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Two new acarid mites from Hungary (Acari, Astigmata)

by A. FAIN and S. MAHUNKA

Summary

A new genus, *Cisellipsopus* n.g., and two new species, *Cisellipsopus microporus* and *Troglocoptes longibursatus* (Acaridae), are described from soil traps in Hungary.
Key-words : Taxonomy - Acari - New taxa - Soil - Hungary.

Résumé

Un nouveau genre, *Cisellipsopus* n.g., et deux nouvelles espèces, *Cisellipsopus microporus* et *Troglocoptes longibursatus* (Acaridae), sont décrits de Hongrie. Ils furent capturés au moyen de pièges déposés sur le sol.
Mots-clés : Taxonomie - Acari - Nouveaux taxa - Sol - Hongrie.

Introduction

We describe herein a new genus, *Cisellipsopus*, and two new species, *Cisellipsopus microporus* and *Troglocoptes longibursatus*, both found in soil traps by S.M. in Hungary. All the measurements are in micrometers.

Family ACARIDAE
Subfamily RHIZOGLYPHINAE
Genus **Troglocoptes** FAIN, 1966

The genus *Troglocoptes* FAIN, 1966 was established for a species, *T. luciae* FAIN, 1966, found in wet guano of a bat, *Nycteris* sp., in a cave in Zaïre.
A second species, *T. subterraneus* FAIN, 1976, was discovered from the humus in Nouvelle Amsterdam Island.
The new species described herein was found from humus in Hungary.
The genus *Troglocoptes* is close to the genera *Schwiebea* OUDEMANS, 1916 and *Acarotalpa* VOLGIN, 1966. It differs from these genera by the following characters (in females) :

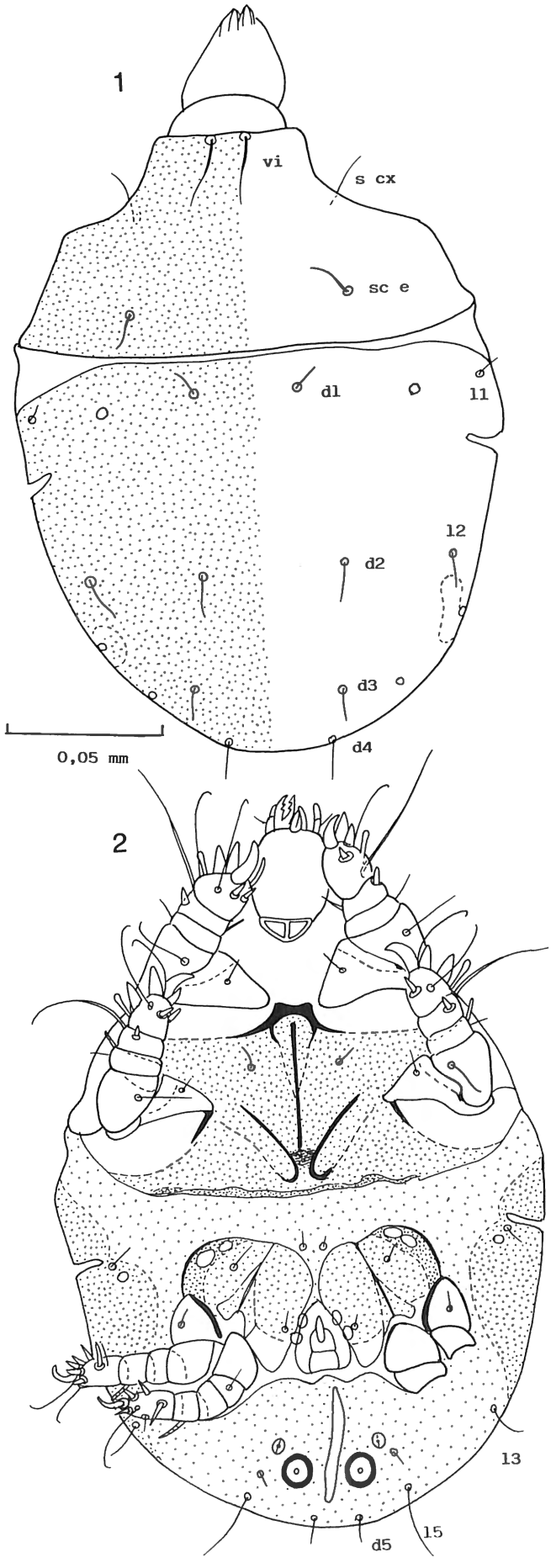
1. Dorsum with two large completely punctate shields. In SCHWIEBEA, there is only a small propodonotal median shield, in *Acarotalpa*, the dorsal cuticle is soft.
2. Setae *sc e* are short (long in the two other genera).
3. Tarsi I-IV with 10-10-10-10 setae, of which 8 are spines and 2 are tenent setae. In *Schwiebea* the number of spines is variable but there are always 3-3-3-2 tenent setae. In *Acarotalpa* the tarsi bear 13-12-10-10 setae.
4. The bursa is a long cylindrical tube and the spermatheca is not visible. In *Schwiebea* the bursa is shorter and the spermatheca presents a sclerotized pattern. In *Acarotalpa*, the bursa comprizes a distal free tube and a proximal tube completely embedded into the spermatheca.

KEY TO THE GENUS *TROGLOCOPTES*
(females)

1. Epimera III and IV free. Bursa 50 long. Setae *sc e* 120 apart ..... *T. subterraneus* FAIN, 1976
   Epimera III and IV fused. Setae *sc e* 90-95 apart . 2.
2. Bursa 60-70 long ..... *T. luciae*, FAIN, 1966
   Bursa 115-120 long ..... *T. longibursatus* n. sp.

Troglocoptes longibursatus nov. spec.

Male holotype (figs 1-2) : idiosoma 210 long and 160 wide (maximum). Length and width in a paratype : 197 × 147. Dorsum : Sejugal furrow well developed. Propodosoma 80 long. Dorsum covered by 2 completely punctate and sclerotized shields. Hysteronotum with a pair of long lateral lyrifissures situated between *l1* and *l2* and extending ventrally. Length of setae : *vi* 18-20; *sc e* 12; *d1* to *d4* 12 to 15; *l1* and *l2* 5 to 8; *l3* 15; *l5* (ventral) 25; *d5* and *a* (ventral) 3 to 5. Venter : Sternum long, reaching almost the epimera II posteriorly. All coxae covered with punctate shields. Epimera III and IV fused. Penis 18 long. Diameter of copulatory suckers 12. Legs short, the anterior legs stronger than posterior legs. Lengths of tarsi I-IV : 15-15-15-15. All tarsi ending in a claw, the anterior claws much stronger than the posterior ones. Tarsi I-II with 10 setae, of which 2 are thin tenent setae about as long as tarsi and curved at apex and 8 are spines (5 small and 3 very thick).



Tarsi III with 2 tenent setae and 8 spines. Tarsi IV with 1 tenant seta, 7 spines and 2 suckers. Tibiae I-II with 2 unequal spines; tibiae III and IV with a spine. Solenidia : tarsus I with ω*1* basal and with apex slightly bulbous; ω*2* subbasal, slightly shorter than ω*1*; ω*3* apical. Tibiae with 1-1-1-1 solenidia. Genua 2-1-1-1. The genu I bears 2 solenidia equal in length and set closely together. Gnathosoma relatively narrow, 48 long and bearing a sclerotized linear pattern at its base.

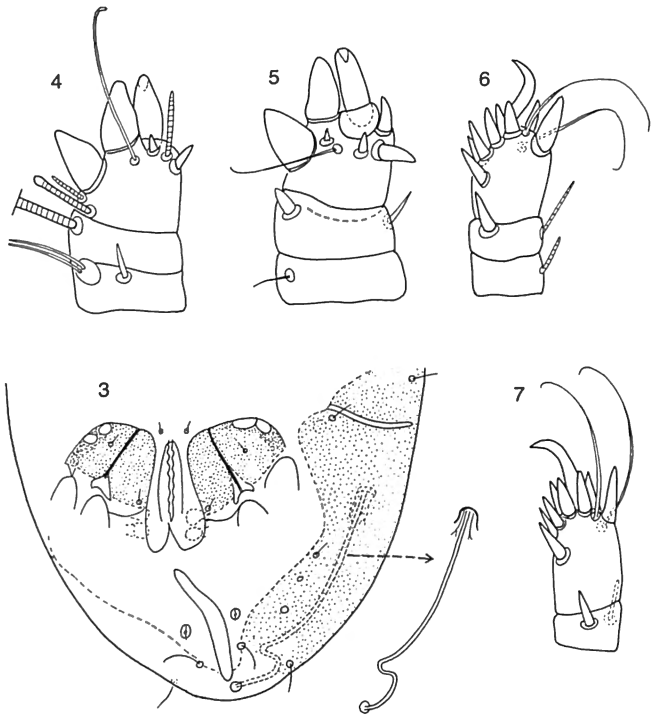
Female (figs 3-7) : length and width of idiosoma of 2 paratypes : 249 × 180 and 255 × 202. Dorsal and ventral surfaces as in the male, except for the sexual organs. Adanal suckers absent. Legs as in male but tarsus IV does not bear suckers.

Habitat :
Holotype and one male paratype, 3 female paratypes from a soil trap in Hungary (n° Kcs 7-41) from Kiskunság National Park, Agasegyhása, 1978, leg. E. Hamori and L. Adám. Holotype male and 2 female paratypes in the Hungarian Natural History Museum, Budapest. One male paratype and one female paratype in Institut royal des Sciences naturelles de Belgique, Bruxelles.

Genus **Boletoglyphus** Volgin, 1953
Fantovia Samsinak, 1957
? *Ellipsopus* Fain and Ide, 1976
Lindquistia Mahunka, 1977

In 1952, Turk and Turk described *Schwiebea boletophagi* n. sp. from phoretic deutonymphs (hypopi) found on *Boletophagus reticulatus* (L.) (Coleoptera, Tenebrionidae) in Scotland. From the same host, but in U.S.S.R., Volgin (1953), unaware of the paper of these authors, redescribed the same species under the name *Boletoglyphus cribrosus* n. g., n. sp.
The description of Volgin was overlooked by Samsinak (1957) who described his new genus *Fantovia* based on *Schwiebea boletophagi.*
The descriptions of these authors were inadequate and several important characters, such as the chaetotaxy of the legs, were incompletely described and depicted.
In 1976, Fain and Ide described *Ellipsopus ornatus* n. g., n. sp. from hypopi phoretic on the beetle *Bolitotherus cornutus* from U.S.A. This species is clearly distinct from *Boletoglyphus boletophagi* mainly by the shape of the chaetotaxy of the dorsum. It is possible that both species belong actually to the same genus but before to make a decision a reexamination of the species of Turk should be made.
The genus *Lindquistia* Mahunka, 1977, is an objective synonym of *Ellipsopus* because it is based on the same type species as the latter.

Figs. 1-2. Troglocoptes longibursatus *n. sp. Male in dorsal (1) and ventral (2) view.*



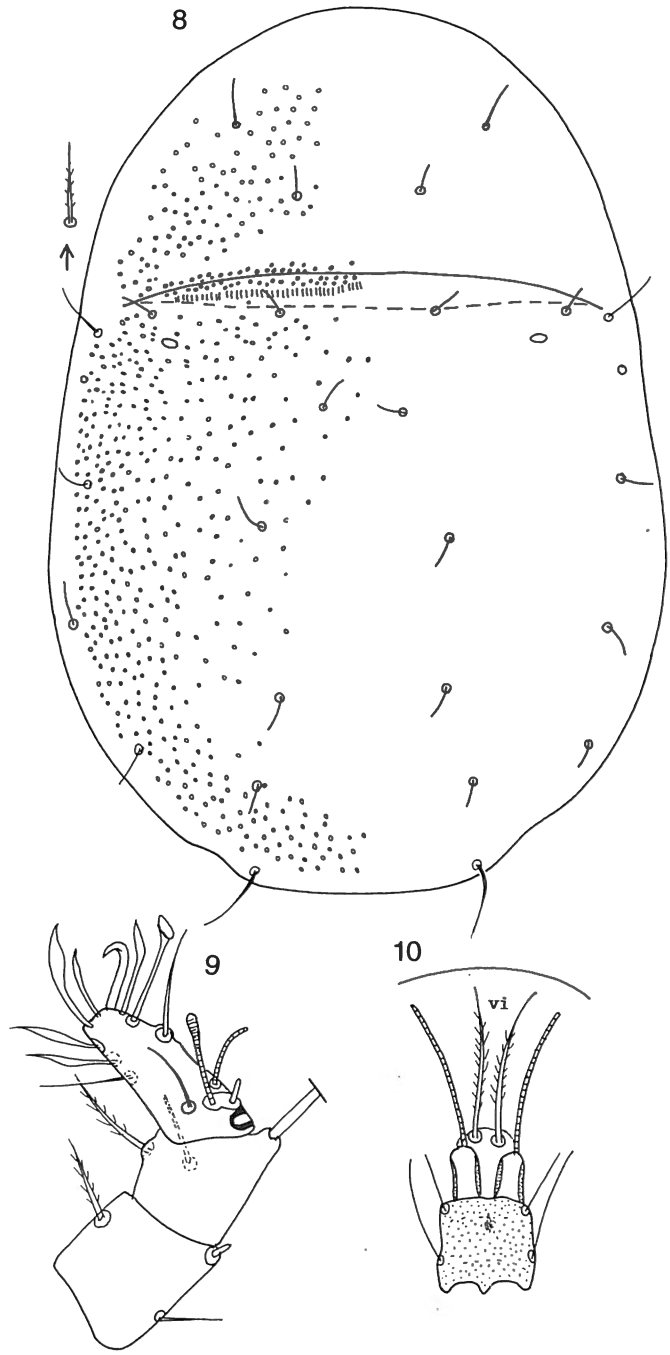
Figs. 3-7. Troglocoptes longibursatus *n. sp. Female : opisthogaster (3); apical segments of leg I dorsally (4) and ventrally (5); apical segments of legs III (6) and IV (7) in lateral view.*

Genus **Cisellipsopus** nov. gen.

This new genus is known only from the hypopial stage. It resembles superficially the genus *Boletoglyphus* (and *Ellipsopus*). It differs, however, from it by the following characters.

1. Tarsi I-II with 9 setae, of which 5 are foliate, one is saucerlike and 3 are simple. Tarsi III and IV with 4 foliate and 4 simple setae. We have not seen specimens of *Boletoglyphus* but in *Ellipsopus ornatus* the tarsi I-II bear 8 setae of which 2 are very narrowly membranous, the 6 other being simple. Tarsi III and IV with 4 foliate and 4 simple setae. In *E. ornatus* these tarsi bear a ventro-apical spine and 7 simple setae.
2. Tibiae I-II with 2 setae (only one seta, a spine, in *E. ornatus*).
3. Base of palposoma with 2 pairs of thin setae (only one pair in *E. ornatus*).
4. Setae *ve* absent (present in *E. ornatus*).
5. Setae *gp* situated laterally (submedian in *E. ornatus*).
6. Setae *l5* much shorter than in *E. ornatus*.
7. Oil gland and oil gland aperture not observed (present in *E. ornatus*).
8. Body not ellipsoidal but distinctly widened in its posterior half).

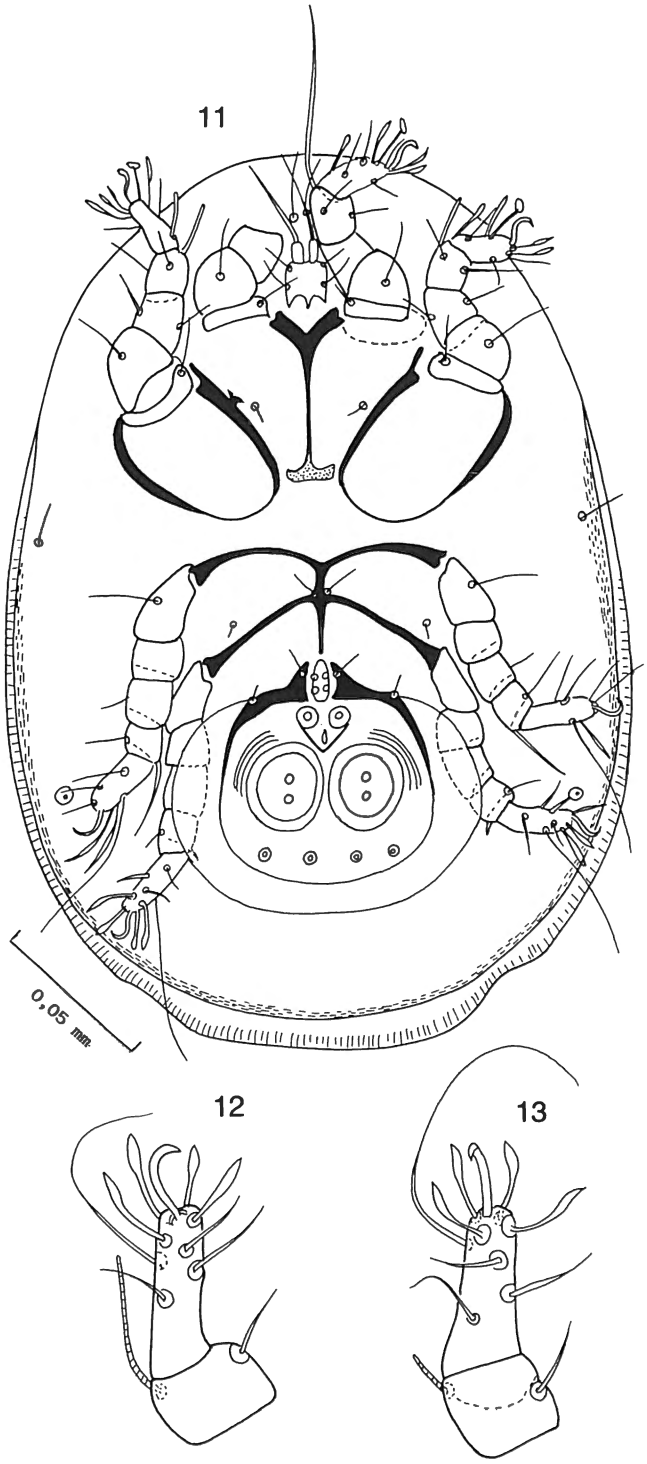
Type species :
Cisellipsopus microporus n. sp.



Figs. 8-10. Cisellipsopus microporus *n. g., n. sp. : Hypopus in dorsal view (8); apical segments of leg I dorsolaterally (9); palposoma and setae vi* (10).

Cisellipsopus microsporus nov. spec.

Hypopus, holotype (figs 8-13) : length 270, maximum width 189. Length and width in 2 paratypes : 249 × 170 and 258 × 190. Sejugal furrow well developed. Length of propodonotum 81. The propodosoma is rounded anteriorly, it is very long and partly membranous and covers completely the legs except the tarsi. Dorsal surface covered by two punctate shiels except in its anterior part which is soft. Dorsum bearing numerous and very small pits except in the anterior part of the propodonotum and in the median



Figs. 11-13. Cisellipsopus microporus *n. g., n. sp. : Hypopus in ventral view (11); Tibia and tarsus of legs III (12) and IV (13) in lateral view.*

part of the body where the pits are less numerous or absent. Lengths of setae : *sc e* 20; *sc i* 13; *d1* to *d5* 9 to 12; *h* 22; *l1* to *l4* 15; *l5* 25-30. Some of these setae bear very short and poorly distinct barbs. Venter : palposoma 20 long and 13 wide. It is completely ventral and bears 2 pairs of thin setae and a pair of apical solenidia 25 long. Sternum long, incompletely fused posteriorly with epimera II. Coxae II incompletely closed by a poorly sclerotized band. Epimera III and IV fused in the midline to a longitudinal median sclerite. Coxal fields III separated from coxal fields II. Suctorial plate 83 wide, bearing a pair of very large posterior suckers. Anterior suckers much smaller. The 4 conoids are very small and situated behind the posterior suckers on a straight line. Setae *vi* barbed, 30 long situated on a conical stalk completely hidden by the palposoma. Setae *ve* lacking. Setae *cx I, cx III, ga, gm* and *gp* short and very thin. The *gp* are situated laterally at 15 from the *gm*. Legs relatively short. Lengths of tarsi 22-20-20-20. All tarsi ending in a strong claw 10 long. Oil gland not observed. Number of setae on legs : Tarsi I-II with 9 setae (5 foliate, one spoonlike and 3 simple. Tarsi III and IV with 8 setae (4 foliate, 1 barbed and 3 simple of which the dorsal is relatively long (30-35 on tarsus III and 40-50 long on tarsus IV). Tibiae with 2-2-0-0 setae. Genua 2-2-1-0. Solenidia of legs : Tarsus I with ω*1* basal with apex slightly dilated; famulus cylindrical; ω*3* thin, cylindrical, slightly more apical than ω*1*. Solenidion ω*2* not observed. Tibia I with a very long (60) solenidion phi, longer than that of tibia II (14), of tibia III (25) and tibia IV (5). Genua I-IV with 1-1-1-0 solenidia.

Habitat :
Holotype and 4 paratypes, all hypopi, from soil traps in Hungary (Coll. S. MAHUNKA). Holotype and 2 paratypes in the Hungarian Natural History Museum, Budapest. Two paratypes in the Institut royal des Sciences naturelles de Belgique, Bruxelles.

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