

A new species, *Aagaardia oksanae* sp.n.  
(Diptera, Chironomidae, Orthoclaadiinae)  
from Sikhote-Alin' Biosphere Nature Reserve

Новый вид хирономид *Aagaardia oksanae* sp.n.  
(Diptera, Chironomidae, Orthoclaadiinae)  
из Сихотэ-Алинского биосферного заповедника

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**Key words:** Diptera, Chironomidae, Orthoclaadiinae, *Aagaardia*, new species, Russian Far East.

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

**Abstract.** A new species, *Aagaardia oksanae* sp.n., is described from Sikhote-Alin' Biosphere Nature Reserve (Primorskii Krai, Russian Far East) by imago male which is distinctive in the genus by tile-like arrangement of virga spines. It is a first record of *Aagaardia* Sæther for Russia and Asian region.

**Резюме.** Приведено иллюстрированное описание имаго самца нового вида хирономид *Aagaardia oksanae* sp.n. из Сихотэ-Алинского биосферного заповедника (Приморский край, российский Дальний Восток), отличающегося от четырёх известных в Голарктике видов черепичноподобным расположением шипов вирги. Находка представителя *Aagaardia* Sæther – первая в России и Азии.

## Introduction

The genus *Aagaardia* was established by O.A. Sæther [2000] for four species of Orthoclaadiinae which males imago have share bare eyes, bare squama, extending costa, triangular gonostylus and two groups of extremely strong and sclerotized virga.

One species, *A. longicalcis* Sæther, is known from Nearctic (Canada) and three species are described from West Palaearctic — *A. sivertseni* (Aagaard) (Finland and Norway), *A. protensa* Sæther (Finland) and *A. triangulata* Sæther (Turkey).

We are describing the fifth species *A. oksanae* sp.n. from Sikhote-Alin' Biosphere Nature Reserve of the Russian Far East. It is also the first record of *Aagaardia* for Russia and Asian region.

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

Holotype of new species is deposited in the Institute of Biology and Soil Sciences, Far East Branch of the Russian Academy of Sciences, Vladivostok, Russia.

*Aagaardia oksanae*  
Makarchenko et Makarchenko, sp.n.

Fig. 1.

**Material.** Holotype: ♂, Sokhatinoe Lake, Sikhote-Alin' Biosphere Nature Reserve, Primorskii Krai, Russian Far East, 25.VII.2004, altitude is about 600 m a.s.l., leg. O. Zorina.

Male imago (n = 1).

Total length 1.95 mm. Wings length 1.39 mm. Total length/wing length 1.4. Coloration dark brown. Wings light brown.

Head. Eyes bare and roundish. Temporal setae including 3–4 verticals and 1 postorbitals. Clypeus with 4 setae.

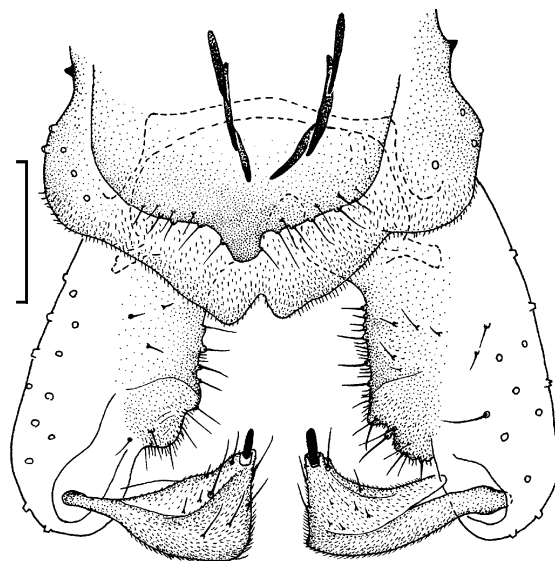


Fig. 1. Гипопигий *Aagaardia oksanae* sp.n., from above. Scale bar 50  $\mu$ m.

Рис. 1. Гипопигий *Aagaardia oksanae* sp.n., вид сверху. Масштабная линейка 50 мкм.

Table 1. Length (in  $\mu\text{m}$ ) and proportions of leg segments of the holotype *Aagaardia oksanae* sp.n.  
Таблица 1. Длина (в  $\mu\text{m}$ ) и пропорции ног голотипа *Aagaardia oksanae* sp.n.

P	f	ti	ta <sub>1</sub>	ta <sub>2</sub>	ta <sub>3</sub>	ta <sub>4</sub>	ta <sub>5</sub>	LR	SV	BV
P <sub>1</sub>	496	624	304	216	140	104	84	0.49	3.68	2.62
P <sub>2</sub>	512	528	236	136	96	76	76	0.45	4.41	3.56
P <sub>3</sub>	528	576	292	160	136	84	84	0.51	3.78	3.01

Palpomere length ( $\mu\text{m}$ ): 20, 40, 80, 72, 108. Head width/palpal length 1.2. Antenna with 13 flagellomeres; AR 0.55.

Thorax. Anteprepronotum with 2 lateral setae. Acrostichals 16 (beginning from anteprepronotum), dorsocentrals 11, prealaris 2. Scutellum with 4 setae.

Wings. Anal lobe completely reduced. Squama without setae. R with 7 setae, R<sub>1</sub> and R<sub>4+5</sub> without setae. Costal extension 80  $\mu\text{m}$ . Cu<sub>2</sub> curved in distal part.

Legs. BR<sub>1</sub> 2.0; BR<sub>2</sub> 1.9–2.0; BR<sub>3</sub> 3.5. Spur of front tibia 28  $\mu\text{m}$  long. Two spurs of middle tibia break off. Spurs of hind tibia 36  $\mu\text{m}$  and 12  $\mu\text{m}$  long. Hind tibial comb with 11–12 spines. Length and proportions of leg segments see Table 1.

Hypopygium (Fig. 1). Anal point length 12  $\mu\text{m}$ , width 14  $\mu\text{m}$ , anal point length/width 0.86. Tergite IX with 10 setae (from one side of anal point), 6 of them stay on posterior margin of tergite IX; laterosternite IX with 7 setae and anterior tooth-like projection. Transverse sternapodeme 88  $\mu\text{m}$  long. Virga consists of 3 tile-like arranged spines, total length 60  $\mu\text{m}$ . Gonostylus 68  $\mu\text{m}$  long, without crista dorsalis, outer corner is smoothly rounded to pointed. Gonocoxite 188  $\mu\text{m}$  long. Megaseta of gonostylus 12  $\mu\text{m}$  long. HR 2.76.

**Diagnosis.** Male imago of *Aagaardia oksanae* sp.n. is separated from known species of this genus by tile-like arrangement of virga spines.

**Диагноз.** Самец *Aagaardia oksanae* sp.n. отличается от известных видов рода строением вирги гипопигия, состоящей из двух групп, каждая из которых включает 3 черепичнообразно расположенных друг за другом туповершинных тёмных, сильно склеротизованных шипа. У самцов других видов шипы расположены в виде розетки.

**Etymology.** Named in honor of Dr. Oksana V. Zorina who collected this species and other interesting chironomid imago in region difficult of access of Sikhote-Alin' Nature Reserve.

**Distribution.** Known only from the type locality in the Sikhote-Alin' Biosphere Nature Reserve.

**Remarks.** A new species is close related to West Palaearctic species *A. sivertseni* (Aagaard) and separated from this one by shape of gonostylus, anal point and by tile-like arrangement of virga spines. The genus *Aagaardia* is recorded for the first time for Russia and Asian region.

## References

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