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The identity of the enigmatic genus *Stenocolletes* Schrottky (Hymenoptera: Tiphidae)

MARIANO LUCIA¹, LEOPOLDO J. ALVAREZ¹, VICTOR H. GONZALEZ^{2,3}
& ALBERTO H. ABRAHAMOVICH¹

¹División Entomología, Museo de La Plata, Universidad Nacional de La Plata, Paseo del Bosque s/n, 1900FWA, La Plata, Argentina. CONICET. E-mail: mlucia@fcnym.unlp.edu.ar; lalvarez@fcnym.unlp.edu.ar; alberto@fcnym.unlp.edu.ar

²Southwestern Oklahoma State University, Biological Sciences, 100 Campus Drive, Weatherford, Oklahoma, 73096, USA. E-mail: victorgonzab@gmail.com

³Division of Entomology, Natural History Museum, and Department of Ecology & Evolutionary Biology, 1501 Crestline Drive – Suite 140, University of Kansas, Lawrence, Kansas, 66045, USA

Abstract

The identity of *Stenocolletes* Schrottky and its single species, *Stenocolletes pictus* Schrottky, has remained a mystery since their description in 1909. *Stenocolletes* was originally placed in the bee family Colletidae but no known American colletid matches the original description. The type of *S. pictus* is likely lost as are large portions of Schrottky's collection. Herein, we describe and designate as neotype a historic specimen that closely matches Schrottky's description and place it in the current classification. *Stenocolletes pictus* is conspecific with the South American thiidid wasp *Calchaquila albinervis* (Brèthes, 1913). Both generic and specific names are new synonymous of *Stenocolletes* and *pictus*, respectively (**new junior synonym**). *Stenocolletes pictus* is also recorded for the first time from Córdoba, Argentina.

Key words: Anthoboscidae, Anthophila, Argentina, Colletidae, Panurginae, Tiphidae

Introduction

Among the nearly 600 species of insects described by Curt Schrottky (1874–1937), the identity of the genus *Stenocolletes* Schrottky and its single species, *Stenocolletes pictus* Schrottky, 1909, have remained a mystery. Schrottky (1909) described *Stenocolletes* from two males collected by Carlos Bruch (1869–1943) in Catamarca, Argentina, and as indicated by its generic name, he placed it in the short-tongue bee family Colletidae. Although Schrottky did not examine the tongue of his specimens to avoid further damage (Schrottky indicated that the box with the type specimens arrived broken), he regarded *Stenocolletes* as the most distinctive of the hairy Colletidae, particularly because of the yellow maculation on all tagmata (Schrottky 1913). That taxonomic placement was not questioned by subsequent authors (Ducke 1912; Sandhouse 1943; Michener 1965, 1989) until Michener (2000, 2007) doubted that Schrottky's *Stenocolletes* was actually a colletid given that its body coloration is not found in any other American colletid bee. He suggested that *Stenocolletes* might instead be a panurgine bee of the genus *Psaenythia* Gerstaecker.

The identity of *Stenocolletes* could be easily clarified by examining the type of *Stenocolletes pictus*. However, it is well-known among entomologists that a large portion of Schrottky's private collection was destroyed and that the remaining part is scattered among multiple institutions in South America, United States and Europe (Rasmussen *et al.* 2009). Thus, as of today, the existence or whereabouts of the type of *S. pictus* is unknown and the taxonomic placement of the species remains questionable.

As a part of an ongoing study of the Argentinean melittofauna, we found in the Alejandro Ogloblin collection at the Museo de la Plata, Argentina (MLP), a male specimen (Figs 1–4) labeled “*Stenocolletes pictus* Schrottky, Plesiotipus” [Plesiotype]. The specimen agrees closely with the original description by Schrottky in the body pubescence, size, and color. However, it was collected in the providence of Córdoba in 1942, several years after

Schrottky's death, and therefore is not the type. Nonetheless, our finding is noteworthy for two reasons: first, no other specimen has been recognized as *S. pictus*, and second, the word plesiotype was occasionally used for specimens that were discovered after the publication of a description and which were believed to be the same species.

To stabilize the name, herein we designate that newly located specimen as neotype of *Stenocolletes pictus* Schrottky. The specimen is neither a colletid nor an andrenid bee, but a wasp of the family Tiphidae, conspecific with *Plesiomorpha albinervis* Brèthes, 1913.

Material and methods

The specimen designated as neotype of *Stenocolletes pictus* Schrottky is deposited at MLP and was compared with the male specimen of *Calchaquila albinervis* (Brèthes, 1913), determined and described by Genise (1984), from the Museo Argentino de Ciencias Naturales Bernardino Rivadavia (MACN), Argentina. This male specimen used for comparison is from the same locality as the holotype female of *C. albinervis* (La Paz, Mendoza). External morphological structures were studied using a Nikon SMZ 745T stereomicroscope and photographs were taken with a Canon Power Shot® A520 digital camera attached to it. Digital images were assembled with CombineZM software™.

Results

Systematics

Family Tiphidae Leach, 1815

Subfamily Anthoboscinae Turner, 1912

Genus *Stenocolletes* Schrottky

Stenocolletes Schrottky 1909: 253. Type species: *Stenocolletes pictus* Schrottky, 1909.

Plesiomorpha Brèthes 1913: 108; Genise, 1984: 203 [homonym of *Plesiomorpha* Warren 1898, Type species: *Plesiomorpha albinervis* Brèthes, 1913]

Calchaquila Genise 1984: 203 [*nomen novum* for *Plesiomorpha* Brèthes 1913. Type species: *Plesiomorpha albinervis* Brèthes, 1913] [**new synonym**]

Stenocolletes pictus Schrottky, 1909

(Figures 1–4)

Stenocolletes pictus Schrottky, 1909: 253 [Neotype: MLP; ♂, Salto, Córdoba, Argentina] [**new neotype designation**]

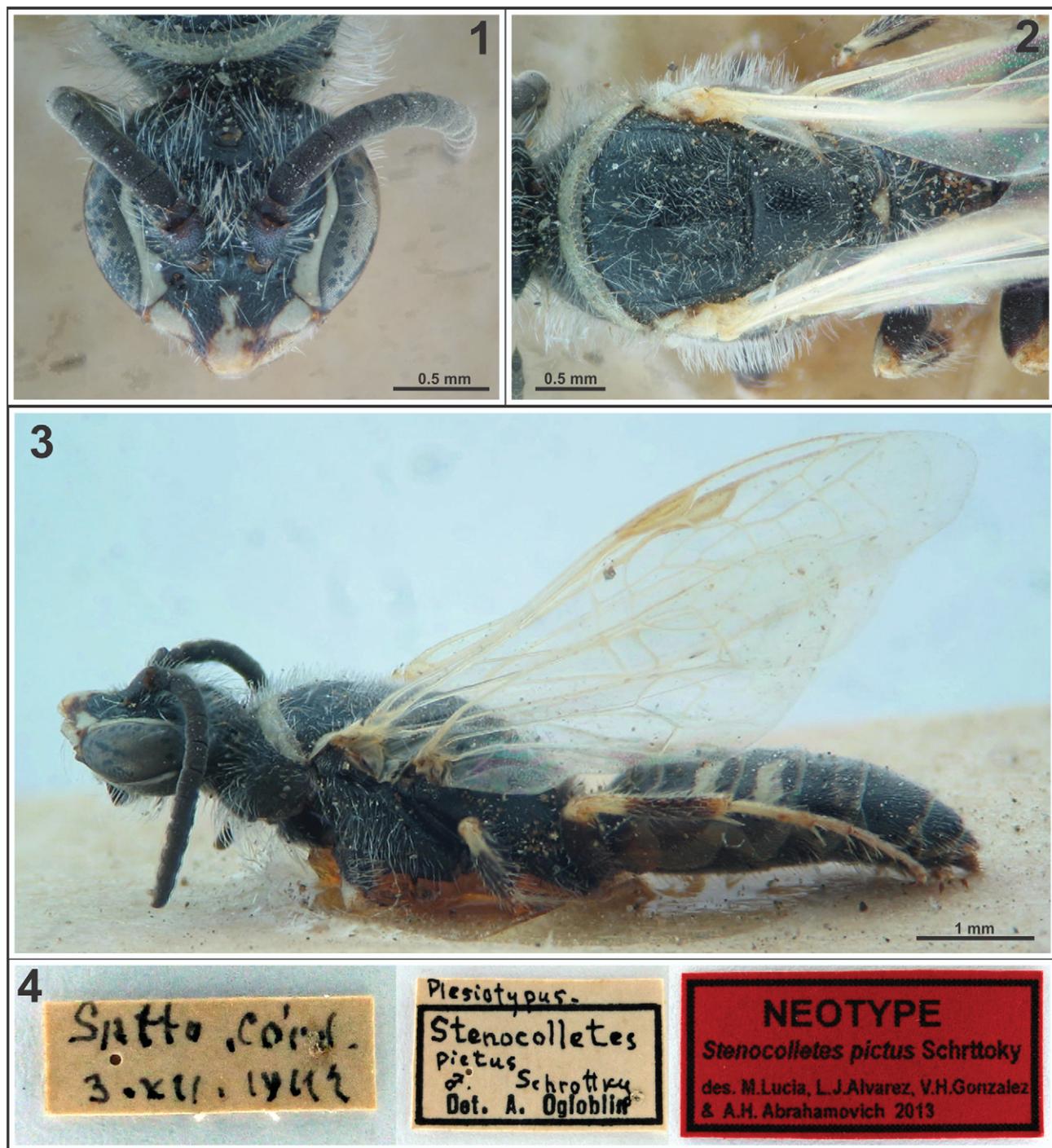
Plesiomorpha albinervis Brèthes: Jörgensen, 1912: 278 [*nomen nudum*]

Plesiomorpha albinervis Brèthes, 1913: 109 [Holotype: MACN; ♀, La Paz, Mendoza, Argentina]; Genise, 1984: 204 [unnecessary type designation] [**new synonym**]

Calchaquila albinervis (Brèthes, 1913); Genise, 1984: 204.

Description: Body length 7.6 mm, head length 1.65 mm, head width 1.70 mm, mesosoma width 1.35 mm, metasoma width (as measured across second tergum) 1.55 mm. *Coloration.* Color black, except dark brown to black on antenna and whitish yellow as follows: mandible, except light brown at margins and apex; face as in Fig. 1; gena with narrow band along outer margin of compound eye; pronotum with transverse band along posterior margin (Fig. 2); tegula (except translucent margin); metanotum with median spot; femora apically on outer surface; meso- and metatibiae basally and apically on outer surface; meso- and metatarsi; second to fourth terga with medially interrupted bands (band on T4 weakly marked). Wing membrane hyaline, veins whitish, pterostigma pale yellow (Fig. 3). *Pubescence.* White; head and mesosoma with abundant long, erect simple hairs; terga and sterna

with short, simple, decumbent hairs. *Sculpturing*. Head and mesosoma with large, dense punctures. Metasomal terga with punctures sparse, fine; apical margins translucent, pale whitish-yellow. *Structure*. Compound eyes converging below, upper ocular distance 1.16 mm, lower ocular distance 1.06 mm; antennae with 11 flagellomeres (length of scape, pedicel and flagellomeres 1 to 3: 0.34 mm:0.12: 0.22:0.28: 0.28, respectively); flagellomeres 7 and 8 carinate; clypeus projected medially with apex rounded (Fig. 1).



FIGURES 1–4. Neotype male of *Stenocolletes pictus* Schrottky. 1, Facial view. 2, Dorsal view of mesosoma. 3, Lateral habitus. 4, Specimen labels.

Distribution. ARGENTINA: Catamarca, Córdoba, Mendoza, Neuquén, Rio Negro, San Juan and Salta. This species occurs along the Monte phytogeographical province, from Salta to Rio Negro (Genise 1984).

New record. ARGENTINA. Córdoba (see comments below).

Comments. The specimen designated herein as neotype of *Stenocolletes pictus* is deposited at MLP and has the following label data: Salto, Córdoba. [=Córdoba], 3.XII.1942 [rectangular handwritten label] // Plesiotipus *Stenocolletes pictus* Schrottky ♂ [handwritten] Det. A. Ogloblin // NEOTYPE *Stenocolletes pictus* Schrottky des. M. Lucia, L. J. Alvarez, V. H. Gonzalez & A. H. Abrahamovich 2013 [red rectangular label].

Brèthes (1913: 109) described *Plesiomorpha albinervis* from a single female specimen, as he explicitly indicated in the original description. Thus, such a specimen is the unique type because no other specimens are mentioned in the original description and Genise's (1984: 205) designation of this specimen as lectotype is not necessary.

Discussion

Considering Schrottky's expertise and experience with bees, it is difficult to imagine that he may have mistakenly described a wasp for a bee, but it is not surprising given the remarkable superficial resemble of the male specimen to a colletid bee. The collector of the two male specimens described by Schrottky, Carlos Bruch, is recognized for his work on the biology and systematics of Argentinean beetles and ants (Lizer y Trelles 1943). Thiipid wasps are known as ectoparasites of Coleoptera and thus, it is reasonable to speculate that those specimens might have been collected during any of Bruch's studies on Coleoptera.

On the other hand, Alejandro Oglobin (1891–1967), whom recognized the specimen as *Stenocolletes pictus* and herein designated as neotype, was a renowned entomologist specialist on Argentinean wasps and bees (De Santis 1968). Personal letters archived at MLP indicate that Oglobin maintained a continuous communication with Bruch. Given Oglobin's expertise on wasps, it might have been possible that he was the first to recognize Schrottky's mistake, but failed to publish this finding or mentioned it in his personal letters to Bruch.

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