



Frugivorous Flies (Diptera: Lonchaeidae) Hosts in the State of Bahia, Brazil and registers of new bitrophic interactions

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Larvae of Lonchaeidae flies (Tephritoidea) are found in decaying organic material (trunks, branches and leaves), flower buds are attacked by *Dasiops frieseni* Norrbom & McAlpine, 1997, damaged fruits as well as ripe and green ones of oranges and passion fruits, all infested by *Neosilba zadolicha* McAlpine & Steyskal, 1982 (Strikis et al., 2011). In Brazil three genera of Lonchaeidae have been found: *Dasiops* Rondani (1856), *Neosilba* McAlpine (1962) and *Lonchaea* Fallén (1820). *Neosilba* and *Dasiops* are the most important from an economic point of view, once they include the majority of frugivorous flies (Strikis et al., 2011). The main purpose of this work was to extend the knowledge over Lonchaeidae species and their hosts in the State of Bahia, Brazil and new bitrophic interactions.

In the following municipalities of the State of Bahia, Brazil: Barra do Choça (14°44' S, 40°26' W), Jiquiriçá (13°16' S, 39°34' W; 13°17' S, 39°34' W and 13°11' S, 39°33' W), Laje (13°13' S, 39°25' W), Planalto (13°15' S, 39°43' W), Camamu (13°58' S, 39°08' W and 13°58' S, 39°11' W) and Wenceslau Guimarães (13°15' S, 39°43' W), from March 2013 through June 2015 were collected fruits belonging to 32 plants species and flower buds of yellow passion fruit, according to its availability in the crop fields. Fruits and flower buds were weighed, counted and displaced in plastic trays. After 12 days the pupae were conditioned in plastic pots containing vermiculite until the emergence of the adults that were preserved in plastic vials containing ethanol 70%.

The adults males of *Neosilba*, *Lonchaea* and females of *Dasiops* were identified at species level utilizing a stereomicroscope and biological microscope (McAlpine and Steyskal, 1982; Norrbom and McAlpine, 1997).

From 11,320 pupae 5,821 adults emerged (5,549 specimens of Tephritidae, 95.3%), 232 specimens of parasitoids (4.0%) and 40 specimens of Lonchaeidae (0.7%). Lonchaeidae infested 10 plant species: *Spondias purpurea* L. (Anacardiaceae), *Rollinia* sp. (Annonaceae), *Carica papaya* L. (Caricaceae), *Averrhoa carambola* L. (Oxalidaceae), *Psidium guajava* L., *Syzygium malaccense* (L.) Merr. & L. M. Perry (Myrtaceae), *Passiflora edulis* f. *flavicarpa* Deg. (Passifloraceae), *Coffea arabica* L. (Rubiaceae), *Citrus sinensis* L. e *Citrus aurantifolia* L. (Rutaceae).

Neosilba glaberrima (Wiedmann, 1830) emerged from fruits of *Rollinia* sp., *C. papaya*, *P. guajava* e *C. sinensis*. *Neosilba pendula* (Bezzi, 1919) emerged from fruits of *A. carambola*, *C. arabica*, *S. purpurea* e *S. malaccense* and *Neosilba zadolicha* McAlpine & Steyskal, 1982 emerged from fruits of Annonaceae, Passifloraceae e Rutaceae. Those species are considered to have the largest number of plant hosts among *Neosilba* species in Brazil and have a wide geographic distribution (Costa et al., 2009; Montes et al., 2010; Garcia and Norrbom, 2011; Strikis et al., 2011; Melo et al., 2012; Raga et al., 2015). *Neosilba glaberrima* (n=6) was found attacking fruits of Annonaceae, Caricaceae e Myrtaceae and was for the first time associated to fruits of *Rollinia* sp. (Annonaceae).

Only one specimen of *Neosilba certa* (Walker, 1850) was found attacking fruit of *P. guajava*, trophic association already described by Souza-Filho et al. (2009) and in peach fruits by Montes et al. (2010) in the State of São Paulo, Brazil.

One specimen of *Dasiops inedulis* (Steyskal, 1980) emerged from flower bud of *P. edulis* f. *flavicarpa*. The same trophic relation was observed by Aguiar-Menezes et al. (2004) in the State of Espírito Santo and in Southern Bahia, both in Brazil, by Melo et al. (2012). *Dasiops inedulis* is considered an important pest of flowers buds of Passifloraceae, once the larvae feed on the ovaries of the flowers causing flower drop and the losses to the crop can reach 100% in commercial crops (Strikis et al., 2011).

In the present work new trophic relations were observed, like *C. papaya* x *Lonchaea* morphotype 1, *Rollinia* sp. x *Neosilba glaberrima* and *C. arabica* x *Neosilba nigrocaerulea* (Malloch, 1920). For the first time *C. arabica* is registered as host of *Neosilba nigrocaerulea*, which was found attacking fruits of *Pouteria* sp. (Sapotaceae) in the State of Amapá, Northern of Brazil (Strikis et al., 2011).

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