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

SERGIO ANTONIO VANIN1,4, DANIELA DE CASSIA BENÁ1,2 & FABIANO FABIAN ALBERTONI3

1Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão, Travessa 14, 101, 05508-900 São Paulo, SP, Brasil. E-mail: savanin@ib.usp.br

2Faculdade de Ciências Biológicas e Ambientais, Universidade Federal da Grande Dourados, Cidade Universitária, Rodovia Dourados–Itahum, km 14, 79804–970, Dourados, MS, Brasil. E-mail: danicoleoptera@gmail.com

3Museu de Zooseologia, Universidade de São Paulo, Avenida Nazaré 481, 04263-000, São Paulo, SP, Brasil. E-mail: fabianoalbertoni@gmail.com

4Corresponding author. E-mail: savanin@ib.usp.br

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 wide-laced 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 leaves (Capimont 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 Capimont (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 Sterculiaceae (Silva et al. 1968; Janzen 1979). According to Silva et al. (1968) two species of *Phelypera* which occur in Brazil, *P. griseofasciata* (Capimont, 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-