

Status and distribution of Golden-rumped Euphonia *Euphonia cyanocephala* on the Guiana Shield, South America

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SUMMARY.—Golden-rumped Euphonia *Euphonia cyanocephala* is widely but patchily distributed in South America. Until now, its presence over the Guiana Shield was poorly known. We discuss its status and distribution in French Guiana, Surinam and Guyana, and adjacent northern Brazil and southern Venezuela. We believe that the erratic and unpredictable occurrence of this euphonia over the Guiana Shield probably reflects seasonal, nomadic movements. Almost all observations in French Guiana and Surinam were made during the short and long dry seasons of February–March and July–December, respectively, suggesting that these are nomadic movements probably related to the seasonal availability of particular dietary items.

Golden-rumped Euphonia *Euphonia cyanocephala* of Trinidad and South America, Antillean Euphonia *E. musica* of the West Indies, and Blue-hooded Euphonia *E. elegantissima* of Middle America were long treated as conspecifics (Isler & Isler 1999), but are now considered to be different species (Meyer de Schauensee 1966, Ridgely & Tudor 1989, Sibley & Monroe 1990, Hilty 2011, Remsen *et al.* 2014). *E. cyanocephala* is widespread, albeit patchily distributed in South America (Restall *et al.* 2006, Hilty 2011). It occurs in northern Venezuela from Sucre and Monagas throughout the coastal cordilleras with isolated observations in Amazonas (Zimmer & Hilty 1997), and further throughout the Andes south to northern Argentina, as well as in the lowlands and coastal mountains of south-east Brazil and adjacent Argentina and Paraguay (Areta & Bodrati 2010). Milensky *et al.* (2005) mentioned Golden-rumped Euphonia for French Guiana, Surinam, Guyana and the south-east Venezuelan state of Bolívar. However, its status and distribution across the Guiana Shield are poorly known (Hilty 2011).

The larger part of the range of Golden-rumped Euphonia is occupied by *E. c. cyanocephala*, while *E. c. pelzelni* and *E. c. insignis* occur from southern Colombia to Chimborazo in western Ecuador, and on the east slope of the Andes in Ecuador, respectively.

The species occurs in a variety of habitats, in humid and fairly dry regions, from sea level to 3,260 m. It is observed in the canopy of lowland and montane forest, in shade plantations, thickets and trees in clearings, in gardens and parks. It usually forages in pairs or small groups, as well as in mixed-species flocks, mostly in the canopy but it descends to bushes in open places to feed on berries (Isler & Isler 1999, Restall *et al.* 2006, Areta & Bodrati 2010, Hilty 2011). Here, we present new information on the species' status and distribution in French Guiana, Surinam and Guyana, as well as adjacent northern Brazil and southern Venezuela.

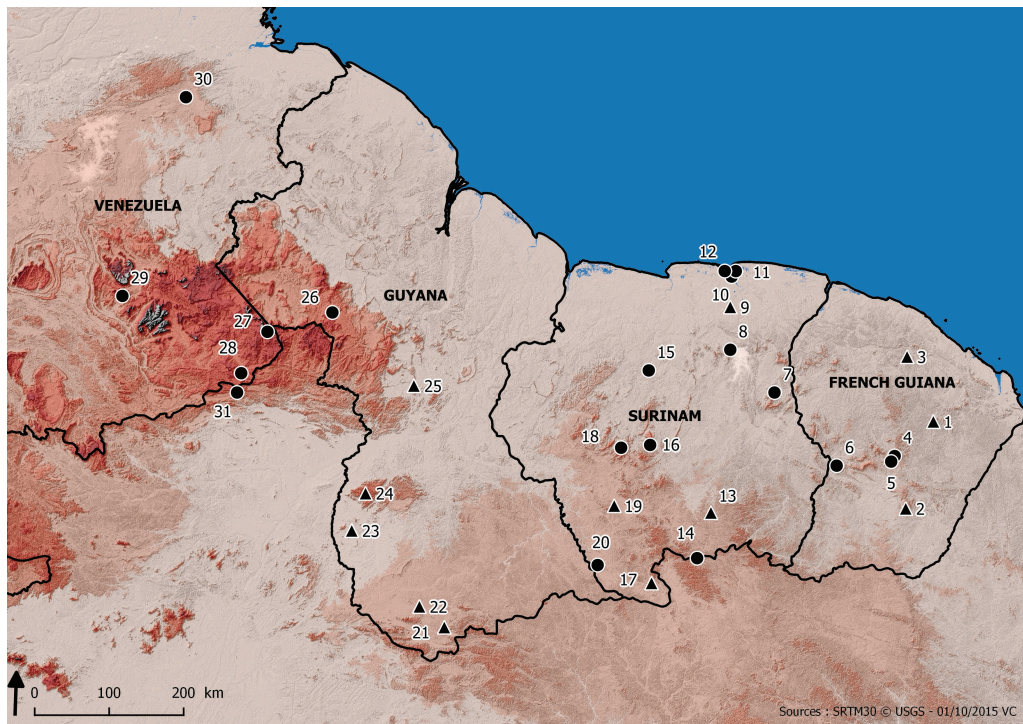


Figure 1. Localities on the Guiana Shield where Golden-rumped Euphonias *Euphonia cyanocephala* were recorded (circles) and not recorded (triangles). Coordinates and elevations are approximative. FRENCH GUIANA: 1. Nouragues Nature Reserve (04°04'N, 52°44'W, 400 m), 2. Mont Itoupé (03°01'N, 53°04'W, 800 m), 3. Saint Eugène (04°51'N, 53°03'W, 115 m), 4. Monts La Fumée (03°39'N, 53°12'W, 320 m), 5. Saül (03°38'N, 53°13'W, 200 m), 6. Monts Atachi Bakka (03°32'N, 53°54'W, 780 m). SURINAM: 7. Lelygebergte (04°25'N, 54°39'W, 650 m), 8. Brownsberg (04°56'N, 55°11'W, 480 m), 9. Zanderij (05°27'N, 55°11'W, 20 m), 10. Paramaribo (05°49'N, 55°10'W, 3 m), 11. Leonsberg (05°53'N, 55°07'W, 2 m), 12. Weg aan Zee (05°53'N, 55°15'W, 1 m), 13. Kasikasima Top (02°58'N, 55°25'W, 700 m), 14. Grensgebergte (02°25'N, 55°35'W, 800 m), 15. Voltzberg (04°41'N, 56°10'W, 100 m), 16. Tafelberg (03°47'N, 56°09'W, 1,020 m), 17. Sipaliwini savanna (02°07'N, 56°08'W, 250 m), 18. Wilhelminagebergte (03°45'N, 56°30'W, 800 m), 19. Kaysergebergte (03°03'N, 56°35'W, 300 m), 20. Kwamalasamutu (02°20'N, 56°47'W, 230 m). GUYANA: 21. Essequibo River (01°35'N, 58°38'W, 500 m), 22. Acary Mountains (01°50'N, 58°56'W, 1,000 m), 23. Rupununi savannas (02°45'N, 59°45'W, 500 m), 24. Kanuku Mountains (03°12'N, 59°35'W, 1,000 m), 25. Iwokrama Forest (04°30'N, 59°00'W, 1,000 m), 26. Ayanganna Tepui (05°23'N, 59°59'W, 2,000 m). VENEZUELA: 27. Mount Roraima (05°09'N, 60°46'W, 1,500 m), 28. Santa Elaena de Uairén (04°39'N, 61°05'W, 900 m), 29. Uaipán Tepui (05°35'N, 62°31'W, 500 m), 30. Imataca Forest Reserve near El Palmar (07°59'N, 61°45'W, 250 m). BRAZIL: 31. Pacaraima (04°25'N, 61°08'W, 475 m) (Map prepared by A. Bordin & V. Charlet).

Methods

We discuss the status and distribution of the Golden-rumped Euphonia in French Guiana, Surinam and Guyana, and adjacent northern Brazil (Amapá, Pará, Roraima) and southern Venezuela (Bolívar). In addition to data in the literature and on internet sites (www.faune-guyane.fr/, www.wikiaves.com.br/), we present unpublished field observations made in Surinam and French Guiana held in the databases of Ribot (2014) and Comité d'Homologation de Guyane (OC). We also present previously unpublished data on relevant specimens collected in Surinam and Venezuela, and now in the American Museum of Natural History (AMNH), New York, and Colección Ornitológica Phelps (COP), Caracas, respectively (Appendix 1). Specimens at the first-named museum were checked by JI in 1984 and at the latter by S. L. Hilty in 2014.

Results

Localities across the Guiana Shield where Golden-rumped Euphonias have been recorded as well as intensively surveyed areas where this euphonia has not yet been recorded are shown in Fig. 1. The number of records per month in Surinam and French Guiana since 1902, are presented in Fig. 2, wherein we also provide generalised information on rainfall patterns across the Guiana Shield by indicating mean monthly rainfall in 1960–90 at Pokigron (c.04°29'N, 55°22'W) in central Surinam (CRU 2015).

French Guiana.—First recorded by Thiollay (1986). He observed it four times at forest edges near Saül in central French Guiana between mid-October and mid-December 1984, but precise dates and details are no longer available (J.-M. Thiollay *in litt.* 2011). These records were mentioned by Tostain *et al.* (1992) under '*Euphonia aureata*'. On 29 October 2002, VP observed two male *E. cyanocephala* in the crown of a tree at the edge of a small clearing at the viewpoint along the trail on Monts La Fumée, c.2.5 km north-east of Saül. The clearing is surrounded by primary forest. On 8–9 October 2008, MD photographed a pair foraging in the canopy at the edge of the same clearing (Renaudier *et al.* 2010). On 13 July 2009, a flock of at least 12, including males and females, and a young male in transitional plumage (Fig. 3), was photographed by TD at Monts Atachi Bakka, near Maripasoula (Renaudier *et al.* 2010). A pair of *E. cyanocephala* was seen in canopy on the outskirts of Saül, on 9 October 2009, by H. Michel & S. Nicolle (Renaudier *et al.* 2010) and on 16 November 2012, by OC, P. Huet & A. Pataud. However, *E. cyanocephala* has never been recorded at Saint Eugène, near the hydro-electric dam of Petit Saut, where OC studied birds in 1993–96 (Claessens 2002), or at Nouragues Nature Reserve in eastern French Guiana, despite many avifaunal surveys since its creation in 1995 (Thiollay *et al.* 2001). During intensive surveys of Mont Itoupé, a forested table mountain in the interior of French Guiana, c.70 km south of Saül, VP, G. Léotard & O. Tostain did not find the species in March 2010, nor did OC & A. Renaudier in October 2010.

Surinam.—Between September 1902 and September 1905, B. Chunkoo & H. R. Putscher collected eight *E. cyanocephala* in Surinam for Walter Rothschild in England (T. Trombone *in litt.* 2009). They are now at AMNH: six are labelled 'near Paramaribo', one 'rijweg near Paramaribo', i.e. a road leaving Paramaribo towards Uitkijk, and one 'Saramacca District', which is adjacent to Paramaribo (Appendix 1). Therefore, all were collected close to sea level in a large area around Paramaribo, which was still largely forested in the early 20th century (Haverschmidt & Mees 1994; A. Spaans *in litt.* 2009). AMNH 511836, from an unknown locality in Saramacca District, was collected on 9 December 1904, not 7 December 1904 as stated in Haverschmidt & Mees (1994).

Approximately 70 years later, T. Wals (1976) observed singles of *E. cyanocephala* on Brownsberg on 27 August 1976 and near Voltzberg on 13 September 1978. On 13 March 1978, G. Mees & V. Mees-Balchin observed a pair in the crown of a tree at the edge of a forest clearing atop the Brownsberg (Haverschmidt & Mees 1994). On 11 November 1979, T. H. Davis tape-recorded a male singing in the canopy at the edge of the same clearing (<http://macaulaylibrary.org/audio/11565>). B. J. O'Shea, on 10 June 2003, and I. Derfeld & G. Love, on 27 October 2005, saw singles of *E. cyanocephala* in the Lelygebergte (Alonso & Mol 2007; B. J. O'Shea *in litt.* 2009). During a stay of several months on Brownsberg, S. Wytema (*in litt.* 2009) observed *E. cyanacephala* just once, on 5 July 2005 along the Mazaroni road on the ridge of the Brownsberg. O. Ottema observed this euphonia on 10 December 2005 near Caiman camp on the slope of the Tafelberg (Zykowski *et al.* 2011). In April 2010, K. J. Zykowski (*in litt.* 2011) tape-recorded one in the Wilhelmiagebergte. B. J. O'Shea observed the species on 16 March 2012 in the Grensgebergte (O'Shea & Ramcharan 2012). However,

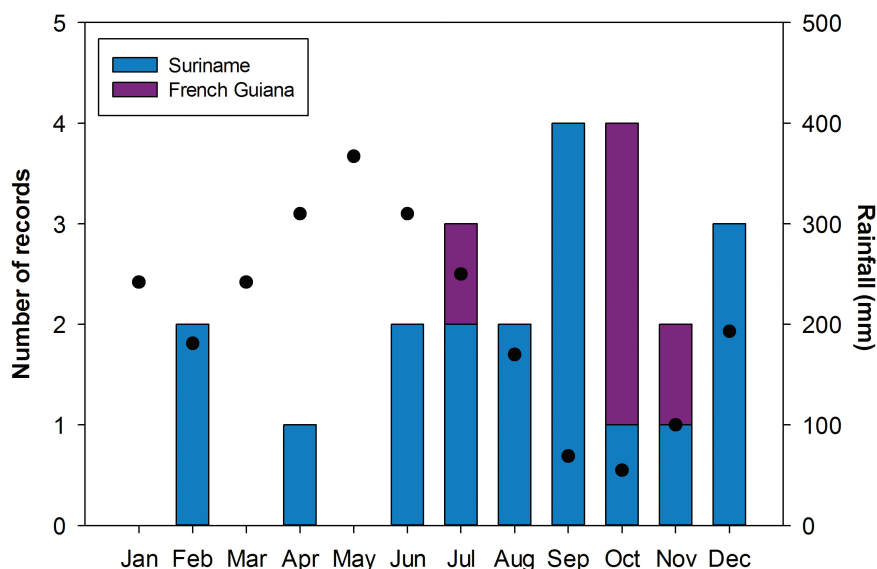


Figure 2. Records of Golden-rumped Euphonia *Euphonia cyanocephala* per month since 1902 in French Guiana ($n = 5$) and Surinam ($n = 18$). Only precisely dated records are included (bars, left X-axis). Mean monthly rainfall in mm at Pokigron ($c.04^{\circ}29'N$, $55^{\circ}22'W$) in central Surinam in 1960–90 (circles, right Y-axis) (Graph prepared by R. Ribot).



Figure 3. Immature male Golden-rumped Euphonia *Euphonia cyanocephala*, Monts Atachi Bakka, near Maripasoula, French Guiana, 13 July 2009 (Tanguy Deville)

it has not been observed at localities such as the Zanderij savanna, the Kasikasima Top, the Kaysergebergte and Sipaliwini savanna in the interior of Surinam (Mittermeier *et al.* 2010, O'Shea & Ramcharan 2012, Ribot 2014).

Guyana.—During intensive surveys since 1993, *E. cyanocephala* was not recorded in Iwokrama Forest, the Kanuku Mountains, Rupununi savannas, along the upper Essequibo River and in the Acary Mountains, all in the southern half of Guyana (Parker *et al.* 1993,

Robbins *et al.* 2004, Ridgely *et al.* 2005, Braun *et al.* 2007, Robbins *et al.* 2007; B. J. O'Shea & M. B. Robbins *in litt.* 2009, C. M. Milensky *in litt.* 2011). However, in early 2014, during a survey of Ayanganna Tepui in the Pakaraima Mountains of western Guyana, a pair of *E. cyanocephala* was photographed (M. B. Robbins *in litt.* 2014).

Venezuela.—Snyder (1966) mentioned *E. cyanocephala* for the Venezuelan side of Mount Roraima, near the junction of the Guyana, Venezuela and Brazil borders. It also occurs at other localities near the border with Guyana in south-east Bolívar. On 27 January 1948, W. H. Phelps Jr. collected a male at the western base of Uaipán Tepui and, on 16 March 1950, M. Castro took a pair on the slopes of Mount Roraima (Appendix 1). Subsequently, *E. cyanocephala* was seen in Imataca Forest Reserve, c.15 km east of El Palmar by T. A. Parker in February 1985 and 1987, and by S. L. Hilty in February 1989 and 1995, while C. Parrish observed the species near Santa Elena de Uairén in the late 1970s (Hilty 2003; S. L. Hilty *in litt.* 2014).

Brazil.—Until recently, there were no records north of the Amazon, i.e. in the states of Amapá, Roraima or northern Pará (Novaes 1980, Silva *et al.* 1997, Naka *et al.* 2006; C. Carlos *in litt.* 2009). However, on 13 January 2011, R. Czaban photographed a pair near Pacaraima, a municipality in north-west Roraima (WA285878–79).

Discussion

Distribution.—In the early 20th century, Golden-rumped Euphonia was rather common in the forested interior of the Guianas (Penard & Penard 1910). The region around Saül in French Guiana is a well-inventoried part of this French overseas department (Renaudier 2009). Therefore, it is unsurprising that most records of *E. cyanocephala* were made there, while the avifauna of other parts of central or southern French Guiana is still poorly studied.

A large area around Paramaribo was still largely forested in the early 20th century, but is now seriously degraded. In the early 1900s, *E. cyanocephala* appeared to be more numerous in the coastal region of Surinam during the drier months of the year (Penard & Penard 1910), i.e. the short dry season of February–March and long dry season of July–December (CRU 2015). According to two Surinamese aviculturists (H. Robert & J. Luchmun pers. comm. to JHR), in that epoch the species was also trapped for trade near Leonsberg and along Weg naar Zee in the coastal region near Paramaribo. However, nowadays *E. cyanocephala* is trapped around Kwamalasamutu, a village of Trio Indians surrounded by forest on the Sipaliwini River in southern Surinam. Although much field work is conducted around Paramaribo and in Saramacca District (Ottema *et al.* 2009, Ribot 2014), no sight records in the coastal region have been reported in recent decades. Recent, reliable observations in Surinam are from forested hills in the interior, e.g. the Voltzberg, Lelygebergte, Tafelberg, Grensgebergte, Wilhelminagebergte and especially Brownsberg, now a well-surveyed reserve managed by STINASU (Foundation for Nature Conservation in Suriname).

The range of *E. cyanocephala* in southern Brazil generally reaches as far north as southern Bahia, Goiás and Mato Grosso (Sick 1993), with the northernmost records in the Serra dos Carajás (c.06°00'S, 50°20'W) in central Pará, where the species has been observed and tape-recorded on several occasions (Pacheco *et al.* 2007; G. M. Kirwan *in litt.* 2015), i.e. well south of the Amazon and c.1,100 km from Saül in French Guiana, the nearest locality on the Guiana Shield where this euphonia has been reported.

In Venezuela, the population of *E. cyanocephala* on the Guiana Shield in southern Bolívar is separated by c.470 km from two observations at Junglaven camp in Amazonas (05°06'N, 66°44'W; Zimmer & Hilty 1997).

Localities where *E. cyanocephala* has been recorded on the Guiana Shield post-1970 form two groups (Fig. 1). One is restricted to the forested and hilly interior of Surinam and extends over central French Guiana, following the 'Inini-Camopi' Mountains including Mounts Atachi Bakka and Saül (Barret 2001). A second group of records is concentrated in the montane region at the junction of the Guyana, Venezuela and Brazil borders.

Habitat.—Across the Guiana Shield (Fig. 1), the species has an obvious preference for the montane interior. No recent observations have been made in the coastal area despite constant effort by birdwatchers and surveys by ornithologists. Most sightings are nowadays made around open areas on forested hills at altitudes between c.200 and 2,000 m. In north-east Argentina, the species is commoner in mountainous regions and makes only slight incursions into the lowlands (Areta & Bodrati 2010).

Abundance.—Due to their preference for the forest canopy, and despite males being quite colourful, Golden-rumped Euphonias can easily escape detection. The warbling song may help to locate them. Nevertheless, with just 13 records in the 21st century, the species certainly is rare or under-recorded on the Guiana Shield, in contrast to formerly (Penard & Penard 1910), which suggests that it was more abundant there in the past. The degree and causes of this potential decline are unknown, but any change in the species' habitats in this region appears unlikely. It is most frequently seen foraging in pairs, small groups or multi-species canopy flocks. In north-west Argentina and south-east Brazil, flocking with congeners appears to be related to the recently described longitudinal migration of Golden-rumped Euphonias (Areta & Bodrati 2010).

Seasonal movements.—Altitudinal movements are known for many bird species occurring at higher elevations, especially in the Andes (e.g. Loiselle & Blake 1991, Bildstein 2004, Chaves-Campos 2004). At a much smaller scale, in the Guianas, several high-altitude, frugivorous, birds like Sharpbill *Oxyruncus cristatus* and White Bellbird *Procnias albus* occur during the long dry season in the lowlands and littoral of French Guiana and Surinam, far from the interior hills where they breed (A. Renaudier & O. Ottema *in litt.* 2009; OC pers. obs.). Although the sample is small, it is striking that most records of the species in French Guiana and Surinam, including those by Thiollay (1986), occurred during the drier seasons of the year (Fig. 2)

Until now, *E. cyanocephala* was presumed to be a resident breeder in French Guiana and Surinam (Ottema *et al.* 2009). However, longitudinal migration has recently been described for the population breeding in south-east Brazil and migrating to Argentina (Misiones) and Paraguay in the austral autumn / winter (Areta & Bodrati 2010). Conversely, we believe that the species' sporadic occurrence on the Guiana Shield can be interpreted as seasonal movements from the highlands at the western edge of the Guianas into the hill and montane forests in the interior of these countries. The paucity of records, even in well-surveyed areas, indicates that these movements do not constitute regular migrations. Hilty (2003) also noted the species' 'unpredictable and erratic' occurrence in Venezuela. We speculate that these seasonal movements occur in search of food, although it is unclear if they are related to the fruiting season of their main foods, e.g. mistletoes (Isler & Isler 1999, Areta & Bodrati 2010, Hilty 2011). More observations are clearly needed to document and understand the pattern of occurrence of Golden-rumped Euphonia on the Guiana Shield.

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Appendix 1: specimens of Golden-rumped Euphonia *Euphonia cyanocephala* collected on the Guiana Shield in Surinam and south-east Venezuela

Given are: collection number, sex, locality, date of collection and collector. See text for museum acronyms.

Surinam

- AMNH 511839, ♂, near Paramaribo, 17 July 1902, B. Chunkoo.
- AMNH 511840, ♂, near Paramaribo, 1 September 1902, B. Chunkoo.
- AMNH 511841, ♂, rijweg near Paramaribo, 21 September 1902, B. Chunkoo.
- AMNH 511837, unsexed (female-like plumage), near Paramaribo, 14 August 1904, B. Chunkoo.
- AMNH 511838, ♂, near Paramaribo, 7 December 1904, B. Chunkoo.
- AMNH 511836, ♀, Saramacca District, 9 December 1904, B. Chunkoo.
- AMNH 511843, ♂, near Paramaribo, 17 June 1905, H. R. Putscher.
- AMNH 511842, juvenile ♂, near Paramaribo, 10 September 1905, H. R. Putscher.

Venezuela

- COP 43241, ♂, Uaipán Tepui, 13 February 1948, W. H. Phelps Jr.
- COP 50852, ♂, Mount Roraima, 16 March 1950, M. Castro.
- COP 50851, ♀, Mount Roraima, 16 March 1950, M. Castro.