

Chaetocladius (s. str.) *amurensis* sp.n.
(Diptera, Chironomidae, Orthoclaadiinae)
from the Amur River basin (Russian Far East)

Новый вид хирономид *Chaetocladius* (s. str.) *amurensis* sp.n.
(Diptera, Chironomidae, Orthoclaadiinae)
из бассейна р. Амур (российский Дальний Восток)

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

Abstract. A new species, *Chaetocladius* (s.str.) *amurensis* sp.n., from Takantsy River (tributary of Bureya River, Amur River basin, Khabarovsk Territory) and upper stream of Kolumbe River (Amur River basin, Sikhote-Alin Biosphere Nature Reserve, Primorye Territory) is described and figured by imagines male. A new species is close related to *Chaetocladius* (s.str.) *britae* Sæwedal from Northern Sweden and separated from the latter by wider the inferior volsellae and by the shape of the gonostylus.

Резюме. Приведено иллюстрированное описание имаго самца нового вида хирономид *Chaetocladius* (s.str.) *amurensis* sp.n. из р. Таканцы (приток р. Бурья, бассейн р. Амур, Хабаровский край) и верхнего течения р. Колумбе (бассейн р. Амур, Сихотэ-Алинский биосферный заповедник, Приморский край). Самец нового вида отличается от известных представителей рода очень крупным гипопигием, ширина которого заметно превышает ширину сегментов брюшка, наиболее близок *Chaetocladius* (s.str.) *britae* Sæwedal из Северной Швеции, но имеет более широкий нижний придаток гонококситы и иную форму гоностил.

Up to the present time the genus *Chaetocladius* Kieffer, 1911 includes one species of the subgenus *Amblycladius* Kieffer and about 40 Palearctic species of *Chaetocladius* s.str. [Sæther et al., 2000]. Thirteen species of *Chaetocladius* s.str. were recorded for the Russian Far East [Makarchenko, Makarchenko, 2004]. A new species, *Chaetocladius* (s.str.) *amurensis* sp.n., was found in the Amur River basin. Male of this species is described and illustrated below.

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

Holotype and paratype of a new species are deposited in the Institute of Biology and Soil Sciences, Far East Branch of the Russian Academy of Sciences (IBSS FEB RAS), Vladivostok, Russia.

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

Figs 1–2.

Material. Holotype: male, Takantsy River, tributary of Bureya River (Amur River basin), Khabarovsk Territory, Russian Far East, 19.IX.2006, leg. E. Makarchenko. Paratype: male, Kolumbe River, tributary of Bolshaya Ussurka River (basin of Amur River), Sikhote-Alin Biosphere Nature Reserve, Primorye Territory, 1.X.2005, leg. O. Zorina.

Discription. Male imago (n = 2).

Total length 3.5–3.7 mm. Wing length 1.58–2.88 mm. Total length/wing length 1.28–2.22. Coloration dark brown.

Head. Eyes bare and roundish. Temporal setae 13–24 from one side. Clypeus with 9–10 setae. Antenna with 13 flagellomeres, plume slightly reduced; pedicel without setae. Length of subapical seta of terminal flagellomere 46–48 µm. AR 0.70–0.74. Lengths (µm) of palpomeres 1–5 : 24–28 : 44–52 : 116–132 : 100–108 : 132–162. Third palpomere in distal part with sensillae chaetica. Head width/palp length 1.0–1.25.

Thorax. Anteprepronotum with 4–6 lateral setae. Acrostichals 13–17, dorsocentrals 13–14, prealars 4. Scutellum with 7 setae.

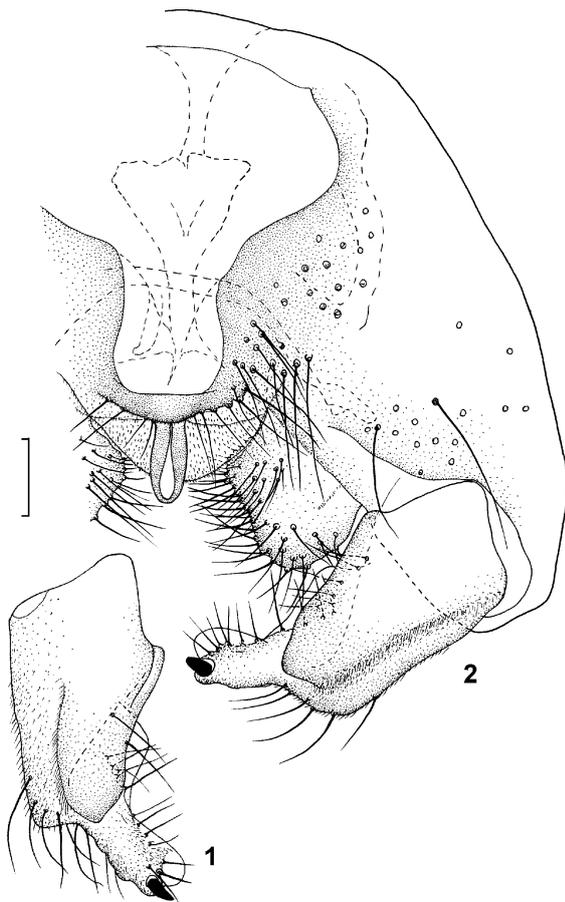
Wing. Anal lobe slightly reduced. Squama with 7–8 setae. R with 16–20 setae, R₁ with 2–3 setae, R₄₊₅ with 15–20 setae. R₂₊₃ not so good visible.

Legs. BR₁ 2.4–2.5, BR₂ 2.2–2.5, BR₃ 3.0–3.3. Spur of front tibia 40–56 µm. Spurs of middle tibia 28 µm and 28–34 µm long. Spurs of hind tibia 28 µm and 56–64 µm long. Hind tibial comb with 13–17 setae. Length and proportions of leg segments see Table 1.

Hypopygium (Figs 1–2). Strong and broad in comparison to rest of abdomen. Anal point length 52–60 µm, width 20–26 µm, at base covered by a hump. Tergite IX and laterosternite IX close connected and with about 40 long setae from one side of anal point. Virga absent. Gonocoxite about 400 µm long, with wide inferior volsella, covered by

Table 1. Length (μm) and proportions of leg segments of *Chaetocladius amurensis* sp.n., male (n=2).
Таблица 1. Длина члеников ног (мкм) и их индексы самца *Chaetocladius amurensis* sp.n. (n=2).

| P | f | t | ta ₁ | ta ₂ | ta ₃ | ta ₄ | ta ₅ | LR | SV | BV |
|----------------|-----------|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------|-----------|-----------|
| P ₁ | 1086-1169 | 1186-1253 | 818-852 | 448-484 | 317-351 | 192-200 | 142-150 | 0.68-0.69 | 2.78-2.84 | 2.76-2.81 |
| P ₂ | 1136-1186 | 1119-1186 | 551-568 | 334 | 251 | 150 | 125-134 | 0.48-0.49 | 4.09-4.18 | 3.26-3.38 |
| P ₃ | 1219-1336 | 1286-1386 | 768-818 | 434-451 | 326-351 | 184-200 | 142-150 | 0.59-0.60 | 3.26-3.33 | 2.99-3.09 |



Figs 1–2. Male of *Chaetocladius* (s.str.) *amurensis* sp.n. 1 — gonostylus, from one side; 2 — total view of hypopygium from above. Scale bar 50 μm .

Рис. 1–2. Самец *Chaetocladius* (s.str.) *amurensis* sp.n. 1 — гоностиль, сбоку; 2 — общий вид гипопигия, сверху. Масштабная линейка 50 мкм.

long setae. Gonostylus 208–60 μm long, with subapical crista dorsalis. Shape of gonostylus is intricate. Megaseta of gonostylus 16–18 μm long.

Diagnosis. Male imagines of *Chaetocladius* (s. str.) *amurensis* sp.n. with broad hypopygium in comparison to rest of abdomen. Tergite IX and laterosternite IX close connected and with numerous long setae. Gonocoxite with wide inferior volsella, covered by long setae. Gonostylus wide and long, with subapical crista dorsalis. Shape of gonostylus is intricate.

Диагноз. Самец *Chaetocladius* (s.str.) *amurensis* sp.n. отличается от известных видов рода крупным широким и сильно хитинизированным тёмно-коричневым гипопигием, у которого тергит IX и латеростернит IX слиты и с многочисленными длинными щетинками. Гоноксит массивный, его нижний придаток широкий, покрыт длинными щетинками. Гоностиль широкий в базальных двух третях, имеет сложную форму, субапикально с округлой кривой.

Etymology. The new species is referred to by one's name of Amur River of the Russian Far East.

Distribution. Known only from the type locality in Amur River basin. Both males were collected in upper stream of the mountain rivers.

Remarks. The male of *Chaetocladius* (s.str.) *amurensis* sp.n. is close related to *C.* (s.str.) *britae* Säwedal from Northern Sweden [Säwedal, 1976]. Males only of these two species have broad hypopygium in comparison to rest of abdomen but hypopygium of *C. britae* is inverted (180°), inferior volsella is narrower than the same of *C.* (s.str.) *amurensis* sp.n. and the shape of gonostylus is different.

References

- Makarchenko E.A., Makarchenko M.A. 2004. *Chaetocladius* Kieffer (Diptera, Chironomidae, Orthoclaadiinae) in the Russian Far East // Euroasian Entomological Journal. Vol.3. No.4. P.311–317. [In Russian with English summary].
- Säwedal L. 1976. *Chaetocladius britae* n. sp., a new chironomid species from Northern Sweden, with a hypopygium inversum (Diptera, Chironomidae) // Entomologica scandinavica. Vol.7. P.311–313.
- Sæther O.A. 1980. Glossary of chironomid morphology terminology (Diptera, Chironomidae) // Entomologica scandinavica. Suppl. 14. P.1–51.
- Sæther O.A., Ashe P., Murray D.A. 2000. Family Chironomidae // Papp L., Darvas B. (eds): Contributions to a Manual of Palaearctic Diptera (with special reference to the flies of economic importance). Vol.4. A.6. Science Herald, Budapest. P. 113–334.