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A New Species of Tuxenentulus Imadate (Protura:Acerentomidae)from Taiwan **【Research report】**

臺灣產屠蚘屬 (原尾目：蚘科) 一新種 **【研究報告】**

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Abstract

Tuxenentulus wuluensis n.sp.is reported in this paper.The species is also a newly recorded genus from Taiwan.Detailed description,diagnosis,and distribution of this species are included in the present paper.

摘要

屠蚘屬 (*Tuxenentulus* Imadate) 為臺灣的新紀錄屬。本文報導臺灣產屠蚘屬之一新種—霧鹿屠蚘 (*T. wuluensis* n. sp.)。文中包含種類的描述、鑑別特徵及分佈。

Key words: *Tuxenentulus*,taxonomy,Taiwan.

關鍵詞: 屠蚘屬、分類、臺灣

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A New Species of *Tuxenentulus* Imadate (Protura: Acerentomidae) from Taiwan

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ABSTRACT

Tuxenentulus wuluensis n. sp. is reported in this paper. The species is also a newly recorded genus from Taiwan. Detailed description, diagnosis, and distribution of this species are included in the present paper.

Key words: *Tuxenentulus*, taxonomy, Taiwan.

Introduction

Tuxenentulus Imadate, 1974 is a little-known genus which has only been recorded in some parts of China, Japan, and North America (Imadate, 1994). Recently we collected some specimens of this genus in Taiwan. It was found that the foretarsus and chaetotaxy were different from other species of *Tuxenentulus*, and it was determined to be a new species. The taxonomic treatment and terminology used in this paper follow those of Chao and Chen (1996). All specimens (including types) are deposited in the Department of Biology, Tunghai University, Taiwan.

Tuxenentulus wuluensis sp. nov. (Fig. 1; Table 1)

Female: body length 1080-1330 μm . **Head:** elliptical, length 110-125 μm , width 78-95 μm , L1=1.4-1.5. Pseudoculus circular, with longitudinal striae and 2 long elliptical appendages below, 7-8 \times 6-8 μm , PR=15.5-17.0. Labial palpus with a tuft of

setae. Canal of maxillary gland (filamento di sostegno) with cup-shaped calyx and helmet-shaped appendage, dilatation but no partition in blind end of canal. **Thorax:** foretarsus length 95-108 μm , claw length 26-30 μm , TR=3.6-3.8; empodium length 2-3 μm , EU=0.10-0.12. Sensilla t-1 baculiform, BS=0.45-0.52; t-2 thin, long, linear; t-3 small. Exterior sensilla a, b, c, and d long, linear, b and c parallel in position, base of d obviously higher than bases of b and c; e, f, and g long, linear, apex of g reaching empodium. Interior sensilla a' obvious dilatation, base of a' slightly higher in position than t-1; b' and c' linear, apex of c' lower than base of empodium. Middle tarsus length 46-52 μm , claw length 15-17 μm ; hind tarsus length 48-55 μm , claw length 19-21 μm . **Abdomen:** chaetotaxy as shown in table 1. Abdominal appendage I with terminal vesicle and 4 setae; abdominal appendages II-III with 2 setae each, no terminal vesicle, apical seta of these appendages longer than subapical one. Striate band on abdomen VIII reduced;

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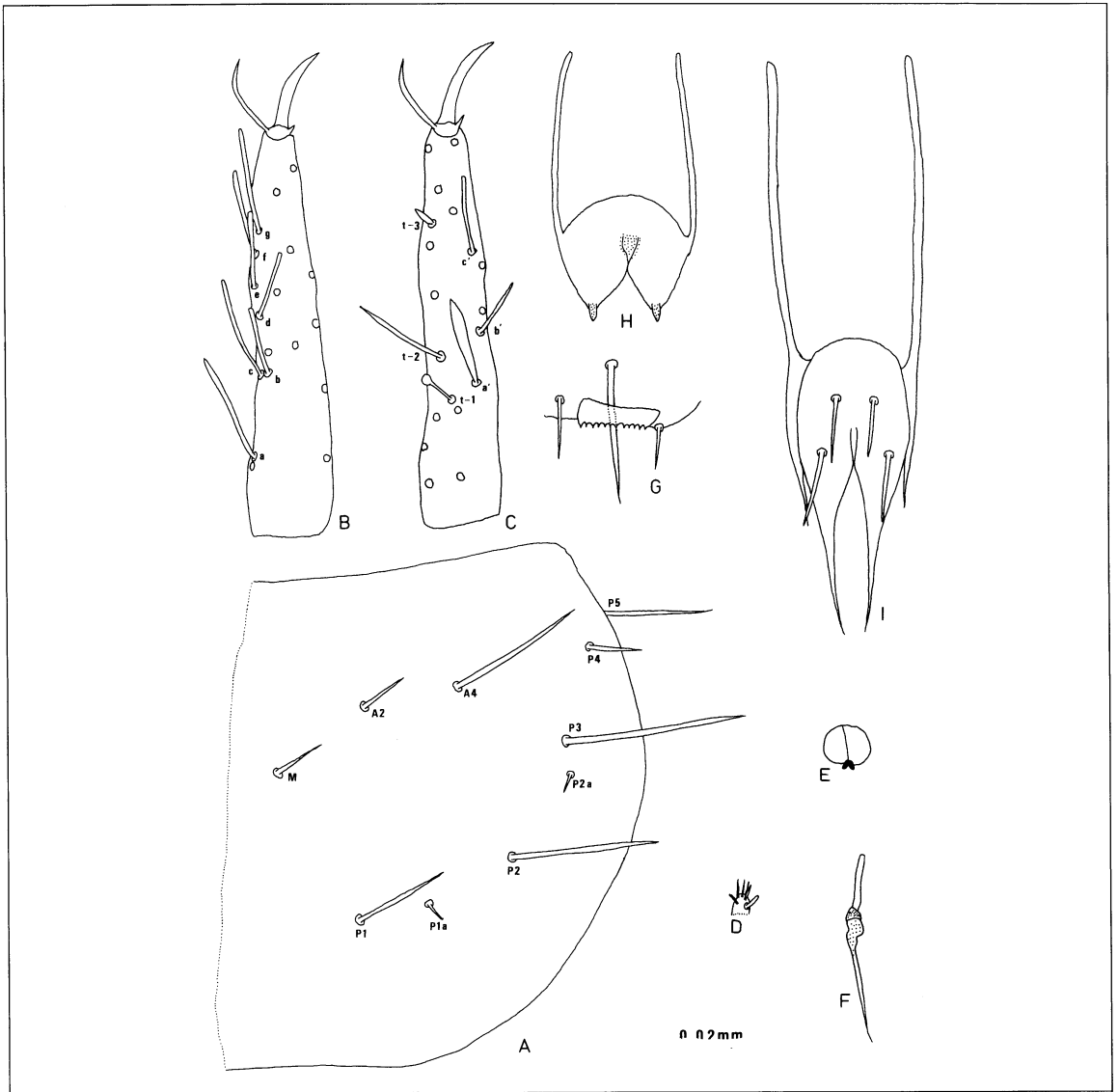


Fig. 1. *Tuxenentulus wuluensis*, n. sp. A. Metanotum; B. Exterior side of foretarsus; C. Interior side of foretarsus; D. Labial palpus; E. Pseudoculus; F. Canal of maxillary gland; G. Comb; H. Female squama genitalis; I. Male squama genitalis.

comb on both sides of tergite VIII oblong, hind margin with 12-13 teeth. Squama genitalis with pointed acrostylus.

Male: characters of foretarsus and chaetotaxy of thorax and abdomen similar to those of female. Squama genitalis with pointed acrostylus.

Maturus junior, Larva II and I: unknown.

Specimens examined: Holotype ♀, TAITUNG: Wulu 712 m, 2-II-1995, R. F. Chao. Paratypes: 6 ♀, 2 ♂, same data as holotype. TAITUNG: Liyuan 1750 m, 4 ♀, 1 ♂, 20-IX-1995, R. F. Chao; Yenping 700 m, 1 ♀, 18-IX-1996, R. F. Chao.

Etymology: The specific name is derived from the local name, Wulu, of the type locality.

Table 1. Chaetotaxy of *Tuxenentulus wuluensis*, n. sp.

	Formula	Complementary setae
Dorsal		
Thorax		
I	4	A1, 2
II-III	4-2/14	A2, 4, M P1, 1a, 2, 2a, 3, 4, 5
Abdomen		
I	6/12	A1, 2, 5 P1, 1a, 2, 3, 4, 5
II-V	6/18	A1, 2, 5 P1, 1a, 2, 2a, 3, 4, 4a, 5, 5a
VI-VII	8/16	A1, 2, 4, 5 P1, 1a, 2, 2a, 3, 4, 4a, 5
VIII	6/15	A1, 2, 3 Pc, 1, 2, 2a, 3, 3a, 4a, 5
IX	14	
X	12	
X I	6	
X II	9	
Ventral		
Thorax		
I	4-4/6	A1, 2, M1, M2 P1, 2, 3
II-III	7-2/4	Ac, 2, 3, 4, M P1, 2
Abdomen		
I	3/4	Ac, 2 P1, 2
II-III	3/5	Ac, 2 Pc, 2, 3
IV-VI	3/8	Ac, 3 P1, 2, 2a, 3
VII	5/8	Ac, 2, 3 P1, 2, 2a, 3
VIII	4/2	A1, 2 P1
IX	4	
X	4	
X I	4	
X II	6	

Remarks: The characters of the foretarsus in this species resemble those of *Tuxenentulus jilinensis* Yin, 1984 (Yin, 1984), but can be differentiated by the shape of interior sensillum a' and the position of exterior sensillum d. The

shape of interior sensillum a' of this species is longer than that of *T. jilinensis*, and the interior sensillum a' of the latter species shows no dilatation. On the other hand, the interior sensillum a' of *T. wuluensis* resembles that of *T. rockyensis*

Imadate, 1981 (Imadate, 1981). The position of exterior sensillum d in both *T. wuluensis* and *T. jilinensis* is obviously higher than the bases of sensilla b and c. But sensillum d of *T. wuluensis* is higher than sensillum t-2, and sensillum d of *T. jilinensis* is lower in position than sensillum t-2. In fact, sensillum d of all species other than *wuluensis* of the genus *Tuxenentulus* is almost always lower than sensillum t-2. The shape and teeth number of the comb on abdomen VIII resemble those of *T. ohbai* Imadate, 1974 (Imadate, 1974). *T. wuluensis* is a rare species in Taiwan. This species was found only in some localities in Taitung.

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臺灣產屠蚘屬(原尾目：蚘科)一新種

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摘 要

屠蚘屬(*Tuxenentulus* Imadate)為臺灣的新紀錄屬。本文報導臺灣產屠蚘屬之一新種—霧鹿屠蚘(*T. wuluensis* n. sp.)。文中包含種類的描述、鑑別特徵及分佈。

關鍵詞：屠蚘屬、分類、臺灣。