARAGUA:

- (Los Sabalos, Río Grande, Savala, Matagalpa, and Tuma), 3 ♂, 3 ♀.

PANAMÁ:

- Bogava, Chiriquí, 1 ♂.

H. o. nelsoni.—

PANAMÁ:

- Santa Fé, Veraguas, 1 ♂, 1 ♀;
Wilcox Camp, 1 ♀.

H. o. bulunensis.—

PANAMÁ:

- Tacarcuna, 2 ♂.

ECUADOR:

- Bulún, 1 ♂ (type).

H. o. ferrugineifrons.—

ECUADOR:

- Río Suno, above Avila, 4 ♂, 1 ♀;
lower Río Suno, 3 ♂, 2 ♀;
below San José, 3 ♂, 2 ♀;
mouth of Río Curaray, 1 ♂.

PERÚ:

- Puerto Indiana, 2 ♂;
Apayacu, 1 ♂;
Sarayacu, 1 ♂;
Lagarto, 1 ♂, 1 ♀.

BRAZIL:

- Río Negro, Tatú, 5 ♂, 1 ♀, 2 (?);
Yucabí, 1 ♀;
Yavanari, 1 ♂, 1 ♀;
Mt. Curucuryari, 3 ♂, 2 ♀, 1 (?);
Río Uaupés, Tahuapunto, 3 ♂, 2 ♀.

VENEZUELA:

- Río Huayná, junction of Cassiquiare, 1 ♂, 3 ♀;
Río Cassiquiare, Solano, 1 ♀;
opposite El Merey, 1 ♂;
Mt. Duida, Caño Seco, 9 ♂;
Playa del Río Base, 3 ♂, 2 ♀;
Foothills Camp, 1 ♂;
Pie del Cerro, 6 ♂, 3 ♀, 3 (?);
Río Orinoco, mouth of Río Ocamo, 1 ♂, 1 ♀;
opposite mouth of Ocamo, 2 ♀;
Nericagua, 1 ♂;
Munduapo, 2 ♂;
Río Cunucunumá, Boca de Sina, 1 ♀;
Río Caura, Suapure, 2 ♂, 3 ♀;
La Prición, 1 ♂;

- Nicaré, 2 ♀;
La Unión, 1 ♂;
Mt. Auyan-tepui, 2 ♂, 1 (?).

H. o. viridior.—

PERÚ:

- Moyobamba, 1 ♂¹ (type of "*viridissimus*"), 1 ♀¹;
La Pampa, 1 ♀;
Astillero, 1 ♂, 1 ♀.

BOLIVIA:

- Río Yapacani, 1 ♂², 1 ♀²;
Río Espirito Santo, mouth of Río San Antonio, 1 ♂, 2 ♀.

H. o. lutescens.—

BRAZIL:

- Río Madeira, Calamá, 1 ♂;
Río Tapajoz, Igarapé Brabo, 2 ♂;
Caxiricatuba, 1 ♀.

H. o. rubrifrons.—

BRAZIL:

- Río Tocantins, Baião, Pedral, 3 ♂, 1 ♀, 1 (?);
Pará, 1 ♂;
Ananindeua, 1 ♂.

H. o. luteifrons.—

BRAZIL:

- Faro, Castanhal, 1 ♂, 1 (?).

BRITISH GUIANA:

- Tumatumari, 1 ♀;
Camacusa, 1 ♂;
Wismar, 1 ♂, 1 ♀.

FRENCH GUIANA:

- Iposuin, 1 ♂, 2 ♀.

DUTCH GUIANA:

- "Interior Surinam," 1 ♂.

Smaragdolanus leucotis simplex (Berlepsch)

Vireolanus leucotis simplex BERLEPSCH, 1912, Orn. Monatsb., XX, p. 18—Santa Elena, Río Jamauchim, eastern affluent of the Río Tapajoz, Brazil; ♂; Mus. Goeldi, Pará.

Although the original describer does not mention the character, *simplex* appears always to have a very definite, light green band across the forehead, sometimes extending posteriad over the yellow superciliaries. The same region sometimes is narrowly dusky green in *leucotis* but most examples of this form examined have no more than a trace of dark green in the area. Both *miketiae* and *bolivianus* have a strong black or blackish line in both places and one British Guianan skin of *leucotis* has a suggestion of this darker marking.

In *simplex*, furthermore, the back is duller green than in the other forms, with a slightly grayish suggestion, and the gray

¹ Specimens in Academy of Natural Sciences, Philadelphia.

² Specimens in Carnegie Museum, Pittsburgh.

of the back of the head is paler than in the other forms, at least it does not reach the dark extremes exhibited by some examples of the others. Sometimes the whole crown has a faint wash of green and the postocular space sometimes has a tinge of light green. The malar stripe is anteriorly greenish, sometimes with a fine touch of yellow at the extreme base (on the mandibular rami) but never, apparently, with the broad yellow spot possessed by some *bolivianus* and *mikettae* and at least one *leucotis*. The auriculars are light gray, paler than the crown but without any whitish median stripe, although a male from the Tocantins has a small white spot below the yellow subocular lunule. The superciliaries lack white tips or have only a slight indication of white at that point.

Some years ago (1930, Field Mus. Nat. Hist. Publ., Zool. Ser., XVII, p. 414) I reported on a bird from central Perú (Huachipa) which I was unable to refer to its proper subspecies. I now have before me a bird, sexed as a male, from Perené, central Perú, which agrees rather exactly with the Huachipa bird. Both specimens have dull, light green back, broad greenish forehead with posterior extensions of the color over the yellow superciliaries, green postocular space, a touch of white below the yellow subocular lunule but no white stripe through the auriculars, and a touch of whitish at the base of the malar region. The Perené bird has the breast clouded with indistinct dark stripes, a character noted in various examples of *leucotis* (2 "♂♂," 1 ♀, 1 ?) where it is more strongly developed and accompanied by usually paler superciliaries narrowed anteriorly to leave a broader dark space at the base of the culmen. The bird without sex has the superciliaries like the adult males.

Of two supposed females of *simplex*, one has the superciliaries relatively paler and narrower anteriorly than the other, the yellow of the under parts also paler with some dull greenish shading clouding the breast. The other, though brighter, has suggestions of dark stripes on the breast.

The Perené bird has the superciliaries meeting the base of the culmen very broadly and the crown has a slight wash of

green. In general, therefore, both the Perené and the Huachipa birds agree better with *simplex* than with any of the other forms. Their reference to *simplex*, however, is not without attendant difficulties.

A single specimen from Río Huacamayo, southeastern Perú, is, as noted farther on, rather certainly *bolivianus*. However, Berlepsch and Stolzmann (1906, Ornis, XIII, p. 107) comment on a female from Huaynapata, also southeastern Perú though a little to the westward from Río Huacamayo, as differing from Bolivian examples of *bolivianus* by having the gray of the pileum duller and without the blackish admixture on forehead and above the superciliary stripe. Hellmayr (1935, Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 8, p. 192) notes a female from Hyutanahan, Rio Purús, Brazil, as lacking the black on the forehead. Taczanowski (1884, Orn. Pér., I, p. 447) described a male from Monterico, Perú, without mentioning any black on the top of the head. A specimen in the U. S. National Museum, examined some years ago (collected by W. S. Church on the "Headwaters of Huallaga R." = near the head of navigation of this stream, somewhere between Chasuta and Yurimaguas, Perú) has no black on the head and no definite green on the forehead although there is a slight trace of whitish in the auricular region, not at all clear as to position owing to the wretched condition of the specimen.

The lack of green on the forehead of the National Museum skin and the trace of grayish white in the auricular region, either as an auricular stripe or as a white tip on the superciliaries, suggests that this bird may belong with certain east-Ecuadorian specimens discussed under *leucotis*. The Huachipa and Perené specimens, and the records from Monterico and Huaynapata, seem better placed in *simplex* where, probably, the Rio Purús examples also should go.

Smaragdolanus leucotis bolivianus
(Berlepsch)

♂ *Vireolanus bolivianus* BERLEPSCH, 1901, Jour. für Orn., XLIX, p. 82—Quebrada Onda, northeastern Bolivia; Frankfurt Mus.

A single specimen from Río Huacamayo, southeastern Perú, has been mentioned by Hellmayr (1935, Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 8, p. 192) as referable to this form but in association with a male from Huachipa which I have discussed above under the heading of *simplex*. The two birds are very different. The Río Huacamayo bird has the forehead strongly blackish (with only a faint greenish tinge) and the superciliaries bordered above by a sharp blackish line. The auriculars are traversed lengthwise by a rather obvious, though not broad and sharp, whitish streak, the postocular space is dark gray, there is a large yellow spot at the anterior end of the malar region, and there is a very limited amount of green on the sides and even less on the flanks.

These characters agree best with the description of *bolivianus* although Berlepsch's three skins apparently lacked all trace of white in the auricular region. Nevertheless, all three apparently had the strong blackish border across the forehead and above the superciliary stripes and the same feature is intimated in Hellmayr's discussion (*loc. cit.*) of a specimen from Cerro Hosane, Dept. Santa Cruz, Bolivia.

A bird without the black markings on the head is recorded from Huaynapata, west of the Río Huacamayo (see discussion of *simplex*) and the ranges of *simplex* and *bolivianus* thus may be supposed to meet somewhere in the intervening area. More material from this region is needed to determine the details of distribution of the two forms.

Smaragdolanus leucotis leucotis (Swainson)

Malaconotus leucotis SWAINSON, "1838" = Dec., 1837, Anim. in Menag., p. 341—"Africa?" errore, = South America (I suggest Cayenne); Cambridge Mus., England.

Vireolanus icterophrys BONAPARTE, 1854, Compt. Rend. Acad. Sci. Paris, XXXVIII, p. 380—Rio Negro [Brazil]; Coll. Verreaux, repository unknown.

Vireolanus chlorogaster BONAPARTE, 1854, *loc. cit.*—"Amer. m."; British Mus.

"*Vireolanus dubus* VERREAUX MS." SCLATER, 1862, Cat. Coll. Amer. Birds, p. 45—in synonymy of *V. chlorogaster*.

It is not impossible that two forms are

confused in the above synonymy and in the various references and specimens assigned to *leucotis leucotis*. Although Swainson's ascription of his *leucotis* to Africa was undoubtedly erroneous, there is no assurance as to the exact locality from which the specimen came other than that it probably was from somewhere between northern Perú and the Guianas.

Bonaparte's *icterophrys*, said to be from the Río Negro, was described as having the lower part of the auriculars whitish, and the name is, therefore, rather certainly synonymous with *leucotis*. Bonaparte's type was in the collection of the Verreaux brothers and it is to be doubted that it is the specimen in the British Museum claimed as type by Gadow (1883, Cat. Birds Brit. Mus., VIII, p. 315). Gadow considered his specimen to be immature but described the immature plumage as having only a trace of white in the auricular region, which quite disagrees with Bonaparte's description of *icterophrys*. The specimen in question is listed by Gadow as presumably from Perú which may be correct although again disagreeing with Bonaparte's citation of "Rio Negro."

Bonaparte's *chlorogaster*, described from a specimen in the British Museum, was given no locality other than South America, but Salvin (1878, Ibis, p. 444) notes that the museum register records its origin as Cayenne. The locality is open to some question. All the specimens I have seen from this general region have the broad whitish stripe through the auriculars, and the description of a Cayenne specimen in the Academy of Natural Sciences of Philadelphia (cf. Baird, 1866, Smiths. Misc. Coll., No. 181, p. 399), Bonaparte's account of his type from the Rio Negro, and Chubb's description of skins from British Guiana all mention the same character.

On the other hand, a specimen from Cutucuo, Macas, Ecuador, and a skin collected by Wallace (labelled "Ecuador" and probably from the southeastern part of the country) have the whitish marking on the auriculars reduced to a trace (as described for *chlorogaster*) and even the figure given by Salvin (*tom. cit.*, Pl. XI) of a specimen from Sarayacu, Ecuador, shows

much less white than is present in Guianan specimens. Of two birds at hand from San José, northeastern Ecuador, one has the auricular stripe broad and complete, the other has it a little narrower and grayer. It is obvious that in eastern Ecuador there is a tendency toward reduction of this pale band. This fact suggests the possibility that the type of *chlorogaster* came from the Napo region.

The specimen from northern Perú, in the U. S. National Museum, discussed in the account of *simplex* (q. v.) is very like these south-east-Ecuadorian birds and probably is to be referred to the same form. Whether they should be separated from *leucotis* under the name *chlorogaster* is problematical. The area occupied is small compared to the ranges of the typical birds and of *simplex*, between which two forms they are intermediate, and it may be best, for the present, to refer them to *leucotis* with this note as to their intermediacy. Adequate series may, some day, provide sufficiently satisfactory evidence to justify subspecific separation.

These birds are relatively rare in collections but may be commoner in life than this would indicate. They are secretive in habits, if not in voice, and not conspicuous in the treetops where they live, which may account for the relatively small numbers that have been collected.

I do not believe that this genus and *Vireolanius* should be given family distinction from the Vireonidae. They are heavy-billed, heavy-footed vireos, with a vireonine pattern of coloration (though the hues are brighter) and vireonine habits. Although some structural characters may be shared in common with the Artamidae, as indicated by Pycraft (1907, P. S. Z. London, pp. 352-359), I should be loath to place a subfamily Vireolaniinae in the family Artamidae as there suggested.

SPECIMENS EXAMINED

V. l. leucotis.—

FRENCH GUIANA:

Tamanoir, 1 ♂;
Pied Saut, 1 ♀.

BRITISH GUIANA:

Tumatumari, 1 ♂.

VENEZUELA:

Río Orinoco Suapure, 1 "♂";

Mt. Duida, Caño Seco, 1 "♂";
Valle de Los Monos, 1 ♂.

ECUADOR:

San José, 1 ♂;
below San José, 1 ♂;
Cutucuo, 1 (?) [= ♀ ?];
"Ecuador," 1 (?) [= ♂ ?].

PERÚ:

"Headwaters of R. Huallaga" [? = near Yuri-maguas], 1 (?).¹

V. l. mikettae.—

ECUADOR:

Paramba, 1 ♂ (type).

V. l. simplex.—

PERÚ:

Perené, 1 "♂";
Huachipa, 1 ♂.²

BRAZIL:

Matto Grosso, Barão Melgaço, 2 ♂;
Rio Tapajoz, Piquiatuba, 2 ♂, 1 ♀;
Igarapé Amorin, 1 ♂, 1 ♀;
Rio Tocantins, Arumatheua, 1 ♂.

V. l. bolivianus.—

PERÚ:

Río Huacamayo, 1 ♂.

Cyclarhis gujanensis virenticeps

Sclater

Cyclorhis virenticeps SLATER, 1860, P. Z. S. London, p. 274, Pl. CLXIV—Babahoyo, Ecuador; cotypes in British Mus.

Throughout southwestern Ecuador, this form is relatively consistent in its characters of yellowish-green back, green cap bordered laterally and anteriorly by dark rufous but without rufous borders on the central feathers, clear light yellow throat and chest, and ochraceous flanks. There is, of course, a certain amount of individual variation in the exact tints and shades involved in this pattern, but the series is fairly uniform. Also in northwestern Perú, from Palambla northwards, there is similar agreement.

Occasional specimens from this region show considerable amounts of gray on the anterior crown, just behind the rufous frontal band, more rarely on the hind neck, but it seems to have no geographic significance. More rarely there is a slight development of narrow rufous margins on the crown feathers or across the occiput, but it is not pronounced. However, one of four birds from Loja, eastern Ecuador, the only place where *virenticeps* is known to

¹ Specimen in U. S. National Museum, Washington.

² Specimen in Field Museum of Natural History, Chicago.

cross the Western Andes, has the top of the head as strongly marked with rufous margins and with as prominent a rufous collar as various examples of *contrerasi*, and more than some of these. The other three Loja birds are quite typical *virenticeps*. The single example mentioned may be a little brighter yellowish green on the back than most *contrerasi*, but it is the only feature that indicates its true identity, and is not perfectly diagnostic. Specimens of *contrerasi* from the portion of Perú nearest to Loja, the Chinchipe Valley, are lighter than average *contrerasi*, approaching *virenticeps*, and the Loja specimen is very similar to some of these birds.

Four examples from western Perú, some distance south of Palambla, offer a problem. One of the birds, a male from Seques, is at the dark extreme of coloration, but is matched by a similar dark bird from Milagros and is very little darker than one Palambla skin. Another Seques male is even darker and has the sides of the belly very dark, between Cinnamon-Brown and Ochraceous-Tawny. One of two males from Taulis, not far from Seques, is about the same above but is still darker and more greenish yellow on the throat, chest, and sides of the head and shows more grayish shading on the breast. The other Taulis male is even darker on the anterior under parts (Olive-Yellow) and has the rest of the under parts pronouncedly gray (Pale Neutral Gray) with a small buffy patch in the middle of the lower belly and only a faint wash of brownish buff on the flanks.

The last-mentioned bird is in moderately abraded plumage; the other Taulis bird a little fresher, and the Seques bird still more so, while the average condition of the brighter birds from Palambla northwards is relatively fresh. I hesitate, therefore, to do more than call attention to the situation which appears to be paralleled, to some extent, in the case of *contrerasi* under which it is discussed in turn. Earlier accounts of a specimen from Paucal (near Taulis and Seques) make no mention of any striking differences from the general run of *virenticeps*, suggesting that the characteristics of the birds now at hand are not of taxonomic significance.

It is interesting to note that while *virenticeps* crosses the Western Andes of Ecuador to the eastern side, *contrerasi* crosses the Western Andes of Perú to their western side at Chugur. While it is not impossible that the single Chugur specimen at hand represents the extreme development of *virenticeps* in the direction of *contrerasi*, it is so well marked in the characters of *contrerasi* that I am obliged, in the absence of contradictory evidence, to refer it to that form.

Records from Paucal and Porculla Pass undoubtedly belong with *virenticeps* to which they were originally assigned.

Cyclarhis gujanensis contrerasi Taczanowski

Cyclorhis contrerasi TACZANOWSKI, 1879, P. Z. S. London, p. 224, Pl. XXI—Tambillo, Perú; ♂; type formerly in the Warsaw Museum, now lost.

C(yclarhis) v(irenticeps) griseipectus CARRIKER, 1934 (June 25), Proc. Acad. Nat. Sci. Phila., LXXXVI, p. 334—Utcubamba, Dept. Libertad, Huallaga drainage, Perú; ♂; Acad. Nat. Sci. Phila.

The pattern on the top of the head in *contrerasi* is much more variable than is that of *virenticeps*. In general, it consists of a complete ring of rufous coloration, on forehead, superciliaries, and nape, enclosing a green central patch in which the individual feathers are, themselves, enclosed by rufous lateral and terminal margins. At one extreme, the central green patch is greatly reduced in extent so that the whole top of the head appears to be rufous with green spots on the centers of some median feathers, mostly concealed or (reported but not shown by any specimens at hand) entirely absent. At the other extreme, the condition is much as in *virenticeps*, with rufous forehead and superciliary stripes but without more than a trace of rufous margins on the central feathers or of a rufous collar; the green of the crown, however, is darker than in *virenticeps*.

In general, also, the green of the back is darker than in *virenticeps*, the yellow of the throat is somewhat darker and with more of a tinge of green, and the breast shows a variable tinge of gray (not apparent in the freshest skins).

The amount of rufous and green on the top of the head is quite irregular and cannot be correlated with distribution. As to the other characters mentioned, there may be some geographical significance, but the case is not quite clear. Birds from Perico, Río Chinchipe, are rather brighter and more yellowish green above and lighter yellow on the throat than the rest of the series of this form but I adjudge this to be an approach toward the characters of *vir-enticeps* which occurs at Loja as detailed in an antecedent paragraph. On the other hand, a single specimen from Chaupe, northwest of Perico, is of average tones of coloration, agreeing with skins from Sauces and Lomo Santo. A single example from Chugur, just over the divide, on the Pacific side of the Western Andes, is so exactly like the Sauces and Lomo Santo birds that I must refer it to the same form although it is near the range of *vir-enticeps*.

Birds from the eastern side of the Marañón, in about the same latitude, are not recognizably distinct from this form, although a name has been provided for them. Various specimens from this region are quite like the Sauces, Lomo Santo, Chugur, and Chaupe skins, although I have none as light in coloration as the Perico specimens. Other examples from this eastern area are darker than their associates, but the differences appear to be due to individual variation and, to a certain extent, to different degrees of abrasion. The darkest example at hand is the most worn. It is a specimen from Leimebamba which is almost as dark greenish (Olive-Yellow) on the throat and as grayish on the abdomen as the curious specimen of *vir-enticeps* from Taulis mentioned on an earlier page.

Some examples have a strong ochraceous coloration on the flanks (apparently not as deep as in the most heavily marked *vir-enticeps*); some have the flanks only lightly colored, and some have even a grayish tone in the same area. With these variations, *contrerasi* remains a somewhat variable but fairly compact form, but I do not believe it can be further divided.

Records that presumably belong with *contrerasi* are from Tambillo, Chira, Callacate, Cutervo, San Ignacio, Huaya-

bamba, Tabaconas, Poco Tambo [? = Pucatambo], and Utcubamba. Stolzmann reports that he heard the species on two occasions at Huambo.

Cyclarhis gujanensis saturatus Zimmer

Cyclarhis gujanensis saturatus ZIMMER, 1925 (May 20), Field Mus. Nat. Hist. Publ., Zool. Ser., XII (8), p. 107—Culleui, Marañón River, Perú; ♂; Field Mus. Nat. Hist.

Some specimens of *contrerasi* and *vir-enticeps* approach this form in size or in the extent of rufescence on the sides of the belly, and the type of "*griseipectus*" (= *contrerasi*) is said to approach it somewhat in the extent of yellow on the breast. Nevertheless, examples of *saturatus* are rather readily recognizable. The back is rather brighter green than that of *contrerasi*, sometimes as yellowish green as that of *vir-enticeps*; wing, tail, bill, and tarsus all average longer than in the other mentioned forms; the sides of the belly and inferior margin of the flanks are regularly rather strongly ochraceous, sometimes most of the belly also, although there usually is some whitish in the median line; the yellow of the throat sometimes is quite deep in hue, sometimes approaching the color of *contrerasi*, and is relatively broadly extended over the chest and sides; the top of the head is most nearly like that of *contrerasi*, showing the minimum and average amount of rufescence possessed by that form though not the maximum.

This is a bird of higher elevations than either *contrerasi* or *vir-enticeps* although it is found at some places as low as the upper limits of range of *contrerasi*. It can hardly be assigned to the Temperate Zone and it seems necessary to recognize a semiarid section of the Subtropical Zone to accommodate this and certain other species with similar peculiarities of distribution.

Records of *saturatus* are from Huamachuco, Cochabamba, Soquian, and Patas.

It is interesting to note that a bird at hand from Choquisongo appears to be referable to this form although the locality is on the western side of the Western Andes, albeit both south of, and at a higher elevation than, Chugur where *contrerasi* makes

a similar crossing. On the other hand, I have no evidence that *contrerasi* crosses this cordillera between Huancabamba and Palambra since all the specimens available from that general region show subspecific segregation on the east and west of the watershed. Farther north, as detailed earlier, *virenticeps* of the Pacific slopes crosses the Andes to the eastern side at Loja, Ecuador. At the same time it may be noted that *contrerasi* is found on both sides of the Eastern Andes although it may have a continuous range in the Subtropical Zone around the broken ends of the mountains which are here lowered to permit the passage of the Río Marañón.

Cyclarhis gujanensis gujanensis
(Gmelin)

Tanagra gujanensis GMELIN, 1789, Syst. Nat., I (2), p. 893—based on "Verde-roux" of Buffon; Guyane = French Guiana.

Lanius supercilii VIEILLOT, 1818, Nouv. Dict. Hist. Nat., nouv. éd., XXVI, p. 153—based on "Le Sourceirou" of Levaillant; probably Cayenne.

Cyclarhis poliocephala TSCHUDI, 1845, Arch. Naturg., XI (1), p. 362—"Brasilia septentrionalis; Guyana, Surinam."

Cyclarhis gujanensis albiventris CARRIKER (not Sclater and Salvin, 1873), 1930 (Dec. 15), Proc. Acad. Nat. Sci. Phila., LXXXII, p. 375—Eneñas, Dept. Junín, Perú; ♂; Acad. Nat. Sci. Phila.

This form has a rather wide range over Amazonia and the Guianas and shows considerable variation in the grayness or whiteness of the lower under parts, the exact tone of yellow on the chest, the hue and length of the rufescent supercilary stripe and the amount of greenish or yellowish coloration on the lateral or superior margin of the flanks. Some birds have little or no tinge of gray on the flanks while others have the whole sides of the abdomen quite grayish with only a narrow median stripe of whitish. I find it impossible, therefore, to subdivide typical *gujanensis* on the basis of this character as was proposed by Carriker (*loc. cit.*). Although I have seen no Peruvian specimens showing the extreme development of gray noted in certain examples from elsewhere, the amount of material from this area is quite limited and may not show the range of

variation that occurs here. Furthermore, the Peruvian skins fit well into the rest of the series, although at the lighter end of the scale. There is no need, therefore, to supply a new name for the preoccupied one given to this light extreme. My thanks are expressed to Mr. de Schauensee of the Academy of Natural Sciences of Philadelphia for the loan of certain Peruvian material needed to supplement my own meager representation of this form from the country in question. The series kindly supplied shows, also, that *gujanensis gujanensis* occupies northwestern Bolivia where its existence has not been heretofore suspected.

Peruvian records that should be assigned to this form are from Samiria, "Upper Ucayali" (= near Cashiboya), La Gloria, Paltaypampa, Eneñas, and Tarapoto.

Study of other Bolivian representatives of the species shows that not only are *cearensis* and *viridis* residents, respectively, of the eastern and southeastern portions of the country, but that the occupants of the highlands of the Cochabamba region are recognizably distinct from both of them without being at all intermediate between them. Accordingly, I propose to define this population as follows.

***Cyclarhis gujanensis dorsalis*,**
new subspecies

TYPE from Parotani, Cochabamba, Bolivia; altitude, 8800 feet. No. 137,910, American Museum of Natural History. Adult male collected June 27, 1915, by Miller and Boyle; original No. 12,628.

DIAGNOSIS.—Nearest to *C. g. viridis* of northwestern Paraguay and northern Argentina but with wing and tail averaging longer and bill averaging shorter (but equally thick, thus appearing stubbier); mantle grayer in some contrast to the green uropygium; lower throat and chest paler, less strongly yellow; lower under parts more deeply buff.

RANGE.—Highlands of central Bolivia.

DESCRIPTION OF TYPE.—Top of head Dresden Brown × Cinnamon-Brown, with the subterminal portions of the feathers grayish, most broadly on the crown; broad upper part of lores and a strong supercilary stripe near Auburn; lower part of the lores, and the sides of the head Gull Gray, the color extending over the sides of the neck and, a little duller in tone, around the back of the neck. Mantle with general effect of Mineral Gray or Olive-Gray, with the tips of the feathers broadly clear gray

but the central portion tinged with greenish; basal portion of the mantle feathers pale grayish, separated from the greenish subterminal area by a shaded, angular bar; scapulars brighter and more greenish than the interscapulars, near Deep Grape Green with a grayish tinge; rump and upper tail-coverts light Serpentine Green with rather narrow gray tips; tail near Yellowish Olive, brighter on exposed margins but inclined to whitish on the narrow outer border of the outermost feathers. Chin and upper part of throat broadly white, invading the base of the malar region; lower throat pale Barium Yellow, duller and tinged with grayish on the sides of the breast; breast, broad sides of the belly, and flanks deep Cinnamon-Buff; thighs and under tail-coverts the same; middle of belly narrowly whitish. Wings dark brown with exposed margins and surfaces of remiges and upper coverts Yellowish Olive except that the fine outer margin of the outermost primary and the distal portion of the same margin on the succeeding primaries are grayish in a progressively shortening amount; inner margins of remiges and the under wing-coverts Citron Yellow with a whitish patch near the base of the primaries and along the adjacent margin of the wing. Bill (in dried skin) light brown with a slaty patch at the base of the mandible; feet dull brown, faintly slaty. Wing, 85 mm.; tail, 74; exposed culmen, 16; culmen from base, 17.75; tarsus, 25.

REMARKS.—Females like the males. I can find no certain differences of size except that the males may reach a greater maximum, although misdetermined sex of a number of specimens may give a false conception of sizes. In the material at hand, both the largest and smallest specimens are sexed as males.

The series shows the following range of measurements: wing, 80–91 mm.; tail, 69–80; culmen from base, 17–19 (av., 17.9). In the allied *viridis*, I find the following: wing, 76.25–86; tail, 67–76; culmen from base, 18.75–20 (av. 19.6). The short, stubby bill of *dorsalis* is readily noticeable on comparison with that of *viridis*.

Young specimens of *viridis* may have the lower under parts as deeply cinnamonous as the adults of *dorsalis*, but they are likely to have the mantle even clearer and darker green than the adults of their own form, in greater distinction from the upper parts of *dorsalis*.

Worn specimens of the present form may lose some of the cinnamonous ventral color by fading but the upper parts become even more pronouncedly gray by the same

process plus abrasion, leaving the whole top of the head and the mantle dirty gray, without much trace of green anteriorly of the rump.

An occasional specimen of *viridis* is at hand with the upper parts noticeably grayish, but this abnormal coloration involves the entire back, including the rump and scapulars, and is not like the bicolored back of *dorsalis*.

Cyclarhis gujanensis parvus Chapman

Cyclarhis flavipectus parvus CHAPMAN, 1917, Bull. Amer. Mus. Nat. Hist., XXXVI, p. 541—Villavicencio, Colombia; ♂; Amer. Mus. Nat. Hist.

In the course of the comparative studies of the present species, I have examined over a hundred examples of Venezuelan, Trinidad, and Colombian examples representing *parvus* and *flavipectus* and believe that these forms ought to be given separate recognition, although with ranges somewhat different than heretofore proposed.

Seven skins from Cristóbal Colón, Paria Peninsula, share the heavy bill and sometimes the bright dorsal coloration with the Trinidad birds; several are relatively dark above but not beyond the range of individual variation in *flavipectus*. I refer them to that form.

On the other hand, various specimens from the Turumiquire region, inland from Cumaná, show more frequent approach toward *parvus* with which some examples agree in detail while others are closer to *flavipectus*. Birds from the remainder of the northern portion of Venezuela and from the course of the Orinoco, from the delta up as far as Ayacucho, are preponderantly small-billed and with darker and duller green backs, usually also with lighter and duller yellow chests. This coloration is especially regular in nine skins from Mai-pures and Ayacucho, localities most nearly in logical association with the eastern slope of the Eastern Andes of Colombia, the type locality of *parvus*. Compared with the type and three paratypes of *parvus*, these upper Orinoco skins show the closest agreement in the respects mentioned.

A little farther down the Orinoco, the birds are brighter in coloration, some of

them with an unusual amount of yellow on the breast, sides and flanks. So, also, along the northern region of Venezuela, the average coloration is brighter. Nevertheless, I do not believe that any clear distinctions can be made from eastern Colombia to the Cumaná region, and I believe all these birds may well be called *parvus*.

As in the case of *Smaragdolanus*, I am unable to agree to the separation of the genus *Cyclarhis* from the family Vireonidae. Although it may be closer to the Laniidae than are the other members of the Vireonidae, and may have certain modifications of the skull consistent with the support of such a massive bill as it possesses, as do the shrikes, various other cranial characters are shared with *Vireo*. Furthermore, the birds of this genus are vireonine in habits, song, and nidification. I see no reason to place them far distant from the Vireonidae as has been proposed by Pycraft (1907, P. Z. S. London, p. 377) and prefer to keep them in the same family. Subfamily distinction might be worthy of support.

SPECIMENS EXAMINED

C. g. gujanensis.—

FRENCH GUIANA:

Cayenne, 3 ♂, 1 ♀, 1 (?).

DUTCH GUIANA:

Paramaribo, 1 ♀, 1 (?).

VENEZUELA:

Roraima, 1 ♂, 2 ♀;

Philipp Camp, 1 ♂;

Rondon Camp, 1 ♀;

Arabupu, 2 ♀;

Río Huaynia, junction with Cassiquiare, 1 ♂.

BRAZIL:

Río Uaupés, Iauarete, 1 ♀;

Río Negro (Mt. Curycuryari, Yucabí, Santa Maria, Tabocal, Tauapessasu, Santa Isabel, Campos Salles, Hacienda Río Negro, Muirapinima, and Igarapé Cacao Pereira), 17 ♂, 11 ♀;

Faro (mouth of Río Paratucú, Maracaná, S. José, and Serra do Espelho), 3 ♂, 3 ♀;

Para (Igarapé Assú and Utinga), 2 ♀;

Río Tocantins (Mocajuba and Baião), 3 ♂, 2 ♀;

Río Xingú (Forte Ambé, Tapará, and Porto de Moz), 5 ♂, 5 ♀;

Río Tapajoz (Caxiricatuba, Aramanyá, Tauarý, Limóal, and Igarapé Amorin), 7 ♂, 8 ♀;

Río Madeira (Borba, Santo Antonio de Guajará, and Humaythá), 5 ♂, 1 ♀;

Matto Grosso, Juruena, 1 ♂.

PERÚ:

Tulumayo, 1 ♂;

Perené, 2 ♂¹;

San Juan, Chanchamayo, 1 ♀¹;

Río Huallaga, Shapaja, 1 ♂¹.

BOLIVIA:

Río Mapiri, Huanay, 3 ♂¹.

C. g. dorsalis.—

BOLIVIA:

Prov. Sucre, Pulque, 1 ♂;

Río Cachimayo, 1 ♂;

Prov. Cochabamba, Parotani, 2 ♂ (incl. type), 1 ♀;

Tujma, 2 ♂;

Prov. Santa Cruz, Chilon, 2 ♂;

Valle Grande, 1 ♂, 1 ♀;

California, 1 ♀.

C. g. viridis.—

BOLIVIA:

Prov. Sara, Camp Woods, 2 ♂;

Camp, 750 m., 2 ♂.

ARGENTINA:

Chaco (General Pinedo, Avia Terai, and Mocoví), 2 ♂, 3 ♀;

Santiago del Estero (Lavalle and Suncho Corral), 5 ♂, 3 ♀;

Tucumán (Tucumán, Taí Trail, Sarmiento, and above San Pablo), 5 ♂, 2 ♀;

Jujuy (Perico and Río San Francisco), 1 ♂, 1 ♀;

Corrientes, Santo Tome, 1 ♂;

Salta (Río Seco, Valle de Lerma, Rosario de Lerma, Embarcación, and Rivadavia),

4 ♂, 2 ♀;

Santa Fé (Ocampo and La Soledad), 3 ♂, 2 ♀.

PARAGUAY:

Trinidad, 1 ♂, 1 ♀;

Fort Wheeler, 1 ♂, 2 ♀.

C. g. ochrocephala.—

ARGENTINA:

La Plata, 1 ♂;

B. Aires, Barracas al Sud, 3 ♂, 1 ♀.

BRAZIL:

São Paulo (Piquete, Alambary, S. Francisco, and Victoria), 8 ♂, 3 ♀;

Paraná (Roca Nova and Castro), 1 ♂, 2 ♀;

Río de Janeiro (Bemfica, Monte Serrat, Ponte Marombe, Alto Itatiaya, Therezopolis, and "Rio-skins"), 8 ♂, 5 ♀, 4 (?).

C. g. cearensis.—

BRAZIL:

Matto Grosso (Urucum, Tapirapoan, and Chapada), 22 ♂, 12 ♀, 4 (?);

Bahia (Bahia and "trade skins"), 8 ♂, 5 ♀, 10 (?) (incl. 1 paratype);

Goyaz (Rio Araguaia, Jutahy, and Rio Thesouras), 3 ♂, 2 ♀, 1 (?);

Maranhão, Primeira Cruz, 2 ♂.

C. g. flavipectus.—

TRINIDAD:

["Trinidad" (two cotypes of "*trinitatis*"), La Brea, Heights of Aripo, Carenage, Valencia, Princetown, Geelet, Caparo,

¹ Specimens in Academy of Natural Sciences, Philadelphia.

Pointe Gourde, Chaguarama, and Laventilla], 14 ♂, 14 ♀, 4 (?).

VENEZUELA:

Cristóbal Colón, 5 ♂, 2 ♀.

C. g. parvus.—

VENEZUELA:

(Cocallar, El Guamal, Río Neveri, La Florida, San Antonio, La Montaña de Guácharo, Forest of Los Palmales, Campos Alegre Valley, San Esteban, Las Quiguas, Cumbre Chiquitos, Quebrada Seca, Hills of La Tigrera, Salsipuede, San Carlos, Cotiza, Las Trincheras, Tucacas, El Limón, Cumanacoa, Bermúdez, Mt. Bucarito, Caicara, Urbana, Maripa, Suapure, Altagracia, Ciudad Bolívar, Agua Salada de Ciudad Bolívar, Sacupana, La Cascabel, Maipures, and Ayacucho), 40 ♂, 20 ♀, 6 (?).

COLOMBIA:

Villavicencio, 2 ♂ (incl. type);

Buena Vista, 1 ♂, 1 ♀.

C. g. canticus.—

COLOMBIA:

(Santa Marta, Bonda, Carthagena, Chioral, Anolaima, northern Antioquia, within twenty miles of Honda, and "Bogotá"), 6 ♂, 3 ♀, 21 (?).

C. g. virenticeps.—

ECUADOR:

(Chone, Guayas, Guayaquil, Zaruma, Cansanga, Santa Rosa, El Chiral, Las Piñas, Punta Santa Ana, Alamor, Portovelo, Río Pullango, Salvias, Guainche, La

Puente, Salado, and Loja), 19 ♂, 13 ♀, 3 (?).

PERÚ:

Tumbez, 1 ♀;

Milagros, 1 ♂, 3 ♀;

Paletillas, 1 ♀;

Palambla, 2 ♂, 3 ♀, 1 (?);

Seques, 2 ♂;

Taulis, 2 ♂.

C. g. contrerasi.—

PERÚ:

Perico, 3 ♀, 1 (?), 1 ♀¹;

Chaupe, 1 ♀;

Sauces, 1 ♂;

Lomo Santo, 1 ♂;

Tabaconas, 1 ♀¹;

Huancabamba, 2 ♀¹;

La Lejia, 2 ♀;

Chachapoyas, 1 ♂, 2 ♀;

San Pedro, 2 ♂, 2 ♀;

Leimebamba, 2 ♂;

Chugur, 1 ♂.

C. g. saturatus.—

PERÚ:

Culcui, 1 ♂ (type)²; 2 ♀²;

Cajabamba, 1 ♂, 1 ♀;

Succha, 1 ♀;

Choquisongo, 1 (?);

Hacienda Limón, 2 ♂².

¹ Specimen in Museum of Comparative Zoölogy, Cambridge.

² Specimens in Field Museum of Natural History, Chicago.