The juvenile plumage, systematic position, and range of *Synallaxis macconnelli* Chubb (Aves, Furnariidae)

by G.F. Mees

Rijksmuseum van Natuurlijke Historie, Raamsteeg 2, Postbus 9517, 2300 RA Leiden, the Netherlands

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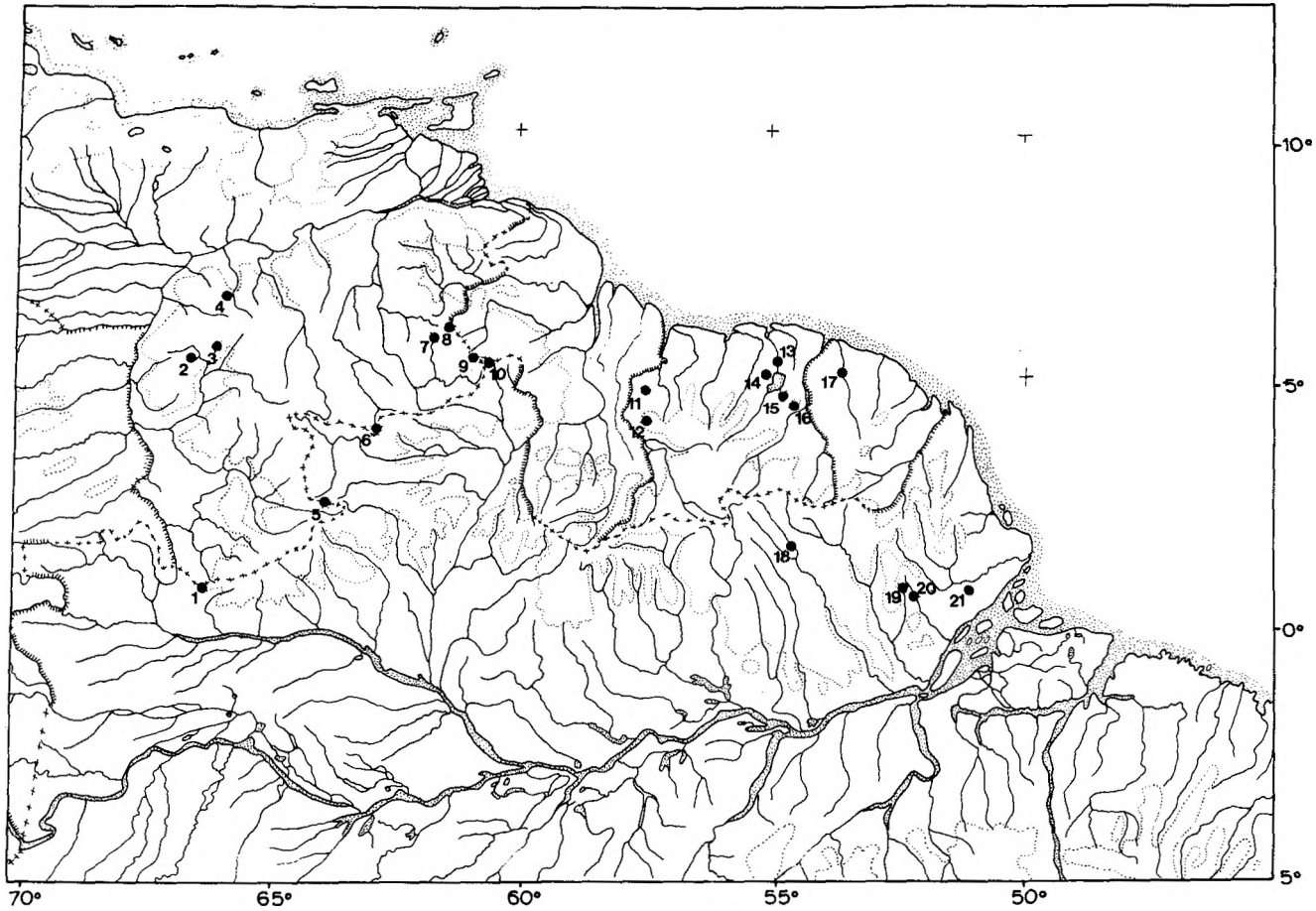
SUMMARY

It was expected that the previously undescribed juvenile plumage of *Synallaxis macconnelli* would be similar to the quite distinctive juvenile plumages of the closely related species *S. cabanisi* and *S. moesta*. However, it is strikingly different, and resembles the species' adult plumage.

S. macconnelli consists of two geographically-separated populations: one in the highlands of southern Venezuela, with an altitudinal range of 1000–1900 m, and one in the lowlands of Suriname, French Guiana, and adjacent northern Brazil, ranging from sea-level to 700 m. Tentatively, these are recognized as two subspecies: *S. m. macconnelli* in the highlands, *S. m. obscurior* in the lowlands, but the differences are slight, and the validity of *obscurior* requires confirmation.

When Vaurie (1980) separated *Synallaxis macconnelli* Chubb from *S. cabanisi* Berlepsch & Leverkühn and *S. moesta* Sclater, with either or both of which it had been held to be conspecific, he did so mainly on the basis of the number of rectrices: eight in *S. macconnelli*, ten in *S. cabanisi*. There are also eight in *S. moesta*, but the fact that in *S. moesta* the rufous of the crown does not extend over the forehead was apparently sufficient reason to give it specific status. The evidence provided by Vaurie is suggestive rather than conclusive, especially because, as he himself has shown, in some members of the genus the number of rectrices may vary from eight to ten, even within a single population. F. Vuilleumier, the editor of Vaurie's posthumous work, has commented in a note (in Vaurie, 1980: 338): "*Synallaxis moesta*, *S. cabanisi* and *S. macconnelli* can probably be considered allospecies of a single superspecies".



The distribution of *Synallaxis macconnelli*.

S. m. macconnelli. Brazil: (1) Neblina. Venezuela: (2) Cerro Camani, (3) Cerro Yavi, (4) Cerro El Negro, (5) "Frontera 2", Sierra Parima, (6) Cerro Urutani, (7) Kavanayén, Gran Sabana, (8) Cerro Ptari-tepui and Sororopán-tepui, Gran Sabana, (9) Roraima, (10) Uei-tepui.

S. m. obscurior. Suriname: (11) Baruba Kreek (km 110), (12) km 212, (13) Brokopondo, (14) Brownsberg, (15) Langetabbetje, (16) Lely-Gebergte. French Guiana: (17) Tamanoir. Pará, Brazil: (18) Aramapucu. Amapá, Brazil: (19) Igarapé Novo, (20) Boa Fortuna, igarapé Rio Branco, (21) Estrada de Ferro-Amapá (km 125).

Vaurie described the immature plumage of *S. moesta* as differing from that of the adult: "by being uniformly dark brown, or dark sooty brown above, without a rufous crown, and more grayish or umbraceous below, with the tips and margins of the feathers faintly darker, producing a vague mottled appearance". He noted that the juvenile plumage of *S. cabanisi* is similar to that of *S. moesta*. He did not examine juveniles of *S. macconnelli*, but presumed that they would be similar to juveniles of *S. moesta* and *S. cabanisi*, "as all three species are certainly closely related".

Material of *S. macconnelli obscurior* Todd, collected in Suriname, includes a juvenile which has the rectrices still growing out, and therefore is only just past the fledging stage. Photographs and notes on a juvenile specimen of the nominate race, *S. m. macconnelli*, in the Phelps collection, were also made available to me. They show that, contrary to Vaurie's expectation, the juvenile plumage is entirely different from that of *S. moesta* and *S. cabanisi*. This difference in juvenile plumage lends strong support to Vaurie's treatment of *S. macconnelli* as a separate species, and even suggests that the relationship with the other two species is less close than Vaurie and Vuilleumier surmised.

Description of the juvenile plumage of *S. macconnelli obscurior* (♀, 25.VIII. 1972, Brownsberg, Suriname, ca. 460 m, RMNH no. 72744). Upper parts similar to those of the adult, but a trifle lighter and browner; hence the rufous of the head (forehead, crown and nape), wings and tail is fully developed (but of a slightly brighter rufous, less chestnut than in the adult). Feathers of the chin and throat grey, with broad greyish white margins, which give the effect of faint grey and white barring, quite different from the chin and throat of the adult birds, in which these feathers are dull black with grey margins, giving the effect of a semi-concealed, poorly-defined, black throat patch. Lores and cheeks lighter and slightly browner than in the adult, and lower under parts, from the upper breast downwards, distinctly browner, less grey. Because of the brownish tinge, the bird resembles adults of the nominate subspecies, which are only a trifle browner on these parts. Iris dark grey (in the adult orange-brown).

Description of the juvenile plumage of *S. m. macconnelli* (♂, 18.XII.1970, Cerro Neblina, Brazil, 1500 m, Coll. Phelps no. 70461). This specimen differs from an adult *S. m. macconnelli* exactly as *S. m. obscurior*, described above, differs from the adult of its subspecies. Iris "castanho".
Note: The specimen from "Frontera 2", listed as ♀ juv. by Phelps (1972: 28; Coll. Phelps no. 71379), for the loan of which I asked originally, is actually adult (Aveledo, in litt.), but, fortunately, the above-mentioned juvenile, not previously published, was available.

Description of the juvenile plumage of *S. moesta obscura* Chapman (♂, 30.III.1967, Mocoa, Putumayo, Colombia, 580 m, FM no. 282050, rectrices growing out; ♀, 23.V.1967, same locality, FM no. 282049). Head without rufous: forehead, crown and nape concolorous with the back. Rufous chestnut confined to the wings (wing-coverts and edges of the remiges) and tail. Feathers

of the chin and throat grey, with broad white margins, giving the effect of grey and white barring, a little more distinct than in *S. macconnelli obscurior*. Lower under parts rather similar to the juvenile *S. m. obscurior*, but slightly darker, the feathers with indistinct dark margins (as mentioned by Vaurie), which are practically absent in *obscurior*.

Description of the juvenile plumage of *S. cabanisi* (♂, 5.V.1969, Conchapen Mt., Yurinaqui Alto, Junin, Peru, 4500 ft, FM no. 285104; ♀, 28.X.1983, Hda. Amazonía, Madre de Dios, Peru, 520 m, FM no. 315560). Upper parts similar to those of juvenile *S. moesta obscura* (a trifle lighter). Feathers of the chin and throat grey, with white shafts and centres, or a broad white bar across, but barring of the throat less distinct than in *S. moesta*. The lower under parts are perhaps a little lighter than in *S. moesta* and the dark margins to the feathers are very faint.
Note: Both specimens examined have a few rufous feathers on the crown, the beginning of the moult into the adult plumage.

In the descriptions, not too much attention must be paid to differences between the throat-feathers: juveniles of all three species have them grey and white or whitish (as against black and grey in the adults), but the exact colour of a feather depends on its size and position. Feathers on the chin are smallest and seem lightest. In *S. macconnelli* the pale greyish white colour is on the margin, or almost so; in *S. moesta* the white is clearer, and in the larger feathers this colour is definitely subterminal, the tips being grey; the same is the case in *S. cabanisi*, but that species has the grey paler, so that the contrast is less, and the white is expanded on and along the shafts.

Vaurie (1980) referred to the plumages described above as the Immature Plumage. I prefer to use the term Juvenile Plumage, as fledglings certainly have it, and I do not know how long this plumage is retained, and when a bird may be called adult. In this connection, it is of interest to mention that I have personally collected and prepared eight specimens of *S. m. obscurior* (including the fledgling described above), seven skins and one skeleton: in one specimen the skull condition was not noted, but all others had incompletely ossified skulls, with at least two large foramina, one in each frontal. Some of these specimens had moderately-developed gonads. In view of the acknowledged longevity of tropical forest birds, I regard it as unlikely that all these birds would have been immature: probably, ossification of the skull in this species is at best a slow process, and cannot be used to estimate age.

Although this paper is primarily about the status of *S. macconnelli*, two more points deserve mention here. The first is that, as previously noted by Zimmer (1936: 11), but contrary to what Vaurie (1980: 94, 108) says, two males, type and paratype of *S. cabanisi fulviventris* Chapman (a subspecies not recognized by Vaurie), do have a band of the same greenish brown as the back on the forehead (AMNH nos. 137281, 148505); a third bird, the female paratype of *fulviventris*, does not (AMNH no. 148504). All three seem fully adult. The second point is that there is a clear difference between *S. moesta* on the one

hand, and *S. cabanisi* and *S. macconnelli* on the other hand, in the structure of the rectrices: in *S. moesta* these have a stiffened shaft, and the barbs are widely spaced, the barbules being poorly developed, so that one can see through the feather; in the other two species the shafts are less stiff, and the barbs are closer together, the barbules well-developed, forming a denser, albeit not quite closed vane. Apparently, the three species differ less than Vaurie thought in some characters, but more in others.

Naturally, the various changes in opinion on specific limits have found their repercussion in nomenclature. The form inhabiting the Guianas was originally described by Todd (1948) as *S. cabanisi obscurior*. This was changed to *S. moesta obscurior* by Mayr & Phelps, Jr. (1967), and changed to *S. macconnelli* by Vaurie (1971, without explanation; 1980).

The species *S. macconnelli* as defined by Vaurie, has been divided into up to four subspecies, viz., the nominate race, *yavii* Phelps & Phelps, Jr., *griseipectus* Zimmer & Phelps, and *obscurior*. The validity of all, except the nominate subspecies, has from time to time been questioned. Vaurie, who in his revision has disposed radically (perhaps too radically) of subspecies, commented on *yavii*, that it was: "known only from a single specimen taken at Cerro Yavi, about 80 km north of Cerro Camani; the specimen, I find, is only very faintly paler than nominate *macconnelli*". The type locality is now almost surrounded by localities from where the nominate race has been recorded and, until the Cerro Yavi population becomes better known, acceptance of *yavii* should remain in abeyance.

Phelps, Jr. (1972: 28) has withdrawn the name *S. cabanisi griseipectus* as a synonym of nominate *macconnelli*. Vaurie (1980: 101), on the other hand, acknowledged that: "*S. m. griseipectus* ... together with *obscurior* is distinctly more gray below, less brownish than nominate *macconnelli*, and also duller and somewhat darker throughout". Just the same, he would place both names in the synonymy. Having been unable to examine topotypical material of *griseipectus*, I cannot give a definite opinion on either point of view, but the type localities of both *macconnelli* and *griseipectus* are in the highlands of La Gran Sabana, and no more than 100 km apart. The presence of two subspecies in such a small area does not make much sense zoogeographically, and therefore I follow both authors mentioned above in regarding *griseipectus* as insufficiently differentiated for recognition. Most of the extant topotypical material of nominate *macconnelli* (from Mt. Roraima) was collected about a century ago, and some discoloration (from grey to brownish) may have taken place, and be partly responsible for the differences noted. It should also be kept in mind that juveniles of the species (up to what age?) differ by having slightly browner under parts than adults, so that a certain amount of individual variation is to be expected.

There remains the subspecies *obscurior*, which was also rejected by Vaurie. In its original description it was characterized as resembling *S. "cabanisi" macconnelli* of Roraima, "but general coloration darker and grayer;

underparts dull neutral gray, the flanks with a slight brownish wash (instead of hair brown to drab); upperparts more grayish, less brownish; and size smaller ... The smaller size and grayish general coloration set it off as an easily separable race''. The measurements provided by Todd are as follows: wing of 3 ♂ 56, 58, 59 mm, tail 61, 67, 68 mm, wing of 1 ♀ 56 mm, tail 61 mm. He failed to give measurements of *macconnelli*. Vaurie (1980: 102) was not convinced that a significant difference exists in measurements: ''it is highly probable that any difference which may exist is slight and average only''. The material measured by me supports Vaurie's suspicions; wing of *macconnelli*: 4 ♂ 62–64 mm, 3 ♀ 59–63 mm and *obscurior*: 4 ♂ 60–63 mm, 3 ♀ 59–62½ mm; tail of *macconnelli*: 4 ♂ 55, 70, 71, 74 mm, 3 ♀ 64, 66, 74 mm and *obscurior*: 4 ♂ 59, 61½, 66, 68 mm, 3 ♀ 63, 63, 65 mm. Admittedly, there seems to be some difference in the tail-length, but the individual variation is considerable. The specimens of *S. m. macconnelli* examined and measured by me, all from Mt. Roraima, are: 2 ♂, 2♀, X/XI. 1881 (BM nos. 89.5.14.141 and 142, 89.5.20.128 and 129); ♀, 18.V.1883 (AMNH no. 523396); ♂, 17.X.1883 (AMNH no. 523394); ♂, X.1898 (AMNH no. 230198). The seven specimens of *S. m. obscurior* are all from Suriname, 1965–1981 (RMNH nos. 37098, 38192, 38220, 80371, 80372, 80525, 80985).

S. m. macconnelli is, on present evidence, a mountain bird, with a recorded altitudinal range of 1000–1900 m (de Schauensee & Phelps, Jr., 1978: 189). Until recently, *S. m. obscurior* was known from its type series only, in the lowlands of French Guiana. Vaurie referred to the relatively large gap in distribution between the nominate race and *obscurior* (Vaurie, 1980: map 12), but the latter is now known to be widely distributed in Suriname, and has been recorded from several localities in Amapá (Novaes, 1974: 84) and from northern Pará (Novaes, 1980: 37–38), which suggests a large and more or less continuous range. In Suriname, I have found it in localities ranging from little above sea-level to 700 m (the highest level visited): where there are higher mountains, it may well occur higher, and the apparent altitudinal separation between *obscurior* and the nominate race may be not as absolute as it seems to be. It is also likely that the absence of records from Guyana (British Guiana) is due to the vagaries of collecting (considering that *obscurior* is fairly common in the extreme West of Suriname, near the Guyanan border).

In summary: *S. m. obscurior* differs from *S. m. macconnelli* by being slightly greyer, less brownish, especially on the under surface, although this may at least partly be due to the material of *S. m. macconnelli* that could be examined being old and perhaps discoloured. Any difference in size is negligible. *S. m. obscurior* has been found from sea-level to 700 m, and *S. m. macconnelli* from 1000–1900 m. For the moment, I consider it justified to retain *obscurior*, but its validity or otherwise requires further study.

MATERIAL AND ACKNOWLEDGMENTS

Specimens examined and described are from the following collections: American Museum of Natural History, New York (AMNH); British Museum (Natural History), Tring (BM); Field Museum of Natural History, Chicago (FM); Rijksmuseum van Natuurlijke Historie, Leiden (RMNH), and the Phelps collection, Caracas.

A direct loan from the Phelps collection was not possible, but a juvenile (described) and an adult specimen of *S. m. macconnelli* were carried by hand to New York by Dr. R. Aveledo, and were there photographed and compared with specimens of *S. cabanisi* and *S. moesta* by Mrs. M.K. LeCroy. Much as I regret having been unable to make the comparisons personally, delegating the work meant that I was able to benefit from the valuable notes provided by Mrs. LeCroy. Furthermore, Dr. Aveledo sent me a copy of all entries of *S. macconnelli* in the register of specimens of the Phelps collection: this has helped me to make the map of its distribution more complete. For the loan from the British Museum, I am indebted to Mr. I.C.J. Galbraith, for the loan from the Field Museum to Dr. J.W. Fitzpatrick.

REFERENCES

Mayr, E. & W.H. Phelps, Jr. - The origin of the bird fauna of the South Venezuelan highlands. Bull. Amer. Mus. Nat. Hist. **136**, 269-327 (1967).

Novaes, F.C. - Ornitologia do Território do Amapá I. Publ. Avuls. Mus. Goeldi 25, 1-121 (1974).

Novaes, F.C. - Observações sobre a avifauna do alto curso do Rio Paru de Leste, Estado do Pará. Bol. Mus. Goeldi (n.s.), Zool. **100**, 1-58 (1980).

Phelps, Jr., W.H. - Adiciones a las listas de aves de Sur America, Brasil y Venezuela y notas sobre aves Venezolanas. Soc. Venez. Cienc. Nat. Bol. **30**, 23-40 (1972).

Schauensee, R.M. de & W.H. Phelps, Jr. - A guide to the birds of Venezuela, i-xxii, 1-424 (1978).

Todd, W.E.C. - Critical remarks on the oven-birds. Ann. Carnegie Mus. **31**, 33-43 (1948).

Vaurie, C. - Classification of the ovenbirds (Furnariidae), 9-46 (1971).

Vaurie, C. - Taxonomy and geographical distribution of the Furnariidae (Aves, Passeriformes). Bull. Amer. Mus. Nat. Hist. **166**, 1-357 (1980).

Zimmer, J.T. - Studies of Peruvian birds. XX. Notes on the genus *Synallaxis*. Amer. Mus. Novit. **861**, 1-26 (1936).