

***Hydrobaenus vernus* sp.n. (Diptera, Chironomidae, Orthocladiinae)
from the Kama River Basin of the Middle Urals
(Perm Territory, Russia)**

**Новый вид хирономид *Hydrobaenus vernus* sp.n.
(Diptera, Chironomidae, Orthocladiinae) из бассейна р. Кама
(Средний Урал, Пермский край, Россия)**

A.B. Krasheninnikov^{*}, E.A. Makarchenko^{}
А.Б. Крашенинников^{*}, Е.А. Макарченко^{**}**

* Perm' State University, Bukireva str. 15, Perm 614990 Russia. E-mail: krasheninnikov2005@yandex.ru.

* Пермский государственный университет, ул. Букирева 15, Пермь 614990 Россия.

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

** Биологический почвенный институт ДВО РАН, просп. 100 лет Владивостоку 159, Владивосток 690022 Россия.

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Ключевые слова: Diptera, Chironomidae, Orthocladiinae, *Hydrobaenus*, новый вид, Средний Урал, Пермский край, Россия.

Abstract. A new species, *Hydrobaenus vernus* Krasheninnikov et Makarchenko, sp.n., is described from the Kama River Basin of the Middle Urals (Perm Territory, Russia) by male imago. It differs from other members of the genus by its short palp with four palpomeres, short and curved gonostylus with wide triangular tooth and megaseta in the distal part, numerous short setae of tergite IX, long and narrow anal point, and very wide inferior volsella.

Резюме. Приведено иллюстрированное описание имаго самца нового вида хирономид *Hydrobaenus vernus* Krasheninnikov et Makarchenko, sp.n., из басс. р. Кама (Пермский край, Россия). Новый вид отличается от известных представителей рода коротким максиллярным щупиком, состоящим из четырёх членников, коротким изогнутым гоностилем с широким треугольным зубцом и терминальным шипом дистально, многочисленными короткими щетинками на тергите IX, длинным и узким анальным отростком и очень широким нижним придатком гонококсита.

Species of the genus *Hydrobaenus* Fries, 1830 are widely distributed in Holarctic Region. Up to the present time in Palaearctic the genus includes 28 species [Sæther, 1976; Sæther et al., 2000; Makarchenko et al., 2009; Makarchenko, Makarchenko, 2010] and 15 species are recorded for Nearctic region [Oliver et al., 1990; Cranston et al., 2007].

Based on material collected by A.B. Krasheninnikov in Permskiy Krai of the Middle Urals a new species *Hydrobaenus vernus* sp.n. is described below by male imago.

Material was fixed by Oudemans solution. The morphological nomenclature follows 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.

Hydrobaenus vernus
Krasheninnikov et Makarchenko, sp.n.

Fig. 1.

Material. Holotype: ♂, unnamed lowland bog of the Sylva River flood plain, Kama River basin, Suksunsky District, Permskiy Krai, Middle Urals, h-147 m a.s.l., 57°02'22.53 N; 57°31'22.45 E, 9.V.2009, leg. A. Krasheninnikov.

Description. Male imago (n = 1). Total length about 3 mm. Wing length 2.16 mm. Total coloration dark brown, wings gray.

Head. Eyes pubescent, with dorsomedian elongations. Temporal setae 11–13, including 5–7 vertical and 6 postorbital in two separated groups. Clypeus with 9 setae. Palp short, with 4 palpomeres. Palpomere length (μm): 60–64, 68, 112–116, 108–116. Head width/palpal length 1.48. Antenna with 13 flagellomeres and well developed plume, AR 1.25–1.29.

Thorax. Antepronotum with 3 lateral setae. Acrostichals 11, dorsocentrals 23 (in 1–2 rows), prealars 8. Scutellum with 12 setae.

Wings. Anal lobe developed, roundish. Squama with 8 setae. R with 9–11 setae, R₁ with 2 setae, R₄₊₅ without setae. Costal extension 56 μm. Apex of R₄₊₅ is distal of apex M₃₊₄.

Legs. BR₁ 1.1; BR₂ 2.2; BR₃ 2.2. Spur of front tibia 60 μm in length. Spurs of middle tibia 56 μm and 28 μm in length. Length of hind tibia spurs 20 μm and 60 μm. Hind

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

P	f	t	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	SV	BV
P ₁	800	960	584	304	216	144	128	0.61	3.01	2.96
P ₂	816	944	416	288	144	96	112	0.44	4.23	3.40
P ₃	912	1040	544	272	176	192	112	0.52	3.59	3.32

tibial comb with 8 spines. Pulvilliæ present. Length and proportions of legs as in Table 1.

Hypopygium (Fig. 1). Anal point bare, 92 μm long and 8 μm wide in distal part. Tergite IX with 40 setae 8–12 μm long; laterosternite IX with 4 setae. Transverse sternapodemæ arched, 100 μm long; oral projections roundish. Virga absent. Gonostylus 100 μm long, curved, in distal part with wide triangular tooth and megaseta 16 μm long. Gonocoxite 360 μm long; inferior volsella very wide, as in Fig. 1, and covered by short setae.

Diagnosis. A new species is clearly separated from other congeners by short palps with 4 palpomeres, short and curved gonostylus, provided with wide triangular tooth and megaseta in distal part, by numerous short setae in tergite IX, long and narrow anal process, and very wide inferior volsella covered with short seta.

Диагноз. Новый вид отличается от известных представителей рода коротким максиллярным щупиком, состоящим из четырех члеников, коротким изогнутым гоностилем с широким треугольным зубцом и терми-

нальным шипом дистально, многочисленными короткими щетинками на тергите IX, длинным и узким анальным отростком и очень широким нижним приштоком гонококсита.

Female, pupa and larva are unknown.

Etymology. The name of this species arises from Latin *vernus* = spring.

Distribution. *Hydrobaenus vernus* sp.n. is known only from type locality in Middle Urals Kama River basin, Suskunsky District of Permskiy Krai.

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References

- Cranston P., Benigno G.M., Dominguez M.C. 2007. *Hydrobaenus saetheri* Cranston, new species, an aestivating, winter-emerging chironomid (Diptera, Chironomidae) from California // Andersen T. (Ed.): Contributions to the systematics and ecology of aquatic Diptera – A Tribute to Ole A. Sæther. The Caddis Press. P.73–79.
- Makarchenko E.A., Makarchenko M.A., Yavorskaya N.M. 2009. New records of chironomids (Diptera, Chironomidae, Orthocladiinae) in Far East and bordering territories. VI. *Hydrobaenus* Fries // Euroasian Entomological Journal. Vol.8. Suppl.1. P.33–50. [In Russian].
- Makarchenko E.A., Makarchenko M.A. 2010. *Hydrobaenus tiunovi* sp.n. (Diptera, Chironomidae, Orthocladiinae) from Sokhondinsky State Biosphere Reserve (Zabaikal'sky Territory, Russia) // Euroasian Entomological Journal. Vol.9. No.3. P.411–412.
- Oliver D.R., Dillon M.E., Cranston P.S. 1990. A catalog of Nearctic Chironomidae // Research Branch of Agriculture and Agri-Food Canada. P.1–89.
- Sæther O.A. 1976. Revision of *Hydrobaenus*, *Trissocladius*, *Zalutschia*, *Paratrissocladius*, and some related genera (Diptera, Chironomidae) // Bulletin Fisheries Research Board of Canada. No.195. P.1–287.
- Sæther O.A. 1980. Glossary of chironomid morphology terminology (Chironomidae, Diptera) // 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. Budapest: Science Herald. P.113–334.

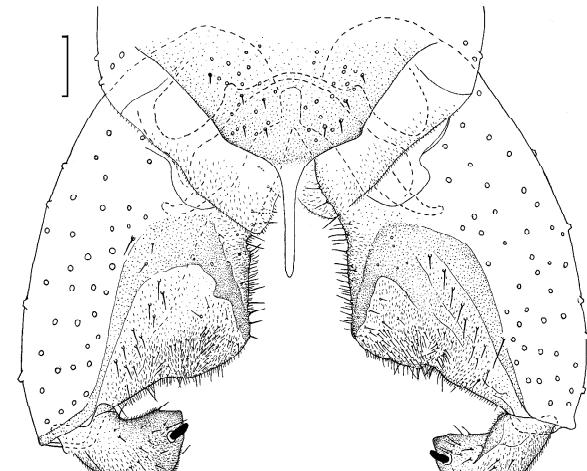


Fig. 1. Male hypopygium of *Hydrobaenus vernus* sp.n., from above. Scale bar 50 μm .

Рис. 1. Гипопигий самца *Hydrobaenus vernus* sp.n., вид сверху. Масштабная линейка — 50 мкм.

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