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SHORT NOTE

Chartergellus jeannei, a New Species of the Swarming Social Wasps from the Amazon Forest (Hymenoptera: Vespidae: Epiponini)

YC Grandinete[1], SR Andena[2], RA Soleman[3], FB Noll[3]

1 - Universidade de São Paulo (FFCLRP – USP), Ribeirão Preto, SP, Brazil
2 - Universidade Estadual de Feira de Santana, Feira de Santana, BA, Brazil
3 - Universidade Estadual Paulista (UNESP), São José do Rio Preto, SP, Brazil

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Corresponding author
Yuri Campanholo Grandinete
Universidade de São Paulo, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto
Av. Bandeirantes, 3900, Ribeirão Preto, SP, Brazil
E-Mail: bioyuri@gmail.com

Abstract

A new species, *Chartergellus jeannei* Andena & Soleman, is described.

Keywords

Chartergellus, Epiponini, Amazon Forest, Army Ants.

Introduction

Chartergellus is a genus of Epiponini with nine species described, which extends from Costa Rica to southeastern Brazil (West-Eberhard *et al*., 2006). Six species are found in Brazil: *C. communis*, *C. sanctus*, *C. amazonicus*, *C. nigerrimus*, *C. punctatior* and *C. zonatus*, being these last four restricted to the Amazon Forest (Richards, 1978). The genus is easily recognized by a curved bristle on the third labial palpomere, the maxillary and labial palpi five and three segmented, respectively, metanotum rounded, lacking an occipital carina and a dorsal groove on mesepisternum (Carpenter, 2004).

Despite the wide distribution, species of *Chartergellus* are rarely found (Jeanne, 1991) and, consequently, their biology is little known (Chavarria & West-Eberhard, 2010). As pointed out by West-Eberhard *et al*. (2010) the taxonomic history of the genus is troublesome, starting with Bequaert (1938) who placed *Chartergus frontalis* (Fabricius) in a new subgenus, *Chartergellus*, because it was very distinct from other species of *Chartergus*. Richards (1978) examined the palpi and pointed out that the *C. frontalis* of Bequaert had a formula of 5:3 maxillary: labial palpal segments and not 6:3 as supposed and raised it to genus, proposing *C. amazonicus* Richards as a replacement name for the preoccupied *Vespa frontalis* Fabricius. Additionally, Richards (1978) described five new species, and removed *C. zonatus* from synonymy with *frontalis*. Later, two new species were described, *C. afoveatus* (Cooper, 1993) and *C. golfitensis* (West-Eberhard et al., 2010). Nests are arboreal, with the pedicel fibrous, cell-marginal, horizontal to the margin of the downward-facing comb (Wenzel, 1998). Carton of long, gray fiber, either supple, smooth, and uniform or brittle and irregular with prominent lines of construction (Wenzel, 1998). The combs are multiple, growing gradually at margins, suspended from the substrate one below each other (Wenzel, 1998).

Here we describe a new species of *Chartergellus,* collected in the Ducke Reserve, Manaus, Brazil, promoted by the I International Meeting on Wasps (July of 2013).

Results

Chartergellus jeannei Andena & Soleman new species (Figs. 1 and 2)

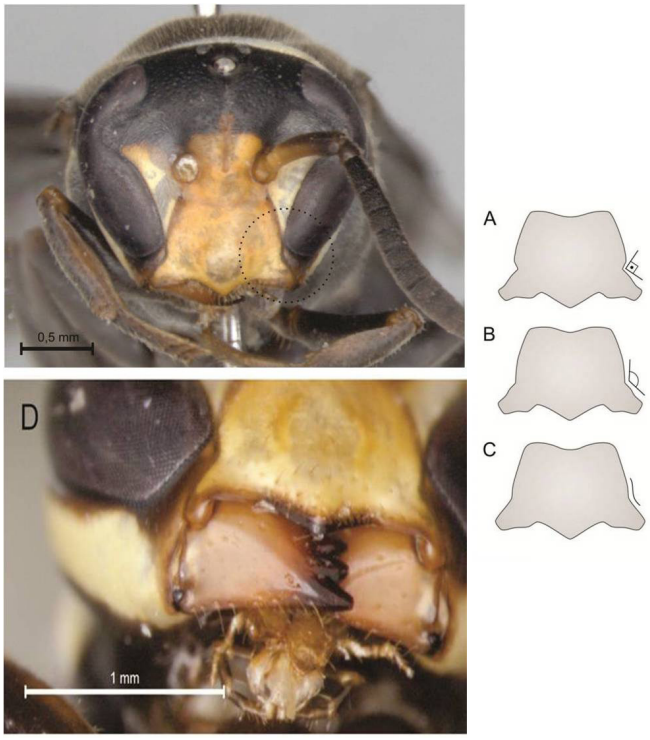

Fig 1. A, B, C: Variations of the clypeus from *Chartergellus jeannei*. The figure B represents the clypeus of the Holotype, while A and C from the paratypes; D: Mandible.

Diagnosis: In general aspects like *Chartergellus zonatus*, although differs from it by a yellow-reddish clypeus narrowly separated from the compound eyes (sometimes touching, see *variation* section) and coarse punctuation on frons, while *C. zonatus* has a clearly reddish clypeus, more separated from the eyes and frons with shallow punctuation.

Description:

Female

Size: 7.0 mm.

Forewing in length 7.5 mm; infuscate, venation blackish, pterostigma short, truncate.

Color: Blackish species, with yellow marks as follow: a band on gena; two inconspicuous spots on vertex; a band along the pronotal carina, posterior border of pronotum, anterior region of scutellum (the band is split in two by a longitudinal black line on center portion) and metanotum; upper part of mesopleura; propodeal valve pale; marks on inner portion of tegula, parategula and posterior portion of the posterolateral lamella from the scutum; transversal bands on terga I-III (weaker on tergum III), on sternum II and a single spot on apex of tergum IV. Clypeus and mandibles (except for the tooth blackish) yellow-reddish. Legs blackish, with yellow-reddish marks on inner portion of tibiae and tarsi. Antenna blackish, with scape, pedicel and apical flagellomeres partially yellow-reddish.

Color Variation: Yellow spot on the dorsal plate of the mesopleura absent; yellow marks on fore tibia may be stronger and on T4 may be absent.

Head (Fig 1): (1) clypeus about as long as wide, evenly convex; narrowly separated of the eyes (Fig 1B), sometimes touching; lateral margins of the clypeus sinuous, although on some specimens (elected as paratypes and all from the same nest) this sinuosity may vary to less until strongly sinuous (Fig 1A and C); pubescence on top 1/3; bristles all over, except those on top half, that are little shorter; (2) frons and vertex with moderately long and spaced hairs; punctures shallow, medium sized, separated by about one diameter; (3) eyes with spaced short hairs; (4) malar space smaller than fourth antennal article, shinning; (5) gena about 0.8 width of eyes in profile; pubescence evident except on lower end, which is shining, reaching the malar space; punctures very shallow and spaced; (6) mandible little raised not forming a rim (Fig 1D); (7) diameter of the medial ocellus, 0,234 mm; (8) interocelar distance, 0,216mm.

Mesosoma (Fig 2 A and B): (1) pronotum with dense pubescence; pronotal carina little raised, rounded, little produced forward; pronotal fovea in a shallow oval concavity; punctures shallow, separated by less than one diameter; (2) mesopleura with same pattern of punctuation and pubescence as that of pronotum but becoming sparser laterally; scrobal furrow wide, shallow; (3) dorsal plate of metapleura 1.3 times longer than wide at middle; punctation very shallow and spaced;

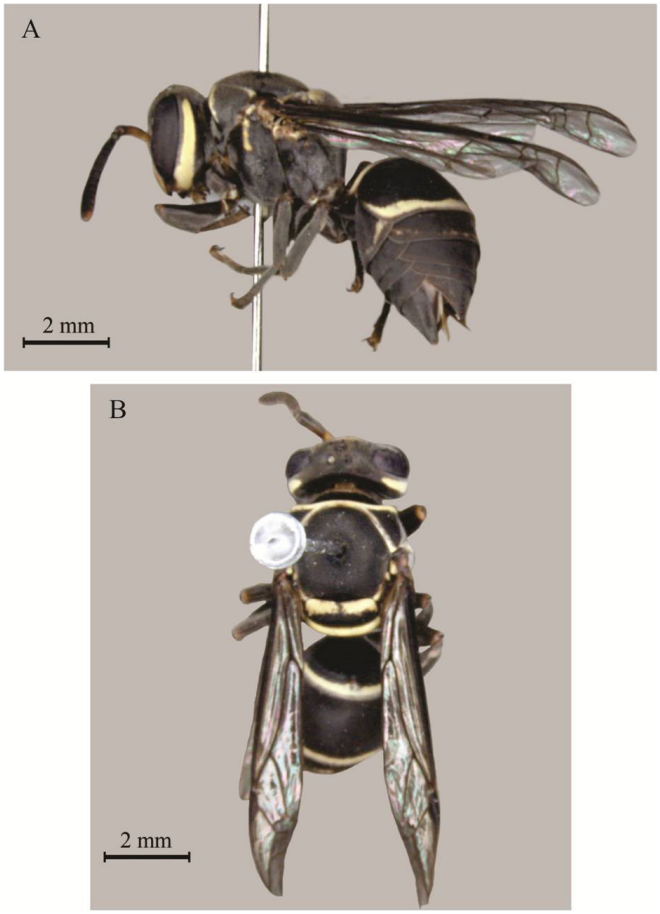

Fig 2. *Chartergellus jeannei*. A: Lateral view; B: Dorsal view.

(4) scutum with pubescence very spaced, present only on borders, central area more shinning; punctuation small, shallow, separated by less than one diameter, becoming sparser centrally; (5) scutellum with same pattern of punctuation of that of scutum; (6) metanotum with pubescence denser than that of scutellum, but not as that of pronotum; punctuation very small and spaced; (7) propodeum with dense pubescence, punctuation shallow and very spaced; propodeal concavity shallow, wide; (8) propodeal valve linear.

Metasoma (Fig 2 A and B): (1) Tergum I cap-shape; (2) tergum II about two times wider than long, coriaceous.

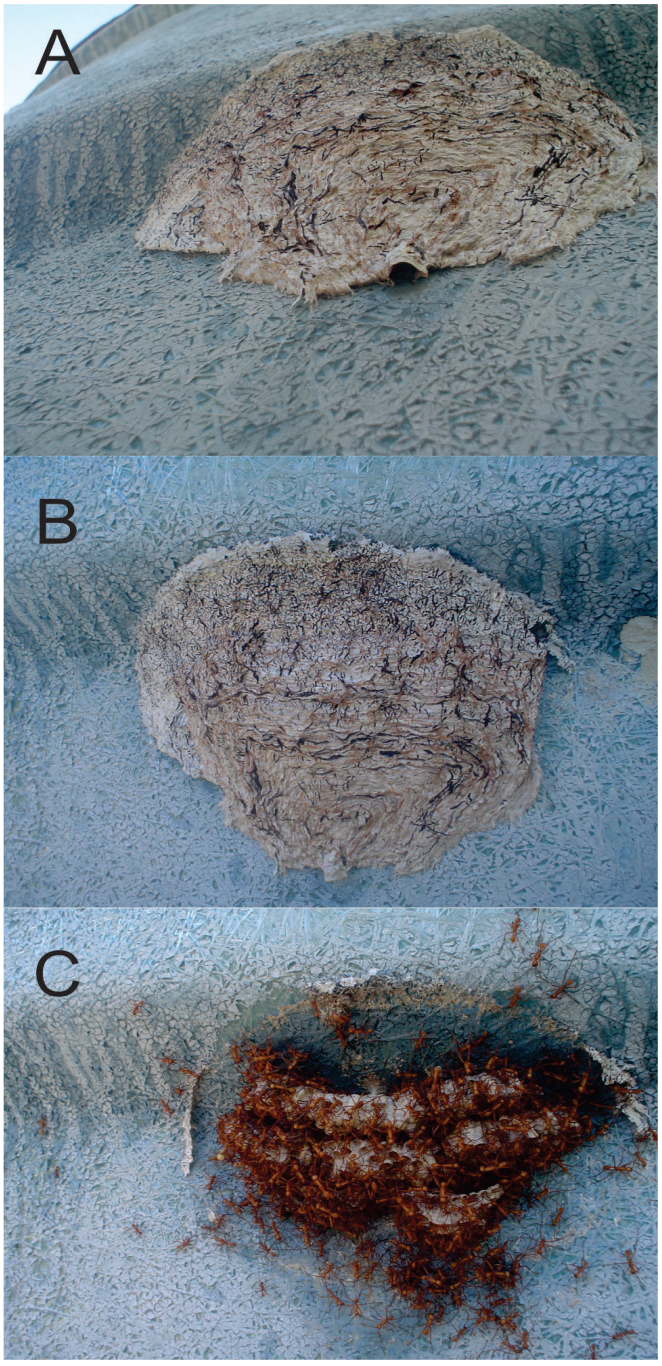

Fig 3. Nest of *Chartergellus jeannei.* A: Ventro-frontal view; B: frontal view; C: Nest attached by Army Ants (*Eciton* sp.).

Nest (Fig 3 A and B): Nest architecture of *Chartegellus jeannei* is typical for the genus (Wenzel, 1998), having three downward-facing combs attached to the substrate one below the other, not in contact with the envelope. Fine pedicels attach the first comb and the consecutive ones. Envelope with long and gray fiber, with an entrance short downward spout. The dimensions of the nest are approximately 13 cm from the entrance to the base and 14 cm of width.

Male: unknown

Holotype: 1 female - Ducke Reserve, Manaus, AM, Brazil; 08-12/vii/2013; Soleman, R. A. col. Museu de Zoologia da Universidade de São Paulo (MZUSP).

Paratype: 5 females - same data of holotype [1 female in MZUSP, 1 female in Museu de Zoologia de Feira de Santana (MZFS), 1 female in American Museum of Natural History (AMNH) and 2 females in UNESP, São José do Rio Preto].

Etymology: We are naming this species in honor of Robert Jeanne, a remarkable scientist who devotes his career on study of social behavior of wasps and who first found the nest and recorded the attack of the army ants.

Remarks

The nest was found in the Ducke Reserve (Manaus, AM) and was hanging above a water tower about eight meters from the ground. Just a few specimens (all females) were collected because during observations the nest was attacked by army ants (*Eciton* sp.) (Fig 3C), what is a common aspect for the Epiponini (Chadab, 1979; O´donnell and Jeanne, 1990). Another interesting aspect, is that the envelope was similar the substrate of the water tower, as a strategy of camouflage already documented for *Chartergellus* by Mateus *et al.* (1999).

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