

Nature Notes

Is this the caterpillar of *Arsenura beebei* (Lepidoptera: Saturniidae)?

We report here on a very distinctive caterpillar and suggest its likely identity. M.K. and Dr Feroze Omardeen encountered it on 11 March 2018 along Martinez Trace, just north of Brasso Seco in the Northern Range of Trinidad, West Indies. The approximate coordinates were: 10°44'00.00" N, 61°18'08.08" W. The caterpillar was stationary on a rotting leaf stalk of *Cecropia peltata* L. (Urticaceae) on the ground, so there was no evidence as to what the food plant was. The caterpillar was striking. It was black with 10 bright blue bands and 7.5-8.0cm in length (Fig. 1).

Although the caterpillar was not reared, we can deduce its identity with some confidence. Its large size indicates an uncommonly large adult moth. The cuticle surface is smooth apart from small subdorsal scoli on the three thoracic segments and segments 8–10 of the abdomen, and it has very large, conspicuous spiracles. These characters suffice to place it in only one genus among the large moths recorded from Trinidad: *Arsenura* (Saturniidae, Arsenurinae) (Lampe 2010, Janzen and Hallwachs 2018). The young caterpillars of *Arsenura* spp. have long, thin scoli, often 2–3 times the body width, which become relatively shorter as the caterpillars grow until they resemble those seen in Fig. 1, or are absent altogether (Lampe 2010, Janzen and Hallwachs 2018).

Two species of *Arsenura* are known from Trinidad: *A. armida* (Cramer) and *A. beebei* (Fleming) (Kaye and Lamont 1927, Cock 2003). *Arsenura armida* has been treated as a widespread polytypic species (Lemaire 1980), but it is now clear that it is more appropriate to treat it as a complex of species, most of which is yet to be worked out (e.g. Brechlin and Meister 2010). The caterpillars of at least some populations of this complex are known. When mature, caterpillars of a population from Carabobo Province, northern Venezuela, are dark brown-black with irregular yellow-brown bands, strongest on abdominal segments 1–7, and no wider than 1/3 of the segment

width, and in the final instar the subdorsal scoli are absent (Lampe 2010). The Central American population, now known as *A. arianae* Brechlin and Meister, has the head and anal segment brown and a pale, broad, diffuse lateral line, linked by irregularly diffuse pale transverse bands (Costa *et al.* 2001, Janzen and Hallwachs 2018). Both these reports are of gregarious species, although it is not out of the question that the apparently solitary blue caterpillar had strayed from a social group and/or was looking for a pupation site. We note that there are very few records of *A. armida* from Trinidad, all from the southern part of the island (Kaye and Lamont 1927), and there has been only one record since 1918 (M.J.W. Cock unpublished).

The caterpillar of *A. beebei* has not previously been reported, as far as we are aware. In contrast to *A. armida*, *A. beebei* has been regularly collected in the Northern Range of Trinidad, with more than 30 records extending from Port of Spain to Toco (M.J.W. Cock unpublished) (Fig. 2). Given this geographic pattern and the lack of any close resemblance of the specimen in question to known caterpillars of the *A. armida* complex, we can consider it very likely that the caterpillar of *A. beebei* is now known and is strikingly distinct in colouration.



Fig. 2. *Arsenura beebei* male from high in the central part of the Northern Range (Morne Bleu Textel installation, 20 January 2007). Wingspan 14 -15 cm. Photo by J. Muddeman (Spainbirds Nature Tours, www.spainbirds.com).

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Fig. 1. Final instar caterpillar of presumed *Arsenura beebei*.

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The caterpillar of *Rothschildia vanschaycki* (Lepidoptera, Saturniidae), a little known silk moth from Trinidad, W.I.

On 9 March 2018, one of us (DSH) found and photographed a large, strikingly colourful caterpillar (Fig. 1) at Guapo Beach, near Point Fortin (approximately 10.19N, 61.67W), on a species of mangrove growing on land. The caterpillar was large, at least 6 cm long so probably in the final instar. It was stationary on a stem about 1.5m off the ground, and we presume that it was on its food plant since there were few other potential food plants nearby, and it wasn't actively searching for a pupation site. Based on this image, the food plant is either white mangrove (*Laguncularia racemosa* (L.) Gaertn. f., Combretaceae) or red mangrove (*Rhizophora mangle* L., Rhizophoraceae), but key diagnostic features are not visible (Y. Baksh-Comeau pers. comm.).

The size and arrangement of spined scoli indicate that it is a species of Saturniidae. Comparison of the image with



Fig. 1. Presumed final instar caterpillar of *Rothschildia vanschaycki*.

published images of Saturniidae caterpillars (e.g. Lampe 2010, Janzen & Hallwachs 2018) showed that *Rothschildia* is the only genus from Trinidad which shows this configuration of short-spined, small subdorsal, dorsolateral and lateral scoli on all thoracic and abdominal segments. *Rothschildia* is a genus of New World atlas moths, with at least 25 species distributed primarily in the Neotropical Region (Lemaire 1978, 1996). In recent years, several new species have been described, and some subspecies have been revised to species (e.g. Brechlin and Meister 2012). There are only three species of *Rothschildia* known from Trinidad: *R. erycina erycina* (Shaw), *R. aurota aurota* (Cramer) and *R. vanschaycki* Brechlin and Meister (Kaye & Lamont 1927, Brechlin and Meister 2012, M.J.W. Cock unpublished data). The mature caterpillar of *R. erycina erycina* is black with white bands and partial orange-red bands, and that of *R. aurota aurota* is yellow-green dorsally, blue green ventrally, with a pale lateral line, small red scoli, red spiracles and no bands (Lampe 2010). As the specimen in question is very different from both of these, we infer that it is the hitherto unknown caterpillar of *R. vanschaycki*. Caterpillars of some subspecies of the closely related *R. lebeau* (Guerin-Méneville) are known (Lampe 2010, Janzen & Hallwachs 2018). Lemaire (1978, 1996) treated the widespread *R. lebeau* as having six subspecies, some of which are now treated as valid species (Brechlin and Meister 2012). Two subspecies might be found in Trinidad: *R. lebeau lebeau* is found in northern Venezuela to the west of Trinidad, while *R. lebeau amacurensis* Lemaire is known from the Orinoco Delta to the south of Trinidad, with one doubtful record from Trinidad (Lemaire 1978) which may prove to be the recently described *R. vanschaycki*. The caterpillar of the latter is unknown, but that of *R. lebeau lebeau* from Carabobo Province, northern Venezuela, is illustrated by