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CRITICAL NOTES ON THE TYPES OF LITTLE-KNOWN
SPECIES OF NEOTROPICAL BIRDS.—PART II.

By C. E. HELLMAYR.

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CRITICAL NOTES ON THE TYPES OF LITTLE-KNOWN SPECIES OF NEOTROPICAL BIRDS.—PART II.*

By C. E. HELLMAYR.

IN the following lines I propose to discuss another series of type-specimens which I have had the opportunity of examining during the last six years, and it is hoped that these notes may not be devoid of interest to the student of neotropical ornithology. Acknowledgments for the loan of material are due to the same gentlemen as mentioned in the first part of this paper, and also to Dr. J. A. Allen, Mr. O. Bangs, Dr. Hans Gadow, and Mr. F. V. McConnell.

48. *Thryothorus coraya* and allies.

Among South American Wrens this is unquestionably the most puzzling and most difficult group. It embraces seven or eight races which, although sometimes separated by wide tracts of country, differ one from another only in slight, but fairly constant characters. For a long time the typical *T. coraya*, "Le Coraya de Cayenne" of Buffon and Daubenton, was the only recognised form whose range was supposed to extend over nearly the whole Amazonian subregion from French Guiana to the eastern slopes of the Andes in Ecuador and Peru. The first attempt to discriminate local races of this wide-ranging bird was made by the late R. B. Sharpe, who, in 1881, described *Thryothorus amazonicus* from the Ucayali, and *T. griseipectus* from the north bank of the Marañon.† In 1903 the present writer‡ gave a short review of the known forms, which, in the light of the ample material now at hand, requires considerable modification. Quite recently Lord Brabourne and Mr. Chubb§ have dealt with the Guianan representatives of the group, but being unfamiliar with the variation of these birds, and unacquainted with the existing literature, they have fallen into several errors, and added, furthermore, to the confusion by creating two useless synonyms.|| So much about the previous papers relating to the subject.

The careful study of a large series leaves no doubt that *T. coraya*, *T. ridgwayi*, *T. amazonicus*, *T. griseipectus*, *T. griseipectus caurensis*, *T. herberti*, and *T. cantator* are merely representatives of the same specific type, agreeing with one another in all essential points, and replacing each other geographically. It is probable that *T. albiventris* Tacz. ¶ also belongs to this group; unfortunately I have not been able to secure an example of this rare species.

The total of specimens examined in the present connection amounts to seventy-two—certainly a far greater number than has yet been at the disposition of any

* Part I.; *Nov. Zool.* xiii. 1906, pp. 305-52.

† *Cat. B. Brit. Mus.* vi. pp. 235, 236.

‡ *Journ. für Ornith.* 51, pp. 532-4.

§ *Ann. Mag. Nat. Hist.* (8 ser.) x. August 1912, pp. 261-2.

|| In the same paper the authors propose the new name *Pteroglossus roraimae*, which, again, is only a synonym of *P. aracari atricollis* (P. L. S. Müll.). See Berlepsch & Hartert, *Nov. Zool.* ix, 1902, p. 102; Berlepsch, *Nov. Zool.* xv, 1908, p. 281; Hellmayr, *l.c.* xvii, 1910, p. 397.—The record of *Thamophilus borbae* from British Guiana is likewise a mistake, the birds from that country being referable to *T. major semifasciatus* (Cab.), which has a wide range in northern South America.

¶ *P. Z. S. Lond.* 1882, p. 5 (1882.—Chirimoto, N. Peru).

monographer. Before proceeding to the account of the various races it may be stated that adult males and females do not differ in coloration; the latter are, however, smaller, and have a shorter, slenderer bill. Young birds of both sexes are much more brownish beneath, the white markings on the sides of the head are dingy, ill-defined, sometimes even obsolete, the upper parts duller as well as darker, etc.

SYNOPSIS OF THE SUBSPECIES OF *Thryothorus coraya*.

1. *Thryothorus coraya coraya* (Gm.).

Turdus Coraya Gmelin, *Syst. Nat.* 1, ii. p. 825 (1789.—based on "Le Coraya de Cayenne," Daubenton, Pl. enl. 701, fig. 1, and Buffon, *Hist. Nat. Ois.* iv. p. 454).

Thryothorus melanos Vieillot, *Nouv. Dict.* 34, p. 56 (1819.—"Brésil"; coll. Laugier).

T. oyapocensis Ridgway, *Proc. U.S. Mus.* x. 1887, p. 516, note (1888.—Oyapoc, Cayenne).

T. coraya Pelzeln, *Zur Orn. Bras.* i. p. 48 (part.: Barra do Rio Negro); Berlepsch, *Nov. Zool.* xv. 1908, p. 106 (Approuague, Ipousin, French Guiana).

T. coraya coraya Hellmayr, *Journ. f. Orn.* 51, 1903, p. 532 (part.: Cayenne).

T. coraya herberti (errore!) Hellmayr, *Journ. f. Orn.* 51, 1903, p. 533 (part.: specimen ex Barra do Rio Negro).

T. oyapocensis oyapocensis Brabourne & Chubb, *Ann. Mag. Nat. Hist.* (8) x. 1912, p. 262 (French Guiana).

Hab. French Guiana: Cayenne, Ipousin, Approuague (Cherrie), Oyapoc (Jelski), Saint-Jean-du-Maroni (Le Mout); Surinam: near Paramaribo (Chunkoo). North Brazil: Barra do Rio Negro [= Manáos] (Natterer).

Adult.—Upper parts rufous brown, duller on crown and nape; upper tail-coverts dull rufescent brown, either uniform or with traces of dusky cross-lines; rectrices regularly barred with blackish and greyish brown or dingy grey, the light bars towards the base of the tail often slightly tinged with fulvous. Sides of head and neck black, varied with numerous well-defined white shaft-stripes; a very distinct superciliary line white. Below: throat and foreneck white, the latter tinged with pale greyish; middle of breast and abdomen dull greyish white or dingy buffish, chest clouded with brownish; sides of the body extensively fulvous-brown; under tail-coverts somewhat paler, barred with dusky.

Juv.—Differ by having the sides of the head sooty blackish with obsolete, greyish white markings; the crown and nape brighter rufous brown; the throat more greyish, the foreneck smoky grey, and the remainder of the under parts nearly uniform fulvous brown, there being but a few buffy white feathers in the middle of the breast. The basal half of the lower mandible is bright yellow, abruptly defined against the blackish tip, while in adult birds the under bill is wholly horn-grey.

Material.—1 ♂ ad. Barra do Rio Negro, 10 from French Guiana, 1 imm. from Surinam. Specimens from different localities average as follows:

Four adult males from Cayenne (French

Guiana) Wing 59–61; tail 53–56; bill 17–18 mm.

One adult male from Barra do Rio Negro,

Brazil Wing 62; tail 57; bill 16 mm.

One adult female from Cayenne Wing 58; tail 53; bill 17 mm.

One immature (not sexed) from Surinam Wing 59; tail 57; bill 15½ mm.

Observations.—The series from Cayenne and Surinam is fairly uniform. An adult male from Saint-Jean-du-Maroni is rather lighter rufous on the back, approaching *T. c. amazonicus*, though otherwise it is quite typical. The single

Brazilian specimen, a perfectly adult male, agrees in every way with Cayenne skins and belongs undoubtedly to the present race. It is one of the two examples referred to as *T. coraya herberti* Ridgw. in my paper quoted above. How this mistake could have been committed I am at a loss to understand. In fact, the Manáos specimen differs from that taken at Cara-rauçí (which will be discussed later on) by much darker, more chestnut-brown upper parts, dingy grey (instead of cinnamon-brown) tail, more extended as well as much brighter fulvous-brown colour on the sides of the body, distinct white markings on the cheeks and ear-coverts, and by having the chest clouded with brownish. In all these characters it is practically identical with Cayenne examples. *T. c. coraya* ranges, therefore, from French Guiana south to the north bank of the Amazons.

Nomenclature.—Messrs. Brabourne and Chubb accept for the Cayenne bird the name *T. oyapocensis* Ridgw., under the assumption that Daubenton's plate represents the race from the Roraima Mountains in British Guiana. However, this view cannot be upheld for several reasons. Firstly, on reference to Buffon's work * we find that the description of "Le Coraya" † evidently applies to the ordinary Cayenne bird, which, moreover, is the only Wren of this group occurring in the French colony. Secondly, the interior of British Guiana was literally unknown at the time of Buffon's writing; and it was not until 1842 that Richard Schomburgk, as the first European traveller, reached the distant mountain chain of which Roraima is the culminating peak. Daubenton's figure with uniform fulvous-brown belly might well have been taken from a young bird in which, as said above, the greyish white middle line is nearly wanting.

2. *Thryothorus coraya griseigula* (Lawr.).

Formicivora griseigula Lawrence, *Ann. N.Y. Acad. Sci.* ii. no. 12. p. 382 (June 1883.—British Guiana); Allen, *Bull. Amer. Mus. N.H.* ii. 1889, p. 151 (juv.).

Thryothorus coraya (nec Gmelin) Cabanis in: Schomburgk, *Reisen Brit. Guiana* iii. 1848, p. 674 ("Küstenwälder," Brit. Guiana); Sharpe, *Cat. B. Brit. Mus.* vi. p. 234 (part., descr. and hab. Bartica Grove); Salvin, *Ibis*. 1885, p. 201 (Bartica Grove, Merumé, Roraima Mts.).

T. ridgwayi Berlepsch, *Journ. f. Orn.* 37, p. 293 (1889—Brit. Guiana; the type is from Bartica Grove); Hellmayr, *l.c.* 51, 1903, p. 534 (crit., Bartica Grove [type], Camacusa).

T. coraya berlepschi Brabourne and Chubb, *Ann. Mag. Nat. Hist.* (8) x. p. 262 (1912.—Bartica Grove).

T. oyapocensis ituribisciensis Brabourne and Chubb, *l.c.* p. 262: (Ituribisce, Brit. Guiana).

Hab. British Guiana: Bartica Grove, Merumé Mountains, Roraima, Carimang River, Camacusa (H. Whitely), Supernaam, ‡ Camacabra Creek, Ituribisce § (F. V. McConnell).

Adult.—Much like *T. coraya coraya*, but differs by having the under parts (except throat and foreneck) strongly washed with ochreous brown or tawny ochraceous. In all other characters, viz. rufous brown colour of upper parts, greyish brown tail-bands, distinct white stripes on sides of head, etc., it closely resembles the typical race.

Juv.—Breast and abdomen uniform rufous-brown, much darker than in the corresponding stage of *T. c. coraya*.

Material.—1 ♂ ad. (type of *T. ridgwayi*), 1 ♀ vix ad. (type of *T. coraya ber-*

* *Hist. Nat. Ois.* iv. p. 484.

† "La gorge et le devant du cou sont blancs, la poitrine est moins blanche et prend une teinte de cendré; il y a un peu de roussâtre sous le ventre et sur les jambes."

‡ Spelt "Supinaam" } on the map in R. Schomburgk's *Reisen in British Guiana*, vol. ii. Leipzig,
§ Spelt "Itterbiesje" } 1847.

lepsi), 1 ♀ imm. from Bartica Grove; 1 ad. Great Falls; 1 Camacabra Creek; 4 Supernaam; 4 Ituribisce; 8 ♂ ♀ Roraima; 1 ♀ ad. Camacusa; 1 ♂ vix ad. R. Carimang.

Specimens from different localities average as follows :

Six males from the coast district	
(Bartica, etc.)	Wing 60-63; tail 56-58; bill 15-16 mm.
Two males from the mountains (Carimang, Roraima)	Wing 61; tail 59, 62; bill 15, 16 mm.
Six females from the coast district	Wing 57-59; tail 53-56; bill 15-16 mm.
Six females from the mountains (Camacusa, Roraima)	Wing 55-57; tail 52-57; bill 15 mm.

Observations.—Messrs. Brabourne and Chubb, in the paper quoted above, distinguish three races as occurring in British Guiana under the names of *T. coraya coraya* (Roraima), *T. c. berlepsi* (Bartica Grove), and *T. oyapocensis ituribisciensis* (Ituribisce district). Mr. F. V. McConnell very kindly forwarded for my inspection his entire series of Wrens which had formed the basis of their conclusions. This material, supplemented by the specimens in the Munich, Tring and Berlepsi Collections, and including the types of *T. ridgwayi*, *T. berlepsi*, and *T. o. ituribisciensis* I have carefully studied, with the result that I find there exists in British Guiana but one form, which is entitled to the name *T. c. griseigula* (Lawr.).

Let us first consider the inhabitants of the lowland districts, which, according to Brabourne and Chubb, are referable to two races, one with dull fulvous underparts (*T. c. berlepsi*), the other with greyish middle line (*T. o. ituribisciensis*). On comparing fifteen specimens I notice that three from Bartica Grove (including the types of *T. ridgwayi* and *T. berlepsi*), and an adult male from Supernaam are much the darkest, the under parts posterior to the white throat and foreneck being nearly uniform bright tawny ochraceous. Then follow two skins from the "Great Falls" and Camacabra Creek with a somewhat duller, more brownish ochraceous belly, which in the last-named bird passes into a paler, more brownish buff tinge along the middle line. Next come two males from Ituribisce (one the type of *T. o. ituribisciensis*) in which the under parts are mainly buffy brown, darkening to ochreous brown on the flanks. An adult bird from Supernaam is closely similar, but the middle of the abdomen is rather more greyish brown and the sides are decidedly darker. Finally, two males (adult and immature) from Supernaam and Ituribisce are even more greyish in the middle, and, except for the slightly darker sides, they are not distinguishable from average Cayenne specimens, i.e. *T. c. coraya*. From the above, it will be seen that the variation is purely individual and not connected with any particular geographic area. It should also be borne in mind that the Ituribisce is in the same district as the Supernaam, both rivers draining their waters through the plains into St. James' Canal (mouth of the Essequibo). The conditions for the development of a peculiar form are, therefore, hardly given.

Messrs. Brabourne and Chubb, furthermore, consider the birds from the mountainous interior (Roraima) to be distinguishable by their lighter "chestnut" back and brighter fulvous underparts. The majority of my skins from the mountains are indeed of a clearer ochraceous beneath, but several are not different from the type of *T. ridgwayi* (ex Bartica Grove), whereas a male from the Carimang River (Roraima district), in the dull ochreous-brown belly, exactly matches some of the

lowland examples. In the shade of the upper parts I cannot discover any constant difference between the two series. Adult Roraima birds are by no means lighter rufous brown than those from Bartica Grove or Supernaam, and for the present I am unable to discriminate more than one form in British Guiana.

Thus, *T. c. griseigula* may be characterised as being similar to *T. c. coraya*, but as a rule easily distinguishable by the ochraceous or ochreous brown colour of the lower parts, though occasionally specimens may be found which closely resemble the typical race.

Nomenclature.—The earliest available name is apparently *Formicivora griseigula*, founded upon an immature example from British Guiana. The description leaves no doubt as to its identity, which, moreover, has been confirmed by Dr. J. A. Allen through examination of the type specimen.

3. *Thryothorus coraya herberti* Ridgw.

Thryothorus herberti (Riker MS.) Ridgway, *Proc. U.S. Mus.* x. 1887, p. 516 (1888.—Diamantina, near Santarem, Lower Amazons); Chapman and Riker, *Auk*, vii. 1890, p. 266 (Diamantina).

T. coraya herberti Hellmayr, *Journ. f. Orn.* 51. 1903, p. 533 (part.: Cara-raucú).

T. coraya (errore) Pelzeln, *Zur Orn. Bras.* i. p. 48 (part.: Cara-raucú, Lower Amazons).

Hab.—North Brazil, south bank of the Lower Amazons: Diamantina, near Santarem (Riker), Cara-raucú (Natterer).

Adult.—Nearest to *T. coraya coraya*, from Cayenne and Manáos, but differs by having the sides of the head almost uniform black (relieved only by a very narrow, inconspicuous, white superciliary streak and a few extremely narrow lines of the same on auriculars); the upper parts much brighter, more chestnut rufous; the light tail-bands cinnamon-brown instead of dull greyish; the foreneck and chest more purely buffy grey without brownish suffusion; and the flanks less extensively as also paler rufescent brown.

Material.—One ♂ ad. from Cara-raucú, Lower Amazons, J. Natterer coll., Vienna Museum. Wing 62; tail 58; bill $16\frac{1}{2}$ mm.

Observations.—This specimen agrees very well with Mr. Ridgway's description, and appears to be decidedly distinct from *T. c. coraya*. The pileum and nape are dull sepia brown, slightly tinged with umber or rufescent, the remaining upper parts, including wing- and tail-coverts, bright chestnut rufous. Underneath it resembles the Cayenne form, but the breast is somewhat paler and lacks the brownish suffusion, while the flanks are lighter brown. There is, however, no difference between the two races either in size or in the shape of the bill. From *T. coraya amazonicus*, of Upper Amazonia, *T. c. herberti* may be distinguished by the reduction of the white markings on sides of head, by the cinnamon-brown (instead of dull greyish) tail-bands and by the bright chestnut-rufous upper parts. Seen from below the two races are perfectly alike.

4. *Thryothorus coraya amazonicus* Sharpe.

Thryothorus amazonicus Sharpe, *Cat. B. Brit. Mus.* vi. p. 235, tab. 15, fig. 1 (1881.—Sarayaçu, Ucayali, Eastern Peru); Berlepsch, *Journ. f. Orn.* 37, 1889, p. 293 (Yurimaguas).

T. coraya amazonicus Hellmayr, *Journ. f. Orn.* 51, 1903, p. 533 (crit.: Yurimaguas).

T. coraya (errore) Sclater and Salvin, *P.Z.S. Lond.* 1866, p. 178 (part.: Sarayaçu); iidem, *l.c.* 1873, p. 257 (part.: Sarayaçu); Taczanowski, *P.Z.S.* 1882, p. 5 (Yurimaguas).

Hab.—Northern Peru, south of the Marañon: Sarayaçu, Ucayali R. (Bartlett); Yurimaguas, Huallaga R. (Stolzmann, Garlepp).

Adult.—Much like *T. c. coraya*, and only distinguishable by its lighter, rufous-brown upper parts and less rufescent-brown flanks. The bill is by no means

stronger than in adult birds of *T. c. coraya*, and the dusky barring of the upper tail-coverts upon which Dr. Sharpe and Count Berlepsch laid much stress is not a constant feature either. The light-coloured tail-bands are dingy greyish or ashy, only the basal ones slightly tinged with fulvous, exactly as in *T. c. coraya*, with which *T. c. amazonicus* also agrees in having a very distinct superciliary stripe and numerous white longitudinal streaks on the ear-coverts.

Material.—1 ♂, 1 ♂ imm. from Sarayaçu, Bartlett coll., in British (*type*) and Tring Museums ; 1 ♂ ad. Yurimaguas, G. Garlepp coll., Mus. H. v. Berlepsch.

Two males from Sarayaçu Wing 69,61 ; tail 61,51 ; bill 18,17½ mm.
One male from Yurimaguas Wing 62 ; tail 56 ; bill 17½ mm.

Observations.—The type (from Sarayaçu) and the Yurimaguas specimen have the foreneck and chest pale greyish white, clouded with brownish (like *T. c. coraya*), while the second (immature) male from the Ucayali shows a distinct buff wash all over the middle of the belly. The upper tail-coverts are nearly uniform rufous-brown in the Yurimaguas bird, but strongly barred with blackish in the two Sarayaçu skins.

5. *Thryothorus coraya cantator* Tacz.

Thryothorus cantator Taczanowski, *Proc. Zool. Soc. Lond.* 1874, p. 130 (1874.—Amable Maria, Montaña de Vitoc, Central Peru) ; idem, *l.c.* p. 504 (Amable Maria) ; Berlepsch and Stolzmann, *P.Z.S.* 1896, p. 328 (La Merced, La Gloria, Central Peru ; two ♀ ♀).

Hab.—Central Peru, dept. Junin : Amable Maria (Jelski), La Merced, La Gloria (Kalinowski), Chanchamayo (Schunke).

Adult.—Differs from *T. coraya amazonicus* by lacking the white streaks on sides of head, and by having the tail-bands bright cinnamon-brown (instead of dull ashy or brownish grey). The white superciliary stripe is barely indicated by a few minute, obsolete lines above the auricular region.

Material.—1 ♂ ad., 1 ♀ imm. from Chanchamayo, obtained by Mr. C. O. Schunke in February 1909, in the Zoological Museum of Munich.

♂ ad. Wing 65 ; tail 56 ; bill 15 mm.

♀ imm. Wing 64 ; tail 57½ ; bill 16 mm.

Observations.—The two specimens agree in general coloration with the preceding race. The back and outer margins of the remiges show exactly the same light (cinnamon) rufous-brown tinge ; the foreneck is pale greyish buff, passing into a purer buffy along the middle of the abdomen ; the sides are clear fulvous brown. From *T. coraya herberti* they may be distinguished by the much paler rufous upper parts and flanks, as also by the greater reduction of the white markings on the "mask," the auriculars being quite uniform blackish and the superciliary line barely visible.

6. *Thryothorus coraya griseipectus* Sharpe.

Thryothorus griseipectus Sharpe, *Cat. B. Brit. Mus.* vi. p. 236. tab. 15. fig. 2 (1881.—N.E. Peru : Nauta [*type*], Pebas, Loretoyacu ; Eastern Ecuador : Sarayaçu) ; Taczanowski, *Orn. Pérou*, i. 1884. p. 517 (Iquitos, Nauta, Pebas, etc.) ; Goodfellow, *Ibis*, 1901. p. 313 (Archidona, E. Ecuador).

T. coraya (errore) Selater, *P.Z.S.* 1858, p. 64 (Rio Napo, East Ecuador) ; Pelzeln, *Zur Orn. Bras.* i. 1867. p. 48 (part. : Rio Negro betw. S. Isabel and Castanheiro, Marabitanas, Rio Içanna) ; Selater and Salvin, *P.Z.S.* 1866, p. 178 (part. : Nauta) ; iidem, *l.c.* 1867, p. 977 (Pebas) ; iidem, *l.c.* 1873, p. 257 (part. : Nauta, Pebas).

T. coraya coraya (errore) Hellmayr, *Journ. f. Orn.* 51, 1903, p. 532 (part. : Marabitanas, Rio Içanna, Rio Negro).

Hab. North-eastern Peru, north bank of the Marañon ; Nauta (Bartlett), Pebas, Rio Tigré (Hauxwell), Iquitos (Whitely) ; Eastern Ecuador : Rio Napo (Verreaux), Archidona (Goodfellow), Catapino (Petit), Sarayaçu (Buckley) ; N.W. Brazil, Rio Negro district : Marabitanas, R. Içanna, between S. Isabel and Castanheiro (Natterer).

Adult.—Differs from *T. c. coraya* and *T. c. amazonicus* by much darker chestnut-brown upper parts ; pale fulvous (instead of greyish brown) tail-bands ; by having the lower surface posterior to the throat distinctly ashy grey, without any brownish suffusion on the chest, the sides of the body alone being dark russet brown. Size generally less, especially the bill weaker and slenderer.

Material.—5 ♂♂, 2 ♀♀, Nauta (including the type), in British and Tring Museums ; 1 ♀ ad., Pebas, Brit. Museum ; 2 ♂♂ ad., Rio Tigré, Mus. H. v. Berlepsch ; 1 ♂ ad., Catapino, 1 ♀ imm., Archidona, in Tring Museum ; 3 ad. (not sexed), Sarayaçu, in Brit. and Berlepsch Museums ; 4 ♂♂ ad., 1 ♀ ad., 1 ♀ jr., Upper Rio Negro (Marabitanas, Içanna, Castanheiro), Natterer coll., in Vienna and Munich Museums.

Specimens from different localities average as follows :

Four males from Nauta	Wing 63–65 ; tail 55–60 ; bill [damaged].
Two females from Nauta	Wing 59, 60 ; tail 50 ; bill [damaged].
Two males from Rio Tigré	Wing 60, 64 ; tail 51, 56 ; bill 17 mm.
Two males from Eastern Ecuador	Wing 62, 65 ; tail 55, 57½ ; bill 18 mm.
One female from Eastern Ecuador	Wing 59 ; tail 53 ; bill 16 mm.
Four males from the Upper Rio Negro	Wing 58–61 ; tail 50–55 ; bill 15–16 mm.
Two females from the Upper Rio Negro	Wing 57 ; tail 47 ; bill 14½–15 mm.

Observations.—The typical Peruvian birds when compared with a series from Cayenne are much deeper, chestnut brown above, and have the median portion of the breast and abdomen more decidedly ashy grey, the chest being by no means clouded or washed with brownish. The sides of the belly are extensively and dark rufous brown, as in *T. c. coraya*, but the upper tail-coverts are much darker, without traces of dusky barring. There is a very distinct white superciliary stripe, also the sides of the head are strongly streaked with white. Birds from Eastern Ecuador are practically identical with the Peruvian ones. The series from the Rio Negro, however, differ slightly : they are smaller, with the bill notably so, and the upper parts are still deeper chestnut brown. In the small size they agree with *T. c. caurensis*, but have much more rufous-brown on the flanks. In a previous communication on this subject I have referred them to *T. c. coraya*, from which they are, however, obviously distinct.

All the above examples are distinguished by having the tail-bands light fulvous (that is, neither bright cinnamon as in *T. c. herberti*, nor dull greyish brown as in *T. c. coraya*). The upper mandible is black, the lower one horn-grey with light tip.

7. *Thryothorus coraya caurensis* Berl. and Hart.

Thryothorus griseipectus caurensis Berlepsch and Hartert, *Nov. Zool.* ix. p. 7 (1902.—Nicare, Caura River, East Venezuela).

Hab. Eastern Venezuela, Caura Valley : Nicare, La Pricion (E. André).

Adult.—Agrees in all essential characters with *T. c. griseipectus*, but the whole of the lower parts (except throat) is ashy grey, only the innermost sides of the belly being much paler russet-brown.

Material.—8 ♂♂, 4 ♀♀ from the Caura (including the type), six in the Munich, five in the Tring Museum.

Eight males Wing 61–64 ; tail 50–55 ; bill $16\frac{1}{2}$ –18 mm.
Four females Wing 56–58 ; tail 45–49 ; bill 15–16 mm.

Observations.—I am not very confident as to the distinctness of this form, which additional material from intervening countries may prove to be inseparable from *T. c. griseipectus*, although the twelve Caura specimens have certainly less rufescent-brown suffusion on the flanks. The alleged difference in the colour of the lower mandible does not exist. The original describers were deceived by the defective state of the Nauta specimens, all of which had lost the corneous tegument of the bill. In fresh skins from Peru and Ecuador the under mandible is horny grey, with lighter tip, exactly as in the Caura series.

49. *Cyclarhis atrirostris* ScL. = *Cyclarhis nigrirostris* Lafr. juv.

Cyclorhis nigrirostris Lafresnaye, *Rev. Zool.* v. p. 133 (1842.—“in Colombia,” sc. Bogotá).

Cyclorhis atrirostris Sclater, *Ibis* (5) v. p. 324. tab. x. (1887.—Ecuador, Buckley coll., type in British Museum).

No 1. Mus. Brit. “♂ juv. Camino de Manabi, Ecuador, C. Buckley coll. e Museo Salvin and Godman.” Type of *C. atrirostris* ScL.

Wing 79 ; tail 67 ; bill 17 mm.

The careful comparison of the type specimen with a large series from Colombia, (Bogotá, Antioquia) and Ecuador proves it to be a very young example of *C. nigrirostris*. Unmistakable signs of immaturity are the pale cinnamon tips to the greater upper wing-coverts, the pointed rectrices, and the peculiar texture of the feathers on the flanks and crissum. Moreover, the pileum is still covered with the characteristic, fluffy, dull reddish cinnamon feathers of the nestling, which extend, in a wide stripe, over the temporal region to the sides of the nape. Dr. Sclater mistook these stripes for “superciliaries,” while, in fact, they are but remains of the juvenile plumage. The real superciliary streak, indicated by several dark chestnut feathers, is by no means more extended than in average specimens of *C. nigrirostris*, reaching as far as the posterior border of the eye. Newly-grown feathers that are to be observed here and there between the rufous ones have exactly the same colour as in adult *C. nigrirostris*, being cinereous on the forehead, bright green on the crown and temporal region. The coloration of the under parts agrees minutely with that of adult birds, except that the inner margin of the remiges is somewhat brighter yellow. The bill lacks the abruptly defined pale basal spot, the corresponding portion of the mandible being dark brown, but slightly lighter than the black apical half. An immature Bogotá skin in the Munich Museum is intermediate in that respect.

C. atrirostris must, therefore, be relegated to the synonymy of *C. nigrirostris*, since constant differences between Ecuadorian and Colombian specimens do not appear to exist. Generally birds from Bogotá and Eastern Ecuador (Baeza) have rather smaller bills than those from Western Ecuador (Gualea, Milligalli), but there are numerous exceptions to these rules. In coloration they are perfectly alike. Specimens from different localities average as follows :

Five adults from Bogotá	Wing 74-75; tail 62-65; bill 15-16½ mm.
Three adults from Antioquia (Santa Elena)	Wing 75-79; tail 63-67; bill 16-18 mm.
One adult male from Baeza, East Ecuador	Wing 79; tail 65; bill 17 mm.
One adult female from Baeza, East Ecuador	Wing 75; tail 62; bill 16 mm.
Two adult males from Western Ecuador (Gualea, Milligalli)	Wing 76, 77; tail 63, 64; bill 17-18 mm.

50. **Hylophilus brunneus** Allen = **Myrmotherula schisticolor sanctae-martae** Allen ♀!

[*Formicivora schisticolor* Lawrence, *Ann. Lyc. N. H.* viii. p. 173 (1865—Turrialba, Costa Rica).]
Myrmotherula sanctae-martae Allen, *Bull. Amer. Mus. N. H.* xiii. p. 160 (1900.—Valparaiso, Santa Marta, Colombia; descr. ♂ ad.)

Hylophilus brunneus Allen, *l. c.* p. 171 (1900.—Las Nubes, Santa Marta, Colombia; descr. ♀).

No. 1. American Museum Nat. Hist. No. 70,572 "♀" ad. Las Nubes, Colombia, December 14, 1898. Santa Marta Expedition 1898-99. Type of *Hylophilus brunneus* Allen.

Wing 57½; tail 41; bill 14 mm.

This specimen is, without doubt, a female of *M. s. sanctae-martae*, and agrees in every particular with an example from Los Palmales, Andes of Cumaná (Bermudez, N.E. Venezuela) in the Tring Museum. In both, the lower surface of the body is dull ochraceous, darkening to brownish on the sides, but the type has the throat of a rather brighter tinge. The forehead, lores and sides of face are conspicuously washed with ochreous, the back is greyish olive, the wing-coverts and remiges are edged with olive-brown, exactly as in the Venezuelan bird. The maxilla is blackish, the mandible dingy horny whitish.

Venezuelan specimens measure as follows: wing 56-58½; tail 39-42; bill 13-14 mm. Thus, it will be seen that there is no difference in size either.

M. schisticolor sanctae-martae is as yet only known from the Caribbean Coast-mountains of Venezuela and Colombia. Cfr. Hellmayr and Seilern, *Archiv f. Naturg.* 78, Abt. A. Heft. 5, September 1912, pp. 124-5.

51. **Chlorospingus canipileus** Chapm. = **Basileuterus griseiceps** Scl. & Salv.

Basileuterus griseiceps Sclater & Salvin, *P. Z. S. Lond.* 1868, p. 170 (1868.—"Venezuela, in sylvis Caripensibus," sc. Caripé, Andes of Cumaná, Bermudez, N.E. Venezuela).

Chlorospingus (Hemispingus) canipileus Chapman, *Bull. Amer. Mus. N.H.* xii. p. 153 (Aug. 1899. —Los Palmales, Andes of Cumaná).

No. 1. Amer. Mus. Nat. Hist. No. 70,349. Adult (not sexed). Orig. label: "3. Dec. 1898, Los Palmales, No. 36. Shot in low, dense scrub on border of forest, generally met in pairs. Iris brown." Type of *Chlorospingus canipileus* Chapm.

Wing 63½; tail 61½; bill 15½ mm.

This bird is practically identical with the type in the British Museum and two others from the same district at Tring. The wing varies from 61 to 64, the tail measures 60, the bill 15 mm. None of the specimens being sexed, I cannot say whether there is any sexual difference in size, but as far as coloration is concerned the four skins* agree very well together.

B. griseiceps appears to be most nearly allied to *B. leucoblepharus*, from Southern Brazil and Paraguay. In both species, the crown and nape are dark

* I am not aware of the existence of other specimens than the above.

cinereous, the sides of the head are exactly alike, and the legs pale fleshy brown. The Venezuelan bird differs, however, at a glance by the deep yellow (instead of white) under parts.

Chlorospingus reyi Berl.* bears a remarkable likeness to *B. griseiceps*, but may be distinguished by its less depressed, more curved bill, by the absence of rictal bristles, by lacking the blackish mixture about the forehead, the white supra-loral streak and chin-spot, as well as by having the sides of the head olive-yellow (not cinereous). There are two specimens of this rare species in the Tring Museum: an adult female from El Escorial, February 20, 1896, and an adult bird from Mérida, without date and sex, obtained by S. Briceño.

52. *Chlorospingus flaviventris* Sel. = *Tachyphonus luctuosus* Lafr. & D'Orb. ♀ ad.

Tachyphonus luctuosus Lafresnaye & D'Orbigny, Syn. Av. i. in: *Mag. Zool.* 1837, cl. ii. p. 29 (1837.—Guarayos, Bolivia).

Chlorospingus flaviventris Sclater, *P. Z. S. Lond.* xxiv. 1856 p. 91 (July 1856.—Trinidad [Mus. Jardine]; Bolivia? [Mus. Strickland]).

There has been considerable uncertainty about the name *C. flaviventris*, which was originally based upon two specimens: one from Trinidad in Sir William Jardine's possession, and another supposed to be from Bolivia in the Strickland Collection. The former is apparently lost, it being neither in the British nor in the Tring Museum, while the second example is still preserved in the Cambridge Museum, whence it has been kindly forwarded for my inspection by Dr. Hans Gadow. It is a skin in good condition, labelled as follows: "Coll. H. E. Strickland, No. 943 b. *Tachyphonus luctuosus*, Catalogue p. 194." The inscription (in Strickland's own handwriting) of the old label reads: "Arremon-Chlorospingus. Hab. Brazil? Date 1852. Obt^d. from Argent," and on the back: "*C. flaviventris* new. Arremon No. 107 a."

Its dimensions are: wing 63; tail $57\frac{1}{2}$; bill $12\frac{1}{2}$ mm.

This example, which answers exactly to Sclater's original description, agrees with several females of *T. luctuosus* from Bolivia, except in being slightly larger, with a somewhat longer, slenderer bill, and in having the crown rather clearer cinereous. These insignificant differences are no doubt individual. It appears to be one of Bridges' skins, showing the same handsome "make-up" as several Bolivian specimens, obtained by that traveller, in the British Museum.

Salvin† identified *C. flaviventris* with *C. albitempora* Lafr., considering No. 956 a of the Strickland Collection as the specimen referred to by Dr. Sclater. Dr. Gadow having obligingly sent me the bird in question,‡ I can positively state that this is a mistake. Dr. Sclater says of *C. flaviventris*: "capite cinereo, viridi paulum apparente" and "gula albescenti-cinerea, abdomine toto flavo"; whereas No. 956 a has the top and sides of the head dark coffee-brown, the throat bright isabelline, and the whole middle of the belly white, the flanks only being dull yellowish olive-green! It is, therefore, evident that No. 956 a cannot have been one of the types of *C. flaviventris*. But it does not belong to *C. albitempora* either, differing by its isabelline (not whitish) throat, more buffy yellow chest-band, and paler, less blackish crown. In all these particulars it closely resembles the type of *C. fulvicularis* Berl., § forwarded for examination by my friend Count Berlepsch,

* *Ibis* (5) iii. p. 288 (1885.—Mérida, Western Venezuela).

† *Catalogue of the Strickland Collection*, Cambridge, 1882, p. 196.

‡ It is inscribed as follows: "*Chl. albitempora*, Catalogue p. 196, No. 956 a." On the old Strickland label we read: "Brazil? 1852. Obt^d. from Argent. New? *Chlorospingus*—proposed to be *fulvicularis*."

§ *Journ. f. Ornith.* 49, p. 86 (1901.—Samaipata and S. Jacinto, Eastern Bolivia).

and unquestionably refers to the same species. The preparation of the skin is that of Bridges' Bolivian specimens.

C. flaviventris must, accordingly, be added to the synonymy of *Tachyphonus luctuosus* (Lafr. & D'Orb.).

53. ***Emberiza obscura*** Lafr. & D'Orb. should be ***Catamenia obscura*** (Lafr. & D'Orb.)

Emberiza obscura Lafresnaye & D'Orbigny, Syn. Av. i. in *Mag. Zool.* 1837, cl. ii. p. 81 (1837.—Chiquitos, Bolivia; descr. juv.).

Spermophila obscura Taczanowski, *P.Z.S. Lond.* 1874, p. 519 (1874.—Paltaypampa, Central Peru).

No. 1. Muséum d'Hist. Nat. Paris. Juv. (skin) labelled: "No. 313, D'Orbigny 1834, D. no. 236. Chiquitos." Type of *Emberiza obscura* Lafr. & D'Orb.

Wing 53; tail 43; bill $9\frac{1}{2}$ mm.

This specimen agrees exactly with the original description, save in the total length, which is only $11\frac{1}{2}$ cm., instead of $12\frac{1}{2}$ as given by Lafresnaye and D'Orbigny. In coloration of the upper parts it closely resembles an adult male from Viña, Marañon, North Peru, in the Tring Museum. The pileum and back are light brown, with a hardly perceptible olive tinge, but the upper tail-coverts are somewhat duller, and the rufescent edges to the median and greater wing-coverts so conspicuous in the Viña bird are barely indicated in the type specimen. The throat and foreneck (still covered with the fluffy feathers of the juvenile plumage) are decidedly darker than in adults of *S. obscura*, being dingy smoky brownish, with the greyish basal portion showing through. The sides of the body appear to be slightly brighter fulvous brown, while the upper mandible is somewhat paler horny brown.

These small differences are, no doubt, due to immaturity, and I think there can be no question that *E. obscura* is merely a young bird of the species called *S. obscura* nearly forty years afterwards. Structure and general style of coloration are exactly the same as in a considerable series of the last-named species. Seen from below, the type bears a certain likeness to the female of *Tiaris fuliginosa* (Wied),* but may be easily distinguished by having the middle of the belly extensively white and the inner margin to the remiges rufous-buff (instead of whitish), by its shorter tail, as also by its much smaller, less convex bill.

On comparing twelve adult specimens from various localities (2 Bolivia; 1 Callacate, N.W. Peru; 4 Marañon, N.E. Peru; 4 Chimbo, S.W. Ecuador; 1 Paramba, N.W. Ecuador), I fail to see any differences connected with geographical distribution, and can no longer recognise the northern form *S. obscura pauper* (Berl. and Tacz.).† At all events, birds from N.E. Peru which are certainly *S. obscura* Tacz. cannot be distinguished from the Bolivian ones.‡ *S. obscura* Tacz. becomes, therefore, a strict synonym of *Emberiza obscura* Lafr. & D'Orb.

* *Fringilla fuliginosa* Wied, . *Naturg. Bras.* 3, i. p. 628 (1830.—Camamá, Bahia, East Brazil).

† *Spermophila pauper* Berlepsch & Taczanowski, *P. Z. S.* 1884, p. 293 (Cayandeled, West Ecuador).

‡ Specimens from different localities average as follows:

One ♂ ad., Santa Cruz de la Sierra, Bolivia (Carnegie Museum),	Wing 59;	tail 47;	bill $9\frac{1}{2}$ mm.
One ♀ ad., Omeja, Bolivia (Mus. H. v. Berlepsch)	Wing $53\frac{1}{2}$;	tail 44;	bill 9 mm.
Three ♂ ad., Marañon, N.E. Peru (Tarapoto, Viña)	Wing 54-56;	tail 42-44;	bill 8-9 mm.
One ♂ ad., Callacate, N.W. Peru	Wing 56;	tail $44\frac{1}{2}$;	bill $9\frac{1}{2}$ mm.
One ♀ ad., Marañon, N.E. Peru (Viña)	Wing 53;	tail 42;	bill $9\frac{1}{2}$ mm.
Four ♂ ad., Chimbo, S.W. Ecuador	Wing $53\frac{1}{2}$ -56;	tail 41-44;	bill $8\frac{1}{2}$ - $9\frac{1}{2}$ mm.
One ♂ ad., Paramba, N.W. Ecuador	Wing 54;	tail $41\frac{1}{2}$	bill 9 mm.

This species is evidently out of place in the genus *Sporophila*, and seems best referred—for the present at least—to *Catamenia*, although its bill, in comparison to *C. analis*, is laterally much more compressed, with the culmen slightly ridged instead of being distinctly rounded. The upper mandible, however, is very nearly as depressed as in *C. analis*.

C. obscura (Lafr. & D'Orb.) ranges from N.W. Argentine (Salta) through Eastern Bolivia (Chiquitos, Santa Cruz de la Sierra, Omeja) and Peru (Paltaypampa, Tarapoto, Viña, Huamachuco, Callacate) to Western Ecuador (Chimbo, Cayandeled, Paramba).

54. *Poospiza cabanisi* Bonap.

Poospiza cabanisi Bonaparte, *Consp. Av.* i. p. 473 (July 1850.—Paraguay, Mus. Paris).

Poospiza assimilis Cabanis, *Mus. Heinean.* i. p. 137 (May 1851.—South Brazil and Paraguay).

No. 1. Mus. d'Hist. Nat. Paris. Adult (skin). Paraguay, Bonpland coll. "No. 108, Gen. Dub. canelle en dessous." On the back of the label in Bonaparte's own handwriting: "*Poospiza Cabanisii* Bonap."

Wing 68; tail 66; bill 12 mm.

This specimen, which is undoubtedly the type of Bonaparte's description, belongs to the species commonly called *P. assimilis* Cab., and agrees pretty well with a ♂ ad. from São Lourenço, Rio Grande do Sul, H. von Ihering coll. in the Paris Museum. But being in rather fresher plumage, it is everywhere brighter, the mantle more decidedly brownish, the upper part of the head washed with olive-grey, etc. Above the eye and auricular region there is a broad white superciliary stripe; throat and foreneck are pale greyish buff, middle of breast and abdomen largely white; sides of body and crissum, as also **the whole of the lower rump, including the upper tail-coverts**, bright cinnamon-rufous; only the two outermost pairs of rectrices tipped with white, etc.

Bonaparte's name having priority must supersede the term *assimilis* Cab. Cabanis' statement that *P. cabanisi* is well characterised by **lacking the rufous colour on the rump**. I am unable to understand, for Bonaparte in the original description expressly says: "**uropygio**, lateribus crissoque **fulvo-castaneis**."

P. cabanisi Bonap. ranges from southern São Paulo (Ytararé), through Paraná and Rio Grande do Sul to Paraguay and the Argentine provinces of Misiones and Entrerios.*

55. *Emberizoides megarhyncha* Bonap. = *Embernagra platensis* (Gm.) juv.

Emberizoides megarhyncha Bonaparte, *Consp. Av.* i. p. 482 (July 1850.—Mus. Paris, ex Brasil.).

No. 1. Mus. d'Hist. Nat. Paris, juv. (mounted): "*Emberizoides megarhyncha* Bp. Type, du Brésil, par M. Auguste Saint-Hilaire, août 1822."

Wing 81, tail 84, bill $17\frac{1}{2}$ mm.

This is quite a young bird, mostly covered with the fluffy feathers of the nestling plumage; only on the shoulders (lesser wing-coverts) and here and there on the back some isolated feathers of the adult dress are just coming out. The large, thickish bill, and the strong legs with long toes, leave no doubt as to its being a pullus of *Embernagra platensis*.

* I have examined fourteen specimens from the following localities: 2 (♂ ♀) Ytararé, S. Paulo; 4 (2 ♂, 2 ♀) Roça Nova, Serra do Mar, Paraná; 1 ♂ Campo Largo, Paraná; 6 Rio Grande do Sul (Taquara do Mundo Novo, São Lourenço, Arroio Grande); 1 ♂ La Soledad, Entrerios.

The concealed basal portions of the rectrices are pale green, the anal region and under tail-coverts bright buff, as in adult specimens from Barracas al Sud (Buenos Aires), while the newly-grown lesser wing-coverts show exactly the same yellowish green tinge.

In other respects the type fairly agrees with Dr. Sharpe's * description of the young of *E. platensis*. The top of the head and back are buffy brown, broadly striped with blackish brown; the median and greater wing-coverts dusky, with whitish-brown edges; the outer margins to the remiges duller green than in the adult; the under surface is whitish (instead of olive-grey), with distinct reddish brown shaft-streaks on foreneck, breast, and flanks. Perfectly adult birds of *E. platensis* have no traces of dusky markings underneath, but in immature examples there are sometimes dark brown streaks on the foreneck to be seen.

The upper mandible, in the type specimen, is blackish brown, the cutting-edges yellowish brown, the lower mandible whitish.

Emberizoides megarhyncha Bp. is, thus, to be added to the synonyms of *E. platensis*. Dr. Sharpe * had doubtfully referred the name to *Emberizoides herbicola* (Vieill.).

56. On *Empidochanes poecilocercus* Pelz. and *Knipolegus pusillus* Scl. & Salv.

In the second part of his well-known *Zur Ornithologie Brasiliens* the late August von Pelzel described as a new species *Empidochanes poecilocercus* from a single female example, obtained by the celebrated traveller J. Natterer on the Amajai, one of the tributaries of the Rio Negro. The species was not mentioned again in ornithological literature until Berlepsch and Hellmayr,† from an examination of the type specimen, declared it to represent a very distinct form not to be confounded with any other member of the genus *Empidochanes*. Two years afterwards I recorded a second example, also a female, from Itaituba, a small village on the left bank of the Tapajóz River.‡ So far as I know, no other specimens have been obtained since.

In 1873 Messrs. Sclater and Salvin§ published the description of a new Tyrant, *Knipolegus pusillus*. The type, which had been procured by A. R. Wallace somewhere on the Lower Amazons,|| remained unique till 1898, when G. K. Cherrie was fortunate in getting two males at Perico, on the upper Orinoco, Venezuela.¶ In 1907 Miss Snethlage** shot a single male near Alcobaca, on the Tocantins, and in the same year the late W. Hoffmanns sent an adult male from Jamarysinho, a village on the Rio Machados, Madeira district, to the Tring Museum.††

Thus, it will be seen that the two known specimens of *E. poecilocercus* were females, while of *Knipolegus pusillus* only males had been secured. When lately investigating the affinities of Pelzel's species I was struck by its similarity to the females of certain species of *Knipolegus*, both in structure and in style of coloration.

* *Cat. B. Brit. Mus.* xii. 1888. p. 769.

† *Journ. f. Ornith.* 53. 1905. p. 27.

‡ *Nov. Zool.* xiv. 1907. p. 12.

§ *Nomenclator Avium Neotrop.* p. 158.

|| Owing to loss of the original label the exact locality could not be ascertained.

¶ Berlepsch and Hartert, *Nov. Zool.* ix. 1902. p. 36.

** *Journ. f. Ornith.* 56. 1908. p. 525.

†† Hellmayr, *Nov. Zool.* xviii. 1910. p. 284.

On going deeper into the question, I became convinced that it had no relation whatever to *Empidochanes*, being in every way a typical *Knipolegus*, and I arrived at the final conclusion that *K. pusillus* and *E. poecilocercus* were merely male and female of one and the same species.

Four specimens of the former and two of the latter agree perfectly with each other in proportions, shape of the wing, development of the rectal bristles, etc.

All six examples have the three outer primaries narrowed, incised, and acuminate, as described by Berlepsch and Hellmayr,* this peculiarity being equally well pronounced in both sexes; the nostrils are small circular openings; there are numerous long, rather soft rectal bristles. In coloration, the female (*E. poecilocercus*) recalls that of *K. cyanirostris* (Vieill.), having the inner web of the rectrices rufous, the upper tail-coverts cinnamon, and the chest flammulated with dusky. The only point in which it differs from the male (*K. pusillus*) is the slightly narrower bill, with more distinctly ridged (less rounded) culmen, and its blackish (instead of plumbeous) colour. The same sexual difference, however, exists in the allied species.

For the sake of convenience I append the measurements of the specimens examined by me, together with the synonymy, range and characters of the species, which has to stand as :

Knipolegus poecilocercus (Pelz.).

Empidochanes poecilocercus Pelzeln, *Zur Ornith. Bras.* ii. p. 116, 181 (1868.—Rio Amajaú, Rio Negro District, N. Brazil; descr. ♀); Berlepsch & Hellmayr, *Journ. f. Orn.* 53, 1905. p. 27 (crit.); Hellmayr, *Nov. Zool.* xiv. 1907. p. 12 (Itaitúba, R. Tapajóz; 1 ♀).

Chnipolegus unicolor (nec Kaup) Sclater & Salvin, *P. Z. S.* 1867. p. 577 (one example without exact locality, A. R. Wallace coll.).

Chnipolegus pusillus Sclater & Salvin, *Nomencl. Av. Neotrop.* p. 158 (1873.—Lower Amazon, A. R. Wallace coll., descr. ♂ ad.); Sclater, *Cat. B. Brit. Mus.* xiv. 1888, p. 47 (♂ ad.); Berlepsch & Hartert, *Nov. Zool.* ix. 1902. p. 36 (Perico, Orinoco R., Venezuela); Snethlage, *Journ. f. Orn.* 56, 1908. p. 525 (Alcobaça, R. Tocantins; 1 ♂ ad.).

Knipolegus pusillus Hellmayr, *Nov. Zool.* xvii. 1910, p. 284 (Jamarysinho, Rio Machados, R. Madeira district; 1 ♂ ad.).

Hab. Amazonia, North Brazil: Rio Amajaú, upper R. Negro (Natterer); Itaitúba, R. Tapajóz (Hoffmanns); Jamarysinho, R. Machados (tributary of the Madeira (Hoffmanns); Alcobaça, R. Tocantins (Snethlage). Central Venezuela: Perico, upper Orinoco R. (Cherrie).

♂ *ad.* (Type of *C. pusillus* Scl. & Salv.). Above and below uniform black, glossed with metallic blue, this gloss being much more pronounced on the pileum and back than on the lower parts. Wing-coverts and remiges dull brownish black, the lesser and median wing-coverts with narrow, glossy metallic blue edges; tail deep black. Axillaries and under wing-coverts dull blackish brown. Bill plumbeous, base of lower mandible horny brown. Wing 59—61; tail 50½—52; bill 11½—12½ mm.

♀ *ad.* (Type of *Empidochanes poecilocercus* Pelz.). Top of the head and back light olivaceous brown; upper tail-coverts, in decided contrast, clear rufescent cinnamon; median and greater wing-coverts dusky, broadly tipped with olivaceous buff, forming two distinct bars across the wing; lesser wing-coverts like the back; remiges dusky, the secondaries exteriorly edged with buff, especially along the apical half; rectrices blackish brown, the middle pair very narrowly bordered with cinnamon

* *Journ. f. Ornith.* 53, 1905, p. 27.

on either side, the others with the inner half of the inner web cinnamon-rufous, and a slight margin of the same colour along the outer web. Lores and a rim round the eye yellowish buff; cheeks, auricular region and sides of the neck light olivaceous brown like the back. Under surface pale primrose-yellow, throat and under tail-coverts more buffy; sides of throat, foreneck, and sides of body flammulated with pale brown, most strongly on foreneck. Axillaries, under wing-coverts, and an extremely narrow edge along the quill-lining buff. Bill blackish, basal half of lower mandible paler brown. Wing 55—57; tail 48—51; bill 12 mm.

Obs. In both sexes the feathers of the pileum are somewhat elongated so as to form a slight, rounded crest. The tail is moderately rounded, the outer rectrices being 2 to 3 mm. shorter than the median ones. The males from the Orinoco (Perico) are practically identical with the type in the British Museum, while that from Jamarysinho (R. Madeira) has the upper parts duller, less bluish black. The female from Itaituba also differs in some particulars from the type of *E. poecilocercus*; the back is duller olive-brown, the auricular patch darker brown, the throat less buffy, the under tail-coverts are more ochraceous, and the dusky stripes on the chest darker as well as more strongly defined. These slight divergencies are most probably individual.

Material.

- No. 1. Brit. Museum (♂) ad., Lower Amazons.
Type of *C. pusillus* Schl. & Salv. Wing 61; tail 52; bill 11½ mm.
- No. 2. Mus. H. v. Berlepsch, "♂" vix ad.,
Perico, Orinoco R. Venezuela, September 25, 1898 Wing 61; tail 52; bill 12½ mm.
- No. 3. Mus. Tring "♂" ad., Perico, September 25, 1898 Wing 59; tail 50½; bill 12 mm.
- No. 4. Mus. Tring "♂" ad., Jamarysinho,
R. Machados, September 14, 1907 Wing 59; tail 51; bill 12 mm.
- No. 5. Mus. Vienna, No. 18324. "♀" ad.,
Rio Amajau, N.W. Brazil, September 16,
1831. Type of *E. poecilocercus*, Pelz. Wing 57; tail 51; bill 12 mm.
- No. 6. Mus. Tring, "♀" ad., Itaituba, R. Tapajóz,
N. Brazil, January 12, 1906 Wing 55; tail 48; bill 12 mm.

57. *Ochthoea keaysi* Chapm. = *Caenotriccus simplex* Berl.

Caenotriccus simplex Berlepsch, *Journ. f. Ornith.* 49. p. 88 (Jan. 1901.—Sandillani, West Bolivia).
Ochthoea keaysi Chapman, *Bull. Amer. Mus. N.H.* xiv. p. 227 (Sept. 1901.—Inca Mine, Marcapata, South-eastern Peru).

No. 1. Mus. H. v. Berlepsch, No. 1535, G. Garlepp coll. Adult (not sexed), Sandillani, W. Bolivia, 2500 m. alt., July 6, 1896.

Type of *Caenotriccus simplex* Berl. . . . ad. Wing 55; tail 43½; bill 11½ mm.

No. 2. Mus. H. v. B., No. 912, G. Garlepp coll. Adult (not sexed), S. Jacinto, E. Bolivia, January 13, 1891 . . . ad. Wing 53; tail 39; bill 12 mm.

No. 3. Amer. Mus. Nat. Hist., No. 74100. Orig. label: "August 4, 1900, ♀, No. 86, Inca Mine, Peru, H. H. Keays coll."

Type of *Ochthoea keaysi* Chapm. . . . ♀ imm. Wing 53; tail 43; bill 12 mm.
The type of *O. keaysi* agrees very well with the Bolivian specimens except

that the rump, upper tail-coverts, thigh, and flanks are rather more rufescent brown. The back, too, appears to be slightly more brownish green, while the edges to the wing-coverts and remiges are deeper rufescent brown. These insignificant variations are, no doubt, due to age, for the type of *O. heaysi* is immature. The middle of the breast and abdomen is decidedly yellowish, as in No. 2 (S. Jacinto), whereas in the type of *C. simplex* the belly is nearly uniform dingy olive-green. I agree with Count Berlepsch that this species, notwithstanding its rather divergent bill, finds its natural place in the genus *Caenotriccus*. To *Ochthoeca* it has, as far as I can see, no close relation.

C. simplex is only known as an inhabitant of the mountains of Northern Bolivia and South-Eastern Peru (Marcapata).

58. *Ochthoeca olivacea* Allen = *Tyranniscus improbus* ScL. & Salv.

Tyranniscus improbus ScLATER and SALVIN, *P. S. Z. Lond.* 1870. p. 841. pl. 53. fig. 3 (1871.—Mérida, Venezuela (type); Ocaña, North Colombia).

Ochthoeca olivacea ALLEN, *Bull. Amer. Mus. N. H.* xiii. p. 152 (1900.—Valparaiso, Santa Marta, North Colombia).

No. 1. Amer. Mus. Nat. Hist., No. 72728. Type of *Ochthoeca olivaceus* (sic) ALLEN. Orig. label: "Santa Marta Expedition, 1898-99. Valparaiso, Colombia, April 14, 1899, G. H. Hull." Adult: Wing 64*; tail 56*; bill 10 mm.

This bird is, no doubt, the same as *T. improbus*, of which the Tring Museum has a large series from the type locality. In fact, on comparing the Santa Marta specimen with fourteen skins from Mérida, I cannot detect the slightest difference either in colour or size: the back is of exactly the same shade of green; the darker crown forms a kind of dusky cap; a distinct frontal band and a spot above the brownish black anteocular patch are white, the auriculars dark olive-brown; the whitish superciliary line is inconspicuous, as in an adult male from Valle (January 17, 1888); the throat dull white; the foreneck flammulated with pale yellowish on a light greyish ground, etc. The pale markings on the wing show the same distribution as in Mérida examples, but the edges to the median wing-coverts are perhaps more whitish than in the majority of the latter.

Five adult males from Mérida measure: wing 61-63; tail 52-55; bill 10-11 mm.

T. improbus inhabits the mountains of Western Venezuela (Mérida) and Northern Colombia (Santa Marta, Ocaña). In the north coast ranges of Venezuela it is replaced by *T. petersi* Berl. About the characters of this species cfr. Hellmayr and Seilern, *Arch. f. Naturg.* 78, Abt. A, Heft 5, September 1912, p. 79.

59. *Ochthoeca jesupi* Allen, should be *O. diadema jesupi* Allen.

Ochthoeca jesupi ALLEN, *Bull. Amer. Mus. N. H.* xiii. p. 151 (1900.—San Lorenzo, Santa Marta, North Colombia).

No. 1. Amer. Mus. Nat. Hist., No. 72727, ♀ imm., S. Lorenzo, 7000 ft., May 12, 1899, G. H. Hull.

Type of *O. jesupi* ALLEN. Wing 58; tail 49; bill 11½ mm.

So far as is possible to judge from a single immature specimen, this appears to be a distinct form, most nearly allied to *O. diadema diadema* (Hartl.). It resembles the Bogotá bird in the coloration of the wings, but may be recognised

* In the original description the measurements, by misprint, are given as follows: wing 54; tail 46 mm.

by lacking the blackish cap (the feathers of the pileum being olive-green like the back, with inconspicuous dusky central spots), by its decidedly lighter, more greenish brown back, somewhat paler yellow frontal band, and by having the flanks slightly washed with brownish. The absence of the dusky cap **may** be due to immaturity, but the other characters, though slight, serve to distinguish *O. d. jesupi* from the **young** of *O. diadema*. The upper wing-coverts are but obsoletely margined with the colour of the back.

O. diadema gratiosa differs from the Santa Marta bird by its blackish cap, much darker, rufescent olive back, more greenish breast (without yellowish admixture), and by having the greater wing-coverts broadly tipped with cinnamon rufous.

The three "species" replacing each other geographically are more properly designated by trinomials.

(a) *O. diadema diadema* (Hartl.).* Andes of Colombia (Bogotá) and Western Venezuela (Mérida).†

Seven adults (not sexed) from Bogotá. Wing 58, 60½, 63-65; tail 50, 54, 57-59; bill 11½-12½ mm.

Four adult males from Escorial, Mérida. Wing 63½-65; tail 55-59; bill 11½-12½ mm.

(b) *O. diadema jesupi* Allen. Sierra Nevada de Santa Marta, N. Colombia.

One female (imm.) from San Lorenzo. Wing 58; tail 49; bill 11½ mm.

(c) *O. diadema gratiosa* (Scl.), ‡ Mountains of Ecuador and N.W. Peru (Tambillo).

Five adult males from Ecuador. Wing 63-64; tail 54-56; bill 11-12 mm.

Four adult females from Ecuador. Wing 58-61; tail 48-52; bill 11-12 mm.

60. *Pogonotriccus alleni* Oberholser = *P. ophthalmicus* Tacz.

Pogonotriccus ophthalmicus Taczanowski, *P. Z. S.* Lond. 1874, p. 135 (1874.—Amable Maria, Central Peru).

Leptopogon godmani Sclater, *P. Z. S.* 1887, p. 48 (1887.—Sarayaçu, Ecuador).

Pogonotriccus alleni Oberholser, *Proc. U. S. Nat. Mus.* xxv. 1902, p. 65 (1903.—Rio Cauca, Western Colombia).

In the first part of this paper § I have shown *Leptopogon godmani* to be identical with *P. ophthalmicus*, and now I am able to state that *P. alleni* Oberholser is another synonym of the same species. Although this identity has already been mentioned in another connection, || a more detailed explanation of the case seems desirable. My conclusions are based upon the following specimens :

- No. 1. Munich Museum, ♂ ad. Cumbre de Valencia, Venezuela, October 2, 1910. S. M. Klages coll. Wing 60; tail 57; bill 9½ mm.
- No. 2. Carnegie Museum, No. 35,126 ♂ ad. Cumbre de Valencia, Venezuela, October 13, 1910. M. A. Carriker coll. Wing 59; tail 55; bill 10 mm.

* *Myiobius diadema* Hartlaub, *Rev. Zool.* vi. p. 289 (1843.—"Nouvelle Grenade," i.e. Bogotá).

† Birds from Mérida are practically identical with those from Bogotá.

‡ *Mecocerculus graciosus* Sclater, *P. Z. S.* 1862, p. 113 (Ecuador).

§ *Nov. Zool.* xiii. 1906, p. 322-3.

|| See Hellmayr and Seilern, *Archiv f. Naturg.* 78, Abt. A, Heft 5, September 1912, p. 77, note 2.

- No. 3. Museum Seilern, (♀) ad., Cumbre de Valencia, October 12, 1910. S. M. Klages coll. Wing 54 ; tail 49 ; bill 9 mm.
- No. 4. Tring Museum, (♂) ad., Primavera, Cauca, West Colombia, 900 m, Raap coll. Wing 58½ ; tail 57 ; bill 10 mm.
- No. 5. Amer. Mus. Nat. Hist., "♂" ad., Rio Cauca, Colombia, June 1898, J. H. Batty coll. No. 71758. Type of *P. alleni* Oberholser Wing 57½ ; tail 53½ ; bill 10 mm.
- No. 6. Tring Museum, (♂) ad., Bogotá coll. (ex Mantou) Wing 62 ; tail 56 ; bill 10 mm.
- No. 7. Tring Museum, "♂" ad., West side of Pichincha, Ecuador, November 1898. Goodfellow coll. Wing 62 ; tail 55½ ; bill 10½ mm.
- No. 8. Tring Museum, "♂" imm., West side of Corazón, Ecuador, September 1898. Goodfellow coll. Wing 60½ ; tail 50 ; bill 9½ mm.
- No. 9. Tring Museum, "♂" ad., West side of Corazón, Ecuador, September 1898. Goodfellow coll. Wing 58½ ; tail 53 ; bill 10 mm.
- No. 10. Tring Museum, "♀" ad., West side of Pichincha, Ecuador, November 1898. Goodfellow coll. Wing 55 ; tail 50 ; bill 9½ mm.
- No. 11. Museum Berlepsch, ♂ ad., Huambo, North Peru, March 15, 1880. J. Stolzmann coll. Wing 62 ; tail 57 ; bill 10 mm.
- No. 12. Museum Berlepsch, "♂" ad. Mapoto, East Ecuador, January 15, 1884. J. Stolzmann coll. Wing 61 ; tail 55 ; bill 10 mm.

The small differences noticed by Hellmayr and Seilern* as existing between Venezuelan skins (Nos. 1—3) and two undoubted *P. ophthalmicus* (Nos. 11, 12) are not borne out by the larger series which came to hand since our remarks were written. It is true, the two examples from the Cauca River, including the type of *P. alleni*, agree with the Cumbre birds in the light cinereous pileum, clear yellowish green back, bright sulphur-yellow colour of the anterior auricular region, and in the lesser extent of the whitish chin-spot, as contrasted to the two specimens in the Berlepsch Collection (Nos. 11, 12); but the series from Ecuador shows considerable variation in all these characters, and the Bogotá skin (which would be expected to belong to the pale northern race) is fully as dark as the Huambo bird (No. 11).

In the adult male from Pichincha (No. 7) and the immature one from Corazón (No. 8) the anterior auricular region is white, scarcely shaded with yellowish, as in the Huambo specimen (No. 11), while in the two others from the same localities (Nos. 9, 10) it is even more deeply olive-yellow than in the Cumbre and Cauca examples. The crown is light cinereous in No. 9 (Corazón), as in the latter, but very dark slate-grey in No. 7 (Pichincha), while the others are intermediate. As to the colour of the back, only one of the Ecuadorian skins (No. 8, Corazón) matches those from Venezuela, but the three others are also decidedly lighter green than

* *Arch. f. Naturg.* 78, Abt. A. Heft 5, September 1912, p. 77.

the Huambo bird. But again, the adult male from Mapoto and the Bogotá skin are absolutely indistinguishable from the Peruvian skin, having the head very dark slate-grey, the back dull olive green, the anterior ear-coverts whitish, and the breast strongly olivaceous.

From the above, it will be seen that though there is a certain individual variation, the colour differences are not peculiar to any geographic area. Therefore, we can admit only one form, *P. ophthalmicus*, ranging from Central Peru (Amable Maria, Ropaybamba, La Gloria) through Ecuador to Western Colombia (Cauca Valley) and North-western Venezuela (Cumbre de Valencia).

61. *Tyrannus fumigatus* Lafr. & D'Orb. should be *Myiochanes fumigatus fumigatus* (Lafr. & D'Orb.)

Tyrannus fumigatus Lafresnaye & D'Orbigny, Syn. Av. i. in *Mag. Zool.* 1837, cl. ii. p. 43, (1837.—Yungas in Bolivia).

Contopus ardesiacus (nec Lafresnaye 1844) Sclater & Salvin, *P. Z. S.* 1879, p. 615 (Tilotilo, Yungas, Bolivia); Sclater, *Cat. B. Brit. Mus.* xiv. 1888, p. 237 (part., l, m, Tilotilo, Bolivia).

No 1. Mus. d'Hist. Nat. Paris. Skin, labelled: "D. 261, Bolivia. No. 175. D'Orbigny, 1834. *Tyrannus fumigatus* Nob."—Wing 93; tail $78\frac{1}{2}$; bill 16 mm. Type of species.

No. 2. Mus. v. Berlepsch, "♀" ad. S. Antonio, Yungas, Bolivia, July 5, 1895, G. Garlepp coll., No. 1163	Wing 92; tail $76\frac{1}{2}$; bill 16 mm.
No. 3. Mus. Berlepsch, "♀" ad. S. Antonio, August 7, 1895, No. 1189	Wing 90; tail 80; bill 16 mm.
No. 4. Mus. Berlepsch, "♀" ad. S. Antonio, August 31, 1895, No. 1253	Wing 90; tail 76; bill $15\frac{3}{4}$ mm.
No. 5. Mus. Berlepsch, "♀" ad. Songo, western Yungas, Bolivia, June 30, 1896, No. 2347	Wing 91; tail 78; bill $16\frac{1}{2}$ mm.
No. 6. Mus. d'Hist. Nat. Paris, adult. Tilotilo, Bolivia. Buckley coll., Boucard collection	Wing 92; tail 79; bill $16\frac{1}{2}$ mm.

The type of *Tyrannus fumigatus* Lafr. & D'Orb. which has never been identified, proves, on examination, to be an example of the species universally called *Contopus ardesiacus* (Lafr.). There are four specimens from the same country in the Berlepsch Museum, while the French National Collection possesses an unsexed adult bird obtained at Tilotilo, Bolivia, by the late Clarence Buckley. On comparing the six Bolivian skins with a considerable series from North Peru (Tambillo), Western Ecuador, Colombia (Bogotá) and Western Venezuela (Andes of Mérida), I find several well-marked differences which warrant the recognition of a darker, northern form, *Myiochanes fumigatus ardesiacus* (Lafr.). The Bolivian birds are altogether paler and lighter in coloration: the back is clear sooty grey with an olivaceous tinge, the sooty blackish crown forming a rather well-defined dusky cap; the under parts are lighter olivaceous grey, with the throat and middle of the belly decidedly whitish. These characters are strongly pronounced in the fresh plumage (Nos. 1—5); the Tilotilo bird (No. 6)—in very worn, abraded condition—is scarcely lighter above than Bogotá skins in corresponding stage, but the much paler

under-surface serves to distinguish it at a glance. In the northern race * the back is much darker sooty grey, being little, if anything, lighter than the crown; the whole under surface, from the chin to the anal region, is uniform sooty grey [very nearly as dark as the upper parts], the under tail-coverts only being edged with whitish.

Count Berlepsch † has united *Contopus brachyrhynchus* Cab., ‡ from N.W. Argentine, with *M. f. fumigatus*, as defined above. In fact, when studying the type, forwarded by the authorities of the Berlin Museum, in company with the Count several years ago, I could not perceive any material difference between the Bolivian series and the Tucumán bird. However, it should be noted that the type specimen of *C. brachyrhynchus*, in bleached breeding plumage, is not quite fit for the purpose of comparison. Since that time I have had the opportunity of examining five adults from the mountains of N.W. Argentine, § and they appear to me to represent another recognisable form, characterised by its very pale coloration. The nape, back and sides of the head, instead of being sooty grey, are light smoke-grey tinged with olivaceous, the crown nearly concolour with the mantle; the throat is more whitish; the breast much paler greyish, and the yellowish white area in the middle of the belly far more extended. The wings are apparently somewhat longer (98—101 mm.).

There are, thus, three races to be distinguished :

(a) *Myiochanes fumigatus ardosiacus* (Lafr.) || the darkest, ranging from Central Peru through Western Ecuador to Colombia, Western Venezuela (Mérida) and British Guiana (Roraima).

(b) *Myiochanes fumigatus fumigatus* (Lafr. & D'Orb.), lighter, with whitish admixture on throat and middle of belly, inhabiting the highlands of Bolivia.

(c) *Myiochanes fumigatus brachyrhynchus* (Cab.), the palest, occurring in the high mountains of North-Western Argentine (Tucumán, Jujuy). ¶

The recently described *Myiochanes ardosiacus polioptilus* Todd, ** from the Venezuelan coast-mountains—which I have not seen—appears to be a fourth member of this group, and should be called *M. fumigatus polioptilus* Todd.

62. *Neopipo helenae* McConnell should be *N. cinnamomea helenae* McConnell.

Neopipo helenae McConnell. *Bull. B.O.C.* xxvii. p. 105 (1911.—Ituribisce, Brit. Guiana).

No. 1. Mus. McConnell (♂) ad. Ituribisce, Brit.

Guiana, October 1908, *N. helenae* McCon-

nell. Type Wing 51; tail 38; bill $7\frac{1}{2}$ mm.

This specimen and an adult male from French Guiana in the Tring Museum differ from *N. cinnamomea* of Upper Amazonia by having the lores greyish white

* I have examined specimens from the following localities: 3 Bogotá, 1 Western Colombia, 3 Mérida, 4 Western Ecuador, 1 N.W. Peru (Tambillo), 1 Central Peru (Huánuco), 1 British Guiana (Roraima).

† *Ornis*, xiv. February 1907, p. 478.

‡ *Journ. f. Ornith.* 31, p. 214 (1883.—Tucumán).

§ Two ♂♂ from Tucumán; 1 ♂, ♀♀ from Ledesma, Jujuy.

|| *Tyrannula ardosia* Lafresnaye, *Rev. Zool.* vii. p. 80 (1844.—"Colombie," sc. Bogotá).

¶ See also Lillo, *Apunt. de Hist. Nat.* i. No. 3, 1909, p. 42 (Tucumán); Hartert and Venturi, *Nov. Zool.* xvi. 1909, p. 203 (Tucumán, Jujuy); Dabbene, *Ornith. Argent.* i. 1910, p. 347 (Tucumán).

** *Ann. Carnegie Mus.* viii. No. 2, p. 208 (1912.—Lagunita de Aroa, Est. Lara, North Venezuela),

and the cheeks, ear-coverts and sides of neck dingy olive-grey (instead of deep buff). Furthermore, the interscapular region is darker, dull rufescent brown, with a greyish tinge (instead of bright tawny brown).

I am unable to discover any other constant differences. Though the type has rather light ochreous under parts, passing into buffy whitish (not "greyish white," as said in the original description) on the throat, the Cayenne bird does not differ in this respect from Upper Amazonian examples.

The two races are, however, closely allied, and represent each other geographically, so that their natural relationship seems more correctly expressed by trinomials. I herewith give the synonymy, together with a short résumé of their range and characters.

(a) *Neopipo cinnamomea cinnamomea* (Lawr.).

Pipra (?) *cinnamomea* Lawrence, *Proc. Acad. Nat. Sci. Philad.* 1868. p. 429 (1868.—"Upper Amazon").

Neopipo rubicunda Sclater & Salvin, *P. Z. S. Lond.* 1869. p. 438. tab. 30. fig. 3. (1869.—Chamicuros, Eastern Peru).

Neopipo cinnamomea Sclater & Salvin, *P. Z. S.* 1873. p. 283 (Xeberos, Chamicuros, Eastern Peru); Sclater, *Cat. B. Brit. Mus.* xiv. p. 303 (part. a-c, Chamicuros; d, e, Sarayaçu, East Ecuador); Hellmayr, *Nov. Zool.* xiv. 1907. p. 361 (Humaytha, R. Madeira, Brazil); idem, *l.c.* xvii. 1910 p. 308 (the same).

Hab. Upper Amazonia, ranging from the head-waters of the Rio Napo (Sarayaçu), in Ecuador, south through Eastern Peru (Xeberos, Chamicuros) to the Carabaya district (Yahuarmayo) in South-eastern Peru, and east to the left bank of the Rio Madeira (Humaytha), Western Brazil.

Characters. Upper back (interscapulium) bright tawny brown, without greyish admixture; lores buff; cheeks, malar region and auriculars somewhat deeper buff, along the upper edge of the ear-coverts an extremely narrow streak of olive; sides of the neck olivaceous.

Examined. Three adults (including the type of *N. rubicunda*) from Chamicuros, one from Sarayaçu, East Ecuador, in the British Museum; one ♂ ad. Humaytha, Rio Madeira, in the Tring Museum; and one ♂ ad. from Yahuarmayo, Carabaya, S.E. Peru, H. & C. Watkins' coll., in the Munich Museum.

Obs. The bird from Humaytha agrees in coloration with that from Yahuarmayo, but is decidedly smaller and has a slightly shorter bill.

♂ ad. Yahuarmayo, S.E. Peru Wing 54; tail 39; bill $7\frac{1}{2}$ mm.

♂ ad. Humaytha, W. Brazil Wing 49; tail $35\frac{1}{2}$; bill 7 mm.

(b) *Neopipo cinnamomea helenae* McConnell.

Neopipo helenae McConnell, *Bull. B. O. C.* xxvii. p. 105 (1911.—Ituribisce, British Guiana).

N. cinnamomea (nec Lawrence), Salvin, *Ibis* 1885. p. 301 (Camacusa, Brit. Guiana); Sclater, *Cat. B. Brit. Mus.* xiv. p. 303 (part. f, g, Camacusa); Berlepsch, *Nov. Zool.* xv. 1908, p. 138 (Ipousin, Rio Approuague, French Cayenne).

Hab. British Guiana: Camacusa, Ituribisce; French Guiana: Ipousin, Rio Approuague.

Characters. Upper back (interscapulium) dull rufescent brown, slightly tinged with greyish; lores greyish white; cheeks, malar region and auriculars (with the exception of small, half-concealed buffy spot on the lower portion) as well as sides of neck dingy olive-grey.

Examined. One adult from Ituribisce (type of *N. helenae*), collection of F. V. McConnell; one ♂ ad. from Ipousin, French Guiana, in the Tring Museum.

- ♂ ad. Ituribisce, British Guiana (type
of subspecies) Wing 51; tail 38; bill $7\frac{1}{2}$ mm.
♂ ad. Ipousin, French Guiana Wing $50\frac{1}{2}$; tail 36; bill [damaged] mm.

63. *Conopophaga browni* Bangs = *Grallaricula ferrugineipectus* (Scl.).

Grallaria ferrugineipectus Sclater, *P. Z. S. Lond.* xxv. p. 129 (October 1857.—“in Venezuela, in vicin. urbis Caraccas (Levraud); type in Paris Museum).

Conopophaga browni Bangs, *Proc. Biol. Soc. Wash.* xiii. p. 100 (1899.—Pueblo Viejo and Chirua, Sierra Nevada de Santa Marta, North Colombia).

- No. 1. Muséum d'Hist. Nat. Paris: “Cat. gén.
No. 449, de Caraccas, par M. Levraud, 1856,
No. 137. *G. ferrugineipectus* Scl. type Wing 67; tail 30; tars. 21;
bill $13\frac{1}{2}$ mm.
No. 2. Tring Museum: No. 265, A. Mocquerys
coll., adult (not sexed), Ejido [near Mérida],
Venezuela, March 1894 Wing 64; tail $30\frac{1}{2}$; tars. 23;
bill 14 mm.
No. 3. Collection of E. A. & O. Bangs, No. 6178,
♂ ad., *Conopophaga browni*, Colombia (Chirua),
February 12, 1899 Wing 63; tail 31; tars. 22;
bill $13\frac{1}{2}$ mm.
No. 4. Collection of E. A. & O. Bangs, No. 6180,
♀ ad., *C. browni*, Colombia (Chirua), February
12, 1899 Wing 63; tail 30; tars. 22;
bill 14 mm.

The two specimens from Santa Marta (Nos. 3 and 4) are practically identical with the type in the Paris Museum. The latter has the ochreous frontal band and the sides of the face slightly paler—differences no doubt due to fading, for it has been exposed to the light in the galleries for many years. The Ejido bird, a fresh skin in good condition, agrees in every particular with the Colombian specimens. *C. browni* becomes, therefore, a synonym of *G. ferrugineipectus*.

This scarce species inhabits the mountains of North-western Venezuela (Silla de Caraccas, Ejido) and Northern Colombia (Sierra de Santa Marta), occurring exclusively at high elevations.*

64. *Agyrtria alleni* Elliot = *Chrysuronia oenone josephinae*
(Bourc. & Muls.) ♀ ad.

[*Ornismya oenone* Lesson, *Hist. Nat. Colibris*, Suppl. Ois-Mouch. p. 157. tab. 30 (1831-32.—“la Trinité,” errore †.)]

Trochilus Josephinae Bourcier & Mulsant, *Rev. Zool.* xi. p. 272 (1848.—loc. ign.).

Agyrtria alleni Elliot, *Auk* v. p. 263 (1888.—Yungas, Bolivia).

* The locality “San Esteban, Venezuela” (*i.e.* hot, low country), attached to an example in the British Museum is most certainly incorrect. The species might occur on the higher slopes of the Cumbre de Valencia, although it should be noted that it has not been met with by Mr. S. M. Klages during his recent collecting trip.

† See Hellmayr & Seilern, *Arch. f. Naturg.* 78, Abt. A., Heft 5, Sept. 1912, p. 139.

- No. 1. American Mus. Nat. Hist. No. 30,784. *Agyrtria alleni* Elliot. Type, Bolivia, Yungas. Rusby Collection; Collector's label: "Yungas, Bolivia, S. 18°, 6000 ft., Rusby, 1885, June" Wing 48; tail 27½; bill 18½ mm.
- Nos. 2-5. Mus. H. von Berlepsch. ♀ ♀ ad. Bolivia (Yungas), G. and O. Garlepp coll. Wing 49-51; tail 27-29; bill 18½-19 mm.

Agyrtria alleni, a species not identified by Salvin and Hartert, proves to have been based upon a female of *C. oenone josephinae*, a well-known Bolivian Humming-bird. The type specimen is practically identical with a female from Songo, western Yungas, in the Berlepsch Collection.* They agree in the dull bluish green tint of the forehead and crown, and in the reddish bronze tail, the three outer pairs of rectrices having, in both specimens, a distinct, pale greyish apical spot. Like the Songo example, the type has the throat and malar region spotted with glittering golden-green on a white ground, these spots being absent on the chin and but barely indicated along the median portion of the upper throat; the foreneck is white, with bronze-green (not glittering) apical edges; the remainder of the under parts dull white, washed with metallic green on the flanks; under tail-coverts pale greyish, edged with whitish, upper tail-coverts fiery reddish bronze, much the same as in the Songo bird. The bill, in Nos. 1-5, is quite alike both in shape and colour, the maxilla being black, the mandible pale brownish with dusky tip.

Count Berlepsch, who has seen the type, entirely concurs with my identification. *Agyrtria alleni* is consequently to be placed among the synonyms of *C. o. josephinae*, whose range appears to be restricted to the forests of Bolivia.

65. On the group of *Saucerottia sophiae* (Bourc. & Muls.).

The latest reviewer, Mr. Ridgway,† distinguished four races of this group, calling them: *Saucerottia sophiae sophiae* (Costa Rica and Nicaragua), *S. sophiae saucerottei* (Western Colombia), *S. sophiae warscewiczii* (Northern Colombia), and *S. sophiae braccata* (Andes of Venezuela). The specific names are applied in the same sense as by Dr. Hartert,‡ who, however, separated *S. sophiae*, *S. saucerottei* and *S. warscewiczii* specifically, regarding *S. braccata* as a subspecies of the last-named form. To my mind the arrangement put forward by Ridgway is the most correct expression of the natural affinities of these birds, which agree in structure as well as in general style of coloration, and present only slight (though perfectly constant) differences in the colour of the upper and under tail-coverts.

Trochilus Sophiae Bourcier et Mulsant,§ though originally based upon Bogotá skins, has generally been referred to the Costa Rica form with coppery or purplish bronze rump and mainly steel-blue under tail-coverts. This misapplication of the name is evidently due to the fact that the alleged type, in the Elliot collection (now the property of the American Museum of Natural History), marked "Nicaragua" || belongs to the Central American race. However, on consulting

* No. 2238, Otto Garlepp coll.

† *Bull. U.S. Mus.* No. 50, v., Nov. 1911, pp. 436-7.

‡ Tierreich, *Lief.* 99, 1900, pp. 52-3.

§ *Annal. Sci. Phys. et Nat., d'Agric. etc., Lyon* vi. p. 318 ("1846."—Bogotá; descr. ♂ ♀).

|| See Ridgway, *Bull. U.S. Mus.* No. 50, v, p. 440, note b.

the original description it is easily seen that this example cannot be the true type of *T. sophiae*. Bourcier and Mulsant characterise their species as follows : " Dessus du corps revêtu de plumes soyeuses, d'un vert moins foncé et plus luisant sur la nuque, les couvertures alaires et la moitié antérieure du dos, passant au **vert cuivreux sur le croupion et la couverture caudale**, dont les dernières plumes sont d'un bleu d'acier . . . **Couverture sous-caudale**, formée de plumes d'un **vert bronzé**, ou d'un **gris bronzé**, étroitement bordé de blanc." This entirely disagrees with the Costa Rica form, in which the **uropygium** and **upper tail-coverts** are strongly glossed with **coppery** or **purplish**, while the **lower tail-coverts** are decidedly **steel-blue** with greyish edges. On the other hand, the above terms apply perfectly well to *S. saucerottei*, of Western Colombia, which is also found in Bogotá collections.* This species (of which the Munich Museum possesses a couple from Cali, the type locality) **has the rump and upper tail-coverts bronzy green**, the longest feathers only dull steel bluish with coppery margins, and the **under tail-coverts dusky brown**, edged with whitish.

Moreover, there is in the Paris Museum a nearly adult specimen † from Colombia (id est **Bogotá**), named and presented by Bourcier himself, which corresponds exactly to the description of *T. sophiae* and, besides, agrees in every respect with typical *S. saucerottei* from Cali ! Hence, there seems little doubt that *T. sophiae* is the same as *S. saucerottei*, while the bird found in Costa Rica and Nicaragua ought to be called *S. hoffmanni* (Cab. & Heine).‡ Those who might object that so excellent an expert as Bourcier would not have described the same species under two different names I would remind of the case of *Lafresnaya saül* (Del. & Bourc.). This species was first made known by Delattre and Bourcier § under the name *Trochilus saül*, but in another paper published nearly simultaneously it was redescribed as *T. gayi* by Bourcier and Mulsant !||

Mr. Ridgway (l.c.) accepts *S. sophiae* as the oldest specific title for the group. It appears, however, that the article in the *Revue Zoologique* containing the account of *Trochilus saucerottei* Del. & Bourc.,¶ has a slight priority, as may be inferred from a note in the same periodical (on page 314) concerning the memoir in the *Annales des Sciences phys. et nat. etc. de Lyon*.**

Therefore, the nomenclature of the various forms has to stand as follows :

(a) *Saucerottia saucerottei saucerottei* (Del. & Bourc.).

Trochilus Saucerrottei (err. typogr.) Delattre & Bourcier, *Rev. Zool.* ix. p. 311 (Sept. 1846.—"Caly, Nouvelle Grenade").

Trochilus Sophiae Bourcier & Mulsant, *Ann. Sci. phys. et nat., d'Agric. etc. Lyon* ix. p. 318 (1846.—Bogotá).

Saucerottia sophiae saucerrottei (sic) Ridgway, *Bull. U.S. Mus.* No. 50, v, 1911. p. 436.

Hab. Western parts of Colombia (Cauca, Cali, etc.), also in Bogotá collections.

* Mons. Simon has an absolutely typical Bogotá skin.

† "No. 852, *Amazilia sophiae* (Bourc. & Muls.). Don de M. Bourcier, Colombie."

‡ *Hemithylaca Hoffmanni* Cabanis & Heine, *Mus. Heinan.* iii. p. 38 (March 1860.—Costa Rica).

§ *Trochilus Saül* Delattre & Bourcier, *Rev. Zool.* ix. p. 309 (Sept. 1846.—Quito, Ecuador).

|| *Trochilus Gayi* Bourcier & Mulsant, *Ann. Sci. phys. et nat., d'Agric., etc., Lyon* ix. p. 325 (1846.—loc. ign.)

¶ *Rev. Zool.* ix. p. 311 (Sept. 1846.—Caly, "Nouvelle Grenade").

** "Tel est le titre d'un travail que cet ornithologiste [viz. Bourcier] va insérer dans les *Annales de la Soc. Roy. d'Agriculture* . . ."

(b) *Saucerottia saucerottei hoffmanni* (Cab. & Heine).*Hemithylaca Hoffmanni* Cabanis & Heine, *Mus. Hein.* iii. p. 38 (1860.—Costa Rica).*Saucerottia sophiae* Hartert, *Tierreich, Lief.* 9, 1900, p. 53 (monogr.).*Saucerottia sophiae sophiae* Ridgway, *Bull. U.S. Mus.* No. 50, v, 1911. p. 439 (monogr.).*Hab.* Nicaragua and Costa Rica.(c) *Saucerottia saucerottei warscewiczii* (Cab. & Heine).*Hab.* Northern Colombia (Santa Marta District, Rio Magdalena, Santander, etc.).(d) *Saucerottia saucerottei braccata* (Heine).*Hab.* Andes of Western Venezuela (Mérida).

N.B. *Trochilus caligatus* Gould* is certainly **not** the Central American form, but may be an earlier name for *S. s. warscewiczii*. The description fits the Santa Marta bird exceedingly well. Cfr. "upper tail-coverts and tail bright steel-blue, under tail-coverts the same, fringed with white." The type (if still extant) should be re-examined.

66. *Amazilia forreri* Bouc. = *Amizilis amazilia* (Less.).*Orthorhynchus Amazilia* Lesson, *Voyage de la Coquille, Zool.* i. 2. p. 683. pl. 31. fig. 3 (April 1830—"commune dans les buissons du littoral du Pérou").*Amazilia forreri* Boucard, *The Humming Bird*, iii. p. 7 (March 1893.—"Mazatlan, Mexico." errore !); idem, *Genera of Humming Birds*, 1894, p. 193.

No. 1. *Mus. d'Hist. Nat. Paris*, Coll. Boucard. Adult: "*Amazilia forreri* Boucard, Mazatlan, Mexique, Forrer. *Type of species*."—Wing 59; tail 35; bill $19\frac{1}{2}$ mm.

Mr. Ridgway † states: "I have not seen this species, which seems to be very distinct." In company with Mons. Simon, I have carefully compared the type with a good series of the West Peruvian *A. amazilia*, and have not the slightest hesitation in saying that it is merely a specimen of that species with wrong locality. It agrees in all essential points with examples from the West Coast of Peru in the Paris Museum and in Mons. Simon's collection, and differs only by its slightly more coppery green upper parts and by having the tips to the median rectrices a shade darker, more blackish green. One example from Peru, however, approaches it very closely. The maxilla is wholly black, as in a Lima specimen in Coll. Simon; the coloration of the under parts is exactly the same as in *A. amazilia*—the throat and foreneck being golden green, the middle of the breast and abdomen white, the flanks pale rufous, etc. Contrary to Dr. Hartert's statement, ‡ the type does not differ in size from ordinary Peruvian specimens.

It is well to remember that the type was **bought** by the late Adolphe Boucard in San Francisco from a dealer who told him it had been obtained by Forrer at Mazatlan. But the "make" of the specimen is very different from that of authentic Forrerian skins, and as no collector has ever met with the species about Mazatlan, we may fairly assume that the assigned locality was an error. *A. forreri* is, therefore, to be excluded from the Mexican Ornithology and enters into the synonymy of *Amizilis amazilia* (Less.).

* *P. Z. S. Lond.* xvi. p. 14 (1848.—New Granada).† *Bull. U.S. Mus.*, No. 50, v, Nov. 1911, p. 416.‡ *Tierreich, Lief.* 9, 1900, p. 63.

67. *Amizilis ellioti* (Berl.) replaces *A. verticalis* auct.

Both Dr. Hartert * and Mr. Ridgway † applied the name *Trochilus verticalis* Lichtenstein ‡ to a species with (immaculate) white under tail-coverts found in the western and central states of Mexico (Sonora, Sinaloa, Jalisco, Michoacán, etc.). In Eastern Mexico (states of Vera Cruz, Oaxaca, and Chiapas) occurs the nearly allied *A. cyanocephala cyanocephala* (Less.), chiefly characterised by having the under tail-coverts olive-grey, faintly glossed with bronze and margined with white.

Trochilus verticalis was founded upon specimens obtained by the Prussian travellers Deppe and Schiede in the late twenties of last century. Thanks to the courtesy of Drs. Reichenow and Lorenz, I have been enabled to examine three examples, belonging to the Berlin and Vienna Museums respectively, all marked by Lichtenstein himself as "*Trochilus verticalis*." They were collected by Deppe at Perote, a place situated between **Puebla** and **Jalapa**, in the state of **Vera Cruz**, Eastern Mexico. These skins are unquestionably identical with the bird known as *A. cyanocephala*, having the **sides of the neck metallic green**, and the **under tail-coverts pale brownish olive**, edged with white, and agree in every respect with a series from Jalapa and Oaxaca.

T. verticalis is, therefore, to be relegated to the synonymy of *Amizilis c. cyanocephala*, while the **West Mexican** species has to bear the name *Amizilis ellioti* (Berlepsch).

68. *Coccyzus euleri* Cab.

Coccygus Euleri Cabanis, *Journ. f. Ornith.* 21, p. 72 (1873.—Cantagallo, prov. of Rio de Janeiro, South-eastern Brazil).

Coccyzus euleri Chapman (& Riker), *Auk*, viii, 1891, p. 159 (crit.; Santarem, Lower Amazons; Chapada, Mattogrosso); Stone, *Ibis*, 1899, p. 476-7 (Aunai, § interior of British Guiana).

Coccygus Bairdi (nec Sclater) Pelzeln, *Zur Orn. Bras.* iii, 1869, p. 273 (Paciencia, northern S. Paulo, South Brazil).

Coccygus lindeni Allen, *Bull. Essex Inst.* viii, p. 81 (1876.—Santarem, Lower Amazons).

Coccyzus americanus (nec Linnaeus) Allen, *Bull. Amer. Mus. N.H.* v, 1893, p. 136 (Chapada, Mattogrosso; one ♂, October 28, 1883).

No. 1. Vienna Museum: "♂" ad.,
Paciencia, March 25, 1823.

Natterer coll. No. 1141 (76b) . Wing 127; tail 124; tars. 21; bill 24½ mm.

No. 2. Tring Museum: "♂" ad.,
Pararah, Surinam, August 28,

1905. Chunkoo coll. . . . Wing 131; tail 129; tars. 22½; bill 27 mm.

C. euleri is certainly the rarest among South American Cuckoos. The type was obtained by Euler at Cantagallo, in the province of Rio de Janeiro, and is preserved in the Berlin Museum. Mr. Stone recorded a specimen from the interior of British Guiana that had been forwarded to the Academy of Natural Sciences of Philadelphia. In the British Museum there is a second example from the same country, taken by H. Whitely at Aunai on June 24, 1889. H. H. Smith secured a single male near Chapada, Mattogrosso, S.W. Brazil, on October 28, 1883, which is

* Tierreich, *Lief.* 9, 1900, p. 62.

† *Bull. U.S. Mus.* No. 50, v, Nov. 1911, p. 422.

‡ *Preisverzeichnis Mexik. Vögel*, 1830, p. 1 (Mexico).

§ Misspelt "Aruwai."

in the American Museum of Natural History in New York. This is the specimen referred to by Allen and Chapman. According to the latter author, the type of *C. linden*i, collected by Linden at Santarem, on the mouth of the Tapajóz, and forming part of the Museum of Comparative Zoology at Cambridge (Mass.), belongs also to the same species.* To these are now to be added the two examples given at the head of this article, making a total of seven records.

The specimen of Natterer's (who, as in so many other cases, was the real discoverer of the species) answers well to the original description. *C. euleri* is, in fact, only a diminutive form of the North American *C. americanus* (Linn.), but has no rufous whatever on the wings, and nearly pure white (instead of buff) axillaries and under wing-coverts. The colour of the bill is exactly the same: maxilla black, basal half of maxillary tomium and the mandible orange-yellow, extreme tip of the latter blackish. The upper parts are pale greyish brown, glossed with bronze (like *C. americanus*); the anterior portion of the pileum, lores, and an obsolete stripe above the eye cinereous; auricular region pale brown, darkening anteriorly; wing-coverts pale bronze-brown, like the back; remiges dusky, outer webs light brown, with bronzy sheen; three outer pairs of rectrices black, with long white tips, the two succeeding ones light bronze-brown, passing into blackish terminally and ending in a narrow white margin, the median pair wholly bronze-brown; under surface white, foreneck and sides of breast faintly washed with greyish; inner web of quills broadly edged with pale buff at basal portion.

The Surinam bird is rather larger, with longer bill, and the buff quill-lining is less conspicuous. These trifling variations are most probably individual.

C. euleri, notwithstanding its rarity in collections, appears to be rather widely distributed in South America, ranging from the Guianas to Southern Brazil (São Paulo). Nothing is known about its life-history, but it is doubtless a resident and not a migrant from some northern country.

69. *Geococcyx velox* (A. Wagner) replaces *G. affinis* Hartl.

Cuculus velox A. Wagner, *Münchener Gelehrte Anzeigen*, iii. p. 95 (July 1836.—Mexico; Karwinski coll.).

Geococcyx affinis Hartlaub, *Rev. Zool.* vii. p. 215 (1844.—Guatemala).

No. 1. Zoological Museum, Munich: ad.,

Mexico—Karwinski coll. Type of

Cuculus velox A. Wagner . . . Wing 142; tail 280; bill 40 mm.

No. 2. Mus. H. v. Berlepsch: ad., Guate-

mala, Rockstroh coll. 1891, No.

28,889 Wing 137; tail [incomplete]; bill 35 mm.

Cuculus velox was described by Dr. Andreas Wagner, then Curator of the Zoological Collections at Munich, from an example obtained by Karwinski somewhere near the city of Mexico (exact locality not stated). Shelley † put it down as a synonym of *G. "mexicanus"* = *G. californianus* (Less.), but examination of the type specimen proves this view to be erroneous. The type, an adult bird in rather worn

* Dr. Allen says that the "strongly cinereous colour of the lower parts" is a conspicuous feature in *C. linden*i. This does not well agree with the specimens examined by me, in which the under surface is nearly pure white.

† *Cat. Birds Brit. Mus.* xix. 1891. p. 419.

plumage, agrees in all essential particulars with *G. affinis*, of which Count Berlepsch most obligingly sent me a skin collected by Rockstroh in Guatemala. The under parts are uniform buff, paling into whitish on chin and upper throat; **the lower tail-coverts blackish brown with lighter brown tips** (not buff as in *G. californianus*) ; **the sides of the foreneck and chest only** are marked with broad, black shaft-stripes. Above, the crown and nape are black, with white apical spots ; **the back**, instead of being pale bronze greenish, as in *G. californianus*, is **bright rufescent-brown** ; also the upper wing-coverts and inner secondaries (tertials) are metallic brown with coppery reflections, not greenish bronze.

The naked space behind the eye, supposed to be lacking in the type specimen, is developed to the same degree as in other examples, but the taxidermist (who probably took it for a deficiency) had very cleverly covered it with small feathers—which, however, can be easily removed.

There is, of course, the possibility that larger series may show the Guatemalan birds to be subspecifically separable from the typical Mexican form. The point I wish to emphasize is that *Cuculus velox* belongs to the group of *Geococcyx affinis*, and has no relation whatever to *G. californianus* (Less.).

70. *Ramphastos citreopygus* Gould is an artefact !

Ramphastos citreopygus Gould, *Monogr. Ramph.* (1st ed.) pl. iv (1834.—“believed . . . from Peru” ; Coll. Swainson).

No. 1. University Museum, Cambridge (England), labelled : “E. Mus. Acad. Cantabrigiae—Swainson Collection, *Type of R. citreopygus* Gould, *Monogr.* ed. 1.” Wing 215 ; tail 136 ; bill 156 mm.

R. citreopygus has been completely lost sight of ever since it was described by Gould in 1834, being not even mentioned either in the second edition of Gould’s Monograph or in the *Catalogue of Birds*. The type specimen, kindly forwarded to me for inspection by Dr. Gadow, turns out to be an artefact: the body is taken from *R. vitellinus* Licht., to which is very cleverly attached the head of *R. monilis* P. L. S. Müll. (= *erythrorhynchus* Gm.). It is only fair to state that Dr. Gadow had already arrived at the same conclusion.

The bill of the substituted head-portion agrees in colour and shape with *R. vitellinus*, of which a large series from the Guianas and Trinidad has been examined, while the body does not present any difference from the well-known *R. monilis*.

Consequently *R. citreopygus* is to be eliminated from the list of existing species.

71. *Aulacorhynchus** *wagleri* (Sturm)—a nomenclatorial Note.

In 1835 J. Gould described and figured a Mexican species of Toucan from a single example in the Munich Museum under the name *Pteroglossus pavoninus*. † The same specimen was made the type of a new species, *Pteroglossus wagleri* ‡ by Sturm, six years afterwards. The purpose of this note is to show that the correct specific name of the species in question is that given by Sturm.

* This term was generally supplanted by the later *Aulacorhamphus* Gray on the insufficient ground of having been previously employed in botany.

† *Monogr. Ramph.*, Part iii, 1835.

‡ *Monogr. Rhamphastiden*, 2. Heft, 1841, tab. [6].

The first author to use the adjective *pavoninus* in combination with *Pteroglossus* was apparently Wagler;* but his excellent description—taken from a single bird from Valle Real, Mexico, in the Berlin Museum—leaves no doubt as to its being referable to *Aulacorhynchus prasinus* auct. In fact, Gould, four years later, founded his *Pteroglossus prasinus* (Lichtenstein MS.)† on the very same specimen in the Berlin Collection!

However, in spite of its undoubted priority, *pavoninus* (1829) cannot replace *prasinus* (1833), for Wagler evidently had no intention of creating a new name of his own, but merely employed Gmelin's old term.‡

Ramphastos pavoninus Gmelin § is described as "*R. viridis, pennis rubris et pavoninis hinc inde interspersis*," and refers, no doubt, to some artefact. Consequently, this name should be altogether disregarded. The nomenclature of the two green Mexican Toucans stands, therefore, as follows:

(a) *Aulacorhynchus prasinus prasinus* (Gould).

Pteroglossus pavoninus (nec Gmelin) Wagler, *Isis*, 1829, p. 507 (Mexico, Valle Real: specimen in Museo Berolin. decembri occisum).

Pteroglossus prasinus (ex Lichtenstein MS.) Gould, *Monogr. Ramph.* (1st edit.), part i, plate (1833.—spec. unicum in Mus. Berolin.).

(b) *Aulacorhynchus prasinus wagleri* (Sturm).

Pteroglossus pavoninus (nec Wagler) Gould, *Monogr. Ramph.* (1st edit.), part iii, plate (1835.—specimen in Mus. Monacense); idem, *P.Z.S.* 1835, p. 158 (Mus. Munich).

Pteroglossus wagleri Sturm, *Monogr. Rhamph.* Heft 2, tab. [6] (1841.—Mexico: Mus Monac.).

Aulacorhamphus wagleri Selater, *P.Z.S.* 1859, p. 388 (Xacatepec, Oaxaca, S.W. Mexico); idem, *Cat. B. Brit. Mus.* xix. 1891, p. 157.

Aulacorhamphus pavoninus (errore) Salvin & Godman, *Ibis*, 1889, p. 240 (Amula, Sierra Madre del Sul, Guerrero, Western Mexico).

This western form differs from *A. p. prasinus* in its dull yellowish frontal band and oily-green crown; by lacking the narrow, pale bluish green superciliary streak; and by having the black patch at the base of the culmen confluent with the black stripe along the maxillary tomium. Besides the type, the Zoological Museum at Munich possesses a second adult specimen, both without any further indication than "Mexico." The wing measures 128–129, the tail 125–127, the bill 75–77½ mm.

A. p. wagleri appears to be very rare in collections. The late A. Boucard obtained an example at Xacatepec in Oaxaca, Mrs. H. H. Smith another in the Sierra Madre del Sul, state of Guerrero. Additional specimens doubtless exist in American museums.

The following species are discussed in Part II. of this paper:

<i>T. coraya</i> and its races	p. 227
<i>T. ridgwayi</i> Berl.	
<i>T. coraya berlepschi</i> Brab. & Chubb	} = <i>Thryothorus coraya griseigula</i> (Lawr.) . p. 229
<i>T. oyapocensis ituribisciensis</i> Brab. & Chubb	

* *Isis*, 1829, p. 507.

† *Monogr. Ramph.* (1st ed.), Part i. 1833.

‡ See Wagler's remark: "*Ramphastos pavoninus* auctor."

§ *Syst. Nat.* 1, i. p. 353 (1788.—ex "Le Toucan verd du Mexique," Brisson, *Orn.* iv. p. 423: ex "Xochitenacatl," Fernandez, *Hist. nov. Hisp.* p. 51, tab. clxxxvii.).

- Cyclarhis atrirostris* Scl.
Hylophilus brunneus Allen
Chlorospingus canipileus Chapm.
Chlorospingus flaviventris Scl.
Emberiza obscura Lafr. & D'Orb.
Poospiza cabanisi Bonap.
Emberizoides megarhyncha Bonap.
Empidochanes poecilocercus Pelz.
Cnipolegus pusillus Scl. & Salv.
Ochthoeca keaysi Chapm.
Ochthoeca olivacea Allen
Ochthoeca jesupi Allen
Pogonotriccus alleni Oberholser
Tyrannus fumigatus Lafr. & D'Orb.
Neopipo helenae McConnell
Conopophaga browni Bangs
Agrytria alleni Elliot
Trochilus sophiae Bourc. & Muls.
Amazilia forreri Bouc.
Amizilis ellioti (Berl.) p. 252
Coccyzus eulerei Cab. p. 252
Geococcyx affinis Hartl.
Ramphastos citreopygus Gould
Aulacorhynchus wagleri (Sturm) p. 254
- = *C. nigrirostris* Lafr., juv. p. 234
 = *Myrmotherula schisticolor sanctae-martae*
 Allen, ♀ p. 235
 = *Basileuterus griseiceps* Scl. & Salv. p. 235
 = *Tachyphonus luctuosus* Lafr. & D'Orb. ♀ p. 236
 = *Catamenia obscura* (Lafr. & D'Orb.) p. 237
 = *Poospiza assimilis* Cab. p. 238
 = *Embernagra platensis* (Gm.), juv. p. 238
 } = *Knipolegus poecilocercus* (Pelz.) p. 239
 = *Caenotriccus simplex* Berl. p. 241
 = *Tyranniscus improbus* Scl. & Salv. p. 242
 = *Ochthoeca diadema jesupi* Allen p. 242
 = *Pogonotriccus ophthalmicus* Tacz. p. 243
 = *Myiochanes fumigatus fumigatus* (Lafr.
 & D'Orb.) p. 245
 = *Neopipo cinnamomea helenae* McConnell. p. 246
 = *Grallaricula ferrugineipectus* (Scl.) p. 248
 = *Chrysuronion oenone josephinae* (Bourc. &
 Muls.), ♀ p. 248
 = *Saucerottia saucerottiei* (Del. & Bourc.) p. 249
 = *Amizilis amazilia* (Less.) p. 251
 = *Geococcyx velox* (Wagner) p. 253
 = an artefact p. 254

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