

4. *Herpetotheres cachinnans queribundus* Bangs and Penard. Type locality, Pernambuco, Brazil. Size large (wing, 276–292 mm.; tail, 213–230); coloration pale, apparently even paler than in *excubitor*. Southern South America, east of the Andes, from southern Brazil to northern Argentina.

MEASUREMENTS.—Wing: 275 (worn), 276, 277, 281, 284, 287, 288, 288, 290, 291, 292, 292; average of twelve, 285.1 mm.; average of eleven, 286.0 mm.

Tail: 198 (worn), 201 (worn), 204 (worn), 207 (worn), 210 (worn), 213, 214, 214, 215, 216, 221, 230; average of twelve, 211.7 mm.; average of seven, 217.1 mm.

The geographic differences shown by *Herpetotheres* are correlated with climatic conditions. The larger races inhabit, in general, areas of lower temperatures than the smaller races. The paler races are restricted to the more arid parts of the range. The similarity between the forms at the geographic extremes of the genus, *excubitor* and *queribundus*, is in contradiction to Jordan's Law.

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TWO NEW PERUVIAN HUMMINGBIRDS OF THE GENUS *COELIGENA*

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RECENTLY, in looking over certain Peruvian hummingbirds, I discovered that there was a notable distinction between examples of *Coeligena torquata insectivora* of central Perú and specimens from the northern part of that country heretofore referred to the same subspecies. The distinction is so marked that specific separation at first seemed possible, although fuller study dispelled this supposition. The new form may be known as follows.

***Coeligena torquata margaretae*, new subspecies**

TYPE from La Lejia, north of Chachapoyas, Perú; altitude about 9000 feet. No. 234,391, American Museum of Natural History. Adult male collected March 13, 1925, by Harry Watkins; original No. 8992.

DIAGNOSIS: Male differs from the same sex of the other forms of the species by having two spots of metallic color on the top of the head, separated by a black line; the anterior spot smaller and more bluish, the posterior one larger and more greenish. Throat a little lighter and more broadly green than in *C. t. torquata* of Colombia and eastern Ecuador but not so broadly (on the malar region) as in *C. t. fulgidigula* of western Ecuador. Mantle more blackish than in *fulgidigula*, about as in *torquata*.

RANGE: KNOWN only from the Central Andes of northern Perú, near Chachapoyas, and possibly south to the neighborhood of Taya-bamba.

DESCRIPTION OF TYPE: Top and sides of the head largely velvety black with a faintly greenish gloss in certain lights; a small patch of glittering feathers in the center of the forehead varying from Ethyl Green¹ to Phenyl Blue according to the position of the light; separated from the frontal patch by a black line; in the center of the crown and anterior occiput a second, larger patch of glittering feathers, Emerald Green to Skobeloff Green, according to the position of the light; behind the eye a small white lunule; nape and mantle black (with faint greenish lights in certain positions; lower back and upper tail-coverts shining Dark Yellowish Green. Chin and anterior throat moderately glittering Wall Green, the feathers with concealed black subterminal areas and white bases; lower throat and chest occupied by a large triangular area of pure white extending laterally onto the sides of the neck; lower breast, sides, and belly black, with a dark green gloss that becomes pronounced on the flanks; under tail-coverts lighter green centrally, margined exteriorly toward the base with whitish; thighs white. Remiges purplish brown; with a narrow outer margin of the outermost primary brownish; upper wing-coverts shining Dark Yellowish Green. Tail forked; median rectrices dark green; remaining pairs white with green tips, narrowest on the submedian pair and broadest on the external pair, reaching farther basad on the outer margin than on the inner of these various feathers, most pronouncedly on the outermost. Bill (in dried skin) black; feet

¹ Names of colors are capitalized when direct comparison has been made with Ridgway's 'Color standards and color nomenclature.'

yellow; claws blackish. Wing, 80 mm.; tail, 47; exposed culmen, 34; culmen from base, 39; tarsus, 5.

REMARKS: Female not clearly distinguishable from the same sex of *torquata* and *fulgidigula*. The bill in the single topotypical female is as long as in the longest-billed male (exposed culmen 36 mm.) which is longer than in any specimen I have measured of *torquata* (34 mm.) or *fulgidigula* (35 mm.) and still longer than in *insectivora* (31 mm.), but a series of females would rather certainly show an overlap with these other forms as does the series of males (33–36 mm.).

It is very curious that this excellently marked north-Peruvian form has not previously received a name since its most striking character was noted many years ago. Tschudi's original description of his *Tr[ochilus] insectivorus* (Arch. Naturg., 10, pt. 1: 298, May, 1844—Perú [= between Huari and Chagacancha, Junín]) was based on a female or a young male and hence was of little diagnostic value, but Elliot (Ibis, 1876: 5) described the adult male plumage from a specimen from Chilpes, Junín. In spite of this account, Taczanowski (Orn. Pérou, 1: 389, 1884) in his discussion of *insectivora*, cited the reference to Elliot but described the bird I have named *margaritae*, presumably from a specimen collected at Huambo by Stolzmann, although he had earlier (cf. P. Z. S. London, 1874: 543) seen examples of the Junín bird from Pumamarca and Chilpes. Salvin (Cat. Birds Brit. Mus., 16: 128–129, 1892) also described the male of the more northern form. Berlepsch and Stolzmann (P. Z. S. London, 1902: 23) noted part of the differences between Huambo and Junín specimens but referred both to *insectivora*. Simon (Novit. Zool., 9: 180, 1902) discussed a male from Compan which had the frontal spot of *margaritae*, but he thought that it was a character of the fully adult plumage of *insectivora*.

However, I have four males from the Junín region, including the specimen described by Elliot, and three are fully adult and quite distinct from *margaritae*. One of them has a single blue feather on the forehead; the others have no trace of the marking that is so prominent in *margaritae*. Furthermore, they are otherwise dissimilar. The green of the throat is as broadly expanded as in *fulgidigula*, the lower under parts are green rather than black, the mantle likewise is green with a black shading apparent only in certain lights instead of the reverse, the coronal patch averages lighter green than in *margaritae*, and the bill is shorter as noted above. There is no question that two forms are involved.

The records from Huambo and Compan undoubtedly belong to *margaritae*, as do those from Ray-Urmana, "Sorritos" [= Sorritor],

and Uchco. A female from Utcubamba, kindly lent by Mr. R. M. deSchauensee of the Academy of Natural Sciences of Philadelphia, is unassignable by itself, but the proximity of the locality to Compan assures its reference to *margaretae*.

I have a young male from Chaupe, Perú, north of the Marañón, which is similarly unidentifiable without adult males from the same locality, but the proximity of the place to Loja, Ecuador, whence I have an adult male of *C. t. torquata*, suggests the assignment of the Chaupe bird to the typical form.

This Loja bird has a few frontal feathers finely tipped with blue and the coronal feathers, although their broad tips are violaceous as in normal *torquata*, have a suggestion of greenish blue subterminally. Both features indicate intermediacy between *torquata* and *margaretae*. Occasional other specimens of *torquata* and *fulgidigula* have a bright feather or two on the front, but nothing like the pronounced patch shown by *margaretae*.

I believe that *inca* should be united specifically with the *torquata* group. The most striking character is the rufescent instead of white pectoral area, but the feathers are rufous only at their tips beneath which the white of the *torquata* group is still present. The general plumage is more clearly green and more glittering than in the other forms, but *insectivora* is intermediate in that respect. It also has a frontal spot but lacks the coronal one, in which respect *margaretae* is intermediate, having both these spots.

In examining the available series of *inca* I discovered certain differences between Peruvian and Bolivian examples which I believe justify the recognition of two rufous-breasted forms instead of one. Additional material, kindly lent by Mr. R. M. deSchauensee of the Academy of Natural Sciences of Philadelphia, confirms the distinction. Since the type locality of *inca* is in northern Bolivia (Coroico), it is the Peruvian population that must be named. It may be known as follows.

***Coeligena torquata omissa*, new subspecies**

TYPE: from Huaisampillo ["Huasampilla"], southeastern Perú; altitude 9000 feet. No. 37,550, American Museum of Natural History. Adult male collected in April, 1872, by Henry Whately.

DIAGNOSIS: Nearest to *C. t. inca* of northern Bolivia, but differs in the male sex by more pronounced green on the throat, a more evident green tinge (in certain lights) on the sides and top of the head, a somewhat bluer (less greenish) frontal patch, a very slightly lighter average hue of rufous on the breast, and somewhat darker green back and

lower under parts. Females not certainly distinct from those of *inca*, but with the average hue of rufescence on the breast a little lighter.

RANGE: Southeastern Perú, in the Urubamba Valley and the Marcapata District.

DESCRIPTION OF TYPE: Top of head deep black, with a noticeable green gloss in certain lights; center of forehead with a glittering patch of color varying from Vivid Green to Oxide Blue (with traces of Dark Violet in certain lights); back shining green, near Cossack Green, passing into a lighter and somewhat more golden hue on the upper tail-coverts. Sides of head like the crown, with a similar greenish gloss visible in certain lights but with a strongly green area on the sides of the neck, merging into the green of the mantle; chin and throat black with pronounced dark green centers on the feathers; upper breast and sides crossed by a broad band of Sanford's Brown (the concealed subterminal portions of the feathers white); rest of under parts of body dark glittering green with strong bluish reflections in certain lights; under tail-coverts dark green without pronounced glitter; thighs white. Remiges Olive-Brown, with outer margin of outermost primary paler; upper and under wing-coverts like the back. Median rectrices near Krönberg's Green with a golden tinge most evident apically; remaining pairs white with broad green tips, narrowly extending basad along the inner margins and more broadly so on the outer margins of the outermost pair. Bill (in dried skin) blackish; feet yellowish, with claws dusky brown. Wing, 79 mm.; tail, 48.5; (bill broken at tip); tarsus, 5.

REMARKS: Adult females have the throat rufescent like the breast and the top of the head green like the back, with the glittering frontal patch sometimes slightly suggested. The pattern of the tail is different from that of the males. On the outermost rectrices, the outer margin is blackish well basad, broadening gradually to reach the shaft near the tip but usually not rounding the tip to the inner web; on the next pair, this stripe is narrower and shorter but the terminal margin of the inner web may be dusky; on the submedian pair, the outer border of the outer web is again heavier and greenish, the tip of the web is broadly dull green, and most of the inner web is similarly greenish well basad; the third pair from the outside is the most variable and sometimes is like the subexternal, sometimes like the submedian feathers. This difference in the tails of the two sexes appears to be more pronounced in *inca* and *omissa* than in the more northern forms of the species, but some examples of the latter show a definite amount of the same condition.

The green markings on the throat of *omissa* and the greenish sheen

obscurely seen on the crown I believe are to be considered as definite trends in the direction of *insectivora* whose green belly and back represent an intermediate condition between *margaretae* and *omissa*. The position of the frontal patch is the same in *margaretae* and *omissa* (and *inca*), just as the placement of the coronal patch is the same in *margaretae* and *insectivora*. The rufous pectoral area of *omissa* and *inca* is the only notable character distinguishing these two forms from the *torquata* group, and since the breast of these forms is still white back of the rufous tips, the character seems hardly of specific value. I have no hesitation, therefore, in broadening the concept of the *torquata* group to include these two southern forms.

In addition to the localities for the material at hand, records of *margaretae* are from Huambo, Uchco, Ray-urmana, Sorritor ["Sorritos"], and Compan.

Records of *insectivora* are from Maraynioc, Puyas-yacu ["Tuyas-yacu"], Pumamarca, and between Huari and Chagacancha.

Records of *omissa* are from Cuzco and Torontoy.

SPECIMENS EXAMINED

C. t. conradii.—

VENEZUELA:

(Mérida, Culata, Nevados, Conejos, Montañas Sierra, and "Venezuela"), 21 ♂, 14 ♀, 3 (?).

C. t. torquata.—

COLOMBIA:

(El Roble, El Pinón, Santa Elena, Subia, El Eden, La Florida, Cerro Munchique, Cocal, west of Popayán, Medellín, above Salento, and "Bogotá"), 10 ♂, 16 ♀.

ECUADOR:

(Ambato, above Baeza, upper Sumaco, Zúñac, Papallacta, Cuyuja, Loja, and "Ecuador"), 13 ♂, 5 ♀.

PERÚ:

Chaupe, 1 ♂.

C. t. fulgidigula.—

ECUADOR:

(Gualea, Guamino, Lloa, Pichincha, Pallatanga, near Mollituro, Quito, and "Ecuador"), 20 ♂, 11 ♀.

C. t. margaretae.—

PERÚ:

La Lejia, 6 ♂ (incl. type), 1 ♀;

Utcubamba, 1 ♀¹.

¹ Specimens in Academy of Natural Sciences, Philadelphia.

C. t. insectivora.—

PERÚ:

- Chilpes, 2 ♂;
 Culumachay, 1 ♂;
 Tambo de Aza, 1 ♂.

C. t. omissa.—

PERÚ:

- Huaisampillo, 3 ♂ (incl. type), 1 ♀;
 Limbani, 1 ♂, 1 ♀;
 below Limbani, 2 ♂;
 Oconeque, 3 ♂¹, 3 ♀¹, 1 ♀;
 Urubamba Cañon, 1 ♂;
 Santa Rita, 2 ♂;
 San Miguel, 1 ♂.

C. t. inca.—

BOLIVIA:

- Cillutincara, 2 ♂, 1 ♀;
 Nequejahuiria, 2 ♂;
 Chaco, Yungas, 4 ♂, 1 (?);
 Incachaca, 2 ♀¹, 1 (?).

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PROBABILITY IN SUBSPECIFIC IDENTIFICATION OF
 SINGLE SPECIMENS

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INTRODUCTION

POPULATIONS, represented in museum collections by series of specimens, are the proper units in the study of geographical variation. This study, with some of its formal presentations—the naming of subspecies, the allocation of specimens, and the outlining of ranges—deals with the average characters of populations. But occasionally an individual specimen, because of its characters and its geographical origin, demands special consideration. Sometimes it is the only specimen from a wide area. In such a case there is little to do but assess its characters, and identify it subspecifically accordingly. The assumption is made that its characters are normal or average. But sometimes, from an area well represented in the collection, there comes a specimen that in appearance accords better with the average