

## SHORT COMMUNICATION

# First report of parasitism on pupae of *Opsiphanes invirae amplificatus* Stichel (Lepidoptera, Nymphalidae) by *Conura (Conura) maculata* (Fabricius) (Hymenoptera, Chalcididae) in Rio Grande do Sul, Brazil

Geraldo Salgado-Neto<sup>1</sup> & Marcelo Lopes-da-Silva<sup>2</sup>

<sup>1</sup>Departamento de Biologia, Centro de Ciências Naturais e Exatas (CCNE), Universidade Federal de Santa Maria, Campus Universitário, Faixa de Camobi, km 9, 97119-900 Santa Maria-RS, Brasil. gsalgado@bol.com.br

<sup>2</sup>Unidade Laboratorial de Entomologia, Laboratório de Quarentena Vegetal, Embrapa Recursos Genéticos e Biotecnologia, Av. W5 Norte, Caixa Postal 02372, 70770-917 Brasília-DF, Brasil. msilva@cenargen.embrapa.br

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**ABSTRACT.** First report of parasitism on pupae of *Opsiphanes invirae amplificatus* Stichel (Lepidoptera, Nymphalidae) by *Conura (Conura) maculata* (Fabricius) (Hymenoptera, Chalcididae) in Rio Grande do Sul, Brazil. This scientific note records the parasitism on pupae of *Opsiphanes invirae amplificatus* Stichel (1904) by *Conura (Conura) maculata* (Fabricius). This is a report of this interaction in the subtropical region of South America and the first report of the occurrence of this parasitoid in the state of Rio Grande do Sul, Brazil.

**KEY WORDS.** Biological control; natural enemy; palms; parasitoids wasps.

**RESUMO.** Primeiro registro de parasitismo em pupas de *Opsiphanes invirae amplificatus* Stichel (Lepidoptera, Nymphalidae) por *Conura (Conura) maculata* (Fabricius) (Hymenoptera, Chalcididae) no Rio Grande do Sul, Brasil. Esta nota científica registra o parasitismo em pupas de *Opsiphanes invirae amplificatus* Stichel (1904) por *Conura (Conura) maculata* (Fabricius). Este é um registro desta interação na região subtropical da América do Sul e o primeiro relato de ocorrência deste parasitóide no estado do Rio Grande do Sul, Brasil.

**PALAVRAS-CHAVE.** Controle biológico; inimigo natural; palmeiras; vespas parasitóides.

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*Opsiphanes invirae* (Hübner, 1818) is widespread in Brazil but is most commonly found between the states of Rio de Janeiro (Southeastern Region) and Rio Grande do Sul (Southern Region) (Silva *et al.* 1968; Ferreira *et al.* 1998). This species is considered a pest of the “açai” palm tree (*Euterpe oleraceae*) in Eastern Brazilian Amazonia (Northern Region), according to Souza & Lemos (2007). In Rio Grande do Sul, this subspecies was recorded by Link & Alvarez Filho (1979), and Link *et al.* (1980) [treated as *Opsiphanes invirae amplificatus* Stichel (1904) by those authors]. More recently, Lamas (2004) also reported the occurrence of this subspecies in Paraguay.

Six species of Chalcididae are listed as parasitoids of *Opsiphanes* (pupa stage): *Conura immaculata* (Cresson, 1865) (De Santis 1983); *Conura maculata* (Fabricius, 1787) (Ashmead 1904; Briceño-Vergara 1978; De Santis 1980; Boucek & Delvare 1992); *Conura oiketicusi* Cameron, 1913 (De Santis 1979); *Spilochalcis denieri* (Blanchard, 1938) (Costa Lima 1950; De Santis 1989); *Spilochalcis morleyi* (Ashmead, 1904) (Waterston 1923; Lepesme 1947; De Santis 1980; Delvare 1992; Ruszczyk 1996) and *Spilochalcis nigrifrons* (Cameron, 1884) (Gonçalves 1946; Costa Lima

1950; Silva *et al.* 1968; De Santis 1979; Boucek & Delvare 1992; Delvare 1992).

We collected 35 larvae and five pupae of the *Opsiphanes invirae amplificatus*, during one year (March 2006 to March 2007). This survey was carried out on native and exotic species of Palmaceae in the vicinities the Universidade Federal de Santa Maria (UFSM) campus (53°42'W; 29°43'S). The larvae of *O. invirae amplificatus* were found in *Syagrus romanzoffianum* (Cham.) Becc. (Gerivá); *Livistona chinensis* (N. J. Jacquim) R. Brown (Chinese Range); *Roystonea regia* (HBK) O. F. Cook (Cuban Real Palm); *Archontophoenix cunninghamiana* Wendland & Drude (Australian Real Palm).

After being collected, pupae were kept in a climatic chamber (25 ± 1° C; 70% UR; photoperiod of 14 hours) and observed daily until the adult emergence of *O. invirae amplificatus* or its parasitoids. Adult parasitoids were preserved in ethanol 70%. Voucher specimens were deposited in the collection of the Laboratório de Biologia Evolutiva of Universidade Federal de Santa Maria (UFSM). All parasitoids were identified by Dr. Gerard Delvare, CIRAD (Centre de Coopération Internationale en Recherche Agronomique pour le Développement, Montpellier, France) as *Conura*

(*Conura maculata* (Fabricius, 1787) (Hymenoptera, Chalcidini) and the hosts were identified as *O. invirae amplificatus* by Dionísio Link (CCR/UFMS).

*Conura (Conura) maculata* (Fabricius, 1787) is currently known to occur in North America [USA (Texas, Arkansas) and Mexico], Central America (Nicaragua and Costa Rica) and South America (Venezuela, Colombia, French Guiana, Ecuador, Paraguay, Argentina and Brazil) (Briceño-Vergara 1978; De Santis 1989; Boucek & Delvare 1992).

*Conura maculata* is a gregarious parasitoid of the pupae of Brassolinae (Lepidoptera, Nymphalidae). This species is known to be associated to the following species: *Brassolis sophorae* (Fabricius) (Silva *et al.* 1968; De Santis 1989; Boucek & Delvare 1992); *Opsiphanes invirae* (Hübner, 1818) (Silva *et al.* 1968); *Opsiphanes tamarindi* (Felder, 1861) (Labrador 1961; Briceño-Vergara 1978; Domínguez-Gil *et al.* 2006) and *Opsiphanes cassina* (Felder 1862) (Boucek & Delvare 1992; Mexzón & Chinchilla 1996; Rodríguez *et al.* 2006).

So far, *C. maculata* has been reported in the following Brazilian states: Amazonas, Espírito Santo, Rio de Janeiro, and São Paulo (Tavares & Araújo 2007). With the discovery of the pupae of *O. invirae amplificatus* serving as hosts for *Conura maculata* in Santa Maria (Rio Grande do Sul state), this becomes the first report of this interaction in the subtropical region of South America and the first occurrence of this parasitoid in the state of Rio Grande do Sul.

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