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New species of *Tetracanthella* from Asia and North America (*Collembola*: *Isotomidae*)

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ABSTRACT. *Tetracanthella antoni, T. deharvengi, T. martynovae, T. monguna* n. spp. from Siberia and *T. juneaui* n. sp. from Alaska are described. Key to species of the genus *Tetracanthella* of Asia and North America is provided.

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

Tetracanthella SCHOTT, 1891 is among the most large Palearctic genera of *Collembola*. Most of its members are distributed in Europe. In Asia and America the genus is represented by fewer and more primitive forms. This paper provides information on five new species of the genus.

The types are preserved at the Zoological Museum in S.-Petersburg (ZIN), Moscow State Pedagogical University, Russia (MSPU), and in the Canadian National Collection in Ottawa, Canada (CNC).

In the descriptions the following abbreviations were used:

PAO - postantennal organ;
Ant. I-IV - antennal segments I-IV;
Th. I-III - thoracic segments I-III;
Abd. I-VI - abdominal tergites I-VI;
Leg I, II, III - first , second, third pair of legs;
p1, a1 - first chaeta of p-row, a-row;
MDM, ML, MDl - dorsomedial, lateral and dorsolateral macrochaeta;
s - sensillum;
ms - microsensillum.

Tetracanthella martynovae n. sp.

(Figs 1-7)

DIAGNOSIS

A member of *wahlgreni* group. Macrochaetotaxy: 22/223. Tenaculum with chaeta. Dens with 1 anterior and 2 posterior chaetae. 5 pp-chaetae on the head. Cuticular smooth fields absent. Empodium c. 1/2 claw.

TYPE MATERIAL

Holotype (female), type locality: Russia, Sakha Republic (Jakutia), the Lower Indigirka River, near v. Chokurdakh, tundra, 19.VIII.1983, leg.V. BULAVINTSEV; 4 Paratypes (on slide), same locality; 5 paratypes: Jakutia, shore of Laptevykh Sea, Shirokostan Peninsula, 7.VIII.1983, leg.V. BULAVINTSEV (preserved in MSPU and ZIN collection).

OTHER MATERIAL

Jakutia, shore of Laptevykh Sea, Khromskaya Bay and Omulyakhskaya Bay (V. BULAVINTSEV); delta of the Lena River, Kuba Bay (V. BULAVINTSEV); near delta of the Olenek River, Vaganytta-Kyuel Lake (A. BABENKO); Chukotka, Chaun Bay (A. FJELLBERG).

DESCRIPTION

Total length up to 1.4 mm. Body of common shape, deeply black, including appendages. Dorsal integument strongly reticulate. Evident smooth fields absent, however some polygons on Abd. IV extremely large (figs 2, 3). The size of polygons varies widely (see below).

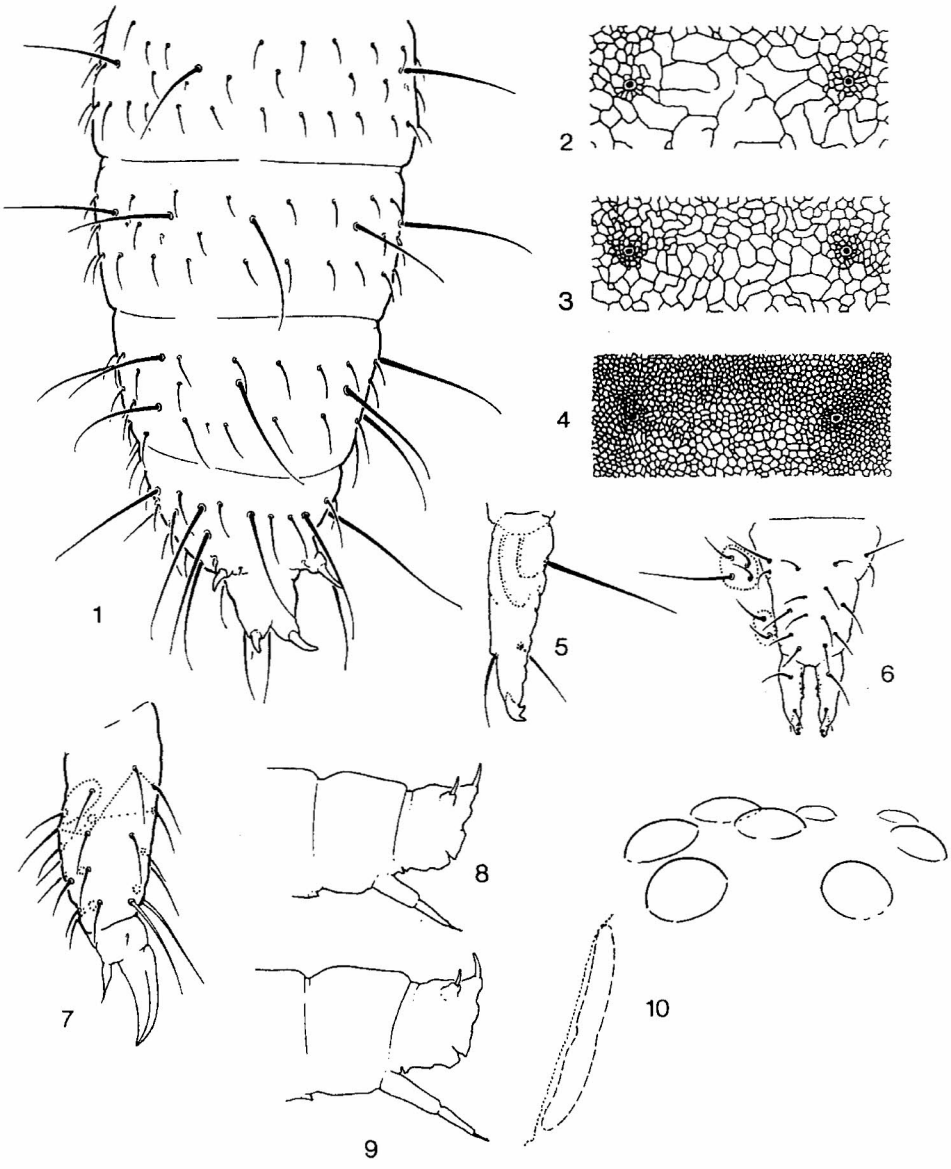
Ant. III with 2 external, 2 internal and 1 lateral sensilla (males in addition with lateral s' sensillum). Ant. I with 2 ventrolateral sensilla. 8+8 ommatidia, G and H smaller. PAO narrow, hidden in integumentary groove, c. 2.5-3 diameters of the nearest ommatidium. 2 prelabral chaetae. Maxillary outer lobe with 4 sublobal hairs. 5(6) pp-chaetae. ap-chaeta absent.

Number of chaetae along dorsal median line of Th. II-Abd. V:11-12,8/4,4,4,4. a1 chaetae on Abd. V at a level with or slightly behind macrochaetae. The main ratios are: Abd. IV - p3:p1 = 1.5-1.9, p1:a1 = 1.0-1.2, p1:GIII = 1.1-1.8. Macrochaetae long and pointed (Abd. IV: Md:p1 = 2.6-4.1). Macrochaetotaxy of Th. II-Abd. III: 2,2/2,2,3. Number of sensilla of Th. II-Abd. V: 3+ms, 3+ms/2+ms, 2+ms, 2+ms, 2, 4. Median sensilla situated behind macrochaetae. Th. III with 1+1 ventromedial chaetae.

Claw without inner tooth. Empodial appendage 1.8-2.2 times shorter than inner edge of claw of Leg III. Tibiotarsi with 1,2,2 dorsal slightly clavate enlarged hairs. Tibiotarsus III with 24 chaetae, with additional chaetae D3 and D5. Upper subcoxa of Leg I with chaetae. Male spurs weakly differentiated.

Tenaculum with chaeta and 3+3 teeth. Anterior subcoxa with 2-3, posterior one with 4 (3) chaetae. Manubrium with 7-8+7-8 dorsal chaetae. Dens with 1 anterior and

2 posterior chaetae, d:GIII=1.4-1.7. Mucro short, with 2 teeth. Anal spines parallel, on high reticulate papilla, eAi:GIII=1.2-1.5.



1-10. *Tetracanthella* spp. 1-7 - *Tetracanthella martynovae* n. sp; 1 - dorsal chaetotaxy of Abd.II-VI; 2-4 - reticulation in median region of Abd.IV, nearby p1-chaetae (2-3 - Lower Indigirka, 4 - Chaun Bay); 5 - dens, lateral; 6 - furcal complex, ventral; 7 - tibiotarsus of Leg III (C-row marked, additional chaetae encircled); 8, 9 - profile of Abd.III-VI: 8 - *T. juneaui* n. sp.; 9 - *T. pacifica* (Canada, Garibaldi Park); 10 - ocular area

VARIABILITY

The specimens from Chukotka (Chaun Bay) have moderate reticulation (fig. 4) and shorter empodium (c. 2.5 times shorter than claw). At present I include them in *T. martynovae*, since the material is not sufficient to explain the status of this form.

REMARKS

T. martynovae is placed in *wahlgreni* group sensu DEHARVENG, 1987. The new species is most similar to *brachyura* BAGNALL, 1949, *raynalae* DEHARVENG, 1987 and *nitida* DEHARVENG, 1987 (Europe). It differs from all of them in the absence of smooth fields on abdomen. The last two mentioned species have very broad smooth fields on several segments, so their separation is beyond question. *T. brachyura* has one modest smooth field on Abd. IV, however it is easily distinguished based on its short empodium (c. 1/3 claw).

Tetracanthella juneaui n. sp.

(Figs 8, 10-16)

DIAGNOSIS

A member of *ethelae* group. Macrochaetotaxy: 22/222. Dens with 1 anterior and 3 posterior chaetae. Tenaculum with 3+3 teeth.

TYPE MATERIAL

Holotype (female), type locality: USA, Alaska, Juneau, Mts. near Mendenhall Glacier, snowbed with meadow of *Luetkea pectinata*, c. 1000 m a.s.l., 13.VII.1980, leg.A. FJELLBERG; 20 Paratypes (on slides and in alcohol), same locality (preserved in CNC collection).

DESCRIPTION

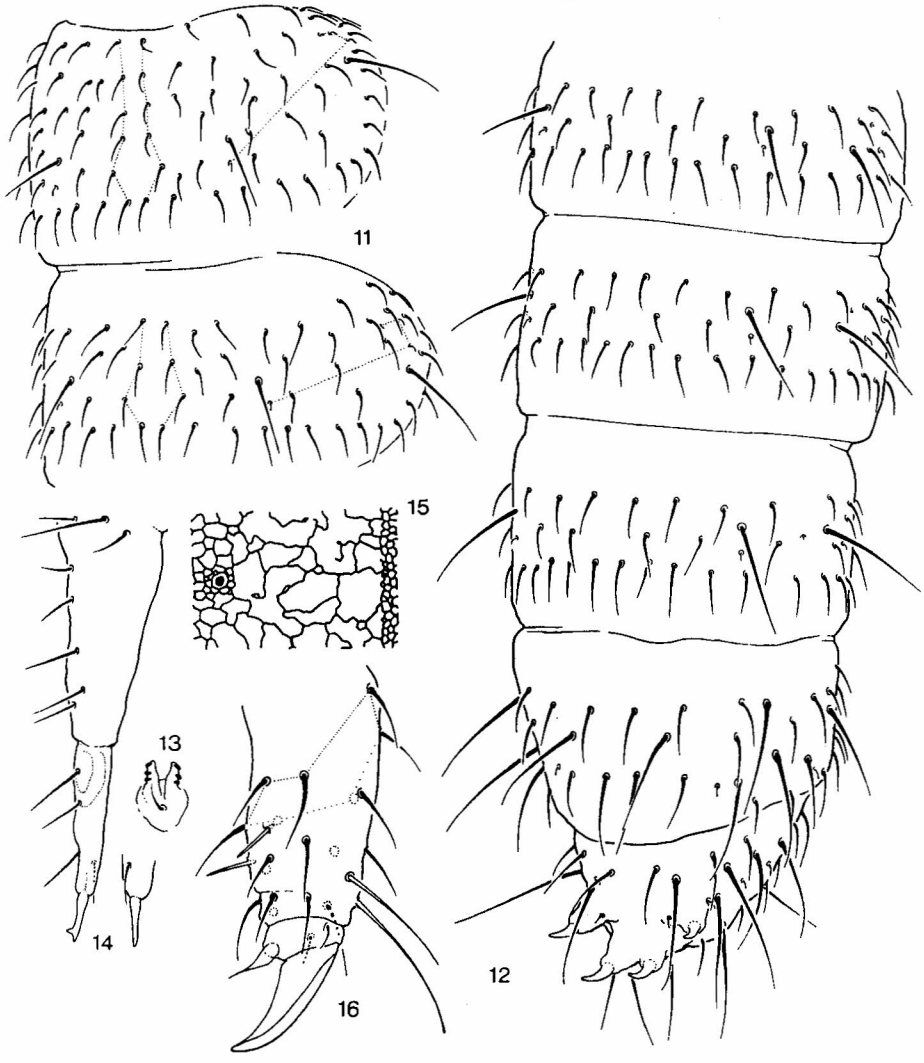
Total length from 0.8 (small male) to 1.3 (large female) mm. Body of common shape. Greyish-blue, including antennae and legs. Dorsal integument strongly reticulate, polygons on Abd. IV large (fig.15). Smooth fields absent.

Ant. III with 2 external, 2 internal and 1 lateral sensilla (males in addition with lateral s' sensillum). Ant. I with 2 ventrolateral sensilla. 8+8 ommatidia, G and H smaller. PAO narrow, slightly more than 3 diameters of the nearest ommatidium. 2 prelabral chaetae. Maxillary outer lobe with 3 sublobal hairs. 5(6) pp-chaetae. ap-chaeta absent.

Number of chaetae along dorsal median line of Th. II-Abd. V: 12,8/4,4,4,4. a1 chaetae on Abd. V in front of macrochaetae. The main ratios are: Abd. IV - p3:p1 = 1.1-1.5, p1:a1 = 1.3-1.8, p1:GIII = 2.0-2.8. Macrochaetae long and pointed, sometimes slightly broadened at tip (Md:p1(Abd. IV)= 1.3-1.8). Macrochaetotaxy of Th. II-Abd. V: 2,2/2,2,2. Dorsal macrochaeta on thorax well developed (Ml:Md=1.4-1.7). Th. II and III sensilla of normal size. Number of sensilla of Th. II-Abd. V: 3+ms, 3+ms/2+ms, 2+ms, 2+ms, 2, 4. As a rule microsensilla on Th. II and Abd. II

hardly visible. Median sensilla situated behind macrochaetae. Th. III without ventromedial chaetae.

Claw without inner tooth. Empodial appendage 1.6-2.0 times shorter than inner edge of claw of Leg III. Tibiotarsi with 1,2,2 dorsal blunt hairs, and 1,1,0 ventral



11-16. *Tetracanthella juneaui* n. sp. 11 - dorsal chaetotaxy of Th. II, III; 12 - dorsal chaetotaxy of Abd. I-VI; 13 - tenaculum; 14 - furca, lateral; 15 - reticulation in median region of Abd. IV, nearby p1-chaetae; 16 - tibiotarsus of Leg III (C-row marked)

insignificantly elongated hairs. Tibiotarsus III with 22 standard chaetae (additional chaetae absent). Upper subcoxa of Leg I without chaetae. Male spurs slightly dilated.

Tenaculum with chaeta and 3+3 teeth. Anterior subcoxa with 5-6, posterior one with 4-5 chaetae. Manubrium with 8(7-9)+8(7-9) chaetae, dens with 1 anterior and 3 posterior chaetae, d:GIII=2.4-2.7. Mucro of *ethelae* type, long and narrow, with 2 teeth. Anal spines of normal size, parallel, on high papilla, eAi:GIII=1.3-1.6.

REMARKS

T. juneaui is placed in *ethelae* group sensu DEHARVENG, 1987. In the chaetotaxy of dens and macrochaetotaxy of abdomen the new species resembles to *christianseni* CASSAGNAU, 1959 (USA: Oregon and California) and *pacifica* RUSEK et MARSHALL, 1976 (Canada: British Columbia). It differs from both in the presence of 3+3 teeth on tenaculum. In general, the furca in *juneaui* is less developed than in these species; this is apparent from the general size of furca (cf. figs 8 and 9 in this paper and fig. 9B in DEHARVENG, 1987) and chaetotaxy of manubrium. In the p1:a1 (Abd. IV) and Ml:Md (Th. II) ratios *christianseni* stands closest to the nearest to the new species.

Tetracanthella monguna n. sp.

(Figs 17-21)

DIAGNOSIS

A member of *grinbergsi* group. Macrochaetotaxy: 33/223. Ventromedial chaetae on Th. III absent. Dens with 1 anterior and 3 or 4 posterior chaetae.

TYPE MATERIAL

Holotype (female), type locality: Russia, SW Tuva, Mongun-Taiga District Mugur-Aksy Range, mountain tundra, lichens and moss, 23.VII.1993, leg.S. STEBAEVA (preserved in MSPU collection).

DESCRIPTION

Total length about 1.4 mm (subadult female). Body of common shape. Blackish-blue, including antennae and legs. Dorsal integument distinctly reticulate. Polygons on Abd. IV c. 0.5-1 diameters of chaeta basis. Smooth fields absent.

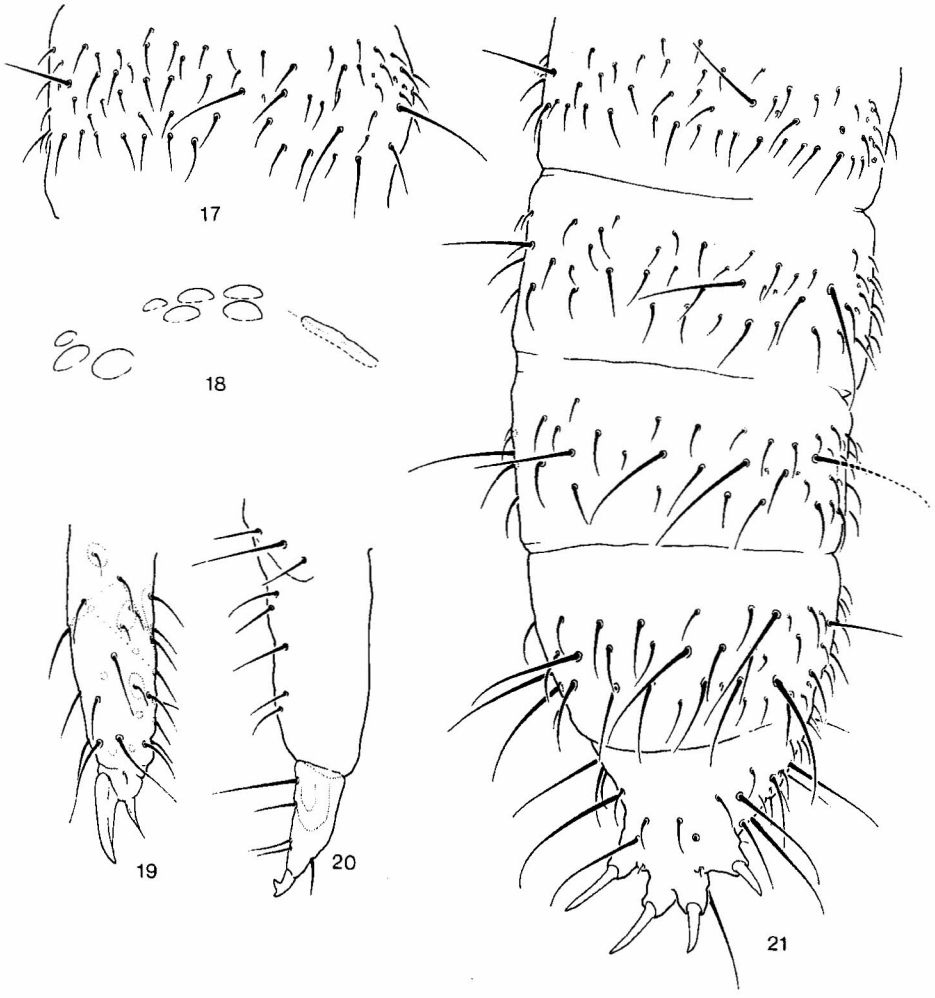
Ant. III with 2 external, 2 internal and 1 lateral sensilla (in males unknown). Ant.I with 2 ventrolateral sensilla. 8+8 ommatidia, G and H smaller. PAO narrow, c. 2.3 diameter of the nearest ommatidium. 4 prelabral chaetae. Number of sublobal hairs unknown. 5 pp-chaetae. ap-chaeta present.

Number of chaetae along dorsal median line of Th. II-Abd. V:12,9/6,6,..,6 (aberration is observed on Abd. III). a1 chaetae on Abd. V in front of macrochaetae. The main ratios are: Abd. IV - p3:p1 = 1.2, p1:a1 = 1.6, p1:GIII = 2.8. Macrochaetae long and pointed (Abd. IV: Md:p1 = 1.5). Macrochaetotaxy of Th. II-Abd. V: 3,3/2,2,3 (A). Sensilla on body of normal size. Number of sensilla of Th. II-Abd. V:

3+ms, 3+ms/2+ms, 2+ms, 2+ms, 2, 4. Median sensilla arranged between the macrochaetae. Th. III without ventromedial chaetae.

Claw without inner tooth. Empodial appendage reduced, 1.8 times shorter than inner edge of claw of Leg III. Tibiotarsi with 1,2,2 dorsal slightly clavate hairs. Tibiotarsus III with 22 standard chaetae and at least 6 additional ones (including D3 and D4). Upper subcoxa of Leg I without chaetae.

Tenaculum with chaeta and 4+4 teeth. Anterior subcoxa with 5, posterior one with 4 chaetae. Manubrium with 8+8, dens with 1 anterior and 3 or 4 (asymmetri-



17-21. *Tetracanthella monguna* n. sp. 17 - dorsal chaetotaxy of Th. III; 18 - ocular area; 19 - tibiotarsus of Leg III; 20 - furca, lateral; 21 - dorsal chaetotaxy of Abd. I-VI

cally) posterior chaetae, d:GIII=1.2. Mucro short with 2 teeth. Anal spines long, parallel, on high papilla, eAi:GIII=1.9.

REMARKS

The species is placed in *grinbergsi* group sensu DEHARVENG, 1987. In macrochaetotaxy (33/223) it is most similar to *sexsetosa* MARTYNOVA, 1971 (Middle Asia: Tian-Shan Mts.). It is distinct in the absence of ventromedial chaetae on Th. III and more reduced furca. *T. sexsetosa* has thoracic ventromedial chaetae and long dens with 5 posterior chaetae on dens in furca.

Tetracanthella deharvengi n. sp.

(Figs 22-25)

DIAGNOSIS

A member of *stebaevae* group. Macrochaetotaxy: 33/333A, moreover some additional ones on each tergites. Body whitish-grey. Dens with 1 anterior and 3 posterior chaetae. 8+8 ommatidia. Anal spines with distinct papillae.

TYPE MATERIAL

Holotype (female), type locality: Kazakhstan, West Altai Mts, Ivanovski Range, near Leninogorsk, subalpine zone, mountain taiga with *Abies*, *Larix* and *Pinus sibirica*, 16.VI.1983, leg.I. VTOROV; 10 Paratypes (on slides) same locality and in alpine zone, at a higher altitude.

OTHER MATERIAL

Russia, S Krasnoyarsky District, West Sayan Range, Usinski road, subalpine meadow (S. STEBAEVA).

DESCRIPTION

Total length up to 1 mm. Body rather broad. Whitish with pigment granules scattered all over the body. Appendages white. Dorsal integument clear reticulate, polygons on Abd. IV c. 1/2-1 diameters of chaeta basis. Smooth fields absent.

Ant. III with 2 external, 2 internal and 1 lateral sensilla. Ant. I with 2 ventrolateral sensilla. 8+8 ommatidia, G and H smaller. PAO narrow, c. 3 diameters of the nearest ommatidium. 4 prelabral chaetae. Maxillary outer lobe with 4 sublobal hairs. 6(5-7) pp-chaetae. ap-chaeta present.

Number of chaetae along dorsal median line of Th. II-Abd. V: 12,8(9)/4,4,4,8 (7-9). Abd. I, II and usually Abd. III with additional axial pair of chaetae (encircled in fig. 25, these chaetae not included in axial formula). Abd. IV with additional median chaeta behind p-row. a1 chaetae on Abd. V in front of macrochaetae. The main ratios are: Abd. IV - p3:p1 = 1.1-1.3, p1:a1 = 1.6-2.1, p1:GIII = 1.8-2.7. Macrochaetae of normal size, pointed (Abd. IV: Md:p1 = 1.3-1.8). Macrochaetotaxy of Th. II-Abd. V: 3(4),3(4)/3(5),3(5),3(5) (A) (the total number of macrochaetae

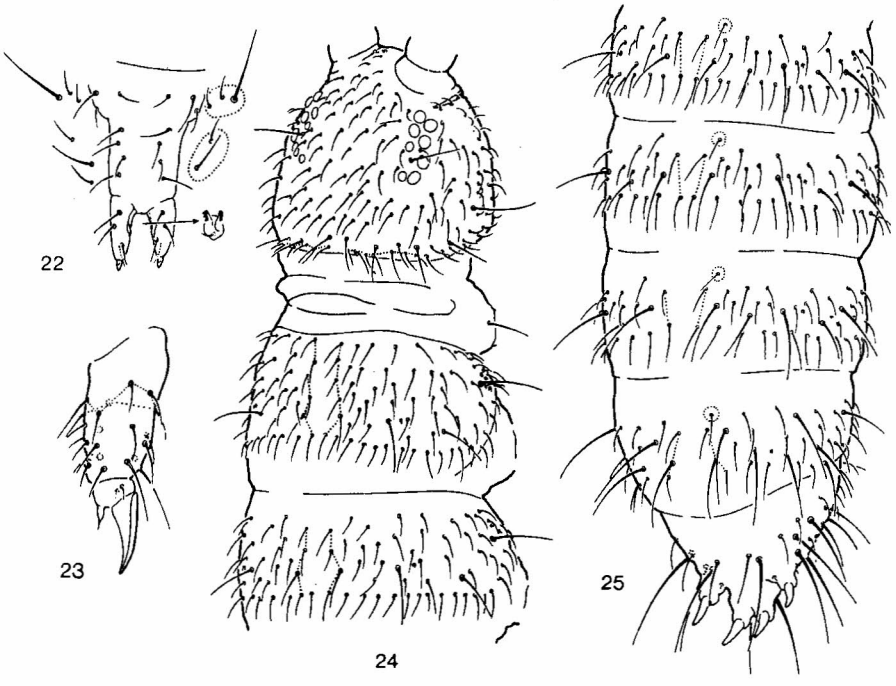
including additional ones given in parenthesis). Additional macrochaetae on Abd. I poorly developed. Sensilla on body very short and feebly marked. Number of sensilla of Th. II-Abd. V: 3+ms, 3+ms/2+ms, 2+ms, 2+ms, 2, 4. Median sensilla situated between macrochaetae. Th. III without ventromedial chaetae.

Claw without inner tooth. Empodial appendage reduced, 2.2-3.3 times shorter than inner edge of claw of Leg III. Tibiotarsi with 1,2,2 elongated dorsal chaetae, ventral enlarged chaetae weakly developed. Tibiotarsus III with 22 chaetae (additional chaetae absent, rarely D3 present). Upper subcoxa of Leg I without chaetae. Male spurs not dilated.

Tenaculum with 1(0) chaeta (see below) and 3+3 teeth. Anterior subcoxa with 2(3), posterior one with 3 chaetae. Furca short, manubrium with 7-8+7-8, dens short and broadened, with 1 anterior and 3 posterior chaetae, d:GIII=1.0-1.6. Mucro short, with 2 teeth. Anal spines of normal size, parallel, on distinct papilla, eAi:GIII= 1.2-1.9.

VARIABILITY

Although the structure of tenaculum is accepted as constant character, specimens without chaetae on tenaculum were found along with the typical ones.



22-25. *Tetracanthella deharvengi* n. sp. 22 - furcal complex, ventral; 23 - tibiotarsus of Leg III; 24 - dorsal chaetotaxy of anterior part of body; 25 - dorsal chaetotaxy of posterior part of body

REMARKS

T. deharvengi is placed in *stebaevae* group sensu DEHARVENG, 1987. In the chaetotaxy of dens and the body coloration it is most similar to *stebaevae* DEHARVENG, 1987 (S Siberia, Kuznetsky Ala-Tau Range). The new species is easily recognized by 8+8 ommatidia, 4 prelabral chaetae, distinct papillae of anal spines and 22 chaetae on tibiotarsus III, whereas *stebaevae* has 6+6 ommatidia, 2 prelabral chaetae, indistinct papillae of anal spines and 23 chaetae on tibiotarsus III (D3 present). The mentioned characters were verified in the type material of *stebaevae*.

Tetracanthella antoni n. sp.

(Figs 26-29)

DIAGNOSIS

A member of *stebaevae* group. Macrochaetotaxy: 33/333A, without additional macrochaetae. Body blackish-blue. Dens with 1 anterior and 5(4) posterior chaetae. Axial formula: 12,8/4,4,4,6.

TYPE MATERIAL

Holotype (female), type locality: Russia, S Krasnoyarsky District, West Sayan Range, Oyski Mts., Olenya river, ca 1800 m alt., moss tundra, 10.VII.1990, leg. S. STEBAEVA (preserved in MSPU collection).

DESCRIPTION

Total length up to 1.6 mm. Body of common shape. Blackish-blue, including antennae and legs. Dorsal integument distinctly reticulated. Polygons on Abd. III c. diameter of chaeta basis, on Abd. IV - 1.0-1.5 diameters. Smooth fields absent.

Ant. III with 2 external, 2 internal and 1 lateral sensilla. Ant.I with 2 ventrolateral sensilla. 8+8 ommatidia, G and H smaller. PAO narrow, c. 2 times longer than diameter of the nearest ommatidium. 4 prelabral chaetae. Maxillary outer lobe with 4 sublobal hairs. 5 pp-chaetae. ap-chaeta present.

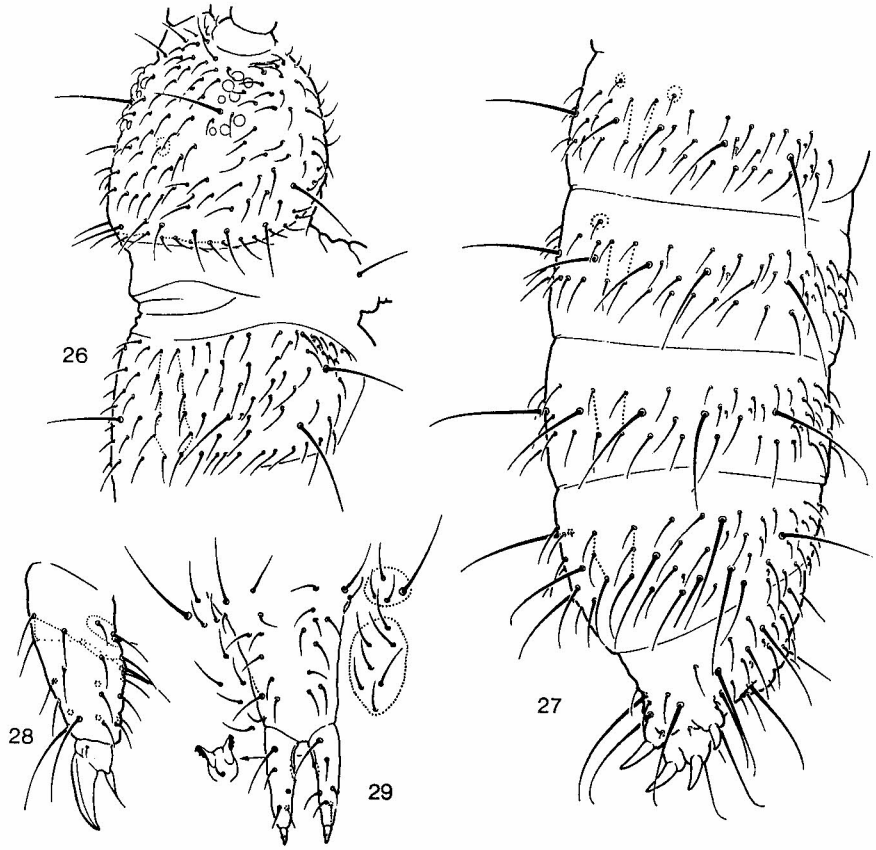
Number of chaetae along dorsal median line of Th. II-Abd. V:12,8/4,4,4,6. A1 chaetae on Abd. V in front of macrochaetae. Abd IV with additional row of chaetae behind p-row. Abd. I with additional axial chaetae (not included in axial formula). The main ratios are: Abd. IV - p3:p1 = 1.2-1.3, p1:a1 = 1.5-1.6, p1:GIII = 2.8-3.5. Macrochaetae long and pointed (Abd. IV: Md:p1 = 1.5-1.8). Macrochaetotaxy of Th. II-Abd. V: 3,3/3,3,3 (A). Sensilla on body of normal size . Number of sensilla of Th. II-Abd. V: 3+ms, 3+ms/2+ms, 2+ms, 2+ms, 2, 4. Median sensilla located between macrochaetae. Th. III without ventromedial chaetae.

Claw without inner tooth. Empodial appendage long, 1.3-1.6 times shorter than inner edge of claw of Leg III. Tibiotarsi with 1,2,2 dorsal slightly clavate hairs. Tibiotarsus III with 25 chaetae (additional chaetae D3, D4 and D5 present). Upper subcoxa of Leg I without chaetae.

Tenaculum with chaeta and 4+4 teeth. Anterior subcoxa with 5-7(8), posterior one with 4-5 chaetae. Manubrium with 9(8)-10, dens with 1 anterior and 5(4) posterior chaetae, d:GIII= 1.6-2.0. Mucro with 2 teeth. Anal spines long, parallel, on high papilla, eAi:GIII=1.4-1.8.

REMARKS

The new species is placed in *stebaevae* group sensu DEHARVENG, 1987. In the chaetotaxy of dens and body coloration the species is most similar to *czernovae* KUTYREVA, 1980 (Russia, Far East). *T. czernovae* differs from the new species in 3 anterior chaetae on dens. I was able to study two paratypes of *czernovae* which made it possible to find an array of other differences between these forms. The latter species is much more polychaetotic, which is expressed by axial formula of abdomen (6,6,6,8), number of pp-chaetae on the head (7-8), chaetotaxy of manubrium (11-12+11-12) and other features.



26-29. *Tetracanthella antoni* n. sp. 26 - dorsal chaetotaxy of head and Th. II; 27 - dorsal chaetotaxy of Abd. I-VI; 28 - tibiotarsus of Leg III; 29 - furcal complex, ventral

KEY TO THE ASIAN AND NEARCTIC *TETRACANTHELLA*

1. Furca entirely absent ..... 2.
-. Furca present ..... 3.
2. Chaeta on upper subcoxa of Leg I and sternite of Th. III present ..... *caucasica* (STACH, 1947)
-. Chaeta on upper subcoxa of Leg I and sternite of Th. III absent ..... *orientalis* MARTYNOVA, 1977
3. Mucro absent ..... 4.
-. Mucro present ..... 9.
4. Macrochaetotaxy: 3,3/2,3,3 (W) ..... *wahlgreni* AXELSON, 1907
-. Macrochaetotaxy: 2,2/2,2,3 ..... 5.
5. Median microchaetae (a1) of Abd. V in front of macrochaetae ..... *osetica* POTAPOV et KUCHIEV, 1993
-. Median microchaetae (a1) of Abd. V behind macrochaetae ..... 6.
6. Manubrium with 8-9+8-9 dorsal chaetae ..... *hatipari* POTAPOV et KUCHIEV, 1993
-. Manubrium with 6-7+6-7 dorsal chaetae ..... 7.
7. p1-chaetae on Abd. IV long (Md:p1=1.6-1.8) ..... *fjellbergi* DEHARVENG, 1987
-. p1-chaetae on Abd. IV short (Md:p1>2.2) ..... 8.
8. Smooth fields usually absent. 3 pp-chaetae on head .... *arctica* CASSAGNAU, 1959
-. Smooth fields present. 4-5 pp-chaetae on head ..... *sibirica* DEHARVENG, 1987
9. Chaeta on upper subcoxa of Leg I present. Chaetae on sternite of Th. III present ..... 10.
-. Chaeta on upper subcoxa of Leg I absent. Chaetae on sternite of Th. III absent, rarely present ..... 14.
10. Dens with 1 anterior and 3 posterior chaetae. Abd. III with 2+2 macrochaetae ..... 11.
-. Dens with 1 anterior and 2 posterior chaetae. Abd. III with 3+3 macrochaetae ..... 12.
11. Axial chaetotaxy of abdomen: 6,6,6,8-10 ..... *acuminata* CASSAGNAU, 1959
-. Axial chaetotaxy of abdomen: 4,4,4,6 ..... *pilosa* SCHOTT, 1891
12. Tibiotarsi with 1,2,1-2 strongly differentiated ventral clavate hairs ..... *bellingeri* DEHARVENG, 1978
-. Tibiotarsi without or with weak ventral elongated hairs ..... 13.
13. Body weakly greenish-grey pigmented. Dorsolateral macrochaetae on abdomen weakly developed ..... *tarbae* POTAPOV et KUCHIEV, 1993
-. Body deeply black pigmented. Dorsolateral macrochaetae on abdomen long ..... *martynovae* n. sp.
14. Macrochaetotaxy: 2,2/2,2,2 ..... 15.
-. Macrochaetotaxy: 2,2/2,2,3 ..... *californica* DEHARVENG, 1978
-. Macrochaetotaxy: 3,3/2,2-3,3 (A) ..... 20.
-. Macrochaetotaxy: 3,3/3,3,3 (A) or more ..... 23.
15. Dens with 1 anterior and 3 posterior chaetae. 2+2 axial chaetae on Abd. IV .... 16.
-. Dens with more chaetae. 3+3 or more axial chaetae on Abd. IV ..... 18.

16. Tenaculum with 3+3 teeth ..... *juneaui* n. sp.
-. Tenaculum with 4+4 teeth ..... 17.
17. Ratio Ml:Md (Th. II,III) = 1.3-1.6 ..... *christianseni* CASSAGNAU, 1959
-. Ratio Ml:Md (Th. II,III) about 2 ..... *pacifica* Rusek & MARSHALL, 1976
18. Dens with 4 posterior chaetae. Tenaculum with 3+3 teeth .... *ethelae* WRAY, 1945
-. Dens with 6-7 posterior chaetae. Tenaculum with 4+4 teeth ..... 19.
19. Dens with 1 ventral chaetae. Anal spines long ..... *sylvatica* YOSII, 1939
-. Dens with 3 ventral chaetae. Anal spines short* .... *manschurica* KUTYREVA, 1980
20. Macrochaetotaxy: 3,3/2,2,3 (A) ..... 21.
-. Macrochaetotaxy: 3,3/2,3,3 (A) ..... 22.
21. Chaetae on sternite of Th. III absent. Dens somewhat longer than inner edge of Claw III ..... *monguna* n. sp.
-. Chaetae on sternite of Th. III present. Dens c. twice longer than inner edge of Claw III ..... *sexsetosa* MARTYNOVA, 1971
22. Axial chaetom of abdomen: 4,4,4,8 (anterior additional axial pair of chaetae not included) ..... *grinbergsi* DEHARVENG, 1987
-. Axial chaetom of abdomen: 8,8,8,8 or more** .... *septemsetosa* MARTYNOVA, 1971
23. Dens with 1 anterior and 3 posterior chaetae ..... 24.
-. Dens with more chaetae ..... 25.
24. 8+8 ommatidia. Cuticle strongly reticulate ..... *deharvengi* n. sp.
-. 6+6 ommatidia. Cuticle with hardly developed reticulation .... *stebaevae* DEHARVENG, 1987
25. Axial chaetom of abdomen: 4,4,4,6 (anterior additional axial pair of chaetae not included). Dens with 1 anterior and 5(4) posterior chaetae ..... *antoni* n. sp.
-. Axial chaetom of abdomen: 6,6,6,8. Dens with 2-3 anterior and 6 posterior chaetae** ..... *czernovae* KUTYREVA, 1980

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*on the basis of study of the material from S Far East of Russia (Vladivostok).
** on the basis of examination of the holotype.