

FAUNAL DIVERSITY OF PENTATOMIDAE IN SOUTH INDIA WITH ADDITIONAL RECORDS

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Abstract

Pentatomidae is one of the largest families of Heteroptera, found in all major zoogeographic regions. It comprises both phytophagous and predatory groups. South India is rich in the diversity of *Pentatomidae*. This region is recorded with 86 genera and 164 species of *Pentatomidae*. Materials used for the present study were taken from the surveys conducted from various locations in the southern India as part of the ICAR Network Project on Insect Biosystematics at University of Agricultural Sciences, Bangalore (UASB) and National Bureau of Agricultural Insect Resources, Bangalore (NBAIR, Bangalore). Five species were recorded for the first time from south India. Of these, three species were collected from grass vegetation and one species from bamboo. Identification and distinguishing characteristics of these new forms are discussed in detail.

Key words. *Pentatomidae*, *Aeliomorpha* Stål, *Critheus* Stål, *Eysarcoris* Hahn, *Glaucias* Kirkaldy, south India.

Introduction

Pentatomidae is one of the largest families of Heteroptera, found in all major zoogeographic regions. It comprises both phytophagous and predatory groups. They are economically important as majority of these prefer to feed on the reproductive parts of plants such as flowers, ovules, ovaries, developing grains and immature fruits and a few are predatory, sucking the body fluids of immature stages of Coleoptera and Lepidoptera. Phytophagous groups suck the plant sap by thrusting their stylets into the plant tissues, between cells. The aggregated feeding behavior of quite a few of these species, aggravate the injury to crops. They injure the plants directly, by destroying or reducing the fecundity and fertility of reproductive structures. They are known to infest several agricultural crops of economic importance such as vanilla, pulses, cereals, areca, vegetables like bhendi, cabbage, cauliflower, mustard; fruit crops such as guava, oranges and several medicinal and aromatic plants. A few species are confirmed as vectors of phytoplasma such as *Halyomorpha halys* (Stål) (witches' broom phytoplasma to *Paulownia* spp. in Asia) [1].

Pentatomidae are characterized by the well-developed scutellum, that is triangular to semielliptical in shape; claval commissure reduced or absent; paired abdominal trichobothria positioned laterally and posteriad of spiracles; tarsi three segmented; spiracles of abdominal segment 2 concealed by metapleura except in a few genera of large body size [2]. The fauna of *Pentatomidae* are abundant with representatives of all the four subfamilies viz., Asopinae (exclusively predators), Pentatominae, Phyllocephalinae and Podopinae known from India, are also recorded from south India (south India includes the southern part of the Deccan Plateau with Arabian sea in the West, the Indian Ocean in the south and the Bay of Bengal in the East). One of the earliest works on *Pentatomidae* is by [3] from erstwhile Mysore state. Recent documentation on the diversity of this group is by [4] from Karnataka and [5] from south India. Pentatominae is the most diverse subfamily among *Pentatomidae* and 29 tribes have been recorded from south India. South India is recorded with 57% of the genera (86) and 43% of the species (164) of *Pentatomidae* reported from India [5].

Materials & Methods

Materials studied for the present work have come from the surveys conducted from various locations in the southern India as part of the ICAR network Project on Insect Biosystematics at University of Agricultural Sciences, Bangalore (UASB) and National Bureau of Agricultural Insect Resources, Bangalore (NBAIR, Bangalore).

Results and Discussion

A total of five species have been recorded for the first time from south India. They are *Aeliomorpha viridescens* Rider & Rolston, *Critheus lineatifrons* Stål, *Eysarcoris aenescens* (Walker), *E. dubius* Dallas and *Glaucias albomaculatus* (Distant). Of these, *A. viridescens*, *E. aenescens* and *E. dubius* are collected on grass. *Critheus lineatifrons* is collected on bamboo. A brief description of the species is given below.

Aeliomorpha Stål

Diagnosis: Head strongly declivous with apex rounded (Fig. 7); mandibular plates as long as clypeus; clypeus free apically, not enclosed by mandibular plates; lateral margins of mandibular plates sinuate; antennae sexually dimorphic, with segment I not reaching apex of head; pronotum with lateral margins not reflexed, smooth, neither callose, nor explanate; posterior margin straight; humeri nearly rounded; meso and metasternum with slight longitudinal carina; peritreme groove shaped reaching middle of metapleuron (Fig. 10); scutellum subtriangular and gradually narrowing towards apex; abdominal sternites smooth, basal sternite lacking tubercle or spine; posterolateral angles of abdominal sternites III-VII rounded.