

# CHERRIE'S SPINETAIL (*SYNALLAXIS CHERRIEI* GYLDENSTOLPE) (AVES: FURNARIIDAE) IN CARAJÁS AND GOROTIRE, PARÁ, BRAZIL

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*RESUMO.* *Synallaxis cherriei* Gyldenstolpe (Aves: Furnariidae) é pássaro raro em coleções, conhecido por poucos espécimes provenientes do oeste da Amazônia. Aqui relatamos duas novas populações da espécie, encontradas na Serra dos Carajás e Gorotire, Pará, Brasil, ampliando a distribuição uns 1.200 km para o leste. No oeste da Amazônia, a espécie se encontra em floresta alta, numa faixa altitudinal de 580 a 1.100 m; no Pará, ocorre em capoeiras maduras e borda de mata, em altitudes entre 200 e 400 m. Em Carajás confirmamos sua simpatia sintópica com *Synallaxis rutilans*, resolvendo a controvérsia sobre a relação taxonômica entre essas espécies. Apresentamos observações sobre o comportamento e vocalizações e dados sobre 10 espécimes de *S. cherriei* da coleção do Museu Paraense Emílio Goeldi. A espécie apresenta grande variação individual, tornando difícil a avaliação da diferenciação geográfica acusada por vários autores. Apresentamos hipótese de que as populações de altitude no oeste da distribuição sejam diferentes daquelas do leste, o que só poderá ser testado com o exame de material comparativo depositado em museus estrangeiros.

*ABSTRACT.* *Cherrie's Spinetail, Synallaxis cherriei* Gyldenstolpe (Aves:

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*Furnariidae*) is a bird rare in museum collections, known from only 13 specimens from western Amazonia. Here we report two newly discovered populations of Cherrie's Spinetail from the Serra dos Carajás and Gorotire, Pará, Brazil, 1200 km east of the closest previous record. In western Amazonia, the species is found in high rain forest at altitudes from 580 to 1100 m, while in Pará it occurs in maturing second growth and forest edge, at altitudes from 200 to 400 m. In Carajás we verified syntopic sympatry between *S. cherriei* and *S. rutilans*. Observations on behavior and vocalizations are reported, and data on 10 new specimens of *cherriei* in the Museu Goeldi collections are presented. The Pará population demonstrates considerable individual plumage variation, making it difficult to evaluate geographical variation in the species. We present the hypothesis that lowland populations of *cherriei* from Brazil may be subspecifically distinct from those at higher altitude in Peru and Ecuador.

## INTRODUCTION

Cherrie's Spinetail, *Synallaxis cherriei* Gyldenstolpe, is a rare furnariid known from only 13 specimens collected at dispersed localities in western Amazonia. Here we report on the distribution, habitat, behavior, vocalizations, plumage, and taxonomic status of Cherrie's Spinetail at the Serra dos Carajás and Gorotire in southeastern Pará, Brazil, over 1000 km east of the closest previous reported station. We include data on 10 new specimens, including 2 in juvenal plumage.

## STUDY SITES

The Serra dos Carajás (6°05'S, 50°05'W) and Gorotire (7°40'S, 51°15'W) are located between the Rio Xingu and Rio Tocantins in southeastern Pará, Brazil, within 200 km of each other.

The vegetation of the Carajás region is mostly high rain forest, with exposed iron ore on crests (700 m) of the serra covered with scrub known as "canga" (Secco & Mesquita, 1983). Cardoso da Silva observed Cherrie's Spinetail in Carajás during survey work at the site of the manganese mine (altitude approximately 300 m) near Igarapé Azul in August 1984. A team of Museu Goeldi technicians encountered the species at this same locality in June 1985. The site has now been destroyed by mining operations. All *S. cherriei* from Carajás were found in relatively well-lighted edge zones of the rain forest which covered the manganese deposit. Closely related *S. rutilans* was common in the interior of this forest. This is the first report of syntopic sympatry in these two species.

Gorotire (erroneously called "Gradaús" on most maps) is in the ecological transition zone between Amazonian rain forest and cerrado. The region presents a rich mosaic of habitats, ranging from open campos and cerrado to gallery forest, maturing second growth, and high rain forest. Approximately 600 Kayapó Indians live in the village of Gorotire; they hunt and garden on the surrounding land. Novaes (1960) reported on a collection of birds made by C. T. Carvalho, J. Hidasi, and M. Amaral in Gorotire and other sites in southeastern Pará in 1957. These workers spent 28 July to 13 September in Gorotire but did not collect any *Synallaxis* there. The observations at Gorotire reported here were made during two expeditions by Oren from 6 to 27 September 1983 and from 16 May to 6 June 1985.

In Gorotire Cherrie's Spinetail inhabited the understory of 25 to 40 year old second growth forest with a canopy at about 8 m and a few large emergents up to 15 m tall in an area at 200-300 m altitude. The only other species of *Synallaxis* registered by Oren in Gorotire was *S. gujanensis* in low second growth near the village.

## DISTRIBUTION

Cherrie's Spinetail has been reported from Barão de Melgaço (altitude 300-400 m) on the Rio Jiparaná, Rondônia, Brazil (type of the species), "near Rio Napo, east Ecuador" (Gyldenstolpe, 1930), and at three localities in Peru: Moyobamba, San Martin (Carriker, 1934), Luisiana, Cuzco (Terborgh & Weske, 1969), and Ayacucho (Figure 1). All these sites are in headwater regions of major Amazon tributaries, at altitudes ranging from lowland (Rondônia) to over 1000 m. All Peruvian records are above 580 m (1900 feet). It is difficult to give an altitude estimate for the Ecuador record as the Rio Napo traverses regions of diverse altitudinal range. The newly discovered Pará populations extend the known range of *S. cherriei* 1200 km to the east, and are also in Amazonian headwaters. Carajás is drained by the Rio Itacaiunas, a left bank tributary of the Tocantins, while Gorotire is on the Rio Fresco, a major right bank tributary of the Xingu. The discovery of Cherrie's Spinetail at these two sites is renewed evidence of the sketchy level of our knowledge of Amazonian birds. It will not be surprising if further ornithological exploration reveals additional populations of this species in the basin.

## HABITAT

The only published information on the habitat distribution of *S. cherriei* is that of Terborgh and Weske (1969), who found the birds exclusively in high forest at Luisiana, Cuzco, Peru, where second growth, matorral, coffee planta-

tions, and cacao plantations were also studied. These workers recorded three other species of *Synallaxis* at Luisiana (*S. gujanensis*, *S. cabanisi*, and *S. albicularis*), but only *S. cherriei* was limited to high forest. Habitat generalist *S. gujanensis* was the only congener that shared the forest habitat with *cherriei*. Carriker (1934) noted the altitudinal distribution of *cherriei* in Peru, indicating that the species was found at higher altitude (580 m to 1070 m) than close relative *S. rutilans* (lowland), with no direct overlap between the forms.

In southeastern Pará *S. cherriei* was distributed in maturing second growth and forest edge, and was not recorded in the interior of high rain forest. The apparent difference in habitat preferences for the eastern and western

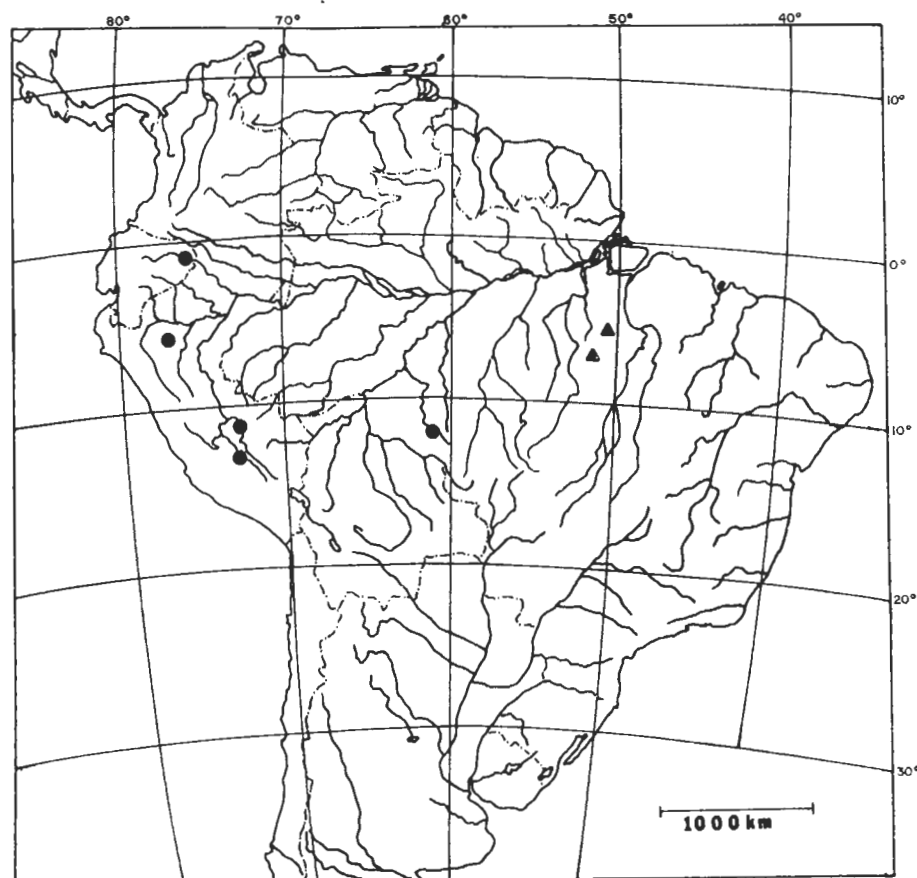


FIGURE 1: Distribution of *Synallaxis cherriei*. Circles indicate specimens reported in the literature, triangles new populations in southeastern Pará, Brazil.

populations is extremely interesting and may be related to sympatry with *S. rutilans*. The species are so similar that Hellmayr (1925) considered *cherriei* to be an aberrant individual of *S. rutilans amazonica*, differing only in the light rather than black throat. Subsequent work has clearly shown the distinctiveness of the two species, but they are certainly very closely related and probably ecological competitors where they occur together. These species are both in high rain forest in western Amazonia, but in different altitudinal ranges without overlap (Carriker, 1934). Were the two species are in contact in lowlands in southeastern Pará, they are separated ecologically, with *rutilans* in the forest interior and *cherriei* in edge and relatively well-lighted second growth.

### FORAGING AND ALARM BEHAVIOR

Our observations indicate that *Cherrie's* Spinetail spends most of its time in the understory. During foraging the birds investigated suspended dead leaves near the ground tree trunks, and gleaned the upper and lower surfaces of green leaves, usually within 3 m of the ground, but occasionally as high up as 8 m. The diet included diptera, spiders, and lepidoptera larvae.

Flights were always short (less than 10 m) and, on landing, the birds lowered and raised the tail. When alarmed the spinetails moved the tail from side to side and quickly flew to the ground where they assumed a frozen position with the body feathers fluffed out.

### VOCALIZATIONS

At Gorotire *Cherrie's* Spinetails sang regularly in the early morning during September 1983. The song consisted of two notes which may be written "kra-kúh" or "pru-chéng" (*purucheng* is the onomatopoeic Kayapó Indian name for *S. cherriei*), the second note somewhat lower and shorter than the first. Units of these two notes were sung in succession, each pair requiring about one second. At the end of a series the second note alone was repeated 4 to 8 times. The birds called from thick undergrowth where they were usually well hidden. In May and June 1985 when adults were accompanied by immatures, the birds frequently gave a single high-pitched "psiu" reminiscent of the call of *Phaethornis ruber*. At Carajás the birds emitted a single whistled "piiwwh" while foraging.

The "song" of *S. rutilans* is quite different from *cherriei*, consisting of three low nasal notes which may be written "túh-uh-rúh", the first note longest and second shortest. Each phrase requires about 1 sec to be executed; approximately four phrases are repeated every 10 sec, although intensity and frequency of the song vary with motivation.

SPECIMENS

The Museu Goeldi ornithological collections house 10 *Synallaxis cherriei* from southeastern Pará: from Gorotire, 3 adult males (MPEG 35.443, 12.IX.83, coll. D. C. Oren and A. A. Jensen; MPEG 37.078 and 37.079, 3.VI.85 and 19.V.85, coll. D. C. Oren and M. Santa Brígida), 1 adult female (MPEG 35.444, 10.IX.83, coll. DCO and AAJ), 2 immature males (MPEG 37.080 and 37.081, 3.VI.85 and 2.VI.85, coll. DCO and MSB), and 1 unsexed adult in alcohol (MPEG A5.903, 2.VI.85, coll. DCO and MSB); from Carajás, 1 adult male (MPEG 37.231, 17.VI.85, coll. M. Santa Brígida and R. S. Pereira), 1 adult female (MPEG 37.232, 19.VI.85, coll. MSB and RSP), and 1 unsexed adult in alcohol (MPEG A5.046, 1.VIII.84, coll. J. M. Cardoso da Silva). Data on measures and weights of these specimens are found in Table 1. The bill measurement

Table 1

Measurements (mm) and weights of *S. cherriei* specimens in MPEG

registration nº	wing (flat)	tail	bill	tarsus	total	weight
♂'s: 35.443	59.0	59.0	13.8	18.9	143	14.5 g
37.078	57.0	56.0	14.0	17.4	137	16g
37.079	58.5	59.0	13.2	18.1	145	17g
37.231	57.0	59.0	12.4	17.2	140	..
♀'s: 35.444	57.0	56.0	14.7	18.7	134	16g
37.232	54.0	58.0	13.8	18.4	147	..
immature ♂'s:						
37.080	57.0	60.0	12.7	18.5	145	16.5g
37.081	56.5	59.0	13.9	18.2	134	16g
unsexed adults:						
A5.046	59.0	60.0	12.9	18.5	..	..
A5.903	57.0		12.9	18.0	..	15g

is from the attachment at the skull to the tip, and total lengths are of the birds in the flesh. Weights were determined in the field with Pessola balances. Iris color was variously described as brown (3 specimens), brownish gray (3), gray (1), and ivory (1), with no relation to sex or age discernible. The tarsus was gray (2), brownish gray (4), or greenish gray (2). The maxilla in all cases was black, while mandible color varied with age, being black in full adults (2), gray with a black tip in intermediate birds (2), gray in young adults (2), and ivory in immatures (2).

Compared with Vaurie's (1980:91) data on 7 individuals, the Pará *S. cherriei* (Table 1) have somewhat shorter wings (54-59 mm *vs* 59-62 mm), similar tails (56-60 mm *vs* 54-59 mm), and shorter bills (12.4-14.7 mm *vs* 14.2-16 mm) than American Museum of Natural History (New York) specimens. It is difficult to evaluate the significance of these findings without direct comparison of specimens, especially when one considers the small sample size involved.

Furthermore, the adult birds at hand show considerable individual variation in plumage coloration. The description of the type of *cherriei* has been published twice (Cherrie, 1916; Gyldenstolpe, 1930) and will not be repeated here. In the Museu Goeldi series, the upperparts of adults are mostly Hair Brown (119A) (colors from Smithe, 1975/81), sometimes with an amber wash. All present some indication of an Amber (36) collar, varying from distinct (MPEG 35.444) to barely notable (MPEG 37.078). The Amber (36) of the forehead and superciliary borders distinctly with the brown upperparts, or grades gradually. The extent and tone of Amber (36) below is most variable of all, sometimes being deep and restricted to the breast and uppermost belly, while in other specimens it extends much further down. The two adult females at hand are lighter on the throat and belly than any of the males. The young in juvenal plumage have the amber of the adults substituted by Clay Color (26), whitish throats, no amber wash above, and only a slight hint of amber edging to the wing coverts.

Adult gonad condition and capture dates of immatures indicate that breeding in *S. cherriei* in Pará is probably restricted to the rainy season (December to May).

## TAXONOMY

*Synallaxis cherriei* was originally described by Cherrie (1916) based on a single male from Barão de Melgaço, Rondônia, Brazil, collected during the Roosevelt-Rondon Expedition, and given the name *S. rufogularis*, which proved to be preoccupied. Gyldenstolpe (1930) noted the error, renamed the species in honor of its describer, and proposed the race *napoensis* based on a single adult female from eastern Ecuador. Gyldenstolpe's form differed from typical *cherriei* "by having the rufous of the forehead less spreading over the crown and mantle... abdomen darker... inner edges of quills with lighter edges". Carriker (1934), who had not seen Gyldenstolpe's paper, described the race *saturata* based on four males from Moyobamba, Peru "differing from [the typical] form in the darker brown (less rufous) back and pileum and darker belly and flanks". Vaurie (1980) considered *cherriei* monotypic.

The specimens from southeastern Pará fit Cherrie's original description, but we have not had the opportunity to compare them directly with material

from western Amazonia. The range in detail of the plumage in the series at the Museu Goeldi indicates considerable individual variation in the Pará population, and it is difficult to evaluate the proposed subspecies from the literature. Vaurie (1980) had the best material available to any author to date, but only a small series (9) in all, and only a single male (the type) from lowland Amazônia. Given the apparently different habitat preferences of *S. cherriei* in lowlands and at altitude, it would not be surprising to confirm that the lowland Amazonian populations from Rondônia and Pará are separable from higher altitude populations in Peru and Ecuador. In such a case *napoensis* Gyldenstolpe would apply to the western race. Further comparative work is necessary to evaluate this hypothesis.

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