THE SOUTHERN RACES OF THE WHITE-THROATED SPADEBILL (*PLATYRINCHUS MYSTACEUS*)

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I recently compared specimens of the White-throated Spadebill (*Platyrinchus mystaceus*, a tyrant flycatcher ranging from Mexico to Argentina) that I collected in Corrientes and Misiones, Argentina, during September and October 1967, with material of that species in The American Museum of Natural History collected by W. H. Partridge and by the Emil Kaempfer expedition. It was immediately evident that northeastern Argentine specimens differ from specimens of *P. m. mystaceus* from eastern Brazil. Further comparisons and study of all relevant material (125 specimens) of this species in the A.M.N.H. revealed that *P. m. "mystaceus"* actually comprises two groups of populations. One of these occupies a range extending eastward and southward from southern Mato Grosso, central and southern Paraguay, and Misiones and Corrientes, Argentina, to central Paraná, western Santa Catarina, and eastern Rio Grande do Sul, Brazil. The other group occurs in Brazil from Maranhão south to eastern Paraná, and from the Atlantic Coast west probably to eastern Mato Grosso. These populations of *P. mystaceus* are apparently in contact with *P. m. bifasciatus* of central Mato Grosso, but there is a hiatus (in Amazonia) between them and the northern and western South American races of this species (Meyer de Schauensee, 1966: 359).

The type locality of *P. m. mystaceus* Vieillot is "Paraguay," and its basis is a description from Azara supplied by Azara's friend Noseda, who lived in San Ignacio (Guazú), southern Paraguay. Following the suggestion of Cory and Hellmayr (1927: 265), I designate Noseda's place of residence, San Ignacio (San Ignacio Dept.), Paraguay, as the type locality of the nominate race. The earliest available name for the eastern (Brazilian; see the range outlined above) group of populations is *Platyrhynchos cancromus* Temminck (see Temminck and Laugier, 1838, plate 12; Cory and Hellmayr, 1927: 266), which was published in September 1820, as part of Livraison 2 (plate 12, fig. 2; see Sherborn, 1898: 485–488).

I have tried to locate the type of *P. cancromus* (Temminck) at museums in Paris (thanks to Jean Dorst and C. Voisin) and Leiden (thanks to G. F. Mees). The latter (in litt.) located a mounted specimen of *P. mystaceus* which "appears to be the specimen figured in pl. col. 12 fig. 2" (of Temminck and Laugier, loc. cit.). Its label reads only: "*Platyrhynchus*

cancromus Temm Pl. col. 12. f 2 Brésil." No other information on this specimen is available. According to Mees the old South American specimens in the Leiden Museum came from many sources "but mainly from Natterer and the Prinz von Wied." The latter's major work (Wied, 1831) on his Brazilian collection mentions only Temminck's *Platyrhynchus olivaceus* (= *Rhynchocyclus olivaceus*), which is figured (Figure 1) on the same plate with *P. cancromus*. Wied would doubtless also have cited *P. cancromus* Temminck had he provided Temminck with specimens of that spadebill from Brazil. As for Natterer, his Brazilian itinerary prior to mid-1820 included the region around São Paulo and Rio de Janeiro (von Pelzeln, 1868: i–v). Von Pelzeln does (op. cit., p. 100) list *P. mystaceus* as taken by Natterer at Rio de Janeiro and Ipanema. Temminck's type specimen could have been obtained by Natterer, but it is equally possible that it was taken by some other (Dutch?) collector elsewhere in eastern Brazil.

The Temminck specimen "does not look different, in dorsal coloration" (Mees, in litt.) from other Brazilian specimens of *P. mystaceus* in the Leiden Museum (which lacks specimens from the range of *P. m. mystaceus* as I have restricted it above.) Its bill measures 7.3 mm across the nostrils, according to Mees, which places the male specimen within the range of *P. m. cancromus* and outside the ranges of both *P. m. mystaceus* and *P. m. bifasciatus*. Thus the bird represents *P. m. cancromus*. In view of the likelihood that the the specimen was obtained near the east coast of Brazil, I restrict the type locality of *P. m. cancromus* (Temminck) to Piquete in the hills of eastern São Paulo, 185 km northeast of the city of São Paulo (at about 22° 37′ S, 45° 09′ W). This locality, from whence I have seen several specimens, is well within the range of *cancromus*; it is in hilly country rather than in the coastal lowlands (where the species seems not to occur), and yet it is not far from the cities of Rio de Janeiro and São Paulo.

DIAGNOSIS OF *P. m. mystaceus* (see Table 1).—This form appears smaller (wings slightly shorter) than *P. m. cancromus;* its bill is shorter and markedly narrower; its dorsal coloration is greener and much less rufous, strongly tending in color toward *P. m. bifasciatus* of Mato Grosso (the latter is considerably larger than even *P. m. cancromus*; it has a very much larger bill, and wing bars that are normally lacking in both *P. m. mystaceus* and *P. m. cancromus*). The data suggest a north to south cline of diminishing bill size within *P. m. mystaceus*, as the narrowest-billed birds I have measured are from Santa Cruz, Rio Grande do Sul, and from Barra Concepción, Misiones (near the Corrientes border).

DISCUSSION OF VARIATION.—*P. m. mystaceus* has slightly shorter wings,

TABLE 1
MEASUREMENTS OF VARIOUS SAMPLES OF *Platyrinchus mystaceus*

Sample (N)	Wing[1] $\bar{X}$; Range	Tail $\bar{X}$; Range	Bill length[1] $\bar{X}$; Range	Bill width[1] $\bar{X}$; Range
MALES				
bifasciatus (5)	57.94; 56.0–59.7	31.60; 29.7–32.7	6.20; 6.0–6.5	7.94; 7.5–8.3
cancromus—CE Brazil[2] (12)	53.81; 51.7–56.9	30.94; 27.2–35.0	6.31; 5.9–6.7	7.17; 6.9–7.7
mystaceus[3] (19)	53.67; 51.1–55.2	31.64; 28.5–34.7	5.61; 5.2–6.0	6.25; 5.7–6.8
E Paraná, E Sta. Catarina (7)	54.11; 51.3–56.0	31.39; 28.3–33.3	5.86; 5.3–6.1	6.62; 6.1–7.0
S Mato Grosso (2)	52.7–55.1	30.7–33.0	5.7–6.6	6.7–7.1
N Paraguay (2)	52.8–56.3	28.4–32.5	5.7–5.8	6.5–7.0
W Paraná (3)	51.0–52.7	29.5–32.6	5.5–6.0	6.0–6.4
C Paraná (3)	51.2–55.0	27.7–32.8	5.4–5.8	6.1–6.9
partridgei (3)	54.4–55.8	28.6–29.1	5.8–6.0	6.8–7.5
zamorae (8)	59.13; 55.0–62.0	32.61; 28.4–35.5	6.77; 6.3–7.4	7.11; 6.4–7.7
FEMALES				
bifasciatus (6)	52.76; 51.6–53.4	27.32; 26.3–28.8	6.50; 6.2–6.8	8.10; 7.7–8.5
cancromus—CE Brazil[2] (6)	49.98; 47.3–51.6	26.80; 24.8–28.0	6.58; 6.4–6.7	7.65; 7.1–8.0
mystaceus[3] (11)	49.32; 47.3–50.8	28.22; 25.0–29.8	5.98; 5.8–6.2	6.65; 6.0–7.0
E Paraná, E Sta. Catarina (9)	49.30; 48.0–50.4	27.09; 25.5–28.7	5.89; 5.6–6.1	6.90; 6.7–7.4
S Mato Grosso (2)	49.9–52.4	26.1–29.2	6.1–6.3	6.9–7.1
partridgei (3)	50.3–51.4	25.6–27.8	5.5–6.0	6.9–7.0
zamorae (8)	53.90; 51.7–57.4	28.55; 27.7–29.8	6.72; 6.3–7.1	7.54; 7.3–7.9

[1] Wing length = chord, bill length is from the nostril, and bill width was measured across the nostrils.

[2] Sample drawn from Maranhão, Minas Gerais, Bahia, and São Paulo.

[3] Sample drawn from NE Argentina (Misiones, Corrientes), E Paraguay, and E Rio Grande do Sul, Brazil.

about the same tail length, a shorter bill, and a distinctly narrower bill than does *P. m. cancromus* (Table 1). It is noteworthy that *P. m. bifasciatus* is like both *cancromus* and *mystaceus* in tail length, but has longer wings, and a bill about as long as that of *cancromus*, but much broader. Furthermore it is most interesting that females of all forms examined differ strikingly from males in having much shorter wings and shorter tails, but generally longer and broader bills.

The large sample from eastern Paraná and eastern Santa Catarina is more like *mystaceus* than *cancromus* in wing length and bill length, but in bill width it is intermediate between these two forms. These birds closely approach *cancromus* in coloration. The small sample from central Paraná (Porto Almeida on the Iguassú River) fits within *P. m. mystaceus* mensurally, but in dorsal coloration these birds bridge the gap between that race and *cancromus*. Three males and a female from Guayra and Porto Mendez on the Paraná River, western Paraná (Table 1) are essentially like *P. m. mystaceus*, but one of these is slightly more rufous

dorsally than Misiones specimens of that race. Specimens from Paraná and eastern Santa Catarina are hence considered intergrades between *P. m. mystaceus* and *P. m. cancromus*. An eastern Paraguay female from the upper Iguassú River (see Naumburg, 1935: 469, and map 2 [where it is rendered Yguazú]) is somewhat more rufous than is usual for *mystaceus*, but is included within that sample in the table, as it is mensurally like that form.

Four specimens from southern Mato Grosso include two from Campeiro (= Campanario) and two from the Amambahy River (southeastern corner of Mato Grosso). One of the Amambahy River specimens is somewhat rufous above, but the others are quite green (at the green extreme of variation found in Misiones birds). These birds tend to be long-billed and broad-billed; in addition all have traces of wing bars, whereas such traces are found in few specimens of *cancromus* and *mystaceus*. I tentatively consider these specimens as intergrades between *P. m. mystaceus* and *P. m. bifasciatus*; the localities they represent and the reddish back of one specimen suggest influence from *P. m. cancromus* as well.

Three specimens from northern Paraguay (Zanja Moroti, San Luis de la Sierra) also exhibit traces of wing bars; indeed, the female (A.M.N.H. no. 319796) from Zanja Moroti has pale wing bars approaching those of the more faintly barred specimens of *P. m. bifasciatus* from Chapada, Mato Grosso, the type locality of that form. Two of the three northern Paraguayan birds have bills broader than those found in the sample of *P. m. mystaceus*, but in other measurements, as well as dorsal coloration, these specimens resemble that form. I consider them nearest *P. m. mystaceus*, but tending toward *P. m. bifasciatus*.

In the course of this study it became necessary to examine the few available Bolivian specimens of *P. mystaceus*. Six specimens were borrowed for study through the courtesy of G. Niethammer (Alexander Koenig Museum, Bonn), K. C. Parkes (Carnegie Museum), R. Meyer de Schauensee (Academy of Natural Sciences of Philadelphia; A.N.S.P. below), and J. Steinbacher (Senckenberg Museum). These birds are from the subtropical Andean foothill region of Cochabamba and Santa Cruz departments at elevations from 1,300 to 6,000 feet. The suggestion that the Bolivian birds may constitute an undescribed subspecies was made anonymously in a note in a tray containing a female specimen at the Academy of Natural Sciences of Philadelphia. Bond and Meyer de Schauensee (1941: 348) pointed out some of this specimen's differences from *P. m. zamorae*. The distinctness of the Bolivian specimens was further emphasized by Niethammer (1956: 110). The Bolivian specimens comprise an undescribed subspecies to be known as

Platyrinchus mystaceus partridgei, new subspecies

TYPE.—♀, A.N.S.P. no. 135802, collected at Palmar, Yungas de Cochabamba, Bolivia, 2,600 feet elevation, on 7 July 1937 by M. A. Carricker, Jr., original number 14727. Measurements of type specimen: wing, 50.3 mm; tail, 26.7 mm; bill length, 5.7 mm; bill width, 7.0 mm (measurements described in Table 1).

DIAGNOSIS.—Throat clear white sharply bordered laterally and posteriorly; lower bill mainly or entirely black; underparts orange-yellowish, becoming olivaceous-orange toward the sides of the breast and fading to pale yellow on the abdomen; dorsally olive-green with a rusty tinge; crown dark olive; female lacking yellow crown patch, male with yellow crown patch; measurements in Table 1.

COMPARISON.—All specimens of *partridgei* have a dark lower bill, which allies this race with northern South American subspecies (*zamorae, albogularis, neglectus*). Only two specimens of the *mystaceus* subspecies group (subspecies *bifasciatus, mystaceus, cancromus*) have traces of dusky on the lower bill, while the remainder have a pale lower bill. Dorsally *partridgei* is intermediate in color between *P. m. mystaceus* and *P. m. cancromus*; it is more green and less rufous than the latter subspecies or *P. m. zamorae*. The crown is dark as in *P. m. zamorae*. The edges of the wing coverts and flight feathers are less rusty than those of *cancromus* or *mystaceus*. The sharply bordered, white throat of *partridgei* is like that of *zamorae*. Ventrally *partridgei* is richly orange, more so than all forms of *P. mystaceus;* individuals of *P. m. cancromus* approach *partridgei* in this respect, but have less olive sides. The sides of *partridgei* are less olive (lighter) than those of *zamorae*, but more olive than in races of the *mystaceus* group. Compared with *P. m. bifasciatus*, *partridgei* is more rusty above and much brighter (more orange) below. In its measurements *partridgei* approaches the smaller *mystaceus* and *cancromus*, not the larger *bifasciatus* or *zamorae* (Table 1), although there are too few specimens of *partridgei* for a detailed statistical analysis. Males of *partridgei* seem to have bills as long and broad as those of females; in *mystaceus* and *cancromus* the females tend to have longer, broader bills than males. Thus, *P. m. partridgei* is somewhat intermediate between the southern *mystaceus* group of races and subspecies occuring in northern South America, but its distinctness and unique combination of characters preclude establishing its exact relationships with other subspecies at this time.

DISTRIBUTION.—Known only from a restricted area of Bolivia; localities are: Quebrada, San Juan Mayo and Yungas de Cohabamba in the Department of Cochabamba and Cerro Hosane in the Department of

Santa Cruz. *P. mystaceus* is unrecorded from eastern Bolivia, western Paraguay, and southern Peru (Meyer de Schauensee, 1966), and hence *P. m. partridgei* has a disjunct distribution. As this species is largely subtropical I doubt that any contact exists between *partridgei* and *bifasciatus* or *mystaceus* in lowland eastern Bolivia and the western Paraguayan chaco. A contact between *partridgei* and *zamorae* is perhaps more likely, but remains to be demonstrated.

ETYMOLOGY.—I am pleased to name this new subspecies for the late William H. Partridge who contributed greatly to our knowledge of South American birds.

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