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Leão Bittencourt, Maria Aparecida; Santos de Menezes, Adriano Murielle; de Andrade Bomfim, João Pedro; Oliveira dos Santos, Olivia; Castellani, Maria Aparecida; Strikis, Pedro Carlos
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New records of occurrence of five species of *Neosilba* (Diptera: *Lonchaeidae*) in the State of Bahia, Brazil

Novos registros de ocorrência de cinco espécies de *Neosilba* (Diptera: *Lonchaeidae*) para o Estado da Bahia, Brasil

Maria Aparecida Leão Bittencourt[I*] Adriano Murielle Santos de Menezes[I] João Pedro de Andrade Bomfim[I] Olivia Oliveira dos Santos[II] Maria Aparecida Castellani[II] Pedro Carlos Strikis[III]

- NOTA -

ABSTRACT

*This paper reports the record of new species of **Neosilba** in the State of Bahia: **Neosilba bella** Strikis & Prado; **Neosilba cornuphallus** Strikis; **Neosilba dimidiata** (Curran); **Neosilba ilheuense** Strikis and **Neosilba pseudozadolicha** Strikis. Frugivorous flies were captured by McPhail traps, using a hydrolyzed protein at 5.0%, as attractant, and also obtained of fruits samples of native and exotic plant species, which were collected in domestic orchards in the South of Bahia. The specimens of **Lonchaeidae** were identified according to McALPINE & STEYSKAL (1982), STRIKIS & PRADO (2006) and STRIKIS (2011).*

Key words: ***Tephritoidea**, frugivorous flies, host plant.*

RESUMO

*Este trabalho refere-se a novos registros de espécies de **Neosilba** no estado da Bahia: **Neosilba bella** Strikis & Prado; **Neosilba cornuphallus** Strikis; **Neosilba dimidiata** (Curran); **Neosilba ilheuense** Strikis e **Neosilba pseudozadolicha** Strikis. Moscas frugívoras foram capturadas em armadilhas do tipo McPhail, tendo como atrativo alimentar proteína hidrolisada a 5,0%, e também obtidas de amostras de frutos de espécies vegetais nativas e exóticas, coletadas em pomares domésticos na região Sul do Estado da Bahia. Os espécimes de **Lonchaeidae** foram identificados de acordo com McALPINE & STEYSKAL (1982), STRIKIS & PRADO (2006) e STRIKIS (2011).*

Palavras-chave: ***Tephritoidea**, moscas frugívoras, planta hospedeira.*

The genus ***Neosilba*** comprises 30 described species distributed mainly in Neotropical region (McALPINE & STEYSKAL, 1982; STRIKIS & PRADO, 2005, 2008, 2009; STRIKIS & LERENA, 2009; STRIKIS, 2011).

Some species of this genus are known to cause injuries in commercial fruits in Brazil causing commercial losses. Some crops attacked by ***Neosilba*** species are Barbados cherry (***Malpighia emarginata***) (ARAUJO & ZUCCHI, 2002), coffee (***Coffea arabica***) (AGUIAR-MENEZES et al., 2007), orange (***Citrus sinensis***) (UCHÔA-FERNANDES et al., 2003), peach (***Prunus persica***) (MONTES et al., 2010), tangerine (***Citrus reticulate***) (LOPES et al., 2007), umbu-cajazeira (***Spondias*** sp.) (SANTOS et al., 2004), and leaf buds of cassava (***Manihot esculenta***) (LOURENÇÃO et al., 1996), and other fruit species (RAGA et al., 2011). In Santa Catarina, Southern Brazil, ***Neosilba*** species were associated to many fruits species (GARCIA & NORRBOM, 2011). In the state of Bahia the following species of ***Neosilba*** recorded are: ***N. zadolicha*** McAlpine & Steyskal (SANTOS et al., 2004), ***N. certa*** (Walker), ***N. glaberrima*** (Wiedemann), ***N. parva*** (Hennig) and ***N. pendula*** (Bezzi) (BITTENCOURT et al., 2006).

The main purpose of this study was to report new records of species of ***Neosilba*** as well as some of its hosts in the state of Bahia. McPhail traps (n=10) were used to capture ***Tephritoidea*** flies in commercial crops in the municipalities of Ilhéus (14º52'S; 39º12'W) and Itabela (16º39'S; 39º29'W), hydrolysed protein (5%) was used as

[I]Universidade Estadual de Santa Cruz (UESC), Rodovia Jorge Amado, Km 16, 45662-900, Ilhéus, BA, Brasil. E-mail: malbitte@uesc.br. *Autor para correspondência.
[II]Universidade Estadual do Sudoeste da Bahia (UESB), Vitória da Conquista, BA, Brasil.
[III]Pesquisador, Americana, SP, Brasil.

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attractant and was substituted weekly. In these crops the most common fruits were barbados cherry (***Malpighia punicifolia***, ***Malpighiaceae***), mombin fruits (***Spondias purpurea***, ***Anacardiaceae***), papaya (***Carica papaya***, ***Caricaceae***), yellow passion fruit (***Passiflora edulis* f. *flavicarpa***, ***Passifloraceae***), guajava (***Psidium guajava***) and Surinan cherry (***Eugenia uniflora***) from ***Myrtaceae*** family. Also, many ripe fruits or almost ripe, of many species were randomly collected in domestic orchards in the South of Bahia during the year of 2003 until 2009. The insects trapped and those that emerged from puparia were kept in 70% alcohol. The specimens of ***Lonchaeidae*** were identified according to McALPINE & STEYSKAL (1982), STRIKIS & PRADO (2006) and STRIKIS (2011). The species sampled were the following ones: ***Neosilba bella*** Strikis & Prado**;** ***Neosilba cornuphallus*** Strikis; ***Neosilba dimidiata*** (Curran); ***Neosilba ilheuense*** Strikis and ***Neosilba pseudozadolicha*** Strikis.

Male specimens of ***N. bella*** were captured in traps in Itabela (n=7) and Ilhéus (n=1); also emerged from puparia reared from fruits of arazá fruit (***Eugenia stipitata***, ***Myrtaceae***) (n=1) collected in the municipality of Camamu (13º58'S; 39º11'W), from Barbados cherry (n=2) collected in the municipality of Valença (13º20'S; 39º10'W), and from sapodilla (***Achras zapota***, ***Sapotaceae***) (n=1) collected in the municipality of Taperoá (13º33'S; 39º12'W). Several hosts families of this species were recorded, among them; ***Malpighiaceae***, ***Myrtaceae*** e ***Sapotaceae*** (STRIKIS & PRADO, 2008). ***N. bella*** has a wide geographical distribution in Brazil, it is present in the states of São Paulo, Rio de Janeiro, Espírito Santo, Amapá, Roraima, Goiás, Mato Grosso do Sul and Bahia, in many different biomes, ranging from Mata Atlântica, Amazon rain forest, and Cerrado. Its plasticity in occupying such different biomes and in attacking different hosts makes this species a candidate in becoming an important pest, once it is found in environments occupied by crops plantation, specially coffee (STRIKIS & PRADO, 2006; AGUIAR MENEZES et al., 2007).

From fruits of sapodilla two specimens of ***N. dimidiata*** were recovered. This specie is known to occur in fruits of the families ***Annonaceae*** and ***Sapotaceae*** (QUERINO et al., 2010; UCHÔA, 2012), and is known to occur in Amazon, São Paulo, Amapá, Roraima, Rio de Janeiro and Espírito Santo States (STRIKIS, unpublished data) in forested and humid areas.

Only one specimen of ***N. pseudozadolicha*** was recovered from fruit of arazá fruit; this species have been recorded from fruits of ***Fabaceae*** in the Northwest of the state of Pernambuco and ***Malpighiaceae*** in the North of the state of Roraima (STRIKIS, 2011).

Only one specimen of ***N. cornuphallus*** was recovered from fruit of cashew (***Anacardium occidentale***, ***Anacardiaceae***) collected in the municipality of Valença (13º18'S; 39º15'W). This specie is known to occur in fruits of the following families ***Annonaceae***, ***Anacardiaceae***, ***Fabaceae***, ***Rosaceae***, ***Rutaceae***, ***Rubiaceae***, ***Ulmaceae*** e ***Verbenaceae*** (STRIKIS, 2011).

This is the first record of ***N. ilheuense*** (n=1); this species was collected in August 2011 in a McPhail trap placed in the Campus of the Universidade Estadual de Santa Cruz of Ilhéus (14º47'S; 39º10'W); the trap was placed close to a ***Passifloraceae*** crop. ***Neosilba ilheuense*** belongs to the same cryptic complex of species as ***N. peltae***, ***N. mcalpiniei*** and ***N. parapeltae***, although caught in a trap, it is possible that ***N. ilheuense*** is a primary invader of ***Passifloraceae*** fruit or flower bud, once the trap was placed close to a ***Passifloraceae*** plantation (STRIKIS, 2011).

Except for ***N. ilheuense***, all the other species related in this study are poliphagous, what could make difficult to control the populations of such species. In crops the control is easier to achieve, but would be hard to accomplish in nature due to the widespread distribution of the species and to the polyphagy presented. The number of specimens reared from fruits or captured in traps suggests that the population size is small or the fruits sampled are not the preferred hosts of these species, so a more intensive fruit sampling is needed and the diversification of fruits sampled is also important in order to better evaluate the population dynamics of these species.

From the puparia obtained from the fruits were recovered 41 females of ***Neosilba***. All the fruit-fly specimens are in the collection of Pedro Carlos Strikis, except those used to species descriptions that are deposited at Zoology museum of the Universidade de São Paulo (MZUSP).

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