

Five New Species of the Subfamily Pristocerinae (Insecta, Hymenoptera, Bethylidae) from Colombia

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Abstract. Five new species of bethylid wasps are described from Colombia: *Pseudisobrachium colombianum*, *P. luisae*, *Apenesia bicolor*, *A. formosa*, and *Dissomphalus catalinae*.

Key words: Hymenoptera, Chrysoidea, Bethylidae, *Pseudisobrachium*, *Apenesia*, *Dissomphalus*, new species, Colombia.

Introduction

In the course of our study on the hymenopterous fauna of Colombia, South America, we were able to examine specimens of the family Bethylidae. Among them, we recognized five new species in the subfamily Pristocerinae: two species belonging to the genus *Pseudisobrachium*, two species to *Apenesia*, and one species to *Dissomphalus*. All the pristocerine species show sexual dimorphism; fully winged and ocelli present in males, and completely apterous and ocelli lacking in females. In this paper, we describe those new species from Colombia.

The following abbreviations are used in this paper: HL—head length; HW—head width; LM—length of mesosoma; WP—dorsal width of pronotum; LP—length of propodeum; WPD—width of propodeal disc; TL—total body length; PF—palpal formula (the number of segments in the maxillary and labial palpi).

Systematics

Family Bethylidae Halliday, 1839 Subfamily Pristocerinae Dalla Torre, 1898

Genus *Pseudisobrachium* Kieffer

Pseudisobrachium Kieffer, 1904. *Ark. Zool.*, 1: 368.

For full synonymy see Gordh & Móczár (1990).

This genus is distributed from the tropics to the temperate zones of the world, and is represented by about 140 species including 76 species from the Neotropical region. Of those species, 7 species are known only from females. No information is gained concerning male-female relationship for them.

The genus is distinguished from the other genera of the subfamily Pristocerinae in female by the following combination of characteristics: 1) PF = 5, 3; 2) eye with a single facet or absent; 3) propodeum gradually narrowed anteriorly to a pair of small points; 4) mesopleuron large, bulging laterally; 5) middle tibia with spines.

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***Pseudisobrachium colombianum* sp. nov.**

(Figs 1, 3)

Holotype. Female. HL 1.05 mm; HW 0.88 mm; WP 0.55 mm; LM 1.98 mm; LP 0.63 mm; WPD 0.55 mm; TL 5.5 mm.

Head and mesosoma black; metasoma dark brown; mandible and antennal scape brown; antennal pedicel and flagellomeres dark brown; legs brown.

Head 1.20 times as long as wide in full-face view; sides straight and broadest at anterior end; posterior margin straight and posterolateral corner forming an angle; frons and vertex moderately punctate with smooth interspaces. Mandible with 4 acute teeth including apical projection; basal tooth smallest. Median lobe of clypeus broad, subtruncate, with a median tooth; sides straight and broadest at anterior end. Eye small, consisting of a single facet. Antenna with 13 articles; scape 0.45 mm in length, 2.8 times as long as wide, and broadest at apical end; pedicel as long as wide; 1st to 10th flagellomeres each wider than long; terminal article 1.4 times as long as wide, and shorter than preceding two articles combined.

Pronotum mostly smooth, but sparsely with small punctures; disc 1.27 times as long as wide, with parallel sides and convex anterior margin. Mesonotum 1.41 times as long as wide, with small punctures and smooth interspaces. Mesopleuron smooth, sparsely with small punctures. Propodeum mostly smooth, with straight posterior margin and dully angulate posterolateral corner in dorsal view; disc 1.14 times as long as wide, widest at posterior end and 0.55 mm in width; posterior declivity shagreened.

Metasoma sessil, 1.03 mm in width in dorsal view; terga smooth and shining.

Holotype. Female, Canal Maldito, Rio Sucio, Choco, Colombia, 20. ix. 1994, Luisa Merdoza leg.

Type depository. The type is to be preserved in the collection of the Instituto para Investigación de Recursos Biológicos "Alexander von Humboldt", Villa de Leyva, Colombia (IAVH).

Etymology. The specific epithet is named for the type locality.

Remarks. This species is easily separated from the other Neotropical congeners by the 4-toothed mandibles, the small basal tooth of mandible, the shape of median lobe of clypeus, and the large body size (head length over 1.0 mm). This is the first record of the genus from Colombia.

***Pseudisobrachium luisae* sp. nov.**

(Figs 2, 4)

Holotype. Female. HL 0.65 mm; HW 0.55 mm; WP 0.35 mm; LM 1.20 mm; LP 0.36 mm; WPD 0.31 mm; TL 3.2 mm.

Head and mesosoma black; metasoma castaneous; mandible, antenna, and legs brown.

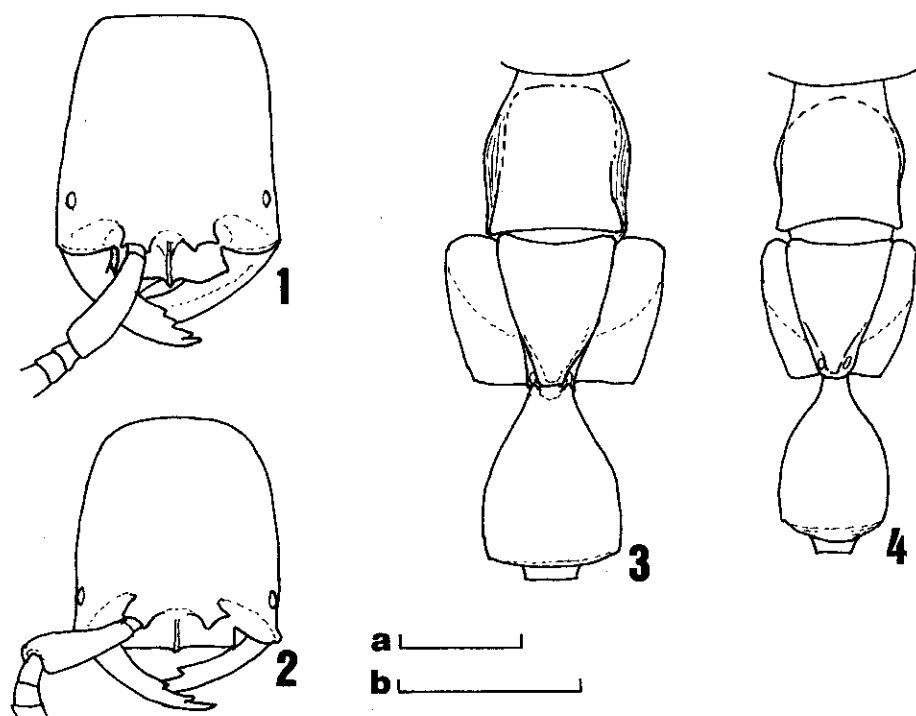
Head 1.19 times as long as wide, with subparallel sides and convex posterior margin in full-face view; frons and vertex moderately punctate, with smooth interspaces. Mandible with 3 teeth; apical two acute and long; basal one blunt and short. Median lobe of clypeus broad, truncate, with straight sides, and with a blunt median tooth. Eye small, consisting of a single facet. Antenna with 13 articles; scape 0.30 mm in length, 2.7 times as long as wide; pedicel as long as wide; 1st to 10th flagellomeres each wider than long; terminal article 1.2 times as long as wide, and as long as preceding two articles combined.

Pronotum moderately punctate with smooth interspaces; the punctures weaker than those of head; disc 1.07 times as long as wide. Mesonotum moderately punctate, 1.40 times as long as wide. Mesopleuron coarsely punctate. Propodeum broadest at posterior end, with straight posterior margin and dully angulate posterolateral corners in dorsal view; disc 1.16 times as long as wide; its width 0.31 mm in dorsal view; lateral surface smooth and shining; posterior surface microreticulate.

Metasoma sessil, smooth and shining; maximum width 0.65 mm in dorsal view. Middle tibia spinose.

Holotype. Female, Al Sur, Atrato Truando, Rio Sucio, Choco, Colombia, 1. xi. 1994, Luisa Mendoza leg.

Type depository. The type is to be preserved in the collection of the IAVH, Colombia.



Figs 1–4. *Pseudisobrachium colombianum* sp. nov. and *P. luisae* sp. nov. 1, 3. *Pseudisobrachium colombianum* sp. nov., female. 2, 4. *P. luisae* sp. nov. 1, 2: head, full-face view; 3, 4: mesosoma, dorsal view. Scale bars: a: 1.0 mm for 1, 3; b: 1.0 mm for 2, 4.

Etymology. This species is named after Ms Luisa Mendoza for her kindness in giving the holotype specimen of this new species to us.

Remarks. This species is easily separated from the other Neotropical congeners by the 3-toothed mandibles, the shape of median lobe of clypeus and the black head and mesosoma.

Genus *Apenesia* Westwood

Apenesia Westwood, 1874. *Thesaurus Entomologicus Oxoniensis*, 4: 170.

For full synonymy see Gordh & Móczár (1990).

This genus is distributed from the tropics to the temperate zone of the world, and is represented by about 130 species including 71 species from the Neotropical region. Of those species, 6 species are known only from females.

The genus is distinguished from the other genera

of the subfamily Pristocerinae in female by the following combination of characteristics: 1) PF = 4, 3-2; 2) eye small, consisting of 1 to 20 facets; 3) propodeum weakly to fairly strongly constricted near the spiracles and its width 1.2–1.8 times its width at the constriction; 4) mesopleuron prominent laterally; 5) middle tibia with spines.

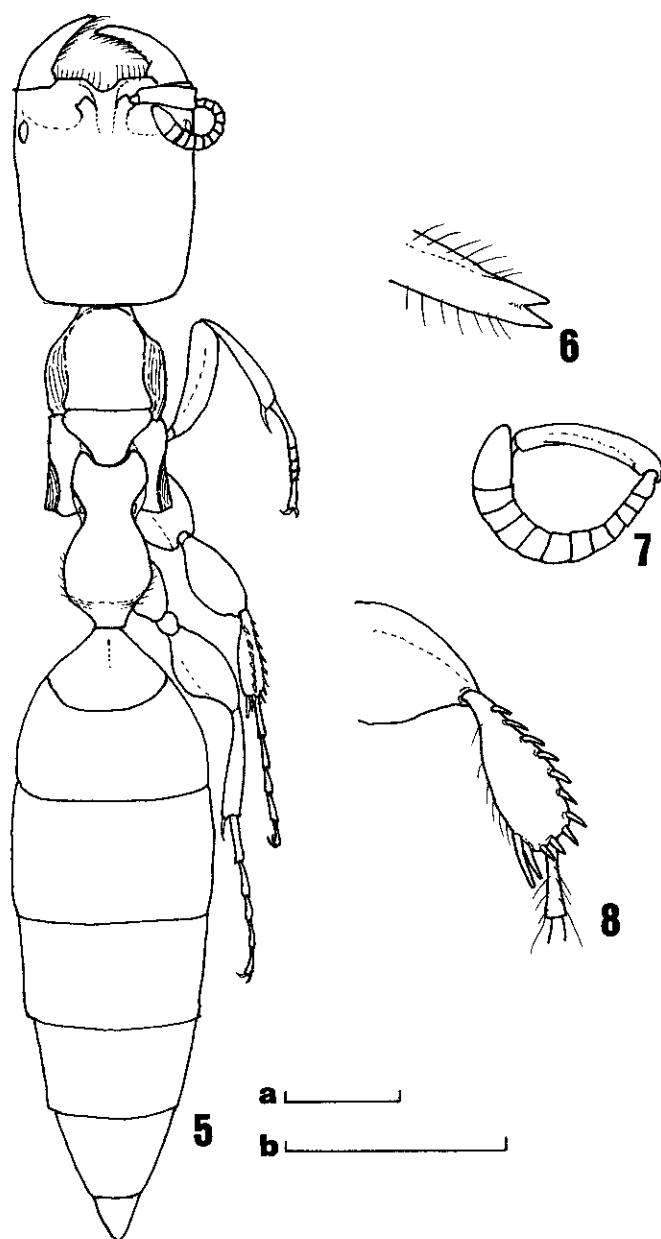
***Apenesia bicolor* sp. nov.**

(Figs 5–8)

Holotype. Female. HL 1.00 mm; HW 0.81 mm; WP 0.39 mm; LM 1.38 mm; LP 0.65 mm; WPD 0.38 mm; TL 4.6 mm.

Head and mesosoma brown; metasoma black; mandible, antenna, and legs brown.

Head rectangular, 1.23 times as long as wide, with parallel sides and straight posterior margin in full-face view; frons and vertex microreticulate and



Figs 5–8. *Apenesia bicolor* sp. nov., female. 5: Body, dorsal view; 6: mandible; 7: antenna; 8: middle tibia. Scale bars: a: 1.0 mm for 5; b: 1.0 mm for 6–8.

impunctate. Mandible with two acute teeth; outer and inner margins with long erect seta. Anterior part of clypeus with a convexity medially. Eye black, 0.075 mm in diameter. Antenna short, with 13 articles; scape 0.28 mm in length, 2.3 times as long as wide,

and broadest at apical end; pedicel as long as wide; 1st to 10th flagellomeres each shorter than wide; terminal article 1.4 times as long as wide, and shorter than preceding two articles combined. In dorsal view, head capsule flat dorsoventrally, 1.89 times as long as

wide.

Pronotum smooth and shining; disc 1.41 times as long as wide; anterodorsal corner not forming angle in lateral view. Mesonotum smooth, as long as wide. Mesopleuron weakly microreticulate; dorsolateral margin carinate. Propodeum smooth, shining, sparsely with shallow small punctures; disc 1.73 times as long as wide; its maximum width being 1.9 times of minimum width in dorsal view.

Metasoma sessile, 0.95 mm in width in dorsal view; 1st tergite smooth and shining, and 2nd to terminal tergites weakly microreticulate. Outer margin of middle tibia with 7 pairs of spines.

Holotype. Female, Vereda La Balsa, Corregimiento La Honda, Lio Sucio, Choco, Colombia, Luisa Mendoza leg (no collecting date is written).

Type depository. The type is to be preserved in the

collection of the IAVH, Colombia.

Etymology. The specific epithet is named after the two-coloured condition of body.

Remarks. The present species is separated from the other Neotropical congeners by the 2-toothed mandibles, the large body size (TL 4.6 mm) and the body coloration.

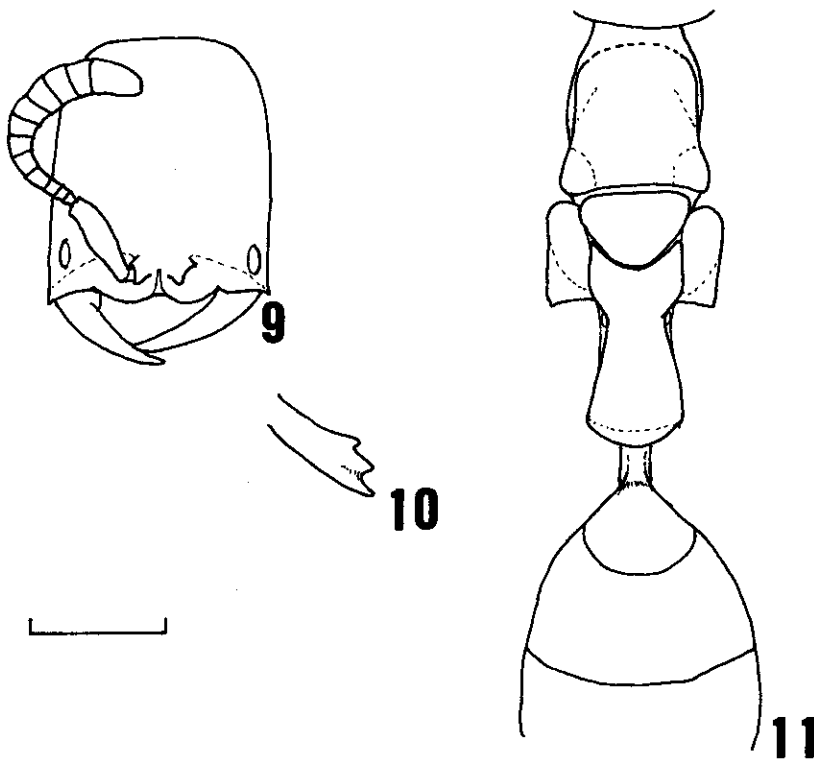
Apenesia formosa sp. nov.

(Figs 9–11)

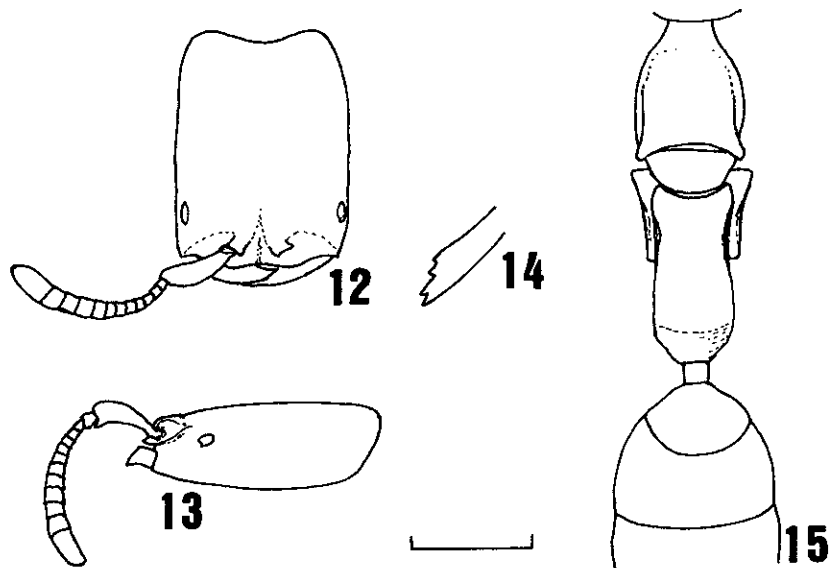
Holotype. Female. HL 0.49 mm; HW 0.39 mm; WP 0.26 mm; LM 0.78 mm; LP 0.40 mm; WPD 0.20 mm; TL 2.0 mm.

Head, mesosoma and metasoma brown; mandible, antenna, and legs yellowish brown.

Head rectangular, 1.26 times as long as wide, with parallel sides and almost straight posterior margin in



Figs 9–11. *Apenesia formosa* sp. nov., female. 9: Head, full-face view; 10: mandible; 11: mesosoma, dorsal view. Scale bar: 0.5 mm.



Figs 12–15. *Dissomphalus catalinae* sp. nov., female. 12: Head, full-face view; 13: *ditto*, lateral view; 14: mandible; 15: mesosoma, dorsal view. Scale bar: 0.5 mm.

full-face view; frons and vertex smooth and shining. Mandible with 3 teeth; basal tooth smallest. Anterior margin of clypeus with a median shallow convexity. Eye 0.05 mm in diameter. Antenna with 13 articles; scapes 0.18 mm in length, 2.3 times as long as wide, and broadest at apical end; pedicel as long as wide; 1st to 10th flagellomeres each wider than long; terminal article 1.3 times as long as wide, as long as preceding two articles combined. In profile, head capsule 1.42 times as long as high.

Pronotum smooth and shining; disc as long as wide; posterolateral corner with a large spot; in profile anterodorsal margin dully angulate. Mesonotum largely smooth, 0.55 times as long as wide. Mesopleura microreticulate; dorsolateral corner not carinate. Propodeal disc smooth, twice as long as wide; its maximum width being 1.78 times of minimum width in dorsal view; lateral surface of propodeum microreticulate; posterior declivity microreticulate.

Metasoma petiolate, 0.53 mm in wide in dorsal view; terga smooth and shining; petiole strongly microreticulate, twice as long as high in profile. Outer

margin of middle tibia with 6 pairs of spines.

Holotype. Female, Cabaña Venados, PNN Orquideas, Municipio de Urrao, Antioquia, Colombia, 5. iv. 1996, J. M. Vargas R. leg.

Paratype. One female, same data as holotype.

Type depository. The types is to be preserved in the collection of the IAVH, Colombia.

Etymology. The specific epithet means the Latin "formosa".

Remarks. This species is separated from the other Neotropical congeners by the 3-toothed mandibles, the emarginate median portion of clypeus, the shape of propodeum, and the small body size (TL 2.0 mm).

Genus *Dissomphalus* Ashmead

Dissomphalus Ashmead, 1893. *Bull. U. S. natn. Mus.*, 45: 41.

For full synonymy see Terayama (1996).

This genus is represented by 122 species including 90 Neotropical species, and distributed in the temperate to the tropical zones of the world. In the Neotropical region, 9 species are known only from

females.

Dissomphalus is distinguished from the other genera of the subfamily Pristocerinae in females by the following combination of characteristics: 1) PF = 2-1, 2-1; 2) Eye small, consisting of less than 25 facets, or absent; 3) propodeal disc long, more or less parallel-sided; 4) mesopleuron not or very weakly produced laterally; 5) middle tibia with or without spines.

***Dissomphalus catalinae* sp. nov.**

(Figs 12–15)

Holotype. Female. HL 0.48 mm; HW 0.35 mm; WP 0.23 mm; LM 0.68 mm; LP 0.33 mm; WPD 0.18 mm; TL 1.9 mm.

Body brown; mandible, antenna and legs yellowish brown.

Head 1.36 times as long as wide, with parallel sides and concave posterior margin in full-face view; frons and vertex smooth and shining. Mandible with 4 teeth; apical 2 teeth acute; basal 2 small and blunt. Eye black, 0.04 mm in diameter. Anterior margin of clypeus truncate. Antenna with 13 articles; scape 0.20 mm in length, 3.2 times as long as wide; pedicel as long as wide; 1st to 10th flagellomeres each wider than long; terminal article 1.4 times as long as wide, shorter than the preceding 3 articles. In profile head capsule flat, 2.38 times as long as high, with subparallel dorsal and ventral margins.

Pronotum smooth and shining; disc as long as wide. Mesonotum microreticulate, 0.67 times as long as wide. Mesopleuron weakly microreticulate, anterolateral corner forming an distinct angle in

dorsal view. Propodeal disc largely smooth, 1.83 times as long as wide, with parallel sides, and its maximum width being 1.07 times of minimum width, with convex posterior margin in dorsal view; lateral surface of propodeum weakly microreticulate.

Metasoma petiolate, 0.45 mm wide in dorsal view, smooth and shining; petiole weakly microreticulate, longer than high in profile. Outer margin of middle tibia with 3 pairs of spines.

Holotype. Female, arque Natural Privado Narino, La Planada, P Colombia, Catalina Estrada leg.

Type depository. The holotype will be deposited in the collection of the IAVH, Colombia.

Etymology. This species is named after Ms Catalina Estrada for her kindness in giving the holotype specimen of this new species to us.

Remarks. This species is easily separated from the other Neotropical congeners by the anteriorly angulate mesopleuron.

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