

Apulia - Prov. Foggia, Gargano, road N. 528, ca. 2 km NE intersection to Carpino, ca. 700m, 23.V.1994, R. Güsten & M. Sanetra leg. [host of *S. huberi*]; Prov. Foggia, Gargano, road Monte S. Angelo-Carpino 1,5 km NW intersection to Vico del Gargano, ca. 700m, 24.V.1994, R. Güsten & M. Sanetra leg. [host of *S. destefanii*];

Abruzzi - Prov. L'Aquila, Gran Sasso, ca. 6 km NE Castel del Monte, ca. 1600m, 30.V.1994, M. Sanetra leg. [host of *S. alpinus*].

Other investigated material: Switzerland, Zermatt, ca. 1600m, W.M. Wheeler leg. 4♀♀ (NMB), syntypes of *T. caespitum penninum* Santschi [host of *S. alpinus*].

The species is locally frequent in central Europe and the Alps, where it prefers higher elevations and more clayey or loamy soils than *T. caespitum*. Like that species, it is monogynous, though there is one record of polygyny from the Alps (Buschinger, 1974). *T. impurum* is probably widely distributed in other parts of the Palaearctic but the actual range remains insufficiently known for several reasons: its status as a distinct species has been confirmed as late as about twenty years ago (Kutter, 1977; Cammaerts et al., 1985), and workers of *T. impurum* are still very difficult to distinguish from those of *T. caespitum*. The latter are generally less strongly sculptured with much intraspecific variation and transition to *T. impurum*. Morphometric characters and differences of sculpture elaborated recently (Seifert, 1996), though constituting a progress, do not identify all samples correctly and appear to be less useful outside central Europe. Females of *T. impurum* are said to possess a slightly less bulging mesonotum, stronger sculpture and to be somewhat smaller and lighter in colour (Kutter, 1977; Cammaerts et al., 1985). These differences, however, are statistical and apparently of little value for species distinction in southern Italy. Therefore reliable assignment of our samples to either *T. caespitum* or *T. impurum* had to be based on the readily distinguishable male genitalia (see Fig. 1 in Cammaerts et al., 1985) and different electromorphs for *Mdh*p (Tab. 4 pag. 333; see also Sanetra et al., 1994).

T. impurum was first mentioned for Italy by Poldi (1980) from Piedmont, but the record, being based on a single worker, seems very doubtful. Indeed it still stands as the only published Italian record of the species. Nevertheless, Poldi et al. (1995) include north and south Italy and potentially Sicily in its stated range. Even in central Europe, *T. impurum* shows a decidedly montane distribution compared to *T. caespitum*, and our new records suggest that south of the Alps, typical *T. impurum* are confined to high elevations. In the Alps and probably also the Appennines, it is the only *Tetramorium* species occurring above 1500m. However, in the mountains of Calabria and Sicily, a form assignable to *T. caespitum* seems to replace *T. impurum* ecologically, and for this reason we question the reported presence of *T. impurum* in Sicily (Poldi et al., 1995).

Individuals from three nest samples from central Gargano Peninsula are close to *T. impurum* in worker morphology and electrophoresis at the loci presented in Tab. 4 pag. 333. However, climatic conditions on the Gargano strongly differ from the high altitude sites typically inhabited by *T. impurum*. Electrophoretic patterns obtained from a recently examined hexokinase locus were not concordant with those of *T. impurum*, though there are not yet enough data to evaluate the taxonomic significance of these electromorphs. Certain samples collected at the island of Elba at similar heights probably belong to the same entity. More detailed studies are required to determine if *T. impurum*