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***Nesticus dimensis* new species, a new troglobitic spider from Turkey (Araneae, Nesticidae), with comments on its phylogenetic relationships**

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Abstract

A new troglobitic spider species, *Nesticus dimensis* n. sp. (♂ ♀), inhabiting the Dim Cave of Alanya (Antalya Prov., Turkey) is diagnosed and described. The new species belongs to the Eastern Mediterranean *Nesticus* Group, which includes *N. eremita* and *N. speluncarum* as the most common and widespread species along with *N. arenstorffi* and *N. henderickxi*. Evolutionary relationships of the taxa belonging to this group of species are discussed on the basis of morphological and molecular data (using *cox1*, *rrnL* and *H3* gene sequence data).

Key words: Arachnida, Araneae, taxonomy, new species, troglobite, caves, Turkey, Mediterranean, molecular phylogeny

Introduction

Nesticids are important representatives of Northern Mediterranean cave faunas and constitute one of the most species-rich groups of cave-dwelling spiders in this area. There are currently 44 species in the Mediterranean region (Platnick, 2013), belonging to *Nesticus* Thorell, 1869 (22 species), *Carpathonesticus* Lehtinen & Saaristo, 1980 (21 species) and *Typhlonesticus* Kulczyński, 1914 (1 species). All of these species but one have been collected in caves, and many of them show conspicuous troglomorphic characters.

The genus *Nesticus* is distributed worldwide except for southeastern Asia, although the great majority of species are Holarctic in distribution. *Nesticus* includes 126 species and eight subspecies (Platnick 2013). Concerning the 22 species of *Nesticus* occurring in the Mediterranean, a detailed study of the male and female genitalia shows conspicuous morphological differences suggesting the presence of different evolutionary lineages that could be interpreted as different genera. This morphological variability among Mediterranean *Nesticus* species was emphasized by Lehtinen & Saaristo (1980). In *Carpathonesticus* clear morphological variability also exists among the 21 species known so far, thus a deep taxonomic revision should be carried out in order to clarify its systematics.

Our goal is to perform a phylogenetic study of all Mediterranean nesticid species in order to define the evolutionary lineages within this group and update the systematics of this family in the Mediterranean area. As part of this overall project, in this paper we describe a new cavernicolous species of *Nesticus* from Dim Cave, a well-known cave located near Alanya, Turkey. We also explore within the Mediterranean *Nesticus* species those that show clear morphological relationships with *N. dimensis* n. sp. To do that, a molecular phylogeny based on nuclear and mitochondrial DNA sequences was reconstructed.