

鹿児島県から採集されたヒトフシムカデ属の特異的な新種 (7)

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A peculiar new species of the genus *Monotarsobius* (Lithobiidae) from Kagoshima, Kyushu, Japan

(Taxonomic study of the order Lithobiomorpha (Chilopoda) in Asia VII)

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Abstract An unknown small centipede belonging to the genus *Monotarsobius* was found from the Osumi Mountains of Kagoshima, Kyushu, Japan. This species is distinguishable clearly by lacking coxal pores on coxa of 12th leg from the other congeners, and is described as *M. itohi* sp. nov.

Key words: Chilopoda, description, Japan, Lithobiidae, *Monotarsobius*, coxal pore

Introduction

Japanese *Monotarsobius* centipedes have been studied taxonomically by Pocock (1895), Attems (1909), Verhoeff (1937), Takakuwa (1938, 1941, 1942), Miyosi (1956), Shinohara (1957, 1972, 1987), Murakami (1960, 1965), Eason (1973), Takano (1979), Ishii (1988, 1990, 1991, 1993, 1995, 2000, 2002), Ishii and Tamura (1994) and Ishii and Yahata (1997), and now about 30 species are known from Japan, though some forms still include taxonomical problems.

All the *Monotarsobius* species so far known have some pores arranged in a row on the coxae of 12th to 15th legs. Recently, a soil faunal survey was conducted at two sites of the Osumi Mountains, Kagoshima Pref., Kyushu, Japan in which an unknown small form belonging to the genus *Monotarsobius* of the family Lithobiidae was obtained. This form is characteristic in lacking pores on coxae of 12th leg, being first in this genus, therefore it is described as a new species here.

Study site profile and method

The present study sites in the Osumi Mountains are located at the Ushine Pass and the Takakuma ravine and soil samples were taken on 8 December 2007. The heights above sea level of the sites are 510 m at the Ushine Pass and 180 m at the Takakuma ravine. Both sites are covered entirely with evergreen broadleaved trees. The samples composed of litter and organic

soil were put in Tullgren funnels for about 168 hours to extract the soil animals. Then the *Monotarsobius* specimens were separated from other soil animals under a binocular microscope. After that, all of the specimens separated were mounted one by one slide with Canada balsam as a medium for the observation using an ordinary optical microscope.

Taxonomic Account

Monotarsobius itohi sp. nov.

[Japanese name: Itoh-hitofusimukade]

(Figs. 1-2, Table1)

Material examined

Holotype: ♂ (NSMT-My296), the Ushine Pass, Tarumizu shi, Kagoshima Pref. (31° 34' 46" N, 130° 48' 50" E), alt. 510 m a.s.l., 8 December 2007. Allotype: ♀ (NSMT-My297), same data as holotype. Paratypes: Nos. 1-3, ♂ (NSMT-My298-1-3), Nos. 4-5, ♀ (NSMT-My298-4-5), same data as holotype; Nos. 6-7, ♂ (NSMT-My298- 6-7), Nos. 8-9, ♀ (NSMT-My298-8-9), the Takakuma ravine, Kanoya shi, Kagoshima Pref. (31° 29' 49" N, 130° 51' 26" E), alt. 180 m a.s.l., 8 December 2007. All the specimens were collected by the author.

All the type specimens will be deposited in the collection of National Museum of Nature and Science, Tokyo.

Table 1. Spine arrangement on each leg article of *Monotarsobius itohi* sp. nov., holotype. C: coxa, t: trochanter, P: prefemur, F: femur, T: tibia, a: anterior, m: medial, P: posterior.

No. of legs	dorsal					ventral				
	C	t	P	F	T	C	t	P	F	T
1					a					
2				ap	a					m
3, 4				ap	ap					m
5				ap	ap				(a)m	m
6-10				ap	ap				am	m
11				(p)	ap				am	m
12									m	m
13			p					(p)	m	m
14			mp				m	mp	m	
15	(a)		mp				m	mp	m	

Description

Coloration: Pale yellowish brown.

Measurement: — male: body length 2.95-4.00 mm (mean 3.51 mm, n=9), head width 0.35-0.47 mm (0.43 mm), head length 0.39-0.49 mm (0.45 mm), 3rd tergal width 0.31-0.45 mm (0.38 mm), 10th tergal width 0.36-0.50 mm (0.44 mm); female: body length 3.18-3.85 mm (mean 3.48 mm, n=5), head width 0.35-0.42 mm (0.40 mm), head length 0.39-0.44 mm (0.42 mm), 3rd tergal width 0.31-0.38 mm (0.35 mm), 10th tergal width 0.36-0.46 mm (0.41 mm).

Male: Head having 3 ocelli arranged in a horizontal row on each side, intermediate one largest. Tömösvary's organ nearly of the same size as anterior ocellus (Fig. 2-A). Antenna usually consisting of 19 articles. Forcipular coxosternite provided with 2+2 teeth nearly of the same size; medial pair of the teeth slightly lower than lateral ones; shoulders of forcipular coxosternite slightly swelling and having slender, long porodont (Fig. 2-B, C). Posterior corners of whole tergites of trunk rounded (Fig. 1-B). Posterior border of tergites I, III, V, VIII, X, XII, XIV and XV slightly concave. Sternites I to XIV somewhat trapeziform and posterior border straight; sternite XV nearly semicircular (Fig. 1-A).

Tarsi of 1st to 13th legs fused, but those of 14th and 15th legs separated into tarsi I and II. Fourteenth and 15th legs thickened. Tibia of 15th legs with a dorso-internal distal small process bearing short spinal setae (Fig. 2-D, E). Accessory claws of pretarsus well-developed in 1st to 13th legs (Fig. 2-F); slightly shorter in 14th leg (Fig. 2-G) and entirely lacking in 15th leg (Fig. 2-H). Twelfth leg completely lacking coxal

pores and 13th to 15th legs with pores arranged in a row of 1, 2, 2 in number (Fig. 1-C). Spine arrangement of legs as shown in Table 1.

Female: Sternite XV nearly trapeziform. Coxal pores of 12th to 15th legs the same as male (Fig. 1-D). Genital coxa of gonopod with two bacilliform spurs; spurs slightly curved and outer spurs longer than inner ones (Fig. 2-I). Secondary genital segment bearing two short dorsolateral setae. Genital claw trifurcated and bearing a short dorsolateral seta.

Remarks

Monotarsobius centipedes have coxal pores arranged in a row on 12th to 15th legs. The species, *M. itohi* sp. nov. is remarkably distinguishable from the other congeneric species by lacking coxal pores on 12th leg.

Etymology

The specific name is dedicated to the late Prof. Dr. Ryosaku Itoh, who was a collembolan specialist and a precious friend of mine.

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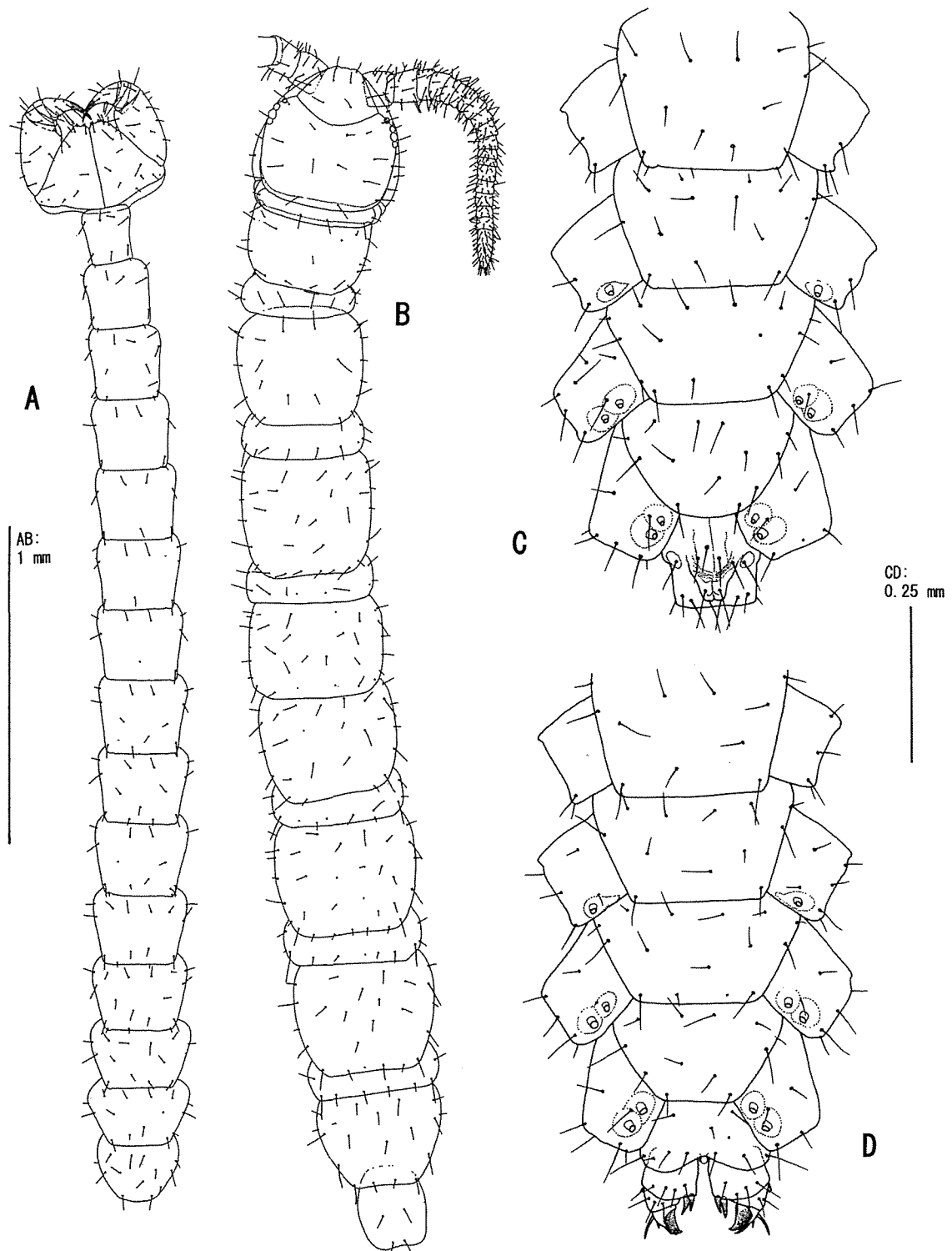


Fig. 1. *Monotarsobius itohi* sp. nov., holotype (A-C) and allotype (D). A, forcipules and sternites, ventral, male; B, head, fourcircular and whole tergites, dorsal, male; C, sternite XII to XV with coxae of legs, ventral, male; D, sternites XII to XV with coxae of legs, ventral, female.

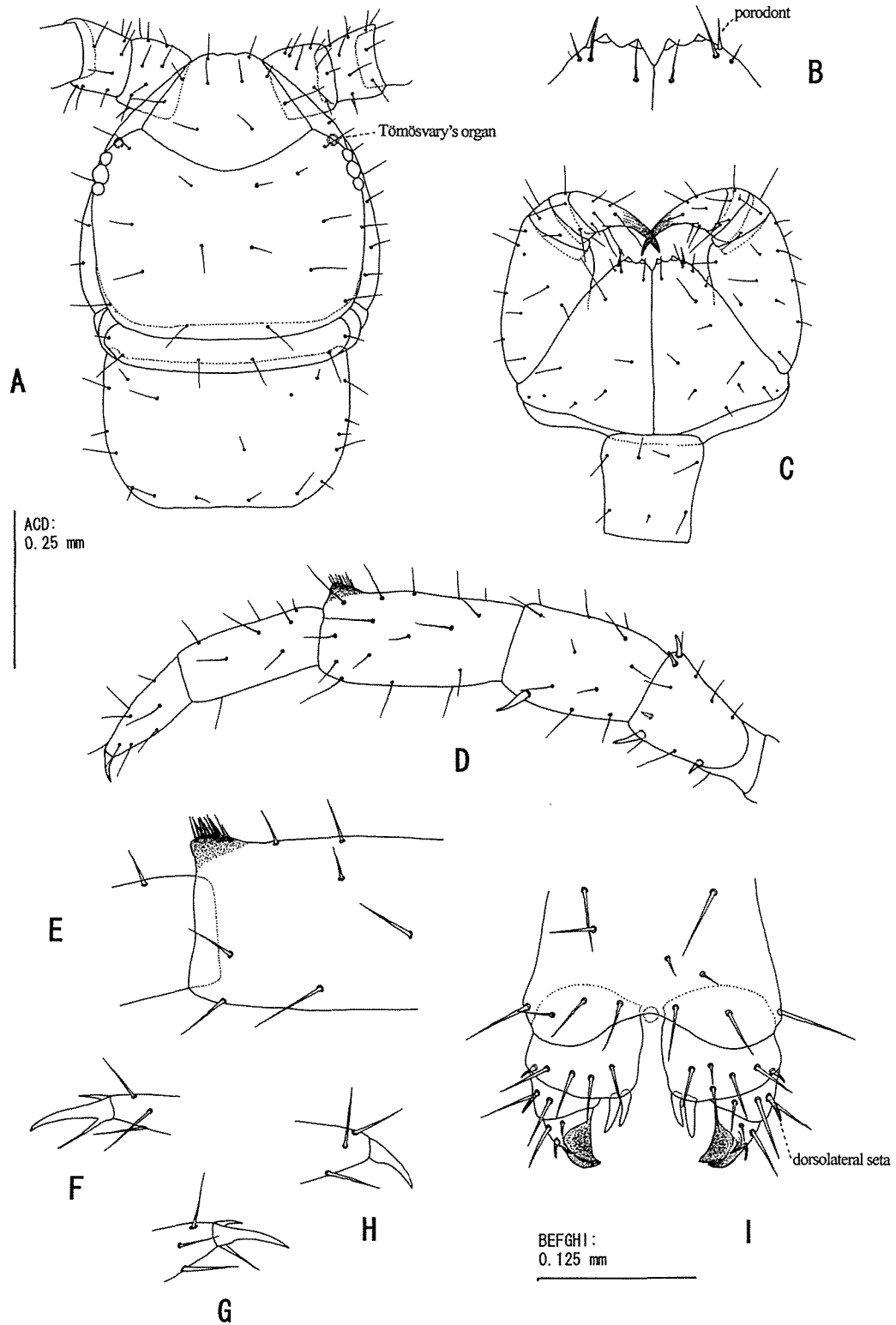


Fig. 2. *Monotarsobius itohi* sp. nov., holotype (A-H) and allotype (I). A, head, fourcircular tergite and tergite I, dorsal, male; B, fourcircular teeth, ventral, male; C, forcipules and sternite I, ventral, male; D, Right 15th leg, lateral, male; E, magnification of tibia of right leg; F, apical claw and distal end of tarsus II of right 13th leg, male; G, apical claw and distal end of tarsus II of left 14th leg, male; H, apical claw and distal end of tarsus II of left 15th leg, male; I, female gonopods, ventral.

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摘 要

石井 清 (〒321-0293 栃木県下都賀郡壬生町北小林 880 獨協医科大学国際教育研究施設基盤教育センター自然科学室) : 鹿児島県から採集されたヒトフシムカデ属の特異的な新種 (アジアにおけるイシムカデ目の分類学的研究 7) .

これまで記録されたヒトフシムカデ属の種は第 12~15 歩肢の基節に腺孔をもっている。最近、九州の鹿児島県から第 12 歩肢の基節腺孔を欠く本属の未記載種を発見し、イトウヒトフシムカデ (*Monotarsobius itohi* sp. nov.) と命名して記載した。

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