Zootaxa 3423: 45–60 (2012)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

Description of immature stages of *Phelypera schuppeli* (Boheman, 1834) with comments on natural history (Coleoptera: Curculionidae: Hyperinae)

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Abstract

Immatures of the *Phelypera schuppeli* (Boheman, 1834) (Curculionidae; Hyperinae; Cepurini) are described, illustrated and compared with available descriptions of larvae and pupae of Hyperini. Immatures and adults from midwest (Dourados, Mato Grosso do Sul; Pirenópolis, Goiás) and southeast Brazil (Bauru, São Paulo) were found on leaves of the host plant, *Pachira aquatica* Aubl. (Malvaceae, formerly Bombacaceae), a tree used as an ornamental plant in many Brazilian frost-free cities. Larvae of *P. schuppeli* are exophytic, brightly colored, eruciform and possess abdominal ambulatory ampullae, resembling larvae of Lepidoptera. Mature larvae can spin globular lattice-like cocoons where pupation takes place. Data in the field and under laboratory conditions confirmed previously published biological observations on *P. schuppeli*. Additional information about defensive behaviors, process of cocoon construction and natural enemies, such as the larval predator *Supputius cinticeps* (Stål, 1860) (Hemiptera: Pentatomidae) and the prepupal and pupal parasitoid *Jaliscoa nudipennis* Bouček, 1993 (Hymenoptera: Pteromalidae), are reported.

Key words: *Phelypera schuppeli*, larva, pupa, morphology, chaetotaxy, Cepurini, *Dysdercus*, *Jaliscoa*, Neotropical Region, *Pachira*, *Supputius*, weevil

Introduction

Unlike most other groups of Curculionidae (except some Cyclominae (e.g. *Gonipterus* Schoenherr, 1833 and *Listroderes* Schoenherr, 1826), Ceutorynchinae (e.g. *Pelenomus* C. G. Thompson, 1859) and Curculioninae (*Cionus* Clairville, 1798) (May 1994; Marvaldi *et al*. 2002; Skuhrovec 2008)), the larvae of Hyperinae do not live inside plant tissue, but instead are exophytic and spend all development time on or under the surface of their host plant leafs (Capiomont 1868; Lima 1956). The known larvae of species of the *Phelypera* are exophytic and ectophagous, brightly colored, eruciform, and possess abdominal ambulatory ampullae, thus resembling larvae of Lepidoptera. Mature larvae spin globular wide-laced cocoons where pupation occurs (Lima 1920, 1956; Bondar 1943).

Phelypera Jekel, 1865 presently includes 15 Neotropical species distributed from Mexico south to Uruguay and is represented in Brazil by 10 species. The last revision of the genus was published by Capiomont (1868), who recognized eight species, all of them currently valid (O'Brien & Wibmer 1982; Wibmer & O'Brien 1986). The knowledge of taxonomy and natural history of the Cepurini, the tribe to which the genus *Phelypera* is assigned, is scanty. *Phelypera* species are associated with species of the plant families Arecaceae, Malvaceae (formerly Bombacaceae), Fabaceae and Sterculariaceae (Silva *et al*. 1968; Janzen 1979). According to Silva *et al*. (1968) two species of *Phelypera* which occur in Brazil, *P. griseofasciata* (Capiomont, 1867) and *P. schuppeli* (Boheman, 1834), are associated with Malvaceae, the former with *Pachira aquatica* Aubl. ("manguba", mongubeira", "mungubeira", "castanheira do Maranhão" or "Malabar Chestnut") and the latter with *Pachira insignis* Savigny ("Guiana Chest-

Accepted by R. Anderson: 22 Jun. 2012; published: 15 Aug. 2012