

A new species of *Diamesa* Meigen (Diptera, Chironomidae, Diamesinae) from Hokkaido Island, Japan

Новый вид *Diamesa* Meigen (Diptera, Chironomidae, Diamesinae) с острова Хоккайдо, Япония

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Key words: Chironomidae, Diamesinae, *Diamesa*, new species, Hokkaido, Japan.

Ключевые слова: Chironomidae, Diamesinae, *Diamesa*, новый вид, Хоккайдо, Япония.

Abstract. An illustrated description of the adult male *Diamesa yezoensis* sp.n. from the Hokkaido Island of Japan is given.

Резюме. По имаго самцу приведено иллюстрированное описание нового вида хирономид *Diamesa yezoensis* sp.n. с острова Хоккайдо Японии.

During the revision of the genus *Diamesa* Meigen, an adult male of a new species was found in the material from the Hokkaido Island of Japan, the description of which is given below.

The male was slide-mounted in Canada balsam. The morphological terminology and abbreviations used below generally follow Sæther [1980]. For some structures of the hypopygium, however, the terminology of Hansen, Cook [1976] and Oliver [1989] is used. The photographs were taken using an Axio Lab.A1 (Karl Zeiss)

microscope with an AxioCam ERc5s digital camera and an Olympus SZX16 stereomicroscope with an Olympus DP74 digital camera, and then stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

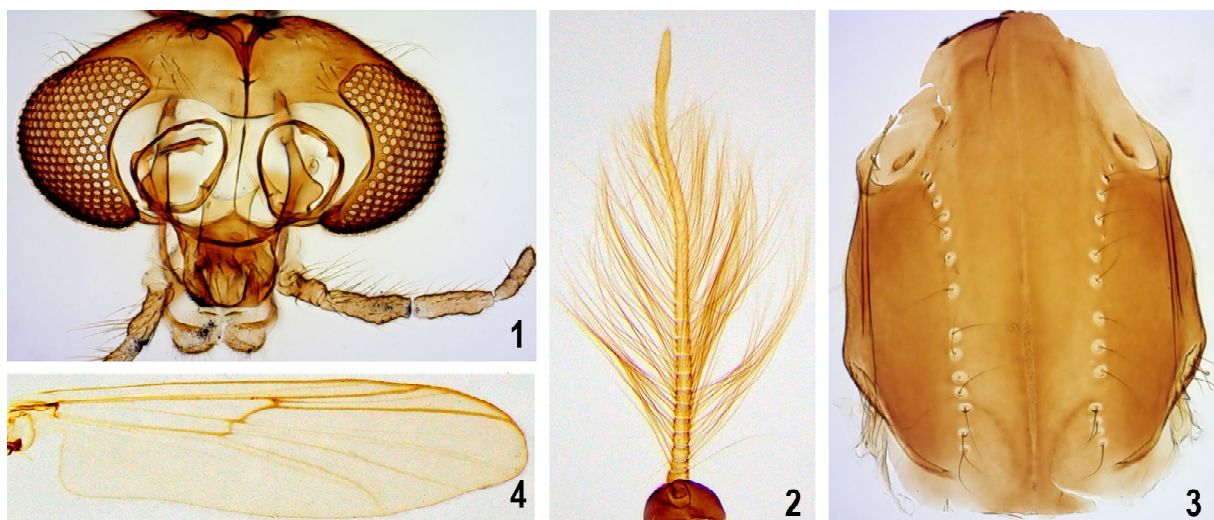
Holotype of the new species is deposited in the Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences, Vladivostok, Russia (FSCEATB FEB RAS).

Description

Diamesa yezoensis Makarchenko, sp.n.

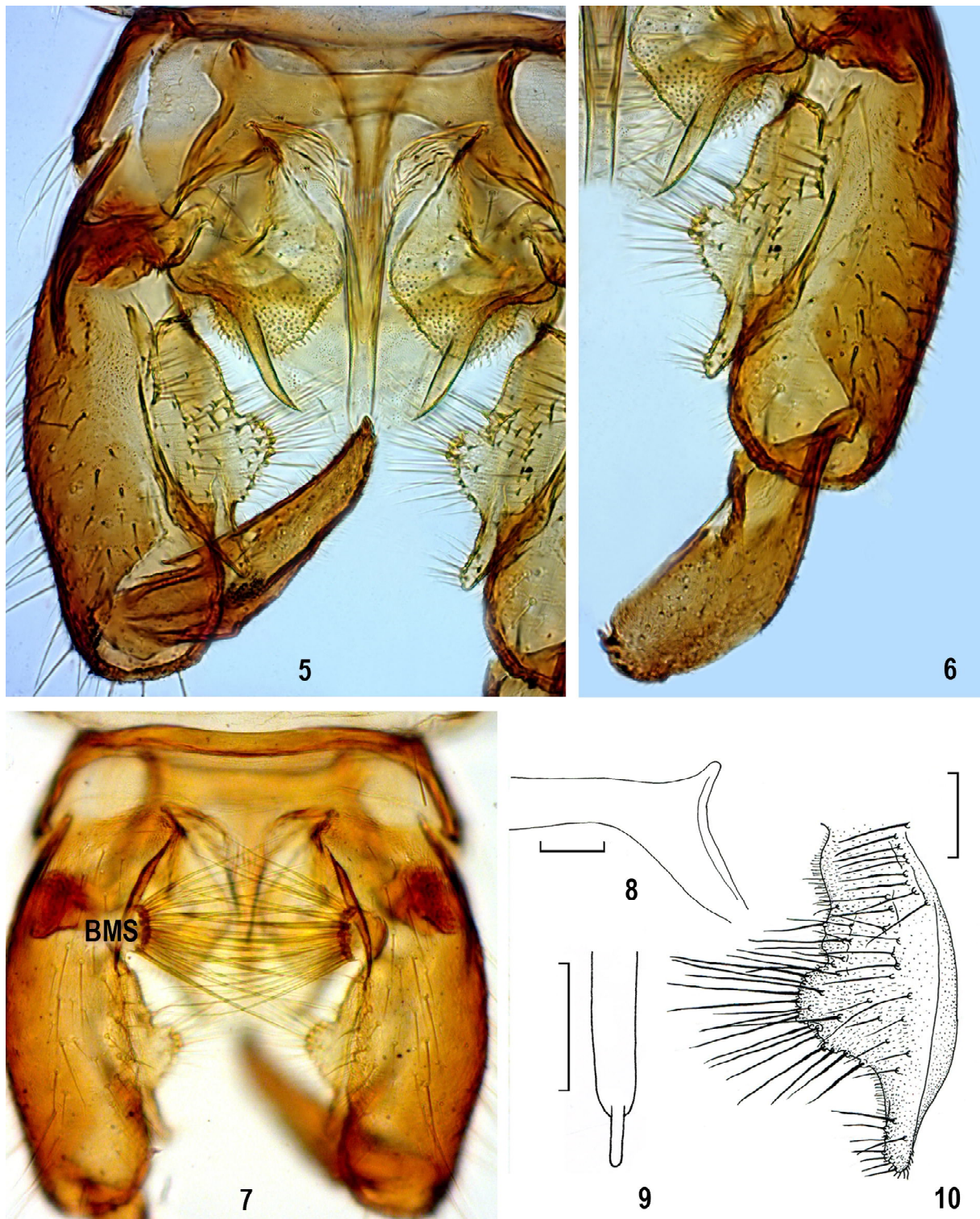
Figs 1–10.

<http://zoobank.org/NomenclaturalActs/3D641EC7-7BD2-45EF-8D23-97D5DA133AAE>



Figs 1–4. Adult male of *Diamesa yezoensis* sp.n. 1 — head; 2 — antenna; 3 — scutum; 4 — wing.

Рис. 1–4. Имаго самец *Diamesa yezoensis* sp.n. 1 — голова; 2 — антенна; 3 — среднеспинка; 4 — крыло.



Figs 5–10. Adult male of *Diamesa yezoensis* sp.n. 5 — hypopygium, dorsal view; 6 — gonocoxite and gonostylus; 7 — hypopygium, ventral view; 8 — part of transverse sternapodeme; 9 — distal part of anal point; 10 — inferior volsella. BMS — basimedial setal cluster. Scale bars: 50 μ m.

Рис. 5–10. Имаго самец *Diamesa yezoensis* sp.n. 5 — гипопигий, вид сверху; 6 — гонококсит и гоностиль; 7 — гипопигий, вид снизу; 8 — часть поперечной стернаподемы; 9 — дистальная часть анального отростка; 10 — нижний придаток гонококсита. BMS — пучок базимедиальных щетинок. Масштабные линейки: 50 мкм.

Table 1. Lengths (in μm) and proportions of leg segments of *Diamesa yezoensis* sp.n., male
Таблица 1. Длина члеников ног (мкм) и их индексы самца *Diamesa yezoensis* sp.n.

P	f	t	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	BV	SV
P ₁	1689	1920	1200	623	426	148	164	0.63	3.53	3.01
P ₂	1880	1720	840	492	312	131	164	0.49	4.13	4.29
P ₃	2160	2160	1240	689	426	148	164	0.57	3.90	3.48

Material. Holotype: adult male, Japan, Hokkaido, Tokachi Subprefecture, Obihiro City, Izumi, Tobetsu River, 27.X.1997, leg. K. Endo.

Description. Adult male (n = 1). Total length 6.5 mm. Total length/wing length 1.59.

Coloration. Dark brown. Wings grayish, venation brownish.

Head. Eyes hairy, reniform. Temporal setae including 6–7 preoculars, 21 verticals, 12–13 postorbitals (Fig. 1). Clypeus with 12 setae. Antenna with 13 flagellomeres and little reduced plume of setae (Fig. 2); terminal flagellomere with 1 setae, 40 μm long in subapical area; AR 1.32–1.39. Palpomere length (μm): 52, 120, 168, 144, 184. Palpomere 3 in distal part with sensilla capitata with diameter 20 μm . Head width/palpal length 1.20.

Thorax. Antepnotum with 8–9 ventrolateral setae. Dorsocentrals 13–16, prealars 8–9 (Fig. 3). Scutellum with 20–30 setae.

Wing (Fig. 4). Length 4.08 mm, width 1.08 mm. Anal lobe rounded. Squama with ca 60 setae, 128–152 μm long, in 1–2 rows. R and R₁ with 27 setae, R₄₊₅ with 6–7 in distal half. RM/MCu 3.0. Costa extension 115 μm long.

Legs. BR₁ 1.33, BR₂ 1.82, BR₃ 1.42. Spur of front tibia 60 μm long. Spurs of mid tibia 32 μm and 40 μm long. Spurs of hind tibia 84 μm and 52 μm long. Hind tibial comb with 20 setae. Mid ta, with 14 pseudospurs, hind ta, with 16 pseudospurs. Length (im) and proportions of leg segments are as in Table 1.

Hypopygium (Figs 5–10). Tergite IX with 16–18 short setae from one side and with long anal point, 308 μm long, which in apical part with peg, 16 im long (Figs 5, 9). Laterosternite IX with 6–8 setae. Transverse sternapodeme almost straight, 28–32 im high and 228 im wide, with triangular antero-lateral projections (Fig. 8). Gonocoxite 408 μm long, with original inferior volsella, which in distal part finger-shaped, 56 μm long and covered with short setae; middle part of volsella swollen along inner margin and covered with long setae, 56–100 μm long (Figs 5–6, 10); basal plate very well developed, with numerous strong microtrichia. Basimedial setal cluster located in basal half of gonocoxite, with 16–18 long and strong setae, 180–200 μm long, radiating fan-like; setae reaching base of opposite cluster (Fig. 7). Gonostylus 252 μm long, scythe shaped, apically with short megaseta, 8 μm long. HR 1.62.

Diagnosis. Eyes hairy. Antenna with 13 flagellomeres and little reduced plume of setae, AR 1.32–1.39. Head width/palpal length 1.20. Dorsocentrals 13–16, prealars 8–9. LR₁ 0.63, BV₁ 3.53, SV₁ 3.01. Anal point long, in apical part with short peg. Transverse sternapodeme almost straight, with triangular antero-lateral projections. Gonocoxite with original inferior volsella, which in distal part finger-like and covered with short setae; middle part of volsella swollen along inner margin and covered with long setae. Basimedial setal cluster located in basal half of gonocoxite, with 16–18 long and strong setae radiating fan-like. Gonostylus scythe shaped, apically with short megaseta. HR 1.62.

Диагноз. Глаза покрыты щетинками, выступающими за фасетки. Антенна с 13 флагелломерами и немного ре-

дуцированным султаном щетинок, AR 1,32–1,39. Ширина головы/длина максиллярного щупика 1,20. Дорсоцентральных щетинок среднеспинки 13–16, преалярных 8–9. LR₁ 0,63, BV₁ 3,53, SV₁ 3,01. Анальный отросток длинный, апикально с короткой палочковидной щетинкой. Поперечная стернаподема почти прямая, с треугольными антеролатеральными выступами. Гонококсит с оригинальным нижним придатком, который в дистальной части пальцевидный и покрыт относительно короткими щетинками, а в середине по внутреннему краю выпуклый, с длинными щетинками. Базимедиальный пучок состоит из 16–18 длинных и сильных щетинок, расположен в базальной половине гонококсита. Гоностиль в форме косы, апикально с коротким терминальным шипом. HR 1,62.

Derivatio nominis. The new species is named after the old name of the of Hokkaido Island — Yezo.

Remarks. The new species is more closely related to Nearctic species *Diamesa nivoriunda* (Fitch, 1847) and Palaearctic *D. vaillanti* Serra-Tosio, 1972 from which well separated by shape of gonostylus and inferior volsellae, and some other features. *D. yezoensis* sp.n. with gonostylus scythe-shaped, apically with short megaseta; inferior volsella in distal part finger-shaped and covered with short setae, middle part swollen along inner margin and covered with long setae. Gonostylus of *D. nivoriunda* approximately triangular, with subterminal peg and short terminal ridge; inferior volsella wide in the basal half and finger-shaped distally, with several apical and subapical setae. *D. vaillanti* with almost straight gonostylus ending in terminal megaseta and tooth. Inferior volsella wide basally and digitate distally, covered with setae which are longest basally.

Distribution. Known only from type locality in Hokkaido of Japan.

Acknowledgements

The author is sincerely grateful to Kazuo Endo for the opportunity to study material and Dr. V.M. Loktionov (Federal Scientific Center of the East Asia Terrestrial Biodiversity, Vladivostok) for help with preparing microphotographs.

The research was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. 121031000147-6).

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