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Archaeoditomotarsus crassitylus, gen. and sp. nov. (Hemiptera: Heteroptera: Acanthosomatidae) from Chile

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Abstract

Archaeoditomotarsus crassitylus, gen. and sp. nov. of Acanthosomatidae (Ditomotarsinae: Ditomotarsini), is described and illustrated. The biogeography of the new taxon is discussed and a key to the Chilean genera of Ditomotarsinae is included.

Key words: Acanthosomatidae, Ditomotarsinae, new genus, new species, Chile

Introduction

Acanthosomatidae is a family of phytophagous Pentatomoids, which contains about 200 species in 56 genera (Faúndez *et al.* 2014). The last world revision on the group was undertaken by Kumar (1974). There are few species of Acanthosomatidae in Chile; however Chilean and Patagonian fauna is almost completely endemic, and of great importance for the understanding of the whole family phylogeny. Carvajal & Faúndez (2013) wrote that this family is represented in the country by 13 species in 12 genera; later Faúndez (2014) erected a new genus and revalidated one species increasing the number to 14 species in 13 genera.

The knowledge of Chilean Acanthosomatidae is limited, and several species have not been collected after their descriptions (e.g. *Pseudosinopla canaliculus* (Reed, 1898) *Nopalis sulcatus* Signoret, 1864; *Hyperbius geniculatus* (Signoret, 1864), *Ea australis* Distant, 1911); and/or reported in old expedition's works so far. About the biology, it is known that many species are distributed in the southern portion of the country and are usually associated with the species of *Nothofagus* (Fagales: Nothofagaceae). Few of them are associated with crops and could be considered of economic importance (Carvajal, Faúndez & Rider *in prep.*). The purpose of this work is to describe a new genus and new species for this family from southern Chile.

Material and methods

For morphology we follow Kumar (1974), and Kment & Vilímová (2010). Material used in this study belongs to the United States National Museum of Natural History, Washington, DC (USNM) and Allan Ashworth Collection, North Dakota State University (ASCN). The map was created with Panmap, Pangaea®.

Results

Archaeoditomotarsus gen. nov.

Type species: *Archaeoditomotarsus crassitylus* sp. nov., by present designation.

whereas it is trapezoid in *Ditomotarsus*, and the ostiolar peritreme shape which is less elongated and more inflated in *Ditomotarsus*. From the other Chilean genera of Ditomotarsinae it can be separated by the characters given in the key.

The resemblance of this genus with genera of different subfamilies is another example of the current problem in classification of Acanthosomatidae, which has been discussed by Kment (2005) and Faúndez (2009), pointing out the need of reliable phylogenetic analysis.

This genus is known from a very small area in the forests of Los Lagos Region in Southern Chile (Fig. 6). This is a zone of valleys, volcanoes and glaciers which can serve as refuge to fauna associated with the ancient *Nothofagus* (Fagales: Nothofagaceae) forests. Thus we believe that this new genus is probably a Gondwanian relict, which is restricted to a small area of the *Nothofagus* forests in southern South America. Therefore it is possible that this genus is ancestrally related to some Neotropical genera with which it shares several morphological traits. The Neotropical genera evolved in the tropical climate and in the highlands of the Andes, thus explaining its disjunct distribution.

Key to Chilean Genera of Ditomotarsinae

- 1(2) Antennomeres strongly thickened. *Cylindrocnema* Mayr, 1864
 2(1) Antennomeres not strongly thickened. 3
 3(4) Paraclypei contiguous in front of clypeus. *Mazanoma* Rolston & Kumar, 1975
 4(3) Paraclypei not contiguous in front of clypeus. 5
 5(6) First antennal segment as long as or longer than head *Planois* Signoret, 1864
 6(5) First antennal segment shorter longer than head. 7
 7(8) Paraclypei strongly concave laterally; colouration blackish. *Hyperbius* Stål, 1867
 8(7) Paraclypei not strongly concave; colouration not blackish. 9
 9(10) Pronotum trapezoid in shape. *Ditomotarsus* Spinola, 1852
 10(9) Pronotum not trapezoid in shape. 11
 11(12) Ostiolar peritreme very short (reaching 1/3 of metapleuron width); body elongate; anteclypeus slightly surpassing paraclypei *Nopalis* Signoret, 1864
 12(11) Ostiolar peritreme longer (reaching 1/2 of metapleuron width); body not elongate; anteclypeus strongly surpassing paraclypei *Archaeoditomotarsus* **gen. nov.**

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