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Cladistic analysis and biogeography of *Brachystethus* Laporte (Heteroptera, Pentatomidae, Edessinae)[1]

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Abstract

In this paper, *Brachystethus* Laporte, 1832 is analyzed cladistically, using 21 characters and 15 taxa, including as outgroups, in a first analysis, the genera *Neotibilis* Grazia & Barcellos, 1994, *Edessa* Fabricius, 1803, *Olbia* Stål, 1862, *Peromatus* Amyot & Serville, 1843, and *Pantochlora* Stål, 1870. Further, these edessine genera were included in the ingroup, without any changes in the only resulting cladogram. The monophyly of *Brachystethus* is supported by four synapomorphies: metasternal carina partially bifurcated, pygophore with blade-like processes, anterior margin of gonocoxites 9 deeply concave medially, and a mesial thickening on gonapophyses 9. *Brachystethus* shares with *Edessa*, *Olbia*, *Pantochlora*, and *Peromatus* four synapomorphies: loss of subcallous margin on pronotum, mesosternal carina lower than metasternal carina, phallus with a short vesica, and presence of a beak-like projection on the thickening of vaginal intima. Based on the cladogram, the transferal of *Brachystethus* to Edessinae is here proposed. Biogeographical analysis has shown congruence between the distributional pattern of the clade formed by *B. rubromaculatus* Dallas, 1851, *B. signoreti* Stål, 1872, *B. cribrus* (Fabricius, 1781), and *Brachystethus* sp. nov. A, and vicariant events on Neotropical region, in the late Cretaceous.

Key words. Cladistic analysis, Edessinae, *Brachystethus*, Pentatomidae, biogeography

Introduction

Amyot & Serville (1843) established, within "Brevirostri, the group "Edessides", including several genera, among them *Edessa* Fabricius, 1803, *Peromatus* Amyot & Serville, 1843, and *Brachystethus* Laporte, 1832. Dallas (1851) established Edessidae, including

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