

Stachorutes sphagnophilus n. sp. from Northern Poland
(Collembola: Neanuridae)

MALGORZATA SŁAWSKA

Department of Forest Protection and Ecology, Warsaw Agricultural University, Rakowiecka
26/30, PL-02-528 Warsaw, Poland

ABSTRACT. *Stachorutes sphagnophilus* n. sp. from Poland is described and illustrated.
A key to the genus *Stachorutes* DALLAI, 1973 is given.

Key words: Entomology, taxonomy, new species, *Collembola*, *Neanuridae*.

Stachorutes sphagnophilus n. sp.

DIAGNOSIS

Body shape resembling *Micranurida* BÖRNER, 1901 type. Postantennal organ with 8-9 vesicles arranged in a circle. 2+2 black-pigmented eyes. Fourth antennal segment with 6 hammer-shaped sensilla. Furcula reduced to small dentes bearing one strong and four shorter setae. Claws without inner tooth. Integument coarsely granulate.

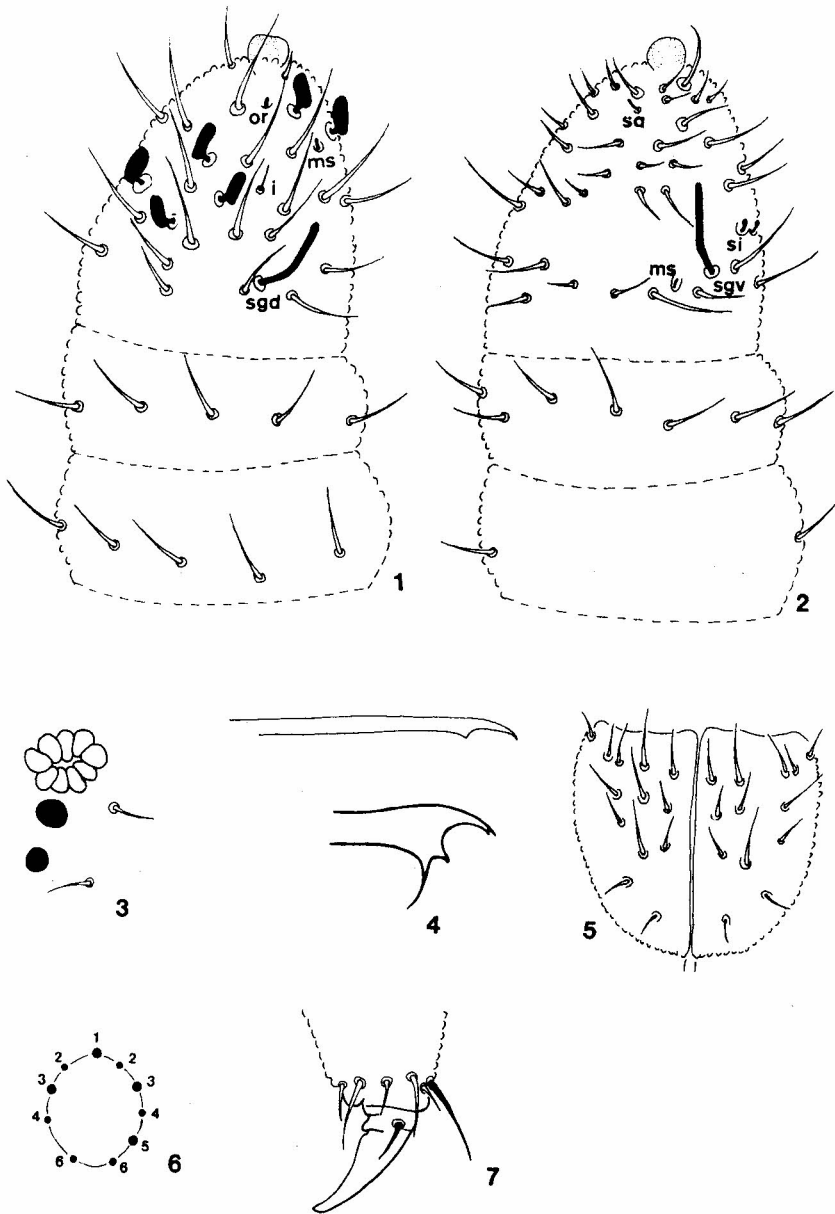
TYPE MATERIAL

Holotype: female, Stara Brda near Miastko, Pomerania, Poland (UTM XV47), pine forest, peaty soil, samples with moss, 25.08.94, coll. M. Sławska. Paratypes (same locality): 3 juv. 28.05.1994, 1 female and 1 juv. 27.06.1994, 2 females and 6 juv. 25.08.1994, 3 females and 5 juv. 25.09.1995, 5 females and 5 juv. 19.09.1995.

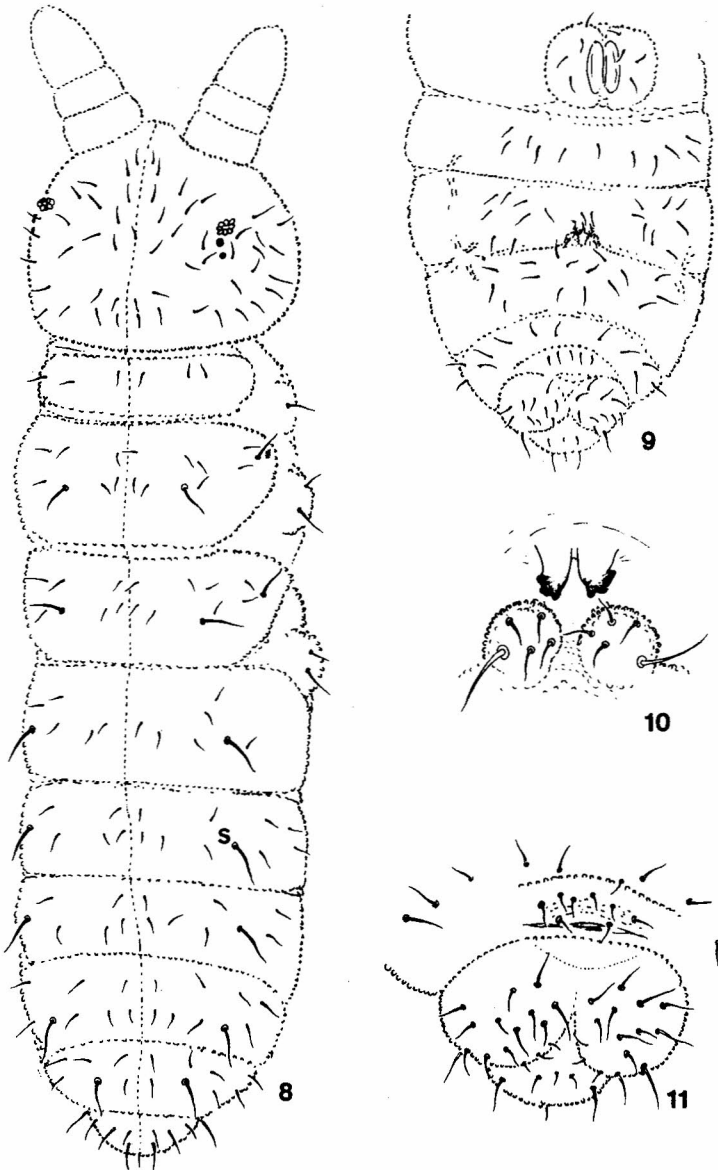
Holotype preserved in the collection of the Institute of Animal Systematics and Evolution, PAS, Kraków, Poland; paratypes in author's collection.

DESCRIPTION

Body length (without antennae) 0.65- 0.85 mm (holotype: 0.85 mm). White in alcohol, eyes distinctly black-pigmented (fig. 8). Granulation of whole body coarse,



1-7. *Stachorutes sphagnophilus* n. sp.: 1 - right antenna, dorso-internal view, 2 - right antenna, ventro-external view, 3 - eyes and PAO, 4 - maxilla and mandible, 5 - labium, 6 - scheme of arrangement of tibiotarsal subapical setae, 7 - hind leg, claw and subapical verticil of setae. or - subapical organitae, ms - micro-sensillum, other explanations in the text



9-11. *Stachorutes sphagnophilus* n. sp.: 8 - dorsal chaetotaxy, 9 - ventral chaetotaxy of abdomen, 10 - mucrodens and tenaculum, 11 - anal lobes and female genital plate

formed by secondary granules. Antennae shorter than head. First antennal segment with 7 setae (sometimes 6), second with 12 setae (sometimes 11). Last two antennal segments fused. III antennal segment with 15 ordinary setae, microsensillum (ms), and sensory organ of antennal segment III composed of sensory rods (si), and two long thickened sensilla (sgd, sgv). Antennal segment IV with simple apical bulb and 6 subequal thick, hammer-shaped sensilla, seta "i", subapical organite "or" and microsensillum (fig. 1, 2). 2+2 eyes distinctly black-pigmented, postantennal organ composed of 8-9 simple vesicles arranged in a circle (fig. 3). Usually the number of vesicles is asymmetrical (8+9) and there may be more than 9 (11 or 12). Mandible fragile with four teeth (subapical tooth difficult to see), maxilla styliform and apically hooked with one small tooth below (fig. 4). Labrum with 2/434 setae, labium without seta L (fig. 5).

Dorsal chaetotaxy as in fig. 8. Setae not differentiated, setae s_3 and m_6 on meso- and metanotum, and p_4 on abdominal terga I-V. Ventral chaetotaxy as in fig. 9, 11. Ventral tube with 4+4 setae. Furcula reduced to small dentes with one strong and four shorter setae each (sometimes with three), tenaculum with 3+3 teeth (figs 9, 10). Tibiotarsi I, II, III with 18 (17), 18 (17), 17 (16) setae respectively. Subapical verticils with 11 setae on each tibiotarsus (fig. 6), sometimes with 10 setae - without seta 5 or 4. Claws without inner teeth (fig. 7).

DISCUSSION

The genus *Stachorutes* DALLAI, 1973, included so far six species (*S. dematteisi* DALLAI, 1973, *S. longirostris* DEHARVENG & LIENHARD, 1983, *S. scherae* DEHARVENG & LIENHARD, 1983, *S. navajellus* FJELLBERG, 1984, *S. valdeaibarensis* ARBEA & JORDANA, 1991, *S. riebi* BARRA, 1994). It is possible that *Micranurida ashrafi* YOSII, 1966 from Nepal belongs to this genus too. The most important difference between them and the new species is the presence of a hammer-shaped sensilla on IV antennal segment *S. sphagnophilus*. Only DEHARVENG (1982) mentioned *Stachorutes* sp. from Corse with *Micranurida*-type sensilla. Thus the diagnosis of this genus should be complemented with a statement on the presence or absence of hammer-shaped sensilla on IV antennal segment. *S. sphagnophilus* described in this paper is very similar to *S. dematteisi* in the number of eyes (2+2), shape of dentes (DALLAI 1973) and dorsal chaetotaxy (DALLAI 1973, FJELLBERG 1985). They differ in the number of vesicles in postantennal organ (8-9 in the new species and 4-7 in *S. dematteisi*), shape of mandibulae (*S. sphagnophilus* with 4 teeth, *S. dematteisi* only-2) and in the presence of strong setae on dentes of *S. sphagnophilus*.

ECOLOGY

S. sphagnophilus n. sp. was collected in soil samples taken in a transition zone between marshy and humid pine forest. It occurred in peaty soil in a narrow belt with *Ledum palustre*, *Sphagnum* sp., *Polytrichum* sp., *Vaccinium myrtillus*, *V. vitis-idea*, *Empetrum nigri* around a small dystrophic, marsh-rimmed lake. The new species was found from May to October among a great number of specimens of *Micranurida*

pygmea BÖRNER, 1901 and *Anurida granulata* AGRELL, 1943. Only females and juvenile specimens were collected and therefore it seems that the population is parthenogenic.

DERIVATIO NOMINIS

The name is derived from the Latin generic name of the peatmoss *Sphagnum*.

A KEY TO THE GENUS *STACHORUTES* DALLAI, 1973

1. 2 + 2 black-pigmented eyes 2.
- 5 + 5 eyes 4.
2. Mucro present, separated from dens *S. riebi* BARRA, 1994
- Dentes without mucro, papilla-like 3.
3. Hammer-shaped sensilla on IV antennal segment present .. *S. sphagnophilus* n. sp.
- Hammer-shaped sensilla absent *S. dematteisi* DALLAI, 1973
4. Cheta m_4 on II and III thoracal terga present, head with dorsal seta a_0
..... *S. navajelus* FJELLBERG, 1984
- Cheta m_4 on II and III thoracal terga absent, a_0 absent 5.
5. Cheta a_2 on II thoracal tergum absent
..... *S. longirostris* DEHARVENG & LIENHARD 1983
- Cheta a_2 on II thoracal tergum present 6.
6. Dens with six setae *S. scherae* DEHARVENG & LIENHARD 1983
- Dens with five setae *S. valdeibarensis* ARBEA & JORDANA, 1991

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