



***Diabrotica collicola* (Coleoptera: Chrysomelidae), a new species of leaf beetle from Argentina and key to species of the *Diabrotica virgifera* group and relatives**

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Abstract

The new species *Diabrotica collicola* Cabrera & Cabrera Walsh is described and illustrated based on specimens collected from Balcozna, Catamarca Province (Argentina). A full description is provided and includes adding morphological characters of the mouthparts, hind wing venation, binding patch, metendosternite, and details of male and female genitalia previously overlooked for the genus. *Diabrotica collicola* is recognized by the following characters: general color parrot green with yellowish vittae, genal space less than 1/4 maximum length of the eye, antennomeres 2 and 3 subequal in males, 3 longer in females, both antennomeres together more than length 1/2 of 4 in both sexes, prothoracic and mesothoracic tarsi of males with ventral adhesive patch, internal sac of the median lobe with four sclerites. Differences with similar species *D. mutabilis* Baly, *D. fulvofasciata* Jacoby, *D. mapiriensis gussi* Krysan & Smith and *D. porracea* Harold are discussed. A key to *D. collicola* and similar species is provided.

Key words: Chrysomelidae, Galerucinae, *Diabrotica collicola*, Argentina, systematics

Introduction

The genus *Diabrotica* Chevrolat comprises 338 species arranged in three groups, as proposed by Smith & Lawrence (1967): *Diabrotica fucata* group, *Diabrotica virgifera* group and *Diabrotica signifera* group. Some of the species do not clearly fit within any of these groups and they may need to be placed in others (Cabrera *et al.* 2008). Members of this genus are distributed throughout Central and South America, with the exception of continental Chile and southern Argentina, although this distribution may be widened in the future. Only species of the *D. fucata* and *D. virgifera* groups are represented in Argentina and they are widely distributed in the central and northern parts of the country, up to the provinces of Ro Negro and Neuquén (ca. 40°S) (Cabrera 2001 a, b). So far, only three species in the *D. virgifera* group have been found in Argentina, whereas the *D. fucata* group is much better represented (Krysan & Smith 1987; Cabrera 2001 a, b; Cabrera & Cabrera Walsh 2004a). However, most species studied are from the subtropical and temperate plains, while the northwestern highlands of Argentina have rarely been explored for galerucines. This region, covering the Yungas, Puna and Prepuna biogeographical provinces (Cabrera & Willink 1980), is characterized by a series of north - south oriented valleys and large plateaus between 1,000 and 4,000 m in elevation, isolated by arid mountainous chains of 4000 – 6000 m in elevation. Annual rainfall ranges from 50 to 600 mm and occurs almost exclusively during summer. Agriculture in this area is limited to the lower parts of the valleys, fringing the floodplains. It is mostly irrigation dependent and consists of small, traditional polyculture farms. During the years 2001 to 2003, we traveled in this region in search for species of *Diabrotica* and their natural enemies.

The purpose of this paper is to provide a full description of a new species, *Diabrotica collicola*, including morphological characters of the mouthparts, hind wing venation, binding patch, metendosternite, and some