



## Description of two new *Temnothorax* species (Hymenoptera: Formicidae) from Italy

ANDREAS SCHULZ<sup>1</sup>, JÜRGEN HEINZE<sup>2</sup> & KATJA PUSCH<sup>2</sup>

<sup>1</sup>Staatliches Museum für Naturkunde, Erbprinzenstr. 13, 76133 Karlsruhe, Germany. E-mail: schulz\_ant@gmx.de

<sup>2</sup>Biologie I, Universität Regensburg, 93040 Regensburg, Germany

### Abstract

We describe two species of the ant genus *Temnothorax*: *T. alienus* **nov. spec.** and *T. saxatilis* **nov. spec.** Both new species are endemic to middle and southern Italy. We characterize the two species and compare them to similar *Temnothorax* from Italy and the Western Palearctic.

**Key words:** Formicoxenini, species diversity, taxonomy of ants, radiation, European fauna

### Introduction

In his recent reclassification of the Formicidae, Bolton (2003) divided the myrmicine genus *Leptothorax* (*sensu lato*) into three genera: *Leptothorax* (*sensu stricto*), *Nesomyrmex* and *Temnothorax*. The great majority of former species of *Leptothorax* (*s.l.*) were transferred to the genus *Temnothorax*, established by Mayr in 1861 for a number of small Palearctic Formicidae. During the last decades, a wealth of biological information has been accumulated about species of this and other genera in the tribe Formicoxenini. As colonies are generally small, with often less than 200–300 individuals, they can be collected completely and reared under controlled conditions in the laboratory (Buschinger 1968, 1974). The large interest in the Formicoxenini stems from the fact that its species serve as model systems for the investigation of population and colony structures of ants with small societies and pronounced kin conflict (Heinze 2004), and also because numerous species are social parasites – guest ants, slave-makers, and workerlessinquilines (Buschinger 1981, 1986, Hölldobler & Wilson 1990).

In contrast to the attention species of *Temnothorax* and other formicoxenine genera have received with respect to behavior and social biology, their taxonomy is still unclear. There are nearly 600 described taxa in the genus *Temnothorax*, of which approximately 300 are recognized as valid species (Bolton 1995a, 1995b). *Temnothorax* inhabits nearly all terrestrial environments in the Palearctic and is found in almost all habitats from sea level to altitudes of 2700 m. Mediterranean habitats are especially rich in species. A high proportion of endemic *Temnothorax* species occurs at high altitudes, especially on isolated mountains (Schulz unpubl.).

In Italy, the number of described species of *Temnothorax* is high and the diversity of species seems to be similar from north to south (Baroni Urbani 1971). However, southern Italy is less well studied than the northern part of the country and additional species can be expected. Here, we report on two new species of *Temnothorax* from southern Italy, with interesting or geographically far distant relatives. We hope that our study inspires more interest in the remarkable diversity of *Temnothorax* in the Palearctic, which matches that of the most diverse ant genera in the tropics.