



Description of immatures and the bionomy of the Oriental leaf beetle *Chaeridiona thailandica* Kimoto, 1998 (Coleoptera: Chrysomelidae: Cassidinae: Oncocephalini), a leaf-mining hispine beetle

JOLANTA ŚWIĘTOJAŃSKA¹ & DAMIR KOVAC²

¹Zoological Institute, University of Wrocław, Przybyszewskiego 63/77, 51-148 Wrocław, Poland. E-mail: sindiola@biol.uni.wroc.pl

²Entomologie I, Forschungsinstitut Senckenberg, Senckenberganlage 25, 60325 Frankfurt, Germany.

E-mail: damir.kovac@senckenberg.de

Abstract

Larva and pupa of the Oriental *Chaeridiona thailandica* Kimoto are described, figured in detail and compared with the recently described immatures of *Ch. picea* Baly. *Ch. thailandica* larvae mine in leaves of gingers belonging to *Zingiber* and *Boesenbergia* and pupate in the mid-ribs of leaves. The larvae and pupae possess plastron-bearing spiracular gills allowing respiration in water when temporarily submerged after heavy rain.

Key words: morphology, larva, pupa, plastron, spiracular gill, Coleoptera, Chrysomelidae, Cassidinae, *Chaeridiona thailandica*, Zingiberaceae, Thailand, Oriental Region

Introduction

The leaf beetle genus *Chaeridiona* Baly belongs to the Old World tribe Oncocephalini Chapuis and is comprised of eight species occurring in Southeast Asia north to southern China (Maulik 1919; Würmli 1975; Kimoto 1998). The main diagnostic character of this genus is the lack of labial palpi (Maulik 1919; Würmli 1975). Larvae of *Chaeridiona* are leaf-miners feeding on Zingiberaceae (*Ch. metallica* Baly; Kalshoven 1957) and Commelinaceae (*Ch. picea*; Świętojańska *et al.* 2006). Recently, we discovered larvae of *Ch. thailandica* mining in leaves of several species of gingers (Zingiberaceae) in north Thailand. Zingiberaceae are herbaceous ground plants of forests, mostly growing in damp and shady places.

Here we describe larvae and pupae of *Ch. thailandica*, compare these with the recently described immature stages of *Ch. picea* from India (Świętojańska *et al.* 2006) and discuss some aspects of their biology.

Material and methods

Field observations were carried out in July 2006 in the Pangmapha district (Northern Thailand, Mae Hong Son Province), in deciduous/bamboo forest at an altitude of 600–1000 m. Zingiberaceae leaves infested with *Ch. thailandica* were cut and taken to the laboratory for rearing of the larvae. The cut ends of the leaves were placed in narrow mouthed bottles of water. The leaves were covered by a net and development of the beetle larvae checked daily. The immatures were preserved in 70% alcohol.

For the SEM examination larvae and pupae were cleaned, dehydrated in a graded series of ethanol and dried in hexamethyldisilazane (Nation, 1983). The dry specimens were mounted on the stubs, coated with pal-