

Troglotayosicus akaido/12 April 2024 Phylogeny of the Troglomorphic Scorpion Genus Troglotayosicus (Scorpiones: Troglotayosicidae) with Description of a New Species from Colombia

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The enigmatic and rare genus *Troglotayosicus* Lourenço, 1981 (Troglotayosicidae) is known from a few locations in Colombia and Ecuador where they inhabit the leaf-litter on the ground. All species show troglomorphic characters. Little is known about the phylogeny and the biogeography of this fascinating genus.

Jairo Moreno-Gonzalez and co-workers have recently published an interesting article on the phylogeny of *Troglotayosicus*, and a new species from Colombia is described.

Troglotayosicus akaido Moreno-Gonzalez, Luna-Sarmiento & Prendini, 2024

The article has an identification key for the seven known species and a map of their known distribution.

Interestingly, one of the authors was stung by this species while collecting. The sting caused intense, local pain for 30 minutes, but no other serious symptoms. This is probably the first sting report for this family.

Abstract:

The troglomorphic scorpion genus *Troglotayosicus* Lourenço, 1981, occurs in hypogean and epigean habitats in the Andean and Amazonian rainforests of Colombia and Ecuador. The phylogenetic relationships among the species of *Troglotayosicus* are currently unknown. In the present contribution, a new species, *Troglotayosicus akaido*, sp. nov., is described from specimens collected in the leaf litter of a primary rainforest in the Colombian Amazon, near the border with Peru, raising the number of species in the genus to seven. The new species represents the easternmost record of the genus and further extends its distribution into the Amazon. Its phylogenetic position was tested in an analysis of all species of the genus and two outgroup taxa, scored for 131 morphological characters (16 new and 115 legacy; 104 binary and 27 multistate) analyzed with maximum likelihood under the MK model. *Troglotayosicus* was recovered as monophyletic and composed of two main clades. The morphological survey revealed that the ventral macrosetae of the leg telotarsi of the type species, *Troglotayosicus vachoni* Lourenço, 1981, are simple, subspiniform macrosetae, irregularly distributed, but not arranged into clusters nor forming elongated clusters of setae/spinules, as previously suggested. A distribution map and key to the identification of the species of *Troglotayosicus* are provided. Further research,

incorporating molecular data, is needed to understand the evolution and biogeographical history of this enigmatic scorpion genus.

Reference:

Moreno-González JA, Luna-Sarmiento DA, Prendini L. Phylogeny of the Troglomorphic Scorpion Genus *Troglotayosicus* (Scorpiones: Troglotayosicidae) with Description of a New Species from Colombia. American Museum Novitates. 2024;2024(4011):1-39. [Open Access]

<https://scorpion-files.blogspot.com/2024/04/a-new-troglomorphic-leaf-dwelling.html>

Revision #2

Created 15 May 2024 06:21:17 by kkomodo

Updated 1 June 2024 23:38:56 by kkomodo