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**Thinobius korbeli found in the Szigetköz, Hungary  
(Coleoptera: Staphylinidae: Oxytelinae)**

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**Abstract** – The blind, flightless, soil-dwelling staphylinid *Thinobius korbeli* LÖBL et RYCHLÍK, 1994 is first reported from Hungary. The beetle was found in the Szigetköz. Certain important primary and secondary sexual characters are illustrated. With 7 figures.

**Key words** – Coleoptera, Staphylinidae, Oxytelinae, *Thinobius korbeli*, endogean, sexual characters.

INTRODUCTION

The Szigetköz is the area bordered by the Mosoni-Duna and the main watercourse of Duna (Danube) river. An intensive faunistic-ecological study of the area was triggered by the diversion of the runway of the Duna in 1992 by Slovakia onto their side (Csallóköz). The alteration affects the riverbank habitats from Samorín to Gabčíkovo. The Hungarian Natural History Museum started a monitoring study in 1993, focused on the transformation of the faunas caused by the changes. Continuous studies were carried out in Pannonic willow galleries (*Salicetum albae-fragilis*) at Nagybajcs, Ásványráró and Lipót.

In 1994 a blind, flightless staphylinid, *Thinobius korbeli* LÖBL et RYCHLÍK, 1994 was described from Slovakia as new to science, with a detailed ecological-morphological discussion (LÖBL & RYCHLÍK 1994). This species is unique in the subfamily Oxytelinae, where real soil-dwelling taxa were not known previously. Since the localities from where the species was mentioned (Čičov, Gabčíkovo, Trstená na Ostrove) exactly mirror the

Hungarian test sites on the riverside of the Duna, it was a naturally arising question whether the species can be found on the Hungarian side also. The beetle was said to be associated with the plant *Leucojum aestivum* L., a typical inhabitant of often-flooded riverine woods.

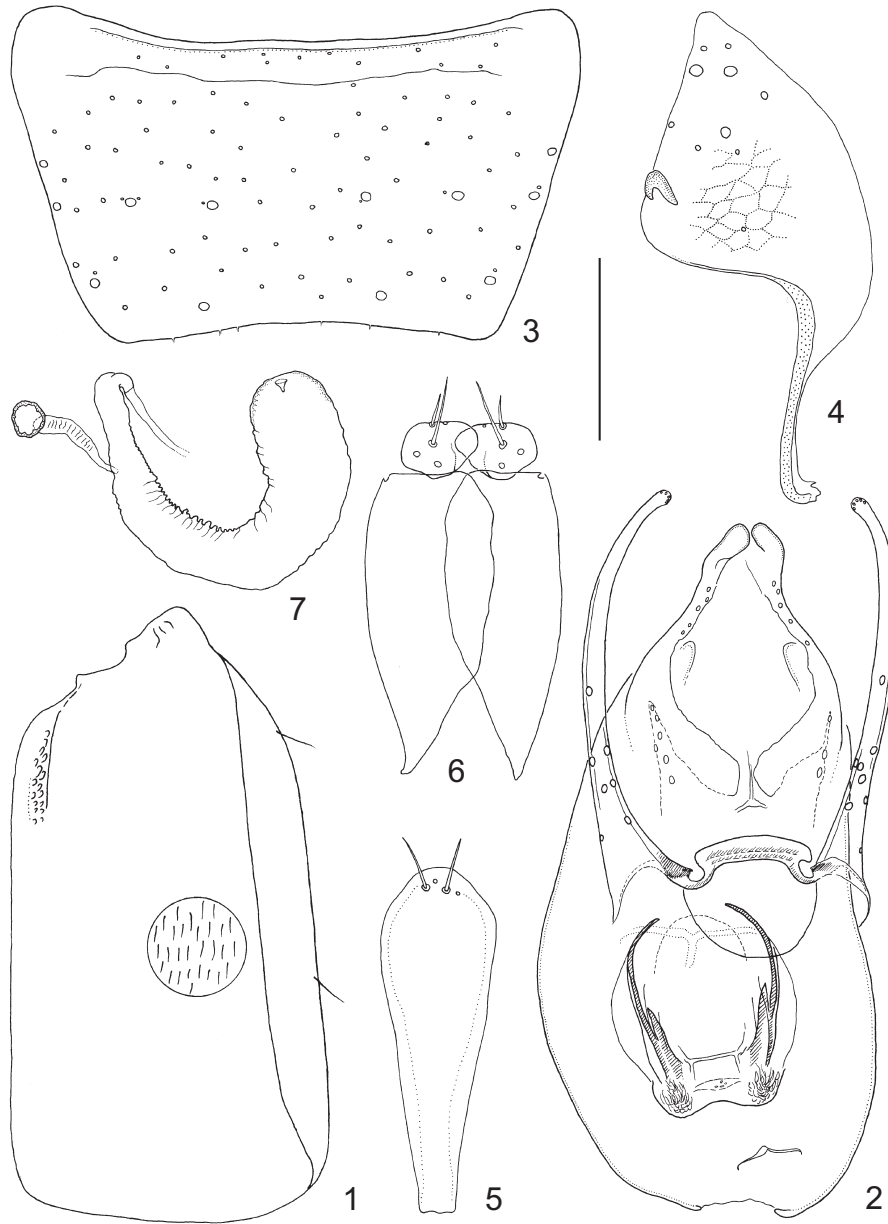
*Abbreviations* – DEIC = Deutsche Entomologische Institut, Müncheberg, Germany; HNHM = Hungarian Natural History Museum, Budapest, Hungary; MHNG = Muséum d'Histoire Naturelle, Genève, Switzerland.

## MATERIAL AND METHODS

To the knowledge of the author, this species was not collected at any new locations (other than those listed in the original description). The Hungarian part of the Duna is heavily affected by the Slovakian alteration of the flow of the river. Of the three sites in the monitoring study, the one at Nagybjacs seemed to be most suitable. This locality is an unaffected gallery forest with lagoons (often with water). It is regularly flooded, therefore rather sparsely vegetated. An ideal site for *Leucojum aestivum* L., which is a plant growing singly, but specimens can occur close to each other. Two groups of plants were tested, one almost immediately (a few meters away) at the waterside, the other group of plants was situated at a higher ridge towards the next lagoon. In the first group only the top 10 centimetres of the soil was dug up (below that there was water), at the other group, the top 20–25 cm. The samples were then treated according to the so-called “soil-washing” method. The soil was put in a water-filled bucket and the organic material coming to the surface was gathered with a fine net and transferred to a fabric bag in which it was let to drip from the water. Back in the laboratory the sample was placed in a Berlese funnel and the specimens let to fall in a container with 80% ethyl alcohol. The funnel was watched throughout 5 days. Altogether 6 specimens (adults) of *Thinobius korbeli* were collected.

Earlier this year GIULIO CUCCODORO sent me a few unmounted specimens of the material that was the basis of the description and which are kept in MHNG. The MHNG material also contained a couple of larval specimens, all collected in July, with the same method as the adults. One of these larvae surely belongs to *Thinobius*, compared to the only described larva of the genus, that of *Thinobius frizzelli* HATCH, 1957 (KINCAID 1961). Since the occurrence of another *Thinobius* species in such habitat is very unlikely, this specimen is supposed to be a larva (probably L2 stage, judging from its size) of *T. korbeli*. Unfortunately, the specimen is very poorly preserved and not suitable for a proper description. Following is the list of the specimen data.

*Thinobius korbeli* – SLOVAKIA: Čičov, 24.VII.1994, leg. O. MAJZLAN (DEIC, 1 female, Paratypus, MNHG, 4, plus 1 larva, 1 male adult [fragmentary] embedded in Euparal, Paratypus, HNHM, 2, Paratypus); Čičov, 24.X.1994, leg. O. MAJZLAN (MHNG, 1 female). HUNGARY: Győr-Moson-Sopron m., 1 km N Nagybjacs, 110 m, *Leucojum aestivum* roots, 15 cm, soil washing, Berlese funnel, 47°46'34"N, 17°40' 47"E, 11.VI.2008, leg. GY. MAKRANCZY (HNHM, 6).



**Figs 1–7.** *Thinobius korbeli* LÖBL et RYCHLÍK, 1994: 1 = elytron, 2 = aedeagus, 3 = sternite VIII of male, 4 = tergite IX of male, 5 = sternite IX of male, 6 = female genital appendages, 7 = spermatheca. Scale = 0.077 mm for Fig. 1, 0.066 mm for Fig. 2, 0.100 mm for Figs 3–5, 0.125 mm for Figs 6–7.

For the illustrations permanent preparations were made in Euparal mounting medium on plastic cards pinned with the specimens. Drawing was done with a Jenalab compound microscope (Carl Zeiss, Jena) and a drawing tube.

## RESULTS

Because the original description missed a few details important for judging the phylogenetic relatedness of the species, a couple of illustrations were felt necessary to add. This helps comparing the taxon to other European species already illustrated (e.g. the *Thinobius linearis* group in MAKRANCZY & SCHÜLKE 2001). Elytra (Fig. 1) with characteristically reduced shoulders (usual for endogean, flightless staphylinids). The original aedeagus illustration was very detailed but misinterpreted a few details that made it difficult to realise that the species (not counting the specialised habitat and resulted modifications) is actually very similar and closely related to a group of species that includes for example *Thinobius klimai* BERNHAUER, 1902 and *T. newberyi* SCHEERPELTZ, 1925. The aedeagus (Fig. 2) also shows this affinity, and perhaps a more distant relationship to other European species like *T. major* KRAATZ, 1857, or *T. ligeris* PYOT, 1874 that have similar aedeagal characters and terminalia. Male sternite VIII is unmodified (Fig. 3), sternite IX present (Fig. 4), tergite IX unmodified (Fig. 5). Female genital appendages (Fig. 6) are also in the plesiomorphic condition, valvifers and coxites still separate (see MAKRANCZY 2006) as opposed to the more derived species, those that are referred to as *Thinobius* s.str. in recent works (e.g. SCHÜLKE 1998). Spermatheca bipartite, very weakly sclerotized, sac-like (Fig. 7). As a conclusion, *Thinobius korbeli* appears to be a highly modified species from one of the very basal lineages of the genus *Thinobius*.

\*

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