

SCIENTIFIC NOTE

Green Lacewings (Neuroptera: Chrysopidae) Associated with Melon Crop in Mossoró, Rio Grande do Norte State, Brazil

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ABSTRACT - A survey of the green lacewings associated with the melon agroecosystem was carried out with the aim of including lacewings into the integrated management program of melon pests. Three species of this predator were found: *Ceraeochrysa cubana* (Hagen), *Chrysoperla externa* (Hagen) and *Chrysoperla genanigra* Freitas. A key to these species is presented.

KEY WORDS: Semiarid, predator, *Chrysoperla*, *Ceraeochrysa*

The municipality of Mossoró, located in the semiarid region of Rio Grande do Norte State is one of the largest melon producers and exporters in Brazil. This makes melon production one of the main segments of agribusiness in the state (Agrianual 2007). However, the expansion of cultivated areas has brought about increases in phytosanitary problems, which became limiting factors to production. Among these problems, pest insects and the damage caused to melon production are a main concern (Araujo *et al* 2007). The major pests of melon in the Northeast semiarid region are the leafminer *Liriomyza trifolii* (Burgess) (Diptera: Agromyzidae) and the whitefly *Bemisia tabaci* (Gennadius) biotype B (Hemiptera: Aleyrodidae) (Guimarães *et al* 2008). In recent natural enemy surveys on melon cropping in Mossoró, the presence of lacewings was noticed (Araujo *et al* 2008). Lacewings are known for their predatory efficiency, ability of their larvae to seek out for food, for being generalists and for having a high survival rate in agroecosystems (Canard & Principi 1984). However, knowledge on which species occur within melon crop is scanty, particularly in the Brazilian Northeastern region. Only two species were reported associated to the melon crop in RN: *Ceraeochrysa sanchezi* (Navás) in Assu (Freitas & Penny 2001) and *Chrysoperla genanigra* Freitas in Mossoró (Freitas 2003). This study aimed at knowing and presenting a key to the lacewing species associated to this agroecosystem in Mossoró, RN.

Collections were performed during the annual peak in melon production, between August 2007 and January 2008, in the Pau-Branco area of Mossoró (4°54'21.61"S and 37°22'1.41"W). Monthly collections were carried out using

entomological net and entomological aspirator. The collected specimens were separated into morphospecies and stored in ethanol at the Laboratory of Entomology of the Universidade Federal Rural do Semi-Árido (UFERSA), Mossoró, RN. Subsequently, the specimens were identified according to Freitas & Penny (2001) and Freitas (2003) at the Laboratory of Entomology of the Faculdade de Ciências Agrárias e Veterinárias (FCAV/UNESP), Jaboticabal, SP. Specimens were deposited at FCAV/UNESP and at UFERSA.

A total of 315 lacewings were collected, belonging to three species: *Ceraeochrysa cubana* (Hagen), collected from August through September, *Chrysoperla externa* (Hagen), from August through November, and *C. genanigra*, from September to January. The latter was described in 2003 and to date is reported only in this Northeastern region (Freitas 2003). *Chrysoperla genanigra* is very similar to the other *Chrysoperla* species in Brazil and is the only one with a black spot on the gena. This is the first record of *C. cubana* and *C. externa* in Mossoró, RN. The occurrence of three lacewing species in melon cropping, and the presence of at least one species throughout the cultivation period sampled, indicates the potential utility of these predators in future pest management programs for melon.

Key to the Species of *Chrysoperla* and *Ceraeochrysa* Found in Melon Cropping in Mossoró, RN

1. Pseudopenis absent; pronotum without red marks (*Chrysoperla*).....2

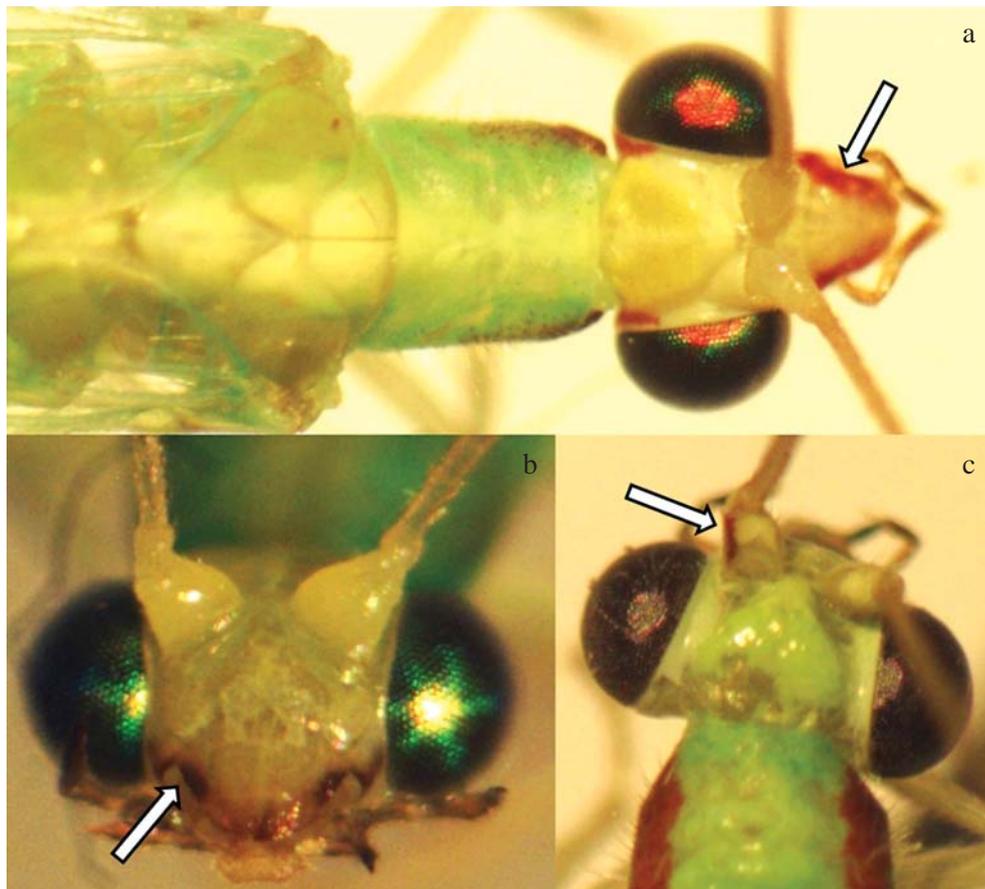


Fig 1 *Chrysoperla externa* (a), *Chrysoperla genanigra* (b) and *Ceraeochrysa cubana* (c).

- 1'. Gonopsis elongate; two hornlike structures on gonarcus or arcessus (*Ceraeochrysa*).....3
- 2. Gena with black spot (Fig 1b).....*Chrysoperla genanigra*
- 2'. Gena with red spot (Fig 1a); Male arcessus only weakly decurved
- 3. Scape with dark red, thin stripe dorso-laterally (Fig 1c); flagellum pale; wings venation green with black crossveins; gonarcus with dorso-medial projection; gonosaccus with several large gonocristae.....*Ceraeochrysa cubana*

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