

Two New Species of Chthoniidae (Arachnida: Pseudoscorpiones) from Korea

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ABSTRACT

Two new species of the Chthoniidae, *Mundochthonius minusculus* n. sp. and *Mundochthonius bifurcatus* n. sp., are described herein. Korean Chthoniidae, thus, comprises a total of six recorded species from four genera.

Key words: Systematics, Chthoniidae, Pseudoscorpiones, Arachnida, new species, Korea

The Korean Chthoniidae has been studied in the genera *Allochthonius* and *Pseudochthonius* by Morikawa (1970), *Allochthonius* by Lee (1982), and *Tyrannochthonius* by Hong and Kim (1993). In this work on *Mundochthonius* Chamberlin, 1929, two new species from Korea are described. Therefore, the Korean Chthoniidae amounts to six species from four genera.

***Mundochthonius minusculus* n. sp. (Figs. 1-4; Pl. 1, Figs. A-D)**

Type data. Holotype male, 8 paratypes (3 males and 5 females) from Mt. Wolchul (litter), Yöngam-gun, Chöllanam-do July 1991 (Y. Hong). Holotype was from the south-east slope at an altitude of 280 m, under the pine forest where the humus layer abundant and moist. Types are deposited in Chonbuk National University.

Other materials examined. One male from Hüksan-do (litter), Shinan-gun, Chöllanam-do, 3 Aug. 1991 (Y. Hong); 1 male and 1 female from Mt. Chiri (litter), Baemsagol Valley, Namwon-gun, Chöllabuk-do, 25 April 1992 (Y. Hong). Deposited in Chonbuk National University.

Diagnosis. Femur of this species 2.6-3.2 times as long as broad with length of 0.24-0.27 mm and chaetotaxy of anterior tergites 4-6-6-6. Number of teeth on fingers 40-46 and 41-45.

Description. Male and female very similar, but female usually slightly larger. Body and palp light

yellowish brown in color; body length of males 0.95-1.18 mm and of females 1.10-1.20 mm.

Carapace: A little longer than broad; anterior margin with numerous denticulations and a prominent serrate epistomal process; no eyes; carapacial chaetotaxy 6-4-4-2-2.

Abdomen: Tergal chaetotaxy of holotype (male) 4-6-6-6-6-6-6-6-6. Anterior operculum of genital complex with 12 setae and posterior operculum with 18 setae on each side of genital opening in male. Anterior and posterior genital opercula of female with 10 and 12 setae, respectively.

Chelicera: Distinctly shorter than carapace; hand with 6 setae; flagellum with 10-11 pinnate setae; fixed finger with 7-15 teeth, movable finger with 9-11 teeth; serrula exterior with 13-14 blades.

Pedipalps: Generally similar to those of other species in the genus, but thick and short in shape (Fig. 4); femur 2.57-3.19, tibia 1.65-1.88, and chela 3.05-3.75 times as long as broad; hand 1.01-1.36 times as long as deep; movable finger 1.59-2.18 times as long as hand; female palp slightly larger and more robust than those in male. Trichobothria of chela as shown in Figs. 3 and 4. Fixed finger with marginal row of 40-46 small teeth; movable finger with 41-45 similar marginal teeth.

Legs: Entire femur of leg IV 1.90-2.39. Tibia 2.66-3.21 times as long as deep. Coxa of leg II with coxal spines branched several times. Intercoxal tubercle present.

Measurements (mm). Figures given first are of the holotype and those in parentheses represent ranges in the 11 paratypes. Body length 1.18 (0.95-1.20). Carapace length 0.33 (0.28-0.33). Chelicera 0.25 (0.23-0.29) in length. Palpal trochanter 0.14 (0.12-0.15) by 0.09 (0.07-0.09); femur 0.26 (0.24-0.27) by 0.09 (0.08-0.10); tibia 0.16 (0.15-0.17) by 0.09 (0.08-0.10); chela 0.43 (0.37-0.47) by 0.12 (0.10-0.15); hand 0.16 (0.14-0.17) by 0.12 (0.10-0.15); movable finger 0.27 (0.24-0.30) in length. Leg IV; entire femur 0.25 (0.22-0.30) by 0.12 (0.10-0.13); tibia 0.18 (0.17-0.20) by 0.06 (0.05-0.07) basitarsus 0.07 (0.07-0.08) by 0.03 (0.03-0.05); telotarsus 0.15 (0.13-0.17) by 0.03 (0.03-0.04).

Remarks. This species resembles *Mundochthonius japonicus* Chamberlin, 1929, but is separated from tergal chaetotaxy and differs in the measurements of pedipalp (4-4-4-6-6-6, femur 3.2 times as long as broad, length of female 0.9 mm, number of carapace setae 16).

***Mundochthonius bifurcatus* n. sp. (Figs. 5-8; Pl. 1, Figs. E-H)**

Type data. Holotype male, paratypes (1 male and 2 females) from Mt. Songni (litter), Poŭn-gun, Ch'ungch'ŏngbuk-do 8 June 1991 (Y. Hong). Holotype is from under broad-leaved tree forest, a little low in soil moisture and layer of humus soil not plenty. Types are deposited in Chonbuk National University.

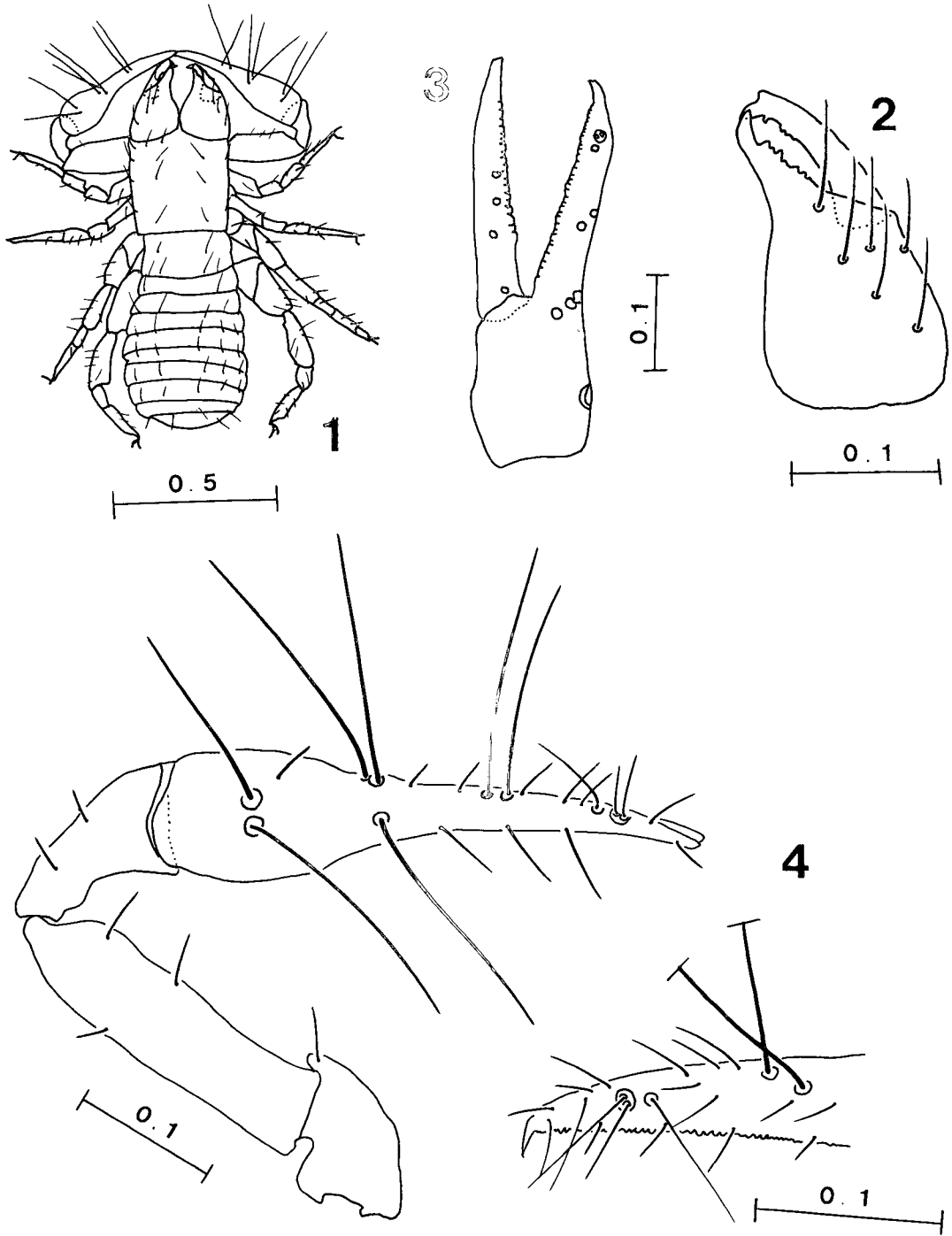
Other materials examined. Two males, 3 females from Mt. Kyeryong (litter), Daejeon, Ch'ungch'ŏngnam-do, 19 April 1992, 2 May 1992 (Y. Hong). Deposited in Chonbuk National University.

Diagnosis. Femur 2.9-3.6 times as long as broad with length of 0.35-0.39 mm and chaetotaxy of anterior tergites 4-4-6-6-6.

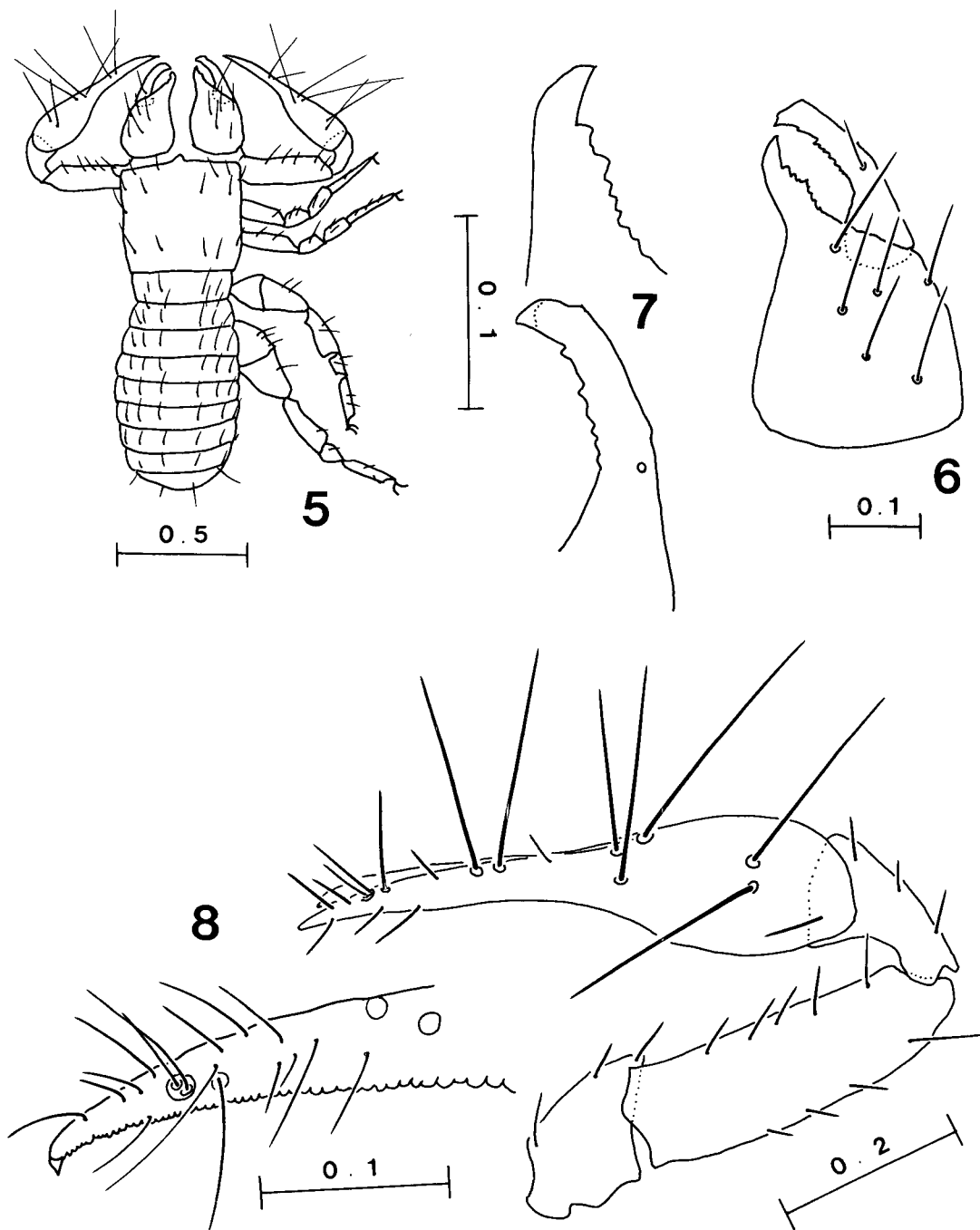
Description. Male and female very similar, but female usually slightly larger. Body and palp light yellowish brown in color; body length of males 1.46-1.55 mm and of females 1.52-1.87 mm.

Carapace: A little longer than broad; anterior margin with numerous denticulations and a prominent serrate epistomal process; no eyes; carapacial chaetotaxy 6-4-4-2-2.

Abdomen: Tergal chaetotaxy of holotype (male) 4-4-6-6-6-6-6-6-6. Anterior and posterior



Figs. 1-4. *Mundochthonius minusculus* n. sp. (male): 1, dorsal view; 2, chelicera; 3, lateral view of chela; 4, dorsal view of pedipalp (scale in mm).



Figs. 5-8. *Mundochthonius bifurcatus* n. sp. (female): 5, dorsal view; 6, chelicera; 7, movable and fixed finger of chelicera; 8, dorsal view of pedipalp (scale in mm).

genital opercula of female with 11-12 and 18-20 setae, respectively.

Chelicera: Distinctly shorter than carapace; hand with 6 setae; flagellum with 10-11 pinnate setae; fixed finger with 12-18 teeth, movable finger with 7-10 teeth; serrula exterior with 16 blades.

Pedipalps: Similar to *M. minusculus* n. sp., but slightly bigger; femur 2.86-3.61, tibia 1.62-1.83, and chela 3.43-4.42 times as long as broad; hand 1.25-1.66 times as long as deep; movable finger 1.63-1.87 times as long as hand; female palp slightly larger and more robust than those in male. Trichobothria of chela as shown in Fig. 8; fixed finger with marginal row of 56-60 small teeth; movable finger with 60-64 similar marginal teeth.

Legs: Entire femur of leg IV 2.02-2.20. Tibia 3.10-3.25 times as long as deep. Coxa of leg II with coxal spines branched several times. Intercoxal tubercle present.

Measurements (mm). Figures given first are of the holotype and those in parentheses represent ranges in the 8 paratypes. Body length 1.61 (1.46-1.87). Carapace length 0.40 (0.40-0.43). Chelicera 0.33 (0.33-0.37) in length. Palpal trochanter 0.18 (0.18-0.21) by 0.10 (0.10-0.13); femur 0.35 (0.35-0.39) by 0.10 (0.10-0.13); tibia 0.20 (0.20-0.22) by 0.11 (0.12-0.13); chela 0.57 (0.57-0.60) by 0.14 (0.14-0.17); hand 0.22 (0.20-0.23) by 0.14 (0.14-0.17); movable finger 0.35 (0.35-0.38) in length. Leg IV; entire femur 0.34 (0.32-0.37) by 0.16 (0.16-0.17); tibia 0.26 (0.26-0.27) by 0.08 (0.08-0.09) basitarsus 0.09 (0.10-0.12) by 0.06 (0.05-0.07); telotarsus 0.20 (0.20-0.22) by 0.04 (0.04-0.05).

Remarks. The specific name is derived from blade form of the serrula exterior. This species resembles *M. japonicus*, but is separated from general size which is bigger. Also, the present new species appears to be closely related to *M. minusculus* n. sp., but differs from latter by longer palpal femur length and tergal chaetotaxy (4-4-6-6-6).

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韓國產 꼬마얏은뱅이科(거미강: 얏은뱅이목)의 2신종

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요 약

1991년 4월부터 1992년 8월까지 월출산, 속리산, 흑산도, 지리산, 계룡산 등 전국 15개 지역에서 채집된 얏은뱅이류를 조사한 결과 *Mundochthonius minusculus* n. sp. (천왕꼬마얏은뱅이, 신칭)와 *Mundochthonius bifurcatus* n. sp. (법주꼬마얏은뱅이, 신칭)를 발견하여 이를 기재한다. 따라서 기록된 한국산 꼬마얏은뱅이는 4속 6종이 된다.

PLATE 1

Figs. A-D, *Mundochthonius minusculus* n. sp.: A, coxa (X 300); B, abdomen, ventral view (X 150); C, male genitalia (X 400); D, female genitalia (X 350).

Figs. E-H, *Mundochthonius bifurcatus* n. sp.: E, flagellum and serrula exterior (X 1,300); F, intercoxal tubercle (X 2,000); G, male genitalia (X 400); H, female genitalia (X 300).

PLATE 1

