

A new species of *Delamarephorura* WEINER & NAJT, 1999 (Collembola, Tullbergiidae) from Cape Province (South Africa)

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Abstract. A new species of the genus *Delamarephorura* is described and illustrated.

Key words: Collembola, new species, taxonomy, chaetotaxy, South Africa, Amola Mts.

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I. INTRODUCTION

WEINER and NAJT (1999) established the new genus *Delamarephorura* in the subfamily Tullbergiinae (now family Tullbergiidae) for the animals from Shira Plateau (Kilimandjaro 3800-4300m, Tanzania). In the material derived from South Africa a new species of this genus was found.

Abbreviations used in the text:

MNHN – Muséum national d'Histoire naturelle, Paris, France;

ISEA – Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków, Poland.

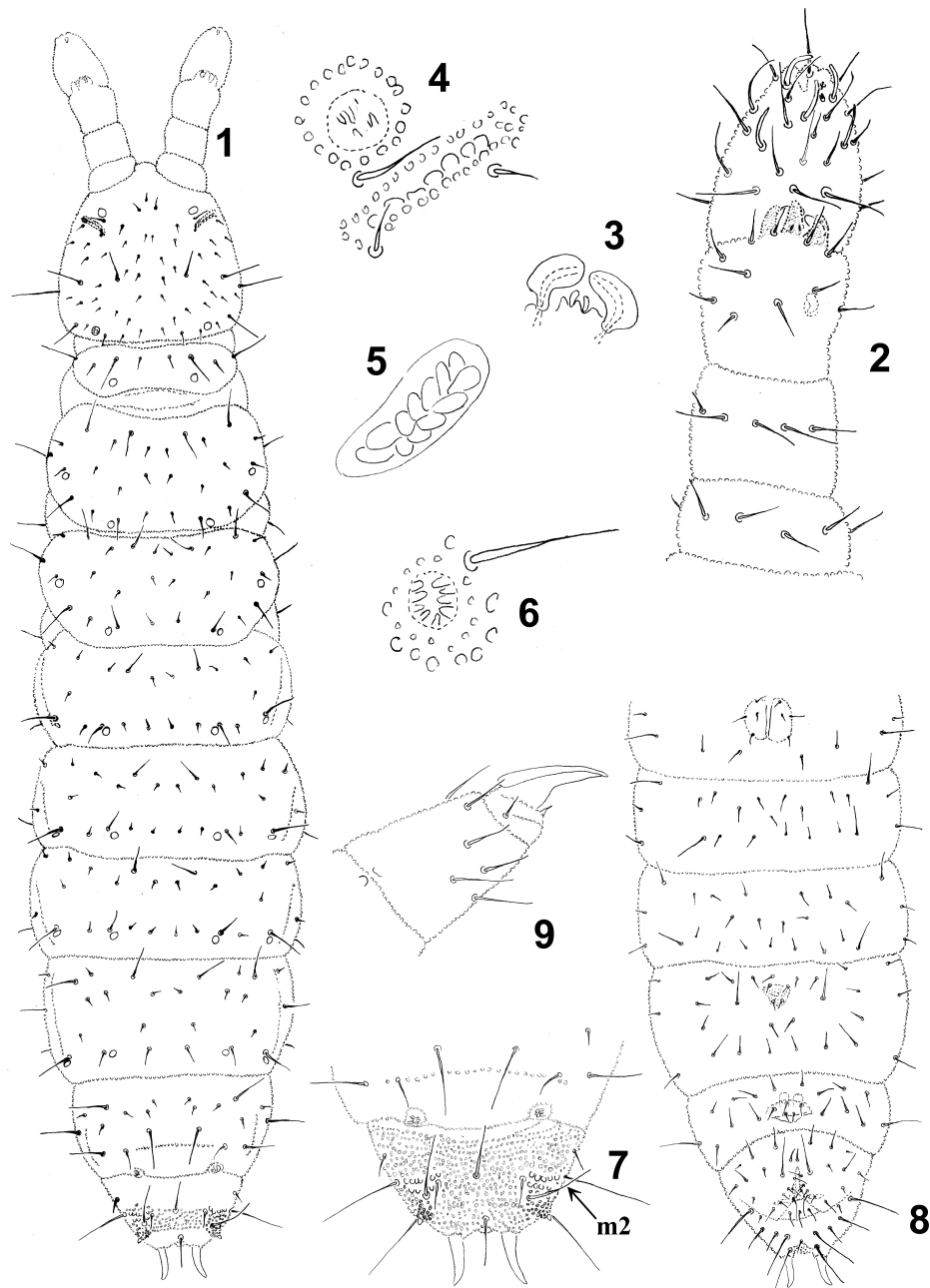
Delamarephorura szeptyckii sp. n.

Figs 1-9, Table 1

Type material. Holotype female (in MNHN), paratypes: female (in ISAE) and juvenile (in MNHN).

Type locality. South Africa, Eastern Cape, Amola Mts., Hogsback, dry prairie (1600m above sea level), August 1995, coll. David MARSHALL.

D e s c r i p t i o n. Holotype female length: 0.77 mm, paratypes length females: 0.8-0.86 mm, juvenile: 0.61 mm. Colour: white in alcohol. Granulation coarser in dorsal side of the body and especially on abdominal tergum VI than in the rest of the body. Fast double-striate pseudocelli (type II after WEINER & NAJT 1991), not very well visible, their formula per half terga as 11/122/22221.



Figs 1-8. *Delamarephorura szeptyckii* sp. n.: 1 – dorsal chaetotaxy; 2 – antenna; 3 – antennal III-organ: sensory clubs and sensory rods; 4 – postantennal organ and pseudocellus; 5 – vesicles of postantennal organ; 6 – pseudocellus on abdominal tergum II; 7 – abdominal tergum of abdomen VI; 8 – ventral chaetotaxy of abdomen; 9 – tibiotarsus III.

Antennal segment IV with five sensilla S1, S4, S7, S8 and S9 (after D'HAESE 2003) = a–e (after RUSEK 1971), microsensillum, subapical organite and apical vesicle. Antennal III-organ with two sensory clubs, two small sensory rods protected by three guard papillae and four guard chaetae, thick, bent sensory club on ventral side (Figs 2, 3). Antennal segment II and I with 7 and 11 chaetae respectively.

Postantennal organ 2.6–2.8 times longer than diameter of pseudocellus, with 12 simple vesicles in two regular rows (Figs 4, 5).

Dorsal chaetotaxy as in Figs 1, 7 and Table 1 with micro- and macrochaetae, sensory chaetae “s” not clearly marked. Microsensilla on thoracic terga II and III present. Head with chaetae p1 and p2 present as microchaetae of the same length. On abdominal tergum VI double crescentic ridges, with two spiniform processes in dorso-lateral position, two true anal spines on distinct papilla and small swelling (=protuberance) in medioventral position. Chaeta m2 anterior to spiniform process (Fig. 7). Thoracic sterna II and III, each with 1+1 chaetae. Ventral abdominal chaetotaxy as in Fig. 8. Abdominal sternum I with 2+2 chaetae and ventral tube with 4+4 distal chaetae. Furcal rudiment on abdominal sternum IV: finely granulated area with four small chaetae in two rows.

Tibiotarsi I, II and III with whorls A and B as 5+5, 5+5 and 5+4 chaetae respectively. Femora I, II and III, each with 8 chaetae, trochanters I, II and III, each with 5 chaetae, coxae I, II and III with 3, 6 and 7 chaetae respectively, subcoxae 2 of legs I without chaetae, II and III, each with 4 chaetae, subcoxae 1 of legs I, II and III with 2, 3 and 3 chaetae respectively. Claw without teeth.

D i s c u s s i o n. The both species: *Delamarephorura salti* (DELAMARE DEBOUTTEVILLE, 1953) and *D. szeptyckii* sp. n. share the following characters: the presence of abdomen VI with double crescentic ridges, the two true anal spines on papillae, the two spiniform processes in dorso-lateral position, a medioventral protuberance (*Metaphorura*-type), double-striated pseudocelli, pseudocellar formula 11/122/22221; antennal III-organ protected by three guard papillae and four guard chaetae. The both species differ each other mainly by the type of chaetae on the body: micro- and macrochaetae in the new species, meso- and macrochaetae in *D. salti* (with some microchaetae only on the head). In *D. szeptyckii* sp. n. chaetae p1 and p2 on the head are microchaetae of the same length, while in *D. salti* chaeta p1 is a short macrochaeta and p2 is a microchaeta. The further difference concerns the abdominal tergum VI – the anterior or posterior position of chaeta near the spiniform process: in *D. salti* it is p2 and in *D. szeptyckii* it is m2.

Some other differences in the chaetotaxy of thoracic and abdominal terga concern probably the poor interpretations of the position of chaetae in the description of *D. salti* (see: table 1 WEINER & NAJT 1999, 185p. and Table 1 in this study). Additionally, the new species has the claw without the inner tooth which is present on the claw of *D. salti*.

Table 1

Delamarephorura szeptyckii sp. n.: formula of dorsal chaetotaxy per half tergiteum

Chaetae rows/body terga	Th.I	Th.II	Th.III	Abd.I	Abd.II	Abd.III	Abd.IV	Abd.V
a	–	5 ¹	5 ¹	6	6	6	5 ⁶	5 ⁶
m	–	4 ²	4 ²	1 ⁴	1 ⁴	1 ⁴	1 ⁷	1 ⁷
p	4	4 ³	4 ³	5 ⁵	5 ⁵	5 ⁵	5 ⁵	3 ⁸
sbc/pl	2	3	3	2	4 (3)	4(3)	6	2

1 – a4 absent; 2 – m1, m4, m5 present; 3 – p2, p6 absent; 4 – m4/5 present; 5 – a6 absent; 6 – m4 present; 7 – m4 present; 8 – p2, p3, p4 present.

Derivatio nominis. We have the great honor of dedicating the new species to Professor Andrzej SZEPTYCKI, the eminent taxonomist in Collembola and Protura, and our friend, who left us in 2008.

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