Diamesa amanoi sp. n., a new species of Diamesinae (Diptera, Chironomidae) from Nepal, with notes on taxonomy and distribution of some Diamesa Meigen

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Abstract: A new species, Diamesa amanoi sp. n., from Mera La (alt. 5,050 m), Nepal is described. The present new species is most closely related to D. subletti Makarchenko from North America. Diamesa plumicornis Tokunaga which had been regarded as Japanese endemic species is newly recorded from South Korea, and D. pankratovae Makarchenko et Bulgakov is recognized as a new synonym of D. filicauda Tokunaga.

INTRODUCTION

Up to the present time the Nepalese subfamily Diamesinae are represented by the following 15 species: Boreoheptagyia rotundata Serra-Tosio, B. sp., Diamesa aberrata Lundbeck, D. barraudi Pagast, D. khumbugelida Saether et Willassen, D. koshimai Saether et Willassen, D. loeffleri Reiss, D. planistyla Reiss., D. praedpua Saether et Willassen, D. yalavia Saether et Willassen, Pagastia sp. 1, P. sp. 2, Pseudodiamesa branickii (Nowick), P. nepalensis Reiss, and P. sp. 1 (Reiss, 1968; Roback and Coffman, 1987; Saether and Willassen, 1987; Serra-Tosio, 1983, 1989).

We described below the male of Diamesa amanoi sp. n. from Nepal and also adduced new data on taxonomy and distribution of D. filicauda Tokunaga and D. plumicornis Tokunaga from the Palaearctic region.

The terminology in the paper follows Hansen and Cook (1976) and Saether (1980). Holotype of Diamesa amanoi sp. n. is deposited in Natural History Museum and Institute, Chiba, Japan (registered number: CBM-ZI 72725). Paratypes are deposited in Institute of Biology and Pedology, Far East Branch of Russian Academy of Sciences, Vladivostok, Russia.

Diamesa amanoi Makarchenko et Kobayashi, sp. n.
(Figs. 1-5)

Male. General color dark brown. Body length 3.4-3.6 mm, body length/wing length 0.9-1.0.

Head. Eyes pubescent. Temporals 5-9, postorbitals 9, clypeals 4-8. Antenna with 13 flagellomeres, plumes reduced (Fig. 1). Pedicel with 2-3 setae 85.8 µm long. Length of subapical seta of terminal flagellomere 16.5-32.1 µm, length of flagellomere's setae 66-175 µm. AR 0.85-1.12. Length of last 4 maxillary palp segments (µm): 82.5 : 109 : 99 : 142. Head width/palp length 1.2. Diameter of sensilla capitata of maxillary palp 9.9-1.0 µm.

Thorax. Antepronotum with 3-4 ventrolateral setae. Dorsocentrals 5-8, prealars 4-5, scutellars 10-12.

Wing. Length 3.2-3.9 mm. R and R1
with 8-16, $R_{4+5}$ with 2-4 macrotrichia. Squama with 23-27 setae.

Legs. BR 1 = 1.0-1.9, BR2 = 1.3-1.9, BR3 = 1.9. Front tibial spur length 42.9-59.4 µm, middle tibial spurs 36.3-46.2 and 39.6-46.2 µm, hind tibial spurs 56.1-59.4 and 56-59.4 µm long respectively (Table 1). Hind tibial comb consisting of 16-18 spines.

**Hypopygium** (Figs. 2-5). Tergite IX with 6-9 setae on each side. Laterosternite with 6-8 setae. Anal point 95.7-121.5 µm long, with small terminal peg (Fig. 3). Medial field of gonocoxite well developed, with numerous microtrichia and setae particularly strong ventrally and with some short setae dorsally (Fig. 2). Basimedian setal cluster absent. Gonostylus bifurcated, with massive and blackish dorsal fork which in about 2.3 times longer of ventral fork; ventral fork small and narrow, with terminal spine (Figs. 2, 4-5).

**Female, pupa and larva** are unknown.

**Type material.** Holotype: ♂, Mera La, Nepal, N27°43′18", E86°54′17", alt. 5,050 m, 10. VIII. 1995, M. Amano leg. Paratypes: 3 ♂♂, the same data as holotype, 10. VIII. 1995, M. Amano leg.

**Etymology.** Named in honour of Dr. M. Amano, Natural History Museum and Institute, Chiba, Japan, who collected this species in Nepal.

**Remarks.** Two species of *Diamesa* with bifurcate gonostylus have been known. These are *D. geminata* Kieffer from Holarctic and *D. subletti* Makarchenko from the Nearctic region (Makarchenko, 1986). *D. amanoi* sp. n. is most close to *D. subletti* from which can be easily separated by reduced antennal setae and different structure of gonostylus. Lobes of gonostylus in *D. subletti* are subequal in shape and length (Fig. 6); ventral (inner) lobe length/dorsal (outer) lobe length, 0.6-0.7; ventral lobe with terminal spine and tooth (Fig. 7). Dorsal lobe of gonostylus in *D. amanoi* sp. n. is massive, ventral lobe is small and narrow, with terminal spine only (Figs. 2, 4-5); ventral lobe length/dorsal lobe length, 0.4.

### Diamesa filicauda Tokunaga, 1966

**Diamesa filicauda** Tokunaga, 1966: 274, Figs. 2-6, ♂♀.

**Diamesa pankratovae** Makarchenko, et Bulgakov, 1986: 37, Figs. 1-2, ♂ PL. Syn. nov.

**Material examined.** Holotype: ♂ [KPU 0190], Mt. Noshaq, NE Afganistan, alt. 3,800 m, 27. VIII. 1960, R. Yoshii leg. Other specimens examined: 3 ♂♂, Shavazikolon-sai River, Tashkent Region, Chatkalsk Nature Reserve, Uzbekistan, alt. 1,200m, 21. II. 1983, G. Bulgakov leg; ♂, Menyuan, Qinhai Pr., China, 15. VII. 1989, X. Wang leg.

**Distribution.** Afganistan, Uzbekistan and China.

**Remarks.** This is the first new information on systematics and distribution of *D. filicauda* since it was described by Tokunaga (1966). In the original description, the detail figure of some structures of male hypopygium was not given and therefore we could not compare *D. filicauda* with some related species before examining holotype. We had a chance to examine the holotype and discovered that hypopygium of *D. filicauda* is identical with that of *D. pankratovae*. The latter species must be a synonym of *D. filicauda*.

### Diamesa plumicornis Tokunaga, 1936

**Diamesa plumicornis** Tokunaga, 1936:
Figs. 1-7. Male of *Diamesa amanoi* sp. n. (1-5) and *Diamesa subletti* Makarchenko (6-7). 1, antenna; 2, hypopygium; 3, anal point; 4-6, gonostylus, ventral view; 7, apical part of gonostylus (ventral lobe).


Distribution. Japan (Honshu) and South Korea.

Remark. For a long time, D. plumicornis has been considered to be indigenous to Honshu, Japan. Finding of this species in South Korea is for the first time outside Japan.

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REFERENCES