

# FIRST RECORD OF THE JEWEL BEETLE *Sternocera* Spp. (Coleoptera: buprestidae) ON *ACACIA SENEGAL* IN JODHPUR

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## KEYWORDS

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## ABSTRACT

The jewel beetle species *Sternocera* spp. has been recorded on *Acacia senegal* in Jodhpur for the first time. The beetles were collected on *Acacia senegal* trees at Kalyana Kumathiya enclosure Jodhpur feeding on foliage of the tree. It is large metallic wood boring beetle within the family Buprestidae. Its pronotum is metallic green in colour and elytra is coppery-brown. These are wood-boring in larvae stages, slowly tunneling through woody tissues of trees.

## INTRODUCTION

Insects are a major component of the world's biodiversity (Mohd and Tara, 2010). Order Coleoptera is enormously rich in species and wide spread in many terrestrial and freshwater environments throughout the world. Beetles belonging to the order coleoptera are the most diverse in all animal groups, with 3,50,000 described species (New, 2007). Kazmi and Ramamurthy (2004) reported that approximately 15,088 species of beetles were recorded from India. The Coleoptera insects has a complete metamorphosis (Endopterygota), having the mesothoracic wings modified into hard elytra. Some beetles feed on flesh, dung, fungi, plants, pollen, flower and fruit as well as some are predatory invertebrates and some are parasites. Beetles are harmful pest attacking on plants, processed fibers, grains and wood products, but can also be beneficial, usually by controlling the populations of serious pests of agricultural plants, examples ladybird feed on aphid colonies, scale insects, thrips and mealy bugs that damage crops (Pawara et al., 2014).

Jewel beetles, which belongs to family Buprestidae are wood boring beetles, usually xylophagous and are usually present in the semidesert and humid tropical areas. They develop under the bark or in the sapwood of trees and shrubs (Svatopluk et al., 2011). They are one of the most easily recognizable families due to their striking colors. They are small to large beetles and have an elongated body shape which tapers towards the abdomen and a short head, which fits closely into the broader thorax (Bolu Halil and Ozgen Inanc, 2011). These Jewel beetles are: shape cylindrical to flattened, elongate-ovoid, generally convex above; colour is often bright

iridescent or dark coloured with different maculae; head greatly deflexed; antennae serrate, labrum bilobed and setose distally; mandible stout, curved; maxillary palpi with four palpomeres; labial palpi with three palpomeres; eyes are lateral; pronotum slightly broader than head; abdomen with five sternites (Fatima et al., 2014).

Recently *Sternocera* spp belonging to the Buprestidae family was recorded on *Acacia senegal* trees from Kalyana Kumathiya enclosure Jodhpur (Rajasthan). The adult of this jewel beetle is dark brown with shiny metallic green coloured pronotum. The color of the elytra is coppery-brown. Beetle feeds on foliage. Present paper encompasses the study of major characteristics, distribution and nature of damage by *Sternocera* spp.

Earlier *Sternocera chrysis* Fabricius was recorded infesting the sapwood of *Salvadora persica* in arid zones of Rajasthan (CAZRI, 1995b; Verma (2003). Balu et al. (2001) recorded *Sternocera chrysis* on *Albizia lebbek* in Tamil Nadu, India.

## Taxonomy

Kingdom: Animalia  
Phylum: Arthropoda  
Class: Insecta  
Order: Coleoptera  
Family: Buprestidae  
Subfamily: Julodinae  
Genus: *Sternocera*

## Characters of family Buprestidae

They are very variable in size and shape, they are frequently

Dorsal view of *Sternocera* spp.Ventral view of *Sternocera* spp.Front view of *Sternocera* spp.

brilliant metallic in colour and very heavily sclerotized woodboring beetles. Body is elongate oval in shape and 1.5 - 100 mm in length. Antennae 11-segmented, short and serrate, pectinate or flabellate. Head more or less hypognathous, deeply sunk in prothorax, frons often excavated or strongly sculptured. Eyes are oval to elongate. Pronotum closely fitting to elytra, its outline often continuous with that of elytra, side margins mostly distinct at base, but sometimes becoming evanescent or rounded anteriorly. Scutellum small to well developed, or completely hidden beneath elytra. In adult is elytra variable from elongate, parallel sided, or tapering strongly in posterior half, to short and subconical, convex or flattened on disc. Upper surface glabrous sometimes forming patterns. Prosternum usually long in front of procoxae, with prosternal process produced and often dilated behind procoxae. Procoxae is globular. Metasternum usually with distinct transverse suture. Abdomen with five visible sternites, basal two fused often with suture partly obliterated. The abdominal tergites are sclerotized heavily and brightly coloured. Legs relatively short, tarsal formula 5-5-5, at least segment 4 lobed beneath (Booth *et al.*, 1990).

#### Subfamily: Julodinae

Body is large, robust, convex, more than 20 mm. Prosternal process narrow; eyes rounded and elytra obtusely tapering in posterior half (Hedaya *et al.*, 2010).

#### Genus: *Sternocera* Eschscholtz

The genus *Sternocera* belongs to subfamily Julodinae. They are large robust beetle, mahogany-brown, with the wing covers very faintly rugose and the closely punctured pitted thorax iridescent green or bronze (Curran, 1946). Sternal process behind the sternal cavity are present. Last antennal segment is with a concave terminal edge. Pronotum is steeply sloping downward. Its pronotum is metallic green in colour and elytra is coppery-brown. Procoxa is very near to anterior rim of prosternum. Elytral base is completely closed, scutellum invisible. Ovipositor sclerotized and have segmentation visible on sides (Holm, 1979).

#### Distribution

It is found in India, Sri Lanka, Beluchistan, Nepal, Burma,

Thailand, Viet-Nam, Pakistan, Laos and China (<http://utenti.romascuola.net/bups/sterasia.htm>, dated 20.11.17).

#### Nature of damage

The larva feeds on the tap root as well as the lateral roots of tree and sometimes feeds on the bark of the trunk at the collar region. As a consequence of infestation gradual wilting and total drying of the plants occurs. These insects are wood-boring as larvae, with the immature forms slowly tunneling through a variety of woody tissues of many tree and shrub species (Bellamy, 1997).

Grijpma, 1970; Grijpma and Gara, 1970; Howard, 1991; Yamazaki *et al.*, 1992 reported that the wood borers can prune, weaken, or kill standing trees, thereby reducing the timber quality of both temperate and tropical species. Barks hollowed by wood borers are used as by ants and spiders as their nest site, as food sources by numerous dead wood feeders and as a host site for parasites (Feller and Mathis, 1997).

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