

Chaetocladius (s. str.) *khrulevae* sp.n.
(Diptera, Chironomidae, Orthoclaadiinae) from the Wrangel Island
(Chukotka, Russian Far East)

Новый вид хирономид *Chaetocladius* (s. str.) *khrulevae* sp.n.
(Diptera, Chironomidae, Orthoclaadiinae) с острова Врангеля
(Чукотка, российский Дальний Восток)

Е.А. Макаренко, М.А. Макаренко
Е.А. Макаренко, М.А. Макаренко

Institute of Biology and Soil Sciences, Russian Academy of Sciences, Far East Branch, 100 let Vladivostoku Ave. 159, Vladivostok 690022 Russia. E-mail: makarchenko@biosoil.ru.

Биолого-почвенный институт ДВО РАН, просп. 100 лет Владивостоку 159, Владивосток 690022 Россия.

Key words: Diptera, Chironomidae, Orthoclaadiinae, *Chaetocladius*, new species, Wrangel Island, Russian Far East.

Ключевые слова: Diptera, Chironomidae, Orthoclaadiinae, *Chaetocladius*, новый вид, остров Врангеля, российский Дальний Восток.

Abstract. A new species, *Chaetocladius* (s. str.) *khrulevae* sp.n., from Wrangel Island (Chukotka Autonomous Region) is described and figured by male imagines. A new species is good separated from congeners by wide and light in apical half anal point, transverse sternapodeme with reduced oral projections, gonocoxite with large roundish inferior volsella, gonostylus in apical part with 1–2 megaseta and with narrow crista dorsalis.

Резюме. Приведено иллюстрированное описание имаго самца нового вида хирономид *Chaetocladius* (s. str.) *khrulevae* sp.n. с о-ва Врангеля (Чукотский автономный округ). Самец нового вида отличается от известных представителей рода рядом признаков: анальный отросток гипопигия широкий, светлый в апикальной половине; нижний придаток гонококситы крупный и округлый; поперечная стерноподема с редуцированными оральной выростами; гоностиль с узкой кристой и 1–2 терминальными шипами.

Introduction

Up to date, the genus *Chaetocladius* Kieffer, 1911 includes one species of the subgenus *Amblycladius* Kieffer and 57 species of *Chaetocladius* s. str. [Ashe, O'Connor, 2012]. Seventeen species of *Chaetocladius* s. str. were recorded for the Russian Far East [Makarchenko, Makarchenko, 2011a–c]. A new species, *Chaetocladius* (s. str.) *khrulevae* sp.n., was found in the Wrangel Island. Male of this species is described and illustrated below.

Material was fixed by 70% ethanol. The morphological nomenclature follows O.A. Sæther [1980].

Holotype of a new species is deposited in the Institute of Biology and Soil Sciences, Far East Branch of

the Russian Academy of Sciences (IBSS FEB RAS), Vladivostok, Russia.

Description

Chaetocladius (s. str.) *khrulevae*
Makarchenko et Makarchenko, sp.n.

Figs 1–3.

Material. Holotype: ♂, unnamed stream near Ushakovsky Village, Wrangel Island, Chukotka, Russian Far East, 2.VII.1979, leg. E. Makarchenko and M. Makarchenko.

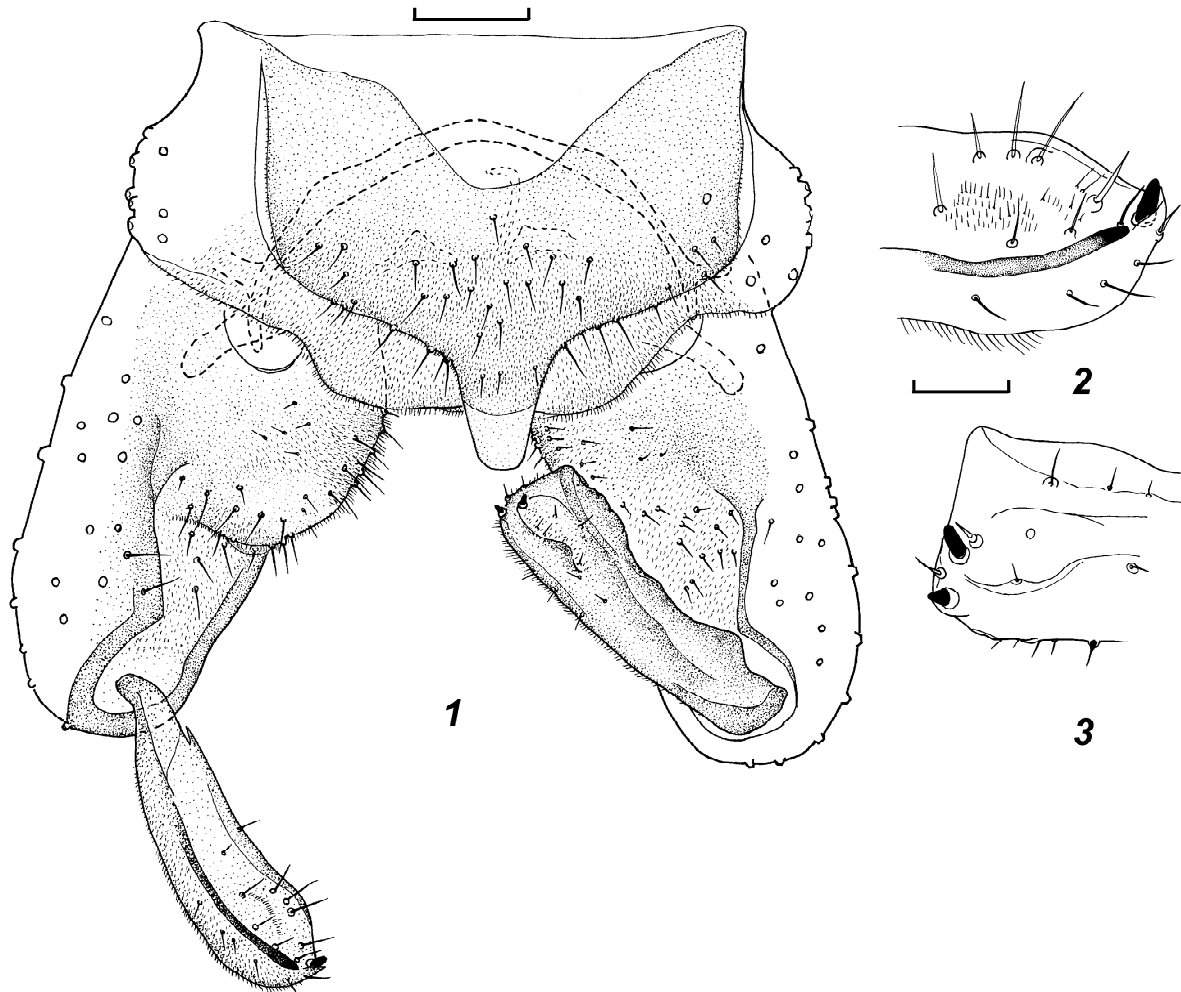
Description. Male imago (n = 1). Dark brown. Total length 3.1 mm. Wing length 2.1 mm. Total length/wing length 1.48.

Head. Eyes bare, inner edge slightly pubescent, with short dorsomedian prolongation. Temporal setae include (from one side) 4–5 verticals and 5 postorbitals. Clypeus with 13 setae. Antenna with 13 flagellomeres and good developed plume; 13th flagellomere 496 µm long; AR 1.48. Lengths (µm) of palpomeres 1–5 — 32 : 52 : 104 : 96 : 112. Head width/palp length 1.33.

Thorax. Anteprepronotum with 6 lateral setae. Acrostichals 24, beginning from border of anteprepronotum in 1–2 rows; dorsocentrals 19 (in 1–2 rows), prealars 7. Scutellum lost.

Wing. Brownish, speckled and with brown veins. Anal lobe well developed, roundish. Squama with 13 setae. R with 16–18 setae, R₁ with 3–4 setae, R₄₊₅ without setae. Costal extension 80 µm. Apex of R₄₊₅ is distal of apex M₃₊₄. Cu₁ straight.

Legs. BR₁ 1.5, BR₂ 1.4, BR₃ 1.8. Spur of front tibia 64 µm long. Spurs of middle tibia 28 µm and 32 µm long. Spurs of hind tibia 24 µm and 64 µm long. Hind tibial comb with 11 setae. Middle legs with 2 pseudospurs on ta₁ and ta₂ and 1 pseudospur on ta₃. Hind legs with 2 pseudospurs on ta₁ and ta₂. Middle leg on ta₁ in apical 3/4 with 12–14



Figs 1–3. Male of *Chaetocladus* (s. str.) *khrulevae* sp.n. 1 — total view of hypopygium from above; 2–3 — apical part of gonostylus. Scale bars are as follows: Fig.1 — 50 μ m; Figs 2–3 — 20 μ m.

Рис. 1–2. Самец *Chaetocladus* (s. str.) *khrulevae* sp.n. 1 — общий вид гипопигия, сверху; 2–3 — апикальная часть гоностилия. Масштабные линейки для рис. 1 — 50 мкм; рис. 2–3 — 20 мкм.

sensilla chaetica; hind leg on ta_1 in apical 3/4 with 29–30 sensilla chaetica. Small pulvillae present. Length and proportions of leg segments see in Table 1.

Hypopygium (Figs 1–3). Anal point wide and light in apical half, 56 μ m long and 40 μ m wide in basal part. Tergite IX with 46 setae. Laterosternite IX with 8–9 setae. Transverse sternapodeme 136 μ m long, with reduced oral projections. Virga 20 μ m long, consists of 3 setae. Gonocoxite 280 μ m long, with large roundish inferior volsella covered by short setae. Gonostylus 152 μ m long; in apical part with 1–2 megaseta 12 μ m long and with narrow crista dorsalis.

Diagnosis. Total length 3.1 mm. Wing length 2.1 mm. AR 1.48. Acrostichals of methonotum 24. LR_1 0.58. Middle and hind legs on ta_1 in apical 3/4 with sensilla chaetica. Small pulvillae present. Anal point wide and light in apical half. Tergite IX with 46 setae. Transverse sternapodeme with reduced oral projections. Virga short, consists of 3 setae. Gonocoxite with large roundish inferior volsella covered by short setae. Gonostylus in apical part with 1–2 megaseta and with narrow crista dorsalis.

Диагноз. Длина тела 3,1 мм. Длина крыла 2,1 мм. AR 1,48. Акростихальных щетинок на среднеспинке 24. LR_1 0,58. Средние и задние ноги в апикальных 3/4 по

Table 1. Length (μ m) and proportions of leg segments of *Chaetocladus* (s. str.) *khrulevae* sp.n., male (n=1)
Таблица 1. Длина члеников ног (мкм) и их индексы самца *Chaetocladus* (s. str.) *khrulevae* sp.n. (n=1)

P	f	t	ta_1	ta_2	ta_3	ta_4	ta_5	LR	SV	BV
P_1	752	944	544	336	240	160	144	0.58	3.12	2.55
P_2	784	912	384	240	192	128	136	0.42	4.42	2.99
P_3	880	1040	560	320	256	144	144	0.54	3.43	2.87

всей длине с чувствительными волосками. Ноги с небольшими пильвилами. Анальный отросток широкий и светлый в апикальной половине. Нижний придаток гоноксита крупный округлый, покрыт короткими щетинками. Вирга короткая, состоит из 3 щетинок. Гноститиль апикально с узкой кристой и 1–2 терминальными шипами.

Etymology. The new species is named in honor of Dr. O.A. Khruleva (A.N. Severtsov Institute of Ecology and Evolution of Russian Academy of Science), well known Arctic entomologist, who collected chironomid material in Wrangel Island in 2006 and passed this one to us for investigation. After getting new material, which she collected, we have prepared inventory of our old material collected in Wrangel Island in 1978–1979 and found among unstudied samples three new species of Chironomidae.

Distribution. Known only from the type locality in Wrangel Island.

References

- Ashe P., O'Connor J.P. 2012. A World Catalogue of Chironomidae (Diptera). Part 2. Orthoclaadiinae // Irish Biogeographical Society and National Museum of Ireland. Dublin. xvi+968 p.
- Makarchenko E.A., Makarchenko M.A. 2011a. *Chaetoclaadius* (s. str.) *antipovae* sp.n. (Diptera, Chironomidae, Orthoclaadiinae) from the Amur River basin (Russian Far East) // Euroasian Entomological Journal. Vol.10. No.3. P.383–384.
- Makarchenko E.A., Makarchenko M.A. 2011b. New or little-known species of chironomids (Diptera, Chironomidae) from South Yakutia and bordering territory // Euroasian Entomological Journal. Vol.10. No.3. P.389–396. [In Russian].
- Makarchenko E.A., Makarchenko M.A. 2011c. Fauna and distribution of the Orthoclaadiinae of the Russian Far East // Wang X., Liu W. (Eds): Contemporary chironomid studies. Proceedings of the 17th International Symposium on Chironomidae. July 6–9, 2009 Nankai University, China. Nankai University Press. P.107–125.
- Sæther O.A. 1980. Glossary of chironomid morphology terminology (Diptera, Chironomidae) // Entomologica scandinavica. Suppl.14. P.1–51.

Поступила в редакцию 14.05.2013