



<http://dx.doi.org/10.11646/zootaxa.3686.5.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:15AEDA97-9392-4A68-A57F-93665D3B8B91>

***Phenrica littoralis* (Bechyné, 1955) (Coleoptera: Chrysomelidae) a potential candidate for the biological control of alligator weed, *Alternanthera philoxeroides* (Martius) Grisebach (Amaranthaceae): redescription of the adult, first description of immature stages, and biological notes**

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Abstract

Flea beetles of alligator weed, *Alternanthera philoxeroides* (Martius) Grisebach (Amaranthaceae), were collected in Argentina, Uruguay, Paraguay, and Brazil. Species in the genera *Disonycha* Chevrolat, *Agasicles* Jacoby, *Systema* Chevrolat and *Phenrica* Bechyné were frequently found on this weed. *Phenrica littoralis* (Bechyné) was the most abundant within this genus. The male is described and the holotype female is redescribed adding new diagnostic characters of the mouthparts, hind wings, metendosternite, and male and female genitalia. Larva and pupa are described and illustrated for the first time providing data for future phylogenetic studies in the subtribe *Disonychina*.

Key words: Galerucinae, Alticini, *Alternanthera philoxeroides*, *Phenrica littoralis*, immature stages, Argentina, weed biocontrol

Introduction

Alligator weed, *Alternanthera philoxeroides* (Martius) Grisebach (Amaranthaceae), is an amphibious plant native to southern South America that was introduced into several countries, including the United States and Australia, where it became a serious aquatic and terrestrial weed (Holm *et al.* 1997).

In recent explorations conducted in Argentina, Uruguay, Paraguay and Brazil to assay the native range of alligator weed and its natural enemies, several species of Alticini flea beetles were collected (Sosa *et al.* 2004). Species in the genera *Disonycha* Chevrolat, *Agasicles* Jacoby, *Systema* Chevrolat and *Phenrica* Bechyné were considered for further studies as potential biocontrol agents (Sosa *et al.* unpublished).

The Neotropical Alticini genus *Phenrica*, included in the subtribe *Disonychina*, is distributed in temperate and subtropical areas of South America (Cabrera & Roig-Juñent 1998). Bechyné (1956) described several new species and proposed new combinations under the name *Phenrica* for species formerly included in the genus *Disonycha* and *Nephrica* Harold. As the genus was not formally described at that time, Bechyné (1958) subsequently described it, designating *Disonycha austriaca* Schaufuss as the type species. Bechyné and Springlová de Bechyné (1966) recognized two subgenera: *Phenrica* (type species *Disonycha austriaca* Schaufuss) and *Orthophenrica* Bechyné & Springlová de Bechyné (type species: *Nephrica quadrimaculata* Clark).

Species of *Phenrica* were collected on Amaranthaceae and on cultivated Fabaceae. Our field studies focused on *Phenrica littoralis* (Bechyné), which was one of the most abundant species of flea beetle on *A. philoxeroides*. This species was originally described as *Nephrica littoralis* Bechyné from Brazil, Paraguay and Argentina, and subsequently transferred to the genus *Phenrica*. Nothing has been published on the immature stages and the biology of this species.