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STUDIES OF PERUVIAN BIRDS. XV¹

NOTES ON THE GENUS *XIPHORHYNCHUS*

BY JOHN T. ZIMMER

Dr. C. E. Hellmayr has again generously supplied me with detailed notes about certain specimens not immediately accessible, and Dr. Percy R. Lowe has been equally kind regarding certain skins in the British Museum. I am further indebted to the authorities of the Carnegie Museum, Pittsburgh; Field Museum of Natural History, Chicago; and the U. S. National Museum, Washington, for the loan of certain specimens which have aided in the following studies.

Names of colors are capitalized when direct comparison has been made with Ridgway's 'Color Standards and Color Nomenclature.'

***Xiphorhynchus guttatus guttatoides* (Lafresnaye)**

Nasica guttatoides LAFRESNAYE, 1850, Rev. Mag. Zool., (2) II, p. 387—"Lorette" (=early Department of Loreto, Perú, near Pebas) and "Colombie" (=Bogotá region); the type I believe to be the Bogotá skin from Lafresnaye's collection, now in Mus. Comp. Zoöl., Cambridge.

Dendrornis rostripallens DES MURS in CASTELNAU, 1856 (June), 'Expéd. Amér. Sud.,' pt. 7, I (3), livr. 17, Oiseaux, p. 45, Pl. XII, fig. 2—Pebas; cotypes in Paris Mus.

I have at hand an interesting series of two hundred and forty-six examples of *guttatoides* from a wide variety of localities in its extensive range and am unable to find any positive characters to warrant the recognition of any additional subspecies. The form as it stands is highly variable, and individual specimens may be selected from most of the localities which show differences of greater or less degree, but they may be matched by skins from other places and the series as a whole remains indivisible.

There is some tendency toward the pattern of *polystictus*² in the birds from the lower Rio Negro, Brazil, one or two of which come very close to that form in this respect, but the bill is consistently paler.

¹Earlier papers in the series comprise American Museum Novitates Nos. 500, 509, 523, 524, 538, 545, 558, 584, 646, 647, 668, 703, 728, and 753.

²It appears necessary to substitute Salvin and Godman's earlier name for the later *sororius* of Berlepsch and Hartert. I have before me one of Whitely's skins from Bartica Grove and find such close approximation to a series of "*sororius*" from nearby parts of British Guiana and elsewhere that segregation is unwarranted. The pattern of *polystictus*, its whitish throat, its measurements, and the shape and color of its bill may be found in skins from other localities, though not all in single specimens.

Similarly there is a little approach on the upper Orinoco, but the specimens from the neighborhood of Mt. Duida are consistently true *guttatoides*.

Among the specimens from the south bank of the Amazon, I am surprised to discover one male *guttatoides* from Borba and twelve males, three females, and one bird of undetermined sex from Villa Bella Imperatríz, all from within the ostensible range of *eytoni*. Furthermore, there are a male and a female of *eytoni* from Faro, within the apparent range of *polystictus*. Nevertheless, some skins of *eytoni* and *guttatoides* are exceedingly similar in all but the color of the bill, and the latter character is not greatly distinctive in *eytoni* and *polystictus*. All three forms are so similar in general respects that it is impossible to find any definite characters that will separate *eytoni* from the other two which virtually intergrade. Fortunately, the data on the skins before me (with the exception of the Borba male) show that the examples of *eytoni* were taken in slightly different neighborhoods from those where *guttatoides* and *sororius* were obtained. At Villa Bella Imperatríz, all the skins of *eytoni* are from several collecting stations situated in the lowlands of the delta of the Rio Andirá, Rio Ramos, and Rio Limão. Those of *guttatoides*, on the other hand, are from the Serra de Parintins, on slightly higher and drier ground a little to the eastward.

Similarly, the specimens of *eytoni* from Faro are labeled simply "Faro," presumably from near the town of that name, which is at the edge of extensive deltal lowlands forming a virtual continuation of those near Villa Bella Imperatríz. The skins of *sororius*, however, are from points higher up the Rio Jamundá, so far as can be determined. There are no distinctive data on the labels of the Borba skins except that the specimen of *guttatoides* was taken on a different date from the examples of *eytoni*, probably indicating a different local area. Presumably, therefore, *eytoni* is an inhabitant of the low, inundated forest, while *guttatoides* and *polystictus* favor drier woods, though Dr. E. Snethlage (1913, Jour. für Orn., LXI, pp. 481, 489, 495) found *sororius* only in the drier woods, but *eytoni* in both the inundated and dry forest (not noted as in the same region as *sororius*). Possibly a seasonal movement may bring them together in the non-breeding season. In any case, if *eytoni* is to be maintained as a conspecies of *guttatoides* and *polystictus*, as I believe it must, its distributional lines must be drawn with the ecological aspect in view. With a single exception, there is still no overlapping of ranges when this is done, and hence no distributional conflict. The exception is a male from the upper Rio Roosevelt, "6th March Rapids,"

which is somewhat intermediate between *guttatoides* and *eytoni*. In general pattern and coloration it is indistinguishable from a female of undoubted *guttatoides* collected at Barão Melgaço, Rio Gy-Paraná, only a few miles away in apparently similar terrain, but the maxilla is blackish. The dorsal streaking is narrow, as in many other *guttatoides*, at the opposite extreme of the pattern of *eytoni* and unapproached by any examples of that form. Except for the blackish maxilla, the Rio Roosevelt bird is, therefore, like *guttatoides* and may represent a casual variation though I can not match it in the extensive series of that form from elsewhere. More skins from the upper Rio Roosevelt are needed to establish the status of this bird.

A good series of *eytoni* from the country reaching from western Maranhão to Borba shows a rather regular progression of increase in rusty tones of coloration. Hellmayr (1907, Novit. Zool., XIV, p. 366; 1910, *op. cit.*, XVII, p. 324) has already pointed out the fact that Borba birds are more suffused with rusty than most Pará skins but he records the observation of a number of Pará birds that agreed with Borba examples. These I have not seen. I have, however, one Borba bird almost as lacking in rusty tone as the Tocantins and Maranhão examples, all of which now at hand agree in lacking this coloration. Most of the Tapajoz examples have more rusty color than the Tocantins birds, but some are inseparable, and the series from the Xingú shows a still greater tendency toward typical *eytoni*. Where a definite line could be drawn to separate a rusty-toned form from *eytoni* is difficult to say, and the form is best left undivided. A slight approach toward *guttatoides* is shown by a male of *eytoni* from Borba, which has a somewhat buffy line along part of the culmen. On the other hand, the bill in *guttatoides* varies in the amount of dusky shading at the base. Sometimes the entire bill is very whitish, without much definite shading. Usually at least the region of the nostrils is dusky and often a rather more extensive area on the maxilla, but if the entire maxilla is dull grayish or brownish (it is never black as in *eytoni*) the mandible is of the same shade. As a rule, also, the bill of *eytoni* is more slender with more regular curvature of the culmen from base to tip, and with the tip less decidedly decurved than in *guttatoides*, but the variations in the latter form show every degree of intermediacy. The top of the head in *eytoni* is blacker and the lores more distinctly blackish as a rule; the streaks on the upper mantle are always broad at the base and usually distinctly acute at the tips, but there is perfect intermediacy in some skins of *guttatoides*. The throat is usually whiter, at least in typical *eytoni* and the dark outlines of the dorsal and

ventral stripes frequently sharper and blacker, but there are too many specimens of both forms so nearly alike that no reliance may be placed in these characters. The color of the bill is distinctive in young birds as well as in adults and remains the best character for the separation of the two forms.

X. g. guttatoides has been recorded in Perú from Monterico, La Merced, Yahuar Mayo, Pebas, Iquitos, Elvira, Yurimaguas, Nauta, Samiría, Cavallo-Cocha, and "Loreto," though if the last-named locality is based on the "Lorette" from which Lafresnaye recorded ten specimens of his *guttatoides*, it is equivalent to Pebas. Other localities are given in the subjoined list of specimens.

SPECIMENS EXAMINED

X. g. guttatus.—BRAZIL: "Bahia," 2; Cajazeiras, 6 ♂, 1 (?); Espirito Santo, Lago Juparaná, 2 ♂, 1 ♀.

X. g. d'orbignyianus.—BOLIVIA: Mission San Antonio, 3 ♂, 7 ♀; mouth of Río San Antonio, 2 ♂ (incl. type of "*rimarum*" Cherrie), 1 ♀; Todos Santos, 2 ♂, 2 ♀. BRAZIL: Chapada, 1 ♂, 1 ♀ (?); Descalvados, 1 ♂; Tapirapoan, 1 ♂; Urucum, 1 ♀; Belvedere de Urucum, 2 ♀.

X. g. eytoni.—BRAZIL: Maranhão, São Luiz, 1 ♂, 1 ♀, 1 (?); As Mangueiras, 3 ♂; Tabocas, 1 ♀; Rio Tocantins, Mazagao, 1 ♂; Arumatheua, 1 ♂; Mocajuba, 2 ♂, 2 ♀; Baião, Pedral, 1 ♂, 1 ♀; Rio Xingú, Tapará, 5 ♂, 1 ♀; Majary Recreio, 1 ♀; Porto de Moz, 2 ♂; Forte Ambé, 1 ♀; Rio Curua, Ilha Malocca, 1 ♂; Rio Tapajoz, Igarapé Brabo, 6 ♂, 4 ♀; Caxiricatuba, 2 ♂, 1 ♀; Piquiatuba, 1 ♀; Aramanay, 2 ♂, 1 ♀; Tauarý, 2 ♂, 1 ♀; Rio Amazonas, Villa Bella Imperatriz (Lago Andirá), 2 ♂; (mouth of Río Andirá), 1 ♂, 1 ♀; (Serra de Parintins), 1 (?); Río Madeira, Borba, 5 ♂, 3 ♀; Río Jamundá, Faro, 1 ♂, 1 ♀.

X. g. guttatoides.—BRAZIL: Río Amazonas, Villa Bella Imperatriz (Santa Clara), 11 ♂, 3 ♀, 1 (?); Río Madeira, Borba, 1 ♂; Rosarinho, 15 ♂, 4 ♀; Santo Antonio de Guajará, 3 ♂, 3 ♀; Río Roosevelt, "6th of March Rapids," 1 ♂ (not typical); Río Machados, Barão Melgaço, 1 ♀; Teffé, 5 ♂, 3 ♀; Río Negro, Igarapé Cacao Pereira, 2 ♂, 2 ♀; Tabocal, 1 ♀; Mt. Curycuryari, 2 ♂, 4 ♀; Yucabi, 2 ♂; Tatú, 11 ♂, 12 ♀; Camanaos, 1 ♂; São Gabriel, 2 ♂, 1 ♀. VENEZUELA: Tahuapunto, 1 ♀; Río Cassiquiare (Solano, El Meré, opposite El Meré, mouth of Río Ocamo, and opposite mouth of Río Ocamo), 41 skins; vicinity of Mt. Duida, 19 ♂, 17 ♀. COLOMBIA: "Bogotá," 1 (?); Florencia, 1 ♂. ECUADOR: Río Suno, above Avila, 1 ♂, 2 ♀; lower Río Suno, 2 ♂; below San José, 1 ♂; mouth of Río Curaray, 2 ♂, 1 ♀; "Napo," 1 (?). PERÚ: Puerto Indiana, 4 ♂, 7 ♀; Orosa, 4 ♂, 2 ♀; Río Seco, west of Moyobamba, 2 ♂, 1 ♀; Sarayacu, 9 ♂, 11 ♀; Lagarto, upper Ucayali, 4 ♂, 10 ♀; Santa Rosa, 4 ♀; mouth of Río Urubamba, 1 ♂; Astillero, 1 (?); La Pampa, 1 ♂. PERÚ or BRAZIL: "Upper Amazon," 1 (?).

X. g. polystictus.—BRITISH GUIANA: Bartica Grove, 1 ♀; Kamakusa, 1 ♂; Minnehaha Creek, 1 ♂, 2 ♀; Tumatumari, 1 ♂, 1 ♀. DUTCH GUIANA: near Paramaribo, 1 ♂, 1 ♀. VENEZUELA: Munduapo, 1 ♂; Maripa, 1 ♂; La Unión, 1 ♀. BRAZIL: Faro (Castanhal), 1 ♂; (San José), 1 ♂; (mouth of Río Paratucú), 3 ♂, 2 ♀; (Serra do Espelho), 2 ♀.

***Xiphorhynchus spixii juruanus* (Ihering)**

Dendroornis ocellata juruana IHERING, "1904" = May, 1905, Rev. Mus. Paulista, VI, p. 436—Rio Juruá. Brazil; cotypes in Mus. Paulista.

Specimens from Teffé, Brazil, from southeastern Perú, and from the lower Ucayali and the south bank of the Amazon between the Ucayali and the Javari are all relatively uniform, and a series from São Paulo de Olivença, Brazil, in the Carnegie Museum, is exactly the same. These birds agree with the description of *juruanus*, whose type locality is near the center of the area bounded by the localities from which material has been examined, and may be taken unhesitatingly to represent this form which is the palest and least conspicuously marked member of the specific group to which it belongs. Probably *juruanus* ranges eastward to the left bank of the Purús, but birds from east of this river and on both sides of the Madeira belong to *elegans*, including Pelzeln's specimen from Manaqueri.

The material at hand shows no direct intergradation between *elegans* and *juruanus*; the variations of *juruanus* are all in the direction of *insignis* of central Perú, as will be discussed below. On the other hand, the specimens of *elegans* from nearest the Amazon have the pectoral spotting slightly smaller than skins from the upper Madeira near the type locality, and this, in a way, is a trend toward *juruanus*. To the eastward, *elegans* is connected rather definitely with *spixii*, which occupies the region from the Pará district west to the right bank of the Tapajoz. Specimens from the latter region often have the stripes on the belly less distinct than in Xingú, Tocantins, and Pará specimens, and are very close to some of the most boldly marked examples of *elegans*. The rufescent tinge on the bend of the wing is variable.

On the Ucayali, in Perú, the transition which occurs between *juruanus* and *insignis* is so diffused that it is impossible to draw a distinct line between them as may be done between *juruanus* and *elegans*. On the other hand, *insignis* forms a transition between *juruanus* and an undescribed form north of the Amazon which is so similar in many respects to *elegans* that the relationship is obvious.

Thus a complete chain of related forms is established although the geographical sequence is not the genetic one.

No previous records of *juruanus* exist from Perú.

***Xiphorhynchus spixii insignis* (Hellmayr)**

Dendroornis insignis HELLMAYR, 1905 (Feb. 24), Bull. Brit. Orn. Club, XV, p. 55—Samiría, Perú; ♂ ad.; Berlepsch Coll., Frankfort Mus.

Birds from Sarayacu and Orosa, in Perú, and from eastward along the south bank of the Amazon in Brazil, as far as Teffé, are *juruanus*, as has been discussed on an earlier page, but in the region of the upper Ucayali a definite difference is discernible. The bill becomes largely whitish, the top of the head is blacker with larger spots, the streaks or spots on the mantle enlarge a little (though they are sometimes no larger than in *juruanus*) and, though they are frequently restricted to the upper part of the mantle, they seem never to be so nearly obsolete as they are in extreme examples of *juruanus*. The general color of the dorsal plumage is warmer than in *juruanus*, but the tone of the under side remains nearly the same with the chin and upper throat definitely whitish, with only a light tinge of buffy notably paler than the color of the lower throat and the pectoral spots; the latter average broader than in *juruanus*, and the belly is frequently a little more positively spotted than in the more eastern form, though the spots are small and are obsolete on the lower belly.

I have seen no examples from near Samiría, the type locality of *insignis*, but the original and supplementary descriptions indicate a bird much like the upper Ucayali form. Particular reference is made to the narrower, more elongate streaks restricted to the upper mantle, much as in *juruanus*, while the under parts are said to have larger and more extensive spots than in *juruanus*; the upper wing-coverts and scapulars lack all trace of the pale shaft-streaks so conspicuous in *elegans*, while the bill is whitish except at the base of the maxilla.

Taczanowski's description of Yurimaguas and Chamicuros specimens agrees well with this characterization, so far as the particular details are mentioned, and adds the fact that the gular area is less ochraceous than the chest and pectoral spots, while the lower abdomen is much paler than the anterior portion. These points are of little consequence in the matter of distinguishing *insignis* from *juruanus*, but are significant when comparing birds from north of the Amazon in Perú and eastern Ecuador. These have been referred to *insignis* but prove to be so consistently distinct that they deserve a name. Their description follows shortly.

The upper Ucayali series is not entirely uniform and shows occasional divergence in the direction of *juruanus*. Thus, out of eighteen skins from this region, three (two males from Lagarto and one from Santa

Rosa) have the maxilla without a definite whitish terminal area. The two Lagarto birds, furthermore, have the top of the head more brownish than sooty, the mantle exceptionally little streaked, and the pectoral spots notably small; the Santa Rosa bird is not marked in these respects. The characters are those of *juruanus* though in the present instance they presumably represent the extreme of individual variation in *insignis*. Sarayacu birds are all of this nature with no trace of the characters of *insignis*.

Records from Perú which belong to *insignis* are from Samiría, Yurimaguas, Chayavitas, Shanusi, and Chuchurras, to which the material examined adds several localities.

***Xiphorhynchus spixii ornatus*, new subspecies**

TYPE from Puerto Indiana, mouth of the Río Napo, Perú. No. 231,998, American Museum of Natural History. Adult female collected July 7, 1926, by Carlos Olalla and sons.

DIAGNOSIS.—Nearest to *X. s. elegans* of western Matto Grosso and the Rio Madeira, Brazil, but more warmly colored and with the spots of upper and under parts larger; bill whitish except on basal part of maxilla; lesser wing-coverts on radial margin of wing less strongly rufous; scapulars and upper wing-coverts usually similarly streaked with buff; wing, tail, and uropygium deeper rufous.

Differs from *insignis* by an even greater difference in the size of the dorsal and ventral spots; pectoral spots decidedly deeper ochraceous-buff; throat deep buff, not white.

RANGE.—Northeastern Perú, north of the Amazon, and the Napo region of eastern Ecuador; north to eastern Colombia and east to the neighborhood of São Paulo de Olivença, Brazil (apparently crossing to south bank of the Amazon at that point).

DESCRIPTION OF TYPE.—Top of head blackish, with large, rounded, subterminal spots of buff, and with distinct, though narrow, buff shaft-lines extending toward the bases of the feathers; hind neck similar; mantle and scapulars Brussels Brown, with very large subterminal spots of Cinnamon × Clay color, a little narrower and more elongate on lower portion but broader (3–5.5 mm. wide) on upper portion, continued basad as a shaft-line or streak sometimes 1–2 mm. wide (often making a violin-shaped area); the pale spots and the broadest shaft-stripes broadly outlined with blackish; rump and upper tail-coverts Chestnut × Bay. Lores whitish; a superciliary line of dull whitish extending to sides of neck where it is strongly tinged with ochraceous; auriculars with dull whitish shaft-stripes and dusky dorsal margins; malar region a little more buffy; chin very narrowly whitish at point; remainder of chin and throat Cinnamon-Buff with rounded tips margined with blackish, more prominently on lower portion; breast and sides with similar pale central spots, 3–4 mm. wide but more constricted basad and thus more fan-shaped, outlined (at least terminally) with blackish; lateral margins of feathers broadly dark Dresden Brown; belly and flanks warm Dresden Brown (darker on flanks) with deep Cinnamon-Buff shaft-stripes outlined with dusky, broadest anteriorly, obsolete on femoral areas which are near Cinnamon-Brown; under tail-coverts Saccardo's Umber with

broad but indistinct buffy shaft-stripes outlined with dusky. Remiges light Chestnut above (paler in ventral aspect) with dusky terminal area occupying two-thirds of the outermost primary but obsolete on the inner secondaries and tertials; outer margins of primaries tinged with olive brown; greater and median upper wing-coverts near Sepia (much more rufescent on inner ones), with traces of short, buffy shaft-streaks near tips of some of the feathers; lesser series similar, but the feathers along radial margin a little more rufescent and unmarked. Under wing-coverts buffy Pinkish-Cinnamon. Tail Bay. Bill (in dried skin) whitish on distal portion, pale slaty at base. Feet dark brown. Wing, 97 mm.; tail, 75.5; exposed culmen, 30; culmen from base, 34.5; tarsus, 22.

REMARKS.—Males like the females in color but a little larger in average size (wing, 96–104 mm. as compared with 90–98).

Although in the original description of *insignis* certain specimens from Perú north of the Amazon, eastern Ecuador, and Bogotá were referred to it, Dr. Hellmayr writes me that comparisons were made chiefly between the Samiría skin and a Shanusi example and three topotypes of *elegans*. Although he did not publish the fact, Dr. Hellmayr recorded in his notes that a specimen from Archidona, eastern Ecuador, had larger, more fan-shaped buff markings, especially below, than the Peruvian birds. This is in agreement with the facts shown by the series in hand.

One skin from the Río Suno, above Avila, Ecuador, has the streaks on scapulars and upper wing-coverts obsolete, but the other characters of *ornatus* are unmodified. A male from Florencia, southeastern Colombia, is quite like the rest of the series and is an unquestioned *ornatus*. Two birds from farther north, at Buena Vista, above Villavicencio, are again different and are nearest to *elegans*, of the same grayish tones but with the bill extensively whitish and with the spots on the mantle a little smaller. I have no doubt that these represent the form found in "Bogotá" collections, of which various specimens have been identified as *insignis*. There is, in fact, a much closer resemblance to *insignis* than to *ornatus*, but the pectoral spots are rounder, less fan-shaped, and their dark terminal margins are broader; the lower throat is a little more buffy but far from the deep ochraceous tone of *ornatus*. Identity with *elegans* is improbable from a geographic standpoint even were the whitish bill and other points of difference not in evidence. This form therefore may be described as new.

One male and three females in the Carnegie Museum, labeled as from São Paulo de Olivença, are indistinguishable from *ornatus*. This is most puzzling if it be assumed that the specimens came from the exact sites where twelve skins of *juruanus* were secured, which also are labeled

São Paulo de Olivença. However, the four *ornatus* were taken on different dates from any of the twelve *juruanus*, and I suspect that a somewhat different habitat is involved, connected ecologically, if not otherwise, with the left bank of the Amazon.

***Xiphorhynchus spixii similis*, new subspecies**

TYPE from Buena Vista (above Villavicencio), Colombia; altitude 4500 feet. No. 122,088, American Museum of Natural History. Adult female collected March 9, 1913, by Chapman, Cherrie, et al.

DIAGNOSIS.—Nearest to *X. s. elegans* of northwestern Matto Grosso and the Rio Madeira region, Brazil, but bill much paler, more whitish; shoulder less rufous; scapulars and upper wing-coverts less conspicuously or not at all streaked with whitish.

Differs from *ornatus* by much more grayish general hue with distinctly smaller and less ochraceous spots above and below and a more whitish throat. Differs from *insignis* by slightly more buffy throat and slightly broader and more extensive (but paler) spots on the mantle.

RANGE.—Eastern slope of eastern Andes of Colombia, in the Orinoco drainage.

DESCRIPTION OF TYPE.—Top of head grayish brown with blackish tips, whitish shafts, and rounded subterminal spots of pale buff; hind neck and mantle brownish Medal Bronze with narrow, elongate-oval spots of Pinkish Buff terminally outlined with blackish, which are narrower posteriorly and obsolete on the lowermost mantle-feathers; rump and upper tail-coverts dark Ferruginous. Lores whitish; a narrow superciliary line also whitish, tinged with buff posteriorly; auriculars and malar region pale buffy, with narrow dusky margins; chin whitish; throat pale Cream-Buff with narrow dusky terminal margins; breast and sides with broad, guttate, central spots of Cream-Buff × Warm Buff, strongly outlined distally with blackish, but with the broad margins of the feathers Light Brownish Olive; belly a little paler and flanks a little darker, with the spots becoming smaller and less distinct posteriorly but not perfectly obsolete; femoral areas darker and browner, immaculate; under tail-coverts like lower belly. Wings Auburn × Kaiser Brown with dusky tips on the primaries, broadest on outermost; outer margins of primaries tinged with light brownish olive, upper wing-coverts on exposed portions light Brownish Olive, the innermost greater ones and the inner webs of the remaining greater ones rufescent, and the lesser series along radial margin suffused with dull rufous; upper coverts and scapulars unstreaked; under wing-coverts light Cinnamon-Buff; tail dark Chestnut. Maxilla (in dried skin) pale grayish (with whitish at tip and along the tomia); mandible apparently mostly whitish; feet brownish. Wing, 97.5 mm.; tail, 84; tarsus, 21; (bill broken).

REMARKS.—The only female is in practically adult plumage, being determinable as immature only by a slightly coarser texture of plumage and less acuminate outer primary covert. In coloration it is much like the adult male though slightly darker and with fine, short hair-streaks on the upper wing-coverts and scapulars. Size smaller; wing, 91 mm.; tail, 69; exposed culmen, 25; culmen from base, 30.5; tarsus, 20. The bill is exactly like that of the male, so far as the latter can be determined

with its terminal portion missing, and shows the tip of the maxilla, the tomia, and the mandible whitish.

It is difficult to find anything written about "Bogotá" skins, and the only recorded examples of Colombian birds of the present species that are not Bogotá skins are the two here discussed and the specimen of *ornatus* from Florencia. Depending on the localities reached by "Bogotá" collectors, *ornatus* or *similis* might appear in these trade-skin collections. Dr. Lowe kindly writes me that five Bogotá skins in the British Museum are reasonably like four Iquitos specimens (collected by Whitely), but no great differences can be found in them or in two from Chayavitas and one from Yurimaguas, though the latter bird is paler on the under parts (=less strongly spotted or streaked). Without comparing these specimens with our series and without knowing whether Whitely may not have collected some birds on the right bank of the Amazon opposite Iquitos, it is impossible to allocate these records with certainty. The various forms are so well distinguished in the specimens at hand that it is difficult to suppose the distinction a purely casual one, though some overlapping of characters is to be expected when intermediate localities are represented in collections.

SPECIMENS EXAMINED

X. s. spizii.—BRAZIL: Pará, 1 ♂; Utinga, 1 ♂; Providencia, 1 ♂, 1 ♀; Ananideua, 1 ♂; Rio Tocantins, Mocajuba, 1 ♂, 2 ♀; Baião, 1 ♂; Baião, Pedral, 2 ♂, 1 (?); Rio Xingú, Villarinho do Monte, 2 ♂, 1 ♀; Tapará, 1 ♀; Rio Tapajoz (right bank), Tauary, 1 ♂, 1 ♀; Aramanay, 1 ♀; Piquiatuba, 2 ♀; Caxiricatuba, 1 ♂, 1 ♀, 1 (?).

X. s. elegans.—BRAZIL: Rio Roosevelt, "Broken Canoe Rapids," 1 ♀; "6th of March Rapids," 1 ♀; Rio Madeira, Porto Velho, 1 ♂, 1 ♀, 1 (?); Rosarinho, 2 ♂, 3 ♀; Rio Amazonas, Villa Bella Imperatriz (Santa Clara), 1 ♀; Manaqueri, 1 ♂; Caviana, 1 ♂¹.

X. s. juruanus.—BRAZIL: Teffé, 3 ♂, 3 ♀; São Paulo de Olivença 8 ♂¹, 4 ♀¹. PERÚ: Astillero, 2 ♂, 1 ♀; Orosa, 1 ♂, 3 ♀; Sarayacu, 1 ♂, 4 ♀.

X. s. insignis.—PERÚ: Rio Ucayali, Santa Rosa, 2 ♂, 4 ♀; Lagarto, 6 ♂, 4 ♀; Río Pichis, Puerto Bermúdez, 1 ♂², 1 ♀².

X. s. ornatus.—PERÚ: Puerto Indiana, 1 ♂, 1 ♀ (type). ECUADOR: Río Suno, above Avila, 1 ♂; lower Río Suno, 1 ♀; mouth of Río Curaray, 1 ♀. COLOMBIA: Florencia, 1 ♂. BRAZIL: (? near) São Paulo de Olivença, 1 ♂, 3 ♀.

X. s. similis.—COLOMBIA: Buena Vista (above Villavicencio), 1 ♂ (type), 1 ♀.

Xiphorhynchus obsoletus palliatus (Des Murs)

Dendrornis palliatus DES MURS in CASTELNAU, 1856 (June), 'Expéd. Amér. Sud,' pt. 7, I (3), livr. 18, Oiseaux, p. 46; idem, 1856 (Dec.), *tom. cit.*, livr. 19, Pl. xv, fig. 1—no locality; type in Paris Mus. from Sarayacu, Perú.

¹Specimens in Carnegie Museum, Pittsburgh.

²Specimens in Field Museum of Natural History, Chicago.

Five topotypes are at hand with other examples from Lagarto and Santa Rosa, upper Ucayali, from Orosa and Puerto Indiana, on opposite banks of the Amazon, and from the mouth of the Río Curaray, eastern Ecuador.

These birds all agree with each other in considerable detail and differ from one hundred and seventy examples of the species from numerous localities in Brazil and Venezuela. These other examples are not uniform and may be divided into two good subspecies which are quite distinct in the hearts of their ranges though they intergrade over rather a wide area.

Thus the birds from the south bank of the Amazon, extending westward from the Rio Tocantins to the left bank of the Madeira (and possibly to Fonteboa), are characterized by their olive or grayish-olive coloration on the under side and relatively little rufescent tinge on the back, with the throat quite pale buffy and the streaks and spots above and below relatively whitish. They belong to typical *obsoletus*.

Skins from the upper Orinoco in Venezuela, the vicinity of Mt. Duida, and the upper stretches of the Rio Negro in Brazil, are distinctly more warmly colored, with the throat deeper buff and the streaks and spots more buffy or ochraceous than whitish. They approach *palliat* to some extent, but the pattern is finer, with the streaks and spots not so broad, and the coloration does not reach so deep a tone. Apparently these birds are entitled to the name *notatus* Eyton, the type of which is said by Hellmayr [Field Mus. Nat. Hist. Publ., Zool. Ser., XIII (4), p. 317, footnote b (on p. 318), 1925] to be an extreme example of a possible northern variety, more warmly colored than typical *obsoletus*.

Judging by the material at hand, *notatus* ranges down the Orinoco as far as Suapuré, but specimens from Caicara, Río San Feliz, Río Mato, and Sacupana are closer to *obsoletus*. Likewise on the Rio Negro in Brazil, birds from as far downstream as Tatú on the right bank and Santa Isabel on the left bank are closer to *notatus*, though they show a tendency toward *obsoletus*; skins from Tabocal, Yavanari, and Ilha Sta. Maria are too intermediate to place satisfactorily; and examples from Muirapinima and Igarapé Cacao Pereira, not far above the mouth of the river, are very close to typical *obsoletus*. Birds from Faro are mostly inseparable from *obsoletus*, though a single skin from Serra do Espelho (the others are from Castanhal, Sto. Antonio de Cachoeira, and S. José) is nearer *notatus*. Probably, judging from the Faro birds and the skins from the lower Orinoco, *obsoletus* ranges northward to the Guianas, though I have no material from that region for comparison.

Probably the Fonteboa birds (described as *multiguttatus* by Lafresnaye) are intermediate between *obsoletus* and *palliatius*. They are said to be similar to Rio Negro examples (Hellmayr, *loc. cit.*) but should be studied further, as should Matto Grosso examples of which I have no representatives.

***Xiphorhynchus obsoletus parvimaculatus* Carriker**

Xiphorhynchus obsoletus parvimaculatus CARRIKER, 1934, Proc. Acad. Nat. Sci. Phila., LXXXVI, p. 323—Huacamayo, Prov. Carabaya, Perú; ♂; Acad. Nat. Sci. Philadelphia.

I have not seen this new form which is from a portion of Perú where the species has not been found heretofore. Judging by the description, it bears some resemblance to the *ocellatus* group, especially in respect to the reduction of dorsal markings and the reduction in the rufescence of the upper wing-coverts.

SPECIMENS EXAMINED

X. o. obsoletus.—BRAZIL: Rio Tocantins, Mocajuba, 1 (?); Ilha Pirunum, 1 ♀; Rio Xingú, Tapará, 1 ♂; Villarinho do Monte, 1 ♂; Rio Tapajoz, Santarem, 1 (?); Aramanay, 1 ♂; Igarapé Brabo, 4 ♂, 1 ♀; Rio Amazonas, Cussary, 1 ♂; Villa Bella Imperatriz (Sta. Clara), 3 ♀, 1 (?); Rio Madeira, Borba, 2 ♂, 2 ♀ (incl. cotype of *Dendroplex similis* Pelzeln); Igarapé Auará, 3 ♂, 1 ♀; Rosarinho, 4 ♂, 1 ♀ 1 (?); Sto. Antonio de Guajará, 2 ♂, 6 ♀; Rio Jamundá, Faro (Castanhal, S. José, and Sto. Antonio de Cachoeira, 4 ♂, 2 ♀ 1 (?); Rio Negro, Muirapinima, 2 ♂, 1 ♀; Igarapé Cacao Pereira, 1 ♂. VENEZUELA: Río Orinoco, Sacupana, 1 ♂; Río Mato, 1 ♀; Caicara, 1 ♂; Río San Feliz, 1 ♂.

X. o. notatus.—VENEZUELA: Mt. Duida, Caño León, 1 ♂, 1 ♀; Esmeralda, 11 ♂, 9 ♀; Lalaja, 2 ♀; Playa del Río Base, 1 ♂, 1 ♀; Savana Grande, 1 ♂; (western) foot of Mt. Duida, 1 ♂, 1 ♀; Boca de Sina, Río Cunucunumá, 1 ♀; Río Orinoco, Munduapo, 1 ♂, 1 ♀; Suapuré, 1 ♂, 1 ♀; Río Cassiquiare, Buena Vista, 4 ♂, 4 ♀; El Meray, 9 ♂, 4 ♀; opposite El Meray, 1 ♂, 3 ♀; above Ihuapo, 1 ♀; mouth of Río Ocamo, 7 ♂, 4 ♀; opposite mouth of Río Ocamo, 4 ♂, 5 ♀; Solano, 1 ♀; junction of Río Huayná and Río Cassiquiare, 1 ♀. BRAZIL: Rio Uaupés, Tahuapunto, 1 ♂; Rio Negro, Tatú, 2 ♂, 1 ♀, 1 (?); San Gabriel, 1 ♂, 1 ♀; Santa Isabel, 2 ♂, 1 ♀.

X. o. notatus × *obsoletus*.—BRAZIL: Rio Negro, Tabocal, 3 ♂; Yavanari, 2 ♂, 2 ♀; Ilha Santa Maria, 1 ♀; Rio Jamundá, Faro (Serra do Espelho), 1 ♂.

X. o. palliatius.—PERÚ: Río Ucayali, Sarayacu, 5 ♂; Santa Rosa, 1 ♂; Lagarto, 2 ♂; Río Amazonas, Orosa, 1 ♀; Puerto Indiana, 1 ♀. ECUADOR: mouth of Río Curaray, 2 ♂.

***Xiphorhynchus ocellatus ocellatus* (Spix)**

Dendrocolaptes ocellatus (guttatus) SPIX, 1824, 'Av. Bras.' I, p. 88, Pl. xci, fig. 1—"in sylvis campestribus Piahy," errore = mouth of Rio Madeira, Brazil; HELLMAYR, 1925; Munich Mus.

[*N(asica) Beuperthuysii* LAFRESNAYE, 1850, Rev. Mag. Zool., (2) II, p. 419—"Perú" (= Cumaná, Venezuela) and banks of the Amazon, Pebas and Santa Maria, Perú; Paris Mus. or Mus. Comp. Zoöl., Cambridge.]

Dendrornis weddellii DES MURS in CASTELNAU, 1856 (June), 'Expéd. Amér. Sud.,' pt. 7, I (3), livr. 18, Oiseaux, p. 46, Pl. XIV, fig. 2—no locality, = Peruvian Amazon; Paris Mus.

Birds from the right bank of the Rio Madeira are typical of *ocellatus*, and skins from farther east, along the south bank of the Amazon and its southern affluents, are inseparable, though there appears to be a hiatus in distribution between the right bank of the Tapajoz and the left bank of the Xingú, as will be discussed later. North of the Amazon the case is somewhat different.

I am unable to place the records of *ocellatus* from Pebas and Santa Maria without examination of the specimens. They have been examined by Hellmayr, who found them inseparable from the type of *ocellatus*, but our extensive series of that form places some doubts on the correctness of the assignment. All our specimens from north of the Amazon are somewhat different from typical *ocellatus*, while *napensis* occurs in Perú, only a few miles west of Pebas.

There is great probability that the Pebas birds belong to a slightly differentiated form found on the west bank of the Rio Negro, Brazil, from near its mouth to its source, and on the west bank of the Cassiquiare and on its affluent, the Huaynía, in Venezuela.

A good series from this range is, in general, distinguishable from true *ocellatus* by darker margins of the buff pectoral spots which are, in turn, perhaps slightly larger than in Rio Madeira skins. The mantle averages more heavily streaked, sometimes with the streaks slightly expanded to form rounded, subterminal dots. Nevertheless, numerous specimens are not more pronouncedly streaked on the back than *ocellatus*. The best-marked examples, on the other hand, are not far removed from certain skins of *napensis*, showing clearly the full intergradation of *napensis* and *ocellatus*. The shoulder is even more strongly and deeply rufescent than in *ocellatus*, being far different from the condition in *chunchotambo*.

If there is an intermediate form found in this region, it may have to bear the name *beuperthuysii* or *weddellii*. There is so much confusion surrounding the former name that it may have to be dropped as unidentifiable. Elliot and, later, Bangs contended that a skin from an unknown locality, in the Lafresnaye collection, now in Cambridge, Mass., labeled "*Beuperthuysii*" in Lafresnaye's handwriting, is the type of that species, but Ménégau and Hellmayr concluded that two birds in the Paris Museum, from Pebas and Santa Maria, collected by

Castelnau and Deville, are the cotypes. In the original description, Lafresnaye mentions the species as being in the Paris Museum but says nothing of any specimens of his own, which he may or may not have had at the moment. In any case, he confused two species in his account, a form of *ocellatus* and *X. susurrans jardinei*. The latter bird was represented in the Paris Museum by a specimen collected by Beuperthuys near Cumaná, Venezuela (though Lafresnaye thought it was from Perú), to which Pucheran and Lafresnaye had given the manuscript name *Beuperthuysii*. In the published description, Pucheran and Lafresnaye are cited as the authors of the name (although the description was drawn up from a specimen of *ocellatus* subsp.). The Beuperthuysian skin is specifically mentioned in the original account, with the obvious result that it is a cotype of the published name, *Beuperthuysii*, as much as are the Pebas and Santa Maria birds. No mention is made of any other specimens and there is no assurance whatever that Lafresnaye had, at the time of the description, the specimen, now in the Museum of Comparative Zoölogy, Cambridge, which Elliot and, later, Bangs believed to be the type. This specimen is undoubtedly from the Lafresnaye collection but may have reached his hands after 1850.

In any case, there is such confusion in regard to this name that any attempt to fix it on a particular bird must be purely arbitrary.

The name *weddellii* is definitely based on the Pebas and Santa Maria specimens of Castelnau and Deville, and if these are found to be like Cassiquiare skins, the name will be available for the form which I have briefly characterized. Until such comparison can be made the name *ocellatus* must be applied to the birds from this entire region.

Xiphorhynchus pardalotus seems to replace the *ocellatus* group in the Guianan region and the adjacent areas of northeastern South America, yet it is not close enough taxonomically to warrant its inclusion in the same species. According to our extensive series, *ocellatus* is absent from the area between the Tapajoz and Xingú Rivers, reappearing on the eastern bank of the Xingú and continuing to beyond the Tocantins. On the other hand, there are five skins of *pardalotus* from this area of intermission. Furthermore, the skins of *ocellatus* from Faro, north of the Amazon, are from near the town of that name, while *pardalotus* was taken at several nearby, but not identical, sites, some of them, at least, west of the Jamundá while Faro itself is east of it. From the Rio Negro, there are specimens of *pardalotus* from Manaos and Camanaos on the left bank, while *ocellatus* appears on the right bank from near the mouth to the junction of the Cassiquiare and on the west bank of the latter stream

to the Río Huaynía but not so far as the Orinoco; *pardalotus*, however, occupies the east bank of the Cassiquiare and the region about the base of Mt. Duida, continuing down the Orinoco at least on the right bank, according to published accounts, and probably joining the range of the species in British Guiana. The only suggestion of similarity in pattern between *ocellatus* and *pardalotus* is in the occasional trace of blackish margins on the dorsal streaks of some *ocellatus* from the upper Rio Negro-Cassiquiare region, but the gap is very wide in this and other respects.

Returning to the south bank of the Amazon, there is apparent, to the westward of the Río Purús, as far as the lower Ucayali (and possibly to the right bank of the lower Huallaga), a recognizable differentiation from typical *ocellatus* to which no name has yet been applied. The most striking characteristic is the loss of the broad patch of bright rufous color on the shoulder that is found, without clear exception, in the series of *ocellatus* from both north and south of the Amazon. This form may be known as follows.

***Xiphorhynchus ocellatus perplexus*, new subspecies**

TYPE from Sarayacu, Río Ucayali, Perú. No. 238,326, American Museum of Natural History. Adult male, collected July 22, 1927, by Carlos Olalla and sons.

DIAGNOSIS.—Nearest to *X. o. ocellatus* of the right bank of the lower Rio Madeira, Brazil, but wings, tail, and uropygium darker rufous; radial margin of wings browner, only faintly tinged with deep rufous; breast darker, with the pale spots more conspicuously outlined with dusky; maxilla, in dried skins, a little paler horn-color.

RANGE.—Lower Río Ucayali, Perú, eastward at least as far as Teffé, possibly westward to the right bank of the lower Huallaga.

DESCRIPTION OF TYPE.—Top of head Fuscous, with blackish tips and margins and buff shaft-lines slightly expanded subterminally; hind neck lighter brown with shaft-marks slightly broader; mantle Saccardo's Umber × Cinnamon Brown with narrow, pale buffy shaft-streaks, broadest near the neck and obsolete on lower portion; rump and upper tail-coverts light Bay. Lores buffy whitish; malar region a little more whitish and with narrow dusky outlines; auriculars with dusky margins and whitish shafts; a narrow line of feathers above the auriculars with shaft-streaks more whitish than those on the top of the head; sides of neck like hind neck but with pale markings broader; chin and throat Pinkish Buff with narrow, dusky, terminal margins, obsolete on the chin but rather prominent on the throat; lateral throat-feathers with outer margins blackish, forming a dark submalar line; upper breast-feathers with central spots of Pinkish Buff, outlined with blackish brown, the lateral margins of the feathers a little darker than Light Brownish Olive; sides and flanks Light Brownish Olive with narrow buffy shaft-streaks; lower breast similar, with shaft-streaks wider but less sharply defined; belly pale Isabella Color with ill-defined buffy shaft-streaks; under tail-coverts lightly tinged with dull rufous. Wings light Bay, clearest on tertials; outer margins of primaries and secondaries on more basal portions tinged with brownish; terminal portion of inner webs of primaries blackish, most extensive on outer feathers; outer secondaries with a slight dusky shading in the

same position; innermost greater upper wing-coverts like the tertials; outer ones and primary-coverts with outer margins near the color of the back; median series a little less rufescent and more brownish; lesser series like median series except for a slight rufescent tinge on a few feathers immediately adjoining the radial margins; tail Bay. Bill (in dried skin) light Hair Brown, darker at base of maxilla; feet dull Hair Brown. Wing, 98 mm.; tail, 77.5; exposed culmen, 29; culmen from base, 33.25; tarsus, 21.

REMARKS.—The general coloration of this form is much closer to *ocellatus* than to *napensis* although the markings are a little bolder than in *ocellatus*. The dark coloration of the wings, tail, and uropygium are exactly those of *napensis*, but the dull coloration of the shoulder is shared regularly in the group only by *chunchotambo* and *brevirostris*; an occasional *napensis* is similar, but very rarely so. With this combination of characters, although it is one to be expected in an area near to the meeting ground of the other three forms, it may not be amiss to give a name to the possessors.

A single Teffé bird is slightly different from three Peruvian examples in having the pale pectoral markings as broad as in some *napensis*, and the bill as dark as in the palest *ocellatus*. In the other characters of *perplexus* it agrees with the Peruvian bird and is not to be matched by any skins of *ocellatus* at hand.

A record of *ocellatus* from the lower Huallaga (probably from Chamicuro) probably belongs with *perplexus*, though it may be *chunchotambo*.

***Xiphorhynchus ocellatus napensis* Chapinan**

Xiphorhynchus chunchotambo napensis CHAPMAN, 1924 (July 2), Amer. Mus. Novitates, No. 123, p. 8—upper Río Suno, eastern Ecuador; ♂; American Mus. Nat. Hist.

Examples from Puerto Indiana and Anayacu, north of the Amazon in Perú, are best referred to this subspecies, although *ocellatus* is recorded from Pebas, not far to the eastward. For the most part they can be matched with typical *napensis* from higher up the Napo, though extreme examples from eastern Ecuador are more boldly marked than any of the Peruvian examples, showing, on their part, a tendency toward *chunchotambo*. As noted in an earlier paragraph, examples of *ocellatus* from the upper Río Negro, Brazil, and the region of the Río Cassiquiare, Venezuela, show an intermediacy between *ocellatus* and *napensis*, and the Puerto Indiana and Anayacu birds seem to be in the line of connection.

Strangely enough, three males and a female from Lagarto, upper Ucayali, are also indistinguishable from *napensis*, in spite of the occurrence of *perplexus* at Sarayacu, lower down the river, completely dividing

the range of *napensis*. There is no suggestion of their intergrading with *perplexus* nor with *chunchotambo*, nor are there any peculiarities by which a separation could be justified. I judge the ancestral range of *napensis* to have been across the Amazon from the mouth of the Napo to the Ucayali and along the entire course of this stream, into which range *perplexus* pushed its way from the eastward, possibly after *napensis* withdrew in part to the isolated region at the head of the Ucayali.

A single skin from Pomará, left bank of the middle Marañón, is intermediate between *napensis* and *chunchotambo* but is closer to *napensis*. The streaks on the top of the head are broader than in most *napensis*, but those on the mantle are narrower and those on the upper abdomen less well developed. Furthermore, the coloration is slightly warmer and the radial margin of the wing is strongly rufescent, which is true of most *napensis* but not of *chunchotambo*. Presumably parts of the ranges of these two forms are separated by the course of the Marañón, though there is no apparent barrier between the two in the neighborhood of the upper Ucayali.

***Xiphorhynchus ocellatus chunchotambo* (Tschudi)**

D(endrocolaptes) Chunchotambo TSCHUDI, 1844 (May), Arch. Naturg., X (1), p. 295—Perú (=Chanchamayo Valley); Mus. Neuchâtel.

Twenty-two skins from the Andean regions of Perú and an equal number from northern Bolivia show a distinct segregation into two recognizable forms, to one of which the name *chunchotambo* is applicable. Tschudi's description in the 'Fauna Peruana,' Aves, p. 241, 1846, gives one or two of the distinctive characteristics which help to decide the issue (though there is one point of divergence), and one of Tschudi's original examples, kindly lent by the U. S. National Museum, removes any doubts that may have remained. A young bird from La Merced adds its consistent measure of evidence. Tschudi's specimen agrees closely with skins from the upper and lower Huallaga while the birds from southeastern Perú and Bolivia together agree in their distinction from the more northern examples, making this southern form obviously the one entitled to a new name, given in the description which follows shortly.

At the northernmost end of the range of *chunchotambo* there is a trend toward *napensis*, and a specimen from Río Negro, west of Moyobamba, is very like that one from Pomará, on the left bank of the middle Marañón, which seems to be closer to *napensis*, as detailed above.

A male from Pozuzo is not quite typical, but is somewhat faded and matches the series of *chunchotambo* much better than the specimens of

napensis from the upper Ucayali, to which it bears some geographical affinity.

Records from Perú which presumably belong to *chunchotambo*, in addition to some from localities included in the list of specimens examined, are from Amable Maria, Monterico, La Gloria, Huambo, Chirimoto and Jeberos.

***Xiphorhynchus ocellatus brevirostris*, new subspecies**

TYPE from Río Inambari, southeastern Perú; altitude 2200 feet. No. 132,728, American Museum of Natural History. Adult male collected March 16, 1915, by H. and C. Watkins; original No. 22.

DIAGNOSIS.—Similar to *X. o. chunchotambo* of central and northern Perú but differs by having the bill shorter and paler, with the culmen averaging more convex in outline; wing and tail shorter; general color averaging browner, less olivaceous; stripes on mantle broader, more pronounced; upper throat more nearly immaculate; stripes on lower under parts broader but less sharply defined.

RANGE.—Tropical Zone of southeastern Perú and northern Bolivia.

DESCRIPTION OF TYPE.—Top of head dark Sepia, slightly more dusky at tips of feathers and with pale buffy shaft-streaks widening distally into prominent obovate spots; mantle distinctly brighter, near dark Saccardo's Umber, with broad, elongate-ovate shaft-stripes, narrower adjoining the rump; rump and upper tail-coverts Chestnut \times Burnt Sienna. Lores whitish, a double row of whitish-centered feathers over the auriculars; auriculars and upper malar region with pale buffy shaft-stripes and dusky margins. Chin and upper throat pale buff with very narrow dark tips on lower portion (most examples have these tips obsolete or nearly so); lower malar region similar, with a dusky line separating this region from the throat; lower throat and upper breast with buff centers and dusky brown margins and tips giving a spotted appearance; sides of breast and neck with centers narrower and more streaklike; lower breast with broad buffy shaft-stripes not very sharply defined from the margins which are Dresden Brown \times Light Brownish Olive; these margins paler on lower belly, making the streaks even less well defined and the general color of the area lighter. Wings externally rufous with a slight golden brown wash on the exterior margins; lesser upper wing-coverts light tawny with faintly brighter shaft-lines; middle and greater coverts somewhat duller; terminal portions of primaries and secondaries somewhat dusky; under wing-coverts ochraceous cinnamon; inner margins of remiges deeper cinnamon; tail light Bay. Bill with culmen strongly curved, gonys rectilinear; color (in dried skin) dull brownish-white, dusky at base of maxilla; feet grayish brown. Wing, 95 mm.; tail, 81; exposed culmen, 26.5; culmen from base, 30; tarsus, 21.

REMARKS.—Females like the males but smaller. The measurements of typical *chunchotambo* appear to be within the following range of figures. Males: wing, 102–107 mm. (av., 104.6); tail, 85–98 (av., 91.1); culmen from base, 33.5–36 (av., 35.1); tarsus, 22–23 (av., 22.6). Females: wing, 101; tail, 84; culmen from base, 36–36.5; tarsus, 21.

The measurements of *brevirostris* are as follows: Males: wing, 95–101 (av., 96.7); tail, 70.5–83 (av., 78.1); culmen from base, 28.5–32.25 (av., 30.2); tarsus, 20–21 (av., 20.5). Females: wing, 87–99 (av., 91); tail, 64–80 (av., 72.1); culmen from base, 29–33 (av., 30.5); tarsus, 19–21 (av., 20.3).

Tschudi's measurements of the type of *chunchotambo* are given in inches and lines, presumably of the old Prussian standard, and translated into the metric scale show a wing of 105 mm. and a bill of 35.8 mm. The paratype in hand has the wing, 103 mm.; tail, 89; culmen from base, 35; and tarsus, 23. Tschudi also mentions the dusky margins on the feathers of the throat but makes no mention of the stripes on the mantle, which may be poorly developed in some of the northern birds, but are very prominent in the form I have described as new.

The young bird from La Merced is small, but owing to its immaturity it can not be used unreservedly for comparative purposes. The throat is rather distinctly marked at the tips of the feathers and the mantle is relatively narrowly streaked, according well with the northern series.

Peruvian records which belong to *brevirostris* are from Cosñipata, Río Huacamayo, Yahuar Mayo, Río Cadena, San Gaban, and Marcapata.

SPECIMENS EXAMINED

X. o. ocellatus.—BRAZIL: Rio Madeira, Borba, 5 ♂; Igarapé Auará, 9 ♂, 5 ♀, 1 (?); Rio Amazonas, Villa Bella Imperatriz, 6 ♂, 3 ♀, 2 (?); Rio Tapajoz, Igarapé Brabo, 8 ♂, 2 ♀; Boim, 1 ♂; Rio Xingú, Tapará, 3 ♂, 6 ♀; Rio Tocantins, Baião, 1 ♂, 1 ♀; Rio Jamundá, Faro, 3 ♂, 1 ♀, 1 (?); Rio Negro, Igarapé Cacao Pereira, 5 ♂, 3 ♀; Muirapinima, 2 ♂, 1 ♀; Tabocal, 3 ♂, 2 ♀; Yucabi, 1 ♀; Mt. Curycuryari, 4 ♂, 3 ♀; Yavanari, 1 ♂, 1 ♀; Tatú, 5 ♀, 3 ♂, 2 (?); Marabitanas, 1 ♂, 1 ♀; Rio Uaupés, Tahuapunto, 4 ♂, 7 ♀. COLOMBIA: opposite Tahuapunto, 1 ♂. VENEZUELA: Río Huayná, junction with the Cassiquiare, 5 ♂, 7 ♀.

X. o. perplextus.—PERÚ: Sarayacu, 3 ♂ (incl. type). BRAZIL: Teffé, 1 ♂.

X. o. napensis.—ECUADOR: upper Río Suno, 2 ♂ (incl. type), 1 ♀; lower Río Suno, 2 ♂, 1 ♀; below San José, 1 ♂, 2 ♀; mouth of Río Curaray, 3 ♂; mouth of Lagarto Cocha, 2 ♂; Zamora, 1 ♂. PERÚ: Pomará, 1 ♂; Puerto Indiana, 2 ♂, 1 ♀; Anayacu, 2 ♂, 1 ♀; Lagarto, upper Ucayali, 3 ♂, 1 ♀.

X. o. chunchotambo.—PERÚ: "Voyage de M. Tschudi" (paratype), 1(?)¹; La Merced, 1 ♀; Pozuzo, 1 ♂²; Huachipa, 4 ♂², 2 ♀²; Rioja, 1 ♀²; Río Negro, west of Moyobamba³, 1 ♂; Guayabamba, 1 ♂.

X. o. brevirostris.—PERÚ: Río Inambari, 1 ♂ (type), 2 ♀; La Pampa, 2 ♂, 1 ♀; Río Távora, 3 ♂. BOLIVIA: Todos Santos, 3 ♂, 1 ♀; Mission San Antonio, 3 ♂,

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

²Specimens in Field Museum of Natural History, Chicago.

³Mr. Carriker's recent (1934, Proc. Acad. Nat. Sci. Phila., LXXVI, p. 325, footnote³) and unwarranted statement to the contrary notwithstanding: the locality is west of Moyobamba, and west of Rioja, on the road to Chachapoyas, at an elevation of about 2600 feet. I have no doubt that there may be another "Río Negro" north of Moyobamba at another elevation, but it has nothing to do with my citations of specimens as given above.

7 ♀; mouth of Río San Antonio, 1 ♂, 1 ♀; Tres Arroyas, 1 ♂, 1 ♀; Vermejo, 1 ♂; Río Espíritu Santo, 1 ♂², 2 (?)².

X. pardalotus.—FRENCH GUIANA: Tamanoir, 3; Ipousin, 1. BRITISH GUIANA: Tumatumari, 7; Potaro Landing, 6; Minnehaha Creek, 1; Rockstone, 4; Meamumouth, 1. VENEZUELA: Río Orinoco, La Unión, 1; Suapure, 3; Mt. Duida region, 50; Río Cassiquiare, Buena Vista, 2; Solano, 3. BRAZIL: Rio Negro, Camanaos, 1; Manaos, 1; Faro (San José), 4; (Castanhal), 8; (mouth of Rio Paratucú), 5; (Serra do Espelho), 3; Obidos, 2; Rio Tapajoz (right bank), Aramanay, 5.