

***Cricotopus (Cricotopus) reissi, spec. nov.*  
from Chukchi Peninsula, northeastern Russia**

(Insecta, Diptera, Chironomidae)

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The male adult of *Cricotopus (Cricotopus) reissi, spec. nov.* is described from northeastern Russia and identified as a member of the *pilosellus* group. The new species is characterised by the structures of intermedian paramere and basal lobe of the gonocoxite, and by the shape of the gonostylus.

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### **Introduction**

Taxonomy and systematics of the genus *Cricotopus* van der Wulp, 1874, of the Russian Far East are very poorly investigated. Up to the present time, only 13 species have been recorded in this region, namely *C. (Cricotopus) algarum* (Kieffer), *C. (C.) bicinctus* (Meigen), *C. (C.) fuscus* (Kieffer), *C. (C.) trifascia* Edwards, *C. (C.) gr. tremulus*, *C. (Isocladius) brevipalpis* Kieffer, *C. (I.) gr. intersectus*, *C. (I.) gr. obnixus*, *C. (I.) sylvestris* (Fabricius), *C. (I.) trifasciatus* (Meigen), *C. (Nostococladius) sp.*, *C. (Pseudocricotopus) montanus* Tokunaga, and *C. maritimus* Tshernovskij (Konstantinov 1950, Levanidov 1969, Makarchenko & Makarchenko 1994, Makarchenko et al. 1997, 1999, and original data). Most of these findings were based on larvae, and therefore the Far Eastern members of this genus of Orthoclaadiinae are still in need of considerable study.

In this paper, a new species is presented belonging to the *pilosellus* group within the subgenus *Cricotopus (Cricotopus)*. It has been found on the Chukchi Peninsula, one of the least accessible and most insufficiently investigated regions of the Russian Far East.

### **Terminology**

Morphological terminology and abbreviations follow those of Sæther (1980), except for hypopygium structures, for which is used terminology of Hirvenoja (1973).



*Cricotopus (Cricotopus) reissi*, spec. nov.

Figs 1A-E

**Types.** Holotype: adult ♂ (slide-mounted in Euparal), Russian Far East, Magadan Territory, Chukchi Peninsula, Kresta Bay, Seutakan Lake, 12.07.1976, leg. E. Makarchenko. – Paratypes: 12♂♂ (in either Fora-Berleze or Euparal), as holotype, except 12.-14.07.1976 (All deposited in the Institute of Biology and Soil Sciences, FEB RAS, Vladivostok, Russia).

**Etymology.** The new species is named in honour of Dr. Friedrich Reiss who supported my taxonomic investigations of the Far Eastern Chironomidae and always helped me.

**Differential diagnosis.** *Cricotopus (C.) reissi*, spec. nov. belongs to the *pilosellus* group of Hirvenoja (1973), along with *C. (C.) pilosellus* Brundin, *C. (C.) pilidorsum* Hirvenoja, and *C. (C.) villosus* Hirvenoja. The new species is well separated from the other known members of this group by the shape of the gonostylus with a subtriangular outer projection, by the simple, finger-shaped basal lobe of the gonocoxite, and by the relatively strongly developed intermedian paramere with long microtrichia. The other species have simple gonostyli without lateral projections, double basal lobes, and no noticeable intermedian parameres.

### Description

**Male imago** (n=3). Colour dark brown. Total length 3.3-3.6 mm; total length/wing length 1.28-1.43 mm.

Head. Eye hairy (seta length about 1.5-2 times facet height), with moderate dorsomedian extension. Temporal setae 24-26, bi- to multiserial, not clearly separated into inner and outer verticals and postorbitals; coronal setae 4 (length about 13-17  $\mu\text{m}$ ); clypeus with 13-25 setae; palpomere lengths 2-5 ( $\mu\text{m}$ ): 69-96, 109-145, 116-129, 158-185. Palp length (Pm 1-5)/head width 0.74-0.96. Antennal plume well developed, length of setae on flagellomeres 2-12: 310-432  $\mu\text{m}$ ; subapical seta length 53-54  $\mu\text{m}$ ; AR 0.97-1.30 (n=5). Frontal tubercles absent.

Thorax (Fig. 1A). Coloration dark brown, scutal stripes brown. Anteprenotals 23-27 (length 50-66  $\mu\text{m}$ ); acrostichals 17-21, biserial (length 36-50  $\mu\text{m}$ ), beginning near anteprenotum; dorsocentrals 107-118, (length 56-60  $\mu\text{m}$ ), multiserial, converging medially behind scutum; prealars 56-71 (length 40-110  $\mu\text{m}$ ), multiserial, with an anterior and a posterior group distinguishable; anterior prealars extending to near parapsidal suture; supraalars 7-10 (length 43-50  $\mu\text{m}$ ); scutellars 72-120 (length 59.4-79.2  $\mu\text{m}$ ), multiserial. Postnotum with 4-5 setae (length 40-67  $\mu\text{m}$ ), posterior anepisternum II with 2 setae, preepisternum without setae.

Wing. Length 2.3-2.8 mm, width 0.6-0.7 mm; membrane with fine punctation of microtrichia; anal lobe well developed and rounded; squama with 13-18 setae; costa not produced or slightly produced beyond  $R_{4+5}$ ;  $R_{2+3}$  ending closer to  $R_1$  than to  $R_{4+5}$ ;  $Cu_1$  slightly curved; R with 13-16 short setae;  $R_1$  and  $R_{4+5}$  without setae.

Legs. Coloration dark brown or brown, tibiae without light rings. Fore tibia with 1 spur, mid and hind tibiae each with 2 spurs; length of spurs ( $\mu\text{m}$ ):  $P_1$  60-70;  $P_2$  both 36-43;  $P_3$  79-90 and 36-43; comb on hind tibia with 9-10 setae (length 33-56  $\mu\text{m}$ ). Pulvilli vestigial, like small spines. Lengths ( $\mu\text{m}$ ) and proportions of leg segments (n=3):

	fe	ti	ta <sub>1</sub>	ta <sub>2</sub>	ta <sub>3</sub>	ta <sub>4</sub>	ta <sub>5</sub>
$P_1$	788-959	959-1150	554-639	320-383	234-277	170-192	149-170
$P_2$	852-1001	895-1065	405-511	234-320	192-234	128-170	128-170
$P_3$	895-1065	1044-1235	533-639	341-405	256-320	149-192	149-192
	LR	BV	SV	BR			
$P_1$	0.56-0.58	2.64-2.75	3.13-3.30	1.8-1.9			
$P_2$	0.45-0.50	2.86-3.16	3.96-4.31	1.5-1.7			
$P_3$	0.50-0.53	2.68-2.76	3.57-3.72	1.7-1.8			

Abdomen. Tergites dark brown, with numerous setae. Setal distribution on the abdominal tergites is uniform, as in *C. (C.) pilosellus* Brundin (Oliver & Dillon 1988: fig. 4).

Hypopygium (Figs 1B-E). Tergite IX without anal point, with 23-26 setae (length 16-33  $\mu\text{m}$ ),



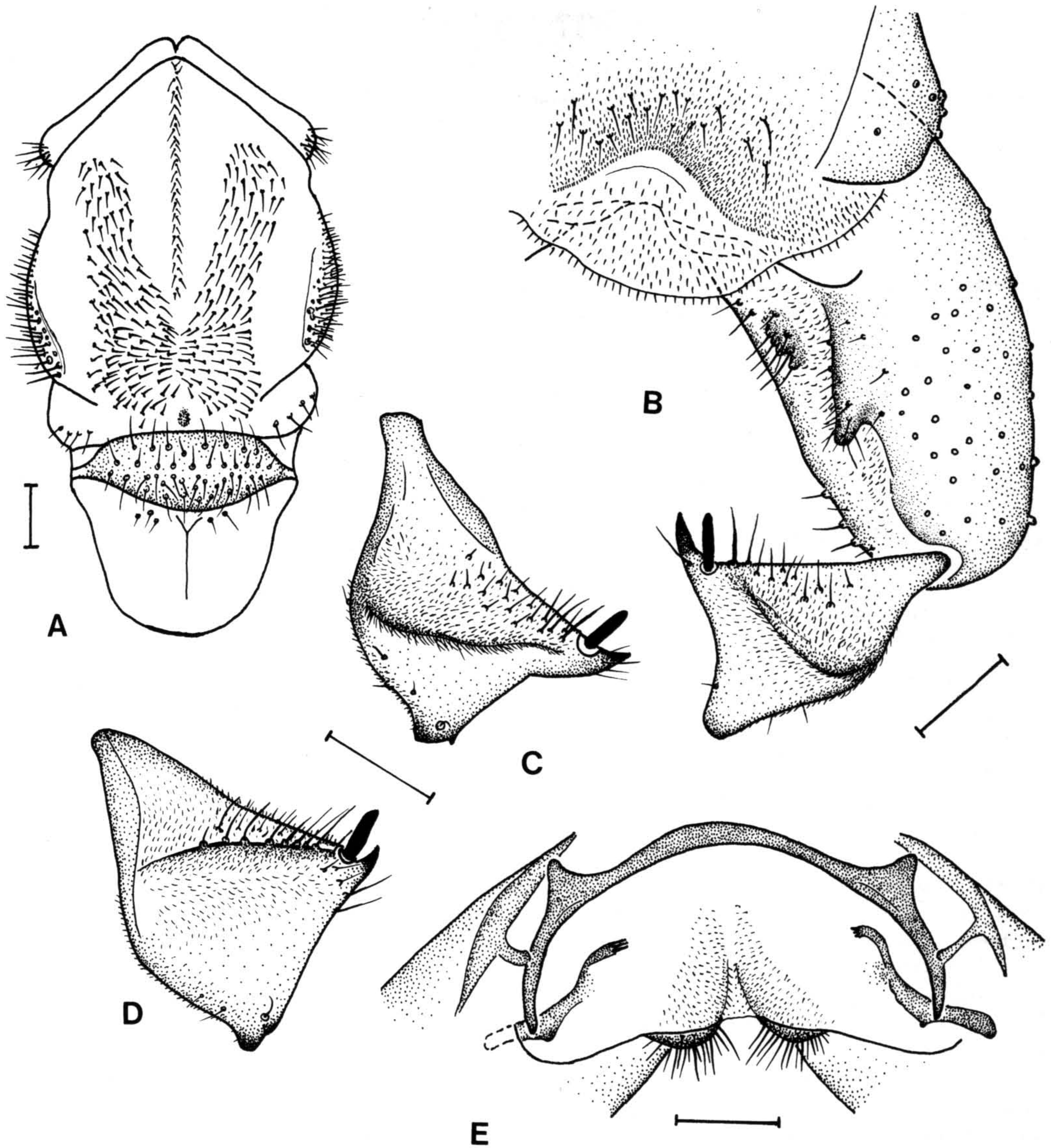


Fig. 1. *Cricotopus (Cricotopus) reissi*, spec. nov. Adult male. A. Thorax. B. Hypopygium. C.-D. Gonostylus in different aspects. E. Detail of terminal segment showing internal apodemes and intermedian parameres. Scale: 50  $\mu\text{m}$ .

posterior margin concave; laterosternite IX with 6-7 setae (length 66-99  $\mu\text{m}$ ). Inner margin of gonocoxite in middle part with group of 8 setae. Intermedian paramere of gonocoxite small and rounded, with numerous elongate microtrichia (length 16-30  $\mu\text{m}$ ) (Fig. 1E); basal lobe simple and finger-shaped, covered with short setae. Gonostylus (Fig. 1B-D) wide, medio-laterally with subtriangular projection, apically with claw-like tooth (length 20  $\mu\text{m}$ ) and strong megaseta (length 26-28  $\mu\text{m}$ ), subapically with 2-3 strong setae (length 33-39  $\mu\text{m}$ ), inner margin lined with short setae; HR 1.7-1.8.

Female imago, pupa and larva. Unknown.

**Distribution.** *C. (C.) reissi*, spec. nov. is known only from the type locality on Chukchi Peninsula in the Russian Far East.

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## References

- Hirvenoja, M. 1973. Revision der Gattung *Cricotopus* van der Wulp und ihrer Verwandten (Diptera, Chironomidae). – Ann. Zool. Fenn. **10**: 1-363
- Konstantinov, A. S. 1950. “Chironomids of the Amur River basin and their significance in food of Amur’s fishes.” – Trudy Amurskoi Ikhtiologicheskoi Expeditsii 1945-1949 **1**: 147-286 (in Russian)
- Levanidov, V. J. 1969. “Reproduction of Amur’s salmon and food base of their young in Amur River tributaries.” – Izvestija TINRO **67**: 1-242 (in Russian)
- Makarchenko, E. A. & M. A. Makarchenko 1994. A preliminary data on chironomid fauna (Diptera, Chironomidae) of the Sakhalin and Kunashir Islands. – Far Eastern Entomologist **5**: 1-8
- – , – – & O. V. Zorina 1999. A preliminary list of Chironomidae (Diptera) of the Primorye Territory (Russian Far East). – Far Eastern Entomologist **78**: 1-15
- Makarchenko, M. A., E. A. Makarchenko & T. L. Vvedenskaja 1997. A preliminary chironomid list (Diptera, Chironomidae) of the Kamchatka Peninsula and bordering territories. – Far Eastern Entomologist **40**: 1-7
- Oliver, D. R. & M. E. Dillon 1988. Review of *Cricotopus* (Diptera: Chironomidae) of the Nearctic arctic zone with description of two new species. – Can. Ent. **120**: 464-496
- Sæther, O. A. 1980. Glossary of chironomid morphology terminology (Diptera: Chironomidae). – Ent. scand. Suppl. **14**: 1-51