

in an odd biogeographic pattern, a similar range disjunction between northern Venezuela and the cerrado region of Brasil exists in *Basileuterus flaveolus*.

The songs of both *reiseri* and *urichi* are apparently unknown. Comparisons of their songs with those of *virescens* when they become available will help clarify the relationships within this group.

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References:

- Hellmayr, C. E. 1905. [A new species of tyrant from Brazil]. *Bull. Brit. Orn. Cl.* 15: 73.
Hellmayr, C. E. 1927. Catalogue of the Birds of the Americas. Part V. *Field Mus. Nat. Hist., Zool. Ser.* Vol. 13.
Meyer de Schauensee, R. & Phelps, W. H., Jr. 1978. *A Guide to the Birds of Venezuela*. Princeton Univ. Press.
Pinto, O. M. de O. 1944. *Catalogo das Aves do Brasil*, Pt 2. Dept. Zool., Sec. Agricult., Indust. e Commercio, Sao Paulo.
Traylor, M. A., Jr. 1979. Tyrannidae. in M. A. Traylor Jr. (ed.), *Checklist of Birds of the World*, Vol. 8. Harvard Univ. Press.
Traylor, M. A., Jr 1982. Notes on tyrant flycatchers (Aves: Tyrannidae). *Fieldiana, Zool.* no. 13.
Zimmer, J. T. 1955. Further notes on tyrant flycatchers (Tyrannidae). *Am. Mus. Novit.* No. 1749.

Address: Douglas F. Stotz, Bird Division, Field Museum of Natural History, Roosevelt Rd. at Lakeshore Dr., Chicago, IL 60605, U.S.A.

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Two new subspecies of *Formicivora serrana* (Hellmayr) from southeastern Brazil, and notes on the type locality of *Formicivora deluzae* Ménériés

by L. P. Gonzaga & J. F. Pacheco

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The Serra Antbird *Formicivora serrana* was described by Hellmayr (1929a: 377) on the basis of 8 specimens from Minas Gerais and Rio de Janeiro, Brazil, correcting an error he had made some years earlier (Hellmayr 1924) and followed by Snethlage (1927), that involved the misapplication of the names *F. deluzae* Ménériés, 1835 and *F. nigricollis* Ménériés, 1835 to the bird which was later given the name *serrana*.

Formicivora deluzae is known only from the type in the Leningrad Academy of Sciences, a female reported to have been collected (our translation) "not far from the Serra dos Órgãos in the lands of Mr Deluze, a Frenchman established near Rio de Janeiro" (Ménétriés 1835: 485). This specimen was considered to be "barely distinguishable from the female of *Neorhophias* [= *Formicivora*] *grisea grisea*" (Hellmayr 1929a), while Naumburg (1939), commenting on *F. deluzae*, wrote that "it is rather singular that the bird has never been found again in the vicinity of Rio de Janeiro, and this locality is likely to be wrong, since mistakes of this kind occur in Ménétriés' paper in one or two other cases". Hellmayr (in Naumburg 1939) supported this speculation, writing "I am nearly convinced the locality is wrong and *F. deluzae* merely [a] *grisea* female". Despite these opinions, and regardless of the validity of *deluzae*, the family Deluze indeed owned a farm (Fazenda Constância) at Teresópolis, 60 km northeast of Rio de Janeiro on the Serra dos Órgãos, in the early nineteenth century (cf. Ferrez 1970: 70), and we see no reason for this not being the correct type locality of the bird originally indicated by Ménétriés, whatever its identity. There is, also, at least one record (by voice) of *F. grisea* from Teresópolis, made by H. Sick (pers. comm. 1988) in late 1949, and further field work there should be able to confirm or otherwise the existence of *F. deluzae*. The only other known record of *F. grisea* in the state of Rio de Janeiro (R.J.) is from Macaé, on the northern part of its coast, in 1988 (J.F.P.). Pinto (1978) quotes *deluzae* as a subspecies of *F. grisea* and gives its range, without foundation, as "southern Brazil, on the Atlantic strip of the state of Rio de Janeiro (and possibly Espírito Santo)".

A ♂ specimen in the Museu Nacional do Rio de Janeiro (MNRJ 26540), collected by F. C. Novaes in the municipality of Cabo Frio (R.J.) on 27 March 1951 bears a label written "near *Formicivora grisea*". This led us initially to suppose that Cabo Frio could harbour a population of *F. deluzae*, but a comparison, kindly made by V. M. Loskot of colour slides of a female *Formicivora* specimen collected by ourselves in Cabo Frio with Ménétriés type of *F. deluzae*, dismissed that possibility. In addition, continued field work in the littoral and other parts of R.J. served to convince us that we were actually dealing with new populations of *F. serrana*, which demanded further comparative study of specimens deposited in the MNRJ and a re-evaluation of the taxonomy of the species. We conclude that it is necessary to recognize 3 subspecies of the Serra Antbird, 2 of them new. The following is a brief review of geographic variation in the species. The subspecies are arranged geographically here from north to south (Fig. 1). Capitalized colour names with numbers refer to Smithe (1975, 1981).

Formicivora serrana serrana

Neorhophias serrana Hellmayr, 1929, *Field Mus. Nat. Hist. Publ.*, Zool. Ser. 12(18): 377, in footnote (part, Minas Gerais and Espírito Santo, Brazil). Type locality: Sete Lagoas, Minas Gerais.

Diagnosis. Originally given by Hellmayr (1929a) in the first description of the species, distinguishing it from *F. m. melanogaster*: "upper parts mars brown (instead of brownish slate); tertials along outer web narrowly

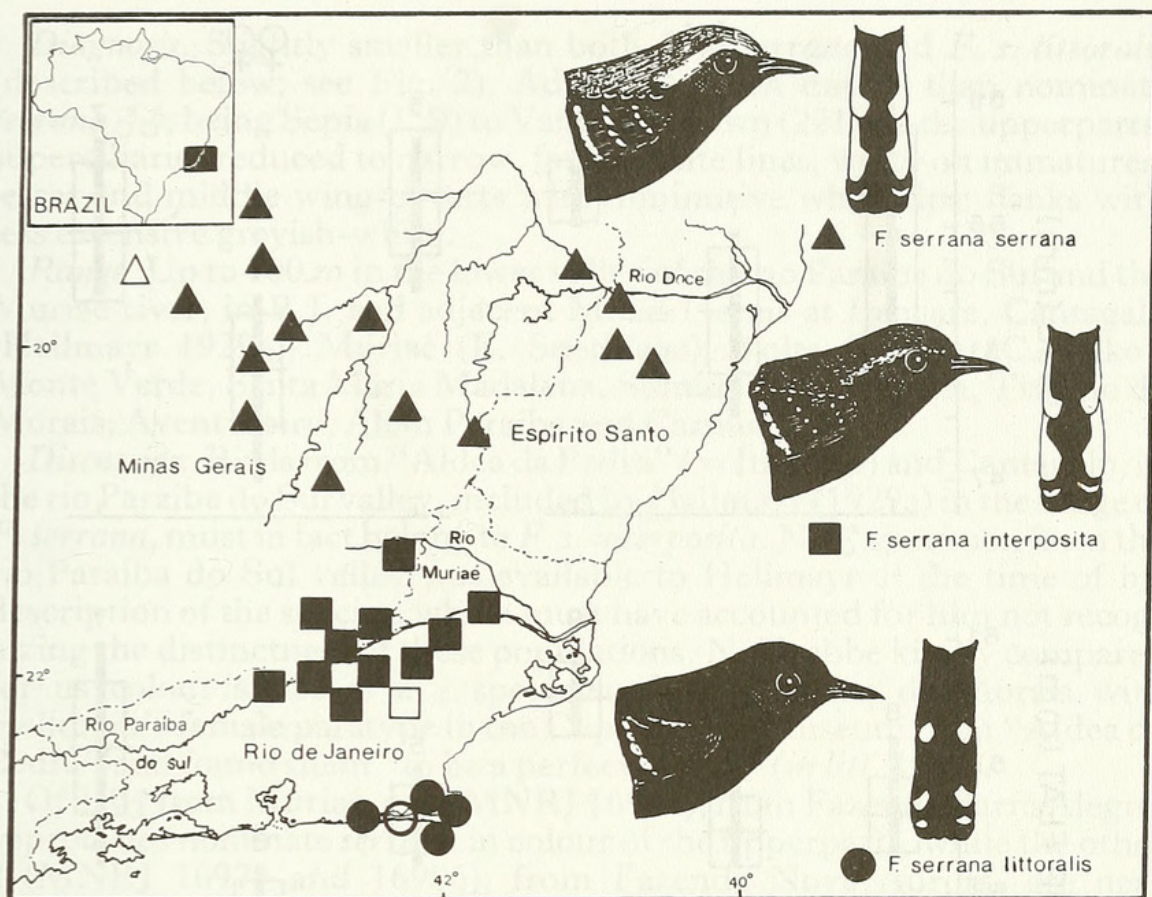


Figure 1. Distribution in southeastern Brazil of *Formicivora serrana*, including 2 new subspecies, *F. s. interposita* and *F. s. littoralis*. Open symbols indicate type localities. Heads and tails of adult males represented.

fringed with cinnamon-brown or russet (instead of broadly edged with white); [white] superciliaries much widened posteriorly; males with sides of breast and flanks smoke grayish, the latter sometimes suffused with whitish or buffy brown; female underneath deeper buff; bill much stronger and stouter”.

Females of all presently proposed subspecies are virtually identical, denoting lack of geographical heterogynism (*sensu* Hellmayr 1929b) in the species.

Range. Up to 1000 m in serras of Minas Gerais: rio Bacalhau, Lagoa Santa, Sete Lagoas, Vargem Alegre, rio Gualaxo, rio Matipó, rio Sacramento, serra do Caparaó, Resplendor, rio Piracicaba, rio Doce, Fazenda Boa Esperança (Pinto 1952), Conceição do Mato Dentro (E. Willis and Y. Oniki), Santa Bárbara (A. Brandt), Viçosa (Monteiro *et al.*, 1983), serra do Caraça (Carnevali 1980); and in adjacent Espírito Santo: Baixo Guandu (Snethlage 1927), Jatiboca and Santa Teresa (H. Sick).

***Formicivora serrana interposita* subsp. nov.**

Neorhophias serrana Hellmayr, 1929, *Field Mus. Nat. Hist. Pub.*, Zool. Ser. 12(18): 377, in footnote (part, “Aldea da Pedra” (= Itaocara) and Cantagalo, Rio de Janeiro, Brazil).

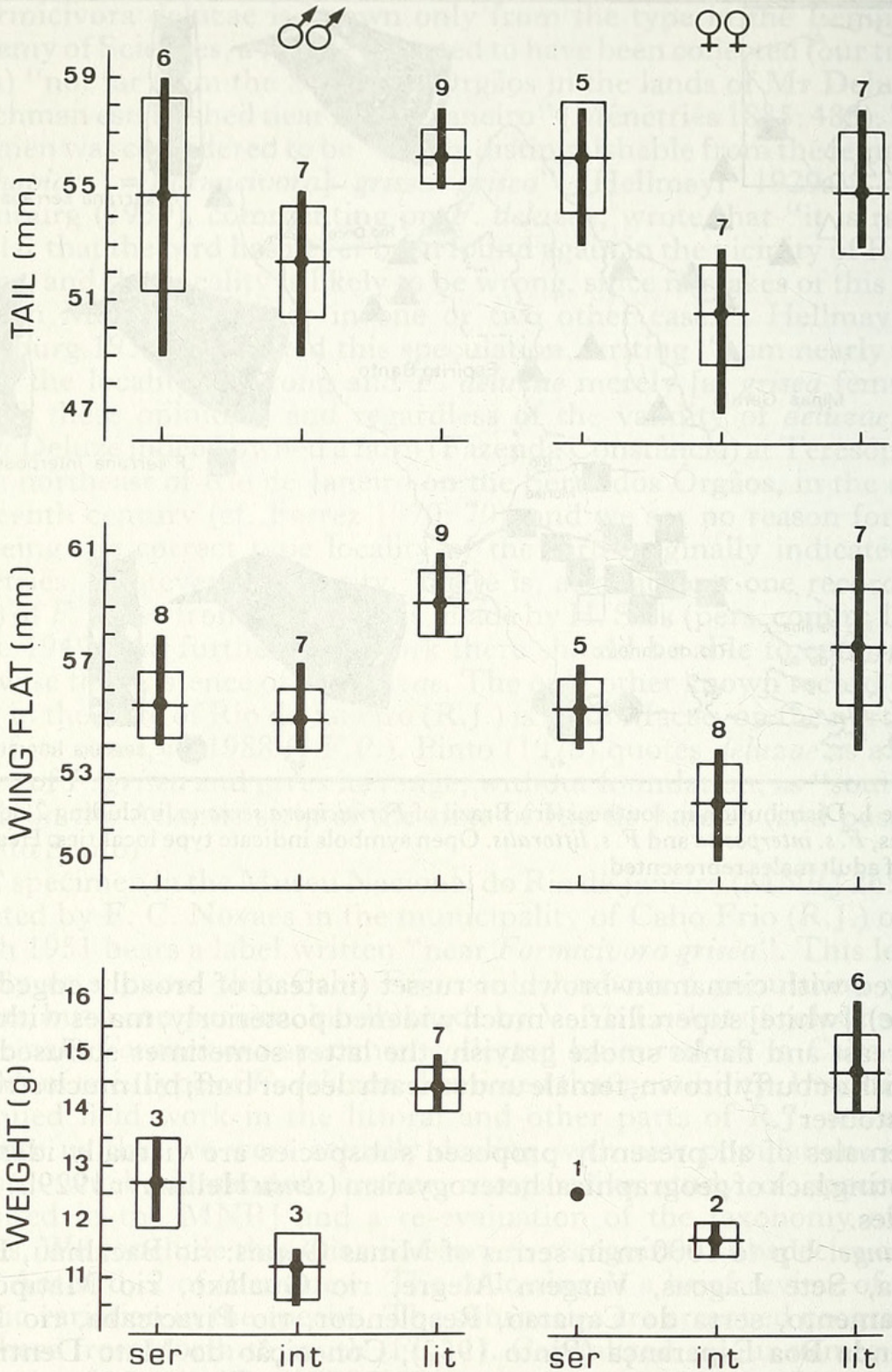


Figure 2. Measurements and weights of *Formicivora serrana* subspecies: ser = *F. s. serrana*; int = *F. s. interposita*; lit = *F. s. littoralis*. The horizontal line represents the mean, the vertical line the range, and the rectangle one standard deviation on each side of the mean. Numbers above ranges are sample sizes.

Holotype. Museu Nacional do Rio de Janeiro No. 36750. Active adult ♂ (gonads 6 mm, skull ossified) from Fazenda São Geraldo (22°06'15"S, 42°14'03"W), Trajano de Moraes, Rio de Janeiro, Brazil, elevation c. 600 m; collected 21 Nov 1987 by L. P. Gonzaga & J. F. Pacheco.

Diagnosis. Slightly smaller than both *F. s. serrana* and *F. s. littoralis* (described below; see Fig. 2). Adult ♂♂ much darker than nominate *serrana* ♂♂, being Sepia (119) to Vandyke Brown (221) on the upperparts; superciliaries reduced to narrow, faulty white lines, wider on immatures; lesser and middle wing-coverts with diminutive white tips; flanks with less extensive greyish-white.

Range. Up to 700 m in the lower valley of the rio Paraíba do Sul and the Muriaé river, in R.J. and adjacent Minas Gerais at Itaocara, Cantagalo (Hellmayr 1929a), Muriaé (E. Snethlage), Volta Grande (C. Lako), Monte Verde, Santa Maria Madalena, Sumidouro, Sapucaia, Trajano de Morais, Aventureiro, Além Paraíba and Carmo (J.F.P.).

Discussion. Birds from "Aldea da Pedra" (= Itaocara) and Cantagalo, in the rio Paraíba do Sul valley, included by Hellmayr (1929a) in the range of *F. serrana*, must in fact belong to *F. s. interposita*. No ♂ specimen from the rio Paraíba do Sul valley was available to Hellmayr at the time of his description of the species, which must have accounted for him not recognizing the distinctness of these populations. N. Krabbe kindly compared for us colour slides of a ♀ specimen from Trajano de Morais with Hellmayr's female paratype in the Copenhagen Museum from "Aldea da Pedra" and found them "to be a perfect match" (*in litt.* 1988).

Of 3 ♂♂ from Muriaé, one (MNRJ 16982), from Fazenda Barra Alegre, approaches nominate *serrana* in colour of the upperparts, while the other 2 (MNRJ 16979 and 16986), from Fazenda Nova Aurora, are near matches for specimens of *interposita* from Trajano de Morais. When more specimens are available from the Muriaé/Viçosa region, they may be found to represent a transitional population between these subspecies.

Etymology. Latin *interposita*, interposed; referring to the intermediate position of the range of this subspecies, between *F. s. serrana* and *F. s. littoralis*.

Formicivora serrana littoralis subsp. nov.

Holotype. Museu Nacional do Rio de Janeiro No. 36751. Active adult ♂ (gonads 4 and 7 mm, skull ossified) from Maçambaba beach (22°55'45"S, 42°13'35"W), Arraial do Cabo, Rio de Janeiro, Brazil, near sea level; collected 29 Oct 1989 by L. P. Gonzaga & J. F. Pacheco.

Diagnosis. Slightly larger than both nominate *serrana* and *interposita* (Fig. 2); white on the tail restricted to the tips of the rectrices. Adult ♂♂ similar to *interposita* ♂♂ in dark colouration of the upperparts and flanks but lacking white superciliaries; white tips of lesser and middle wing-coverts diminutive or lacking.

Range. Confined to restinga and related vegetation along the coast in the municipalities of Cabo Frio, São Pedro da Aldeia, Arraial do Cabo, Araruama and Saquarema, and offshore islands (ilha Comprida, ilha de Cabo Frio), in R.J. Its apparent absence farther inland and north of Peró dunes (22°50'S), Cabo Frio, is attested by field work in several other localities, but its range spreads from Arraial do Cabo westwards through the Maçambaba region to Jaconé beach (42°40'W) in the municipality of Saquarema. It was not found, despite intensive search, farther west in the Maricá region in apparently suitable habitat.

Discussion. This subspecies appears to represent an isolated marginal relict at the southern extremity of a formerly continuous range of the species, since a distinct clinal variation in colour is evident between the 3 subspecies recognized here.

Field work showed that voices of birds from the coast, the rio Paraíba do Sul valley and Minas Gerais were virtually the same, and that play-back of the song recorded in Cabo Frio elicited response by birds in Trajano de Moraes, the type locality of *F. s. interposita*. Having also in mind the similarity of females, we provisionally prefer to give *littoralis* subspecific status alongside *interposita* and *serrana*, although its present geographical isolation along with the quite distinct morphological features of the ♂♂ and habitat could well be taken into account in allowing *littoralis* specific status.

Etymology. Latin *littoralis*, littoral; referring to the range of the subspecies, restricted to a small number of coastal localities.

Additional remarks

Like others of their genus, Serra Antbirds are relatively common inhabitants of shrubby vegetation, where they keep low in the foliage, foraging on arthropods mainly to 1–2 m from the ground. Another species observed at both *F. s. interposita* and *F. s. littoralis* type localities was the southeastern Brazilian endemic Hangnest Tody-Tyrant *Hemitriccus* (= *Idioptilon*) *nidipendulus*, which is one of the commonest birds in the restinga.

Response from play-back of *F. serrana* vocalizations was usually strong and enabled us to collect several individuals of both sexes, including an immature male *littoralis* on 19 January 1990, which showed no gonadal enlargement and only partial ossification of the skull. This bird's plumage looked remarkably like that of *F. s. serrana* adult males. Like all adults that responded to play-back, it approached the sound source and sang, but seldom left thickets, being reluctant to cross even trail-sized openings. The male's song is a series of about 4 "chop" notes per second. While singing, the bird perches upright on a twig, bobbing the tail, which is held slightly spread, following the rhythm of the emission. Other calls, uttered by both males and females, include a loud, sharp "kee-ip" repeated every 1–4 seconds, or a series of 2–4 such notes, associated at times with a short rattle, and a series of about 2–20 "yeah" notes ascending in pitch and slowing slightly. The latter call was often emitted in response to play-back or other disturbance.

The discovery of *F. s. littoralis* extends the known range of *F. serrana* down to sea level, where it is seemingly restricted to bromeliad/cactus-rich restinga scrub growing on sand bars and other scrub vegetation on coastal hillsides. No other bird is known to show a similar pattern of distribution in southeastern Brazil (Fig. 1). *F. s. littoralis* is also the only bird which may be considered typical for the restinga. In this habitat, we found it to occur at quite high densities over a relatively large area in the Maçambaba region. On the other hand, though the very distinct littoral population can tell us more about the ecology and origins of the restinga, real estate onslaught in the region raises serious questions about its continued existence there.

Specimens examined

F. s. serrana (13). MINAS GERAIS: Fazenda Taveira, Mariana (4); ESPÍRITO SANTO: Fazenda da Serra, Baixo Guandu (4), Santa Teresa (2), Jatiboca (3).

F. s. interposita (15). MINAS GERAIS: Fazenda Nova Aurora, Muriaé (4), Fazenda Barra Alegre, Muriaé (3), Fazenda Pombal, Volta Grande (3). RIO DE JANEIRO: Fazenda São Geraldo, Trajano de Moraes (5) (including type).

F. s. littoralis (18). RIO DE JANEIRO: praia da Concha, Cabo Frio (5), ilha de Cabo Frio (4), ilha Comprida (1), Arraial do Cabo (3), restinga da Maçambaba (5) (including type).

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References

- Carnevali, N. 1980. Contribuição ao estudo da ornitofauna da Serra do Caraça, Minas Gerais. *Lundiana*, Belo Horizonte, 1: 88–98.
- Ferrez, G. 1970. *Colonização de Teresópolis. À sombra do Dedo de Deus. 1700–1900. Da fazenda March a Teresópolis*. Rio de Janeiro: Departamento de Assuntos Culturais—M.E.C. (Publ. do IPHAN 24).
- Hellmayr, C. E. 1924. Catalogue of birds of the Americas. *Field Mus. Nat. Hist. Publ.*, Zool. Ser. 12(13), Part 3: 189–190.
- Hellmayr, C. E. 1929a. A contribution to the ornithology of northeastern Brazil. *Field Mus. Nat. Hist. Publ.*, Zool. Ser. 12(18): 235–501.
- Hellmayr, C. E. 1929b. On heterogynism in Formicarian birds. *J. Orn.* 77 (suppl.): 41–70.
- Ménétriés, E. 1835. Monographie des Myiothères. *Mém. Acad. Sci. St Petersburg* (6th series) III (2): 484–485, pl. 5.
- Monteiro, A. R., de Mattos, G. T. & Pontes, J. L. 1983. Avifauna observada e identificada no município de Viçosa, Minas Gerais, Brazil. *Experientiae*, Viçosa, 29(3): 31–47.
- Naumburg, E. M. B. 1939. Studies of birds from eastern Brazil and Paraguay, based on a collection made by Emil Kaempfer. *Bull. Amer. Mus. Nat. Hist.* 76: 231–276.
- Pinto, O. 1952. Súmula histórica e sistemática da ornitologia de Minas-Gerais. *Arqvos Zool. S. Paulo* 8: 1–52.
- Pinto, O. M. de O. 1978. *Novo Catálogo das Aves do Brasil*, primeira parte. São Paulo: Empresa Gráfica da Revista dos Tribunais.
- Smithe, F. B. 1975, 1981. *Naturalist's Color Guide*. New York: Amer. Mus. Nat. Hist.
- Snethlage, E. 1927. Algumas observações sobre pássaros raros ou pouco conhecidos do Brasil. *Bol. Mus. Nac. R. Jan.* 3(3): 60–64.

Addresses: L. P. Gonzaga, UFRJ, Instituto de Biologia, Departamento de Zoologia, Cidade Universitária, 21941 Rio de Janeiro, RJ, Brazil. J. F. Pacheco, Rua Gustavo Augusto de Rezende 570 Fdos. 6 ap. 102, 21931 Rio de Janeiro, RJ, Brazil.



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