



## ***Carmenta chromolaenae* Eichlin, a new species (Lepidoptera: Sesiidae) for the biological control of *Chromolaena odorata* (L.) King & Robinson (Asteraceae)**

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### **Abstract**

A new species of Sesiidae, *Carmenta chromolaenae* Eichlin, is described to make the name available to researchers evaluating the moth's potential for biological control of its host plant, *Chromolaena odorata*, in South Africa and other parts of the plant's invasive range. This clearwing moth species was reared from the host plant in Venezuela. The adult moth, including the male and female genitalia, larva, and pupa are described and illustrated. Its biology and possible use as a control agent are discussed.

**Key words:** Sesiidae, *Carmenta*, new species, description, Venezuela, South Africa, biological control, host plant, biology, genitalia, larva, pupa

### **Introduction**

During efforts to discover herbivores of the perennial woody shrub *Chromolaena odorata* (L.) King & Robinson (Asteraceae), an undescribed species of *Carmenta* (Sesiidae) was reared. The host plant is commonly referred to as “chromolaena,” “Siam weed,” or “Jack in the bush” and is native to the subtropics and tropics of the Americas. However, the plant has spread to many similar climates throughout Africa, Asia, Micronesia, and Australia, where it is considered a noxious weed as it impacts negatively on agriculture and biodiversity. The new species of clearwing moth is described here to make the name available to those investigating the moth for its potential as a biological control agent for *Chromolaena odorata* in South Africa and elsewhere.

Terminology of the chaetotaxy follows Stehr (1987). Depositories are abbreviated as follows: SANC = South African National Collection of Insects, Pretoria, South Africa; CSCA = California State Collection of Arthropods, Sacramento, California, U.S.A.; and MIZA = Museo del Instituto de Zoología Agrícola, Maracay, Venezuela. TDE is responsible for the original description of the new species. LWS, CZ, and OSD provided information and data regarding the biology and the potential of this species as a biological control agent. OSD and JC produced the descriptions of the larval and pupal stages.

### ***Carmenta chromolaenae* Eichlin, new sp.**

Figs. 1–10

**Diagnosis.** *Carmenta chromolaenae* is a small (forewing length 4–7 mm), darkly colored moth with dark