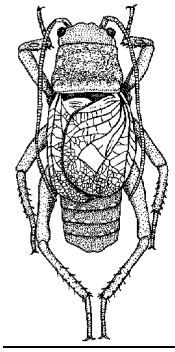

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A NEW SPECIES OF THE GENUS *DICROTENDIPES* KIEFFER, 1913 (DIPTERA: CHIRONOMIDAE: CHIRONOMINAE) FROM NORTH KOREA

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Dicrotendipes koreanus Orel, **sp. n.** is described on the base of adult male from North Korea. New species differs from congeners in the structure of hypopygium.

KEY WORDS: Diptera, Chironomidae, *Dicrotendipes,* new species, Korea.

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Из Северной Кореи по самцу описан новый для науки вид комаров-звонцов *Dicrotendipes koreanus* Orel, **sp. n.** Новый вид отличается от других видов рода строением гипопигия.

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INTRODUCTION

The genus *Dicrotendipes* was erected by Kieffer in 1913, with *Dicrotendipes septemmaculatus* (Becker, 1908) as a type species (Kieffer, 1913). The immature

stages of *Dicrotendipes* are found in both lentic and lotic habitats, but are generally more prevalent in lentic conditions (Epler, 1988). More than 100 species have been described (Qi *et al*., 2012). Twenty three species of *Dicrotendipes* have been recorded from the Eastern Palaearctic region, namely, 10 species from Japan (Niitsuma, 1995; Sasa & Kikuchi, 1995), 10 species from China (Qi *et al*., 2016), 10 species from Russian Far East (Makarchenko *et al*., 2005; Zorina, 2006), and 6 species from Korea; beside them five species were known from South Korea, namely, *D. hannervosus* Ree, 2013, *D. nervosus* (Staeger, 1839), *D. pelochloris* (Kieffer, 1912), *D. septemmaculatus* (Becker, 1908), *D. tamaviridis* Sasa, 1981, and two species, *D. nervosus* and *D. septemmaculatus*, from North Korea (Riess, 1980; Ree, 1981; Ree & Kim, 1981; Ree *et al*., 1995; Ree, 2013; Ree, 2014). One new species of *Dicrotendipes* is found in North Korea and described below.

Present paper is based on the material collected in North Korea by the Polish professor Wiesław Krzemiński in 1981. Material was fixed in 70% ethanol and mounted in Fora-Berlese solution.

Morphological terminology and abbreviations follow Sæther (1980) and Epler (1988).

Holotype of new species is deposited in the National Institute of Biological Resources, Incheon, Republic of Korea (NIBR).

DESCRIPTION

Family Chironomidae

Subfamily Chironominae

***Dicrotendipes koreanus* Orel, sp. n.**
Figs 1–8

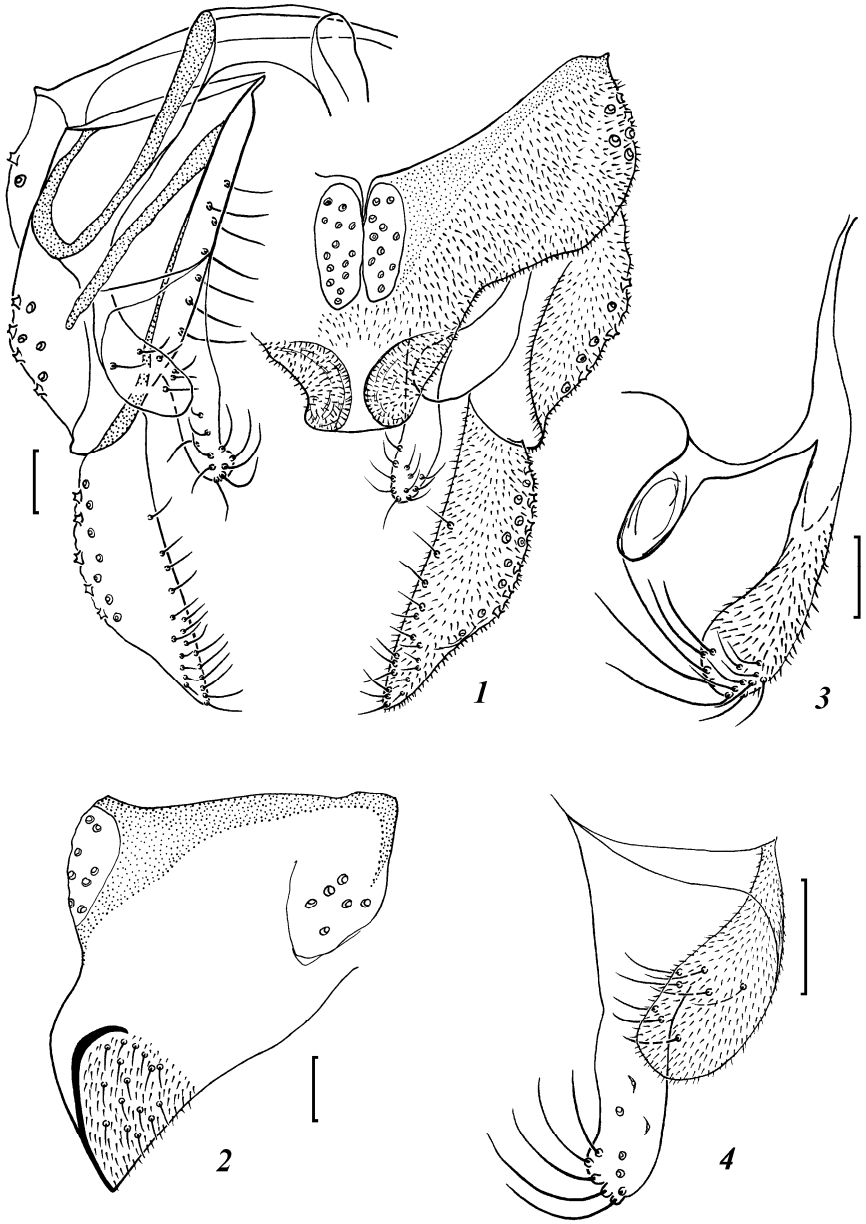
TYPE MATERIAL. Holotype – male, **Democratic People's Republic of Korea**: Pyongyang (= Phjŏngjang or Phenian), small lake, 11.VI 1981, coll. W. Krzemiński (NIBR).

DESCRIPTION. ADULT MALE (n=1). General colour yellowish brown. Total length 6.0 mm; total length / wing length 2.2.

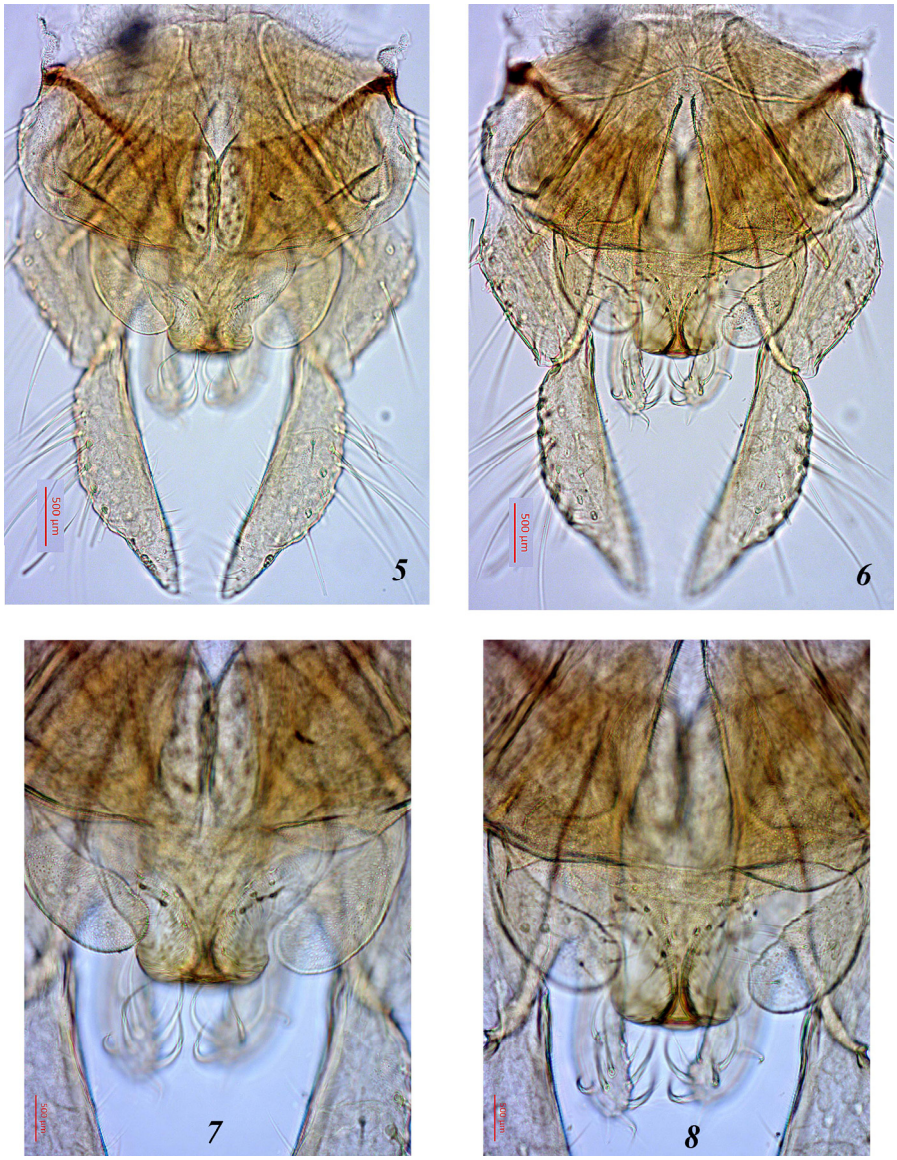
Head. Frontal tubercles rudimentary (3,5 μm Ø circles free of microtrichia). Temporal setae 15. Clypeus with 24 setae. Maxillary palp 600 μm, lengths of last 4 palpal segments (μm): 72, 200, 144, 184. Palp length / head width 0.70. Scapus yellowish, flagellomeres 1–11 – dark-brown, 1764 μm long. AR 3.0. Antenna length / palp length 2.94.

Thorax. Ground colour of scutum pale yellow, mesonotal strips yellowish brown. Aps 0, Ac 22, Dc 18–21, Pa 8, Su 2. Scutellum pale yellow, with 18 setae. Postnotum in distal 2/3 yellowish brown.

Wing length 2.7 mm. Squama with 15–16 setae; brachiolum with 2–3 setae. R, R_1 with 43–52 setae, R_{4+5} with 22–29 setae. VR 1.11. Halter's pale yellow.



Figs. 1–4. Details of the hypopygium structure of *Dicrotendipes koreanus* sp. n. 1 – hypopygium, dorsal view; 2 – tergite IX, lateral view; 3 – superior and inferior volsellae, lateral view; superior and inferior volsellae, dorsal view. Scale bar 50 μm.



Figs. 5–8. Hypopygium of *Dicrotendipes koreanus* sp. n. 5 – dorsal view of hypopygium; 6 – ventral view of hypopygium; 7 – anal point and superior volsella, dorsal view; 8 – anal point and superior volsella, ventral view. Scale bar 50 µm.

Legs yellowish brown. Terminal combs of t_3 with spurs long 41 μm and 27 μm (spurs on t_2 broken). BR_2 3.13. Mid ta_1 sensilla chaetica 17–20. Length and proportions of legs segments are as follow:

P	f	t	ta_1	ta_2	ta_3	ta_4	ta_5	LR	SV	BV
P_1	1260	1113	–	–	–	–	–	–	–	–
P_2	1155	1155	630	420	294	147	126	0.55	3.67	2.98
P_3	1407	1512	–	–	–	–	–	–	–	–

Abdomen yellowish brown.

Hypopygium (Figs 1–8). Tergite IX with 12–14 median setae set within two clearly defined ovoid areas. Laterosternite IX with 6–7 setae. Anal point short and wide (length 85 μm, width 75 μm), with 16 lateroventral setae on each side; in lateral view hunchbacked and straight. Gonocoxite 286 μm long, with 6–7 setae. Superior volsella semi-circular shape (length 109–119 μm), slightly curved, and the most extended in the apical third (44 μm), microtrichiose, and with 7–8 strong ventromedial setae; LWR 2.5–2.7. Inferior volsella (170 μm long) apically clubbed and curved in lateral view, and covered with microtrichia except of apical part, with 10 long dorsal and 8–9 short ventral setae. Gonostylus 211 μm long, massive and straight, expanded in the proximal two-third (61 μm), gradually narrows towards the apex. HR 1.36.

COMPARISION. Adult male of *D. koreanus* sp. n. clearly differs from all known species of *Dicrotendipes* by the original structure hypopygium as well as by the following combination of features: yellowish brown colour; total length 6.0 mm; frontal tubercles small; AR 3.0; anal point short and wide, in lateral view hunchbacked and straight; superior volsella semi-circular shape slightly curved, microtrichiose, with 7–8 strong ventral setae; inferior volsella clubbed apically and curved in lateral view; gonostylus massive and straight, expanded in the proximal two-third, gradually narrows towards the apex; HR 1.36.

ETYMOLOGY. Latin noun (*Korean*) and suffix -*us*. The species is named for the country when material was collected.

DISTRIBUTION. Known only from North Korea.

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