



## A review of the Mutillidae (Hymenoptera) of Turkey

ARKADY S. LELEJ<sup>1</sup> & EROL YILDIRIM<sup>2</sup>

<sup>1</sup>Institute of Biology and Soil Science, Far Eastern Branch of Russian Academy of Sciences, Vladivostok-22, 690022, Russia.  
E-mail: lelej@biosoil.ru

<sup>2</sup>Atatürk University, Faculty of Agriculture, Department of Plant Protection, 25240, Erzurum, Turkey.  
E-mail: eyildi@atauni.edu.tr; yildirimerol@hotmail.com

### Abstract

Sixty five species in 21 genera are recorded from Turkey. The new species, *Skorikovia anatolica* Lelej, **sp. nov.** (Turkey), is described and illustrated. The hitherto unknown male is recognized for *Pseudophotopsis schachruda* (Skorikov). A new synonymy is proposed for *Pseudophotopsis schachruda* (Skorikov 1935) = *Ephutomma schachruda* var. *robusta* Skorikov 1935, **syn. nov.**, *E. mavromoustakisi* Suárez 1959, **syn. nov.** A new status is proposed for *Krombeinella gaullei* (Invrea). The status is resurrected for *Pseudophotopsis schachruda* (Skorikov) and *Dentilla erronea* (André). Nine species are recorded for the first time from Turkey: *Pseudophotopsis syriaca* (André), *Myrmilla anopla* Skorikov, *Tropidotilla semirufa* (André), *Mutilla richterae* Lelej, *Skorikovia radoszkovskii* (Skorikov), *S. transcaucasica* (Lelej), *Smicromyrme azerbaijanicus* Lelej, *S. novaki* Invrea, and *S. rufipes* (Fabricius). *Krombeinella gaullei* (Invrea) is recorded for the first time from Bulgaria. Eleven species and one subspecies are excluded from the list of Turkish fauna. A key to five Palaearctic species of *Skorikovia* is given. A tabular checklist for the mutillid fauna of Turkey, Greece, Armenia, Azerbaijan, and Georgia includes 106 species and four subspecies. A cluster analysis of faunal similarities among these countries for Mutillidae produce two major clusters (index similarity 0.4): Turkey and Greece (bootstrap probability 95 %), and Armenia, Azerbaijan, and Georgia (bootstrap probability 90 %), and demonstrates the important boundary between two large biogeographical subregions of Palaearctic: Mediterranean and Euro-Siberian. The Turkish fauna, especially its eastern part, is the transitional zone between these subregions. The mutillid fauna of Turkey consists of widely distributed in the Mediterranean (21), East Mediterranean (28), widely distributed in the Palaearctic (three) and Anatolian-Armenian (13) species, including five endemic species. The highest number of species is known from the Anatolian biogeographical province of Turkey: 55.

**Key words:** Mutillidae, velvet ant, fauna, new species, biogeography, Turkey, Greece, Armenia, Azerbaijan, Georgia

### Introduction

Turkey occupies Asia Minor between the Mediterranean Sea and the Black Sea and stretches into continental Europe (Fig. 1). Turkey has long been known to possess a potentially rich mutillid fauna. However, there is no modern comprehensive work that summarizes all information about the velvet ants mentioned in the literature. The present work has been assembled to provide a revised list of the mutillid species found in Turkey, to provide critical assessment of previous literature records, and to analyze the composition of mutillid fauna of Turkey and its similarity with neighbouring countries. Mutillidae inhabit mostly dry, sandy areas. Such arid places, frequently seen in the territory of modern Turkey, form a virtual melting pot, where the faunas of Middle and Central Asia meet these of Mediterranean. The variable topography of Turkey, with isolated highlands formed along the border with Georgia, Armenia, and Iran after the Pliocene, has contributed to neoendemism in this area (Ljubomirov & Yildirim 2008). The mutillid fauna of Turkey is richer than that of neighbouring countries (Table 1). Nine species have been described from Turkey (Radoszkowski 1890, André 1901, Invrea 1952, Nagy 1972, Suárez 1975, Lelej 1985, Nonveiller 1994).