Zootaxa 2358: 57–67 (2010)
www.mapress.com/zootaxa/

Article

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

Taxonomic and bionomic notes on *Agriosphodrus dohrni* (Signoret) (Hemiptera: Reduviidae: Harpactorinae)

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Abstract

Agriosphodrus dohrni is redescribed. The male genitalia is described and illustrated for the first time. Some biological characters of this reduviid, such as the predatory behavior, mating, oviposition, hatching, molting, emergence, colonization, and cannibalism, are noted.

Key words: *Agriosphodrus dohrni*, Reduviidae, taxonomy, bionomics

Introduction

Agriosphodrus Stål, a small genus in the reduviid subfamily Harpactorinae, was established in 1866 by Stål with only two species, *A. dohrni* (Signoret) from China, India, Japan, Vietnam; and *A. perelegans* Breddin from Vietnam. The type species of this genus, *A. dohrni*, is a large-sized diurnal reduviid, usually found on poplar, willows, and tree of heaven near human habitation. *A. dohrni* have attracted the attentions of some researchers (Hiroshi 1983, 1985, 1986a, b, 1988), because this reduviid may have potential as biocontrol agents against some important agricultural pests. More importantly, the nymphs of this species perform significant colonization, and feed on many kinds of forest insect pests, especially larvae of Lepidoptera (Yao *et al*. 1995). The purpose of this paper is to provide useful morphological characters for identifying the nymph and adult of this species found in the field. Herein, we describe and illustrate the adult and the male genitalia, and we photograph the different instars. The biological notes are discussed based on a laboratory colony.

Materials and methods

A laboratory colony was established in 2007 from specimens captured in Shaanxi Province. The colony was reared in Beijing, in plastic cases, under a temperature of 23±2°C and RH of 50±7%, and fed every 3 days with yellow mealworms, *Tenebrio molitor*. Eggs laid are collected to secure the eclosion rate. After eclosion, 20 first instars were separated individually into plastic cups with an upcenter support of absorbent cardboard, and they were offered to feed every third day. These individual bugs were maintained in a light incubator at 25±2°C and 60±5% RH, and were checked daily for ecdysis or death. The others were reared similarly. Any special behaviors were observed and noted.

The male genitalia of the reduviid were soaked in hot 10% KOH solution for approximately 5 minutes to remove soft tissue, rinsed in distilled water, and dissected under a Motic binocular dissecting microscope. Dissected genitalia were placed in vials with glycerin and pinned under the corresponding specimens. All drawings were traced with the aid of a camera lucida. Morphological terminology mainly follows those of Lent & Wygodzinsky (1979) and Davis (1966). Measurements were obtained using a calibrated micrometer.

Accepted by C. Schaefer: 8 Dec. 2009; published: 12 Feb. 2010