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Ceratophysella multilobata, a new species from Texas, USA (Collembola: Hypogastruridae)

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ABSTRACT. *Ceratophysella multilobata* n. sp. is described from Texas, USA.

Key words: entomology, taxonomy, new species, Texas, USA, Collembola, Hypogastruridae, *Ceratophysella*.

A checklist of North American Collembola comprises 25 described and 4 undescribed species (provisionally named spp. K, L, NN and OO) of the genus *Ceratophysella* BÖRNER, 1932 (CHRISTIANSEN & BELLINGER 1998). A detailed analysis of sp. L material from Texas (USA) which I have obtained thanks to the kindness of Prof. Kenneth CHRISTIANSEN (Grinnell College, Iowa) made it possible to ascertain that these specimens represented a new species. Its description is given below.

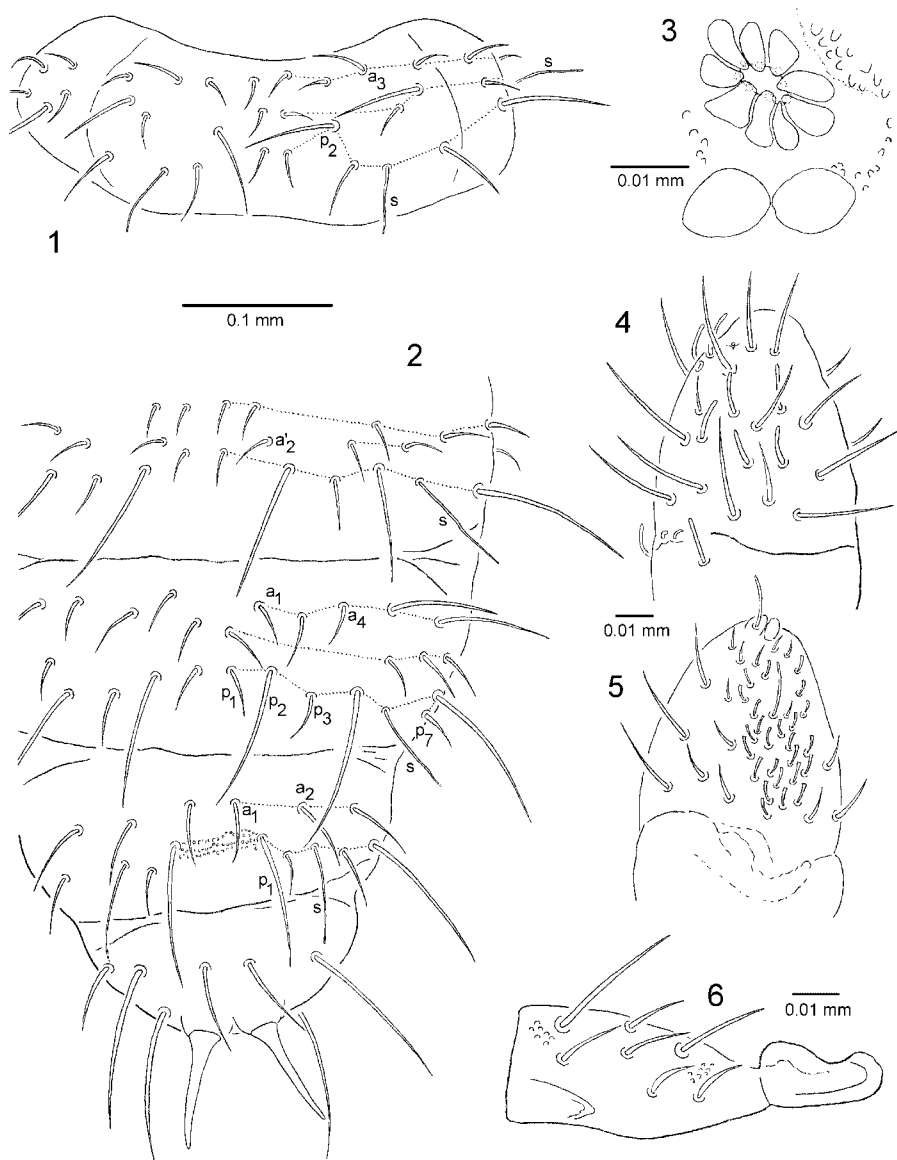
Ceratophysella multilobata n. sp.

ETYMOLOGY

Named after its postantennal organ consisted of numerous lobes.

DIAGNOSIS

Two characters: finely granulate integument and chaetotaxy of the *denticulata* type place *C. multilobata* n. sp. near *C. guthriei* (FOLSOM, 1916) and *C. maheuxi* BUTLER, 1966. Nevertheless, it can be easily separated from mentioned species by the presence of unusual postantennal organ consisted of numerous lobes (*C. gut-*



1-6. *Ceratophysella multilobata* n. sp.: 1 – chaetotaxy of thoracic tergum II, 2 – chaetotaxy of abdominal terga III-VI, 3 – postantennal organ and neighbour ocelli, 4 – dorsal side of antennal segments III-IV, 5 – ventral side of antennal segments III-IV, 6 – dens and mucro. Abbreviations in text

hriei and *C. maheuxi* have postantennal organ consisted of four lobes), antennal segment IV with simple apical vesicle (in *C. maheuxi* trilobed) and large boat-like mucro (in *C. guthriei* small).

DESCRIPTION

Body length 0.9-1.5 mm. Body color greyish-brown, eyepatches black, anal spines yellow. Granulation fine and uniform, usually 16-22 granules between setae p_1 on abdominal tergum V (Fig. 2).

Dorsal chaetotaxy of thorax and abdomen as in Figs. 1, 2, chaetotaxy of head typical of the genus. Microchaetae and macrochaetae of medium size, serrated. Body sensilla (s) fine and smooth. Setae a_3 on thoracic tergum II as mesochaetae, setae p_2 shifted forward. Setae a'_2 on abdominal terga I-III present, on abdominal tergum V absent. Setae a_1 , a_4 , p_3 and p_7 on abdominal tergum IV present. Setae p_1 and p_2 on abdominal tergum IV microchaetae and macrochaetae respectively. Three axial setae on abdominal tergum IV are strongly diverging. Subcoxae I, II, III with 1, 3, 3 setae respectively. Microsensillum (ms) on thoracic tergum II present.

Antennal segment IV with simple apical vesicle, subapical organite, microsensillum, 7 cylindrical sensilla, 15-25 short curved flattened at tips sensilla in ventral file (Figs 4, 5). Antennal III-organ with two long (lateral) and two short (internal) curved sensilla (Fig. 4). Microsensillum on antennal segment III present. Eversible sac between antennal segments III-IV present (Fig. 5). Antennal segment I with 7 setae.

Ocelli 8 + 8. Postantennal organ larger twice as single ocellus, with 9-12 lobes (Fig. 3). Accessory boss absent.

Labrum with 5, 5, 4 setae and 4 prelabrals. Head of maxilla of the *denticulata* type. Outer lobe with 1 sublobal hair.

Tibiotarsi I, II, III with 19, 19, 18 setae respectively, clavate setae absent. Claws with inner tooth and pair of indistinct lateral teeth. Empodial appendage with broad basal lamella and apical filament reaching inner tooth.

Ventral tube with 4 + 4 setae.

Furca well developed. Dens/mucro ratio = ca. 2. Dens with 7 setae (2 inner apical slightly modified) (Fig. 6). Mucro boat-like (Fig. 6). Retinaculum with 4 + 4 teeth.

Anal spines thin and slightly curved, situated on high basal papillae (Fig. 2). Ratio: anal spines/inner edge of claws III = ca. 1.5.

Epitokous individuals have shortened setae, anal spines, claws and mucro.

MATERIAL EXAMINED

Holotype: female on slide, District Park Cave (7324, Travis Co., Texas, USA), litter, 19. 01. 1991, leg. J. Reddell and M. Reyes (preserved at the collection of Grinnell College, Iowa).

Other material: reproductive female on slide, cave (7115, Travis Co.), litter, 20. 02. 1989; reproductive male on slide, New Comanche Trail Cave (7166,

Travis Co.), litter, 6. 02. 1989; juvenile specimen on slide, Hideout Cave (7327, Travis Co.), litter, 31. 01. 1991; female on slide, Raccoon Cave (7289, Williamson Co.), litter, 16. 03. 1990; 2 juveniles on slide, Temples of Thor Cave (7355, Williamson Co.), litter, 31. 01. 1992; juvenile on slide, Garden of Sinks Cave (7279, Williamson Co.), litter, 13. 02. 1990; female on slide, Runoff Cave (7380, Coryell Co.), litter, 14. 03. 1992; female on slide, Charley's Cave (9128, Bexar Co.), on water, 6. 12. 1994 (all collected by J. Reddell and M. Reyes in Texas, USA and preserved at the collection of Grinnell College, Iowa).

REFERENCE

- CHRISTIANSEN, K., BELLINGER, P. 1998. The Collembola of North America north of the Rio Grande. A taxonomic analysis. Grinnell College, Grinnell, Iowa: 1520 pp.