

First record and range extensions of *Cryptophion* Viereck, 1913 (Hymenoptera: Ichneumonidae) species in the Southeast region of Brazil

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ABSTRACT: We report the first record of *Cryptophion guillermoi* Gauld and Janzen, 1994 in Brazil and present the geographic range extensions for *Cryptophion espinozai* Gauld and Janzen, 1994 in the Southeast region of Brazil.

The Ichneumonidae is thought to be the richest family among the insect parasitoids and, according to Townes (1969) and Gauld (2002) includes from 60 to 100 thousand species respectively. In Brazil, the family is represented by 822 species (Yu *et al.* 2012). However, this number is certainly underestimated when it is considered that Brazil is one of the world's most diverse countries (Ministério do Meio Ambiente 2002) and its fauna still remains poorly studied.

Within the Campopleginae, *Cryptophion* Viereck, 1913 is a very distinctive Neotropical genus with seven described species (Yu *et al.* 2012). Before the publication of Gauld and Janzen (1994), only *C. inaequalipes* (Cresson, 1874) from Mexico and *C. strandi* Viereck, 1913 from Paraguay were recognized. Gauld and Janzen (1994) described five other species from an intensive Malaise trap survey project of ichneumonids in Costa Rica. During this study, they also examined two specimens of *C. espinozai* Gauld and Janzen, 1994 from Lavras and Felixlândia in Minas Gerais State, Brazil. Since then, there were no further reports on the occurrence of any species of this genus in Brazil.

Specimens of this genus can be readily differentiated from other Campopleginae genera by their rather stout body; margins of eyes strongly indented opposite the antennal sockets; mandibles short, strongly tapered and with a very broad ventral flange; the propleuron shows a forwardly projecting flange near its lower edge; lower part of mesopleuron with a deep sternal groove; propodeum short and deeply excavate longitudinally at the middle; hind legs unusually long and stout, with a ventral ridge that bears stout hairs on the basitarsus, and the fore wing with a more or less triangular areolet, petiolate above, with 2m-cu joining M opposite or slightly distal to 3rs-m (Townes 1969; Gauld and Janzen 1994). As far as is known, *Cryptophion* species develop as koinobiont endoparasitoids of Sphingidae or Saturniidae (Lepidoptera) larvae (Gauld and Janzen 1994).

In this paper we report the first record of *Cryptophion guillermoi* Gauld and Janzen, 1994 in Brazil and present the geographic range extensions for *Cryptophion espinozai* Gauld and Janzen, 1994. The specimens were collected

as a result of large faunal survey projects throughout the Southeast region of the country. The studied specimens are deposited in the DCBU (Department of Ecology and Evolutionary Biology of Federal University of São Carlos) and are listed in Appendix 1 (SISBIO permit number 10195-1).

***Cryptophion espinozai* Gauld and Janzen, 1994** (Figure 1)

Previous geographic distribution- Lavras and Felixlândia in Minas Gerais State (Gauld and Janzen 1994). **New records:** Sete Lagoas in Minas Gerais State and Águas de Santa Bárbara, Campos do Jordão, Descalvado, Luiz Antônio, Pedregulho, Santa Rita do Passa Quatro and São Carlos in São Paulo State.

Remarks- *C. espinozai* may be distinguished from other species mainly by the black color of the scape, interocellar distance 2.0-2.2 times the orbital ocellar distance, and the posterior transverse carina of the mesosternum strongly raised into acute protuberances lateromedially, centrally with a deep V-shaped concave area in females (this carina is weakly raised lateromedially and has a U-shaped central concavity in males) (Gauld and Janzen 1994).

The specimens were collected in areas of the Atlantic



FIGURE 1. Female habitus of *Cryptophion espinozai*.

Forest, Savannah, and nearby orange crops.

***Cryptophion guillermoi* Gauld and Janzen 1994** (Figure 2)

Previous geographic distribution- This species was only known to occur in Costa Rica. **New records:** Timóteo in Minas Gerais State and Águas de Santa Bárbara, Bauru, Luiz Antônio, Porto Ferreira, and Santa Rita do Passa Quatro in São Paulo State.

Remarks- This species can be easily identified by its more or less regularly punctate mesoscutum, entirely black hind tarsus, and subcylindrical hind tibia, pale-yellowish centrally but proximally and distally black (Gauld and Janzen 1994).

The specimens were collected in the Atlantic Forest and Savannah areas.



FIGURE 2. Female habitus of *Cryptophion guillermoi*.

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ERRATUM

The original article was, erroneously published without the Appendix, which can be found below.

Appendix 1. Material examined

Cryptophion espinozai: BRAZIL, MG: 1 ♀, Sete Lagoas, 19°28' S, 44°15'08" W, 27.iii-10.iv.2000, Malaise, W.J.R. Matrangolo col.; 1 ♀, same data except 22.viii-4.ix.2000; 1 ♀, same data except 4-12.ix.2000; 3 ♀, same data except 12-26.ix.2000; BRAZIL, SP: 1 ♀, Águas de Santa Bárbara, Estação Ecológica de Santa Bárbara, 22°48'4.4" S, 49°15'13" W, 08.ii.2008, Malaise, A.M.P. Dias eq. col.; 1 ♂, Campos do Jordão, Usina Santa Izabel, 22°44' S, 45°30' W, 1800 m, 27.ix-12.x.2002, Malaise, S.A.G. Gomes eq. col.; 1 ♀, Descalvado, Fazenda Fischer, 21°53'60" S, 47°37'26" W, 10.xii.1999, Malaise, A.M.P. Dias eq. col.; 1 ♀, same data except 08.ii.2000; 11 ♀ 1 ♂, same data except 15.iii.2001; 1 ♂, same data except 06.iv.2001; 1 ♀, Luiz Antônio, Estação Ecológica do Jataí, 21°35'45,1" S, 47°48'10" W, 25.vi.2006, Malaise, A.M.P. Dias eq. col.; 2 ♀, Santa Rita do Passa Quatro, Parque Estadual de Vassununga, Mata Capetinga, 21°40'56" S, 47°37'13" W, 29.xii.2006, Malaise, A.M.P. Dias eq. col.; 1 ♀, Santa Rita do Passa Quatro, Parque Estadual de Vassununga, Mata Ciliar, Pé do Gigante, 21°38'35,6" S, 47° 37'31,5" W, 22.viii.2007, Malaise, A.M.P. Dias eq. col.; 1 ♀, same data except 6.x.2007; 1 ♀, São Carlos, Fazenda Canchim, Sorgo, 21°55'22" S, 47°48'47,52" W, 16.ii.2011, Malaise, C. S. Souza eq. col.; 1 ♀, same data except 11.v.2011; 1 ♀, same data except 29.vi.2011, 1 ♀, same data except 30.viii.2011; 1 ♀, São Carlos, Universidade Federal de São

Carlos, 22°01'04" S, 47°53'27" W, 15.i.2002, Malaise, A.M.P. Dias eq. col.; 1 ♀, Pedregulho, Parque Estadual das Furnas do Bom Jesus, 20°13'37,5" S, 47° 25' 23,7" W, 19.v.2008, Malaise, A.M.P. Dias eq. col.

Cryptophion guillermoi: BRAZIL, MG: 1 ♀, Timóteo, Parque Estadual do Rio Doce, 19°39' 30,1" S, 42°34'30,4" W, 22.ii.2011, Malaise, A.S. Soares eq. col.; 1 ♀, same data except 19°39'28,3" S, 42°34'22,5" W, 23.v.2011; BRAZIL, SP: 2 ♀, Águas de Santa Bárbara, Estação Ecológica de Santa Bárbara, 22°48'3,4" S, 49°15'18,7" W, 08.ii.2008, Malaise, A.M.P. Dias eq. col.; 1 ♀, Bauru, Estação Ecológica de Bauru, 22°14'02" S, 49°05'19" W, 10.i.2007, Malaise, A.M.P. Dias eq. col.; 2 ♀, Luiz Antônio, Estação Ecológica do Jataí, 21°36'54" S, 47°47'02" W, 25.iv.2006, Malaise, A.M.P. Dias eq. col.; 1 ♀, Porto Ferreira, Parque Estadual de Porto Ferreira, 21°50'57,3" S, 47°26'09,4" W, 09.vi.2006, Malaise, A.M.P. Dias eq. col.; 1 ♀, same data except 21°50'52" S, 47°26'16" W, 29.xii.2006; 2 ♀ 1 ♂, Santa Rita do Passa Quatro, Parque Estadual de Vassununga, Mata Capetinga, 21°40'56" S, 47°37'13" W, 18.i.2006, Malaise, A.M.P. Dias eq. col.; 1 ♀, same data except Pé do Gigante, 21°38'35,6" S, 47°37'31,5" W, 27.ii.2006; 1 ♀, same data except Mata Maravilha, 21°43'53,5" S, 47°39'1" W, 29.xii.2006.

We regret this error.

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