

A new endemic dormouse species in Anatolia

Ortaç Çetintaş[‡], Sercan Irmak[§], Ferhat Matur[!], Mustafa Sözen[‡]

[‡] Zonguldak Bülent Ecevit University, Zonguldak, Türkiye

[§] Balıkesir University, Balıkesir, Türkiye

[!] Dokuz Eylül University, İzmir, Türkiye

Corresponding author: Ortaç Çetintaş (ortacetintas@gmail.com)

Abstract

Molecular studies provide very useful information on predicting the evolutionary history of species, species ecology and for describing new species. *Dryomys laniger* is an alpine species that is endemic to Anatolia, inhabiting high rocky areas. Its known distribution consists of fragmented and isolated populations. In order to determine the evolutionary history of the species, a phylogenetic tree was created with one mtDNA and two nuDNA. Thirty-one samples were collected from 6 populations of *Dryomys laniger* distributed in Anatolia. Among these 6 populations, Subaşı plateau (Antalya) and Çiçekliboyun plateau (Niğde) populations are new distribution records for the species. According to the result of this study the genetic distance between Eastern lineage and Western lineage is 7%. Beside this genetic distance, two clades are morphologically significantly different from each other. Based on the differences, the Eastern lineage was defined as a new *Dryomys* species. The two lineages appear in the evolutionary tree as two monophyletic lineages and no common haplotype is shared between these lineages. According to the data available in the literature, and provided in this study, the westernmost distribution limit of *Dryomys laniger* is around the Subaşı plateau (Antalya), and the easternmost distribution limit is probably the Saimbeyli-Tufanbeyli line. The distribution area of the new *Dryomys* species is Tahtalı Mountains on the Adana-Kahramanmaraş border in the west, and the Erzurum region in the east. This study strongly suggests the importance of Anatolian high mountain ecosystems in terms of biodiversity, their potential to host new species, and the need for careful conservation.

Keywords

Phylogeography, endemic mammals, molecular ecology, Alpine species, evolutionary history

Presenting author

Ortaç Çetintaş

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