

# A new species of *Cervellus* Szépligeti (Hymenoptera, Braconidae, Braconinae) with biological notes

Angélica Maria Penteado-Dias<sup>1</sup>, Marcos Antonio Barbosa Moreira<sup>2</sup> & Paulo Henrique Gorgatti Zarbin<sup>3</sup>

<sup>1</sup>Universidade Federal de São Carlos, Departamento de Ecologia e Biologia Evolutiva. Caixa Postal 676, 13565-905 São Carlos-SP, Brasil. angelica@power.ufscar.br

<sup>2</sup>Universidade Federal do Paraná, Departamento de Zoologia, Caixa Postal 19020, 81531-980 Curitiba-PR, Brasil.

<sup>3</sup>Universidade Federal do Paraná, Departamento de Química, Caixa Postal 19081, 81531-990 Curitiba-PR, Brasil. pzarbin@quimica.ufpr.br

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**ABSTRACT.** A new species of *Cervellus* Szépligeti (Hymenoptera, Braconidae, Braconinae) with biological notes. A new *Cervellus* species is described from Brazil. The male to this genus is described for the first time as well its cocoon is illustrated. The specimens parasitize the papaya borer weevil *Pseudopiazurus obesus* (Boheman, 1838) (Coleoptera, Curculionidae) associated with *Carica papaya* Linnaeus, 1753 (Caricaceae) at Rio Grande do Norte and Bahia Brazilian States.

**KEYWORDS.** Biological control; *Carica papaya*; parasitoids; taxonomy.

**RESUMO.** Uma nova espécie de *Cervellus* Szépligeti (Hymenoptera, Braconidae, Braconinae), com notas biológicas. O trabalho apresenta a descrição de uma nova espécie brasileira de *Cervellus*. O macho é descrito pela primeira vez; o casulo é ilustrado. Os espécimes parasitam larvas de *Pseudopiazurus obesus* (Boheman, 1838) (Coleoptera, Curculionidae) sobre *Carica papaya* Linnaeus, 1753 (Caricaceae) nos estados brasileiros do Rio Grande do Norte e Bahia.

**PALAVRAS-CHAVE.** *Carica papaya*; controle biológico; parasitóides; taxonomia.

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The Braconinae is a large subfamily of moderately small to large wasps with more than 2000 described species worldwide (Shaw & Huddleston 1991). Few studies have been made on the New World fauna since the first two decades of the last century. The biologies of many of the Neotropical genera are still unknown. The Braconinae have a cosmopolitan distribution, with the greatest generic and probably specific diversity being in the Old World tropical regions. The Nearctic fauna is similar in its generic composition to that of the Palearctic, but in the Neotropics, most genera are endemic.

The genus *Cervellus* has few species infrequently collected and has distribution on Trinidad and South America, but not recorded from Chile. One species has been reared from a coleopteran larva (Quicke 1989); Fahringer (1930) presents a key to its species; Yu *et al.* 2005 present five valid species.

We present here a new *Cervellus* species, discussing its diagnostic characters and presenting biological information. For the recognition of the subfamily Braconinae and the genus *Cervellus*, see Quicke, *in* Wharton *et al.* (1997). The new species here described was compared with other species presented in Fahringer (1930). The type material is deposited at the Departamento de Ecologia e Biologia Evolutiva da Universidade Federal de São Carlos, SP, Brazil (DCBU).

*Cervellus piranga* sp. nov. Penteado-Dias  
(Figs 5-19)

Material. – Holotype, ♀ (DCBU), “[Brazil] RN, Touros, 15.V.2002, M.A. B. Moreira col.” Paratypes, 3♂♂, 2♀♀ (DCBU), same label

data; 3♂♂, 2♀♀ (DCBU) “[Brazil] BA, Laje, 18-29.X.2004, M. A. B. Moreira col.”

Holotype, ♀, length of body 10.0 mm, fore wing 11.0 mm.

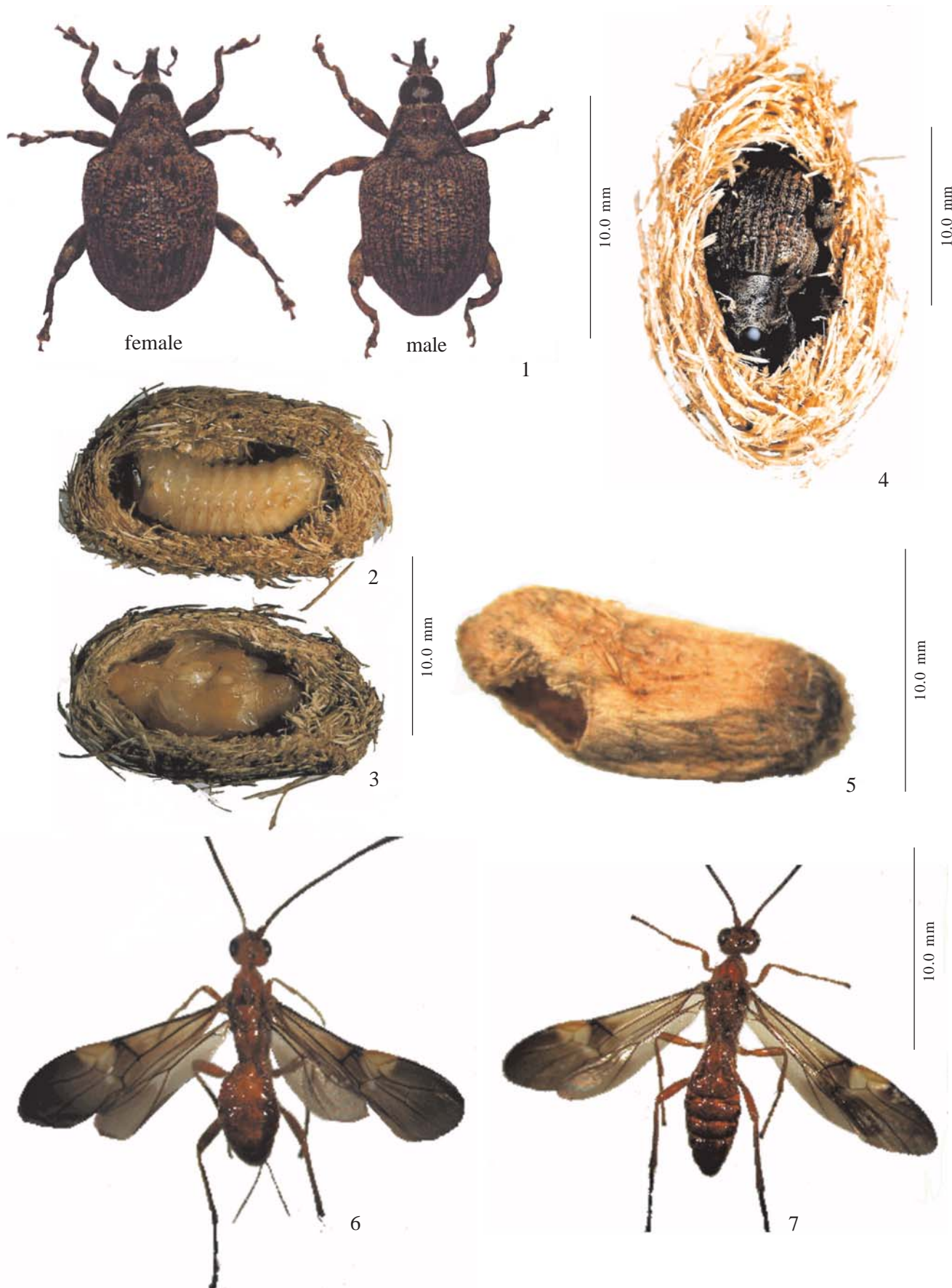
Head. Antenna with 70 segments and as long as fore wing, first flagellomere with thorn-like pre-apical projection (Figs 8, 9). Face with distinctive and massive protuberance with concave dorsal face and with concave frontal aspect (Fig. 12); face and clypeus smooth, near the internal margin of eyes with long hairs and rugose; occipital carina completely absent; vertex smooth; height of eye 4.5 the malar space (Fig. 11). Ocelli in a elevated area; ocellus-ocular distance near 4.0x the diameter of lateral ocellum. Base of mandible with long hairs .

Mesosoma. Length of mesosoma 1.5 times its height (Figs 15, 16); side of pronotum nearly completely smooth; all mesosoma smooth and shiny; propleuron hirsute with pair of boss-like, medially-orientated projections antero-medially (Fig 13); mesopleuron and metapleuron hirsute; mesosternum with lines of long hairs; sternaulus not impressed; notauli present; scutellar sulcus shallow with some carinae (Fig. 15). Propodeum shiny and smooth with long hairs (Fig. 16).

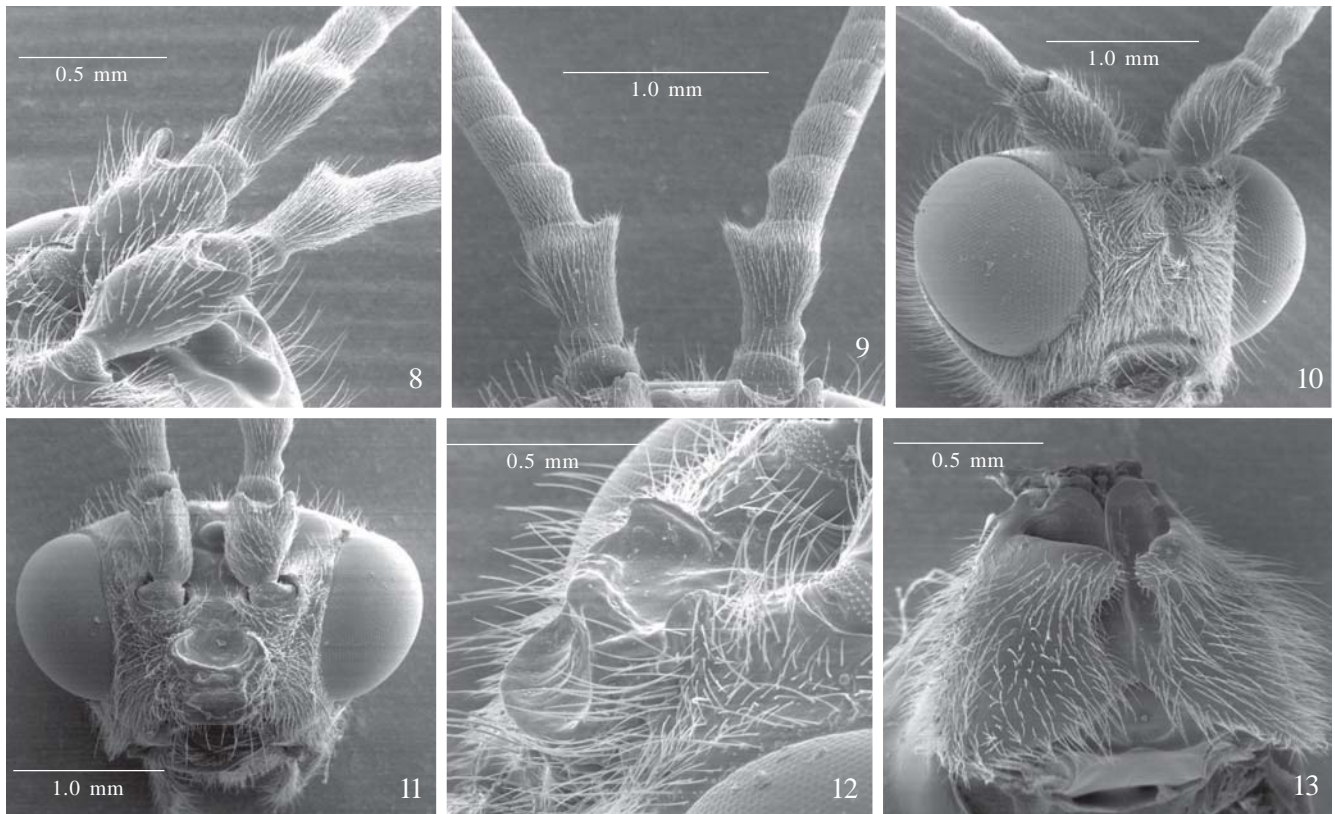
Wings.- Fore wing (Fig. 6) : r 1/5 long as 3-SR; pterostigma elliptical; cu-a slightly post-furcal; m-cu antefurcal, slightly postfurcal . Hind wing : 1M : M+CU = 6 : 1.

Legs.- Length of femur, tibia and basitarsus of hind leg 4.0, 8.0 and 4.0 times their width, respectively; hind femur and tibia with hairs; tarsal claws simple.

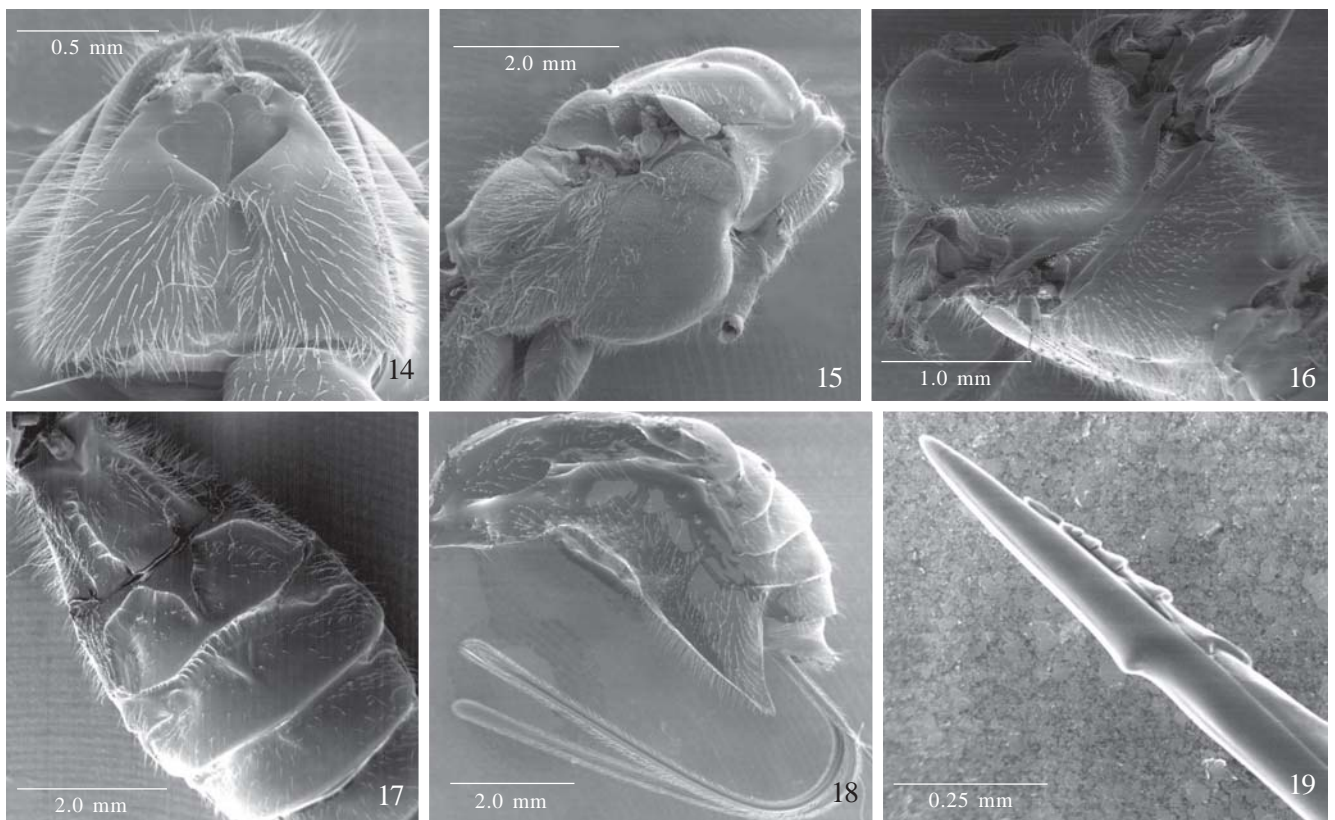
Metasoma. Length of first tergite 1.4 times its apical width (Fig.17) with distinct dorso-lateral carinae, its surface largely



Figs. 1-7. 1-4, *Pseudopiazurus obesus* (Boheman, 1838). 1, female and male; 2, larva in chamber; 3, pupa in chamber; 4, adult in chamber. 5-7, *Cervellus piranga* **sp. nov.** 5, cocoon; 6, habitus, female; 7, habitus, male.



Figs. 8-13. *Cervellus piranga* sp. nov. 8, 9, first antennomeres, female; 10, face, male; 11, head, frontal, female; 12, facial massive protuberance, female; 13, propleurum, female.



Figs. 14-19. *Cervellus piranga* sp. nov. 14, propleurum male; 15, 16, mesosoma, female; 17, 18, metasoma, female; 19, apex of ovipositor.

smooth. Posterior margin of metasomal tergum 2 sculptured. Hypopygium pointed and as long as the apex of the metasoma; length of ovipositor sheath 0.8 times the fore wing (Fig. 18). Apex of ovipositor with subapical teeth (Fig. 19).

Color. Reddish; all flagellomeres, except the first and apical metasoma blackish; fore wing (Fig. 6) yellowish hyaline with two fumated bands, stigma yellow; hind wing with apical half fumated; tarsal claws blackish.

Male (Fig. 7): similar to female, but without the protuberance on face and the thorn-like pre-apical projection on the first flagellomere; height of eye 6.0 the malar space (Fig 10); propleuron as the female (Fig. 14).

Biology. The specimens were reared from the papaya borer weevil *Pseudopiazurus obesus* (Figs. 1-4) associated with *Carica papaya* in Brazil. For detailed descriptions of the immature stages of the Coleoptera see Souza *et al.* (2004). Other biological information of that species is in Bondar (1948). The parasitoid cocoon is illustrated as the Fig. 5.

Comments: the vertex of head and propleuron can be blackish in some specimens. This is the first citation to male of *Cervellus* species what can show the main character to identify this genus, the propleuron with pair of boss-like, medially-orientated projections antero-medially (Figs 13, 14). This is the only character common to female and male specimens. The antennae and the face of the male are simple. Fahringer (1930) has cited only females of *Cervellus nodicornis* (Brullé, 1846) and its variety *C. n. bruesi* Fahringer, 1930, from Brazil, *C. antennatus* (Brullé, 1846) and *C. a. ruficornis* Fahringer, 1930 from Brazil, *C. denticornis* (Szépligeti 1904), from Peru and *C. ramicornis* (Brullé, 1846) from Guyana. *C. denticornis* like *C. piranga sp. nov.* has the first flagellomere with a thorn-like pre-apical projection, but it has the body mostly black

and the stigma of wing is not all yellow. *C. piranga sp. nov.* is the only species with all body, including the legs, with red color and fore wing with all stigma yellow.

Etymology: The name to species refers to reddish general color of the body. The word *piranga* means red in *tupy* language.

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