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NEW SPECIES OF *NEOSILBA* McALPINE (DIPTERA: LONCHAEIDAE) AND NEW RECORDS FROM COLOMBIA

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ABSTRACT

The Neotropical genus of lance flies Neosilba McAlpine could be found associated with fruits, flowers or buds of plants. There are few basic or applied studies of these insects, including data on taxonomy and/or economic importance. We described ten new species from Colombia: N. plana sp. nov., N. tolimensis sp. nov., N. amphora sp. nov., N. convexa sp. nov., N. concava sp. nov., N. orbata sp. nov., N. spiculata sp. nov., N. angusta sp. nov., N. distospinosa sp. nov. and N. piracea sp. nov. We presented a key for the all 40 valid species of the genus, included in five groups and two subgroups: major, parva, peltae, pendula and glaberrima groups. Glaberrima includes the two subgroups glaberrima and certa, and pendula includes the pendula and nigrocaerulea subgroups. Neosilba parva and N. bifida are reported for first time in Colombia.

KEY WORDS: Lance flies; Taxonomy; Distribution; Hosts.

INTRODUCTION

The genus *Neosilba* was erected by McAlpine in 1962 for a Neotropical group of species of lance flies. McAlpine & Steyskal (1982) revised the genus composed of the following species: *N. batesi* (Curran, 1932); *N. certa* (Walker, 1852); *N. dimidiata* (Curran, 1932); *N. fuscipennis* (Curran, 1932); *N. glaberrima* (Wiedemann, 1830); *N. longicerata* (Hennig, 1948); *N. major* (Malloch, 1920); *N. nigrocaerulea* (Malloch, 1920); *N. oaxacana* McAlpine & Steyskal, 1982; *N. parva* (Hennig, 1948); *N. peltae* McAlpine & Steyskal, 1982; *N. pendula* (Bezzi, 1989); *N. perezii* (Romero & Ruppel, 1973); *N. pseudopendula* (Korytkowski & Ojeda, 1971) and *N. zadolicha* McAlpine & Steyskal, 1982. According to the revision of

McAlpine & Steyskal (1982) these insects are widely unstudied, and more species should be described (at least 60 species remained to be described).

Based on the shape of the aedeagus, at least four groups of species (described and undescribed) could be considered: *major* group (*N. dimidiata*, *N. fuscipennis*, *N. longicerata* and *N. major*), *oaxacana* group (*N. oaxacana*), *parva* group (*N. parva*) and *peltae* group (*N. peltae*) McAlpine & Steyskal (*op. cit.*). However this classification was not clear regarding the characters used for the identification of each group, which was also based on descriptions of the species; it could be supposed that the shape of the surstylus and aedeagus is the best character.

After a first revision of the genus, fifteen species were described: *N. bella* Strikis & Prado, 2008;

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N. bifida Strikis & Prado, 2005; *N. cornuphallow* Strikis, 2011; *N. delvechiosi* Strikis, 2011; *N. ilheuisse* Strikis, 2011; *N. inesperata* Strikis & Prado, 2009; *N. laura* Strikis, 2011; *N. mcalpiniei* Strikis, 2011; *N. pantanense* Strikis, 2011; *N. paramerolatus* Strikis, 2011; *N. parapeltae* Strikis, 2011; *N. pradoi* Strikis & Lerena, 2009; *N. pseudobifida* Strikis, 2011; *N. pseudozadolicha* Strikis, 2011 and *N. turgidiphallus* Strikis, 2011 (Strikis & Prado, 2005, 2008, 2009; Strikis & Lerena, 2009; Strikis, 2011).

Larvae of *Neosilba* develop in a variety of plants (including their fruits, flowers or buds) and large populations could be found inflicting economic damage on fruits. Studies of *Neosilba* including taxonomy, biology, ecology and management (when species are pests) are lacking.

The *Neosilba* species from Colombia includes only those recorded by McAlpine & Steyskal (1982): *N. batesi*, *N. glaberrima*, *N. major*, *N. perezi*, *N. pseudopendula* and *N. zadolicha*. The objective of this paper is to contribute to the taxonomic knowledge of the genus through description of ten new species, found especially in surveys of Lonchaidae carried out in the Department of Tolima, Colombia, with specimens obtained from fruits and/or MacPhail traps. This work is a contribution to knowledge of the genus in Colombia, especially in reference to its diversity, hosts and distribution.

MATERIAL AND METHODS

The specimens were collected in a systematic survey carried out in the Department of Tolima between 2004 and 2007, caught in MacPhail traps baited every other week and from fruits infested by larvae and collected monthly. Specimens from fruits collected in the Department of Santander during different times were studied, and material collected from other surveys in Tolima was also included.

Morphologic terminology follows McAlpine *et al.* (1981), McAlpine (1987), Korytkowsky & Ojeda (1971), McAlpine & Steyskal (1982) and Stuckenberg (1999) according to the antennal articles. The acronym of the institution where specimens were deposited is **MENT-UT**: "Museo de Entomología de la Universidad del Tolima, Ibagué, Tolima, Colombia". The taxonomy of the genus is based on the male genitalia, however female genitalia could show interspecific variation (McAlpine & Steyskal, 1982). In this work, association between male and female was difficult due to the presence of more than one species in the fruits collected and/or in the traps. Therefore, descriptions were based only on males.

RESULTS

Diagnosis of the genus *Neosilba* McAlpine was done by McAlpine & Steyskal (1982), including the key for genera in the family. No additional data are required.

There are now 40 species of the genus (include species described in this paper). Based on the morphology of the male genitalia, we included them in 5 groups and 4 subgroups: *major* (6 species), *parva* (2), *peltae* (6), *pendula* groups with two subgroups, *pendula* subgroup (10) and *nigrocaerulea* subgroup (3); and the *glaberrima* group with two subgroups, *glaberrima* subgroup (6) and *certa* subgroup (6). Two species were not included in any group. We do not consider the *oaxacana* group of McAlpine & Steyskal (1982) because its character of prensisetae of the surstylus separated in two groups could be found in other species clearly belonging to other groups. The groups and species are as follow:

major group: Male terminalia hemispherical-shape and filament of the aedeagus long and same width: *N. dimidiata*, *N. fuscipennis*, *N. longicerata*, *N. major*, *N. plana* sp. nov. and *N. tolimensis* sp. nov.

parva group: Male terminalia hemispherical-shape and filament of the aedeagus short and wider: *N. amphora* sp. nov. and *N. parva*.

peltae group: Epandrium narrow in lateral view and filament of the aedeagus short: *N. convexa* sp. nov., *N. concava* sp. nov., *N. ilheuisse*, *N. mcalpiniei*, *N. parapeltae* and *N. peltae*.

pendula group: Filament and C-shape part of the aedeagus similar width.

pendula subgroup: apex of the filament of the aedeagus strongly or slightly swollen and/or S-shaped and or bent: *N. angusta* sp. nov., *N. cornuphallow*, *N. orbata* sp. nov., *N. pendula*, *N. pseudopendula*, *N. pseudozadolicha*, *N. perezi*, *N. spiculata* sp. nov., *N. turgidiphallus* and *N. zadolicha*.

N. nigrocaerulea subgroup: Shape and width of the filament similar until apex: *N. laura*, *N. nigrocaerulea*, *N. pantanense*.

glaberrima group: Filament of the aedeagus strongly thinner than the C-shape.

glaberrima subgroup: Aedeagus with process arising from convex side of thickened C-shape base: *N. batesi*,

N. bifida, *N. delvechioi*, *N. glaberrima*, *N. inesperata* and *N. pseudobifida*.

certa subgroup: Aedeagus without any process arising from convex side of thickened C-shape base: *N. bella*, *N. certa*, *N. distospinosa* sp. nov., *N. oaxacana*, *N. piracea* sp. nov. and *N. paramerolatus*.

Neosilba pradoi should belong to the *glaberrima* group, however we are not sure if it belongs to

glaberrima or *certa* subgroup. Also, we put *N. pseudozadolicha* in the *pendula* subgroup based on its description “The overall shape of the genitalia is similar to *N. zadolicha*”. However, the apex of the aedeagus is not described, and this species was included in the key based on this sentence in the description.

Following is a key for species of *Neosilba* based especially on the key of McAlpine & Steyskal (1982) including the data from Strikis & Prado (2005, 2008).

Key for species of *Neosilba* McAlpine

1.	Male terminalia hemispherical-shape.....	2
1’.	Male terminalia not hemispherical-shape	9
2(1).	Filament of the aedeagus long (reaching or beyond the apex of the epandrium), and more or less similar width throughout its length (<i>major</i> group)	3
2’.	Filament of the aedeagus short (just reaching the base of the epandrium) and wider in any part of it (<i>parva</i> group)	8
3(2).	Wing distinctly fumose to unaided eye, at least on apical half	4
3’.	Wing practically clear to unaided eye	6
4(3).	Wing distinctly bicoloured, apical half brownish, basal half milky-yellow. Margin of scutellum with one or more setulae proximal to basal scutellar bristle.....	<i>N. dimidiata</i> (Curran)
4’.	Wing more uniformly brownish fumose. Margin of scutellum without setulae proximal to basal scutellar bristle	5
5(4’).	Calypteres dusky with brownish margins and fringes. Arista extremely shortly plumose, longest hairs about equal to length of basal arista segment	<i>N. fuscipennis</i> (Curran)
5’.	Calypteres white with whitish fringes. Arista plumosity about as wide as postpedicel	<i>N. longicerata</i> (Hennig)
6(3’).	Aedeagus ventrally flat, not beyond the base of the cerci, surstylus with 4 prenisetae....	<i>N. plana</i> sp. nov.
6’.	Aedeagus tubular-shape.....	7
7(6’).	Aedeagus beyond the apex of the cerci, surstylus with 10 prenisetae at each side....	<i>N. major</i> (Malloch)
7’.	Aedeagus beyond the base of the cerci, but not reaching their apex, surstylus with 5 prenisetae at each side.....	<i>N. tolimensis</i> sp. nov.
8(2’).	Filament of the aedeagus expanded distally in ventral view (chalice-shaped)	<i>N. parva</i> (Hennig)
8’.	Filament of the aedeagus expanded basally in ventral view (bottle-shape)	<i>N. amphora</i> sp. nov.
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9’.	Epandrium wider than the surstylus or at least 1/3 wider than long	15
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10’.	Filament of the aedeagus slightly thinner than C-shape part in lateral view	14
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11’.	Filament of the aedeagus not spiculated, apex with a special shape	13
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12’.	Filament of the aedeagus spiculated only at apex and at base.....	<i>N. convexa</i> sp. nov.
13(11’).	Apex of the filament of the aedeagus arrow-like shape	<i>N. mcalpeinieii</i> Strikis
13’.	Apex of the filament of the aedeagus crown-like shape	<i>N. parapeltae</i> Strikis
14(10’).	Apex of the aedeagus does not reach the base of the surstylus	<i>N. concava</i> sp. nov.
14’.	Apex of the aedeagus beyond the base of the surstylus	<i>N. ilheuense</i> Strikis
15(9’).	Filament of the aedeagus strongly thinner than the C-shape section (<i>glaberrima</i> group)	16
15’.	Width of the filament and C-shape section of the aedeagus similar	28
16(15’).	Aedeagus with a single or pair of processes arising from convex side of thickened C-shape base (<i>glaberrima</i> subgroup).....	17

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- 19(18). Apex of male abdomen with a cluster of stout spines, the cluster somewhat divided on middorsal line; paramere with an elongate lade-like medial lobe and a broad, low, shoulder-like, lateral lobe
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- 20(17'). Aedeagus with a spine-like process at the junction of C-shape and the filament.....21
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- 21(20). Epandrium as long as wide.....*N. bifida* Strikis & Prado
- 21'. Epandrium 2 time as long as wide.....*N. pseudobifida* Strikis
- 22(20'). Aedeagus with a finger-like lobe at the junction of C-shaped and the filament of the aedeagus, apex of the filament beyond the apex of cerci*N. inesperata* Strikis & Prado
- 22'. Aedeagus with a glomerule-like spiculated at the base of the C-shape of the aedeagus
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- 23(16'). Aedeagus with a median carina on outer convex side of C-shape24
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- 26'. Surstylus with more than 7 prensisetae at each side27
- 27(26'). Filament of the aedeagus beyond the prensisetae; surstylus with 10 distal prensisetae at each side not arranged in groups.....*N. bella* Strikis & Prado
- 27'. Filament of the aedeagus not reaching the prensisetae; surstylus with 9 distal prensisetae at each side..
.....*N. paramerolatus* Strikis
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- 38'. Apex of the filament of the aedeagus swollen, but less than 2 times, and reaching the base of the cerci*N. pseudopendula* (Korytkowski & Ojeda)
- 39(37'). Surstylus with 8 transversal and distal prenisetae at each side, gonopodite tubular-shape.....
.....*N. perezi* (Romero S. & Ruppel)
- 39'. Surstylus with 9 longitudinal prenisetae at each side, 2 located near midline and 7 laterally located, gonopodite medially wider*N. angusta* sp. nov.

New species

***Neosilba plana* sp. nov.**
(Figs. 1A-E)

Type data: Holotype ♂. COLOMBIA, Tolima, Ibagué. 04°27'215"N, 75°13'271"O, 1259 m, 30.VIII.2006, M.R. Castañeda & A. Osorio. In Guamo (Inga) (*Inga edulis* Mart) (MEN-UT).

Etymology: The name is an adjective that means flat (from Latin *planus* = flat) in reference to the flat ventral side of the filament of the aedeagus.

Diagnosis: *Neosilba plana* could be recognized by the 4 anterior setulae to basal scutellar bristle; circular male terminalia in ventral view and hemispherical in lateral view (Figs. 1A, B); margin of the epandrium beyond the surstylus and without lobe (Fig. 1B); the filament of the aedeagus with flat lateral and ventral side (Figs. 1A, C); the lateral sides thinner from the section C to apex and they are 3 times wider than ventral side; ventral side slight wider in the middle; big cerci; the distal margin of surstylus in ventral view, with a pair of circular-shape invaginations; surstylus with 4 transversal prenisetae at each side (Fig. 1C). The hemispherical shape of the male terminalia in lateral view with the filament of the aedeagus more or less same width in ventral view, finishing beyond the base of cerci and the big cerci are the common characters of the *major* group. The new species is similar to species in that group and to *N. parva*. In other species of the *major* group the aedeagus is rounded; *N. fuscipennis* has scutellum without setulae before anterior bristle, surstylus with 6-7 prenisetae at each side, apex of paramere rounded, aedeagus rounded in lateral view and reaching beyond the base of the cerci. *N. major* differs by scutellum having 1-3 anterior scutellar setulae to basal bristle, surstylus with 10 prenisetae, aedeagus tubular shaped reaching beyond the base of the cerci. *N. dimidiata* differs by the surstylus projected beyond margin of epandrium,

with an anterior lobe and filament of the aedeagus extended beyond apex of cerci. *N. longicerata* differs especially by the length of the aedeagus, well beyond the apex of the cerci. *N. parva* differs by 1 anterior scutellar setula to basal bristle, 5-6 prenisetae arranged in curved row and filament of the aedeagus chalice-shaped. *N. tolimensis* differs by the aedeagus rounded and spiculated at the junction with the C-shape part.

Description: Body length 5.77 mm long 1.77 mm wide at the pteropleura. *Head:* 2.03 mm wide, 1.86 mm high, 0.78 mm long; front 0.46 mm wide in the lunule, 0.538 mm wide lower ocler triangle; lunule with 10 setulae; postpedicel 1.0 mm long, 0.205 mm wide in lateral view; arista 1.12 mm long, the medial setulae longer than other, 0.089 mm long; subvibrissal area with 4 setulae. *Thorax:* 1.77 mm wide at pteropleura, 1.78 mm long; anepisternum with 4 anterodorsal and 5 posterior bristles; scutellum with 12 setulae between lateral bristles and 4 before the anterior bristle; fringes of calypteres with 12 brown setae; *Wing:* 5.92 mm long, 2.37 mm wide, hyaline. *Abdomen:* 2.40 mm long. Male terminalia: 0.897 mm long, 0.641 mm wide; epandrium 0.46 mm long, 0.32 mm wide (1.44 times as long as broad); gonopodite long with rolled up margins; paramere isosceles-triangular shape in ventral view, 0.153 mm high, 0.038 mm base; surstylus with 4 acute prenisetae at each side, the more internal one separated from the other three; distal line of surstylus slightly concave in the external half; surstylus with an aedeagus-support medial groove; cerci 0.304 mm long, 0.256 mm wide; filament 0.346 mm long, 0.064 mm widest, external surface plain, thinner from the "C" section in lateral view but slightly medial wider in ventral view, plain lateral and ventral sides; scraper-like ejaculatory apodeme chitinized area of the ejaculatory apodeme 0.25 mm long 0.089 mm wide.

Host: specimens studied were collected from Inga fruits (*Inga edulis* Mart).

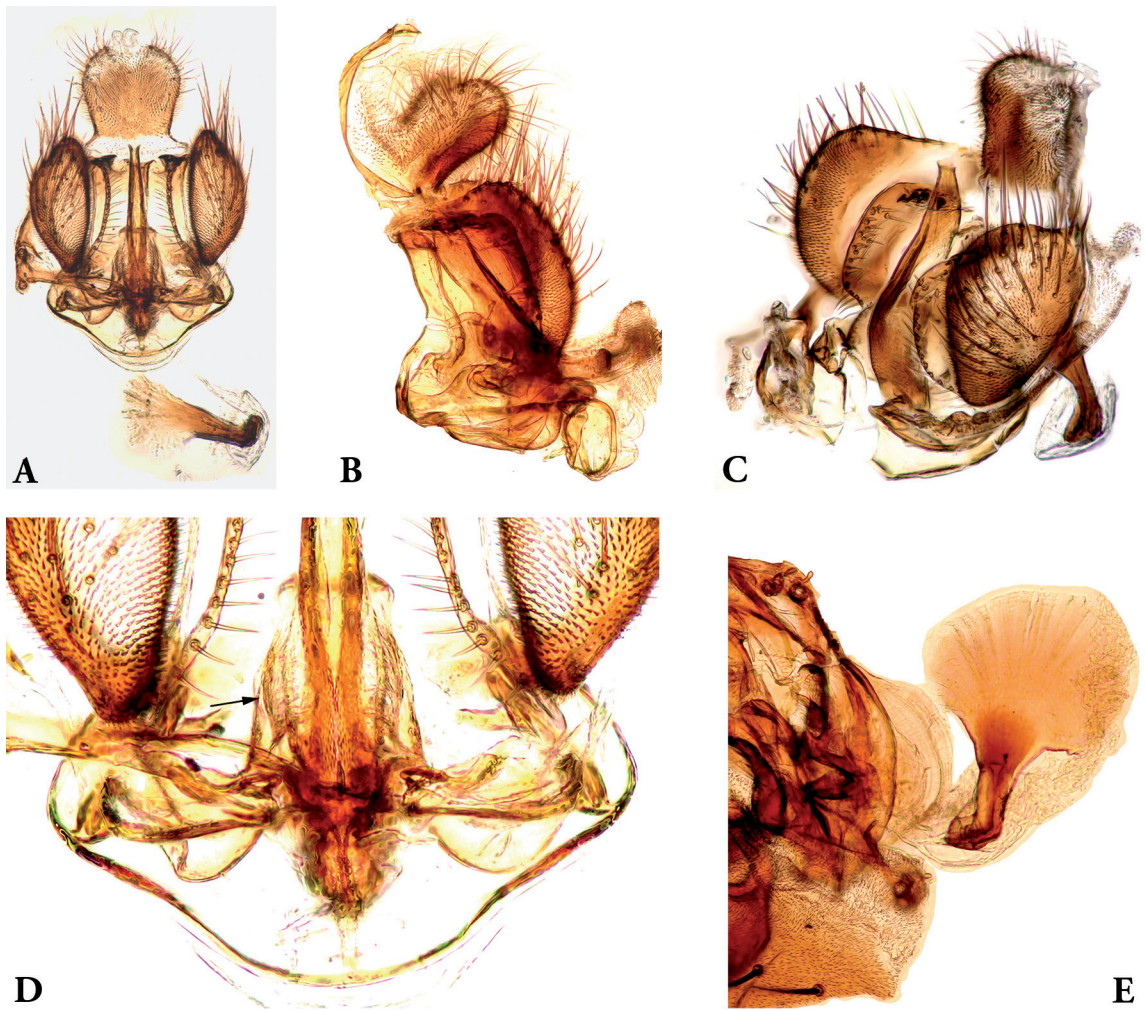


FIGURE 1: *Neosilba plana* sp. nov. Male genitalia: **A**. Ventral view; **B**. Lateral view; **C**. Distolateral view, details of ventral side of the filament and prenisetae; **D**. Paramere and basal part of the filament; **E**. Ejaculatory apodeme.

***Neosilba tolimensis* sp. nov.**
(Figs. 2A-F)

Type data: Holotype ♂. COLOMBIA, *Tolima*, Cajamarca. 04°26'267"N, 75°29'261"O, 2444 m, 03.I.2006, M.R. Castañeda & A. Osorio. In McPhail traps (MEN-UT).

Etymology: Named after its type locality (Department of Tolima, Colombia).

Diagnosis: *Neosilba tolimensis* belongs to the *major* group based in the male terminalia, less than two times longer than wide in lateral view (1:1.6) and hemispherical shape (Figs. 2A, B); the new species has the epandrium as long as wide (1:1.1), triangular-shape paramere (Fig. 2E), elongated and globe-shape gonopodites (tapering), surstylus distally expanded

over the epandrium and with 5 prenisetae at each side (Figs. 2C, D), filament of the aedeagus slightly S-shape in lateral view, section C slightly wider than the filament in lateral view and spiculated in their junction (Figs. 2B, F). The hemispherical-shape of the male genitalia of the new species is similar with those in the *parva* group, however, the species in the *parva* group has a short filament of the aedeagus (it does not reach the base of cerci) and wider. The new species is the sixth species in the *major* group and it could be separated from the other as follow: *N. fuscipennis* differs by a pair of heavy, triangular tooth-like projections near the mesoposterior margin, section C of the aedeagus and filament same width, and surstylus with 6-7 prenisetae at each side. *N. plana* differs by filament being flat in ventral view and gonopodite along with rolled up margins and surstylus with 4 prenisetae at each side; *N. major* differs by paramere

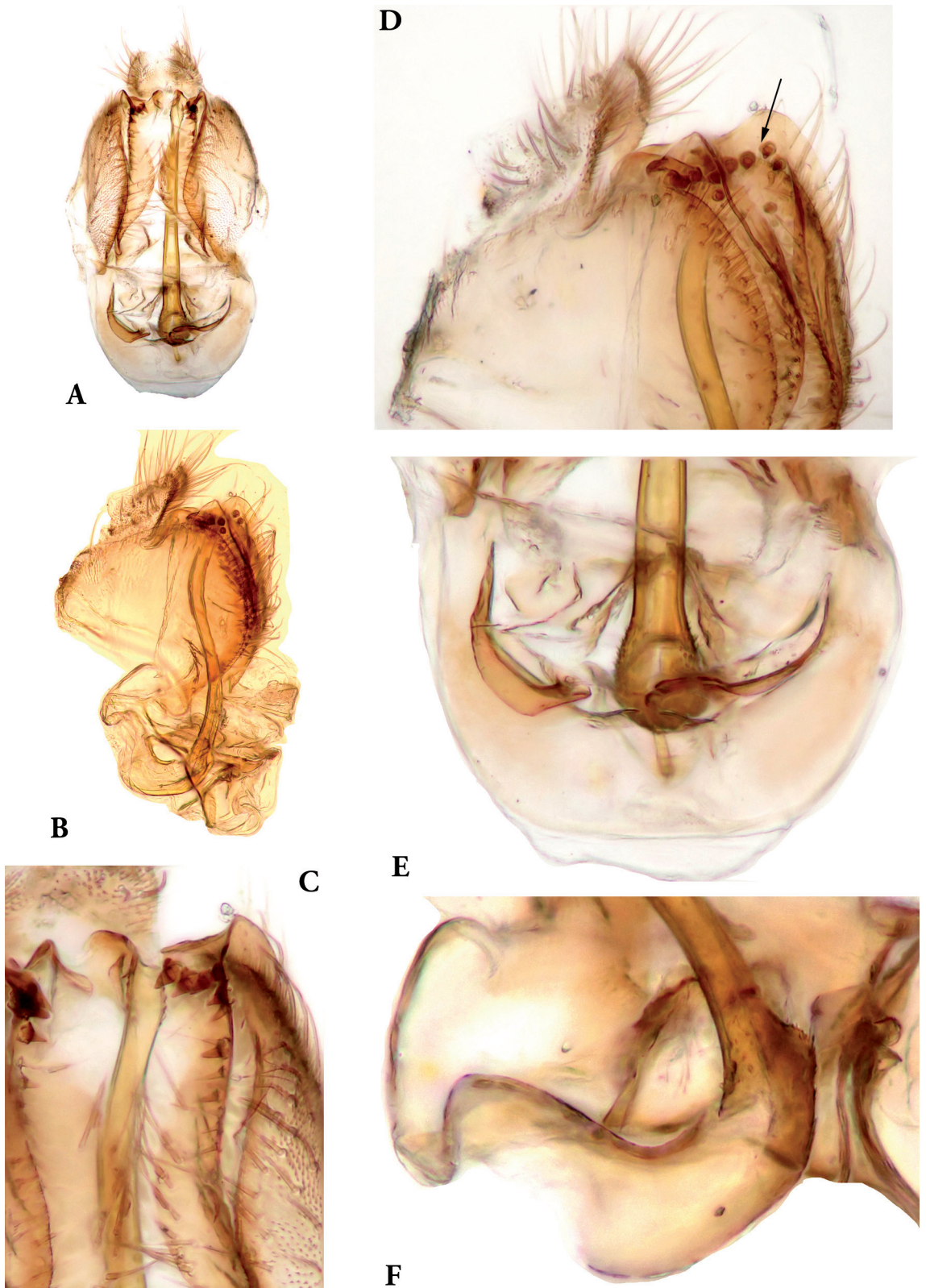


FIGURE 2: *Neosilba tolimensis* sp. nov. Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Apex of the epandrium (ventral view), details of prensisetae; **D.** Apex of the epandrium (lateral view), details of prensisetae; **E.** Base of the filament of the aedeagus (ventral view), paramere and gonopodites; **F.** Base of the filament and C-section of the aedeagus (lateral view).

being finger-shaped, section C of the aedeagus and filament same width, the aedeagus reaching beyond the apex of the cerci and surstylus with 10-11 prensisetae. *N. dimidiata* differs by paramere thin and long in ventral view and surstylus with 7-8 prensisetae at each side; *N. longicerata* differs by section C of the aedeagus and filament same width, the aedeagus reaching beyond the apex of the cerci and surstylus with 7-8 prensisetae at each side.

Description: Body length 5.92 mm long, 1.85 mm wide at pteropleura. *Head:* 1.58 mm wide, 1.51 mm high, 0.96 mm long; front 0.38 mm wide at lunule, 0.53 mm lower ocellar triangle; lunula with 10 setulae; postpedicel 0.83 mm long, 0.21 mm wide in lateral view; arista 1.28 mm long, longest setulae of the arista 0.038 mm long; subvibrissal area with more than 20 setulae. *Thorax:* 2.22 mm long, 1.85 mm wide at pteropleura; anepisternum with 5 anterodorsal and 6 posterior bristles; scutellum with 4 setulae between anterior and posterior bristles; without setulae before anterior bristle; fringes of calypteres with 10 brown setae; Wing 5.55 mm long, 2.22 mm wide, hyaline. *Abdomen:* 2.74 mm long. Male terminalia: 0.69 mm long, 0.44 mm wide; epandrium 0.43 mm long, 0.38 mm wide (1.33 times as long as wide) in lateral view; irregular and globe-shape gonopodite, turn to aedeagus; paramere porrect, triangular-shape and spiculated; surstylus with 5 prensisetae at each side; aedeagus with section C slightly wider than filament in lateral view and spiculated at the junction; filament slightly S-shaped and apex slightly widened and spiculated; cerci 0.12 mm long, 0.09 mm wide in ventral view.

Host: unknown.

***Neosilba amphora* sp. nov.**
(Figs. 3A-G)

Type data: Holotype ♂. COLOMBIA, Santander. Provincia De Vélez. Chipatá. 30.VIII.2006, J. Chacon (MEN-UT). Paratype 1 ♂, same data, (MEN-UT).

Etymology: The name is a substantive that means amphora (from Latin amphora) in reference to the shape of the filament of the aedeagus.

Diagnosis: The scutellum of the *N. amphora* has two anterior setulae to basal bristle, spherical-shaped male terminalia, aedeagus with the filament bottle-like shaped (Fig. 3A), distally spiculated and with

spine-like apical process in ventral view (Fig. 3D), paramere rectangular-shaped (Figs. 3D), surstylus with 10 prensisetae at each side. The general shape of the male terminalia (spherical, prominent cerci and short filament) of the *N. amphora* is similar to those of the *major* group and *N. parva*. *N. amphora* differs from species in the *major* group because the filament of the aedeagus in this group of species is approximately the same width in all its extension, and reaching beyond the base of cerci. *N. parva* it is the most similar species to *N. amphora*, in fact both species belong to the *parva* group which could be characterized by hemispherical male terminalia with short filament of the aedeagus (not reaching the base of cerci) and with different widths in its extension. *N. parva* has a chalice-shaped filament (*i.e.*, wider at the apex than at the base) (Figs. 3H, I) and 5 to 6 prensisetae at each side (Fig. 3J).

Description: Body length 5.74-6.25 mm long, 1.92 mm wide at pteropleura. *Head:* 1.85-1.96 mm wide, 1.7-1.85 mm high, 0.77-0.81 mm long; front 0.55-0.64 mm wide in the lunule, 0.45-0.46 mm wide lower ocellar triangle; lunule with 12 setulae; postpedicel 0.84-0.94 mm long, 0.19-0.20 mm wide in lateral view; arista 1.025 mm long; longest setulae of the arista 0.076-0.089 mm long; subvibrissal area with 3 setulae. *Thorax:* 1.92 mm wide, 2.25-2.48 mm long at pteropleura; anepisternum with 4 anterodorsal and 6 posterior bristles; scutellum with 5 setulae between anterior and posterior lateral bristles and 2 before lateral anterior bristle; fringes of calypteres with 12 brown setae; Wing 5.33-5.40 mm long, 1.92-2.37 mm wide, hyaline. *Abdomen:* 2.70-2.96 mm long. Male terminalia: 0.75-0.89 mm long, 0.82-0.88 mm wide; epandrium 0.32-0.38 mm long, 0.38-0.46 mm wide (0.83 times as wide as long) in lateral view and distally slightly concave; transversal long and thin gonopodite; paramere rectangular-shape, acute at the internal corner and rounded at the external; surstylus with 10 prensisetae at each side, arranged in a sinuous line; filament of the aedeagus 0.30-0.35 mm long, 0.15 mm wide, does not reach the base of the cerci, width of section C like the base of the filament; the filament bottle-shape in ventral view, spiculated 1/3 distal in ventral view around the opening and two apical spine-like projections; cerci 0.17-0.21 mm long, 0.16-0.17 mm wide in ventral view.

Host: *N. amphora* was collected from fruits of chili pepper (*Capsicum annuum* L. var. *frutescens* – Solanaceae) and guava (*Psidium guajaba* L. – Myrtaceae).

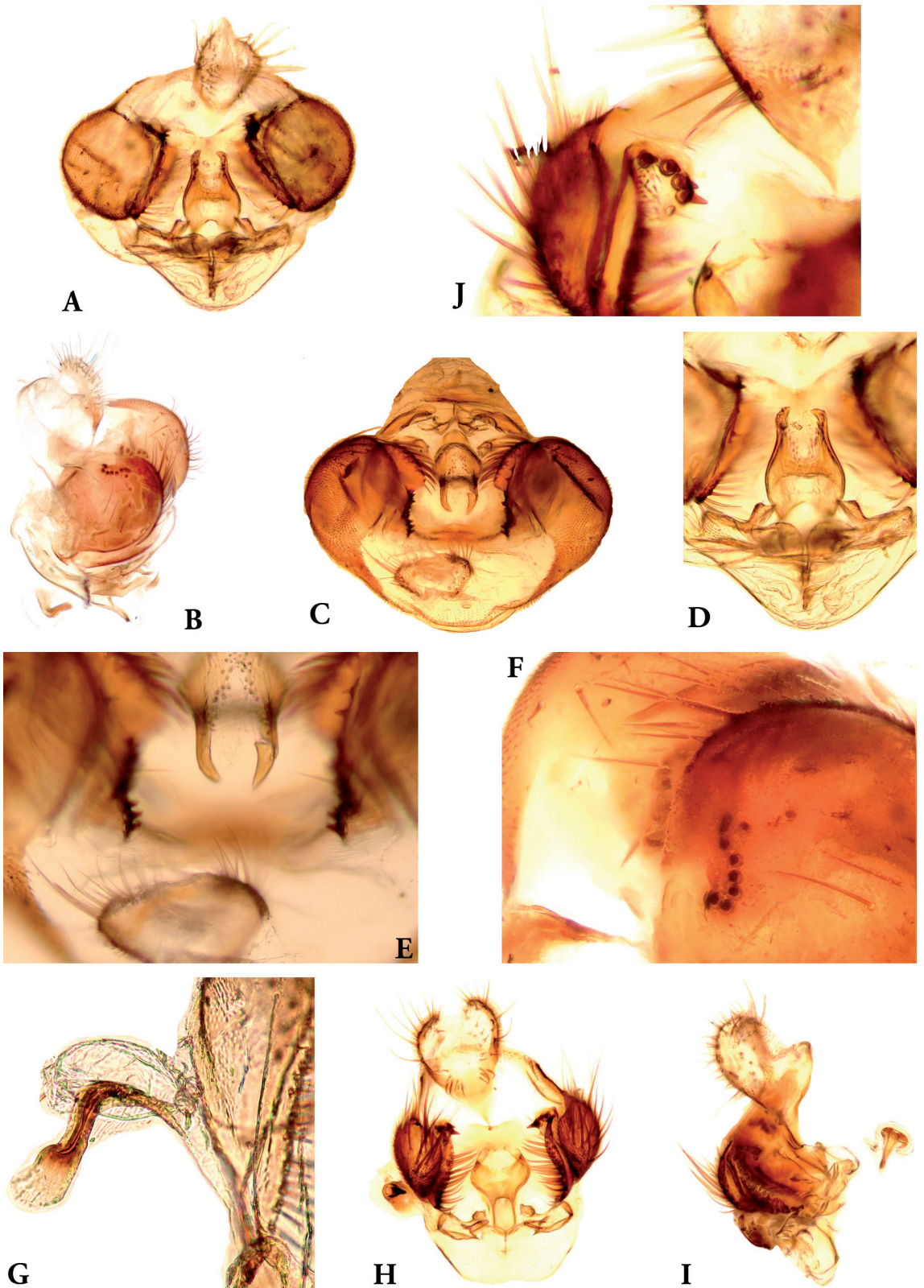


FIGURE 3: Male genitalia: **A-G.** *Neosilba amphora* sp. nov., **H-J.** *N. parva* (Hennig). **A, H.** Ventral view; **B, I.** Lateral view; **C.** Posterior view; **D.** Filament of the aedeagus and paramere; **E.** Apex of the filament of the aedeagus (posterior view); **F, J.** Apex of the epandrium, details of the prensisetae; **G.** Ejaculatory apodeme.

Neosilba convexa sp. nov.

(Figs. 4A-F)

Type data: Holotype ♂. COLOMBIA, Tolima, Ibagué. 04°27'215"N, 75°13'271"O, 1259 m, 22.IX.2005, N.A. Canal and P. Galeano. Trampa McPhail (MEN-UT).

Etymology: The name of this species is an adjective that means convex (from Latin *convexus*) in reference to the posterodorsal border of the epandrium.

Diagnosis: *Neosilba convexa* belongs to the *peltae* group. According to McAlpine & Steyskal (1982), at least nine very similar species should exist in the

group and it could be characterized by the shape of the aedeagus (short; the filament is not longer than section C), the breadth of the aedeagus in ventral view slightly widens at the junction of the filament with section C; shape of the epandrium (narrow in lateral view), the presence of the long setulae in the ventral margin of each surstylus and a fluting in the inner margin of the surstylus. According to our new species, the length of the filament could be slightly longer than the C-shape. These characters could be used in order to separate similar species in the group. *N. peltae* differs by the breadth of the aedeagus in ventral view being similar along all its length, and shorter than section C. Apex just reaches the base of the epandrium, the filament is completely spiculated,

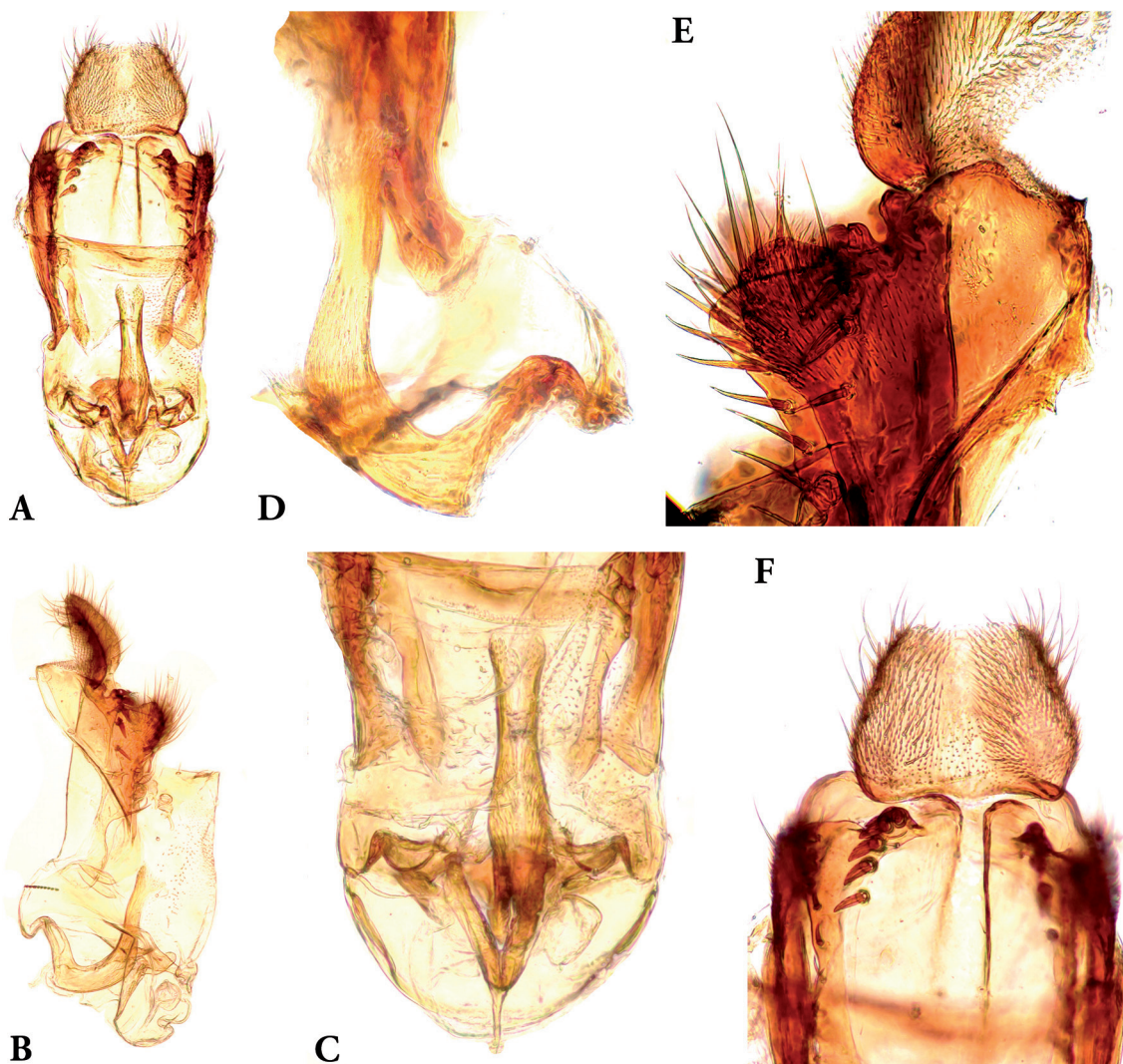


FIGURE 4: *Neosilba convexa* sp. nov. Male genitalia: A. Ventral view; B. Lateral view; C. Base of the epandrium (ventral view), filament of the aedeagus, paramere and gonopodite; D. Filament and section C of the aedeagus (lateral view); E. Apex of the epandrium (lateral view); F. Apex of the epandrium (ventral view), details of the prensisetae.

the posterodorsal border of the epandrium rectangular and 7 setulae of ventral margin of the surstylus. *N. concava* differs by the junction of the filament and the C of the aedeagus is not clearly wider, filament spiculated just at the apex and base 17 setulae along $\frac{3}{4}$ apical in the margin of the surstylus, in three groups 7 distally, 4 spaced medial and 5 posterior and the posterodorsal border of the epandrium concave; *N. mcalpiniei* differs by the apex of the aedeagus being arrow-like shaped; *N. parapeltae* by the apex of the aedeagus crown-like shaped; *N. ilehuense* differs by the filament reaching beyond the base of the surstylus.

Description: Body length 3.12 mm long, 1.55 mm wide at pteropleura. *Head:* 1.66 mm wide, 1.40 mm high, 0.66 mm long; front 0.44 mm wide at lunule, 0.48 mm wide lower ocellar triangle; lunule with 8 setulae; postpedicel 0.70 mm long, 0.19 mm wide in lateral view; arista 0.769 mm long, longest setulae of the arista 0.064 mm long; subvibrissal area with more than 20 setulae. *Thorax:* 1.85 mm long, 1.55 mm wide at pteropleura; anepisternum with 4 anterodorsal and 5 posterior bristles; scutellum with 5 setulae between anterior and posterior bristle, without setulae before anterior bristle; fringes of calypteres with 8 brown setae; Wing 4.18 mm long, 1.85 mm wide, hyaline. *Abdomen:* 2.00 mm long. Male terminalia: 0.94 mm long, 0.23 mm wide; epandrium 0.60 mm long, 0.15 mm wide (3,91 times as long as broad) in lateral view, with a posteroventral setose lobe and posterodorsal border rounded; surstylus margined with 10 equal spaced setulae located slightly beyond the apical half in ventral view and 6 prenisetae at each side in a nearly linear row; transverse gonopodite thinner in the internal apex, cylindrical-shaped paramere and with apical setulae; aedeagus short, the section C slightly longer than the filament, filament 0.15 mm long, 0.023 mm wide, slightly broad at the base in ventral view and reaches beyond the base of surstylus, spiculated at apex and base (the C spiculated also in its junction with the filament); cerci 0.139 mm long, 0.196 mm wide in ventral view, 0.092 mm wide in lateral view.

Host: unknown.

***Neosilba concava* sp. nov.**
(Figs. 5A-F)

Type data: Holotype ♂. COLOMBIA, Tolima, Espinal. 04°11'33.695"N, 74°57'47.200"O, 332 m,

09.XII.2001, N.A. Canal & P. Galeano. In McPhail trap (MEN-UT). Paratype 1 ♂ same data (MEN-UT).

Etymology: The name of this species is an adjective that means concave (from Latin *concavus*) in reference to the posterodorsal border of the epandrium.

Diagnosis: *Neosilba concava* belongs to the *peltae* species group characterized according to data of the previous species. The new species could be recognized because the junction of the filament and the C of the aedeagus is not clearly wider (Fig. 5D), filament spiculated just at the apex and base (Fig. 5D), by the 17 setulae along $\frac{3}{4}$ apical in the margin of the surstylus, in three groups 6 distally, 5 spaced medial and 6 posterior (Figs. 5A, B, E), and the posterodorsal border of the epandrium concave (Figs. 5B, E); *N. convexa* differs by the posterodorsal border of the epandrium rounded; by the 10 equal spaced setulae in the margin of the surstylus and the filament slightly thinner; *N. peltae* differs by the posterodorsal border of the epandrium being rectangular, 7 setulae in the margin of the surstylus preceded by 4 widely spaced; the filament of the aedeagus is totally spiculated; *N. mcalpiniei* differs by the apex of the aedeagus being arrow-like shaped; *N. parapeltae* by the apex of the aedeagus crown-like shaped; *N. ilehuense* differs by the filament reaching beyond the base of the surstylus.

Description: Body length 4.52 mm long, 1.55 mm wide at pteropleura. *Head:* 1.66 mm wide, 1.40 mm high, 0.67 mm long; front 0.49 mm wide at lunule, 0.49 mm wide lower ocellar triangle; lunule with 8 setulae; postpedicel 0.70 mm long, 0.19 mm wide in lateral view; arista 0.77 mm long, longest setulae of the arista 0.064 mm long; subvibrissal area with less than 20 setulae. *Thorax:* 1.85 mm long, 1.55 mm wide at pteropleura; anepisternum with 4 anterodorsal and 5 posterior bristles; fringes of calypteres with 8 brown setae; Wing 4.55 mm long, 1.85 mm wide, hyaline. *Abdomen:* 2.00 mm long. Male terminalia: 1.21 mm long, 0.15 mm wide in ventral view; epandrium 0.60 mm long, 0.15 mm wide in lateral view (4 times as long as broad), without posteroventral lobe and posterodorsal border concave; surstylus margined with 20, in $\frac{2}{3}$ apical, equal spaced setulae in ventral view and 7 prenisetae at each side in a nearly linear row; transverse gonopodite, thinner in the ventral apex, lobule of the paramere cylindrical-shaped, truncated; aedeagus short, filament 0.15 mm long, 0.023 mm wide, slightly broad at the base in ventral view and does not reach the base of the surstylus,

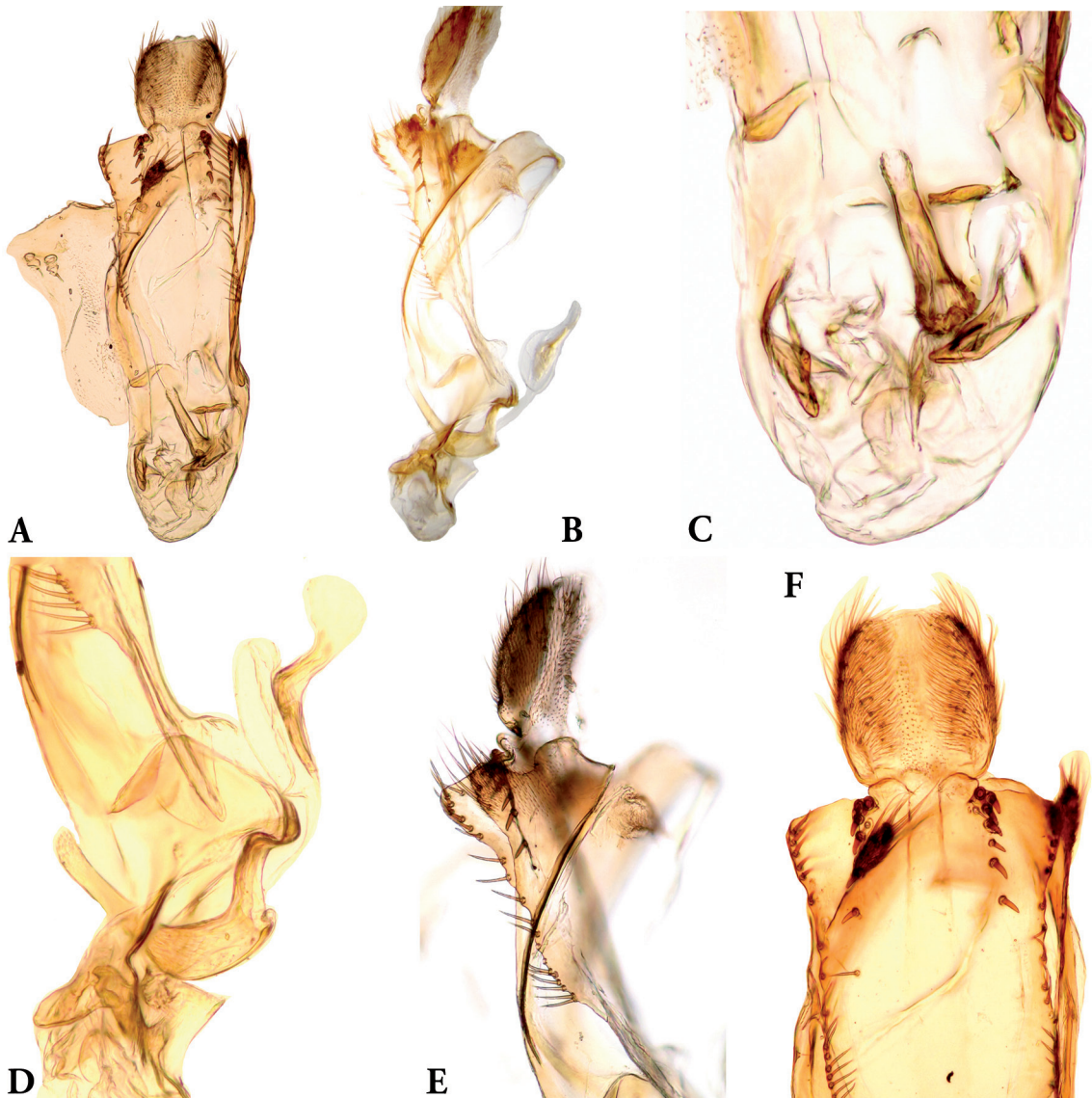


FIGURE 5: *Neosilba concava* sp. nov. Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Base of the epandrium (ventral view), filament of the aedeagus, paramere and gonopodite; **D.** Filament and section C of the aedeagus (lateral view); **E.** Apex of the epandrium (lateral view); **F.** Apex of the epandrium (ventral view), details of the prensisetae.

spiculated at apex and base (the C spiculated in its junction with the filament too) longer than section C; cerci 0.206 mm long, 0.185 mm wide in ventral view, 0.123 mm wide in lateral view.

Host: unknown.

***Neosilba orbata* sp. nov.**
(Figs. 6A-D)

Type data: Holotype ♂. COLOMBIA, Tolima, Ibagué. 04°27'215"N, 75°13'271"O, 1259 m, 18.I.2006, R.

Castañeda & A. Osorio. In *Passiflora vitifolia* Kunth (MEN-UT).

Etymology: The name of the species is an adjective that means circular (from Latin *orbis* = circle and suffix *-aceus* = similar) in reference to the circular shape of the base of the aedeagus.

Diagnosis: *Neosilba orbata* could be recognized by the epandrium as long as wide in lateral view (Fig. 6B) and very thin in ventral view (Fig. 6A); the special character in the new species is the basal part of the aedeagus, which is circle-like shaped (Fig. 6B), more

than the common C-like shape in the other species; the tip of the filament slightly S-like and apex is slightly wider; surstylus with 10 prenisetae at each side (Figs. 6B, C). The other two described species with those similar characters is *N. zadolicha* (Figs. 6E-H) and *N. pseudozadolicha*. *N. zadolicha* has the epandrium 5 times longer than wide (Fig. 6E). *N. pseudozadolicha* differs by the number of prenisetae of the surstylus, 5 at each side.

Description: Body length 4.48 mm long, 1.85 mm wide in dorsal view at pteropleuras. **Head:** 1.77 mm wide, 1.51 mm high, 0.81 mm long; front 0.384 mm wide at the lunule, 0.512 mm wide lower ocellar triangle; frontal lunule with 8 setulae; postpedicel 0.96 mm long, 0.32 mm wide in lateral view; arista 1.00 mm

long, middle setulae longest, 0.011 mm long; subvibrissal area with 5 setulae. **Thorax:** 1.44 mm wide at pteropleura, 1.66 mm long; anaepisternum with 4 anterodorsal and 6 posterior bristles; scutellum with 6 setae between lateral bristles; fringes of calypteres with 6 brown setae; wing 5.62 mm long, 2.03 mm wide, hyaline. **Abdomen:** 2.00 mm long. **Male terminalia:** 0.88 mm long, 0.66 mm wide (1.16 times as long as wide); epandrium 1.15 mm long, 0.98 mm wide; medium surstylus covered by epandrium in ventral view, but 0.089 mm long distally finger-like exposed; surstylus with 10 prenisetae at each side; paramere triangle-like shape in ventral view and finger-like in lateral view; aedeagus smooth; the basal section and the filament is the same thickness, the basal section (commonly C-shaped), circular-shaped; filament

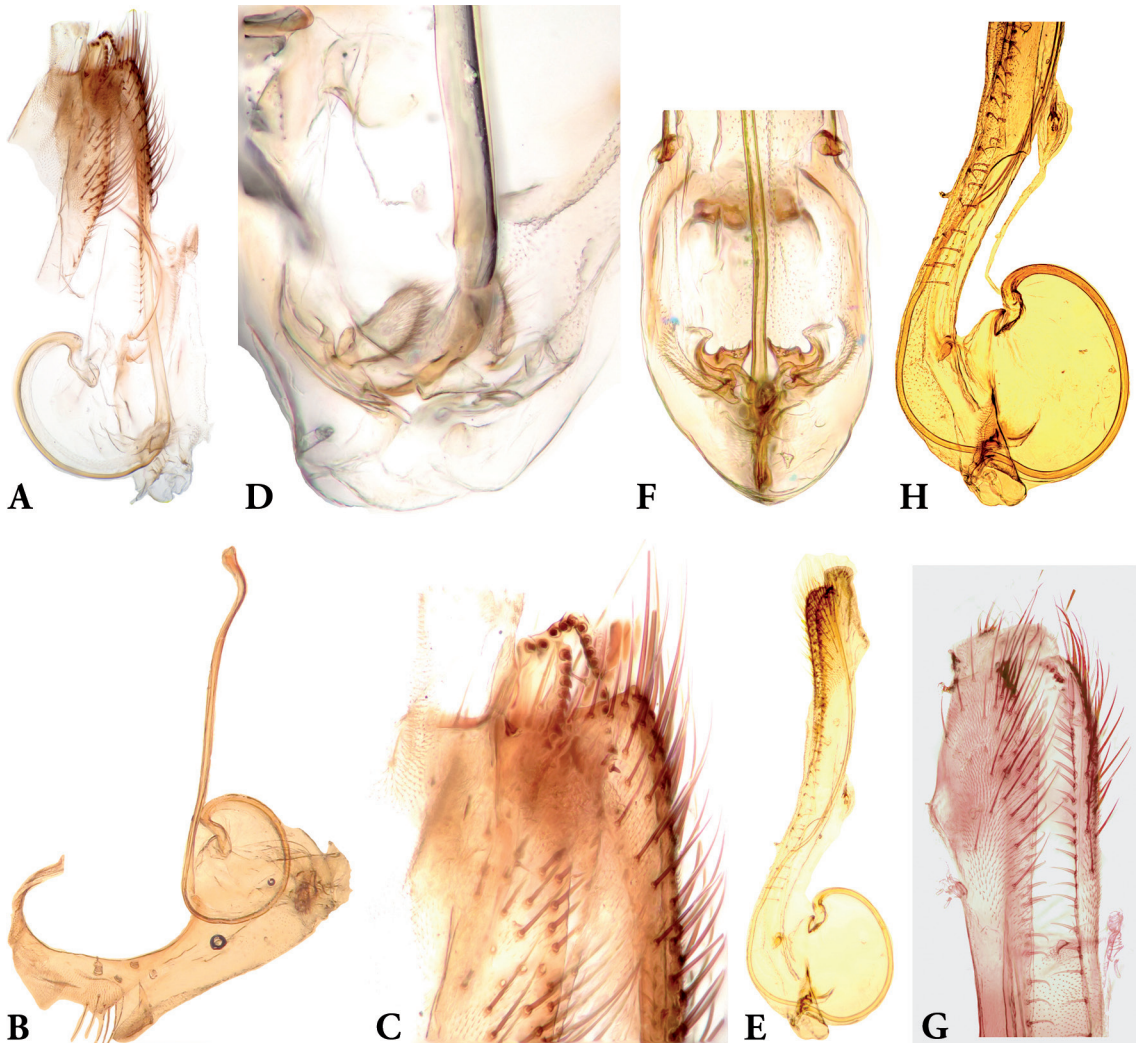


FIGURE 6: Male genitalia: **A-D.** *Neosilba orbata* sp. nov., **E-H.** *Neosilba zadolicha* McAlpine & Steyskal, 1982. **A.** Lateral view; **B.** Aedeagus (lateral view); **C.** Apex of the epandrium (lateral view), details of the prenisetae; **D.** Base of the epandrium (ventral view), details of the prenisetae; **E.** Ventral view; **F.** Lateral view; **G.** Prenisetae; **H.** Section C of the aedeagus (lateral view).

1.413 mm long, 0.089 mm the wider part, apex S-like in lateral view, tip slightly widened; cerci 0.120 mm long, 0.105 mm wide.

Host: *N. orbata* was collected from fruits of *Passiflora vitifolia* Kunth.

***Neosilba spiculata* sp. nov.**
(Figs. 7A-F)

Type data: Holotype ♂. COLOMBIA, Tolima, Cajamarca. 04°26'373"N, 75°29'574"O, 2347 m, 03.I.2006, M.R. Castañeda & A. Osorio. In Guamo (*Inga edulis* Mart) (MEN-UT).

Etymology: The name of the species is an adjective that means spiculated (from Latin *spiculum*) in reference to the filament of the aedeagus that is spiculated.

Diagnosis: *Neosilba spiculata* could be recognized by the constant diameter of the aedeagus, this one with 4 longitudinal lines of spiculae from the base until 4/5 of the ventral surface (Figs. 7E, F); apex of the aedeagus strongly S-shaped in lateral view and slightly wider in ventral view. Epandrium 2 or more times longer than wide and parallel-sided. The new species is similar to male terminalia of *N. pendula*, *N. pseudopendula*, *N. pantanense*, *N. perezii*, *N. cornuphallus*, *N. turgidiphallus* and the next new species *N. angusta*; the male genitalia of *N. spiculata* is similar to species of the *nigrocaerulea* subgroup. *N. pendula* differs the apex of the filament 2-3 times wider and the parameres are tongue-like shaped in ventral view; *N. pseudopendula* differs by it having the surstylus with a distal lobe towards the apex and rounded parameres (Figs. 7I, J); *N. pantanense* differs by having the spiculae of the filament of the aedeagus located at the apical third; *N. perezii* differs by its filament apex being slightly S-like shaped and having a smooth filament of the aedeagus; *N. angusta* differs by having a narrowed apex of the aedeagus. Species from the *nigrocaerulea* subgroup differs by its straight filament; *N. cornuphallus* and *N. turgidiphallus* differ by the filament of the aedeagus with different widths (*i.e.*, wider at the middle), without spiculae.

Description: Body length 5.40 mm long, 1.62 mm wide at pteropleuras. *Head*: 1.59 mm wide, 1.25 mm high, 0.7 mm long; fronts 0.38 mm wide in the lunule, 0.43 mm wide lower ocellar triangle; frontal lunule with 10 setulae; postpedicel 0.78 mm long, 0.19 mm wide in lateral view; arista 0.83 mm long,

longer setulae of the arista 0.051 mm; subvibrissal area with 5 setulae. *Thorax*: 1.62 mm wide, 2.0 mm long; anepisternum with 4 anterodorsal and 6 posterior setae; scutellum with 5 setulae between lateral anterior and posterior bristles; scutellum without setulae before basal bristle; fringes of calypteres with 10 brown setae; Wing 5.0 mm long, 1.92 mm wide, hyaline. *Abdomen*: 2.70 mm long. Male terminalia: 1.23 mm long, 0.28 mm wide; epandrium 0.64 mm long, 0.23 mm wide (2.77 times as long as broad); surstylus without a distal lobe and with 8 prenisetae at each side; proximal half of gonopodites thin and widened in the distal half, gonopodites hairy; parameres with triangular lobes in ventral view; aedeagus with 4 lines of ventral spiculae from base to 0.73 mm (4/5 long); filament 0.83 mm long, 0.128 mm wide, apex of filament strongly S-like shaped in lateral view; cerci 0.192 mm long, 0.135 mm wide.

Host: *N. spiculata* was collected from Inga fruits (*Inga edulis* Mart).

***Neosilba angusta* sp. nov.**
(Figs. 8A-D)

Type data: Holotype ♂. COLOMBIA, Tolima, Coello. 04°16'550"N, 74°54'166"O, 309 m, 12.IV.2006, M.R. Castañeda & A. Osorio. Ex *Cissus* sp. (MEN-UT). Paratypes 5 ♂, same data (MEN-UT)

Etymology: The name of the species is an adjective that means, "to make narrow" (from Latin *angustus*) in reference to the apex of the filament of the aedeagus.

Diagnosis: *Neosilba angusta* belongs to *pendula* subgroup. *Neosilba angusta* has the epandrium less than two times longer than wide (Fig. 8B), surstylus with 9 prenisetae at each side (Fig. 8C), two of them located medially and separated from the other longitudinally and external 7 prenisetae, aedeagus smooth beyond the base of cerci, the C-shape of the aedeagus with the same width than filament in lateral and ventral view (Figs. 8A, B, D), apex of the filament slightly S-shape and slightly narrowed, paramere with a triangular-shape internal lobe with some setulae (Figs. 8A, D). *N. pendula*, *N. perezii*, *N. pseudopendula* and *N. spiculata* differ by the apex of the filament of the aedeagus being swollen; *N. nigrocaerulea* differs by proximal lobes of the surstylus wide and beyond the epandrium, by the 9 external and longitudinally prenisetae, and by the gonopodite, uniformly wide; *N. laura* differs by the small spiculae at base of the filament

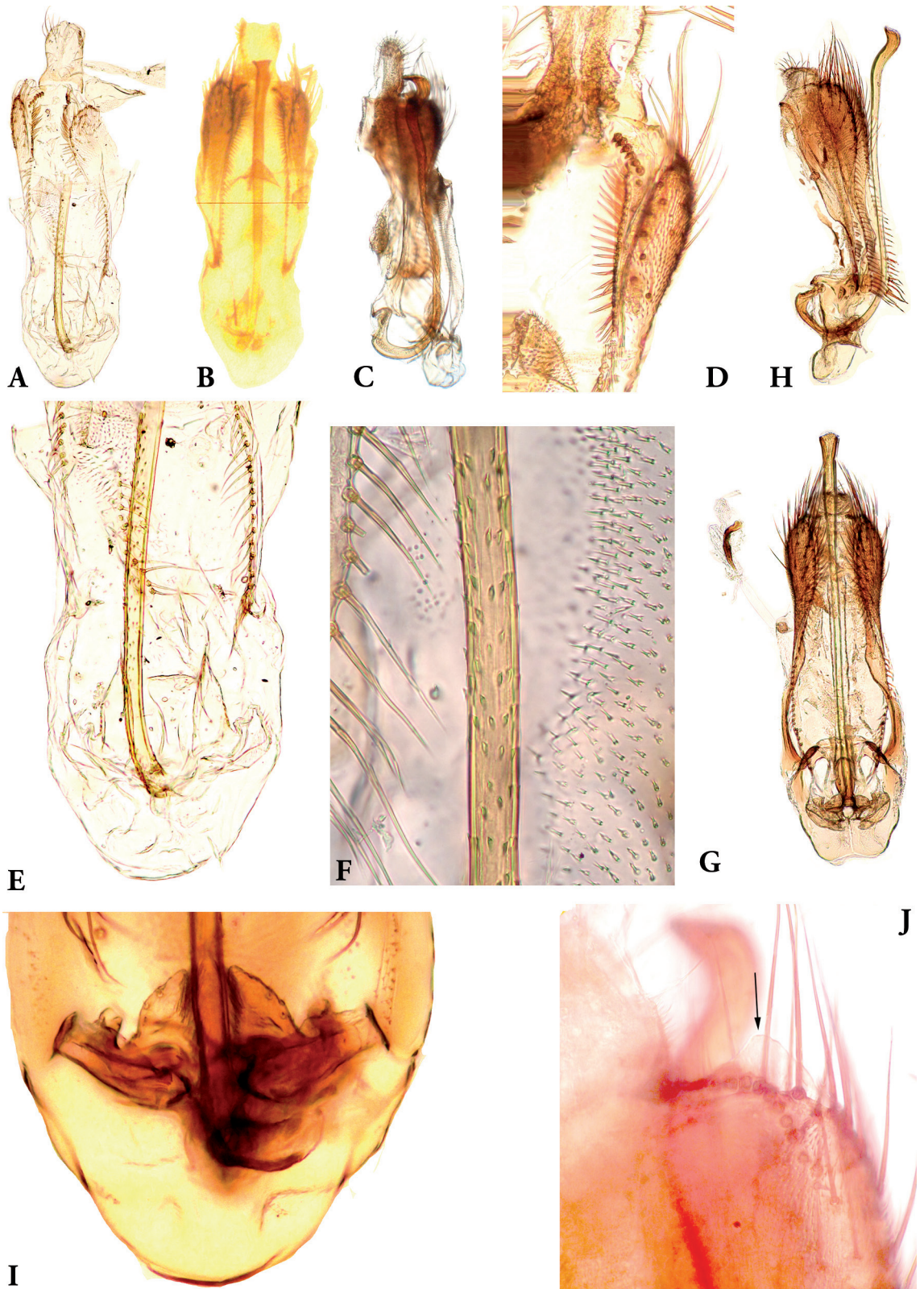


FIGURE 7: Male genitalia: A-F. *Neosilba spiculata* sp. nov.; G-K. *N. pseudopendula* (Korytkowski & Ojeda). A, B, G. Ventral view (A with the filament broken); C, H. Lateral view; D. Details of the prensisetae (ventral view of the epandrium); E, I. Base of the hypandrium (ventral view), details of the paramere; F. Details of the filament of the aedeagus; J. Details of the lobe of the surstylus.

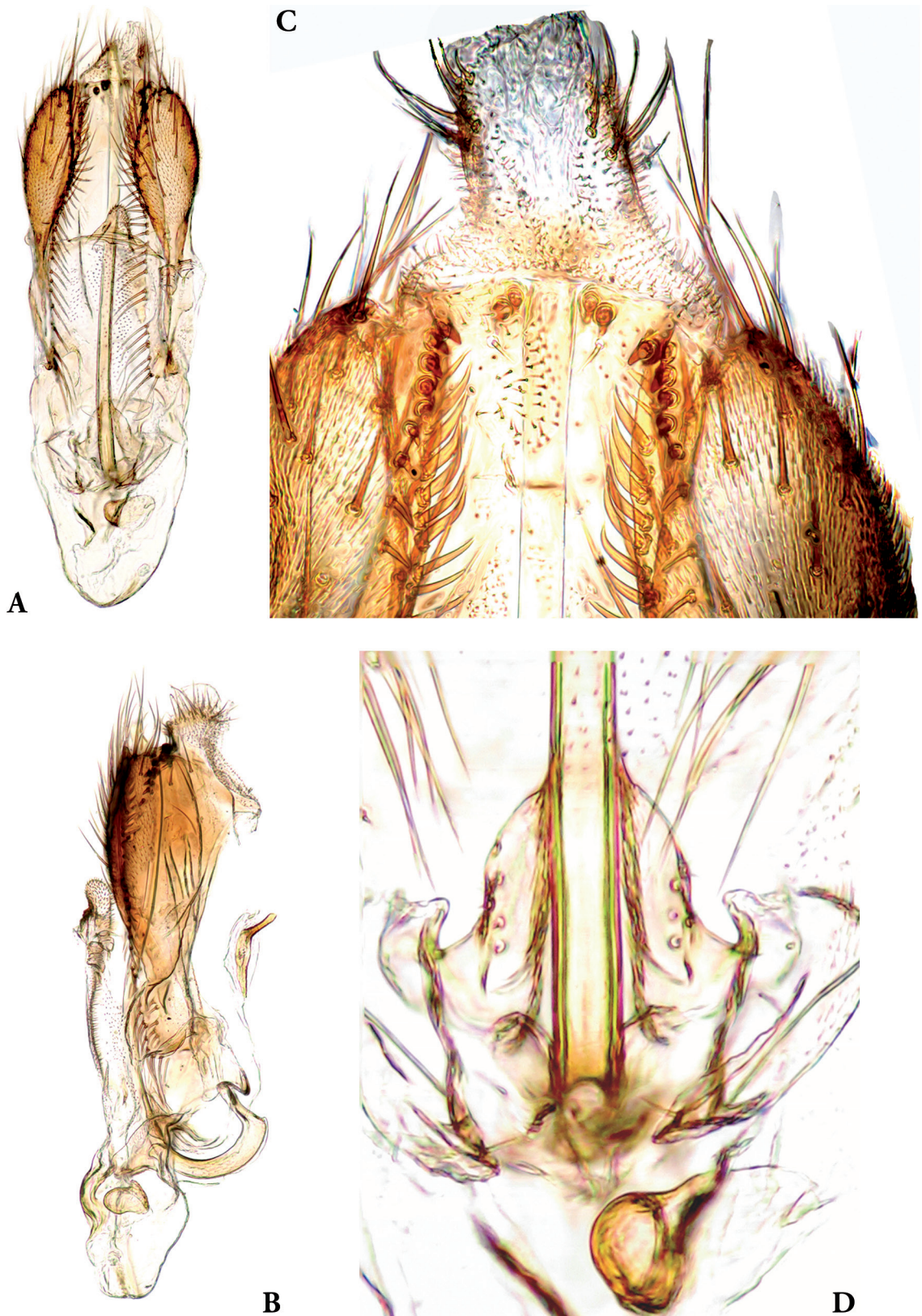


FIGURE 8: *Neosilba angusta* sp. nov., Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Details of the prenisetae (ventral view of the epandrium); **D.** Base of the epandrium (lateral view), details of the paramere and gonopodite.

and 6 prenisetae at each side of the surstylus; *N. pantanense* differs by the spiculae at the apical third of the filament of the aedeagus and prenisetae at each side of the surstylus; *N. cornuphalls* and *N. turgidiphalls* differs by the filament of the aedeagus wider at the middle and number of prenisetae.

Description: Body length 4.74-5.44 mm long, 1.58-1.63 mm wide at pteropleura. **Head:** 1.26-1.78 mm wide, 1.26-1.67 mm high, 0.59-0.85 mm long; front 0.19-0.22 mm wide at the lunule, 0.18-0.23 mm wide lower ocellar triangle; frontal lunule with 16 setulae; postpedicel 0.7-0.89 mm long, 0.13 mm wide in lateral view; arista 0.64 mm long, setulae 0.04-0.08 mm long; subvibrissal area with 6 setulae. **Thorax:** 1.48-1.63 mm wide, 1.78-2.00 mm long; anepisternum with 4 anterodorsal and 6 posterior bristles; scutellum with 5 setulae between lateral bristles; fringes of calypteres with 8 brown setae; Wing 4.00-4.15 mm long, 1.85-2.11 mm wide, hyaline. **Abdomen:** 2.30-2.63 mm long. Male terminalia:

0.64-0.77 mm long, 0.24-0.27 mm wide; epandrium 0.36-0.38 mm long, 0.18-0.20 mm wide (1.9-2 times as long as wide); surstylus with 9 prenisetae at each side (two of them near of the medial line and 7 in the lateral line), aedeagus long and slender, filament fine, smooth, 0.51-0.58 mm long, 0.03 mm wide, apex slightly S-shape in lateral view and slightly narrowed in ventral view, triangular-shape paramere with some medial setae, gonopodite medially wider and acute at apex, cerci 0.064-0.071 mm long, 0.072-0.077 mm wide in ventral view.

Host: *N. angusta* was collected from fruits of *Cissus* sp. (Vitaceae).

***Neosilba distospinosa* sp. nov.**
(Figs. 9A-F)

Type data: Holotype ♂. COLOMBIA, Tolima, Cajamarca. 04°26'267"N, 75°29'261"O, 2444 m,

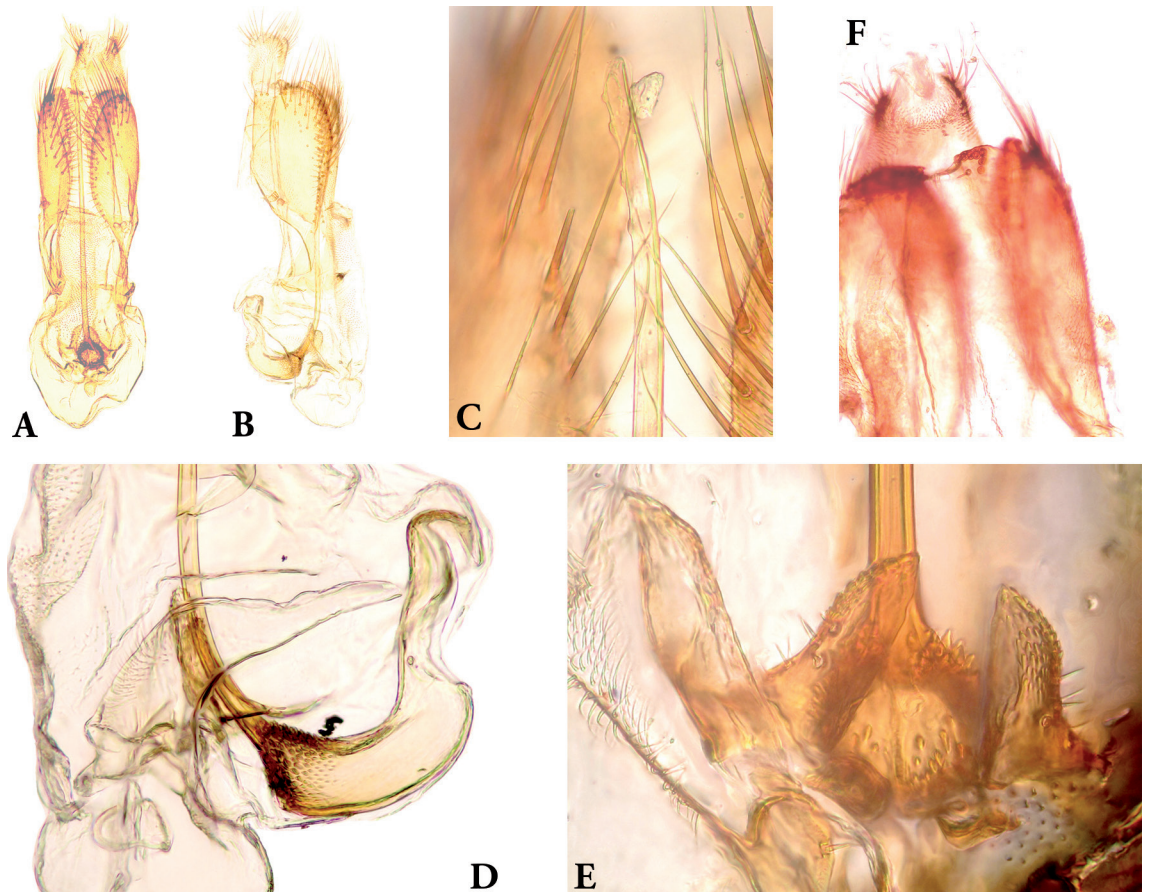


FIGURE 9: *Neosilba distospinosa* sp. nov., Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Apex of the filament of the aedeagus; **D.** Base of the filament and section C of the aedeagus (lateral view); **E.** Paramere and gonopodite (ventral view of the epandrium); **F.** Apex of the epandrium (ventral view) details of the prenisetae.

03.I.2006, M.R. Castañeda & A. Osorio. Ex Guamo (*Inga edulis* Mart) (MEN-UT). Paratypes 3 ♂, Tolima, Cajamarca. 04°26'267"N, 75°29'261"O, 2444 m, 03.I.2005, Mcphail trap (MEN-UT). 1 ♂ 26.I.2005. 1 ♂. 03.I.2006. 1 ♂, 04°26'102"N, 75°29'955"O, 1932 m, 03.XI.2004. 1 ♂, 03.I.2005. 2 ♂, 26.I.2005. 4 ♂, 09.II.2005, 1 ♂, Ibagué,

(Juntas). 23.X.2005, J.C. Cristancho. Mcphail trap (MEN-UT).

Etymology: The name of the species is an adjective that means distal spiculae (from Latin *disto* = distant + *spina* = spine + suffix *osus*) in reference to the filament of the aedeagus of this species that is spiculated at apex.

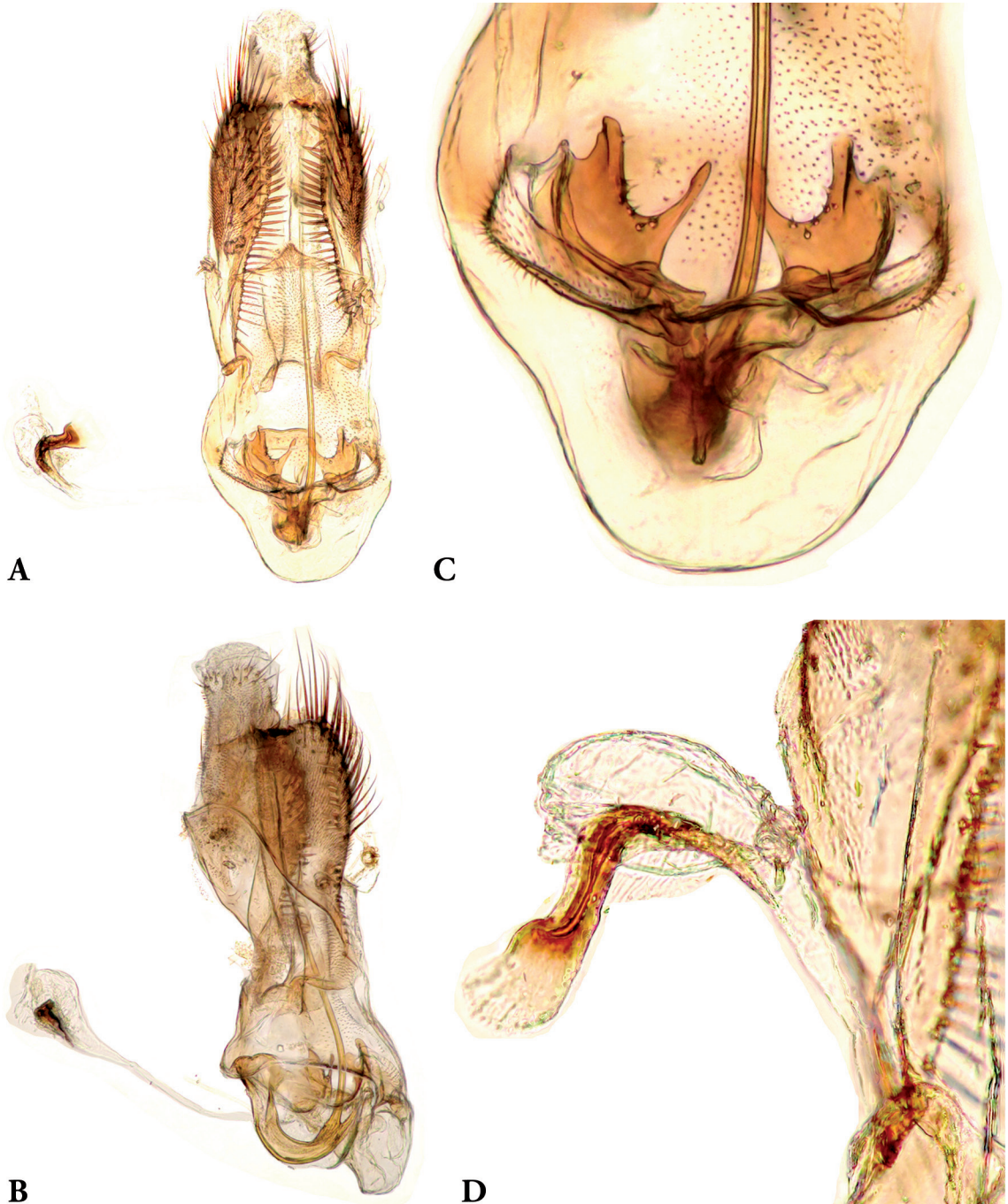


FIGURE 10: *Neosilba batesi* (Curran). Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Base of the hypandrium (ventral view) details of paramere; **D.** Ejaculatory apodeme.

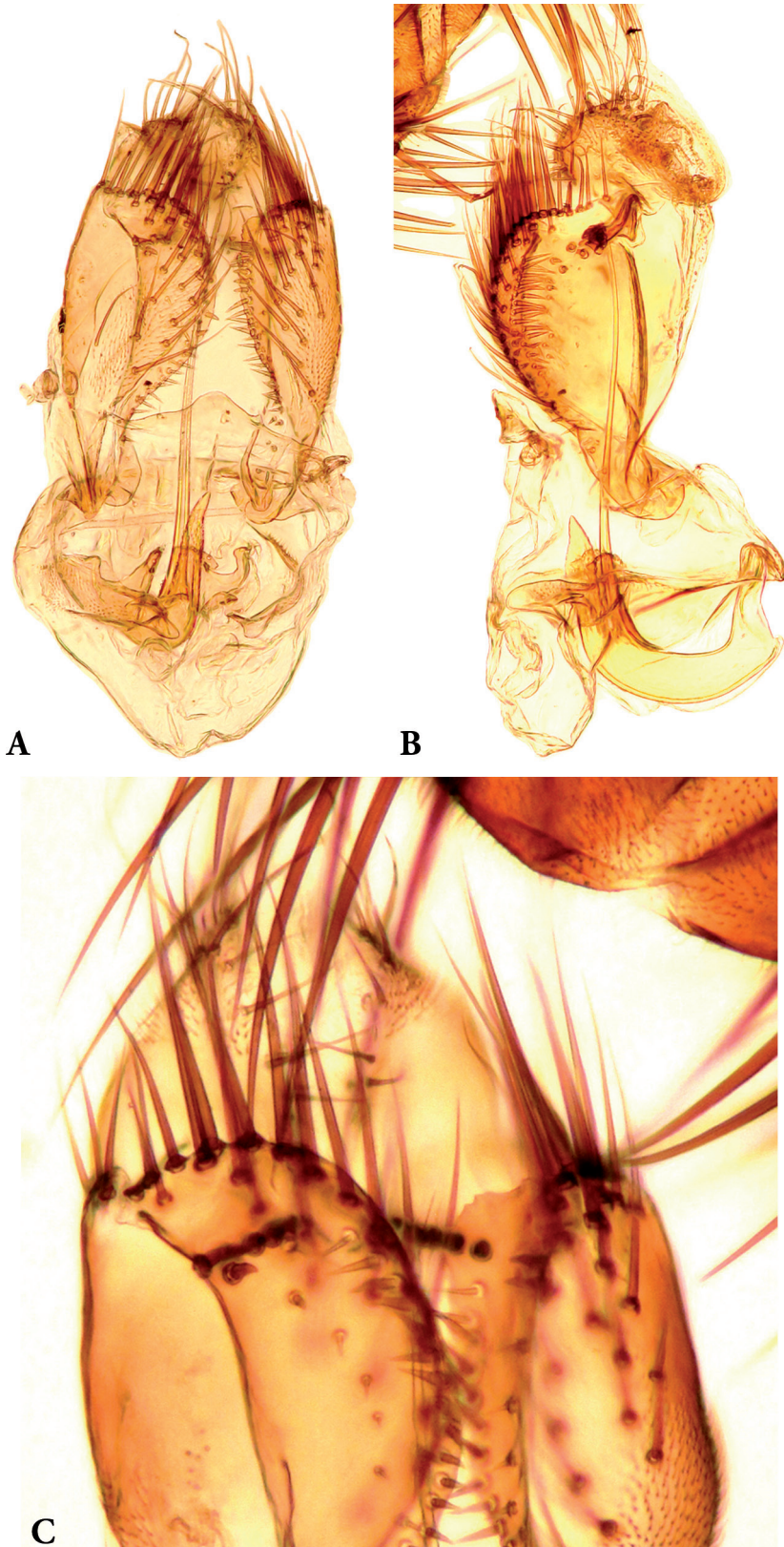


FIGURE 11: *Neosilba bifida* Strikis & Prado. Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Apex of the epandrium (ventral view) details of the prensisetae.

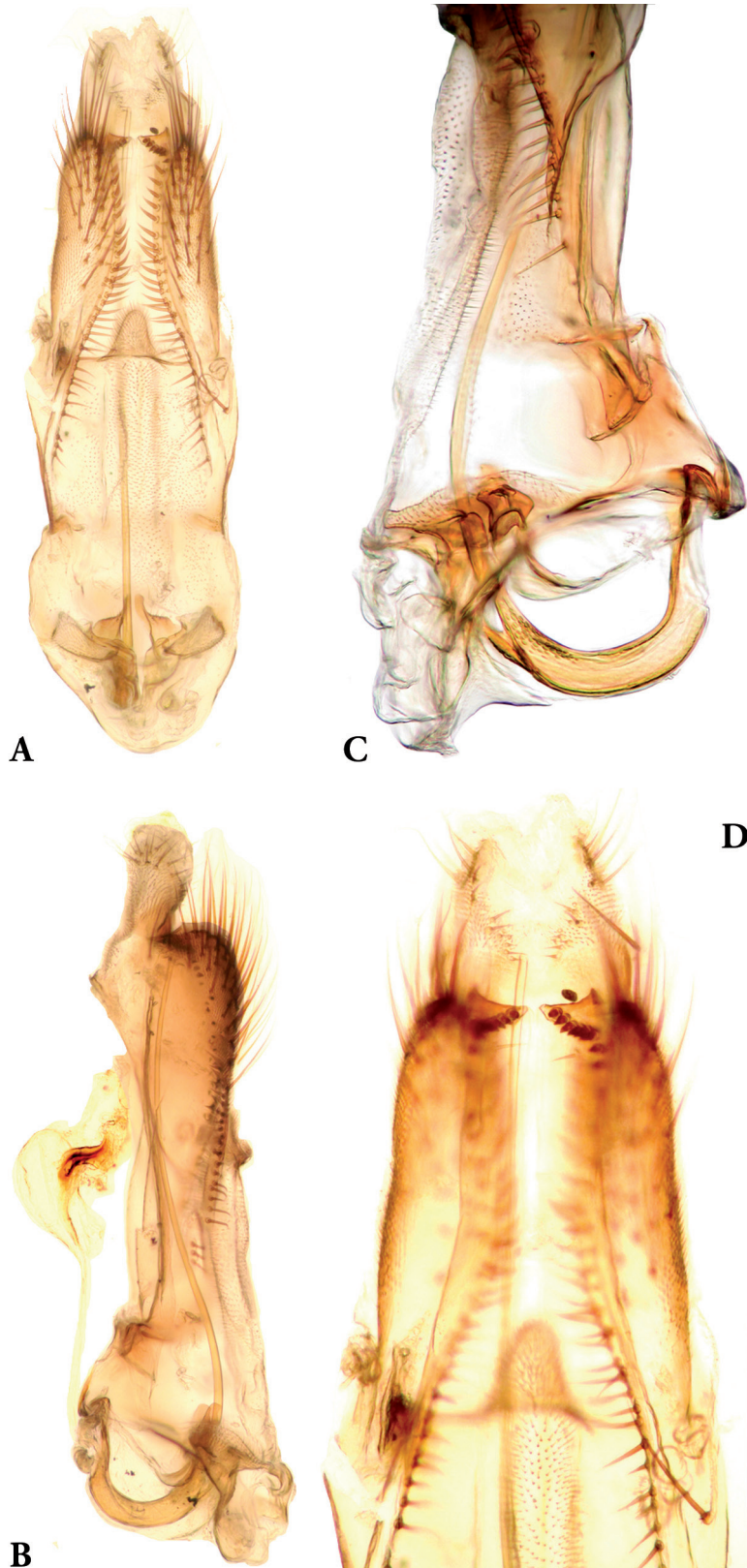


FIGURE 12: *Neosilba glaberrima* (Wiedemann). Male genitalia: A. Ventral view; B. Lateral view; C. Section C and base of the filament of the aedeagus (lateral view). D. Apex of the epandrium (ventral view) details of the prensisetae.

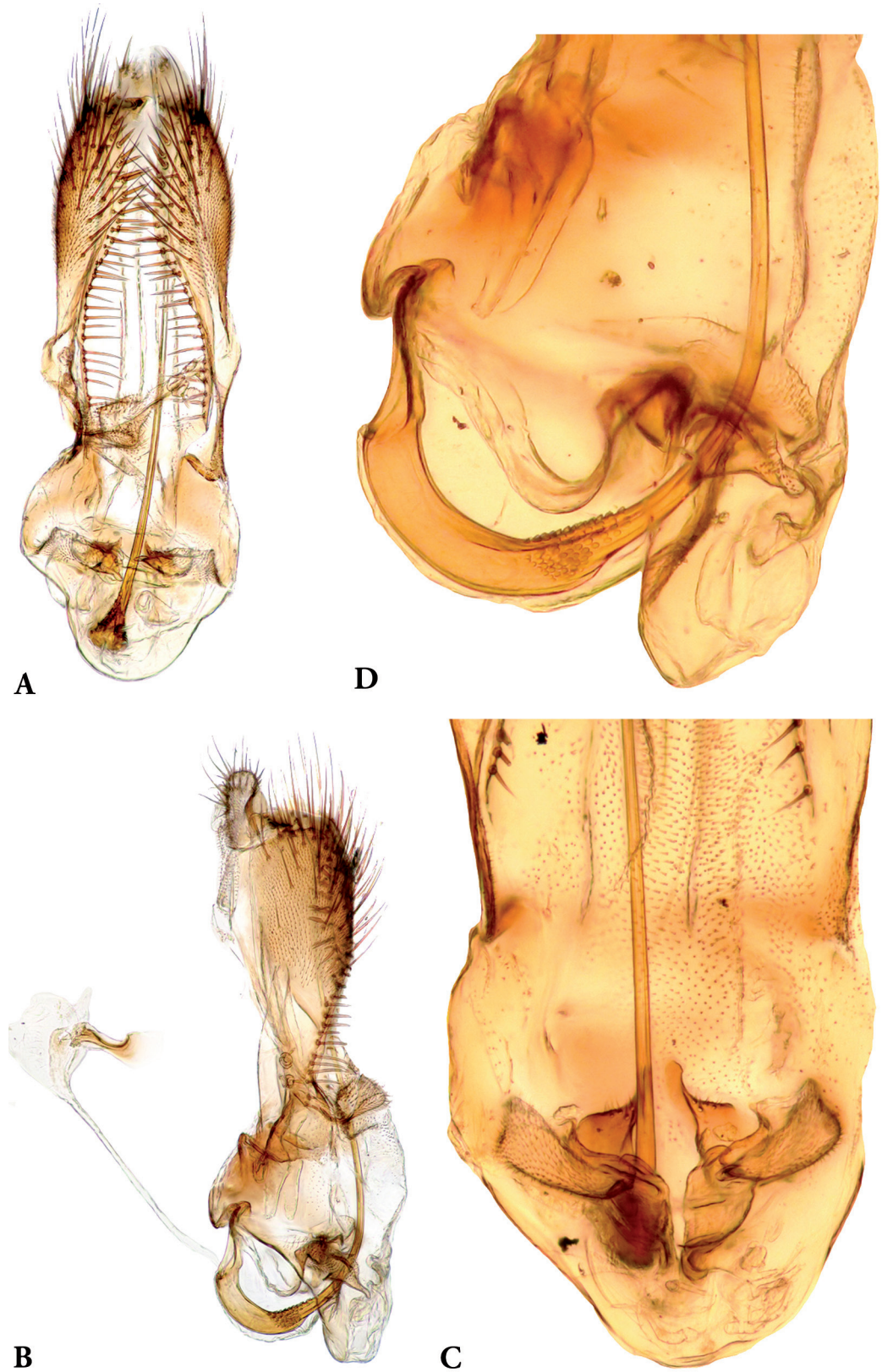


FIGURE 13: *Neosilba certa* (Walker). Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Paramere and gonopodite (ventral view of the hypandrium). **D.** Section C and base of the filament of the aedeagus (lateral view).



FIGURE 14: *Neosilba oaxacana* McAlpine & Steyskal, 1982. Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Paramere and gonopodite (ventral view of the hypandrium). **D.** Section C and base of the filament of the aedeagus (lateral view).

Diagnosis: *Neosilba distospinosa* has 8-10 distal and ventral (4-5 in each side) spine-like spiculae in the filament of the aedeagus (Fig. 9C), distal dorsal and lateral side of C-shaped densely spiculated (Figs. 9A-B, D-E), C-shaped abruptly reduced at the base of the filament (Figs. 9D, E), surstylus with 7 distal prenisetae in right angle at each side (Fig. 9F). *N. distospinosa* belongs to *certa* subgroup because of the size and shape of the male genitalia, The C-shape is thicker than the filament and this one is long and thin. Species of the *glaberrima* subgroup (*N. batesi*, *N. bifida*, *N. glaberrima*, *N. delvechioi*, *N. inesperata* and *N. pseudobifida*) differs by the spine-like lobe or two projected lobes arising on convex surface of the C-shape and by the shape of the paramere (Figs. 10-12); *N. certa* (Fig. 13) and *N. bella* differs by the C-shape is gradually thinner at the base of filament; *N. oaxacana* (Fig. 14) differs by the prenisetae of the surstylus and by the filament of the aedeagus; the surstylus has two prenisetae located near the medial longitudinal line at each side and the other ones located in a external longitudinal line, and the filament does not have any spicula; *N. pradoi* differs by the spiculae in the filament of the aedeagus being absent; *N. paramerolatus* differs by the filament of the aedeagus without spiculae and 9 prenisetae at each side of the surstylus.

Description: Body length 4.8-5.52 mm long, 1.70-2.37 mm wide at pteropleura. *Head:* 1.6-1.8 mm wide, 1.4-1.5 mm high, 0.6-0.7 mm long; front 0.4-0.5 mm wide in the lunule and 0.51-0.55 mm wide lower ocellar triangle; lunule with 8 setulae; postpedicel 0.7-0.9 mm long, 0.2-0.3 mm wide in lateral view; arista 1.1 mm long; subvibrissal area with 3 setulae. *Thorax:* 1.5-2.0 mm wide, 1.9-2.6 mm long, anepisternum with 4 anterodorsal and 5-6 posterior bristles; scutellum with 7 setulae between lateral bristles; fringes of calypteres with 8-9 brown setae; wing 5.3-5.7 mm long, 2.0-2.2 mm wide, hyaline. *Abdomen:* 1.9-2.22 mm long. Male terminalia: Epandrium 0.55-0.61 mm long, 0.35-0.43 mm wide (1.25-1.41 times as long as broad), with a soft distal cleft; surstylus with 7 prenisetae at each side arranged in right angle; trapezoid-shape gonopod with a ventral, spine-like, long and thin setula; paramere finger-like in ventral view, covered with acute spiculae toward its end and with 4-6 setulae; cerca 0.146 mm long, 0.135 mm wide, with a lateral bunch of setulae; aedeagus with distal, thick and acute spiculae, grouped at the end of C and towards the filament; filament 0.015-0.019 mm wide, 0.96-1.15 mm long, smooth, with 4-5 pairs of spine-like spiculae in the ventro-distal side, apex beyond

the surstylus; ejaculatory apodeme rhomboid-shape in ventral view.

Host: specimens were collected from Inga fruits (*Inga edulis* Mart).

***Neosilba piracea* sp. nov.**
(Figs. 15A-E)

Type data: Holotype ♂. COLOMBIA, Tolima, Ibagué. 04°24'302"N, 75°11'766"O, 1107 m, 26.I.2005, R. Castañeda & A. Osorio. Trampa McPhail (MEN-UT). Paratype 1 ♂, Ibagué. 04°27'215"N, 75°13'271"O, 1259 m, 03.I.2006, R. Castañeda & A. Osorio. In McPhail traps (MEN-UT).

Etymology: The name of the species is an adjective that means pear-shape (from Latin *pirum* = pear + suffix *atus* = similar) in reference to the shape of the paramere.

Diagnosis: *N. piracea* (together *N. batesi*, *N. bella*, *N. bifida*, *N. certa*, *N. delvechioi*, *N. distospinosa*, *N. glaberrima*, *N. inesperata*, *N. oaxacana*, and *N. pradoi*) belongs to a group of species with epandrium two or less times as long as wide and has a strong slimming of the aedeagus at the base of the filament, stronger carina at the junction of C and filament (*i.e.*, Section C of the aedeagus strongly wider than the filament). (Fig. 15C) *N. piracea* could be recognized by the epandrium 2 times as long as wide (Fig. 15B), surstylus with 5 to 7 prenisetae at each side (Fig. 15D), section C with an apical dorsal carina and with contiguous spiculae (Fig. 15C). *N. distospinosa* differs by having spiculae on the ventro-distal area of the filament. *N. batesi*, *N. bifida*, *N. delvechioi*, *N. glaberrima*, *N. inesperata* and *N. pseudobifida* by the spine-like lobe or two projected lobes arising on convex surface of the C-shape. *N. certa* and *N. bella* differ by aedeagus with a gradual slimming (cone-like) at the base of the filament, low medial carina in the junction C-filament of the aedeagus and 7 (*N. certa*) or 10 (*N. bifida*) prenisetae located parallel to the posterior margin at each side of the surstylus; *N. certa* differs by a paramere shoulder-like bump (Figs. 13A, D) and triangular-shape in *N. bella*. *N. oaxacana* differs by paramere slender tongue-like and the filament sinuous at the junction with the C in *N. oaxacana* (Fig. 14D). *N. pradoi* differs by the paramere lobose, 7 prenisetae, and by the junction of the filament and C-shape of the aedeagus without any carina.



FIGURE 15: *Neosilba piracea* sp. nov. Male genitalia: **A.** Ventral view; **B.** Lateral view; **C.** Section C and base of the filament of the aedeagus (lateral view); **D.** Apex of the epandrium (ventral view), details of the prensisetae; **E.** Base of the filament of the aedeagus and paramere (ventral view of the hypandrium).

Description: Body length 4.74-4.96 mm long, 1.62-1.85 mm wide at pteropleura. *Head:* 1.25-1.92 mm wide, 1.18-1.48 mm high, 0.66-0.74 mm long; front 0.38-0.51 mm wide at the lunule, 0.41-0.52 mm wide lower ocellar triangle; frontal lunule with 10 setulae; postpedicel 0.7-0.89 mm long, 0.19 mm wide in lateral view; arista 0.70-0.89 mm long, setulae 0.038 mm long; subvibrissal area with 4 setulae. *Thorax:* 1.62-1.85 mm wide, 1.70-2.14 mm long; anepisternum with 4 anterodorsal and 6 posterior bristles; scutellum with 5 setulae between lateral bristles; fringes of calypteres with 8 brown setae; *Wing* 4.55-5.0 mm long, 1.85-1.92 mm wide, hyaline. *Abdomen:*

1.85-2.59 mm long. Male Terminalia: 1.25-1.28 mm long, 0.28-0.33 mm wide; epandrium 0.48-0.52 mm long, 0.32-0.38 mm wide (1.36-1.52 times as long as wide); surstylus with 7 prensisetae at each side arranged at right angle, 5 of them transversely disposed and two longitudinally; paramere pear-shaped in ventral view; cerci 0.192-0.205 mm long, 0.130 mm wide; aedeagus long and slender, base fully C-shaped in lateral view, slightly inflated, suddenly constricted at the junction with the filament, at this point with a dorsal carina and strongly spiculated; filament fine, smooth, 0.92-0.94 mm long, 0.012 mm wide.

Host: unknown.

New records in Colombia

***Neosilba bifida* Strikis & Prado, 2005
(Figs. 11A-C)**

Geographic distribution: Brasil, Colombia.

Specimens data: 1 ♂ COLOMBIA, *Tolima*, Ibagué. 04°24'302"N, 75°11'766"O, 1107 m, 01.VI.2005. R. Castañeda & A. Osorio. Trampa McPhail (MEN-UT). 3 ♂ Cajamarca. 04°24'717"N, 75°18'645"O, 1448 m, 20.X.2005. R. Castañeda & A. Osorio. Café. (MEN-UT). 1 ♂ 15.XII.2005. R. Castañeda & A. Osorio. Café. (MEN-UT). 3 ♂ Cajamarca. 04°24'906"N, 75°22'549"O, 1607 m, 17.III.2006. R. Castañeda & A. Osorio. Café. (MEN-UT). 1 ♂ Cajamarca. 04°26'215"N, 75°23'953"O, 1795 m, 03.I.2006. R. Castañeda & A. Osorio. Trampa McPhail (MEN-UT). 3 ♂, COLOMBIA, *Santander*. Provincia De Vélez. Chipatá. 30.VIII.2006. J. Chacón (MEN-UT).

***Neosilba parva* (Hennig, 1948)
(Figs. 3H-J)**

Geographic distribution: Brasil, Honduras, México, Perú and Colombia.

Specimens data: 1 ♂. COLOMBIA, *Tolima*, Líbano. 18.I.1999. B. Rodríguez. (MEN-UT).

RESUMEN

El género neotropical de moscas negras Neosilba McAlpine puede encontrarse asociado a frutos, flores o terminales de plantas. Son pocos los estudios básicos o aplicados que están relacionados con estos insectos, incluyendo pocos estudios taxonómicos o sobre su importancia económica. En este trabajo se describen diez nuevas especies de Colombia: N. plana sp. nov., N. tolimensis sp. nov., N. amphora sp. nov., N. convexa sp. nov., N. concava sp. nov., N. orbata sp. nov., N. spiculata sp. nov., N. angusta sp. nov., N. distospinosa sp. nov. y N. piracea sp. nov.; se presenta una clave para las 40 especies validas del género, incluidas en cinco grupos y cuatro subgrupos: grupos major, parva, peltae, pendula y glaberrima, glaberrima con dos subgrupos glaberrima y certa, y pendula con los subgrupos pendula y nigrocaerulea. Neosilba parva y N. bifida son referidas por primera vez para Colombia.

PALABRAS-CLAVE: Moscas negras; Taxonomía; Distribución; Hospederos.

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