



## A taxonomic review of the Palaearctic *Tetramorium ferox* species-complex (Hymenoptera, Formicidae)

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### Abstract

This revision treats the members of the Palaearctic *Tetramorium ferox* species-complex on the basis of external morphology and using high precision morphometrics. With this approach we recognize five taxa and six synonyms: *Tetramorium aegeum* Radchenko, 1992b; *Tetramorium densopilosum* Radchenko & Arakelian, 1990; *Tetramorium diomedeam* Emery, 1908; *Tetramorium ferox* Ruzsky, 1903; and *Tetramorium feroxoide* Dlussky & Zabelin, 1985. *Tetramorium laevior* Menozzi, 1936 is synonymized with *Tetramorium diomedeam*. *Tetramorium confinis* Radchenko & Arakelian, 1990, *Tetramorium perspicax* Radchenko, 1992b, and *Tetramorium ferox* subsp. *silhavyi* Kratochvil, 1941 are synonymized with *Tetramorium ferox*. *Tetramorium bursakovi* Radchenko, 1992a is synonymized with *Tetramorium feroxoide*. A key and redescriptions for workers and gynes are given. SEM photos for workers and gynes of each species are provided. A morphology-based definition of the species complex for workers, gynes and males is also provided.

**Key words:** ants, taxonomy, morphometry, distribution, key, biogeography

### Introduction

As a part of a larger revisionary work of the ant genus *Tetramorium* Mayr, 1855 we herein report our results concerning the *T. ferox* species-complex. *Tetramorium* is one of the most diverse ant genera, comprising more than 400 species worldwide (Bolton, 1995a). Modern taxonomic revisions of this genus were carried out by Bolton (1976, 1977, 1979, 1980) for all zoogeographical regions except for the Palaearctic. Biology, distribution and the life cycle of palaearctic *Tetramorium* species are poorly known. About 60 species and infraspecific forms of *Tetramorium* have been recorded from the Palaearctic up to now, mostly from the southern part of the region (Csósz *et al.* 2007).

In the last decade, the interest in research on the genus *Tetramorium* has grown and become part of the mainstream of European myrmecological research. An increasing number of new papers apply various approaches, such as morphology and morphometry (Schulz 1996, Sanetra *et al.* 1999, Csósz & Markó 2004, Csósz *et al.* 2007), or different molecular methods (*e.g.* Sanetra *et al.* 1994, Sanetra & Buschinger 2000, Schlick-Steiner *et al.* 2005, Schlick-Steiner *et al.* 2007) to identify smaller species groups or complexes. Due to the exceedingly high diversity and an expected number of cryptic species it is essential to split the genus into treatable, small complexes even within the Palaearctic Region. Moreover, these species-complexes have distinctive character combinations. The first part of our revisionary work was on the *T. chefketi* species complex (Csósz *et al.* 2007).

The *Tetramorium ferox* complex is distributed throughout Central Europe and the Central and Eastern Mediterranean basin up to central parts of the Palaearctic region, and apparently is absent in North Africa, France and the Iberian Peninsula. Although unknown from the Near East, this area is poorly sampled and we expect to find members of the group in this area and also in the steppe formations of Central Russia. The species is adapted to dry and warm areas, with high nest densities in steppes and mediterranean grasslands with few trees.