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A new species of *Luchoelmis* Spangler & Staines (Coleoptera: Elmidae) from Argentina and its probable larva

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Abstract

A new species of riffle beetle from southwestern Argentina, *Luchoelmis kapenkemkensis*, is described. Its diagnostic characters are illustrated and the key for the identification the species of the genus is updated. A larva, very likely belonging to this species, is also described and compared to other related larvae.

Key words: Elmidae, Elminae, *Luchoelmis*, Neotropical region, larva

Introduction

The genus *Luchoelmis* Spangler & Staines belongs to the subfamily Elminae, and includes four species known only from southern Chile and Argentina (Spangler & Staines 2002). Of those species, only *L. cekalovici* Spangler and Staines is reported from Argentina, with rather extensive distribution – it occurs in at least four provinces (Spangler & Staines 2002; Miserendino & Archangelsky 2006; Archangelsky & Manzo 2007). The larva of *L. cekalovici* was described, whereas larvae of remaining Chilean species are unknown (Spangler & Staines 2002).

During a series of field trips between the years 2005 and 2011, in order to study effects of different types of land use and of the eruption of the Chaiten volcano on different rivers and creeks in western Chubut (Miserendino *et al.* 2012), an unidentified Elmidae species was collected in the Nant y Fall creek. This elmid possesses features characteristic for the genus *Luchoelmis* (Spangler & Staines 2002): an opisthognathous head; body elongate and with subparallel sides; plastron absent on pronotum and elytra; subelytral stria between striae 1 and 2 absent; pronotum and elytra without carinae; pronotum with strong depressions; tarsal claws lacking basal tooth. This species was compared with the original descriptions in Spangler & Staines (2002), and shows several differences in coloration, plastron distribution and also male genitalia with all other known *Luchoelmis* species.

Throughout the study, several other elmids were collected in the same creek: *Luchoelmis cekalovici*, *Stethelmis kaszabi* Hinton, and an unidentified species of *Austrolimnius* Carter & Zeck. Larvae of *L. cekalovici* and *S. kaszabi* were described by Archangelsky & Manzo (2007), and larvae of *Austrolimnius* are easily identified by their antennae, which have a long sensorium, and also by the characteristic distribution of tubercles on the thoracic and abdominal terga. In the same samples a fourth larval type appeared, which did not belong to any other known elmid collected in the same creek. Therefore, this unknown larval type can be associated, with a good degree of certainty, with the adults of the new *Luchoelmis* species described herein.

In this paper we describe and illustrate this new species of *Luchoelmis* and its probable larva. The identification key to adults of *Luchoelmis* is updated, and the new larva is compared with the larvae of *L. cekalovici* and *Stethelmis kaszabi* (the only known larva of this genus).

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Larvae of *L. kapenkemkensis* could be mistaken with those of *Stethelmis* due to the presence of pleural sclerites on the first five abdominal segments; actually they would key out as *Stethelmis* in the keys of Manzo & Archangelsky (2008) and Archangelsky *et al.* (2009). The following characters will easily separate larvae of these two genera: 1) anterior margin of head capsule lacking tooth between base of antenna and clypeus (present in *Stethelmis*); 2) thoracic and abdominal terga with large tubercles arranged in longitudinal rows, bearing long comb-like setae (larvae of *Stethelmis* only have a row of tubercles bearing flat setae on the margins of the abdominal terga); 3) operculum subtriangular (subpentagonal in *Stethelmis*); 4) color reddish-brown (dark brown in *Stethelmis*); 5) abdominal terga I–VII with complete sagittal line (in *Stethelmis* complete sagittal line present only on abdominal segments I–III, on segments IV–V or IV–VI sagittal line incomplete).

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