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NEW HOST RECORDS OF LONCHAEIDAE (DIPTERA) IN BRAZIL AND ASSOCIATED PARASITOID

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ABSTRACT

In this paper we report new host records of *Neosilba pradoi* Strikis & Lerena (3 species), *Neosilba certa* (Walker) (1 species) and *Lonchea* sp. (2 species) in Brazil. The parasitoid *Pachycrepoideus vindemmiae* (Rondani) is associated for the first time in Brazil with a *Neosilba* species.

Key words: *Neosilba, Lonchaea, Pachycrepoideus vindemmiae*

RESUMO

Neste trabalho registram-se novos hospedeiros para *Neosilba pradoi* Strikis & Lerena (3 espécies), *Neosilba certa* (Walker) (espécie 1) e *Lonchea* sp. (espécie 2) no Brasil. O parasitoide *Pachycrepoideus vindemmiae* (Rondani) é associado pela primeira vez no Brasil com uma espécie de *Neosilba*.

Palavras-chave: *Neosilba, Lonchaea, Pachycrepoideus vindemmiae*

Surveys of hosts of Lonchaeidae (Diptera) are recent and scarce in Brazil. Studies of this nature are important in understanding the ecology of lonchaeid species, especially because some of them are reported as agricultural pests (Strikis *et al.* 2011).

Between December 2010 and November 2011, fruits were collected at random from potential hosts of Lonchaeidae in Passo Fundo, State of Rio Grande do Sul, Brazil (28°13'S, 52°26'W). We collected ripe fruits (off the plants or from recently fallen ones) from six plant species (Table 1). The fruits were counted, weighed and stored in screen-covered plastic trays containing vermiculite and kept at room temperature. The substrate was sifted daily and the obtained puparia were stored in flasks containing moist vermiculite. The emerged adults were preserved in 70% ethanol for identification.

We obtained specimens of *Neosilba pradoi* Strikis & Lerena, *Neosilba certa*

(Walker), and *Lonchaea* sp. (Diptera: Lonchaeidae), as well as *Pachycrepoideus vindemmiae* (Rondani) (Hymenoptera: Pteromalidae) (Table 1). This work reports the following hosts for the first time in Brazil: *Inga vera* Willd., *Passiflora elegans* Mast., and *Passiflora caerulea* L. as hosts of *N. pradoi*; *I. vera* as host of *N. certa*; *P. elegans* and *P. caerulea* as hosts of *Lonchaea* sp.

The only past reports of *Neosilba pradoi* on Passifloraceae and Fabaceae were in *Passiflora edulis* and *Inga laurina*, respectively (Strikis & Lerena 2009). Also in Fabaceae, the only known host of *N. certa* was *Inga velutina* (Strikis *et al.* 2011). As regards Passifloraceae hosts of *Lonchaea* sp., the only known host was *P. edulis* (Garcia & Norrbom 2011).

This work associates the parasitoid *P. vindemmiae* to a species of *Neosilba* (*N. pradoi*) for the first time in Brazil. This parasitoid species has already been associated with Tephritidae recovered from fruits of *Prunus persica* (Rosaceae) in the State of São Paulo (Montes *et al.* 2011).

We suggest that more extensive and intensive surveys of Lonchaeidae hosts be completed in the State of Rio Grande do Sul and across Brazil, both in agricultural areas and in regions without significant human alteration, so as to enhance the available knowledge on the ecology of this important dipteran family.

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Table 1. Levels of fruit infestation by Lonchaeidae in Passo Fundo, Rio Grande do Sul, Brazil (December 2010 to November 2011).

Family Scientific name Common name	Collection date	Fruits (n)	Weight (kg)	Infestation* L/fruit	Infestation* L/kg	Emergence
Fabaceae						
Inga vera Willd. "Ingá banana"	2/17/2011	97	0.90	0.10	11.11	*Neosilba pradoi* *Neosilba certa* *Pachycrepoideus vindemmiae*
Malpighiaceae						
Malpighia emarginata Sessé & Moc. ex DC. Acerola	1/13/2011	156	0.96	0.01	2.08	*Neosilba pradoi*
Myrtaceae						
Campomanesia xanthocarpa O. Berg. "Guabiroba"	11/19/2011	90	0.41	0.06	12.20	*Neosilba pradoi*
Eugenia pyriformis Cambess. "Uvaia"	1/24/2011	14	0.24	0.07	4.17	*Neosilba pradoi*
Passifloraceae						
Passiflora caerulea L. Blue passion flower	12/12/2010	50	0.74	0.42	28.38	*Neosilba pradoi* *Lonchaea* sp.
Passiflora elegans Mast. "Maracujá-de-estalo"	1/3/2011	49	0.44	0.88	97.73	*Neosilba pradoi* *Lonchaea* sp.

*L/fruit: Lonchaeids/fruit, L/kg: Lonchaeids/kg