

On the identity of *Ashlockobius* Slater & Slater and *Villalobosothignus* Brailovsky (Hemiptera: Heteroptera: Rhyparochromidae: Myodochini), with the description of a new arboreal species from Ecuador

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Abstract

The genus *Villalobosothignus* Brailovsky, 1984 is diagnosed, and *Ashlockobius* Slater & Slater, 1999 is synonymized with it. A new arboreal species of *Villalobosothignus* from Ecuador is described, and photographs of the adult and male genitalia are provided together with illustrations of certain diagnostic characters to facilitate identification.

Key words: checking generic status, new synonymy, new combinations, new taxon, diagnoses, habitat, distribution

Introduction

Brailovsky (1984) described the new genus and species *Villalobosothignus figueroai* (Myodochini), based on two males from Venezuela. Some years later, Slater and Slater (1999) described, on the basis of one male, also from Venezuela, the genus and species *Ashlockobius cursorius*. When describing *Ashlockobius*, Slater and Slater (1999) overlooked Brailovsky's paper (J. A. Slater, personal communication). In 2003, the first author (Dellapé 2003) described the second species of *Ashlockobius*, *A. bipuntatus*, mentioning that: "The species of *Ashlockobius* closely resemble *Villalobosothignus figueroai* ... It is very possible that these two genera will prove to be congeneric, in which case *Villalobosothignus* will have priority." Recently, we have been able to study photographs of the paratype of *V. figueroai* and specimens of *Ashlockobius* which has led to the conclusion that these species are, in fact, congeneric.

In this contribution, we synonymize the genus *Ashlockobius* Slater & Slater, 1999 with *Villalobosothignus* Brailovsky, 1984, diagnose the genus, describe a new arboreal species of *Villalobosothignus* from canopy-fogging samples taken in Ecuador, and, to facilitate its identification, provide photographs of adults and male genitalia, together with structural illustrations.

Material and methods

A color image of the adult of the new species was captured using the Systematic Entomology Laboratory, United States Department of Agriculture (USDA, care of USNM) EntoVision Imaging Suite that included a JVC KY-75 3CCD digital camera mounted on a Leica M16 zoom lens via a Leica z-step microscope stand. Multiple focal planes were merged using Cartograph 5.6.0 (Microvision Instruments, France) software.

Acronyms used for institutions cited in the paper are USNM (National Museum of Natural History, Smithsonian Institution, Washington, DC, USA) and MLP (Museo de La Plata, La Plata, Argentina).

Measurements (Table 1) of holotype male, five paratype males and five paratype females, were made using an ocular micrometer and are in millimetres, with "*" indicating that the measurement was repeated.

Taxonomy

Villalobosothignus Brailovsky, 1984

Ashlockobius Slater & Slater, 1999 **New synonymy**

Type species: *Villalobosothignus figueroai* Brailovsky, 1984.

Included species: *Villalobosothignus cursorius* (Slater & Slater, 1999) **n. comb.**

Villalobosothignus bipuntatus (Dellapé, 2003) **n.comb.**

Villalobosothignus erwini **n. sp.**

Diagnosis. Head, pronotum and scutellum pruinose, hemelytra shiny. Buccular juncture V-shaped. Males with antennae, profemora and anterior pronotal lobe longer than in females. Apex of distiflagellum paler. Corial margin serrated. Mesepimeron enclosed, evaporative area extensive. Male protibiae with or without spines. Aedeagus unspined, with lobes.

Villalobosothignus erwini **n. sp.**

(Figs. 1–11)

Diagnosis. Scape shorter than head (Figs. 2, 3); distiflagellum paler in apical third (Fig. 1); anterior pronotal lobe higher anteriorly (Figs. 4, 5); profemora not longer than meso- and metafemora; male protibiae unspined; pygophore broad, pointed posteriorly in lateral view (Fig. 7); distance from posterior margin of dorsal aperture to posterior margin of pygophore longer than maximum width of dorsal aperture.

Description. Male holotype. Body elongate, slender, nearly parallel-sided, pruinose. Legs and antennae both elongate.

Head dark brown; vertex slightly convex between eyes; with silvery, short, abundant, decumbent setae; bucculae joined immediately behind labial base; jugal ridge well developed. Eyes protuberant but not stalked. Ocelli closer to anterior margin of collar than to eyes. Rostrum reaching procoxae; light brown, segments III and IV darker; pilose, with abundant erect setae. Antenna: scape shorter than head (Fig. 2), light brown dorsally, darker ventrally; pedicel and basiflagellomere light brown, darker distally; distiflagellomere reddish-brown, becoming paler towards the yellowish apex; with abundant short, decumbent, silvery setae. Head (Fig. 2) narrowed behind eyes but without a distinct neck.

Pronotal collar, anterior pronotal lobe, and anterior half of posterior pronotal lobe, grey pruinose; posterior half of posterior pronotal lobe light brown with darker irregular stripes, humeral angles yellowish. Pronotum with very short adpressed setae and punctate, with most distinct punctures on posterior lobe, and a row of punctures on the collar furrow.

Anterior pronotal lobe elongated, and in lateral view higher anteriorly (Fig. 4). Scutellum grey pruinose, apex whitish; with a Y-shaped, shiny, reddish-brown carina, protuberant medially; with very short adpressed setae. Hemelytra shiny; with very short adpressed setae. Clavus yellowish between inner and median row of punctures, but whitish distally; whitish between median and outer row of punctures, but brown in distal quarter. Corium with a pale subapical spot (as in Fig. 1); with an irregular transverse brown stripe, and an oval whitish spot in inner angle; apex, and a band following apical margin dark brown; basal half of corium whitish, with a median yellowish streak. Membrane translucent tinged irregularly with brown. Pleura dark brown, punctate and pilose, acetabular areas and metepimeron light brown; ostiolar peritreme orange. Legs with coxa, protrochanter, profemur except distally, and apical half of meso- and metafemur, brown; rest light brown, apex of tibiae and pretarsus darker; with abundant, short, decumbent setae. Procoxa with a spine; protrochanter with a small spine. Profemur elongate, slender, but not longer than meso- and metafemur; with two rows of spines on ventral surface. Protibia unspined, with numerous minute tubercles along ventral surface.

Abdomen brown, with abundant, short, decumbent, silvery setae. Pygophore (Figs. 6, 7) broad; extended postero-dorsally in lateral view; dorsal aperture with inner projections digitiform and with a small spine anteriorly; distance from posterior margin of dorsal aperture to posterior margin of pygophore longer than maximum width of dorsal aperture. Paramere (Figs. 8–10): blade relatively short and slightly curved. Aedeagus (Fig. 11) unspined, vesica with two membranous lobes, gonoporal process very long and thin.



FIGURE 1. *Villalobosothignus erwini* n. sp., habitus, female.

Size: Length of holotype 7.8 mm; range of paratypes measured 7.25–7.95 mm (see Table 1 for other measurements).

Females (Figs. 1, 3, 5): similar to males except for the smaller size, shorter antennae, shorter anterior pronotal lobe, and unarmed prothorax. Size: Mean length 6.83 mm; range 6.50–7.00 mm (see Table 1 for other measurements).

TABLE 1. Measurements (mm) of *Villalobosothignus erwini*.

Sex	Male	Female	Male Holotype
Total length	7.25–7.95 (7.51)	6.50–7.00 (6.83)	7.8
Length of head	1.10–1.30 (1.18)	1.00–1.10 (1.05)	1.10
Width of head	1.05–1.20 (1.12)	1.05–1.15 (1.10)	1.15
Width of eye	0.57–0.62 (0.60)	0.57–0.62 (0.60)	0.65
Interocular space	0.50–0.60 (0.56)	0.55–0.65 (0.60)	0.60
Interocellar space	0.2*	0.2*	0.20
Rostral article I	0.35–0.40 (0.37)	0.35–0.40 (0.38)	0.37
Rostral article II	0.65–0.72 (0.68)	0.60–0.67 (0.64)	0.72
Rostral article III	0.40–0.47 (0.45)	0.27–0.30 (0.29)	0.52
Rostral article IV	0.90–1.02 (0.96)	0.55–0.65 (0.62)	1.07
Length of rostrum	2.40–2.55 (2.47)	1.87–1.97 (1.93)	2.70
Scape	0.80–0.95 (0.90)	0.55–0.60 (0.59)	1.05
Pedicel	1.80–2.05 (1.93)	1.10–1.30 (1.24)	2.15
Basiflagellomere	1.70–1.85 (1.75)	0.95–1.25 (1.12)	1.95
Distiflagellomere	1.45–1.65 (1.61)	1.20–1.50 (1.39)	1.75
Antennal total length	5.85–6.50 (6.19)	4.10–4.50 (4.34)	6.90
Length collar	0.10–0.15 (0.11)	0.10*	0.10
Length anterior pronotal lobe	1.20–1.25 (1.21)	0.90–0.95 (0.94)	1.30
Length posterior pronotal lobe	0.60–0.70 (0.64)	0.60–0.75 (0.67)	0.60
Width collar	0.50–0.80 (0.71)	0.70–0.75 (0.72)	0.80
Width anterior pronotal lobe	1.15–1.20 (1.17)	1.05–1.15 (1.09)	1.20
Width posterior pronotal lobe	1.55–1.65 (1.57)	1.55–1.65 (1.57)	1.65
Abdominal length	3.30–3.70 (3.44)	2.75–2.90 (2.81)	-

Range and mean values (n=5).

Material examined. Holotype, ♂, Ecuador, Napo, Res. Ethnica Waorani, 1 Km S. Onkone Gare Camp, Trans. Ent., 29 June 1994, 220 m, 00°39'10''S 76°26'00''W, T.L. Erwin et. al., Insecticidal fogging of mostly bare green leaves, some with covering of lichenous or bryophytic plants in terre firme forest, Lot 748 (USNM).

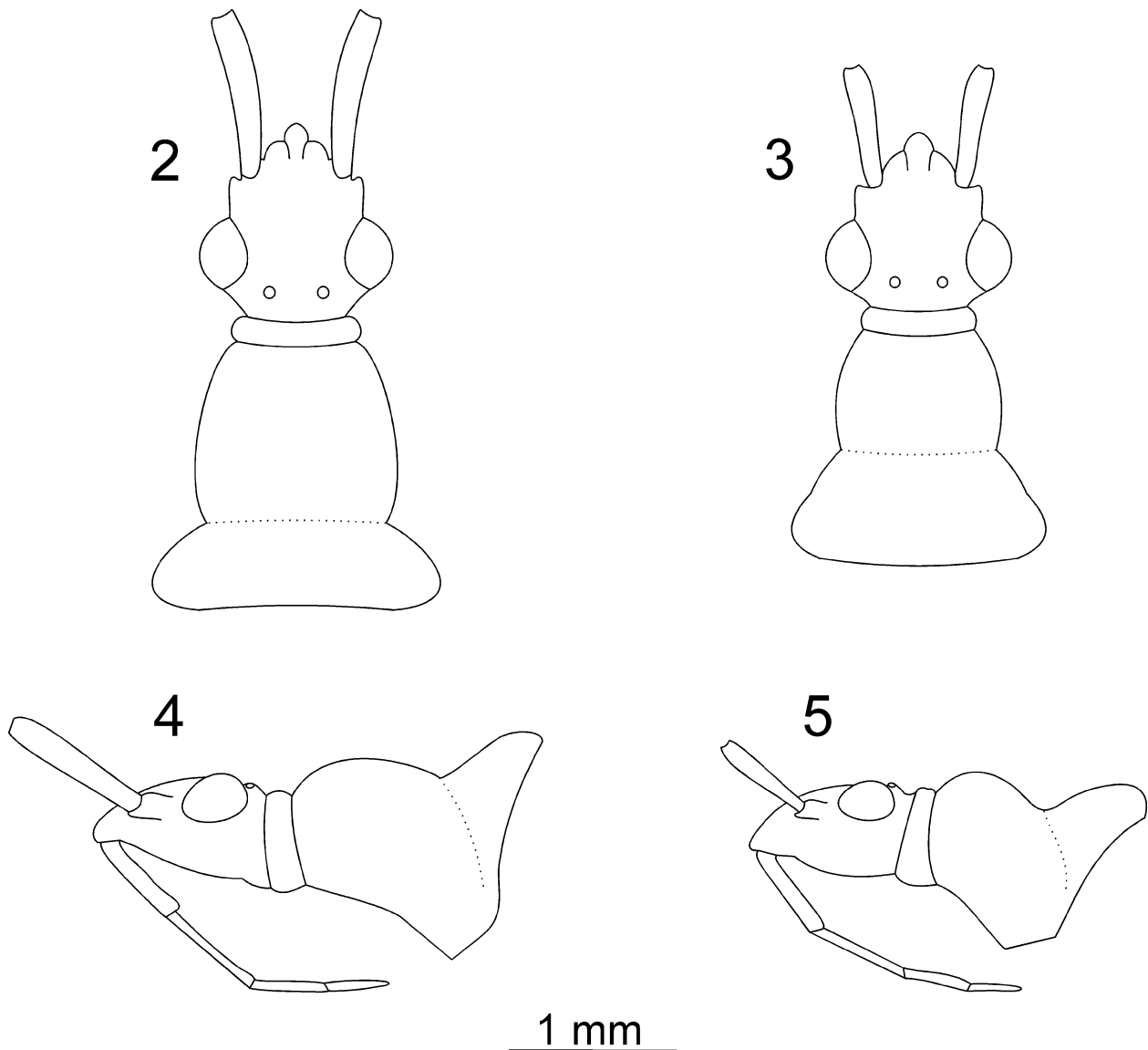
Paratypes 11 ♂ 20 ♀ (the first and last mentioned are deposited in MLP, all other paratypes are deposited in USNM): 2 ♂ 2 ♀, same data, 3 Oct 1996, Lot 1740, Trans T-8 (MLP); 2 ♂ 1 ♀, same data, Lot 1722, Trans T-7 (USNM); 1 ♂, same data, 7 Feb 1996, Lot 1448, Trans T-5; 1 ♂, same data, Lot 1460, Trans T-6; 1 ♀, same data, Lot 1447, Trans T-5; 1 ♀, same data, Lot 1453, Trans T-6; 1 ♂, same data, 2 Oct 1996, Lot 1716, Trans T-6; 1 ♀, same data, Lot 1712, Trans T-6; 1 ♂, same data, 5 Feb 1996, Lot 1434, Trans T-4; 1 ♂, same data, 216,3 m, Lot 1423, Trans T-3; 1 ♀, same data, 216,3 m, Lot 1422, Trans T-3; 1 ♀, same data, Lot 1437, Trans T-4; 1 ♀, same data, 8 Feb 1996, 216,3 m, Lot 1480, Trans T-8; 1 ♀, same data, 4 Oct 1996, Lot 1752, Trans T-1; 1 ♂, same data, 21 June 1994, Lot 715; 1 ♀, same data, 22 June 1996, Lot 1567, Trans T-5; 1 ♀, same data, 15 Jan 1994, Project MAXUS, At x-trans 6,81 m, Lot 578; 1 ♀, same data, 29 June 1994, 220 m, At 10 x-trans, 83 m mark Proj. MAXUS Lot 749; 1 ♂, Ecuador, Napo, Tiputini Biodiversity Station, 216 m, 0°37'55''S 76°08'39''W, 9 Feb 1999, T. L. Erwin et. al. collectors, Insecticidal fogging of mostly bare green leaves, some with covering of lichenous or bryophytic plants, Lot 2008, Transect T-1; 1 ♀, same data Lot 2008 Transect T-1; 1 ♀, same data, Lot #2005, Transect #T-1; 1 ♀, same data, Lot #2002, Transect #T-1; 1 ♀, same data, 6 Feb 1999, Lot 2079, Transect T-8; 1 ♀, same data, 22 Oct 1998, Lot 1976, Transect T-8; 1 ♀, same data, Lot 1974, Transect T-8 (USNM); 1 ♀, Ecuador, Est. de Biodiver. Tiputini, 29 Feb 2002, T. Luz, Coscarón col. (MLP).

Etymology. The specific epithet of this species is dedicated to Terry Erwin, the collector of the specimens.

Distribution. Ecuador

Discussion. Prior to this study, there was no information about the biology or habitat of the species of the genus. Almost all the specimens of *V. erwini* were collected using insecticidal fogging except for a female that was collected with a light trap, indicating an arboreal habitat.

Besides the male genitalic characters, *Villalobosothignus erwini* can be recognized from the other members of the genus by its smaller size, scape shorter than head, the anterior pronotal lobe higher anteriorly, and by the shorter and stouter profemora, which are shorter than meso- and metafemora. The remaining species are larger, with more elongated and slender profemora, always longer than the meso- and metafemora, the scape in males is longer than the head, and the anterior pronotal lobe is longer and is not elevated anteriorly. Males of *V. erwini* and *V. bipuntatus* exhibit unarmed protibiae. In contrast, males of *V. figueroai* and *V. cursorius* have a row of spines on the protibiae; these two species are very similar in external appearance, with both being large (9 or more mm) with extremely elongated antenna and legs, but the descriptions and illustrations of the male genitalia suggest that they are different species.

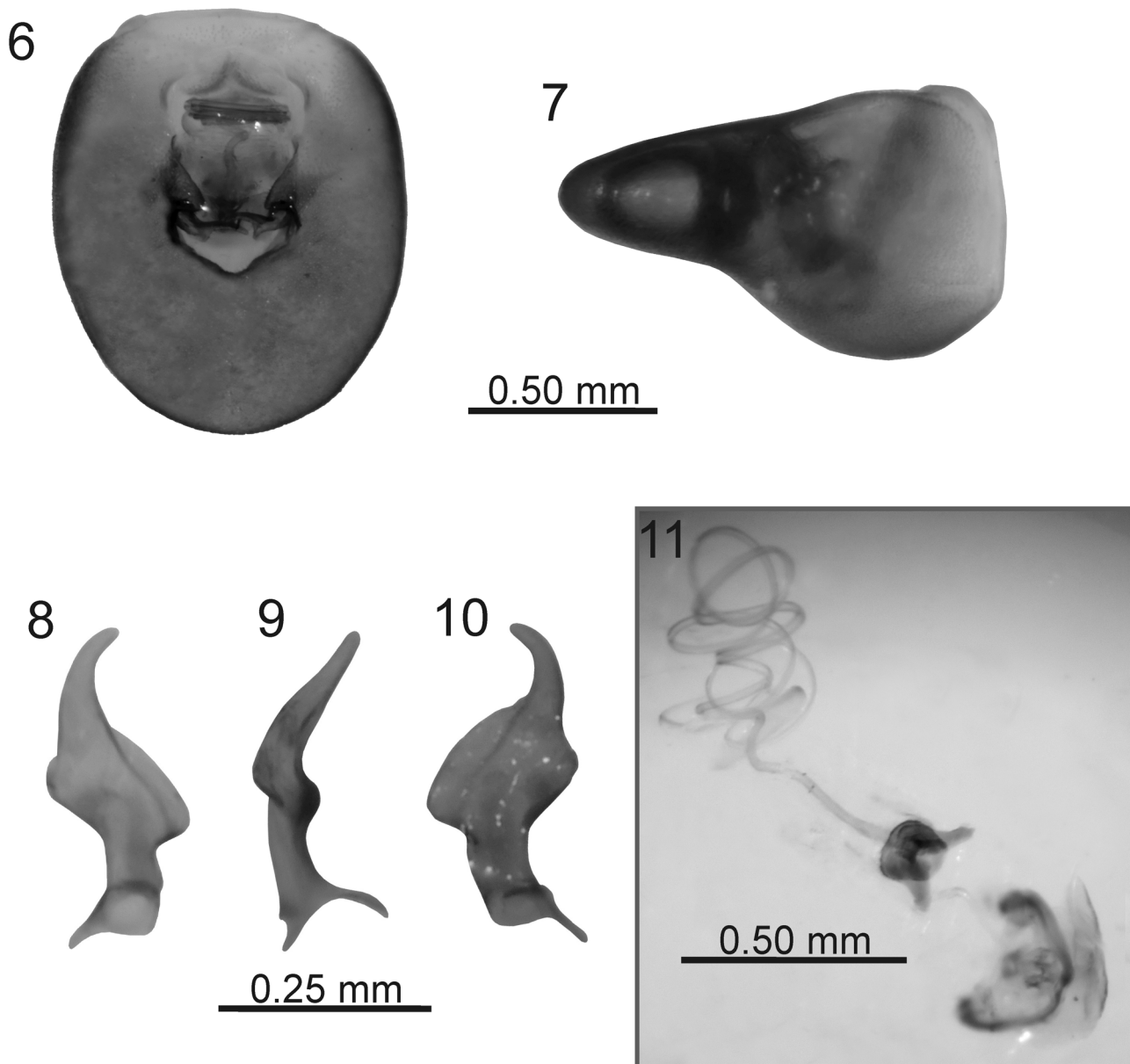


FIGURES 2–5. *Villalobosothignus erwini* n. sp. 2, 4 head and pronotum, male: 2, dorsal view; 4, lateral view. 3, 5 head and pronotum, female: 3, dorsal view; 5, lateral view.

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FIGURES 6–11. *Villalobosothignus erwini* n. sp. 6, 7 pygophore: 6, dorsal view; 7, lateral view. 8–10 right paramere: 8, inner view; 9, posterior view; 10, outer view. 11, aedeagus, anterior view.

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