

The non-breeding range of Esmeraldas Woodstar

Michael Fogden

The recent observation of two individuals of the globally threatened Esmeraldas Woodstar in the subtropics of north-west Ecuador has provided valuable new information concerning the species' potential non-breeding range, which has been more or less unknown to date. The author also revisits the identification of the females and immatures of this poorly known bird, based on his own observations and a recently published paper on the species, which hopefully might permit other observers to contribute to our knowledge of this woodstar, especially during the non-breeding period.



Figures 1–3 (above and facing page top row). Immature male Esmeraldas Woodstar *Chaetocercus berlepschi*, Tandayapa Valley, Pichincha, Ecuador, December 2007 (Michael Fogden); in the field, the overwhelming impression was of a tiny, dark green and white woodstar with a strong white postocular. The colour of the iridescent gorget feathers is variable, depending on the angle and light. In Fig. 2 the iridescent feathers appear rosy violet and quite similar to the typical gorget colour of adult male Little Woodstar *C. bombus*.

Figures 4–6 (facing page, middle and bottom rows). Immature male Esmeraldas Woodstar *Chaetocercus berlepschi*, Tandayapa Valley, Pichincha, Ecuador, August 2010; in Fig. 4 the iridescent gorget feathers are violet and typical of the gorget colour of adult male Esmeraldas Woodstar, whilst Fig. 6 illustrates the distinctive tail pattern (Michael Fogden)



Esmeraldas Woodstar *Chaetocercus berlepschi* is an Endangered hummingbird endemic to moist lowland and foothill forest in western Ecuador^{1,4-6}. Its range is tiny, being mainly confined to the slopes of the coastal cordillera in Manabí and Santa Elena provinces, at altitudes between sea level and c.700 m. Most of the species' range has been deforested² and the little that remains is extremely fragmented.

Recently, Harris *et al.*⁴ encountered Esmeraldas Woodstar at 11 new localities within the same general range, but concluded that the species still merits Endangered status. The same study also found that published descriptions of the female^{5,6} are based on misidentified specimens of immature males and provided the first correct descriptions of the female and immatures plumages.

Non-breeding range

Esmeraldas Woodstar is found in its breeding range only during the rainy season, with the first birds arriving there in late October or November and the last departing in April or early May⁴. The non-breeding range is essentially unknown, with the only relevant records being two from Esmeraldas province—an immature male collected at San Mateo in September 1934 and a male seen at Finca Paraíso de Papagaios, north of Quindé, in September 1995^{4,5}. These two records have led to the hypothesis that the non-breeding range of the Esmeraldas Woodstar lies in Esmeraldas province⁴ (see Map).

Recently, however, there have been two additional records of immature male Esmeraldas Woodstars from outside the breeding range. Both were in the Tandayapa Valley, c.30 km north-west of Quito, in Pichincha province, at altitudes of 1,800 m and 2,000 m, i.e., more than 1,000 m higher than any previously published records. The first bird (Figs. 1–3) was present for approximately two weeks in December 2007, the second (Figs 4–6) on 10–15 August 2010. Both individuals frequented gardens where they foraged at verbena *Stachytarpheta frantzii* plants alongside Little Woodstars *Chaetocercus bombus*, White-bellied Woodstars *C. mulsant* and Purple-throated Woodstars *Calliphlox mitchellii*.

These two records suggest that the non-breeding range of the Esmeraldas Woodstar includes parts of the west slope of the Andes. This is not unexpected. Many species, including hummingbirds, are altitudinal migrants and several species which breed in the Pacific lowlands of Ecuador are known to move as high as the Tandayapa and Mindo areas during the dry season. Little Woodstar, for example, is a regular non-breeding visitor to the Tandayapa Valley. Other dry-season visitors include Red-eyed Vireo *Vireo olivaceus*, which is present in the valley in large numbers in June–December, and Rufous-winged Tyrannulet *Mecocerculus calopterus*, which is present in smaller numbers during the same months.

Effective conservation of Esmeraldas Woodstar depends on an adequate knowledge of both its breeding and non-breeding ranges. To this end, more records from the non-breeding range are urgently required and the species should be looked for during the drier months of June–December anywhere in Esmeraldas province or on the west slope of the Andes in north-west Ecuador. Obvious 'target' areas include Tandayapa,



Map showing Esmeraldas Woodstar *Chaetocercus berlepschi* range/records.

Maquipucuna, Mindo, Milpe, Reserva Mangaloma, Río Silanche, etc.

Identification of female and immature male Esmeraldas Woodstars

Until recently reliable identification of female and immature Esmeraldas Woodstars was hindered by a lack of adequately detailed descriptions, making the accumulation of new locality records extremely difficult. Harris *et al.*⁴ have now described the female and immature plumages in detail, paying particular attention to their diagnostic tail patterns.

Female Esmeraldas Woodstars are tiny and the most critical identification problem is to separate them from the equally miniature female Little Woodstar, which also occurs in north-west Ecuador (e.g., at Tandayapa, Mindo and Milpe) during October–December. In the field, female Esmeraldas Woodstars are best distinguished by their white postocular stripe, which contrasts with their pale cinnamon-buff underparts (Figs. 7–8). Female Little Woodstars differ in having a pale cinnamon-buff postocular stripe, which is concolorous with the underparts (Figs. 9–11). If seen well, their tail patterns are diagnostic. The tail of the female Little Woodstar is cinnamon with a narrow black subterminal band (Figs. 9–11). That of the female Esmeraldas Woodstar has a broader black subterminal band and the central feathers are green tipped with black and buff⁴. Immatures of both species have buff fringes to the feathers of the upperparts.

The cheek-stripe has also been mentioned as a useful character⁴. That of the female Esmeraldas Woodstar is reportedly longer and broader than that of Little Woodstar, and is mainly green rather than dusky. However, in my experience, it is difficult to see any consistent differences in the field or photographs. The cheek-stripes of both species usually show iridescent green feathers, their visibility depending on the light and viewing angle, and the length and width of the stripes depends considerably on posture (e.g. Figs. 7–9).

Immature male Esmeraldas Woodstars are fortunately easier to identify. In the field they appear essentially dark green and white with a contrasting head pattern, conspicuously pale underparts and a whitish tip to the tail (Figs. 1–6). A few iridescent violet to pinkish-purple gorget feathers are often present (Figs. 2 and 4) and, if seen, the tail pattern, with all-green central rectrices, is diagnostic (Fig. 6).

In attempting to identify Esmeraldas Woodstars, it is also important to eliminate Purple-throated Woodstar, which is common and widespread on the west slope of the Andes. Gurney³ pointed out that female and immature Purple-throated Woodstars are extremely variable and often resemble female Little Woodstars (and also, by implication, female Esmeraldas Woodstars). Even experienced observers can be fooled by some of the variations. However, apart from being noticeably larger, female and immature Purple-throated Woodstars are best distinguished by their broad and flared cheek-stripe, and more or less distinct pale collar³.

The author would appreciate receiving details, preferably supported by photographs, of any Esmeraldas Woodstars seen during the dry season or outside the known breeding range.

POSTSCRIPT

Another tiny green-and-white woodstar was observed in Tony & Barbara Nunnery's garden for a few days in November 2011. They were unable to accurately record the bird's tail pattern, but it was otherwise apparently identical to the 2007 bird.

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Figures 7–8 (left). Adult female Esmeraldas Woodstars *Chaetocercus berlepschi* during the breeding season; note that the white or whitish postocular stripe contrasts with the colour of the underparts (Fig. 7 by Ryan Terrill, Río Ayampe, Guayas, Ecuador, March 2008; Fig. 8 by Bert Harris, Río Ayampe, Guayas, Ecuador, February 2008)

Figures 9–10 (below left). Female Little Woodstar *Chaetocercus bombus*, Tandayapa Valley, Pichincha, Ecuador, February 2007; note that the cinnamon-buff postocular stripe is the same colour as the underparts (Michael Fogden)

Figure 11 (below). Female Little Woodstar *Chaetocercus bombus*, Tandayapa Valley, Pichincha, November 2007; note the distinctive tail pattern, which lacks the green central tail feathers of female and immature male Esmeraldas Woodstar *C. berlepschi* (Michael Fogden)

