

Collembola in Sugadaira and Its Adjacent Regions,
Central Japan. Family Tomoceridae I.
*Tomocerus (Tomocerus)**

Hideyuki UEMIYA

*College of Medical Care and Technology, Gunma University,
Showa-machi, Maebashi, Gunma 371, Japan*

(Accepted Dec. 7, 1995)

Synopsis

In this report, as the first step of the collection survey of collembolan species in Sugadaira and its adjacent regions, *Tomocerus (Tomocerus)* was dealt with. The following three species were identified.

1. *T. (T.) cuspidatus* BÖRNER, 1909
2. *T. (T.) ishibashii* YOSII, 1954
3. *T. (T.) asahinai* YOSII, 1954

The key of these species was given as well as their diagnostic descriptions.

Key words: Collembola, Tomoceridae, *Tomocerus*, fauna, Sugadaira

Although many collembolan species have been already described from Japan, we have few faunal studies of collembolans in specific regions. There has been no such work for Sugadaira. Thus, I started the collection survey of collembolan species in and around the region.

The subgenus *Tomocerus* of the genus *Tomocerus* (family Tomoceridae) is dealt with in this report. The collembolans belonging to the subgenus are the most conspicuous in the genus by their large size. The key to subgenera in the genus *Tomocerus* is:

1. Outer basal tooth of mucro absentSubgenus *Monodontocerus*
Outer basal tooth of mucro present2
2. Mucro without corner toothletSubgenus *Tomocerina*
Mucro with corner toothletSubgenus *Tomocerus*

* Contributions from Sugadaira Montane Research Center, University of Tsukuba no. 147.

Three species of the subgenus *Tomocerus* were identified in the collection from the Sugadaira and its adjacent regions. The key of these three species and the diagnostic descriptions for each are given.

Description

Key to three species collected of the subgenus *Tomocerus*.

1. Dental spines 4/4, I, 2, I. All spines compound.
Unguiculus with outer tooth *T. (T.) cuspidatus*
2. Dental spines 4/3, II. All spines compound.
Unguiculus without outer tooth *T. (T.) ishibashii*
3. Dental spines 7/5, I, 1, I. Only large spines compound.
Unguiculus without outer tooth *T. (T.) asahinai*

1. *Tomocerus (Tomocerus) cuspidatus* BÖRNER, 1909 (Fig. 1)

Specimens examined: Sugadaira (1,300 m alt.), Nagano Prefecture, 23. IV. 1984; 30. IX. 1989; 17. XII. 1990, H. UEMIYA leg.

Body length up to 5 mm. Ground color purple or brown. Head purple. First antennal segment and distal part of second purple, and third and fourth brown. Lateral and dorsal side of trunk purple. Ventral side of trunk, ventral tube and furca yellowish. Coxa and distal part of legs purple. Other parts of body brown. Body scales dark brown, heavily striated. Antenna, head, legs and trunk (except for ventral side) with scales. Labral setae 4/5, 5, 5 with 4 recurved spinules on anterior margin. Unguis with one large proximal and up to 4, 5, 4 small distal inner teeth. Unguiculus lanceolate with an inner small and an outer rather large teeth. An outer tooth of unique form. Dental spines 4/4, I, 2, I, brown, with 3-6 plications near the basis. All spines compound. Mucro with 2 dorsal lamellae, 9 intermittent teeth on the inner lamella.

2. *Tomocerus (Tomocerus) ishibashii* YOSHII, 1954 (Fig. 2)

Specimens examined: Sugadaira (1,300 m alt.), Nagano Prefecture, 3. IV. 1990; 4. V. 1995, H. UEMIYA leg.; Kakuma (1,100 m alt.), Nagano Prefecture, 2. V. 1992. H. UEMIYA leg.; Ueda-Shimin-no-Mori (1,000 m alt.), Nagano Prefecture, 24. IV. 1984, H. UEMIYA leg.

Body length up to 3.5 mm. Ground color yellowish white. Third and fourth antennal segments pale. Labral setae 4/5, 5, 4, with 4 recurving marginal spinules on anterior margin. Unguis rather slender, with up to 5, 4, 5 small distal inner teeth. Proximal teeth rather large, others small. Dental spines 4/3, II. All spines compound weakly (compared with *T. cuspidatus*). Mucro elongate, with 6 intermittent teeth on the median part of outer lamella.

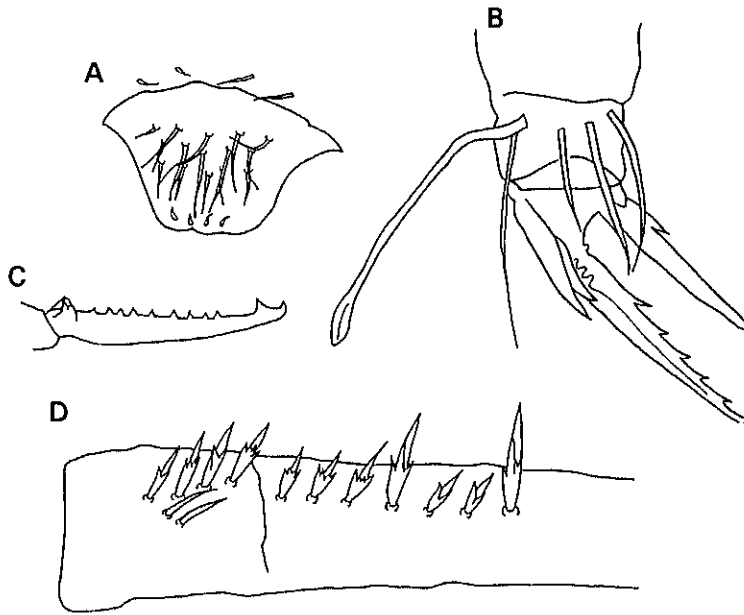


Fig. 1. *Tomocerus (Tomocerus) cuspidatus* BÖRNER.
A: labrum, B: hind claw, C: mucro, D: dental spines.

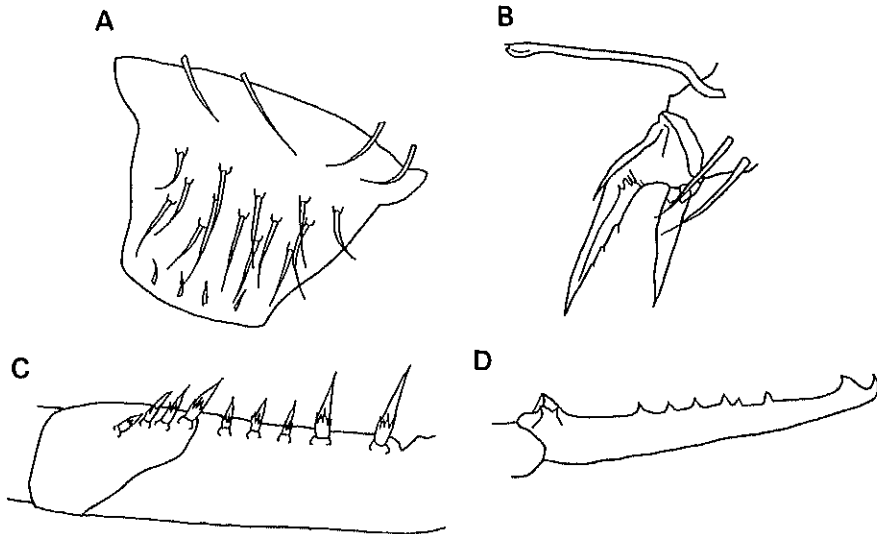


Fig. 2. *Tomocerus (Tomocerus) ishibashii* YOSH.
A: labrum, B: hind claw, C: dental spines, D: mucro.

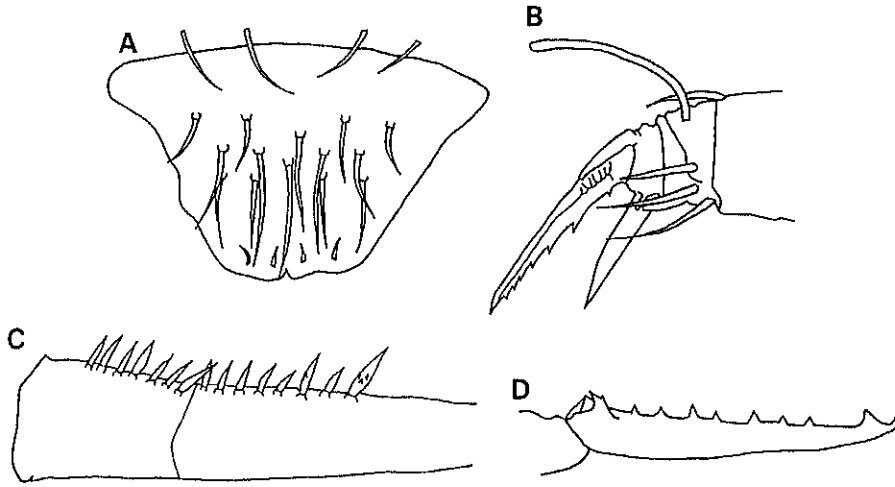


Fig. 3. *Tomocerus (Tomocerus) asahinai* YOSHII.
A: labrum, B: hind claw, C: dental spines, D: mucro.

3. *Tomocerus (Tomocerus) asahinai* YOSHII, 1954 (Fig. 3)

Specimens examined: Sugadaira (1,300 m alt.), Nagano Prefecture, 6. V. 1995, H. UEMIYA leg.

Body length up to 3.5 mm. Head green. First and second antennal segments white, and third and fourth green. Trunk and coxae of mid and hindleg green. Coxa of foreleg purple. Distal part of each tibiotarsus greenish. Distal part of hind femur purple. Furca greenish. Body scales brown. Labral setae 4/5, 5, 4 with marginal recurving setae. Unguis slender, with up to 8, 8, 7 small distal inner teeth. Unguiculus without inner tooth. Dental spines 7/5, 1, 1, 1. Inner side of larger spines with some plications. Mucro with 7 intermittent teeth on the outer lamella.

Acknowledgements

I thank Dr. R. MACHIDA of Sugadaira Montane Research Center, University of Tsukuba (SMRC) for his valuable advice, and also thank Dr. T. TSUTSUMI of SMRC for his aid in collecting specimens.

References

- BÖRNER, C. (1909) Japans Collembolenfauna. Sb. Ges. Naturf. Fr. 1909: 99-135.
YOSHII, R. (1954) Springschwanze des Oze Naturschutzgebietes. Sci. Res. Ozegahara Moor 777-830.