

A list of Dolichopodidae from the Tyresta National Park, Sweden, with description of a new species of the genus *Rhaphium* Meigen (Diptera)

I.Ya. Grichanov

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A list of 44 Dolichopodidae species collected in the Tyresta National Park and Nature Reserve is given. *Rhaphium viklundii* sp. n. is described from this locality, and a key to Swedish species of the *Rhaphium albifrons* group is given. *Medetera inspissata* Collin is recorded from Sweden for the first time.

I.Ya. Grichanov. All-Russian Institute of Plant Protection, Podbelskogo 3, St.Petersburg-Pushkin 196608, Russia. E-mail: grichanov@mail.ru

Introduction

A check list of Dolichopodidae from the Tyresta National Park (59°10'N, 18°18'E) is given below. It is based on 1999-2001 Malaise trapping by Bert Viklund (Swedish Museum of Natural History, Stockholm) along with his colleagues Hans Ahnlund (Gnesta) and Lars-Ove Wikars (Uppsala) conducting an entomological post-fire documentation project in the Tyresta area. The Park and the surrounding buffer zone of Tyresta Nature Reserve are unique on the mainland of southern Sweden with respect to the amount of old Scots pine trees and also due to the limited amount of forestry in general that has taken place in modern time. The list comprises 44 species, of which one (*Rhaphium viklundii*) is new and one (*Medetera inspissata* Collin) is recorded from Sweden for the first time. Most females of the genus *Medetera* are left unidentified. All specimens are deposited at the Swedish Museum of Natural History.

With the two species added in this paper to the previous list (Grichanov, 2002), 323 species are known from Sweden. Several dozens additional species can be expected in the fauna of this country.

List of species from the Tyresta area

Achalcus cinereus (Haliday, 1851), 4 ♀.
Argyra diaphana (Fabricius, 1775), 1 ♂, 1 ♀.
Chrysotus pulchellus Kowarz, 1874, 1 ♂, 4 ♀.
Dolichopus annulipes Zetterstedt, 1838, 4 ♂, 10 ♀.

Dolichopus apicalis Zetterstedt, 1849, 2 ♂, 1 ♀.
Dolichopus cilifemoratus Macquart, 1827, 1 ♂.
Dolichopus discifer Stannius, 1831, 490 ♂♀.
Dolichopus lepidus Staeger, 1842, 169 ♂♀.
Dolichopus maculipennis Zetterstedt, 1843, 2 ♂, 2 ♀.
Dolichopus plumipes (Scopoli, 1763), 2 ♂, 4 ♀.
Dolichopus simplex Meigen, 1824, 14 ♂, 12 ♀.
Dolichopus unguatus (Linnaeus, 1758), 1 ♀.
Hercostomus aerosus (Fallén, 1823), 2 ♂.
Hercostomus metallicus (Stannius, 1831), 1 ♂, 5 ♀.
Hydrophorus altivagus Aldrich, 1911, 1 ♂.
Hydrophorus bipunctatus (Lehmann, 1822), 2 ♂.
Hydrophorus rubifimbria Gerstäcker, 1864, 1 ♂.
Medetera ambigua (Zetterstedt, 1843), 4 ♂.
Medetera apicalis (Zetterstedt, 1843), 2 ♂.
Medetera excellens Frey, 1909, 6 ♂, 3 ♀.
Medetera inspissata Collin, 1952, 2 ♂.
Medetera melancholica Lundbeck, 1912, 25 ♂, 1 ♀.
Medetera muralis Meigen, 1824, 56 ♂.
Medetera obscura (Zetterstedt, 1838), 1 ♂.
Medetera pallipes (Zetterstedt, 1843), 1 ♂.
Medetera petrophila Kowarz, 1877, 2 ♂.
Medetera pseudoapicalis Thunberg, 1955, 3 ♂.
Medetera setiventris Thunberg, 1955, 5 ♂.
Medetera signaticornis Loew, 1857, 1 ♂.
Medetera tristis (Zetterstedt, 1838), 5 ♂.
Medetera vagans Becker, 1917, 59 ♂.
Medetera veles Loew, 1861, 25 ♂.
Systemus pallipes (von Roser, 1840), 2 ♀.
Thrypticus bellus Loew, 1869, 3 ♂, 4 ♀.
Neurigona pallida (Fallén, 1823), 7 ♀.
Neurigona quadrifasciata (Fabricius, 1781), 1 ♂.
Rhaphium caliginosum Meigen, 1824, 1 ♂.
Rhaphium longicorne (Fallén, 1823), 1 ♂, 1 ♀.

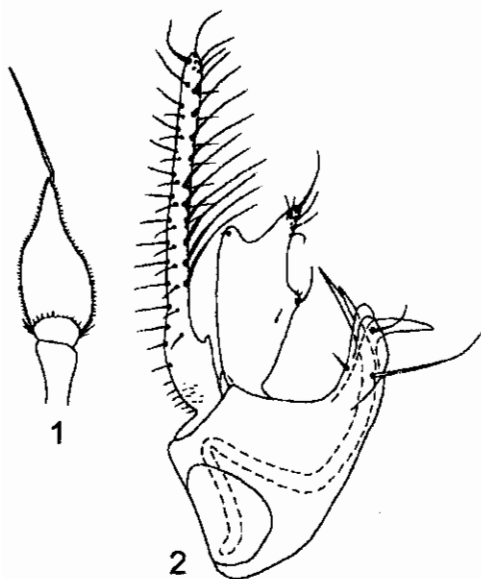
Rhaphium micans (Meigen, 1824), 1 ♂.
Rhaphium viklundi sp. n., 1 ♂.
Campsicnemus curvipes (Fallén, 1823), 2 ♀.
Campsicnemus scambus (Fallén, 1823), 9 ♂, 14 ♀.
Sympycnus pulicarius (Fallén, 1823), 1 ♂.
Syntormon denticulatus (Zetterstedt, 1843), 2 ♀.

***Rhaphium viklundi* sp. n.**
 (Figs 1-2)

Holotype. ♂, Sweden: Sö, Tyresta NP, Brandfält från 1999 vid Lycksjöbaden, Malaise-fälla [Södermanland, Tyresta National Park, burned area from 1999 at Lycksjöbaden, Malaise trap], 11.VI-17.VII.1999, Bert Viklund leg.; deposited at the Swedish Museum of Natural History (Stockholm). The hypopygium was removed from the holotype, placed after alkalisation into glycerol and mounted on the same pin in a cavity of polymer film covered with a piece of adhesive tape.

Description. Male. Head somewhat depressed of shrinkage. Frons and face greenish black, densely grey pollinose. Face broad, under antennae as wide as height of postpedicel. Postocular setae white. Palpi and proboscis short, brownish yellow, covered with black hairs, bearing strong apical seta; proboscis brown, with sparse light hairs. Antennae as long as height of head; postpedicel subtriangular, pubescent, twice as long as high at base; stylus apical, with short hairs, simple. Length ratio of scape to pedicel to postpedicel to stylus, 8 : 5 : 21 : 17.

Thorax bluish black, grey pollinose. Five pairs of strong dorsocentral setae, with reduced hairs in front of the first seta; acrostichals in two rows.



Figs 1-2. *Rh. viklundi* sp. n. 1, antenna, lateral view; 2, hypopygium, left lateral view.

Legs, including coxae, mostly yellow; coxae brownish at base; hind femur black in distal third. Fore and middle coxae on anterior side with yellow hairs and setae, without ventral spine. Hind coxa with one long light external seta. Femora without preapical setae. Fore leg simple, covered with light setulae. Length ratio of fore femur to tibia to 1st and 2nd segments of tarsus (other segments missing), 54 : 59 : 29 : 17. Middle tibia with one anterodorsal and one posterodorsal seta at 1/3 and with three apical setae. Length ratio of middle femur to tibia to 1st and 2nd segments of tarsus (other segments missing), 68 : 78 : 40 : 22. Hind tibia simple, with four short anterodorsal and three apical setae. Length ratio of hind femur to tibia to basitarsus (other segments missing), 70 : 98 : 20.

Wing hyaline. Ratio of section of costa between R_{2+3} and R_{4+5} to that between R_{4+5} and M_{1+2} , 25 : 11. M_{1+2} weakly sinuate at middle. Ratio of apical to basal section of M_{1+2} , 81 : 50. Ratio of crossvein $m-cu$ to apical part of CuA_1 , 35 : 14; lower calypter yellow with fan of yellow setae; halter yellow.

Abdomen dark blue-green, grey pollinose, with black setae; ventrum brown. Hypopygium black. Epandrium strongly projecting distoventrally, with strong ventral hook; hypandrium and aedeagus narrow, pointed, simple. Epandrial lobes developed, with two strong setae. Cercus simple, long and narrow, densely covered with long pale cilia. Surstylus gradually widening distad, triapiculate, with middistal projection bearing several setae.

Length (mm): body 2.8, antenna 0.75, wing 2.8/0.9, 7th segment of abdomen 0.5, hypopygium 0.8.

Etymology. The species is named after the Swedish entomologist Mr. Bert Viklund.

Comparison. Palaearctic species of the genus *Rhaphium* were revised by Negrobov (1979), and some additional species have been described later from Georgia, Siberia and China (Negrobov, 1986; Negrobov & Onishchenko, 1991; Yang, 1998a, 1998b; Yang & Saigusa, 1999, 2000). *Rh. viklundi* sp. n. is related to *Rh. fissum* Lw. and *Rh. albifrons* Ztt., differing in the shorter antennal postpedicel and simple rather than bifurcate cercus. The new species is close to *Rh. qinghaiense* Yang, 1998, differing in the shorter postpedicel, yellow hind tibia and basitarsus and morphology of hypopygium.

Key to Swedish species of the *Rhaphium albifrons* group

1. Postpedicel twice as long as high at base; cercus simple; surstylus widening distad, with distal emargination; 2.8 mm *Rh. viklundi* sp. n.
- Postpedicel 5-7 times as long as high; cercus bilobate; surstylus not widening distad 2

2. Postpedicel 5 times as long as high; cercus with narrow branches; surstylus widened at middle; 2.4-2.7 mm **Rh. fissum** Lw.
- Postpedicel 6-7 times as long as high; cercus with broad branches; surstylus with small inner projection; 2-2.3 mm **Rh. albifrons** Ztt.

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