

THE GENUS *THINOPHILUS* WAHLBERG, 1844
(DIPTERA, DOLICHOPODIDAE) FROM EASTERN PALAEARCTIC,
WITH DESCRIPTION OF TWO NEW SPECIES AND NEW RECORDS

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Two new species of the genus *Thinophilus* Wahlberg, 1844 are described: *Thinophilus* (*Schoenophilus*) *grootaerti*, sp. n. from the Maritime Territory and *Thinophilus ovtshinnikovae*, sp. n. from China. Subgenus *Schoenophilus* Mik, 1878 are recorded for the first time from Asia. Lectotypes and paralectotypes for *Thinophilus pollinosus* Loew, 1871 and *Thinophilus seticoxis* Becker, 1922 are designated. *Thinophilus pollinosus* Loew, 1871 are recorded for the first time from Russia. New data on the fauna of the genus *Thinophilus* of Russia and Mongolia are given. A new key to species of the genus *Thinophilus* from Eastern Palearctic region including 12 species is also presented.

Key words: Dolichopodidae, *Thinophilus*, Palearctic, Maritime Territory, Mongolia.

INTRODUCTION

In the world more than 146 species of the genus *Thinophilus* Wahlberg, 1844 are known. In the Palearctic region 23 species of this genus are described so far. The latest revision of the genus was published by NEGROBOV (1971), and the overview of the Palearctic species of the genus was published by NEGROBOV (1979).

The number of species of the genus *Thinophilus* are known from the Asian part of the Palearctic region, mostly from Central Asia: *Thinophilus bicalcaratus* Negrobov, 1971 – Turkmenistan, Uzbekistan, Tajikistan; *T. brevicilius* Negrobov, 1971 – Tajikistan, Uzbekistan, Kirghizia; *T. vanschuytbroeckii* Negrobov, 1971 – Azerbaijan, Turkmenistan, Afghanistan; *T. ornatus* Negrobov et Grichanov, 1982 and *T. gissaricus* Negrobov et Grichanov, 1982 are described from Tajikistan.

Four species were described from the eastern Palearctic: *Thinophilus longipilus* Negrobov, 1971 from Maritime Territory of Russia and Japan (NEGROBOV 1971, NEGROBOV *et al.* 2014), *T. setosus* Negrobov, 1979 from Mongolia and *T. sinensis* Yang et Li, 1998 from Palearctic and Oriental parts of China, *Thinophilus nigripennis* Negrobov, Kumazawa et Tago, 2014 from Japan.

Four species were known from Mongolia: *Thinophilus pollinosus* Loew, 1871, *T. argyropalpis* Becker, 1907, *T. flavipalpis* (Zetterstedt, 1843) and *T. ruficornis* (Haliday, 1838) (NEGROBOV 1973, 1974).

The subgenus *Schoenophilus* Mik, 1878 with typical species *Schoenophilus versutus* Haliday, 1851 are known from Central and South Europe and from North Africa. Several authors consider *Schoenophilus* as independent genus, and several researchers suppose that *Schoenophilus* is the subgenus of the genus *Thinophilus*.

Allocation of the genus *Schoenophilus* occurs by the presence of 4 pairs of dorsocentral setae, apical or subapical arista of males, in contradistinction to the genus *Thinophilus*, representatives of which is characterized by presence of 5–6 pairs of dorsocentral setae and dorsal arista (NEGROBOV 1971). Several species and subspecies of the genus *Schoenophilus* are described from Papua New Guinea and subantarctic islands of New Zealand: *Thinophilus* (*Schoenophilus*) *pedestris* (Lamb, 1909), *T. (S.) pedestris campbellensis* (Harrison, 1964), *T. (S.) fuscicoxalis* Grootaert et Meuffels, 1984, *T. (S.) hilaris* Parent, 1941, and *T. (S.) splendens* Grootaert et Meuffels, 1984 (LAMB 1909, PARENT 1941, HARRISON 1964, GROOTAERT & MEUFFELS 1984).

Only one species from this genus are known from Palaeartic – *Thinophilus* (*Schoenophilus*) *versutus*, Haliday, 1851, description of which is available in the monograph of NEGROBOV (1979). *Thinophilus* (*Schoenophilus*) *versutus* Haliday, 1851, are known from England, Algeria, Belgium, Bulgaria, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Morocco, Netherlands, Poland, Romania, Russia, Sweden, Tunisia, Turkey, Ukraine.

MATERIAL

The study is based on the material from the funds of the Zoological Institute of the Russian Academy of Sciences and specimens from the collection of the Voronezh State University collected by O. P. Negrobov during the expedition in the Maritime Territory on the territory of the natural state reserve “Kedovaja Padj”. The materials has been collected by Dr. Z. Kaszab from Hungarian Natural History Museum in Mongolia were also investigated. Types of *Thinophilus pollinosus* Loew and *T. seticoxis* Becker from the Zoological Museum of Humboldt University of Berlin are investigated.

RESULTS

***Thinophilus* (*Schoenophilus*) *grootaerti* sp. n.**

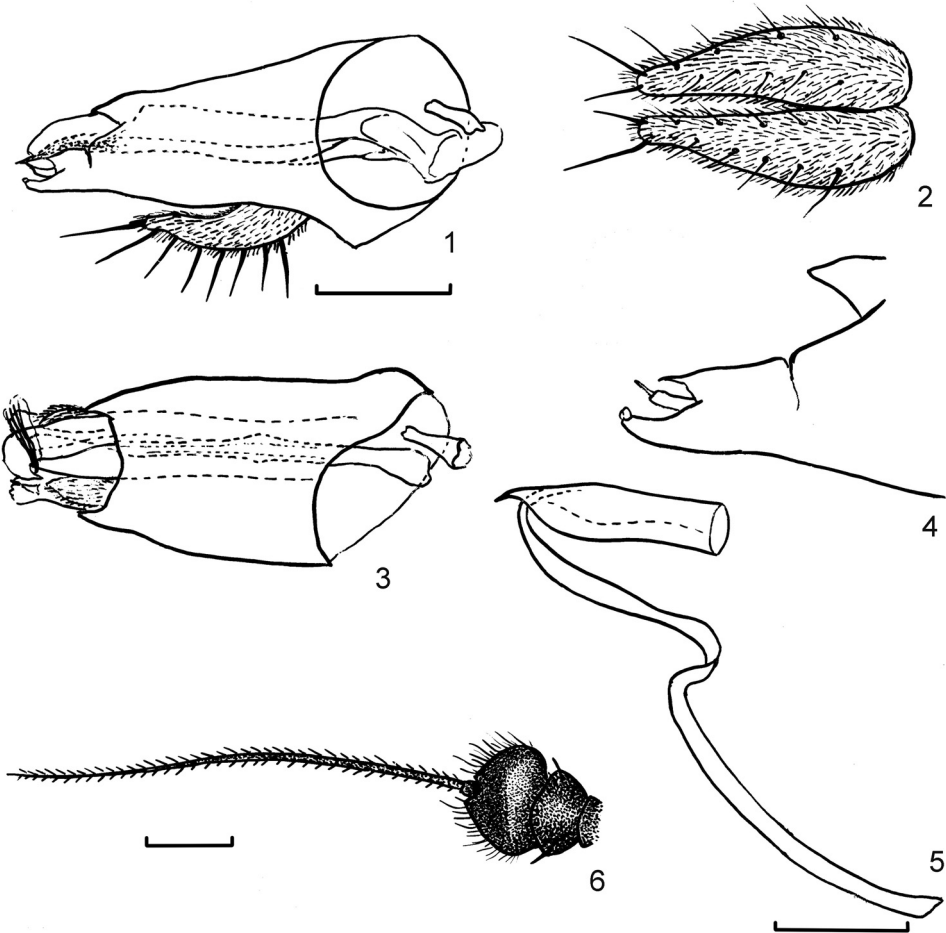
(Figs 1–6)

Diagnosis. Frons with brown pollinosity. Clypeus with yellow-brown pollinosity. Antennae black. Pedicel without process, projecting on postpedicel. Arista apical. Mesonotum without black spot. 4 pairs of dorsocentral setae. Scutellum with 2 strong lateral setae. Legs yellow. Fore coxa with white hairs. 1st segments of fore tarsus not curved. Segments of tarsi not widened.

Description. Male. Frons dull green with brown pollinosity. Clypeus with yellow-brown pollinosity. Epistome green with grey pollinosity. Antennae black. Postpedicel with long hairs, reniform, with oval apex, wider than long. Pedicel without process, projecting on postpedicel. Ratio of clypeus length, epistome length to face width at suture: 0.6/0.9/0.5. Arista apical, shortly pubescent. Ratio of postpedicel length to width and arista length: 0.4/0.5/2.6. Proboscis dark-brown. Palpus yellow with black hairs. Postocular setae white below.

Thorax dark-green, with bronze tingle. Mesonotum with grey pollinosity, pleura with dense pollinosity. Mesonotum without black spot. Propleuron with white hairs. Acrostichal setae absent. 4 pairs of dorsocentral setae. Scutellum with 2 strong lateral setae.

Legs yellow excluding brown mid and hind coxa with yellow apex and yellow apex of tibia. Fore coxa with white hairs. Segments of tarsi not widened, without bunch of long



Figs 1–5. *Thinophilus* (*Schoenophilus*) *grootaerti*, sp. n.: 1 = hypopygium, lateral, 2 = cerci, dorsal, 3 = hypopygium, ventral, 4 = sursyli, lateral, 5 = phallus, lateral, 6 = antennae. Scales: 0.1 mm.

hairs. Fore femora and tibia without long setae. Fore tibia with 2 short setae at apex. 1st segment of fore tarsi not curved, with short ventral hairs. Ratio of fore tibia and tarsus (from 1st to 5th): 3.3/1.4/0.7/0.5/0.4/0.5. Mid and hind femora without long setae. Mid tibia with 2 short anterodorsal setae and 3 long setae at apex. Ratio of mid tibia and tarsus (from 1st to 5th): 4.2/2.4/1.2/0.7/0.4/0.5. Hind coxa with 1 short seta. Hind tibia with 2 anterodorsal and 2 posterodorsal setae, with 2 setae at apex. 1st segment of hind tarsi without long setae. Ratio of hind tibia and tarsus (from 1st to 5th): 4.9/1.4/1.4/0.7/0.5/0.6.

Wing darkened. R_{4+5} and M_{1+2} parallel apically. M_{1+2} slightly curved. Ratio of costal section between R_{2+3} and R_{4+5} to that between R_{4+5} and M_{1+2} : 1.4/0.9. Apical part of M_{3+4} longer than m-cu – 1.3/0.8. Anal angle obtuse. Lower calypter with white hairs. Halter yellow.

Abdomen metallic green, with bronze tinge and dense grey pollinosity, with black hairs. Epandrium narrow, long, widened at base, with angle-shape process on dorsal side at base, longer than wide. Surstylus longer than cerci, with deep incisure and two processes. Cerci elongated oval, rounded at apex, with setae and dense hairs.

Female. Similar to male except: face broader.

Length: body 1.3–1.4 mm, wing 1.3–1.4 mm.

Type material. Holotype. ♂, Maritime Territory, the natural state reserve “Kedovaja Padj”, 21.07.1981 (Negrobov). Paratypes: 1 ♂, 2 ♀, in the same place. Types are stored in the Zoological Institute of the Russian Academy of Sciences, two paratypes are stored in the collection of the Voronezh University.

Etymology. The new species is named after my friend, famous dipterologist from Belgium Dr. Patrick Grootaert.

Differential diagnosis. The new species can be distinguished from the single Palaearctic species in the subgenus *Schoenophilus* by following characters:

- Wings without spots. Palpus yellow. Fore coxa and femora yellow. Halter yellow. Surstylus with two processes at apex

***Thinophilus (Schoenophilus) grootaerti* sp. n.**

- Wings with dark spots on m-cu and on curvature of M_{1+2} . Palpus brown-grey. Fore coxa and femora brown-yellow. Halter brown-yellow. Surstylus with one process at apex *Thinophilus (Schoenophilus) versutus* Haliday

This subgenus is recorded for the first time from Asia, the Maritime Territory.

***Thinophilus ovtshinnikovae* sp. n.**

(Figs 7–8)

Diagnosis. Frons with grey pollinosity. Face with grey pollinosity. Antennae black. Arista subapical. Palpus light-yellow with black hairs. Mesonotum without black spot. 5 pairs of dorsocentral setae. Scutellum with 4 lateral setae. Legs yellow. Fore coxa with white hairs. 1st segments of fore tibia not curved. Segments of tarsus not widened. Hind femora with short anteroventral hairs.

Description. Male. Frons green with grey pollinosity. Face green with grey pollinosity, width at suture is equal to the width of postpedicel. Antennae black, arista black. Ratio of epistome length, clypeus length, face width at suture and palpus length: 0.8/0.5/0.3/0.5. Arista subapical, shortly pubescent. Postpedicel transversely oval with rounded apex, wider than long. Ratio of postpedicel length to width and arista length: 0.4/0.5/2.0. Pedicel without process, projecting on postpedicel. Proboscis brown. Palpus short, light-yellow with black hairs. Postocular setae white below.

Thorax green. Mesonotum with grey pollinosity, with two lighter longitudinal strip, pleura with dense grey pollinosity, without purple spot. Propleuron with 1–2 short white hairs. Mesonotum without black spot. Acrostichal setae absent. 5 pairs dorsocentral setae. Scutellum with 4 lateral setae.

Legs yellow, most of mid and hind coxa brown, tibia darkened at apex. Fore coxa with white hairs. Fore femora and tibia without long setae. 1st segments of fore tibia not curved, without crest of erect setae. Segments of tarsus not widened, without setae. Ratio of fore tibia and tarsus (from 1st to 5th): 3.1/1.7/0.6/0.5/0.3/0.3. Mid femora with short preapical hairs, without long hairs below. Mid tibia with 2 short anterodorsal setae and 1 posterodorsal seta. Segments of mid tarsi without long setae. 5th segment of mid tarsi widened. Ratio of mid tibia and tarsus (from 1st to 5th): 4.1/2.2/0.9/0.7/0.4/0.4. Hind femora with short anteroventral hairs in upper third. Hind tibia with very short setae on dorsal side. Segments of hind tarsi without setae. Ratio of hind tibia and tarsus (from 1st to 5th): 4.3/1.9/1.0/0.7/0.4/0.3.

Wing darkened. R_{4+5} and M_{1+2} slightly divergent apically. M_{1+2} slightly curved. Ratio of costal section between R_{2+3} and R_{4+5} to that between R_{4+5} and M_{1+2} : 1.4/0.9. Apical part of M_{3+4} longer than m-cu – 1.0/0.7. Anal angle obtuse. Lower calypter yellow with white hairs. Halter yellow.

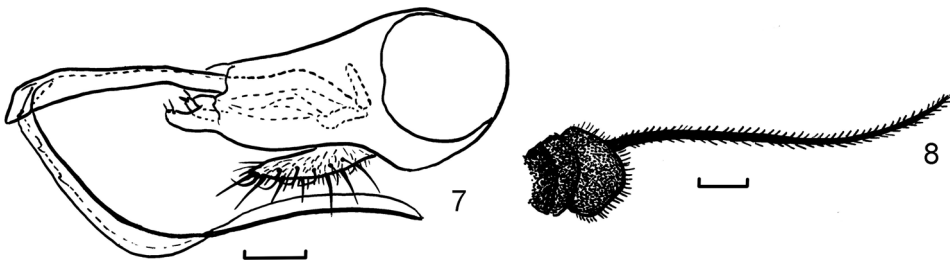
Abdomen metallic green, with bronze strips laterally, with black hairs, with grey pollinosity. Epandrium narrow, narrowed at apex. Surstylus shorter than cerci. Phallus annular curved.

Female. Similar to male except: face broader.

Length: body 1.3 mm, wing 1.3 mm.

Type material. Holotype. ♂, China, 50 km north of Mukden, 20.07.1952 (Rubtsov), Paratypes: 1 ♂, 2 ♀, in the same place. Types are deposited in the Zoological Institute of the Russian Academy of Sciences.

Etymology. The new species is named after famous specialist in Diptera of the Zoological Institute of the Russian Academy of Sciences Olga G. Ovtshinnikova.



Figs 7–8. *Thinophilus ovtshinnikovae* Negrobov, Maslova et Selivanova, sp. n.: 7 = hypopygium, lateral, 8 = antennae. Scales: 0.1 mm for Fig. 7, 0.5 mm for Fig. 8.

Differential diagnosis. In the key to Palaearctic species (NEGROBOV 1971, 1979), the new species runs to *Thinophilus ruficornis* (Haliday, 1838) and can be distinguished from the latter by following characters:

- Antennae black. Dorsal part of epandrium with deep incisures. Surstylus slightly longer than wide. Phallus long curved, longer than epandrium
Thinophilus ovtshinnikovae sp. n.
- Antennae mostly yellow. Dorsal part of epandrium almost straight. Surstylus 2 times longer than wide. Phallus short, shorter than epandrium
Thinophilus ruficornis (Haliday, 1838)

According to key of YANG *et al.* (2011), the new species runs to *Thinophilus seticoxis* Becker, 1922, are known from Oriental region of China (Taiwan) and Indonesia and can be distinguished from it by following characteristics:

- Antennae black. Femora without setae below. Thorax and abdomen green
Thinophilus ovtshinnikovae sp. n.
- Antennae mostly yellow. Femora with setae below. Thorax and abdomen partly purple
Thinophilus seticoxis Becker, 1922

Thinophilus seticoxis Becker, 1922

Thinophilus seticoxis Becker, 1922, *Capita zool.* (Den Haag) 1(4): 36.

Syntypes *Thinophilus seticoxis* stored in Museum für Naturkunde Humboldt-Universität zu Berlin. Lectotype: ♂, Kankau (Formosa), IX, 12 (Sauter) (by present designation). Paralectotype: 2 ♀, Tainan, Formosa, 11.09 (Sauter).

A KEY TO *THINOPHILUS* MALES OF THE EASTERN PALAEARCTIC

1. 4 pairs of dorsocentral setae. Arista apical
T. (Schoenophilus) grootaerti sp. n.
- 5–6 pairs of dorsocentral setae. Arista dorsal 2
2. Mesonotum with brown spot on M₁₊₂ and m-cu 3
- Mesonotum without black spot 4
3. Wing with brown spots *T. indigenus* Becker, 1902
- Wing without spots *T. sinensis* Yang et Li, 1998
4. Scutellum with 2 lateral setae *T. argyropalpis* Becker, 1907

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- Scutellum with 4 setae 5
 - 5. 1st segment of fore tarsi sharply curved 6
 - 1st segment not curved 7
 - 6. 2nd–4th segments of fore tarsi with group of long black setae
T. flavipalpis (Zetterstedt, 1843)
 - 2nd–4th segments of fore tarsi without long setae
T. spinitarsis Becker, 1907
 - 7. Femur in most part black *T. setosus* Negrobov, 1979
 - Femora yellow 8
 - 8. Mid femora with long hairs bellow, which length exceed of femora diameter
T. longipilus Negrobov, 1971
 - Mid femora with short hairs bellow 9
 - 9. Antennae black ***T. ovtshinnikovae*** sp. n.
 - Antennae partly yellow 10
 - 10. Fore coxa dark. Wing without spots *T. nigripennis* Negrobov, Kumazawa et Tago, 2014
 - Fore coxa yellow. Wing which two spots: on curvature of M_{1+2} and m-cu 11
 - 11. 1st segment of fore tarsi with long ventral setae *T. pollinosus* Loew, 1871
 - 1st segment of fore tarsi with short ventral setae
T. ruficornis (Haliday, 1838)

NEW DATA

Thinophilus argyropalpis Beck. – 1 ♀, Mongolia, Chovd aimak, Jamatin Dolon, ca. 40 km N von Somon Manchan, an der SW Ecke des Sees Char us nuur, 1200 m, 11. VII. 1966 (Nr. 673), leg. Z. Kaszab. Distribution: South Europe, Asia Minor, Middle Asia, North Africa. Russia: Volgograd region.

Thinophilus flavipalpis (Zett.) – 1 ♀, Mongolia, Cojbalsan aimak, Somon Tamzagbulag, 600 m, 10. VIII. 1965 (Nr. 388), leg. Z. Kaszab. Distribution: North Africa, Europe, Asia Minor, China.

Thinophilus pollinosus Loew, 1871 – Syntypes stored in Museum für Naturkunde Humboldt-Universität zu Berlin. Lectotype: 1 ♂, Tadjikistan, Zeravschar Thal, № 12695, (Fedschenko); Paratype: 1 ♂♀, in the same place (by present designation).

Material: 1 ♀, Mongolia, Central aimak, 125 km SW of Ulan-Bator, 30–31.07.1969 (Kerzhner), 2 ♂, 1 ♀, Mongolia, South Gobi aimak, 10 km NO of Mountain Onch-

Khairkhan-ula, 08.04.1967 (Kerzhner), 2 ♂, Mongolia, South Gobi aimak, 30 km SSO of Sugin-khuduk, 03.08.1967 (Kerzhner), 1 ♀, Mongolia, Bayan-Khongor aimak, the north shore of Lake Orog-nur, 15–16.08.1967 (Emelyanov), 3 ♂, Mongolia, Bayan-Khongor aimak, the north shore of Lake Orog-nur, 15–16.08.1967 (Zaitsev), 1 ♂, Mongolia, Bayan-Khongor aimak, the north shore of Lake Orog-nur, 15–16.08.1967 (Kerzhner), 1 ♂, 1 ♀, Mongolia, Bayan-Khongor aimak, Toroin-Bulak, 13 km O of Tsagan-Bulak, 16.08.1969 (Kerzhner), 1 ♂, Mongolia, Bayan-Khongor aimak, oasis Ehin-Gol, 11–14.08.1969 (Kerzhner), 3 ♂, 6 ♀, Mongolia, Upper-Gobi aimak, Barun-bayan, 20 km OSO of Tal-Hongoryn-Khuduk, 29–30.06.1971 (Kerzhner), 1 ♀, Mongolia, Sukhe-Bator aimak, sands of Orgon-Els, 15 km SSO of Khongor, 5–6.07.1971 (Kozlov), 1 ♂, Mongolia, Sukhe-bator aimak, Avdaryn-Khuduk 35 km WNW of Dzutol-Khan, 07.13.1971 (Kerzhner), 10 ♂, 16 ♀, the southern part of Mongolia, the Valley of Lakes, in the foothills of the Gobi-Altai, the north shore of Lake Orog-Nuur, 16–18.08.1967 (Emelyanov, Kozlov), 1 ♂, 2 ♀, Mongolia, Sudgobi aimak, Nojon nuruu, Grenzposten Ovot Chuural, 1500 m, 21.06.1967, Nr. 829, Exp. Dr. Z. Kaszab, 1 ♀, Russia, Omsk reg., Severnaya, shore of lake Solodovoe, 23.07.1922 (Reichard), 1 ♂, Russia, Transbaikalia, Republic Buryatia, Kyakhta district, Troitskosavsk (town, which became part of the city Kyakhta in Buryatia), 27.06. 1928 (Lukyanovich), 4 ♂, 6 ♀, Russia, Transbaikalia, 18.07.1928. (Lukjanovitsh).

This species was noted by LOEW (1871) from Russia within the old boundaries, it is an indication of the territory of modern Tajikistan. The species are known from Crimea (GRICHANOV *et al.* 2012), Ukraine (NEGROBOV 1971, 1980), Mongolia (NEGROBOV 1973a, 1974), Azerbaijan (GRICHANOV & TOMKOVICH 2009), China (YANG *et al.* 2011). The species are noted for the first time from Russia.

Thinophilus ruficornis (Hal.) – 1 ♀, Mongolia, Suchebaator aimak: Fluss Bajan gol, 85 km NO von Somon Dariganga, 1100 m, 8. VIII. 1965 (Nr. 377), 1 ♀, Mongolia, Chovd aimak: 10 km NW von Somon Uenc, 1480 m, 4. VII. 1966 (Nr. 625), leg. Z. Kaszab. Distribution: Azerbaijan (GRICHANOV & TOMKOVICH 2009), Ukraine (NEGROBOV 1971, 1980), Mongolia (NEGROBOV 1973, 1974), Russia: Murmansk and Orenburg regions, Yakutia, North Caucasus, Crimea (GRICHANOV *et al.* 2012).

*

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