

# New Report of *Costalimaita ferruginea* (Fabricius) (Coleoptera: Chrysomelidae) on *Eucalyptus* sp. (Myrtaceae) in Sinop - Mato Grosso, Brazil

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**Abstract.** *Costalimaita ferruginea* (Fabricius) (Coleoptera: Chrysomelidae) is the main Coleoptera defoliator of eucalyptus in Brazil and has a strong association with plants of the family Myrtaceae, being the eucalyptus important for the sectors of energy, paper, pulp and furniture industry. The objective of the present study was to record the occurrence of this Chrysomelidae in eucalyptus plants in Sinop, State of Mato Grosso, Brazil, during the months of November 2010 to January 2011, thus contributing to increase in knowledge on the geographic distribution of this insect and also hypothesize that the Coleoptera may soon become a major pest of eucalyptus in the state of Mato Grosso.

**Keywords:** Attack; Damages; Geographical distribution; Occurrence.

## Novo Registro de *Costalimaita ferruginea* (Fabricius) (Coleoptera: Chrysomelidae) em plantas de *Eucalyptus* sp. (Myrtaceae) em Sinop - Mato Grosso, Brasil

**Resumo.** *Costalimaita ferruginea* (Fabricius) (Coleoptera: Chrysomelidae) é o principal Coleoptera desfolhador de eucalipto do Brasil e possui grande associação com plantas da família Myrtaceae, sendo o eucalipto importante nos setores de energia, papel, celulose e indústria moveleira. O objetivo deste estudo foi registrar a ocorrência desse Chrysomelidae em plantas de eucalipto município de Sinop, Mato Grosso, Brasil, durante os meses de novembro de 2010 a janeiro de 2011, contribuindo assim para o aumento no conhecimento sobre a distribuição geográfica desse inseto e ainda, lançar a hipótese de que brevemente esse Coleoptera poderá ser tornar uma importante praga da eucaliptocultura do estado de Mato Grosso.

**Palavras-chave:** Ataque; Danos; Distribuição geográfica; Ocorrência.

*Costalimaita ferruginea* (Fabricius) (Coleoptera: Chrysomelidae) is the principal defoliating beetle species of *Eucalyptus* in Brazil due to its voracity and biotic potential (ZANUNCIO *et al.* 1993; SANTOS *et al.* 2009). Known as "little cow" or "yellow bug of eucalyptus", its occurrence is reported in the states of Rio Grande do Norte, Pará, Maranhão, Bahia, Goiás, São Paulo (MENDES 2004; PINTO *et al.* 2004), Roraima (MARSARO JR. 2006), Mato Grosso do Sul (BERTI-FILHO *et al.* 1980; KASSAB *et al.* 2011), Paraná, Rio Grande do Sul (SANTOS *et al.* 2008), Bahia and Espírito Santo (Reginaldo Gonçalves Mafía, forestry engineer in Fibria Celulose S.A., personal communication). In the state of Minas Gerais, *Costalimaita* sp. have been reported associated with eucalyptus plantations (FREITAS *et al.* 2002; ARNHOLD & GONÇALVES 2010), resulting in outbreaks in the Zona da Mata region (SANTOS *et al.* 2008).

Only adults of Coleoptera are defoliators and can attack and damage eucalyptus plants of any age (MENDES *et al.* 1998), which may compromise its development and even lead to its death. They are considered beetles of small body size (5 – 6 mm long), possess a bright yellowish-brown color, with an orange ventral region, elytra with 15 to 18 longitudinal carina and with small circular spots on the extremity of the wing. They feed mainly on young leaves located in the upper third of the trees, however, in the case of population outbreaks can attack the entire tree, leaving the leaves laced or perforated, which characterizes the type of damage caused by Coleoptera defoliators (SANTOS *et al.* 2008). The development of immature forms occurs in the soil where larvae feed on the roots of grasses. The objective of the

present study was to record the occurrence of *C. ferruginea* in eucalyptus plants in the countryside of Sinop, Mato Grosso, Brazil, thus contributing to increase in knowledge on the geographic distribution of this insect and also hypothesize that the Coleoptera may soon become a major pest of eucalyptus in the state of Mato Grosso.

Adults of *C. ferruginea* were found attacking eucalyptus plants (Figure 1 A and B) in the city nursery (Latitude S 11° 52' 19"; Longitude W 55° 30' 44" and altitude of 16 m) and the private nursery Flora Sinop (Latitude S 11° 52' 01", Longitude W 55° 27' 59" and altitude of 31 m), both in the countryside of Sinop, Mato Grosso, Brazil, during the months of November 2010 and January 2011 which make up part of the rainy season in this region.

Damage was observed mainly in young leaves at the extremities of the tip and lateral regions, where attack is verified to be most intense in the morning and evening. During the hottest portion of the day, the insects remained virtually inactive on the underside of the leaf. When noticing the approach of people, they dispersed rapidly, characterizing the typical behavior of the beetle from the family Chrysomelidae.

Sinop is a city in the Brazilian State of Mato Grosso which presents several characteristics favorable to colonization and establishment of mega insect populations with the potential to become agricultural, forestry and veterinary pests. The warm climate and high rainfall during the months from October to April are ideal for the rapid development of numerous insect species.



Figure 1. A e B - Adults of *Costalimaita ferruginea* (Coleoptera: Chrysomelidae) on leaves of *Eucalyptus* sp. in Sinop, Mato Grosso.

Another important factor related to the access of exotic insects is that the municipality is located along the BR 163 highway linking Cuiabá - Mato Grosso to Santarém - Pará, allowing that several species have access to the city by means of passive transport.

The need for wood associated with forest management planning has resulted in planted forests, especially eucalyptus, recently arriving in this region. Because it is a monoculture some impacts following implementation of this plant, including the appearance of exotic insects, can be found in the region of Sinop.

It is believed that the arrival of this insect to the city of Sinop has happened only recently, since few specimens are recorded attacking *Eucalyptus* sp. Thus, this work not only reports the occurrence of the major defoliation beetle of eucalyptus in Brazil, but can also hypothesize that in the near future, mega populations of Coleoptera may hinder the development of eucalyptus plantations in the northern region of Mato Grosso.

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