

# ***Trichoniscus nivatus* Verhoeff, 1917: A Terrestrial Isopod Species (Crustacea: Oniscidea) New to the Hungarian fauna**

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(Received: 10 September 2008; accepted: 7 July 2009)

This is the first report of the occurrence of *Trichoniscus nivatus* Verhoeff, 1917 in Hungary. The species was captured in natural habitats in two localities of Somogy county, south-western Hungary. Description of known distribution, and figures of male genitalia are given.

Keywords: woodlice, *Trichoniscus nivatus*, new species, Hungary, Transdanubia, soil fauna.

Several isopods previously known as Alpine endemism were found in south Transdanubian region of Hungary due to extensive field surveys in the turn of the 20<sup>th</sup>–21<sup>st</sup> centuries. The results have already been published in several papers (e.g. Farkas, 1998a; Farkas, 1998b; Farkas, 2004; Vilisics and Farkas, 2004; Vilisics, 2005; Farkas, 2007; Vilisics, 2007; Hornung et al., 2008; Gregory et al., 2009) showing evidences that the vast majority of the region's isopod fauna is represented by Cosmopolitan, Holarctic and Central- and Eastern European species. However, the occurrence of "Alpine" species (e.g. *Protracheoniscus franzi* Strouhal, 1948) along with Illyric and North-Balkan species [e.g. *Calconiscellus karawankianus* (Verhoeff, 1908) and *Trichoniscus bosniensis* Verhoeff, 1901] suggests that the area is a diverse biogeographical crossroad for woodlice.

Due to further field surveys carried out in other parts of Transdanubia we have found several species new to the Hungarian fauna in the past few years (Vilisics, 2005; Vilisics, 2007). Our results, especially the new Trichoniscid species, have prompted us to the necessity of revisions on existing materials. These investigations resulted in the finding of *Trichoniscus nivatus* Verhoeff, 1917, a species known exclusively from higher elevations in Austria and Germany.

*Trichoniscus* species are pigmy sized soil and litter dwelling animals with over 100 species worldwide, and an even higher number of synonymies (Schmalfuss, 2003). This is a rather obscure group of isopods. According to our recent knowledge, there are six species in Hungary that have been fully identified by experts: *Trichoniscus noricus* Verhoeff, 1917

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(Kesselyák, 1937) *T. bosniensis*, *T. crassipes* Verhoeff, 1939, *T. steinboeckii* Verhoeff 1931 (Vilisics, 2005; Vilisics, 2007), *T. provisorius* Racovitza, 1908 (Gregory et al., 2009) and *T. nivatus* Verhoeff, 1913 in the present paper. Most of these species have few records in Hungary. However, the vast majority of the Hungarian *Trichoniscus* material was published as *Trichoniscus provisorius*, *T. pusillus* or *T. noricus*. According to our experience these data are rather dubious, therefore further revisions may be important in the future.

#### *Description of the species Trichoniscus nivatus Verhoeff, 1917*

The overall appearance of *T. nivatus* resembles to most *Trichoniscus* species found in Hungary. The body of ca. 2 or 3 mm length is smooth, with light-purple or light-brown colour with fine markings. The species is easily identifiable by its male pleopod-exopodite (Fig. 1), but other morphological characters are unknown.

This species is peculiar in terms of its distribution: the known distribution (Fig. 2.) of *T. nivatus* was restricted to the area between the Reichenhaller Mts. (Stauffenberge and Reiteralpe) in South-East Germany and Salzkammergut and Dachstein Groups in Northern Austria, mainly from higher elevations (> 1380 m a.s.l.) in mountainous regions (e.g. Verhoeff, 1917; Gruner, 1966).

The examined material is stored in University of Kaposvár, Faculty of Animal Science.

#### *Material examined*

- Sávolly, Somogy county (UTM: XM76), willow – poplar forest, 14. 05. 2002, leg. Sándor Farkas, det. Ferenc Vilisics, 3 specimens, 1 male;
- Pogányszentpéter, Somogy county (UTM: XM54), alder forest, 26. 07. 2002, leg. Sándor Farkas, det. Ferenc Vilisics, 9 specimens, 2 males.

## Discussion

Here we present data of a species new to the Hungarian terrestrial Isopoda fauna, which therefore consists of 57 species. The isopod *Trichoniscus nivatus* was found during revisions of samples catalogued as *T. provisorius* in Southern Transdanubia, therefore previously published results (Farkas, 2004; Farkas, 2007) should be reconsidered.

The Hungarian localities are situated approximately 200 kms away from the Alps, and over 300 kms from the previously known distribution area, on 100–150 metres above sea level (Fig. 2). The area is connected with Alpine regions through the main rivers of south and west Transdanubia (e.g. Dráva, Rába), thus, we hypothesise that rivers originating from the Alps might play an important role in the dispersal of alpine-subalpine isopods to lower elevations in Hungary.

We suggest further field surveys and efforts to be taken in re-determinations on existing material to clarify the distribution patterns of the *Trichoniscus* species in Central-Eastern Europe.

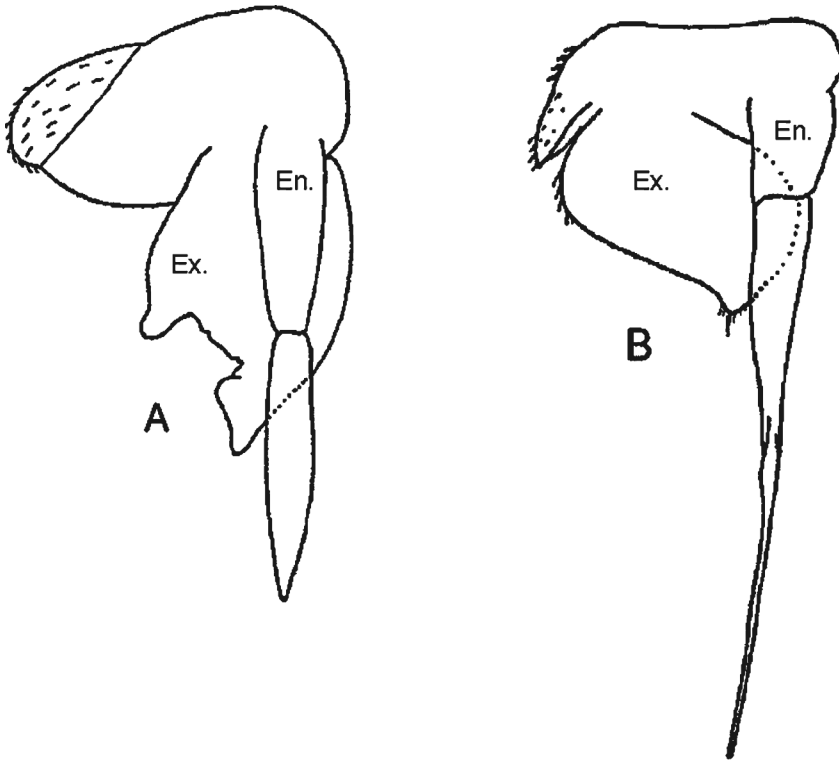


Fig. 1. Male genitalia of *Trichoniscus nivatus* (after Gruner, 1966).

A: 1st pleopod, exo- and endopod; B: 2nd pleopod, exo- and endopod; Ex.: Exopod; En.: Endopod

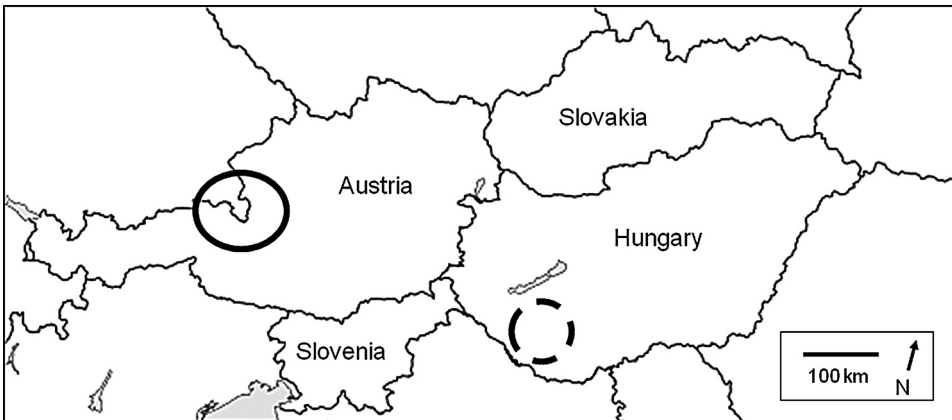


Fig. 2. The area of previously known and new occurrences of *Trichoniscus nivatus*.

Continuous elliptic: The known distribution area of the species (SE Germany and W Austria); Dashed elliptic: Area of the Hungarian occurrence

## Acknowledgements

We are grateful to Dr. Helmut Schmalfuss for the help in species revisions and Dr. Elizabeth Hornung for her useful advices. We thank Steve J. Gregory for his thorough supervision on the text and his useful comments.

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