

Genus	Vol. 17(3): 317-322	Wrocław, 30 IX 2006
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Rusekianna bescidica, a new species from Poland (Collembola: Symphypleona)

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ABSTRACT. *Rusekianna bescidica* n. sp. is described from Poland (Beskid Sądecki Mountains, Carpathians).

Key words: entomology, taxonomy, new species, Poland, Collembola, Symphypleona, *Rusekianna*.

During faunistic investigations in the “Barnowiec” reserve in the Beskid Sądecki Mountains (Carpathians, S Poland), sponsored by University of Wrocław (grants 2020/W/IZ/2003, 1018/IZ/2003), a new species of the genus *Rusekianna* BETSCH, 1977 was found. Its description is given below.

Rusekianna bescidica n. sp.

ETYMOLOGY

Named after its terra typica, the Beskid Mountains in Poland.

DIAGNOSIS

At present two species of the genus *Rusekianna* are known: *R. mongolica* BETSCH, 1977 and *R. sibirica* BRETfeld, 2002 both described from Asia (BETSCH 1977, BRETfeld 1999, 2002). *R. bescidica* n. sp. differs clearly from them in chaetotaxy of dens. The new species has 2 subapical (*R. mongolica* 1, *R. sibirica* 2), 5 proximal (*R. mongolica* and *R. sibirica* 4), 3 outer (*R. mongolica* 3, *R. sibirica* 4) and 3 inner setae (*R. mongolica* 1, *R. sibirica* 2). Moreover *R. bescidica* n. sp. differs from *R. mongolica* in the absence of colour pattern and mucro with both serrated edges.

DESCRIPTION

Body length (without antennae) 0.6-0.79 mm (holotype: 0.79 mm). Body uniformly pigmented. Eyepatches with 8 + 8 ocelli (D smallest) and 2 + 2 setae (Fig. 5). Mandibles normal, maxillae with one enlarged lamella (Figs 10, 11). Chaetotaxy of labrum and labium as in Figs 7-9, 12. Head furnished with short normal setae (Fig. 5). Ratio: length of antennae/head diagonal = 1.3. Ratio: length of antennal segment I : II : III : IV = 1 : 2.1 : 2.8 : 7.1. Chaetotaxy of antennae as in Figs 1, 2. Antennal segment III with protruding papilla (Figs 1, 6). Antennal III-organ consisting of 2 sensilla (longer in males Figs 3, 4). Antennal segment IV incompletely subdivided.

Abdomen with short normal setae (Fig. 13). Bothriotrichia A, B, C and D present (Figs 13-15). Neosminthuroid setae missing. Abdominal segment V included in the small abdomen. Abdominal segment VI in females with normal seta a_0 , other circumanal setae not winged (Figs 15, 16). Appendices anales distally branched (Figs 16, 17).

Subcoxae I, II, III with 0, 1, 1 setae respectively. Subcoxae 2 I, II, III with 1, 1, 1 setae respectively. Coxae I, II, III with 1, 3, 3 setae respectively. Trochanters with 4 setae each. Trochanters II and III with oval organ. Femora I, II, III with 13, 13, 12 setae respectively. Chaetotaxy of tibiotarsi as in Figs 18-21, 23-29. Tita I and II with 6 and tita III with 7 external pores (Figs 19-23, 26, 27). Each tita with 6-7 spatulate setae. Claws small with 2-3 small inner and 2 outer teeth, without tunica. All empodia shorter than claws. Empodium I and II with tooth and short filament, empodium III with tooth but without filament (Figs 19-21, 23-29).

Ventral tube with 2 + 2 setae (Fig. 33). Sacs retracted and vesicles not visible.

Retinaculum with 4 + 4 teeth and 2 setae (Figs 34, 35).

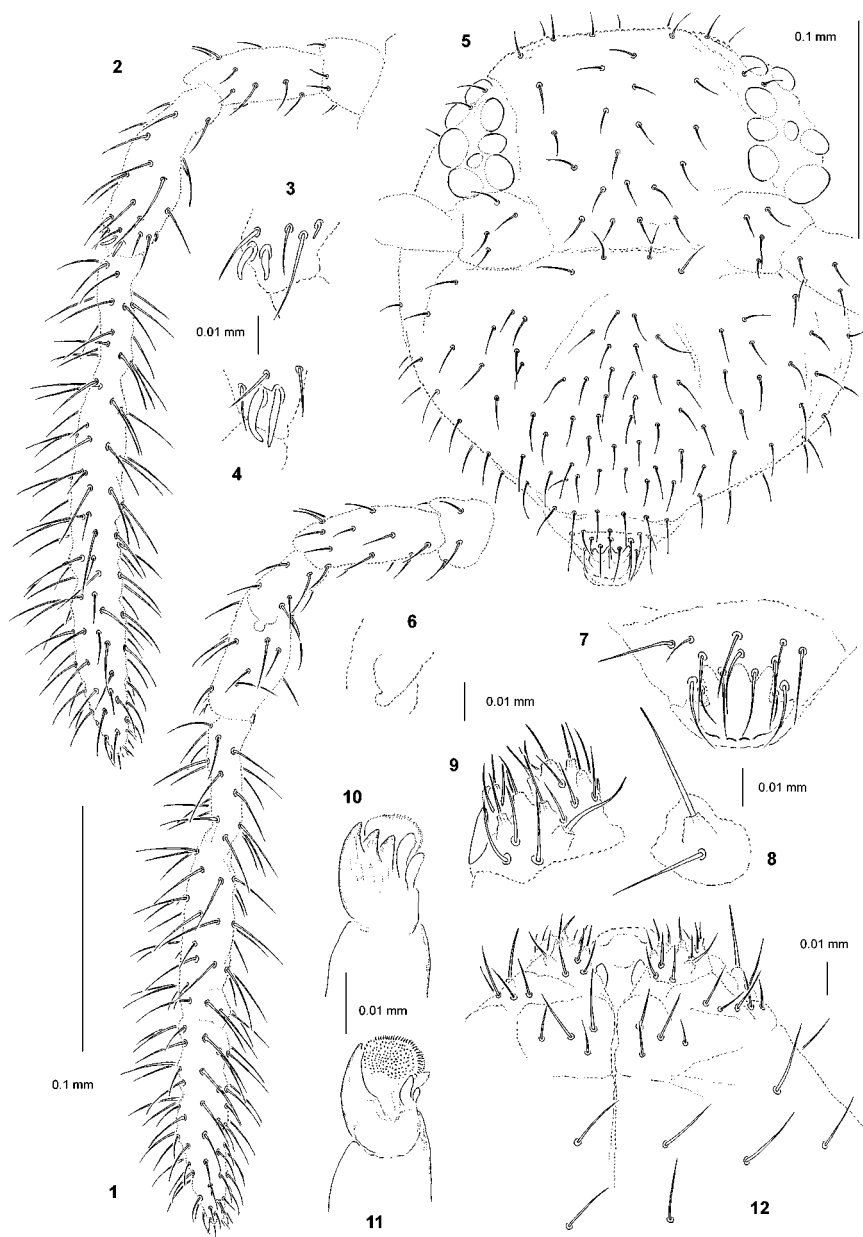
Manubrium with 8 + 8 posterior setae (Fig. 31). Dens anteriorly with 7 apical and 2 subapical setae, posteriorly with 5 proximal setae. 3 outer, 3 inner and 3 median dental setae present (Figs 31, 32). Mucro as in Figs 30-32. Ratio: length of dens/mucro = 2.2-2.4.

TYPES

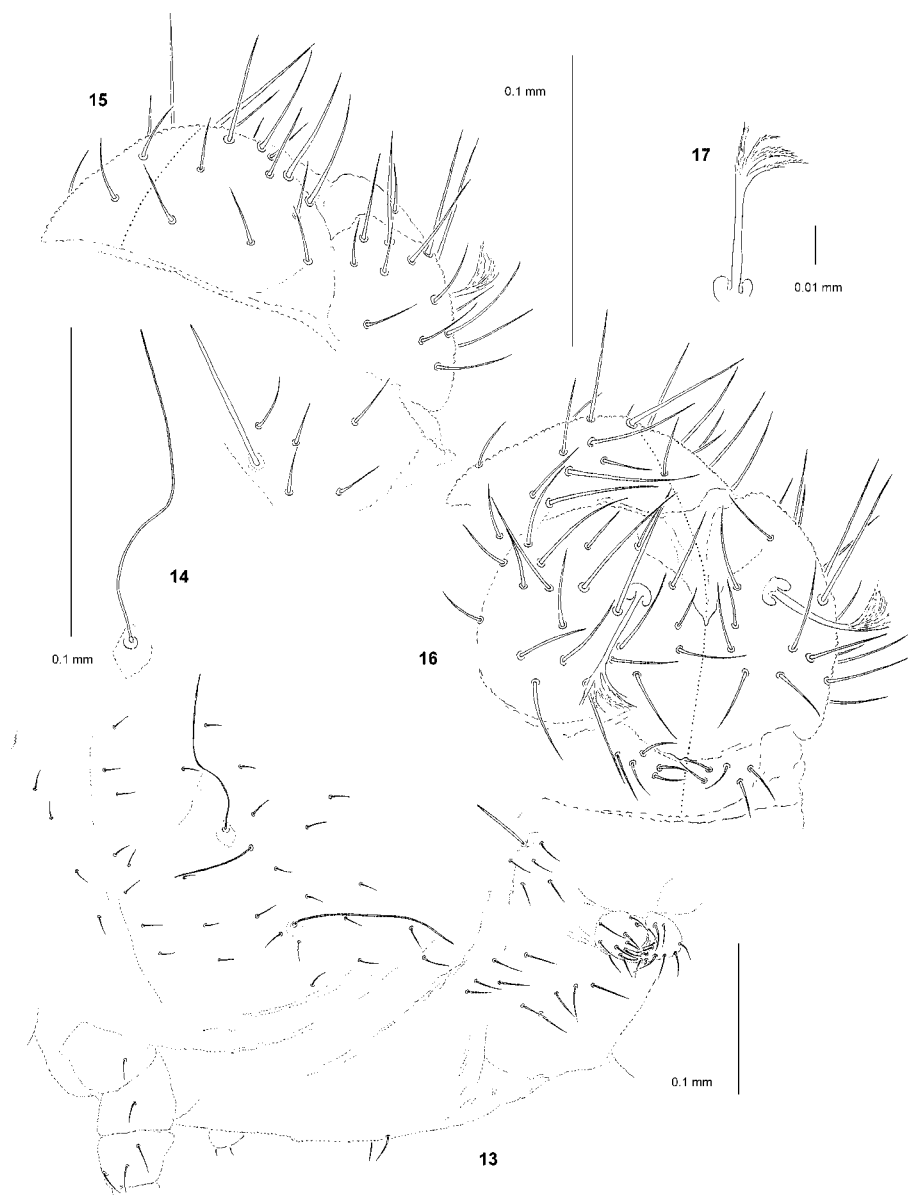
Holotype: adult female on slide, rotten wood in a hollow of a beech, beech forest (*Luzullo-fagetum*) at an altitude 900 m a. s. l., "Barnowiec" reserve near Nowy Sącz (Beskid Sądecki Mountains, Carpathians, S Poland), 9. 05. 2003, leg. A. SMOLIS, D. SKARŻYŃSKI; paratypes: adult male and 6 juveniles on slide, same data as holotype (preserved at the Department of Biodiversity and Evolutionary Taxonomy, Wrocław University, Poland).

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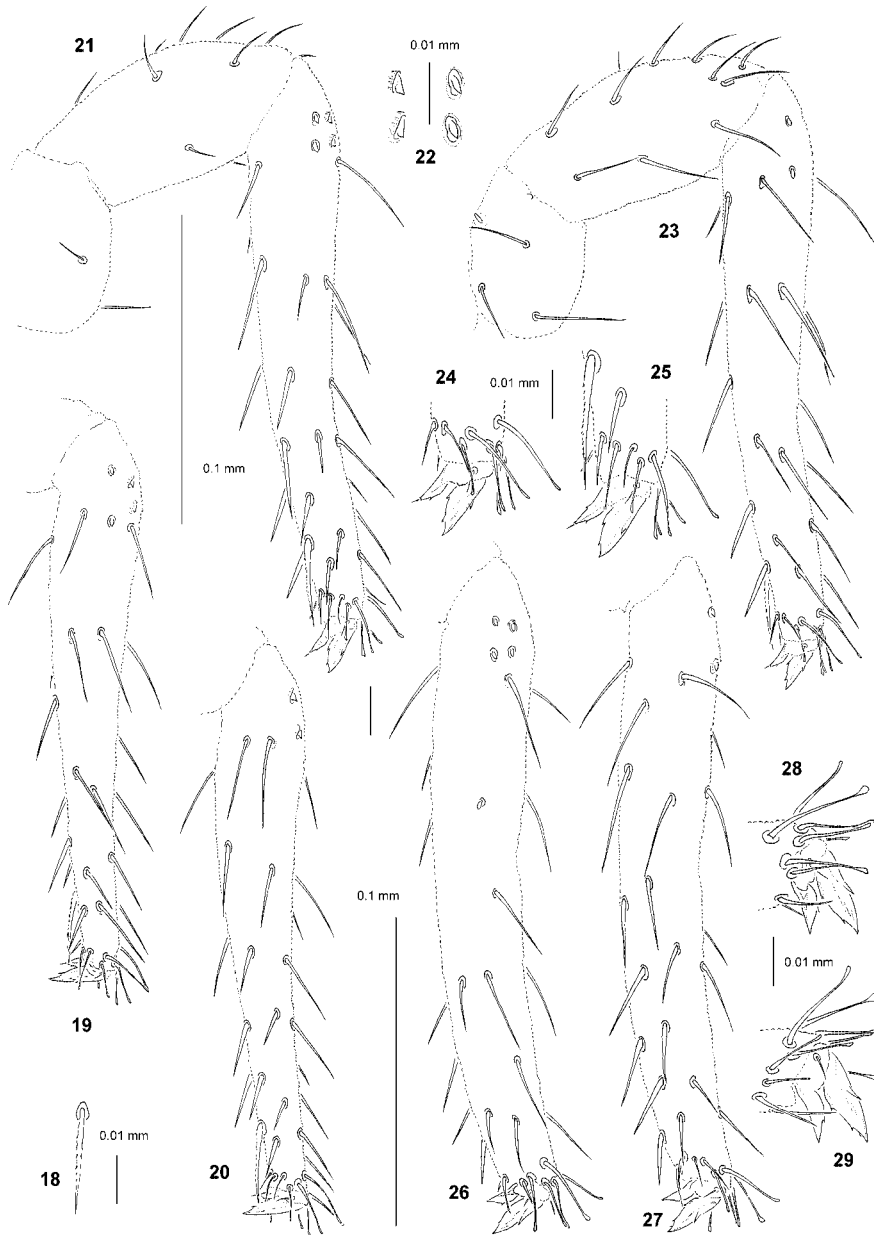
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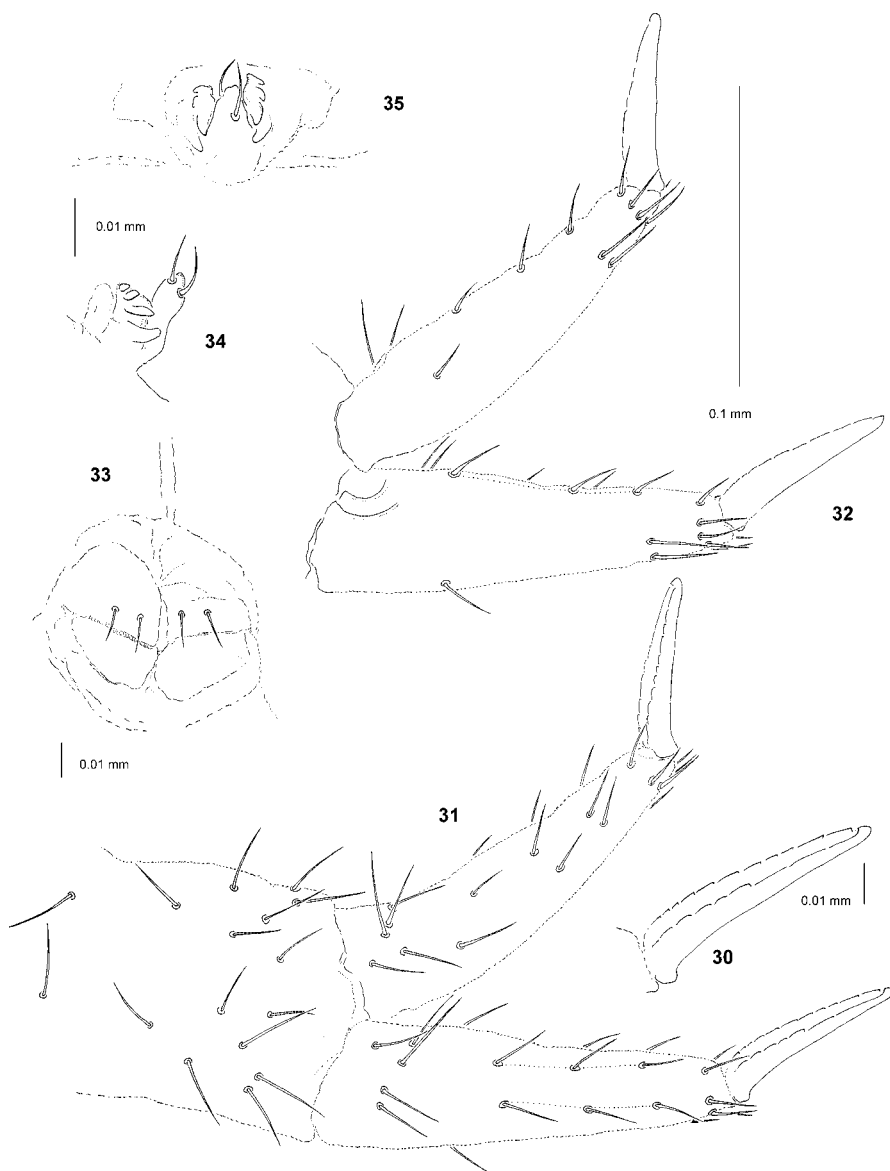
1-12. *Rusekianna bescidica* n. sp.: 1 – right antenna, dorsal view; 2 – right antenna, ventral view; 3 – sensilla of antennal III-organ, adult female; 4 – sensilla of antennal III-organ, adult male; 5 – chaetotaxy of head; 6 – papilla of antennal segment III; 7 – labrum; 8 – maxillary outer lobe; 9 – labial palp; 10 – head of maxilla, dorsal view; 11 – head of maxilla, ventral view; 12 – labium



13-17. *Rusekianna bescidica* n. sp.: 13 – thoracic segment III and abdominal segments I-V, lateral view; 14 – botriotrichium A; 15 – abdominal segments V-VI of adult female, dorsolateral view; 16 – abdominal segments V-VI of adult female, ventral view; 17 – appendix analis



18-29. *Rusekianna bescidica* n. sp.: 18 – serrated seta on tibia-tarsus I; 19 – tibia-tarsus I, dorsolateral view; 20 – tibia-tarsus I, ventrolateral view; 21 – trochanter, femur and tibia-tarsus of II pair of legs, ventrolateral view; 22 – external pores of tibia-tarsus; 23 – trochanter, femur and tibia-tarsus of II pair of legs, dorsolateral view; 24 – claw and distal part of tibia-tarsus II, dorsolateral view; 25 – claw and distal part of tibia-tarsus II, ventrolateral view; 26 – tibia-tarsus III, dorsolateral view; 27 – tibia-tarsus III, ventrolateral view; 28 – claw and distal part of tibia-tarsus III, dorsolateral view; 29 – claw and distal part of tibia-tarsus III, ventrolateral view



30-34. *Rusekianna bescidica* n. sp.: 30 – mucro; 31 – furca, ventral view; 32 – dens and mucro, dorsal view; 33 – tubus ventralis; 34 – retinaculum, lateral view; 35 – retinaculum, ventral view