

SHORT COMMUNICATION

First report and morphological redescription of *Teleonemia morio* (Stål) (Hemiptera, Tingidae) in *Annona squamosa* L. (Annonaceae) in Brazil

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ABSTRACT. First report and morphological redescription of *Teleonemia morio* (Stål) (Hemiptera, Tingidae) in *Annona squamosa* L. (Annonaceae) in Brazil. This is the first report of a severe attack of *Teleonemia morio* (Stål, 1855) (Hemiptera, Heteroptera, Tingidae) on *Annona squamosa* L. (custard apple), causing up to 80% of losses of infested trees. In order to facilitate the identification of this insect pest, the adult female of *T. morio* is redescribed based on specimens collected in Palmeira dos Índios, Alagoas, Brazil.

KEYWORDS. Custard apple tree; insect morphology; lace bug; taxonomy.

RESUMO. Primeiro registro e redescrição morfológica de *Teleonemia morio* (Stål) (Hemiptera, Tingidae) em *Annona squamosa* L. (Annonaceae) no Brasil. Este é o primeiro registro de um ataque severo de *Teleonemia morio* (Stål, 1855) (Hemiptera, Heteroptera, Tingidae) em árvores de *Annona squamosa* L. (pinheira ou fruta-do-conde), resultando em perdas de aproximadamente 80% das plantas infestadas. Com o objetivo de facilitar a identificação deste inseto-praga, foi feita a redescrição da fêmea adulta de *T. morio* com base em espécimes coletados em Palmeira dos Índios, Alagoas, Brasil.

PALAVRAS-CHAVE. Fruta-do-conde; morfologia de inseto; percevejo-de-renda; taxonomia.

In Brazil, the custard apple or sugar apple (*Annona squamosa* L.) (Annonaceae) is the most widely cultivated of all species of *Annona* because of the high commercial value of its fruit pulp and seeds. It also has a considerable potential for export as an exotic fruit (Cordeiro *et al.* 2000; Pereira *et al.* 2009).

One of the most important of the wide range of pests known to attack *Annona* spp. is the fruit borer *Cerconota anonella* Sepp., 1830 (Lepidoptera, Oecophoridae) (Gallo *et al.* 2002). This moth causes significant direct and indirect damage to the fruit and pulp reducing the commercial value for consumption *in natura* and for industrial processing (Broglio-Micheletti *et al.* 2001; Gallo *et al.* 2002). In the 2010 growing season, however, a population outbreak of a hemipterous insect severely damaged custard apple trees, *A. squamosa*, in all producing areas in Alagoas, and the widespread attack caused the death of up to 80% of infested plants. The symptoms appeared as a gradual desiccation of branches and eventually of the entire plant. It was possible to observe the presence of nymphs and adults crawling on aerial parts of the plants and forming large groups on the abaxial leaf blade of new and old green branches. Under the stereomicroscope (at 20 x magnification), small necrotic points were detected in the external epidermis of leaves as well as in the phloem region, observed after dissection (Fig. 1).



Fig. 1. Necrotic punctures on the epidermis of branches of *Annona squamosa* caused by *Teleonemia morio*.

In order to contribute to the knowledge of this insect pest that so extensively damaged *A. squamosa*, we collected and described the morphology of this insect. It was identified as *Teleonemia morio* (Stål, 1855) (Hemiptera, Heteroptera, Tingidae), by Dr. Luiz Antônio Alves Costa (Museu Nacional of the Universidade Federal do Rio de Janeiro, Rio de Janeiro,

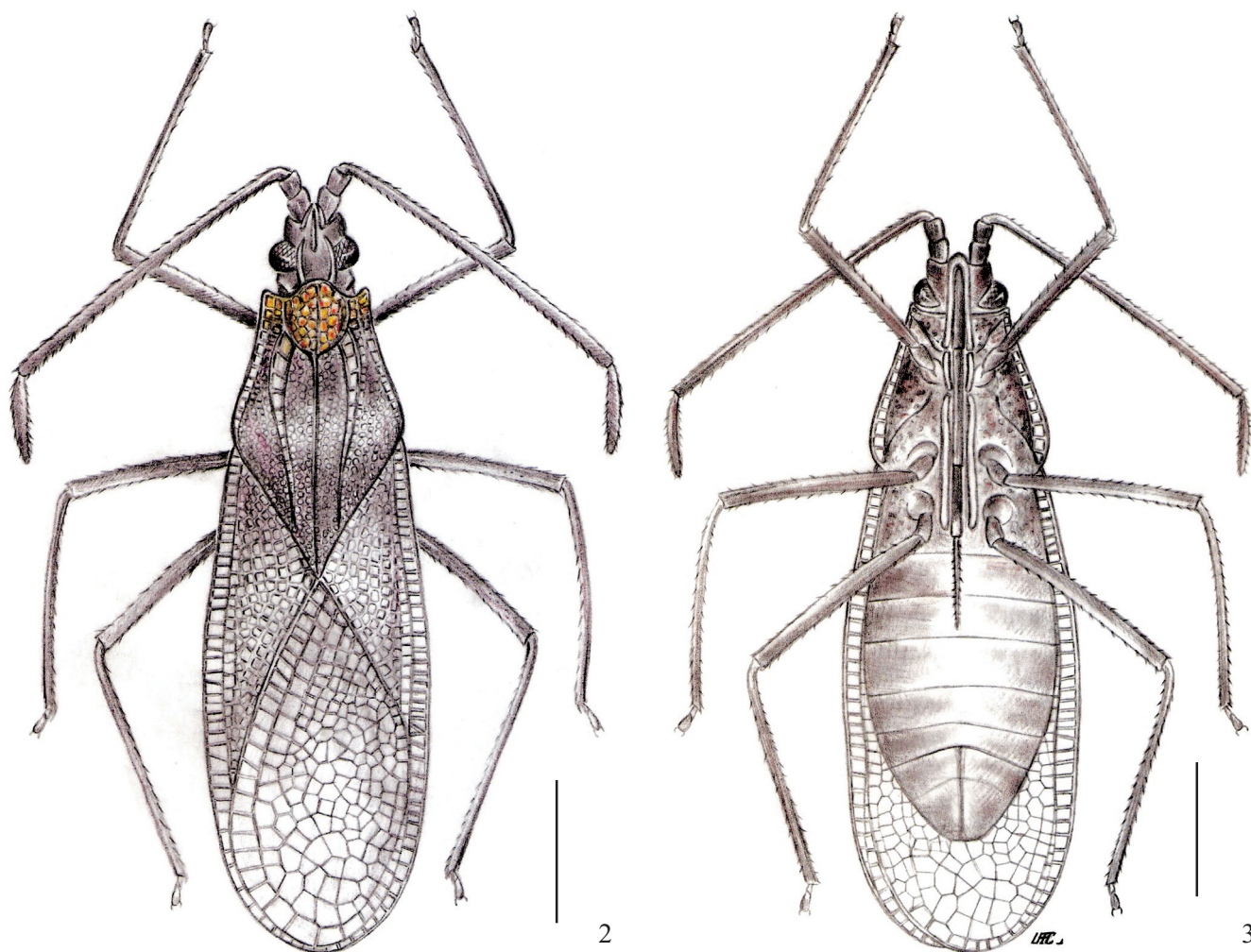
Brazil). For this purpose, samples of the insect were collected in the city of Palmeira dos Índios, Alagoas, Brazil (9°24'25.2"S; 36°37'40.8"W; altitude 342 m asl). Since there was no significant morphological difference between males and females, only adult females were analyzed morphologically under stereomicroscope. Voucher specimens were deposited in the same University.

Our observation represents the first record of *T. morio* on *A. squamosa* in Brazil. Adults and nymphs of *T. morio* have been previously recorded infesting leaves and fruits of *A. coriacea* Mart. and *A. muricata* L. in Manaus, state of Amazonas, Brazil (Peña & Bennett 1995; Hamada *et al.* 1998). However, differently from those previous reports, we observed that *T. morio* do not infest fruits of *A. squamosa*, but feed only on the abaxial leaf blade of new shootings and of mature green branches. The injury is characterized by necrotic punctures caused by the sucking mouthparts of the insect on the epidermis and possibly by injection of toxicogenic saliva. Males and females are similar in color and size (Fig. 2); body length 5.3 mm and 1.6 mm wide; body ob-

long, elongated, with the anterior part slightly narrower and covered by short, sparse pruinose hairs. Body dark-brown to black with yellow vesicles on the anterior part of the pronotum (cap); pronotum swollen and rounded partially covering the head.

Morphological redescription of females. Head black and subrectangular, narrower than the maximum width of the pronotum with five cephalic spines, the two occipital spines long and convergent, the medium-dorsal spine straight and the two frontal short and convergent. Antenniferous tubercle developed and conspicuous. Eyes black, oblong with small ommatidia on the middle of the head. Antennae blackish-brown with short, adpressed pruinose hairs; antennal segments I and II small and broad; segment III nearly twice the length of the other segments combined; segment IV subspatulate and slightly longer than the combined lengths of segments I and II together. Rostrum reaching the third abdominal segment (Fig. 3).

Pronotum black, subpentagonal, tricarinate with median carina uniseriate, straight and wide at the front; lateral carinae uniseriate, wide and curved frontally. Paranota uniseriate,



Figs. 2–3. *Teleonemia morio* – adult female – dorsal and ventral views, respectively. Scale bar = 1 mm.

narrow and yellow at the apex. Elytra strongly reticulated; costal area uniseriate with large quadrangular cells; subcostal area uniseriate with small quadrangular cells; discoidal area semi-lozenge shaped, more than half of the length of the elytra and composed of several series of small quadrangular cells; sutural area reticulate with large polymorphic cells. Legs dark-brown to black covered with short, adpressed hairs; tarsi black, short, dimeric segment I being the smaller and segment II dilated apically. Abdomen dark-brown to black.

This general morphological description of adult females of *T. morio* is valid also for males. It is fundamental for the correct recognition and identification of the species for further studies and control of this insect pest.

ACKNOWLEDGEMENTS

We are grateful to Dr. Luiz Antônio Alves Costa (Museu Nacional of the Universidade Federal do Rio de Janeiro), for the identification.

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