Genus	Vol. 7(3): 319-323	Wrocław, 30 X 1996

A new species of *Hymenaphorura* from Poland (*Collembola*: *Onychiuridae*)

DARIUSZ SKARŻYŃSKI and ROMUALD J. POMORSKI

Zoological Instituite, Wrocław University, Sienkiewicza 21, 50-335 Wrocław, Poland

ABSTRACT. *Hymenaphorura parva* sp. n. is described and illustrated. The springtails were collected in a gravel bed of the river Kamienna (Karkonosze, Sudetes).

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

During faunistic investigations of river and stream beds of Lower Silesia, financed by the University of Wrocław (project number 2020/W/IZ/95), a new species of the genus *Hymenaphorura* BAGNALL, 1948 was found.

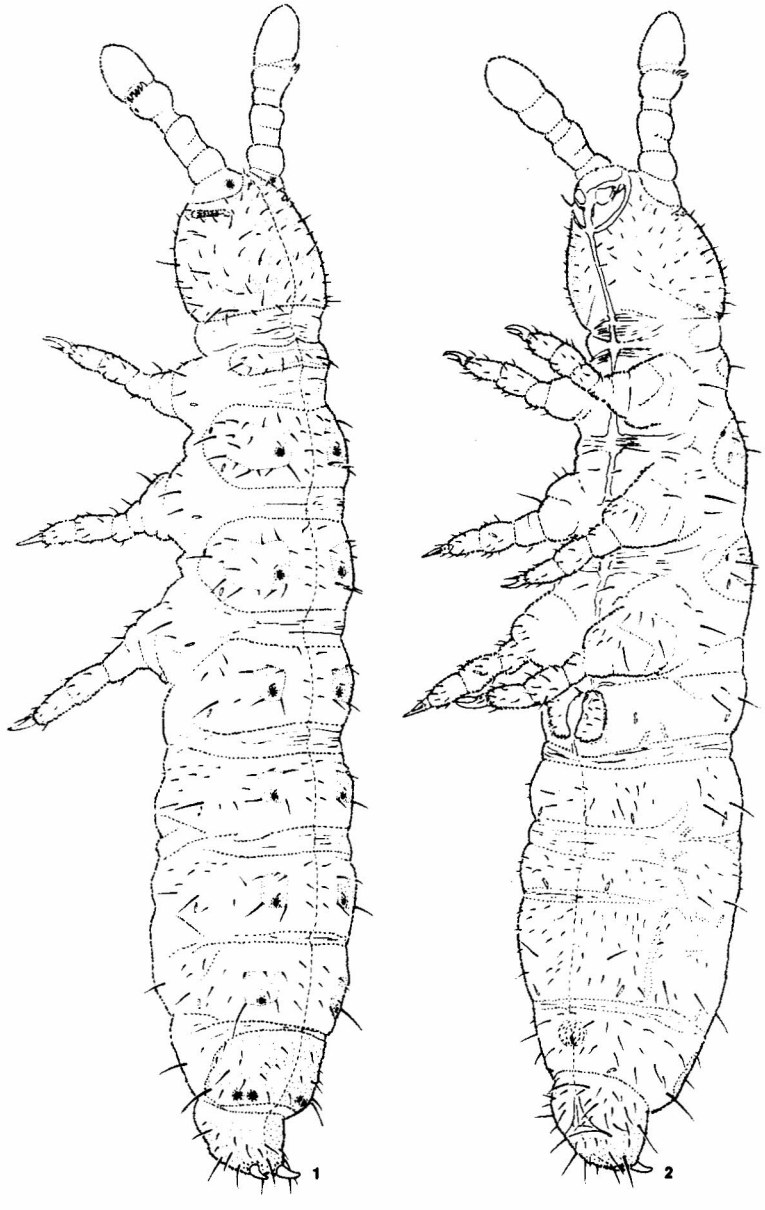
***Hymenaphorura parva* sp. n.**

TYPE MATERIAL

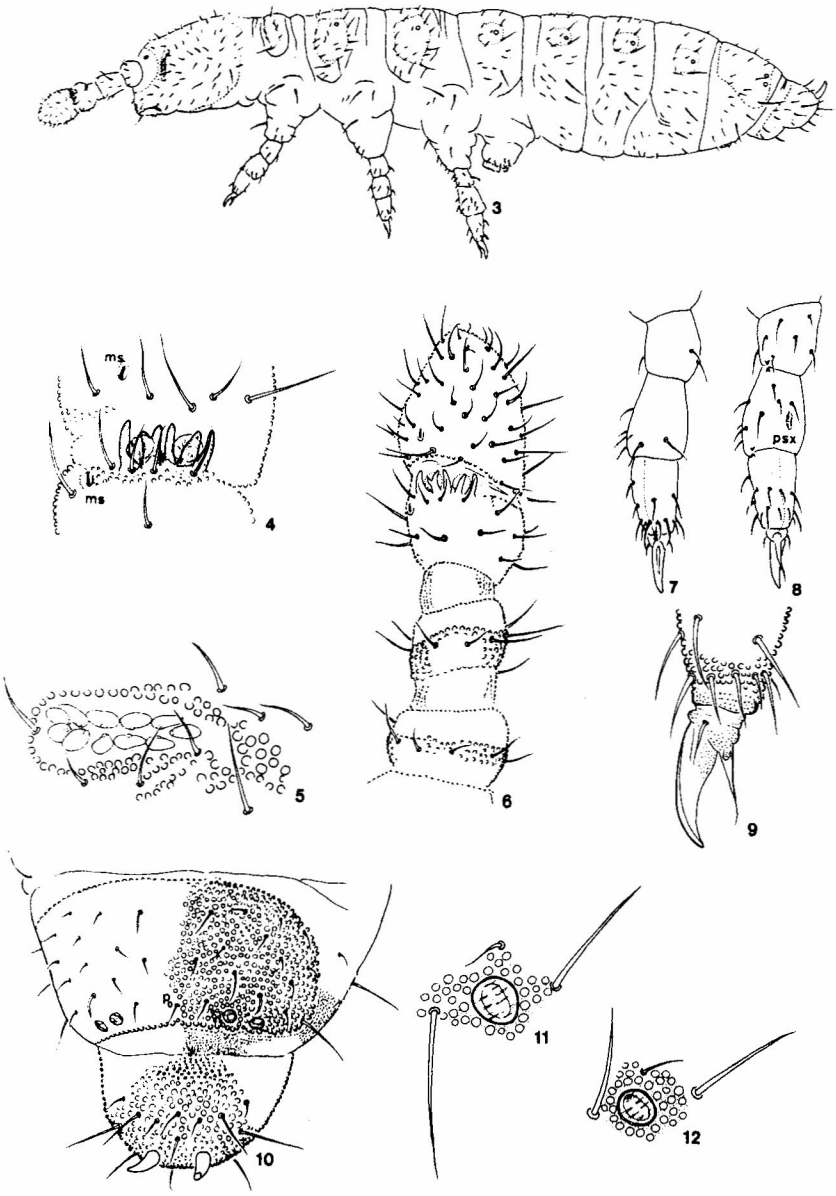
Holotype, male on slide; 12 paratypes on slides; numerous specimens in alcohol; Sudetes, Karkonosze, Szklarska Poręba, Poland; gravel bed of the river Kamienna, 10. 10. 1995; leg. D. SKARŻYŃSKI (preserved in authors collection).

DESCRIPTION

Colour in alcohol white. Size, without antennae, 0.8-1.1 mm (holotype - 0.95 mm). Body rather squat, cylindrical, as in fig. 4. Length of antennae equal to head. Trace of reduced furca in shape of 2 symmetrical small patches of fine granulation. Granulation of dorsal side of the body with poorly visible granular areas of type C2 - according to JORDANA & ARBEA (1994) (fig. 1). Usually 13-15 grains



1-2. *Hymenaphorura parva* sp. n.: 1 - dorsal chaetotaxy, position of pso and psx; 2 - ventral chaetotaxy, position of pso and psx



3-12. *Hymenaphorura parva* sp. n.: 3 - body shape, lateral view; 4 - antennal III sense organ; 5 - postantennal organ; 6 - left antenna; 7 - chatetotaxy of leg, dorsal view; 8 - chaetotaxy of leg, ventral view; 9 - claw; 10 - chaetotaxy and dorsal granulation of V and VI abdominal terga; 11 - granulation surrounding pseudocellus on the IV abdominal terga; 12 - granulation surrounding pseudocellus on the III abdominal terga

around each pseudocellus (figs 11, 12). The cuticular pits, typical for *Hymenaphorura*, located on anterior part of granular area of abdominal tergite V, almost invisible.

Antennal III sense organ (AIIIO) consists of: 5 papillae of which the second external is always forked; 2 sensory rods; 2 smooth, spherical sensory clubs; 4 guard setae.

Antennal segment IV with small subapical organite and microsensillum in basal part of the segment (figs 4, 6). On III antennal segment microsensillum locted laterally, slightly below AIIIO (figs 4, 6).

Postantennal organ (PAO) in shallow, relatively short cuticular groove, with 8-11 (most often 8-9) simple vesicles (fig. 5).

Pseudocellar formula (pso) 10/011/111112, ventral pso absent. Parapseudocellar formula (psx) dorsally 0/011/1111, ventrally 1/000/11111. Each subcoxa1 with 1 psx (higher). Each femur with 1 psx ventrally. Position of pso and psx is presented on figs 1 and 2.

Dorsal chaetotaxy symmetrical, with distinct macrochaetae, as in fig. 1. Thorax II-III with lateral microsensilla. Setae p_2 and p_3, on I-III abdominal terga, located on each side of the pseudocelli of roughly equal length (figs 1, 12); on IV abdominal tergum seta p_3 distinctly longer than p_2 (figs 1, 11). Granular area on abdominal tergum V with 1+1 macrochaeta posterolaterally (figs 1, 10). Subcoxae with 3, 4, 4 setae. Ventral chaetotaxy as in fig. 2, between legs on meso- and metathorax 1+1 setae. Tubus ventralis usually with 8+8 setae. Male ventral organ absent.

Claw always without denticle. Empodial appendage with narrow basal lamella, appendage length equal to 3/4 inner edge of the claw. Distal veriticil of setae on tibiotarsi symmetrical, with 11 setae.

Anal spines weakly curved, pointed with small basal papilla.

Variability

The seta p_0 was observed in 6 paratypes on abdominal tergum V (fig. 10). The shape of second internal papilla in AIIIO is variable - in 3 paratypes papillae are forked, like the second external.

Biology

H. minuta n. sp. is a bisexual species, probably associated with interstitial habitats of gravel river beds.

Remarks

H. parva n. sp. differs from the other *Hymenaphorura* species in its small size, relatively fine granulation, almost invisible pits on granular area of abdominal tergum V and in dorsal psx formula (lack of psx on hind margin of the head capsule and on thoracal tergite I). The new species is related to *H. polonica* Pomorski, 1990, because both species have 1+1 macrochaetae on granular area on abdominal tergum V and claws without denticle. Besides, chaetotaxy of IV juvenile instar of *H. polonica* resembles closely adult specimes of *H. parva* n. sp. The shape of

granular areas of the new species is similar to *H. sibirica* TULLBERG (1867), *H. nova* POMORSKI, 1990, *H. liberta* POMORSKI, 1990, *H. alpina* STACH, 1946, *H. maiteae* ARBEA & JORDANA 1994 (WEINER & FJELLBERG 1994, ARBEA & JORDANA 1994). The structure of AIIIO is similar to *H. nova*.

DERIVATIO NOMINIS

The new species is the smallest (latin *parvus* = small) among the known members of the genus *Hymenaphorura* BAGNALL, 1948.

REFERENCES

ARBEA, J. I., JORDANA, R., 1994. Cuatro nuevas especies de la familia *Onychiuridae* de la Pennsula Ibrica (*Collembola, Poduromorpha*). Pub. Biol. Univ. Navarra, Ser. Zool., **24**: 39-59.

POMORSKI, R. J., 1990. New data on the genus *Hymenaphorura* from Europe. Mitt. Schwei. Ent. Ges., **63**: 209-225.

WEINER, W. M., FJELLBERG, A. Redescription and lectotype designation of *Hymenaphorura sibirica* (TULLBERG, 1876) (*Collembola, Onychiuridae*). Ent. Scand., **25**: 415-417.