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Taxonomic and bionomic notes on the white spot assassin bug *Platymeris biguttatus* (Linnaeus) (Hemiptera: Reduviidae: Reduviinae)

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Abstract

The white spot assassin bug *Platymeris biguttatus*, a large African species is redescribed, along with male genitalia. Some biological notes on life history, nymphal instars, predatory behavior, oviposition, emergence and colonization, etc. based on laboratory rearing and observations are provided.

Key words: *Platymeris biguttatus*, Reduviidae, taxonomy, bionomics, redescription, laboratory rearing

Introduction

Platymeris biguttatus (Linnaeus, 1767) is a large-sized assassin bug and originated in Africa. This species has been well known as white spot assassin bug or white-eyed assassin bug or twin spotted assassin bug as it has two large white spots on its wings. The white spot assassin bug is easy to breed in captivity, hence has been kept as living experimental material in laboratory for a long time. Despite of this, no detailed taxonomic description or biological notes are available at present, hence this paper. This paper provides a detailed morphological redescription of the species, as well as detailed notes on various aspects of its biology based on laboratory rearing.

Material and methods

A laboratory colony was established in Beijing and reared in plastic containers at a temperature of 25±2℃ and RH of 50±7%, and fed every 3 days with yellow mealworms, *Tenebrio molitor* Linnaeus, and crickets. Eggs laid were collected and transferred to a shallow container filled with slightly damp vermiculite to secure the eclosion rate. After eclosion, 20 first instars were separated individually into plastic cups with a central 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 ℃ 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 terminalia of the reduviids 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.

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