

A Taxonomic Study on the Trichoptera of South Korea, with Description of Four New Species (Insecta)

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朝鮮半島南部の毛翅目について

朝鮮半島に生息する毛翅目の分類学的研究は MARTYNOV (1934, 1935), 津田 (1942), BOTOSANEANU (1970)などにみることができる。今回、1983年に朝鮮半島南部地域で得た毛翅目の資料を研究する機会をもつことができ、その結果をまとめることができたので、ここに報告する。

(小林峯生)

By the courtesy of Mr. Shigekazu UCHIDA, Tokyo Metropolitan University, I was able to examine many specimens of the Trichoptera collected by him in South Korea in 1983.

Altogether nineteen species are dealt with here, of which four species are described as new.

Mr. S. UCHIDA kindly presented to me all the specimens reported herein to whom my cordial thanks are due.

Family STENOPSYCHIDAE

Genus *Stenopsyche* McLACHLAN

1. *Stenopsyche marmorata* NAVAS

Stenopsyche marmorata NAVAS, 1919, Rev. Real. Acad. Ci. Fracts. Fis. da Madria, 18: 164, Fig. 6.

Stenopsyche marmorata: SCHMID, 1969. Can. Ent., 101: 241, Fig. 3, Pl. 6, Fig. 4.

Stenopsyche marmorata: BOTOSANEANU, 1970, Ann. Zool., 27: 295.

Specimens examined: 1♂(7622), Gayasan, Gyeongsangnam-do, May 26, 1983(UCHIDA). 1♀(7603), Jirisan, Gyeongsangnam-do, May 28, 1983(UCHIDA). 6♂♂2♀♀(7602, 7609), Odaesan, Gangweon-do, June 1, 1983(UCHIDA).

Distribution: Japan, Sakhalin, Korea.

2. *Stenopsyche bergeri* MARTYNOV

Stenopsyche bergeri MARTYNOV, 1926. Eos 2: 295-297, Figs. 18-21.

Stenopsyche griseipennis: UIMEF, 1925. Arch. Naturg., Berlin, 19(A5): 32-33, Figs. 15-16.

Stenopsyche bergeri: SCHMID, 1969. Can. Ent., 1901: 206, Pl. 4, Fig. 20.

Stenopsyche bergeri: BOTOSANEANU, 1970. Ann. Zool., 27: 295.

Specimens examined: 2♂♂(7626), Jeongseon, Gangweong-do, June 7, 1983(UCHIDA).

Distribution: Siberia, Korea.

Family PHILOPOTAMIDAE

Genus *Sortosa* NAVAS

3. *Sortosa distincta* (WALKER) (Fig. 1)

Philopotamus distincta WALKER, 1852, Cat. Neur. Brit. Mus.: 104.

Sortosa distincta: ROSS, 1956. Evolution and Classification of the mountain Caddisflies. Urbana: 59, Fig. 59.

Specimens examined: 2♂♂2♀♀ (7612), Jirisan, Gyeongsangnam-do, June 5, 1983 (UCHIDA).

Distribution: Eastern North America, Korea (New record).

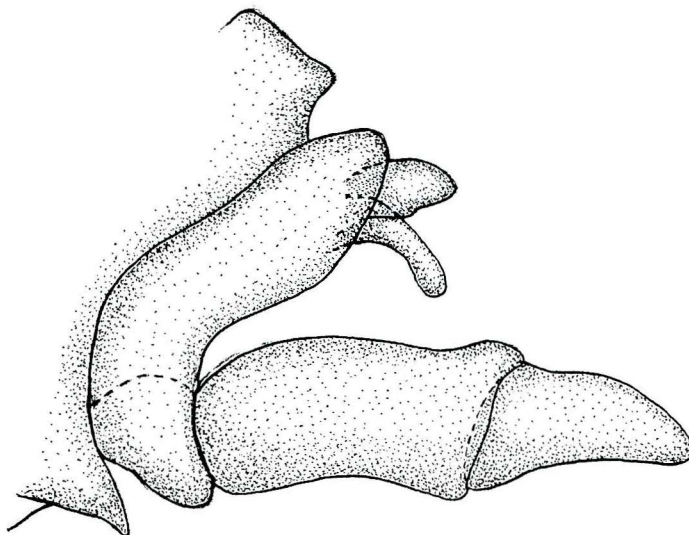


Fig. 1. Male genitalia of *Sortosa distincta*. Lateral view.

Family PSYCHOMYIIDAE

Genus *Psychomyia* LATREILLE

4. *Psychomyia forcipata* MARTYNOV, 1934. The Trichoptera Annulipalpia of the USSR. Leningrad.: 201-202, Fig. 141.

Psychomyia forcipata: BOTOSANEANU 1970, Ann. Zool., 27: 286.

Specimens examined: 1♂ (7630), Jeongseon, Gangweong-do, June 7, 1983 (UCHIDA).

Distribution: South Ussuri, Korea.

Family HYDROPSYCHIDAE

Genus *Aractopsyche* McLACHLAN

5. *Aractopsyche palapata* MARTYNOV

Aractopsyche palapata MARTYNOV, 1934, The Trichoptera Annulipalpia of the USSR, Lenin-

grad.: 251-252, Fig. 182.

Aractopsyche palapata: SCHMID, 1968. Mem. Ent. soc. Can., 1: 56-87, Figs. 73-76.

Aractopsyche palapata: BOTOSANEANU, 1970. Ann. Zool., 27: 296.

Specimens examined: 3♂♂(7605, 7618), Gayasan. Gyeongsangnam-do, May 25, 1983 (UCHIDA).

Distribution: South Ussuri, Sutshan, Sikhotan, Mandshris, Korea.

Genus *Hydropsyche* PICTET

6. *Hydropsyche orientalis* MARTYNOV

Hydropsyche orientalis MARTYNOV, 1934. The Trichoptera Annulipalpia of the USSR. Leningrad.: 276-277, Fig. 198.

Hydropsyche orietales: BOTOSANEANU, 1970. Ann. Zool. 27: 296.

Specimens examined: 1♂(7620) 8♀♀(7604, 7635), Gayasan, Gyeongsangnam-do, May 25, 1983(UCHIDA).

Distribution: Japan, South Ussuri, Korea.

7. *Hydropsyche kozhantshikovi* MARTYNOV

Hydropsyche kozhantshikovi MARTYNOV, 1934. The Trichoptera Annulipalpia of the USSR. Leningrad.: 281-282, Fig. 204.

Hydropsyche kozhantshikovi: BOTOSANEANU, 1970. Ann. Zool. 27: 296.

Specimens examined: 1♂(7628), Jeongsan, Gangweong-do, June 7, 1983(UCHIDA).

Distribution: Japan, South Ussuri, Korea.

Genus *Cheumatopsyche* WALLENGRSAN

8. *Cheumatopsyche infascia* MARTYNOV

Cheumatopsyche infascia MARTYNOV, 1934, The Trichoptera Annulipalpia of the URRS. Leningrad.: 283-284, Fig. 205.

Cheumatopsyche infascia: BOTOSANEANU, 1970. Ann. Zool. 27: 297.

Specimens examined: 5♀♀(7608, 7625, 7636), Gayasan, Gyeongsangnam-do, June 28, 1983(UCHIDA).

Distribution: South Ussuri, Korea.

Family RHYACOPHILIDAE

Genus *Rhyacophila* PECTET

9. *Rhyacophila mannleata* MARTYNOV

Rhyacophila manuleata MARTYNOV, 1934. The Trichoptera Annulipalpia of the USSR. Leningrad.: 69-70, Fig. 37.

Rhyacophila manuleata ROSS, 1956. Evolution and classification of the mountain caddisflies. Urubana: 122.

Rhyacophila manuleata: SCHMID, 1970. Mem. Soc. Ent. Can., 66: 127, Pl. 27, Figs. 12, 13.

Rhyacophila manuleata: BOTOSANEANU, 1970. Ann. Zool. 27: 285.

Specimens examined: 9♂♂(7616, 7623), Gayasan, Gyeongsangnam-do, May 25, 1983

(UCHIDA). 3♂♂(7631), Odaesan, Gangweon-do, June 1, 1983(UCHIDA).

Distribution: Ussuri, Korea.

10. *Rhyacophila narvae* NAVAS

Rhyacophila narvae NAVAS, 1926. Bol. iber. Cience, Nat. Zarogossa, 26: 57.

Rhyacophila narvae: MARTYNOV, 1934. The Trichoptera Annulipalpia of the USSR. Leningrad, 53-54, Fig. 26.

Rhyacophila narvae: SCHMID, 1970. Mem. Soc. Ent. Ca., 66: 125, Pl. 15, Fig. 20.

Rhyacophila narvae: BOTOSONEANU, 1970, Ann. Zool. 27: 280.

Specimens examined: 2♂♂5♀♀(7624, 7634), Gayasan, Gyongsangnam-do, May 25, 1983(UCHIDA).

Distribution: Eastern Siberia, Korea,

11. *Rhyacophila uchidai* sp. nov. (Fig. 2)

Male: Color brown. Body 9.0mm in length. Fore wing 13.3mm and 4.5mm wide. Hind wing 11.0mm and 4.5mm wide. General structure typical for the genus. Genitalia as in Fig. 2. Ninth sternite broad, much longer than the tergite. Tenth segment nearly triangle; upper margin with three processes. Anal sclerite shorter; apical portion black in color. Clasper two-segmented; basal segment stouter and longer than the terminal one; Terminal segment finger-shaped in lateral. Aedeagus composed two lobes; upper lobes shorter than lower one, deeply concave at apical margin in lateral; lower lobes long, spine-shaped.

Holotype: Male (7633), Gayasan, Gyeongsangnam-do, South Korea, May 25, 1983 (UCHIDA).

Distribution: Korea.

12. *Rhyacophila jirisana* sp. nov. (Fig. 3)

Male: Specimens various shades of light brown. Body 3.3mm in length. Fore wing 10.2mm long and 3.8mm wide. Hind wing 10.0mm long and 3.5 wide. General structure typical for the genus. Genitalia as in Fig. 3. Ninth segment broad, long, projected backwardly, divided into two lobes; upper lobe thick; lower lobe taper to a point. Anal sclerite short, claw-shaped in lateral. Clasper two-segmented; basal segment wide, upper anle produced in strong claw in lateral; terminal segment short, two-branched; all branches stout, finger-shaped in lateral, arised many short seta. Aedeagus divided into two lobes; upper lobe shorter than the lower one; lower lobe spine-shaped in lateral, curved downwardly at the apex.

Holotype: Male (7598), Jirisan. Gyeongsangnam-do, South Korea, May 29, 1983 (UCHIDA). Paratype: 2♂♂3♀♀(7598a), same locality as holotype. 16♂♂3♀♀(7613), Jirisan, Geongsangnam-do, South Korea, June 5, 1983 (UCHIDA).

Distribution: Korea.

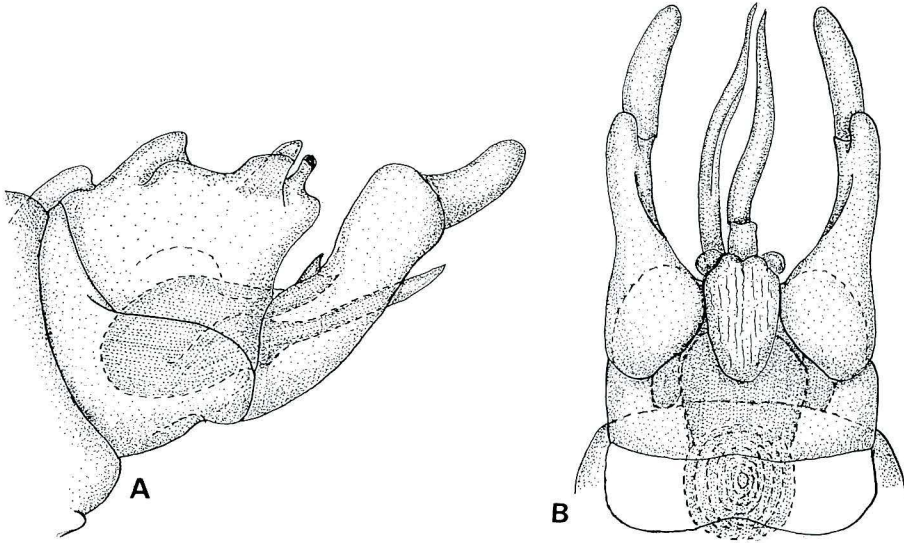


Fig. 2. Male genitalia of *Rhyacophila uchidai* sp. nov., A, lateral view: B, dorsal view.

Genus *Glossosoma* CURRIA

13. *Glossosoma altaticum* (MARTYNOV)

Mystrophora altaticum MARTYNOV, 1914, Rev. Russe d'Ent., 14: 1-4, Figs. 1-3.

Glossosoma lauta TSUDA, 1940. Annot. Zool. Japon. 19: 191-192, Figs. 1-2.

Glossosoma altaticum: ROSS, 1956. Evolution and classification of the mountain caddisflies, Urbana, : 155, Fig. 316.

Glossosoma altaticum: BOTOSANEANU, 1970. Ann. Zool. 27: 289.

Glossosomu altaticum: KOBAYASHI, 1982. Bull. Kanagawa Pref., Mus. (Nat. Sci.), 13: 8-9, PI. 6.

Specimens examined: 2♂♂15♀♀(7641), Odaesan, Gangweon-do, June 9, 1983 (UCHIDA).

Distribution: Eastern Asia, Korea, Japan.

Family LEPIDOSTOMATIDAE

Genus *Dinarthodes* ULMER

14. *Dinarthodes elongata* MARTYNOV

Dinarthodes elongata MARTYNOV, 1935. Trav. Inst. Zool. Acad. USSR. 2: 379-384, Figs. 186-191.

Dinarthodes elongata: KOBAYASHI, 1985. Bull. Kanagawa Pref. Mus., (Nat. Sci.), 16: 17.

Specimen examined: 1♂(8396), Gayasan, Gyeongsangnam-do, May 25, 1983 (UCHIDA).

Distribution: Korea, Japan.

15. *Dinarthodes kurentzovi* MARTYNOV

Dinarthodes kurentzovi MARTYNOV, 1935. Trav. Zool. Acad. URSS. 2: 392-395, Fig. 198.

Dinarthodes kurentzovi: BOTOSANEANU, 1970. Ann. Zool. 27: 307.

Dinarthodes kurentzovi: KOBAYASHI, 1985. Bull. Kanagawa Pref. Mus., (Nat. Sci.), 16: 17.

Specimens examined: 1♂(7619), Gayasan, Gyeongsangnam-do, May 25, 1983 (UCHIDA),

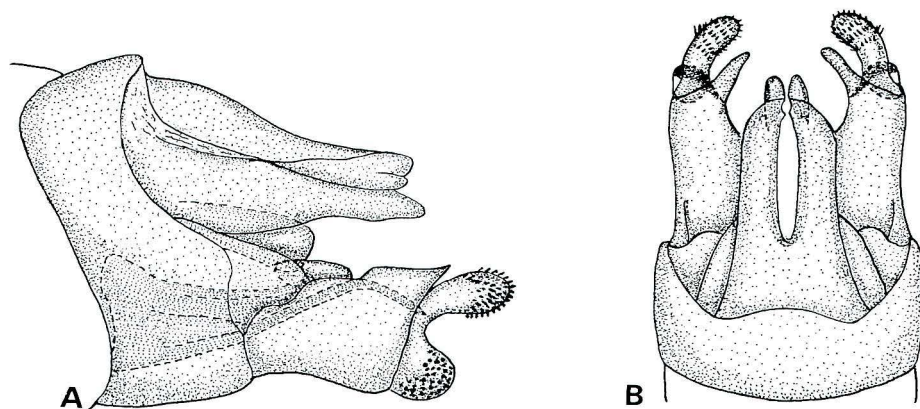


Fig. 3. Male genitalia of *Rhyacophila jiriana* sp. nov., A, lateral view: B, dorsal view.

2♂♂(7642), Odaesan, Gangweon-do, June 9, 1983 (UCHIDA).

Distribution: Ussuri, Korea, Japan.

Genus *Crunobiodes* MASTYNOV

16. *Crunobiodes koriaensis* sp. nov. (Fig. 4)

Male: Color brownish grey. Body 65mm in length. Fore wing 8.0mm long and 3.3 mm wide. Hind wing 7.0mm long and 3.0mm wide. General structure typical for the genus. Genitalia as in Fig. 4. Eighth segment short; apical margin leniently incurved at middle portion in lateral. Tenth segment slender, acuted at its apex; basal portion thick. Suppurior lobe spoon-shaped in lateral. Clasper much longer, apical portion narrower than the other portion; apical margin with a few bristles. Aedeagus divided into three lobes; upper lobe sickle-shaped in lateral; middle lobe slender, acuted at its apex, spine-shaped; lower lobe shorter than the other lobes, rounded at its apex.

Holotype: Male (7621), Gayasan, Gyeongsangnam-do, South Korea, May 25, 1983 (UCHIDA).

Distribution: Korea.

Family LIMNEPHILIDAE

Genus *Hydatophlax* WALLENGREN

17. *Hydatophlax nigrovittatus* (McLACHLAN)

Platyphlax nigrovittatus McLACHLAN, 1972. Ann. Soc. Ent. Belg. 15: 64, Pl. 2, Fig. 1.

Platyphlax nigrovittatus: TSUDA, 1942. Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17(1): 319.

Hydatophlax nigrovittatus: SCHMID, 1950. Mitt. Schweiz. Ent. Ges. 23: 284-286, Figs. 40-41.

Specimens examined: 233 (7601), Odaesan, Gangweon-do, June 1, 1983 (UCHIDA).

Distribution: North Europe, Siberia, Korea (New record).

Family CALAMOCERIDAE

Genus *Ganonema* McLACHLAN18. *Ganonema odaenum* sp. nov. (Fig. 5)

Male: Color dark brown. Body 9.0mm in length. Fore wing 12.0mm long and 4.5 mm wide. Hind wing 9.7mm long and 4.0mm wide. General structure typical for the genus. Genitalia as in Fig. 5. Ninth sternite broad, with swelled at middle portion of distal margin. Ninth stergite stout, long. Cerci long, leaf-shaped in dorsal. Glasper two-segmented; basal segment longer and stouter than the terminal one, barrel-shaped in lateral, arised many long bristles; terminal segment finger-shaped, arised many short seta. Aedeagus stout, with membranous apical portion.

Female: Color dark brown. Specimen longer than the male. Body 14.0mm in length. Fore wing 13.0mm long and 4.0mm wide. Hind wing 10.0mm long and 4.0mm wide.

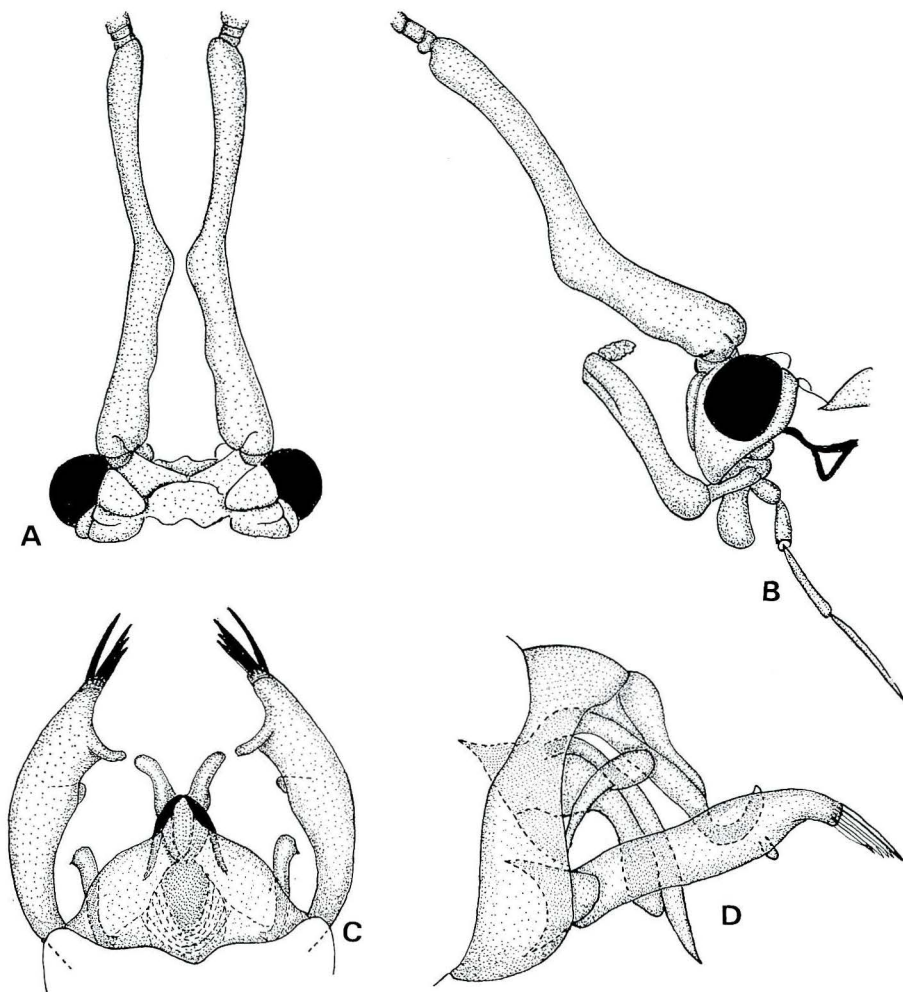


Fig. 4. Antenna and genitalia of male of *Crunobiodes koriaensis* sp. nov., A-B, Antennae, A, dorsal view: B, lateral view: C-D, genitalia, C, lateral view: D, dorsal view.

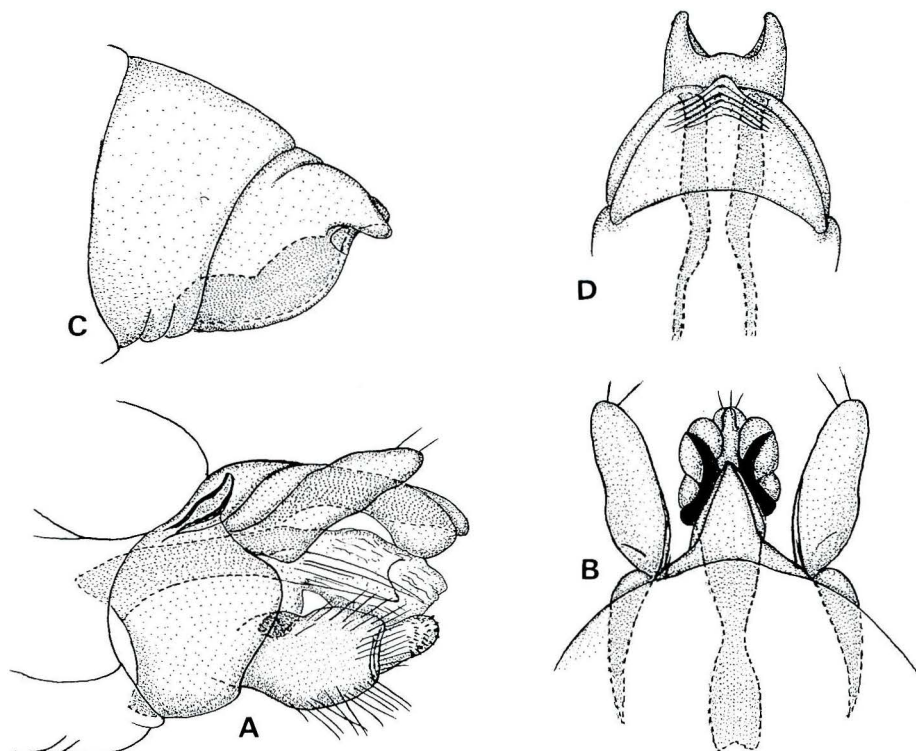


Fig. 5. Male and female genitalia of *Gananema odaenum* sp. nov., A-B, male genitalia, A, lateral view: B, dorsal view, C-D, female genitalia, C, lateral view: D, ventral view,

General structure for the genus. Genitalia as in Fig. 5. Distal margin with a pair of short processes.

Holotype: Male (7638), Odaesan, Gangweon-do, South Korea, June 1, 1983 (UCHIDA). Paratype: 6♂♂5♀♀(7683a), same locality as holotype. 3♂♂3♀♀(7617, 7632), Gaya-san, Gyeongsangnam-do, South Korea, May 25, 1983 (UCHIDA). 1♂(7611), Jirisan. Gyeongsangnam-do, South Korea, June 5, 1983 (UCHIDA).

Distribution: Korea.

Family LEPTOCERIDAE

Genus *Leptocerus* LEACH

19. *Leptocerus shuotsuensis* TSUDA

Lepocerus shuotsuensis TSUDA, 1942. Mem. Coll. Sci. Kyoto Imp. Univ. Ser. B, 17(1): 233-234,

Fig. 8.

Specimen examined: 1♂(7629), Jeongseon, Gangweong-do, June 7, 1983.

Distriution: Korea.

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