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A new species of the genus *Streblocera* Westwood (Hymenoptera: Braconidae: Euphorinae) from peninsular India

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Members of the genus *Streblocera* Westwood (Braconidae: Euphorinae) are koinobiont endoparasitoids of adult chrysomelid Coleoptera (Li *et al.* 2021). *Streblocera* can be identified by an elongated scape with a horn or spine, with one or more flagellomeres being flattened and often serrated (Li *et al.* 2021). *Streblocera* is divided into five subgenera namely *Asiastreblocera*, *Cosmophorida*, *Eutanycerus*, *Streblocera* and *Villocera* (Chen and van Achterberg, 1997). Belokobylskij (2000) proposed the synonymy of *Villocera* with *Eutanycerus* which is presently treated as provisional (Li *et al.* 2021) until supporting molecular data become available.

So far, nine species are known from India, all described by Shamim (2013): *Streblocera* (*Eutanycerus*) *achterbergi* Shamim, *S. (E.) aurrayus* Shamim, *S. (E.) etawahiana* Shamim, *S. (E.) hayati* Shamim, *S. (E.) kanpurensis* Shamim, *S. (E.) levipleuron* Shamim, *S. (E.) shari* Shamim, *S. (E.) shawi* Shamim, and *S. (E.) shujauddini* Shamim. All species are confined to northern parts of India (Uttar Pradesh and Madhya Pradesh). In the present study, the first species from southern India (peninsular region) is described and illustrated and compared with allied species from the Oriental region.

The holotype was collected while sweeping vegetation in the Nilgiris, Tamil Nadu, South India. Many attempts post the collection of the holotype, in an attempt to collect more specimens of the same genus from the same collection locality failed. The following abbreviations are used in the descriptions: F1, F3 and F4 for antennal flagellar segments first, third and fourth; POL—Posterior Ocellar Line; OOL—Ocular Ocellar Line; OD—Ocellar Diameter. Morphological terminology in general follows van Achterberg (1993). Photos were taken with a Leica M 205 A stereozoom microscope with Leica DC 420 inbuilt camera using automontage software (version 3.8). The holotype of the new species is deposited in the National Insect Museum (NIM) of ICAR-National Bureau of Agricultural Insect Resources (ICAR-NBAIR), Bengaluru, India.

Species description

Streblocera (*Eutanycerus*) *breviflagellata* Gupta & van Achterberg sp. nov.

(Figures 1–3)

Key characters. Antennomeres 21; scape 7.7× as long as wide; first and second flagellomere 1.25× as long as wide; apical flagellomere 2.2× as long as wide; length of scape: length of pedicel to seventh flagellomere: length of antenna from eighth flagellomere to apex (1.4: 1.2: 1.8).

Color. Head brown except black stemmaticum, eyes greyish, ocelli transparent; antenna brown; mesosoma brown with propodeum black, remaining brown with darker edges; metasoma yellowish brown except first metasomal tergite black, ovipositor sheath dark brown; wing veins yellowish brown and pterostigma rather dark brown; legs yellowish brown.

Holotype. Body length: 4.7 mm, fore wing, 4.1 mm, antenna: 4.4 mm. Head: width of head in dorsal view 1.7× its length; antennomeres 21; scape long, incrassate, 7.7× its width and 1.6× height of head, at basal quarter with a minute dark brown spine, flagellum geniculate at seventh flagellomere; first to seventh flagellomeres ventrally weakly carinate, sixth and seventh flagellomeres formed into a small hook-like prominence apico-ventrally; first flagellomere 1.3× as long as wide, 0.5× as long as pedicel, subequal to second flagellomere in length; second flagellomere 1.3× its width, almost

equal to third flagellomere; third flagellomere 1.2× its width; length of scape: length of pedicel to seventh flagellomere : length of antenna from eighth flagellomere to apex = 1.4: 1.2: 1.8; length of scape 1.2 times length of antenna from pedicel to seventh flagellomere and length of antenna from pedicel to seventh flagellomere 0.6 times length of antenna from eighth flagellomere to apex; occipital carina complete; OOL : POL : OD = 26.1 : 14.2 : 8; length of eye in dorsal view 1.4× temple; temple smooth, sparsely setose; curved behind eyes; vertex smooth, sparsely setose; face densely setose; intertentorial line 1.4× tentorio-ocular line, anterior tentorial pit deep, large; clypeus 2.3× its height, mildly punctate and setose.

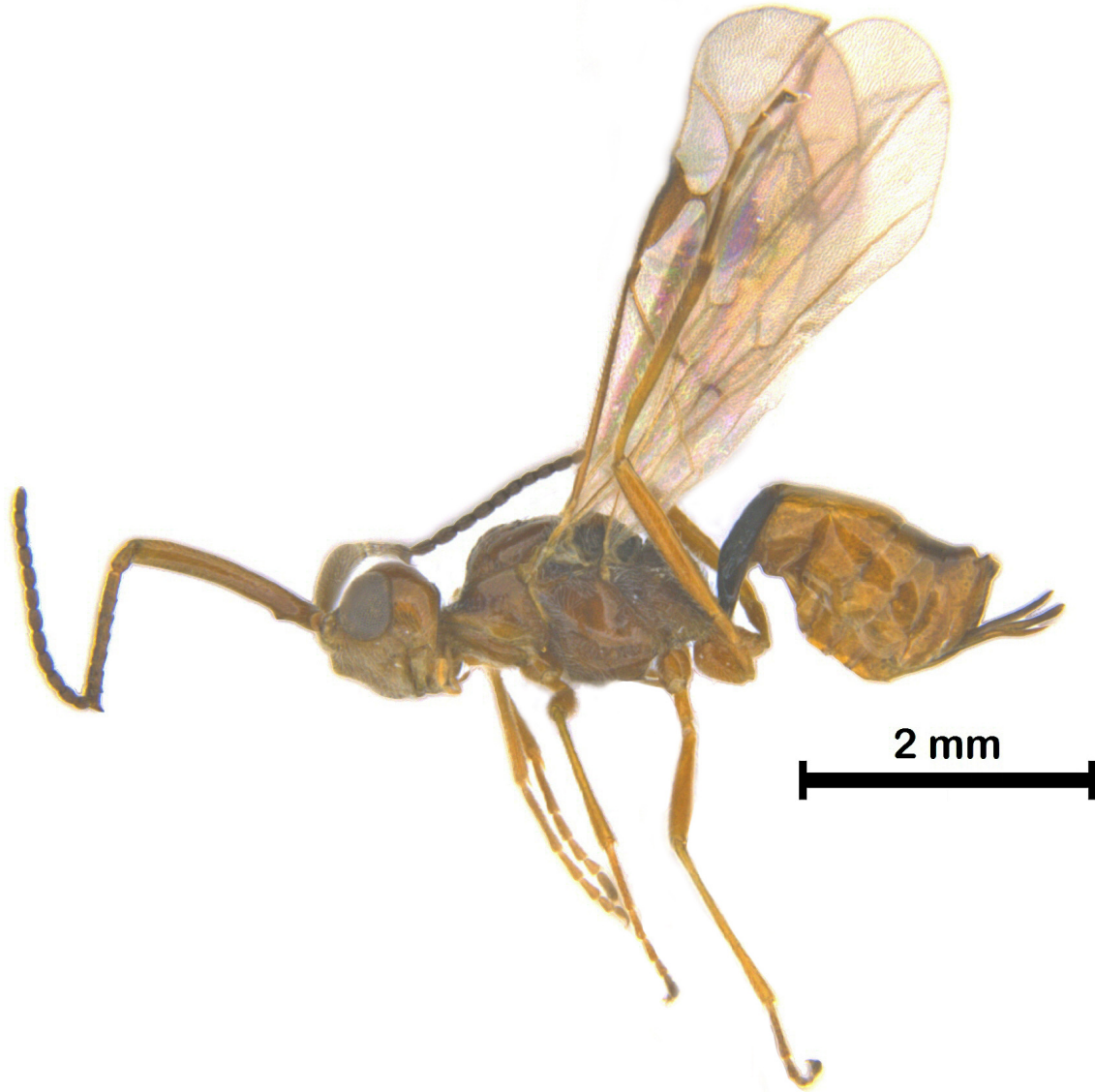


FIGURE 1. Female in habitus (Holotype).

Mesosoma. Length of mesosoma 2.3× its width; pronotum sides finely crenulate anteriorly, medially, and posteriorly; pronotum medially smooth except for few transverse carinae; mesopleuron anteriorly and posteriorly crenulate, remaining smooth; notauli wide, deep, and crenulate; middle lobe of mesoscutum setose, lateral lobes glabrous; scutellar sulcus wide, deep, smooth, except one median strong carina and few lateral carinae; scutellum smooth, flat; sides of scutellum crenulate, rugose; medio-posterior depression large, distinct; propodeum basally smooth with a median carina at basal one fourth, bifurcating to a median areola, remaining area with irregular carinae with smooth areas in between. Wings: fore wing 3.2× as long as wide; length of pterostigma 3.6× its width; length of vein 1–R1 0.8× length of pterostigma; r emitting a little before middle of pterostigma, its length 0.13× width of pterostigma; vein SR1 + 3–SR curved; r : 2–SR : SR1 + 3–SR (relative) = 1 : 3.8 : 10.5; 1–CU1 : 2–CU1 : 3–CU1 (relative) = 0.6 : 3.5 : 1.5; hind wing 4.2× as long as wide; 1–M : 1–r–m : 2–SC+R (relative) = 1.1 : 1.5 : 1.6. Legs: hind coxa setose; length of hind femur, tibia, and basitarsus 7.5×, 12.8×, and 10.3× their widths, respectively; lengths of hind tibial spurs 0.25× and 0.26× hind basitarsus.

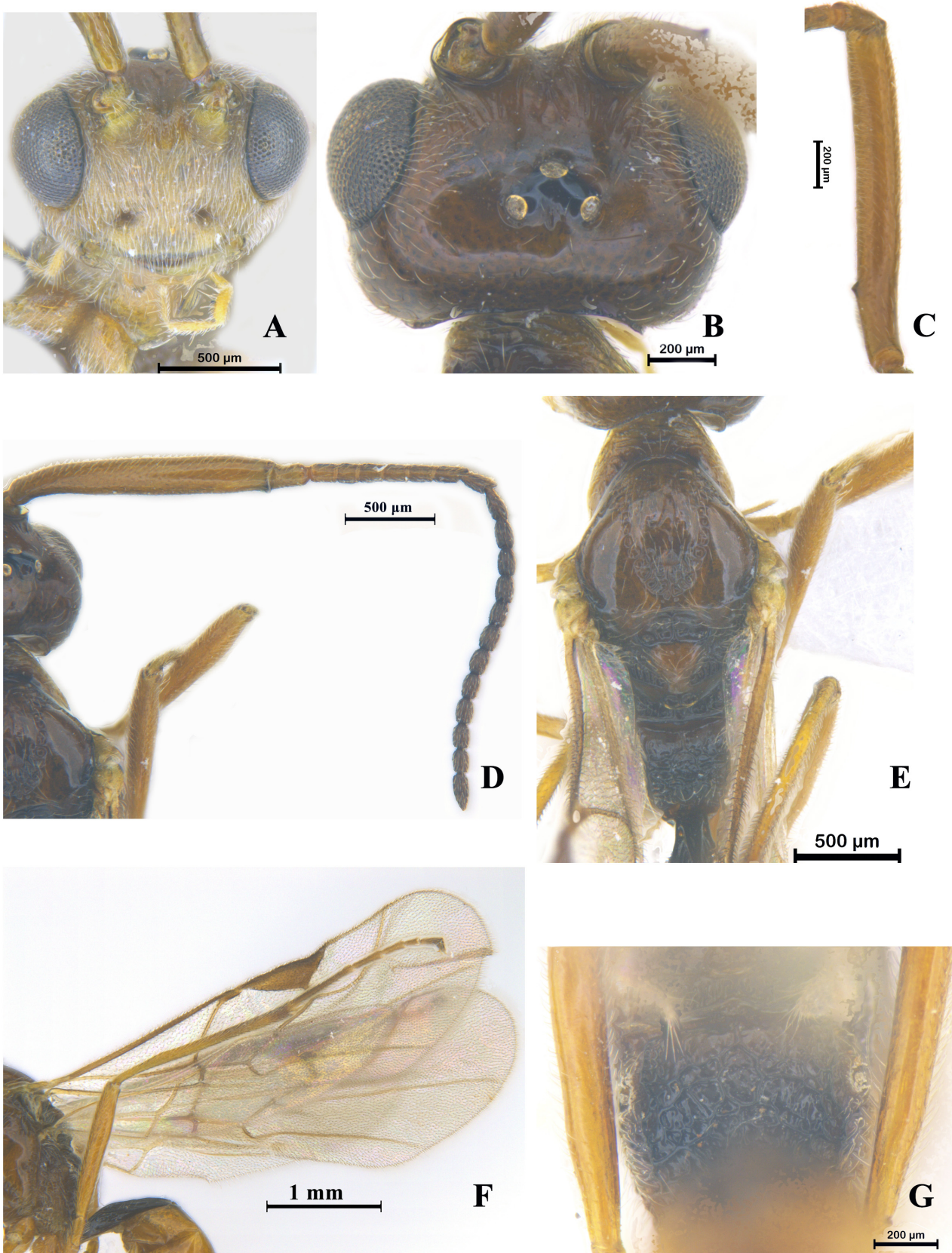


FIGURE 2. A. Head in frontal aspect; B. Vertex; C. Scape; D. Antenna; E. Mesosoma; F. Wings; G. Propodeum.

Metasoma. Length of metasoma 2.3 mm (in lateral view), 2.3× its width and 1.85× its height; first metasomal tergite (in dorsal view) 1.7× its apical width, 1.8× its apical width in lateral view, its surface apically and basally smooth

with smooth region in between two sub-median longitudinal carinae, remaining area longitudinally striate, striations not reaching the apical edge; dorsope present; distance across spiracles $0.2\times$ distance from spiracles to apex of first tergite; ovipositor sheath length $0.19\times$ fore wing and $1.2\times$ hind basitarsus; ovipositor 0.8 mm in length, distinctly curved upward.

Holotype. ♀; India, Tamil Nadu, Wellington, sweep net, 24.ix.2019; leg Omprakash Navik. code—NBAIR/Brac/Euph/Stre/24919 (NIM).

Etymology. “Brevis” is Latin for short and “flagellum” is Latin for small whip or lash because of the comparatively short basal flagellomeres of the antenna.

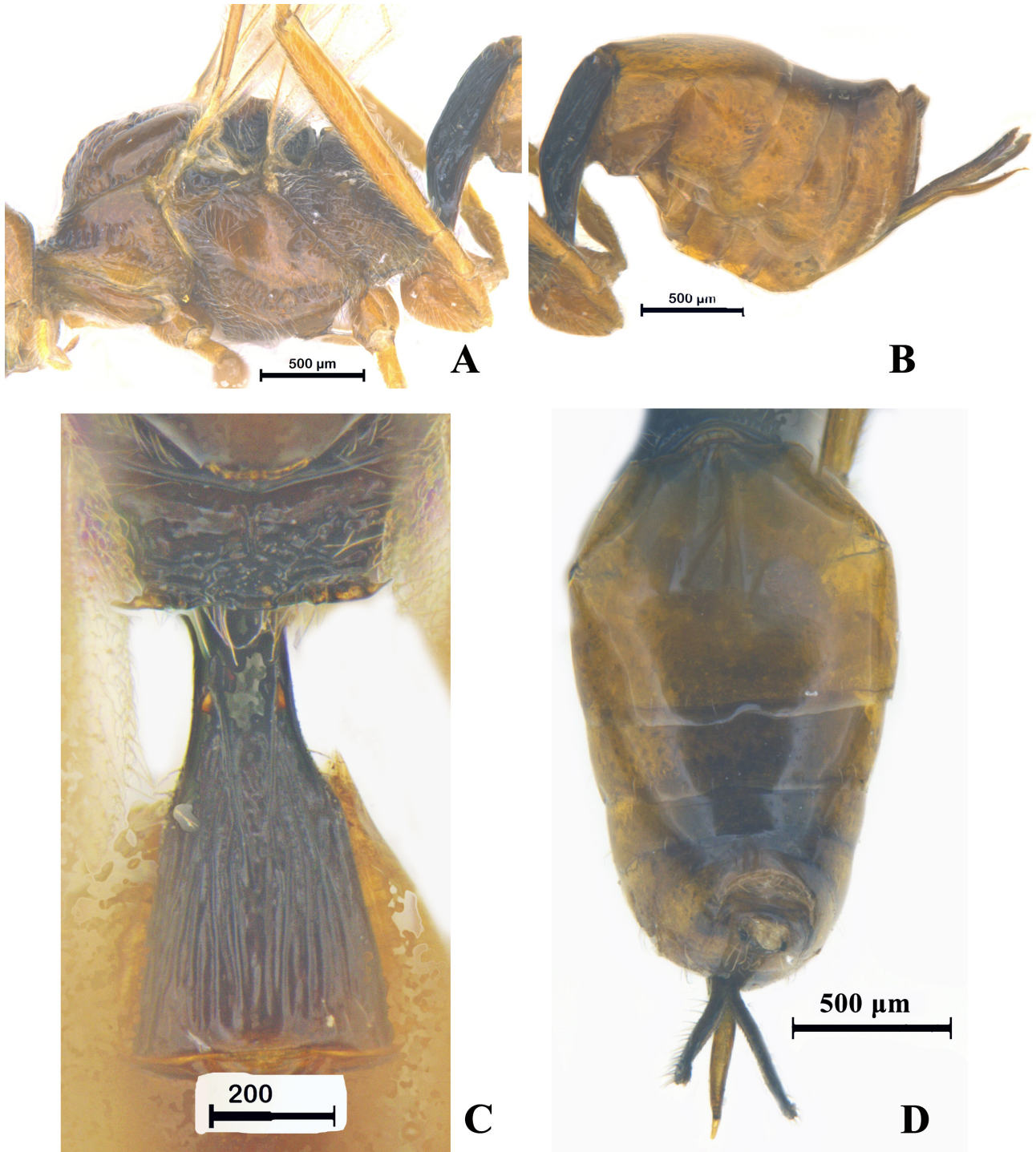


FIGURE 3. A. Mesopleuron; B. Metasoma in lateral aspect; C. Propodeum and first tergite; D. Metasoma in dorsal aspect.

Distribution. India (Tamil Nadu).

Comments. The new species can be distinguished with the combination of characters from other similar species from India and Vietnam detailed in Belokobylskij (2000), Shamim (2013), Long & Nhi (2020), and Li *et al.* (2021).

Streblocera (*E.*) *breviflagellata* **sp. nov.** comes close to four Indian species *S. aurrayus*, *S. etawahiana*, *S. levipleuron*, and *S. shujauddini*—in having same number of antennomeres (21) however can be differentiated in having propodeum basally smooth with a median carina leading to a median areola, remaining with irregular carinae (*vs* propodeum basally reticulate, rugose, apically rugose with short median carina in *S. aurrayus* and uniformly reticulate rugose in *S. etawahiana*); in not having median longitudinal carina in mesosoma (*vs* present in *S. levipleuron*); in having first metasomal tergite 1.7× its apical width (*vs* 2.2× in *S. shujauddini*).

The new species also comes close to *S. intermedia* (from Vietnam) in having 21 antennomeres however differs in F1 0.5× as long as pedicel (*vs* subequal in *S. intermedia*) and in having first metasomal tergite 1.7× its apical width (*vs* 2.5× in *S. intermedia*).

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