

日本産Eohypsibius属(真クマムシ類)の1新種

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**A NEW SPECIES OF THE GENUS *EOHYPYSIBIUS*
(EUTARDIGRADA : EOHYPYSIBIIDAE) FROM JAPAN**

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日本産 *Eohypsibius* 属 (真クマムシ類) の 1 新種

伊藤雅道*

Synopsis The second species of the genus *Eohypsibius* KRISTENSEN, 1982 is described. This species differs from the type species, *Eohypsibius najae* KRISTENSEN, 1982, in having larger and evident lunules at the bases of both internal and external claws on leg IV and having a narrower buccal tube.

Introduction

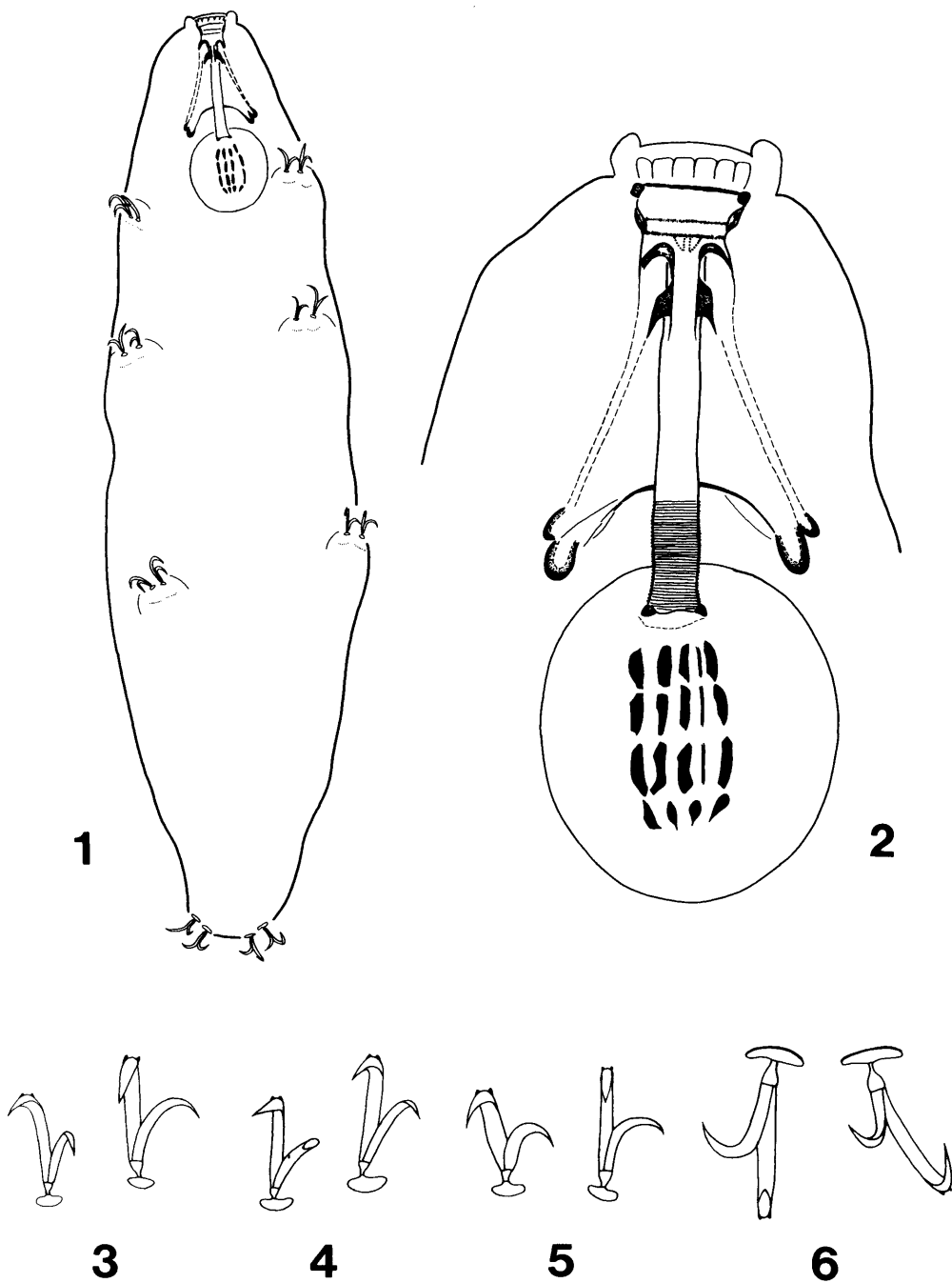
KRISTENSEN (1982) created the genus *Eohypsibius* and attributed it to the family Calohypsibiidae PILATO, 1969 with the description of a new species, *Eohypsibius najae* KRISTENSEN, 1982, which has been the only known species of the genus until now. PILATO (1982) did not accept his treatment and pointed out that the claw of the genus *Eohypsibius* was not of the *Calohypsibius*-type. But he gave no other attribution about the genus. Later BERTOLANI & KRISTENSEN (1987) attributed it to the family Eohypsibiidae BERTOLANI et KRISTENSEN, 1987, the new name of the former Amphibolidae BERTOLANI, 1981.

In the course of the taxonomical and ecological study of terrestrial tardigrades on the northern slope of Mt. Fuji, three specimens of the genus *Eohypsibius* were collected. This paper describes them as a new species.

These three specimens were extracted from surface soil in three different types of forest using Baermann funnels. The morphology of this new species was observed under a phase contrast microscope after the specimens were mounted on slides in Gum Chloral. In the English terminology of the eutardigrade morphology, there are some confusions among Italian authors (PILATO, 1975, etc.), American authors (SCHUSTER, NELSON, GRIGARICK & CHRISTEN-

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Figs. 1-6. *Eohypsibius terrestris* sp. nov. — 1, Habitus, dorsal view; 2, bucco-pharyngeal apparatus; 3, claws on leg I; 4, claws on leg II; 5, claws on leg III; 6, claws on leg IV.

Table 1. Measurements (μm) on the three specimens (holotype, paratype I, and paratype II) of *Eohypsibius terrestris* sp. nov.

	Holotype				Paratype I				Paratype II				
Body length	217.5				215.0				218.8				
Body width (max.)	60.0				55.0				52.5				
Width of mouth opening	6.0				5.5				5.4				
Length of buccal tube	25.7				23.3				24.5				
Width of buccal tube	3.2				2.9				3.0				
Length of the portion of buccal tube with a spiral thickening	7.1				7.0				7.0				
Length of pharyngeal bulb	21.8				19.9				20.2				
Width of pharyngeal bulb	19.8				17.6				18.4				
Length of placoid series	11.9				12.1				12.9				
Length of first macroplacoids	2.0	2.8	2.6	2.3	2.6	3.1	3.1	3.1	2.8	3.0	3.0	3.2	
Length of second macroplacoids	2.2	2.5	2.8	2.8	2.9	3.2	3.1	3.0	2.9	3.2	3.2	3.0	
Length of third macroplacoids	3.0	3.1	3.1	3.6	3.5	3.5	3.3	3.9	3.6	3.9	3.6	3.4	
	e	i	e	i	e	i	e	i	e	i	e	i	
Width of lunules on leg I	1.45	1.3	—	—	1.4	—	1.4	1.4	1.2	—	1.3	—	
Width of lunules on leg II	1.9	1.75	1.7	1.5	1.9	1.7	2.0	1.7	—	1.7	2.0	1.5	
Width of lunules on leg III	2.0	1.7	1.1	1.3	1.8	2.1	2.0	1.7	—	1.6	2.2	1.4	
Width of lunules on leg IV	2.4	2.7	2.0	2.8	2.5	3.0	2.7	2.8	—	—	2.5	—	
e: external claws					i: internal claws					—: unable to measure			

BERRY, 1980, etc.) and English authors (MORGAN & KING, 1976, etc.) . In this paper, PILATO'S (1975) terminology is primarily adopted.

***Eohypsibius terrestris* sp. nov.**

(Figs. 1-6, Table 1)

Measurement* (Table 1): Body length 217.5 μm , body width 60 μm .

Cuticular: Smooth.

Eyes: Absent.

Eggs: Unknown.

Bucco-pharyngeal Apparatus (Fig. 2): *Hypsibius*-type. Width of mouth opening 6 μm . Six peribuccal lobes and 12 peribuccal lamellae present. Three rows of teeth found in buccal cavity. Buccal tube length 25.7 μm , width 3.2 μm . Ratio of width to length 0.125. Strengthening bar absent, but hook-like apophyses for insertion of stylet muscles situated dorsally and ventrally. Buccal tube reinforced posteriorly by spiral thickening, being hardly flexible. Length of portion with spiral thickening 7.1 μm . A drop-like thickening absent between sections with smooth surface and with spiral thickening on the wall of buccal tube. Large

* Measurements in the text are of the holotype.

condyles and stylet support present. Pharyngeal bulb of rounded oval; length $21.8\mu\text{m}$, width $19.8\mu\text{m}$; ratio of length to width 1.1; containing weakly developed apophyses, three rod-like macroplacoids, and large microplacoids. First and second macroplacoids almost equal in length, but third macroplacoids longer than the first or second macroplacoids. Length of macroplacoids: first 2.0, 2.8, 2.6 and $2.3\mu\text{m}$ (average $2.42\mu\text{m}$); second 2.2, 2.5, 2.8 and $2.8\mu\text{m}$ (av. $2.58\mu\text{m}$); third 3.0, 3.1, 3.1 and $3.6\mu\text{m}$ (av. $3.20\mu\text{m}$).

Claws (Figs. 3-6): Shape and size of claws very similar to legs I-III. Claws on leg IV larger than those on legs I-III. Claws *Amphibolus*-type, asymmetric; sequence 2-1-2-1. Primary branches of internal and external claws having two accessory points on all legs. Each claw basally with a teacup-like basal tract, from which both primary and secondary branches are derived. Both branches connected with each other in the posteriorly. Primary branch may not be flexible. Lunules present on all claws; relative width $I < II \approx III < IV^*$. Lunules on leg IV distinctly larger and more evident than those on legs I-III. Width of lunules on leg I $1.3-1.45\mu\text{m}$ (average $1.38\mu\text{m}$), II $1.5-1.9\mu\text{m}$ (av. $1.71\mu\text{m}$), III $1.1-2.0\mu\text{m}$ (av. $1.53\mu\text{m}$), IV $2.0-2.8\mu\text{m}$ (av. $2.48\mu\text{m}$). Cuticular bar absent and two small bars present on legs I-III.

Material examined. All the three specimens were obtained from forest surface soil containing leaf litter and humus on the northern slope of Mt. Fuji. Holotype: Secondary forest of *Quercus mongolia* FISCH. var. *grosseserrata* REHD. et WILS. in Narusawa-mura, Yamanashi-ken, Central Japan ($35^{\circ} 28' 35''$ N, $138^{\circ} 42' 02''$ E), 985 m alt., 20-VI-1986. Paratype I: Natural forest of *Pinus densiflora* SIEB. et ZUCC. on the Kemmarubi larva stream, Kawaguchiko-machi, Yamanashi-ken ($35^{\circ} 27' 36''$ N, $138^{\circ} 45' 51''$ E), 970 m alt., 5-VI-1986. Paratype II: Natural forest of *Fagus japonica* MAXIM., on the northern slope of Mt. Ohmuro, which is a biggest parasitic volcano on Mt. Fuji, Kamikuishiki-mura, Yamanashi-ken ($35^{\circ} 26' 32''$ N, $138^{\circ} 39' 30''$ E), 1300 m alt., 13-VI-1986. The type-series will be deposited in the National Science Museum (Nat. Hist.), Tokyo.

Remarks. The present new species, *E. terrestris*, can be distinguished from *E. nadjae*, only one known species in the genus, by having 1) lunules on leg IV being larger and more evident than those on legs I-III, 2) internal claws on leg IV with lunules (without lunules in *nadjae*), and 3) narrower buccal tube being $2.9-3.2\mu\text{m}$ in width ($6\mu\text{m}$ in *nadjae*).

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摘 要

山梨県富士山北麓の森林土壌より得られた標本にもとずき、*Eohypsibius* 属の1新種、*E. terrestris* を記載した。本種は、模式種である、*E. nadjae* KRISTENSEN, 1982 に次ぐ本属二番目の種であり、

* I-IV indicate width of lunules on legs I-IV, respectively.

(1) 第4脚の lunule が第1～3脚のそれより大きくはっきりしていること、(2) 第4脚内爪の基部に lunule があること、(3) 口管 (buccal tube) がより狭いこと、などにより識別することができる。

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