A new species of Sycorax (Diptera: Psychodidae: Sycoracinae) from the Brazilian Atlantic Forest

Freddy Bravo1; Leonardo de Souza Rocha2 & Claudiney Biral dos Santos2

1 Departamento de Ciências Biológicas, Universidade Estadual de Feira de Santana. Avenida Transnordestina, 44036-900 Feira de Santana, BA, Brazil; E-mail: fbravo@uefs.br
2 Unidade de Medicina Tropical, Universidade Federal do Espírito Santo. Avenida Marechal Campos 1468, 29040-090 Vitória, ES, Brazil; E-mail: claudiney@ppgcf.uesp.br; lsr@ioc.fiocruz.br

ABSTRACT. Sycorax confusa sp. nov. is described from the Atlantic Forest of the state of Espírito Santo, Brazil. The new species has a paramere with a long bristle, a characteristic that had only been observed in Sycorax longispinosa Bravo, 2007 from the Brazilian Amazon; the new species can be differentiated from the last one because the middle acute internal projections of each paramere do not cross each other and because the anterior end of aedeagal apodeme is bulbous. A key to the species of Sycorax Haliday in Curtis, 1839 (males) from the Neotropical Region is provided.

KEY WORDS. Neotropical Region, Brazil, moth fly, new species.


During routine entomological surveillance for leishmaniasis control in the municipality of Afonso Cláudio, Espírito Santo, Brazil, three specimens of a new species of Sycorax were collected and are described here. A key to the Neotropical species of Sycorax (males) is also provided.

The specimens were collected with CDC light traps, cleared with 10% KOH and mounted in Berlese’s medium according to the methodology described by Barretto & Coutinho (1940). The morphological terminology used in the descriptions is the same of Bravo & Salazar-Vaizuelia (2009). The specimens were deposited in the Coleção Entomológica Prof. Johann Becker, Museu de Zoolgia, Universidade Estadual de Feira de Santana, Feira de Santana, state of Bahia, Brazil (MZUEFS).

TAXONOMY

Sycorax confusa sp. nov.

Figs 1-9

Type material. Brazil, Espirito Santo: Afonso Cláudio municipality (Empoçado, 20°03.576’S, 41°10.062’W, 132 msl), 04.VIII.2008, C.B. Santos leg., holotype male (#43949, MZUEFS); two paratype males with the same data as the holotype (#43950 and #43951, MZUEFS).

Diagnosis. First flagellomere 1.8 times as long as second; gonocoxite 1.4 times as long as gonostylus; gonostylus with one apical spine; paramere with long, thick apical bristle, twice as long as paramere; aedeagus bifid without pair of lateral sclerotinized projections; anterior end of aedeagal apodeme bulbous.

Description. Male. Eyes separated, without eye bridge; clypeus rectangular; labrum triangular, 1.5 times as long as clypeus; antenna damaged (incomplete) in all specimens; scape smaller than pedicel (Fig. 1); pedicel spherical (Fig. 1); pedicel twice as long as scape (Fig. 1); basal flagellomeres cylindrical (Figs 1-3); first flagellomere 1.8 times as long as second (Fig. 2); ascoids observed only on third flagellomere of paratype (#43950), short, 0.36 times as long as flagellomere (Fig. 3); palpus formula = 1.0:0.7:0.7:0.7 (Fig. 4). Wing (Fig. 5): distal end of Sc, base of M3, base of CuA1 and transversal vein m-cu lightly sclerotinized; CuA short, not reaching wing margin. Tergite 9 pilose (Fig. 6), wider than long; cerci with apical micropilosity and some bristles on apical margin (Fig. 6). Sternite 10 with apex narrower than base and with apical micropilosity (Fig. 6). Gonocoixite pilose, cylindrical, 1.4 times as long as gonostylus (Fig. 7). Gonostylus pilose with long spine at apex (Fig. 7). Parameres pilose, each with middle acute internal projection; projections not crossing each other (Fig. 8); presence of long, thick apical bristle twice as long as paramere (Fig. 8). Gonostylus with one apical spine slightly shorter than the gonostylus itself (Fig. 7); base of gonostylus with internal group of short sensorial setae (Fig. 7). Aedeagus bifid without pair of lateral sclerotinized projections. Aedeagal apodeme as long as gonostylus; anterior end of aedeagal apodeme bulbous (Fig. 9).
A new species of *Sycorax* from the Brazilian Atlantic Forest

**Female unknown.**

**Etymology.** The name *confusa*, Latin for ‘confused or mixed’, was chosen because the species was initially confused with *Sycorax longispinosa*.

**Remarks.** *Sycorax confusa* sp. nov. (from the Atlantic Rain Forest of Espírito Santo) is morphologically similar to *S. longispinosa* (from the Amazonian Forest in Pará). The presence of a long, thick bristle in the paramere, twice as long as the latter (Fig. 8; BRABO 2007: fig. 10), is a putative synapomorphy for both species, absent in other *Sycorax* species. It is important to note that a basal group of short sensorial setae on the inner base of the gonostylus of the new species has also been observed.
in *S. longispinosa*; although this characteristic was not mentioned in the original description by Bravo (2007), a careful examination of four paratype males deposited in MZUEFS has confirmed the presence of these sensorial setae. The new species and *S. longispinosa* can be distinguished from each other by the following characteristics: 1) the distal end of the Sc, the base of M₁, the base of CuA₁, and the transversal m-cu vein are lightly sclerotinized in *S. confusa* sp. nov. (Fig. 5). While these veins are well sclerotinized in *S. longispinosa* (Fig. 10; Bravo 2007: fig. 5) the wing veins of *S. longispinosa* have been mistakenly interpreted as the base of M₁; the correct interpretation is herein indicated in figure 10; 2) the dorsal profile of the aedeagal apodeme of *S. longispinosa* is thin (Bravo 2007: fig. 9), whereas it is club-shaped in the new species (Fig. 9); 3) the middle acute internal projections of each paramere cross each other in *S. confusa* sp. nov. (Fig. 9). While these veins are well sclerotinized in *S. longispinosa* (Fig. 10; Bravo 2007: fig. 5) the wing veins of *S. longispinosa* have been mistakenly interpreted as the base of M₁; the correct interpretation is herein indicated in figure 10; 4) a pair of lateral sclerotinized projections of aedeagus, similar to thin horns (Bravo 2007: figs 7, 9), which are present in *S. longispinosa*, are absent in the new species (Fig. 9).

**Key to males of Sycorax (sensu Duckhouse 1972) from the Neotropical Region**

1. Gonostylus with apical spine and two or three basal spines...2
2. Gonostylus with apical spine and three basal spines........ 6
3. Gonostylus and gonocoxite without long subterminal hair; genital filament (see Bravo & Salazar-Valenzuela 2009: fig. 11) sinuous ........................................... *S. trispinosa* Young, 1979
4. Gonostylus and gonocoxite with long subterminal hair; genital filament sinuous or arched ........................................... 4
5. Lower distal end of paramere terminating in a hook-like projection, acute at tip; aedeagus ending at same level of distal end of genital filament ...... *S. fairchildi* Young, 1979
6. Aedeagus terminating in a hook-like projection, acute at tip ........................................... *S. assimilis* Barretto, 1956
7. First flagellomere long, 1.5 times the length of second one........ 8
8. First flagellomere 1.3 times the length of second one .......... 10
9. Parameres wide and long in dorsal view, the same length as the gonopods (gonocoxite + gonostylus) .......................................................... *S. bahiensis* Bravo, 2003
10. Aedeagus not terminating in a hook-like projection ........... *S. sp. nov.* Bravo et al., 2009

**ACKNOWLEDGMENT**

FB received a research grant from CNPq (Process 306426/2006-4).

**LITERATURE CITED**


Submitted: 04.II.2010; Accepted: 02.IV.2010.

Editorial responsibility: Gabriel L.F. Mejdalani