

A NEW SPECIES OF *DOLICHOPUS* FROM THE SIBERIAN REPUBLIC OF KHAKASSIA  
(DIPTERA: DOLICHOPODIDAE: *DOLICHOPUS LATIPENNIS* SPECIES GROUP)

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НОВЫЙ ВИД РОДА *DOLICHOPUS* ИЗ РЕСПУБЛИКИ ХАКАССИЯ, СИБИРЬ (DIPTERA:  
DOLICHOPODIDAE, ГРУППА ВИДОВ *DOLICHOPUS LATIPENNIS*)

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**Key words:** *Diptera*, *Dolichopodidae*, *Dolichopus*, new species, Palaearctic Region, Khakassia

**Summary.** A new long-legged fly species *Dolichopus kosterini* sp.nov. from Khakassia is described and illustrated. The new species belongs to the *Dolichopus latipennis* group and appears to be quite distinct in having mostly yellow antenna with relatively short scape and pedicel, in bearing long apicoventral seta on fore tibia, in rather distant from apex position of anterior preapical bristle on hind femur.

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**Ключевые слова:** *Diptera*, *Dolichopodidae*, *Dolichopus*, новый вид, Палеарктическая область, Хакассия

**Резюме.** Из Республики Хакассия описан новый вид мух-зеленушек *Dolichopus kosterini* sp.nov. из группы *Dolichopus latipennis*. Он отличается от других видов желтыми большей частью усиками, наличием длинной апиковентральной щетинки на передней голени, удаленным от вершины заднего бедра положением передней предвершинной щетинки.

## INTRODUCTION

The genus *Dolichopus* Latreille, 1796 has an extremely high diversity of endemic and widely distributed species in the Holarctic Realm, with about 650 species worldwide [Grichanov, 2017]. The *Dolichopus latipennis* species group in the Palaearctic has been recently reviewed and keyed by Negrobov et al. [2009], and has comprised twelve species. Later *Dolichopus lantsovi* Negrobov, Grichanov & Barkalov, 2009, has been placed in synonymy with the Nearctic *D. humilis* Van Duzee, 1921 [Negrobov & Grichanov, 2013]. *Dolichopus jakutus* Selivanova & Negrobov, 2011, described by single male collected by A.K. Bagachanova from environs of Yakutsk, is very close to *D. latipennis* Fallén, 1823, occurring mainly in boreal areas of the Holarctic and being common in Yakutia; the two species differ in face coloration mainly, which is "ochre-yellow, dark-brown under antennae" in *D. jakutus* [Selivanova & Negrobov, 2011], but having dark-brown ground color, mostly whitish pollinose face, yellowish on clypeus in *D. latipennis*.

Here I describe a new species of that group, *D. kosterini* sp.n. from the Republic of Khakassia, which demonstrates further diffusion of characters discussed formerly as having generic importance. The new species appears to be quite distinct in having the mostly yellow antenna with relatively short scape and pedicel, in bearing long apicoventral seta on fore tibia (male secondary sexual character, or MSSC), in rather distant from apex position of anterior preapical bristle on hind femur.

Morphological terminology and abbreviations (for wing veins) follows Cumming & Wood [2009]. Body length is measured from the base of the antenna to the posterior tip of epandrium. Wing length is measured from the base to the wing apex. The relative lengths of the tarsomeres should be regarded as representative ratios and not measurements. Male genitalia were macerated in 10% KOH. Figures showing the male genitalia in lateral view are oriented as they appear on the intact specimen, with the morphologically ventral surface of the genitalia facing up, dorsal

surface down, anterior end facing right and posterior end facing left. The holotype and paratype of a new species are housed at the Zoological Museum of Moscow State University, Moscow, Russia (ZMUM) and the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZIN).

***Dolichopus kosterini* Grichanov, sp.nov.**

(Fig. 1: 1–8)

**Material examined:** **Holotype** ♂, **Russia:** Khakassia, Shira district, Shira salt-lake env., 54.485°N/90.224°E, 350–355 m a.s.l., 21-24.06.2011, K. Tomkovich leg. (ZMUM). **Paratype** 1 ♂: same label (ZIN).

**Description.** Male (Fig. 1: 1). Body length 4.5 mm, wing length 4.0 mm, wing width 1.5 mm, antenna length 1.1 mm, hypopygium length 1.8 mm.

**Head** (Fig. 1: 2): Face with black-brown ground color, greyish white pollinose, nearly reaching lower eye margin, almost parallel-sided, in middle narrower than postpedicel height (0.12/0.19 mm). Proboscis and palpus small, with black hairs; palpus yellow, with short seta. Frons shining, metallic green-black, weakly pollinose. Antenna (Fig. 1: 3) mostly yellow, with pedicel black at dorsal apex, and postpedicel black on distal half; scape 1.5 times longer than high, with about 10 black dorso-lateral setae. Pedicel not longer than high, with ring of small apical setae; postpedicel bud-like, with pointed apex, slightly longer than high (0.27/0.19 mm); stylus bisegmented, about 1.5 times as long as scape, pedicel and postpedicel combined, shortly haired, simple, middorsal. Lower postocular setae white.

**Thorax:** metallic bluish black; pleura weakly grey pollinose; proepisternum with 1 strong black seta and small white hairs.

**Legs:** mostly yellow; pulvilli white. Coxae with mainly black hairs; fore and mid coxae with black apical setae; hind coxa with 1 strong black seta at middle; fore coxa yellow, black at extreme base; mid and hind coxae black. Femora yellow, without long ventral setae; mid femur with strong anterior preapical bristle at about distal 1/4 and small posterior preapical seta, hind femur with 1 strong and long anterior preapical bristle at about distal 1/3 and several elongate dorsal setae at base. Fore and mid tibiae yellow; fore tibia with 3 antero- and 2 posterodorsal,

2 long posterior setae, 1 fine long apicoventral seta; mid tibia with 4 antero- and 2 posterodorsal setae, 1 anteroventral seta. Hind tibia mainly yellow, black on distal 1/4, with black flat surface posteriorly on distal 2/3; slightly thickened distally, with 5–6 anterodorsal, 1 dorsal, 3 posterodorsal, 1–2 strong and few weak ventral setae, with small posterior apical tooth. All tarsi simple; pulvilli and claws small; fore and mid tarsi black from apex of basitarsus; hind tarsus black; hind basitarsus with 2 strong dorsal, 1 strong anterodorsal setae, with several short ventral setae. Tarsomere length ratio: fore tarsus (from first to fifth): 42/21/18/15/16, mid tarsus: 66/42/30/23/18, hind tarsus: 65/57/40/27/20.

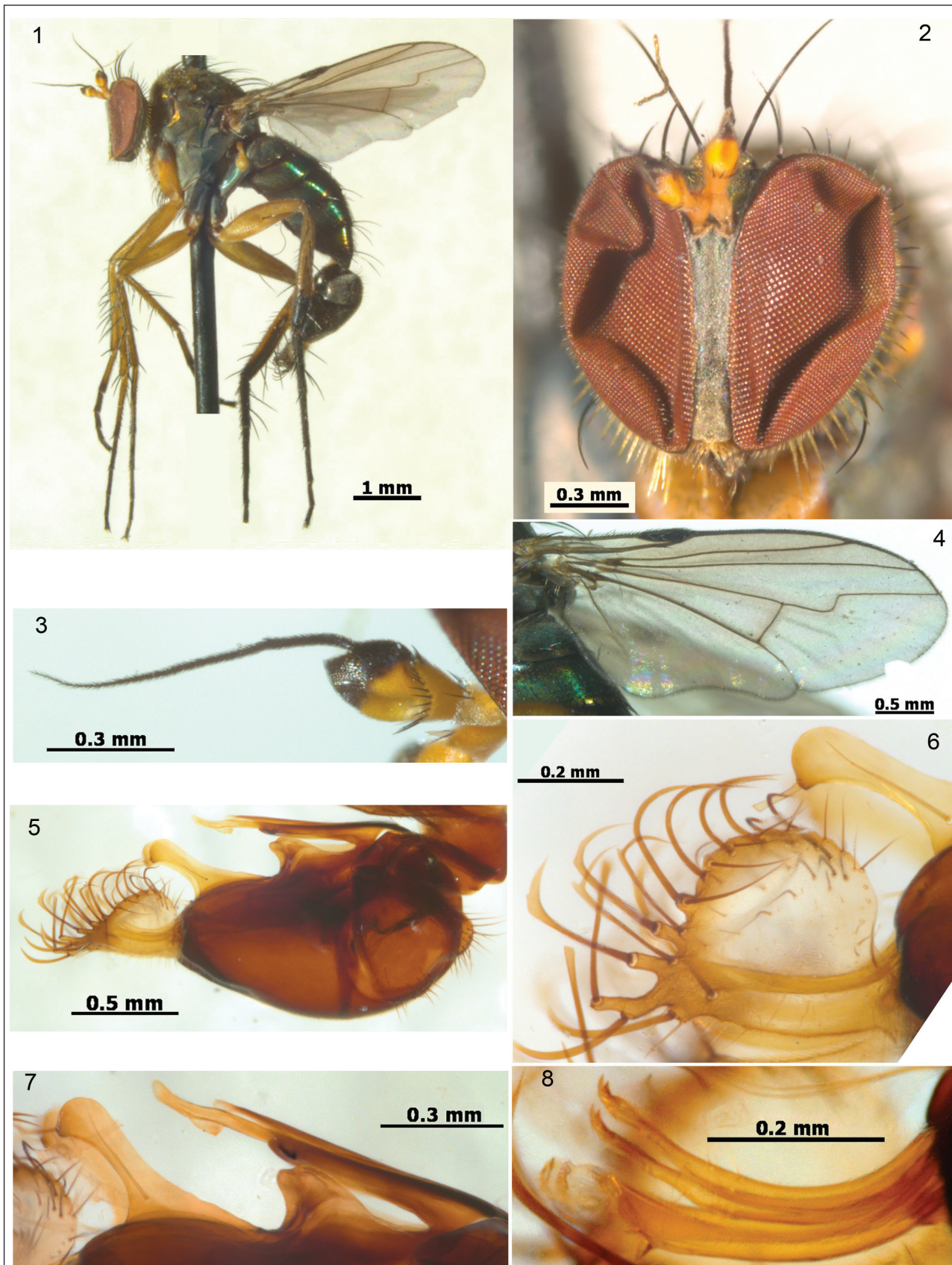
**Wing** (Fig. 1: 4): hyaline, weakly smoky on anterior half, widely rounded at apex. Costa with short large thickening at  $R_1$ ,  $R_{4+5}$  and  $M_{1+2}$  parallel at apex.  $M_{1+2}$  with strong curvation before middle of distal part. Distal part of  $CuA_1$  longer than  $dm-cu$  (0.55/0.41 mm). Hind margin of wing with distinct emargination between  $CuA_1$  and  $A_2$ . Anal lobe large; anal angle right. Lower calypter yellow, with black cilia. Halter yellow.

**Abdomen:** metallic dark green, black along sutures, with black setae. Hypopygium (Fig. 1: 5) large, black. Hypandrium brown, simple, with strong lateral tooth; basiventral epandrial lobes brown, large, asymmetrical; apicoventral epandrial lobe (Fig. 1: 7) brown, long, clavate, rounded at apex, with 1 strong seta at base and 1 blunt seta at apex. Surstyli (Fig. 1: 8) and postgonite brown, long and narrow. Cercus (Fig. 1: 6) nearly quadrate, mostly yellow, black and strongly serrate along distal margin; each tubercle with simple and long hooked flattened setae at apex.

**Female.** Unknown.

**Diagnosis.** The new species is peculiar in having mostly yellow antenna with relatively short scape and pedicel (Fig. 1: 3), in bearing long apicoventral seta on fore tibia, in rather distant from apex position of anterior preapical bristle on hind femur. It has typical male wing morphology for *Dolichopus latipennis* group, but species of the latter has entirely black antennae except for *D. zhelochovzevi* Negrobov, 1976, which has black antenna with only antennal scape yellow ventrally and has no long apicoventral seta on fore tibia. In the general key to the Palaearctic *Dolichopus* (*sensu stricto*) species, *D. kosterini* **sp.n.** comes to





**Fig. 1.** *Dolichopus kosterini* Grichanov, **sp.nov.**: 1 – habitus; 2 – head; 3 – antenna; 4 – wing; 5 – hypopygium; 6 – cercus; 7 – hypandrium and ventral epandrial lobes; 8 – surstyli

**Рис. 1.** *Dolichopus kosterini* Grichanov, **sp.nov.**: 1 – внешний вид; 2 – голова; 3 – усик; 4 – крыло; 5 – гипопигий; 6 – церка; 7 – гипандрий и вентральные лопасти эпандрия; 8 – сурстили

either Far Eastern *D. stackelbergi* Smirnov, 1948, or to trans-Palaeartic *D. linearis* Meigen, 1824, strongly differing in the wing and hypopygium morphology, in the antenna and leg coloration [Negrobov et al., 2005].

**Etymology.** The species is named after the Russian entomologist, Dr. O.E. Kosterin (Novosibirsk).

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