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Two new species of *Chrysotus* Meigen (Diptera, Dolichopodidae) from Siberia, with a key to the Siberian species

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Abstract

Two new species from the southern tundra of the Taimyr Peninsula (Russia) are described. *Chrysotus tricaudatus* Negrobov, Barkalov & Selivanova **sp. nov.** is similar to *C. albibarbus* Loew, but can be distinguished by its brown palpus with black setae, yellow hind tibia and base of hind tarsus, and features of the male genitalia. *Chrysotus komovi* Negrobov, Barkalov & Selivanova **sp. nov.** is similar to *C. obscuripes* Zetterstedt, but can be distinguished by features of the male genitalia. A key to all Siberian species of the genus is also presented along with figures of diagnostic morphological characters.

Key words: Dolichopodidae, *Chrysotus*, Palearctic, Siberia, new species, key to species

Introduction

The genus *Chrysotus* Meigen, 1824 is globally distributed and currently has just over 300 recent species, 65 of which occur in the Palearctic Region (Yang *et al.* 2006). In nature, its representatives are usually found in mesophytic and hygrophytic habitats. Because of their small size, adults fly weakly and spend most of the time on leaves or soil. In forest ecosystems they often can be seen on the leaves of large plants and bushes on the sunny side of the field and in rides. Species of *Chrysotus* can be distinguished from other Dolichopodidae by their smaller size, apical or subapical arista, bright brilliant short compact body, short legs and abdomen and oval, encapsulated hypopygium.

The last key to Palearctic species was published by Negrobov with co-authors (Negrobov *et al*. 2000). Naglis (2010) subsequently described *Chrysotus dischmaensis* Naglis from Switzerland. A key to the Chinese species of this genus was provided in the monograph by Yang *et al.* (2011). After publication of the last key to Palearctic species (Negrobov *et al*. 2000), several papers were published in which the distribution of several species of *Chrysotus* were corrected (Negrobov *et al.* 2003; Maslova *et al.* 2008, 2011; Pogonin & Negrobov 2008). Below we give a description of two new species from Northern Siberia. We also provide an identification key to all species found in Siberia.

Material and methods

Specimens were collected in the southern tundra of the Taimyr Peninsula (Russia) during an expedition conducted by the Institute of Systematics and Ecology of Animals of Russian Academy of Sciences (Novosibirsk) in 2010–2011. New species of *Dolichopus* and *Rhaphium* were described in our first papers (Selivanova *et al*. 2012; Negrobov *et al.* 2012a). The photos of typical habitats of the species described here were published earlier

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-	Face narrow, almost contiguous in lower part (Fig. 2M)	10
8	Postocular setae black	*C. decipiens* Negrobov & Tsuricov
-	Postocular setae white	9
9	All segments of fore tarsi with erect hairs. Thorax with bluish-purple reflection; tibiae yellow.	*C. fortunatus* Negrobov & Maslova
-	Segments of fore tarsi without erect hairs. Thorax green; tibiae mostly black	*C. laesus* (Wiedemann)
10	Hind tibiae yellow, without long anterior hairs.	*C. smithi* Negrobov
-	Hind tibiae darkened, with long anterior hairs	11
11	Palpus dark; tip of phallus tridental in form (Figs 1A, C).	*Ch. tricaudatus* **sp.nov.**
-	Palpus white; tip of phallus without processes	*C. caerulescens* Negrobov
12	Lower postocular setae black; cilia of lower calypter dark	*C. nudisetus* Negrobov
-	Lower postocular setae yellow or white; cilia of lower calypter white or yellow	13
13	Femora yellow or partly darkened	14
-	Femora mostly black or dark-green	16
14	Wing edge with small oval convexity near tip of M_{3+4} (Fig. 3A). Hypopygium as in Figure 3C	*C. neglectus* (Wiedemann)
-	Wing edge arcuate near tip of M_{3+4} (Fig. 3 B). Hypopygium otherwise	15
15	Femora yellow. Fore trochanter yellow. Epandrium with angular dorsal margin (Fig. 3 D); phallus with two dorsal processes (Fig. 3E)	*C. femoratus* Zetterstedt
-	Femora darkened in mid part. Fore trochanter darkened in basal part. Epandrium with oval dorsal margin (Fig. 3F); phallus with broad lateral process on tip (Fig. 3G)	*C. baicalensis* Negrobov & Maslova
16	Dorsum of abdomen with bright silver dusting	*C. andrei* Negrobov
-	Dorsum of abdomen without silver dusting	17
17	Hind trochanters and base of hind femora yellow.	18
-	Hind trochanters and base of hind femora dark	22
18	Mid tibia with 1 strong anterodorsal seta near base (Fig. 3H)	*C. viridifemoratus* Roser
-	Mid tibia with 2 strong anterodorsal setae (Fig. 3I)	19
19	Basal third of hind femur yellow (Fig. 3J)	*C. orientalis* Negrobov & Zurikov
-	Hind femur yellow only near base (Fig. 3K)	20
20	Hind femur with a row of long anteroventral setae along the entire length	*C. sibiricus* Negrobov & Maslova
-	Hind femur with anteroventral setae only near tip	21
21	Hind tibia dark, without long bristles anteriorly; length of postpedicel barely longer than its width	*C. pulchellus* Kowarz
-	Hind tibia yellow, with long bristles anteriorly (Fig. 3L); width of postpedicel twice longer than its length	*C. ljutengensis* Negrobov & Zurikov
22	Postpedicel large (Fig. 3M), its height 2x as long as distance between ocellar bristles. Fore and mid tibiae dark-brown. Tip of phallus with long lateral process at left and short, broad triangular process at right (Figs 1L, M)	*C. obscuripes* Zetterstedt
-	Postpedicel small (Fig. 1E), its height approximately equal or a little more distance between ocellar bristles. Fore and mid tibiae yellow. Phallus not as above	23
23	Phallus without lateral processes, prolonged into a short process at tip, ventrally with some small setulae (Figs 1F, G)	*C. komovi* **sp. nov.**
-	Phallus with two lateral processes on apical part, without setulae ventrally (Fig. 3N)	*C. gramineus* (Fallén)

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