

***Dolichopus setiger* Negrobov, 1973 (Diptera, Dolichopodidae): A long-legged fly new to Europe**

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One male of *Dolichopus setiger* Negrobov, 1973 (Diptera, Dolichopodidae) was collected from Tervola in southern Finnish Lapland (66°N, 25°E) during a study on the Diptera fauna of springs and spring streams in 2004. A second male was found in 2006 among lush vegetation surrounding a weakly calcareous forest spring in Tervola. This species was previously known only from south-central Siberia and the Russian Far East. The new records from Finland are the first for Europe and the West Palearctic region. The fly is redescribed from the Russian type material and the Finnish males.

Key words: Diptera, Dolichopodidae, *Dolichopus setiger*, Europe, Finland, description.

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INTRODUCTION

The dolichopodid fauna of twenty mid-boreal springs in Finland was studied by Jukka Salmela and Jari Ilmonen and the author in 2004 using Malaise traps. The fauna of eutrophic springs in Tervola (66° N, 25° E) was found to be very rich in species and included several rarely recorded, poorly known species. Among them was a male of genus *Dolichopus* Latreille, 1796, clearly distinct but not identifiable with the literature at hand at the time. Another male of the same species was later sweep-netted from the rich vegetation surrounding an eutrophic forest spring in the same area. This species has now been identified as *Dolichopus setiger* Negrobov, 1973, a species new for Europe. The type locality of this species is in the Buryat Republic (53°N, 107°E) in south-central Russian Siberia (Negrobov 1973). It has also been found in the Magadan Oblast (60°N, 150°E) of the Russian Far East (Negrobov 1991).

The original Russian description of *D. setiger* is brief and based on a single male. No illustrations of the male genitalia were provided. In light of these deficiencies of the previously published description, a new description is presented.

REDESCRIPTION

Dolichopus setiger Negrobov, 1975

New material: 1 ♂ Finland, *Obb* [=ObN]: Tervola, Piilola, KKJY coordinates 7347548:3406930, 28 June –2 August 2004, J. Salmela & J. Ilmonen leg., Malaise trap.; 1 ♂ Finland, *Obb*: Tervola, Sompujärvi (732041:341536), 8 July 2006, J. Kahanpää leg. The first specimen was partially dissected for the purpose of illustrating various details. It is stored in alcohol and deposited in the Zoological Museum of University of Helsinki (MZH). The second Finnish specimen is micropinned and kept in the author's private collection. Coordinates are given in the Finnish

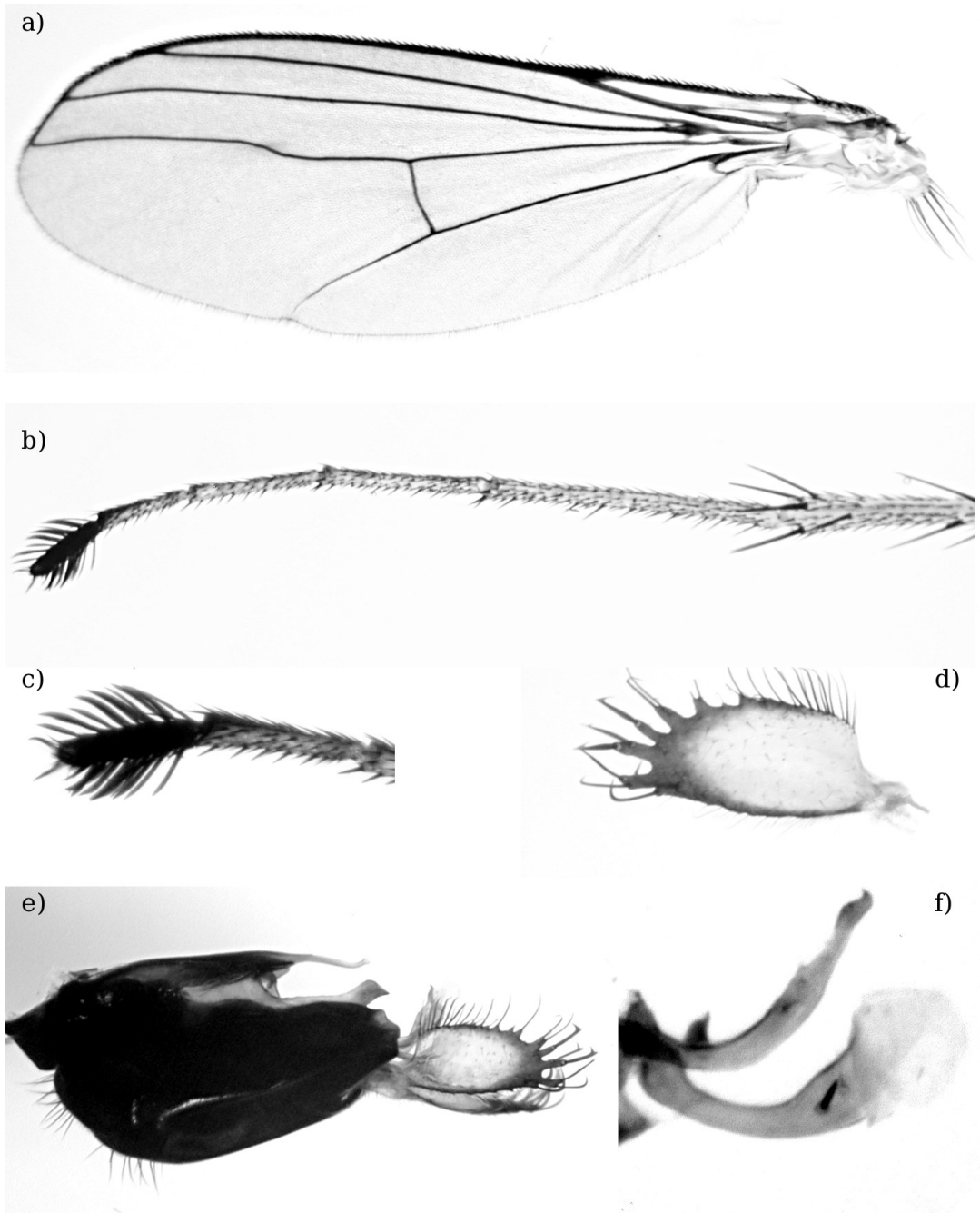


Figure 1. *Dolichopus setiger* Negrobov, 1973, male: a) wing, b) mid tarsus, c) 4. & 5. segment of mid tarsus (dorsal view), d) cercus, e) hypopygium, f) surstyli.

national grid system (*yhtenäiskoordinaatisto*, KKJY) (Heikinheimo & Raatikainen 1971). The redescription is based on the Finnish males and the holotype.

Head: Frons metallic blue (not black as stated in the original description), with weak white dusting visible in lateral view only. Face whitish grey, bare, width slightly less than height of postpedicel. Palpi small, yellow, hairs and short apical bristle black. Rostrum brown. Occiput dark green, dusted. 1 strong divergent ocellar and 1 strong cruciate vertical bristle on each side. Postocellars hairlike. 1 pair of postverticals. Postocular cilia black. Antenna black. Scape dorsally, pedicel dorsally and ventrally haired. Postpedicel 1.5x as long as high, blunt-tipped. Arista mid-dorsal, black, short haired (length of hairs less 1/3 or less of basal width of arista).

Thorax: Ground color dark bluish olive-green. Mesonotum and scutellum slightly grey dusted, Postpronotal-notopleural area with moderate grey dusting. Pleurae with dense grey dusting. Chaetotaxy: Acrostichals short, 2-serial. 1 long and 1 short postpronotal, 2 strong notopleurals, 2+4 dorsocentrals, 1 presutural, 1+3 intra-alars and 1 postalar bristle on each side. Scutellum with 1 pair of strong bristles and irregular sparse rows of short yellow hairs on posterior margin. Proepisternum with short pale hairs, somewhat stronger black hairs along posterior margin and a black bristle on ventral corner above the base of fore coxa. Pronotum with black bristles.

Wings (Figure 1a): Nearly transparent, slightly and uniformly brownish. Anal lobe weakly developed. Veins dark, brown-black. Stigma punctiform. Bends on apical half of M_{1+2} very obtuse. Squamae pale, marginal hairs black. Haltere yellow, stem weakly infusate.

Legs: Coxae black, apices brown, hairs and bristles black. Trochanters brown. Fore and mid femora yellow, basal fifth black. Hind femora black, ventrally yellow in the holotype and one Finnish male. Mid and hind femora with one anterior preapical bristle. Hind femur with long

yellow ventral hairs shorter than the diameter of femur.

Fore and mid tibiae yellow. Fore tibia with 3–4 dorsal and 1 posterior bristles. Mid tibia with 2 posterodorsal, 3–4 anterodorsal, 2 anteroventral and 1 ventral bristles. Hind tibia yellow, apical eighth black, bristles: 1 preapical dorsal, 4–5 anterodorsals, 1 short anteroventral in apical fourth, 4–5 posterodorsals, posteroventral bristles poorly developed but numerous. Posterior surface of hind tibia in basal half with a large dense field of microtrichiae.

Fore basitarsus yellow, tarsal segment 2 dorsally brown, segments 3–5 dark. Segment ratios of fore tarsus 4.3–1.8–1.3–1–1. Mid tarsus as in Figure 1b: basitarsus yellow, segments 2–4 yellow or dorsally brown, apical (5.) segment black (Figure 1c), dorsoventrally compressed and feathered with flattened black marginal bristles. No dorsal bristle on mid basitarsus. Segment ratios of mid tarsus 4.4–2.1–1.8–1.2–1. Hind tarsus black, basitarsus with two (antero)dorsal bristles and 2–3 short anteroventral. Pulvilli white, claws dark.

Abdomen: Dark metallic green, dusting moderate. Hairs and short marginal bristles on tergites black. Sternites with pale hairs. Ventrals margins of tergites with short yellow hairs.

Hypopygium (Figures 1d-f): Ground color black, dusting moderate. Cerci (Figure 1d) brownish yellow with a dark margin. Apical bristles of cerci hooked. Lower surstylus (Figure 1f) with a strong black peg-like bristle near middle. Upper surstylus with with two hairs in middle third.

Measurements: Body length 5.0 mm, wing length 5.0 mm.

The male of *Dolichopus setiger* belongs to a likely paraphyletic group of species with black postocular bristles and black hind femora. Within this group it is easily identified by the yellow hind tibiae and the structure of mid tibia (Figure 1b) (Negrobov et al. 2005). In existing keys to North European *Dolichopus* it runs to *D. annularis*

Ringdahl, 1920 (Stackelberg 1930, Grichanov 2004, 2006) or *D. planitarsis* Fallén, 1823 (Parent 1938). These species can be separated using the following key:

1. Hind femur ventrally with long yellow hairs.....2
 - Hind tibia without long ventral hairs*Dolichopus planitarsis* Fallén
 2. Basal segments (1–4) of mid tarsus yellow*Dolichopus setiger* Negrobov
 - Basal segments of mid tarsus black, white-tipped*Dolichopus annulitarsis* Ringdahl
- The female of *D. setiger* is still unknown.

DISCUSSION

D. setiger Negrobov joins the growing list of insect species described from Siberia or the Russian Far East and recently found in Fennoscandia. The very names of flies such as *Sericomyia jakutica* (Stackelberg, 1927), *Platycheirus magadanensis* Mutin, 1999 (Syrphidae) and *Chamaepsila sibirica* Frey, 1925 (Psilidae) – all recently found in north Europe – reveal the type locality of these species. Many entomologists collecting in northern Fennoscandia have all but ignored the lowland coniferous forests and wetlands in preference for the arctic and subarctic fauna. It is hardly surprising that such relatively obscure insects as flies go unrecorded in a region where even large macrolepidoptera such as *Xestia atrata* (Noctuidae) have only recently been found as new to Europe (Ryrholm 1995).

The boreal eurytopic fens and springs are the preferred habitats of several interesting or rare dolichopodid flies. *Dolichopus bonsdorffi* Frey, 1915, *D. lancearius* Hedström, 1996 and *D. costalis* Frey, 1915 prefer open herb-rich fens in northern Fennoscandia. The last species is only found on mosses floating in spring brooks with strong calcareous influence. The dolichopodid fauna of calcareous forest springs is species-poor, but where rich vegetation surrounds the springs, several interesting long-legged flies can be found, including the very rarely seen *Campsicnemus*

femoratus Ringdahl, 1949. Both Finnish records of *Dolichopus setiger* Negrobov are from weakly calcareous forest springs surrounded by dense vegetation. Canopied calcareous spring-fed wetlands are certainly a very vulnerable habitat in Fennoscandia. Clear-cutting and draining of fens for agriculture or increased forestry yields will permanently destroy the habitat even if the spring itself remains in natural state.

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