Pollinator Academy

Genus: *Sphecomyia*

Sphecomyia vespiformis male

Genus: *Sphecomyia* Latreille, 1829

Family: Syrphidae

Subfamily: Eristalinae

Tribe: Milesiini

Number of species of this genus found in Europe: 1

Description

Head

The face is produced ventrally and the facial tubercle is faintly defined. The frons is enlarged anterodorsally, forming the antennal prominence and is bare with yellow dusting along the eye margins. The head is dichoptic in both sexes and the eyes are bare. The antenna is elongate and as long as, or longer than the face with a segmental length ratio of roughly 4:4:1. The arista is brown and pubescent, and it is shorter than the pedicel.

Thorax

The scutum is dull black and has black dusting, except for the postpronotum which has yellow dusting. There are two submedial pairs of dust stripes on the scutum: the anterior pair are longer, running from almost the anterior margin of the scutum to the transverse suture; the posterior pair, which are shorter, terminate before the posterior margin of the scutum. The scutellum is mostly dull black, being shiny only anterolaterally; the anterior half is covered with yellow dust. The scutum and scutellum have yellow hairs. The subscutellar fringe is almost non-existent with only a few scattered short yellow hairs. The pleuron has yellow hairs and is matte black, lightly black-dusted, expect for the broad posterior margin of the posterior anepisternum and the dorsal part of the katepisternum that are densely yellow-dusted. The metasternum has yellow hairs. The plumule and the spiracular fringes are black. The halteres and calypters are yellow.

Wings

The wing membrane is hyaline, with a yellow tinge on the anterior half. It is microtrichose except that cells bm and cua are bare on anterior half. The alula is microtrichose.

Legs

Legs simple, without modifications.

Abdomen

The abdomen has yellow hairs. The tergites and sternites are shiny to sub-shiny (lightly black-dusted), black with yellow-dusted markings as follows: tergite 1 is dusted along the posterior margin; tergite 2 has a broad medially-interrupted dust band, which narrows from the lateral margin to the central part and does not meet a narrow uninterrupted posterior dust band (which runs along the posterior margin) in the posterolateral corners of the tergite; tergite 3 has a similar pattern, but the medial dust band is thinner and more narrowly interrupted; the pattern on tergite 4 is the same as tergite 3 except for the medial dust band very narrowly or incompletely interrupted; sternite 1 shiny; sternite 2 completely black or with a faint interrupted dust band anteriorly; sternites 3 and 4 have an uninterrupted or narrowly interrupted dust band anteriorly; sternites 6 to 8 are dusted.

General comments on identification to species level

Differential diagnosis

There is only a single *Sphecomyia* species in Europe, *S. vespiformis*. In Europe this large wasp-mimicking fly may resemble other genera like *Temnostoma* or *Spilomyia*. It differs from both because it has antennae that are as long as the face, with the scape and pedicel more than three times longer than the third antennal segment. In *Temnostoma* and *Spilomyia* the antennae are shorter than the face and the scape and

pedicel are as long as or shorter than the third antennal segment. Moreover, *S. vespiformis* has a frontal prominence, which is absent in *Temnostoma* and *Spilomyia*; it also lacks a ventral spine in the hind leg femora (ventral spine also absent in *Temnostoma* but present in *Spilomyia*), and the dorsal and ventral patches of hairs on katepisternum are separated (*Spilomyia* also has these hair patches separated, but in *Temnostoma* the katepisternum is continuously hairy).

Sphecomyia vespiformis female abdomen

Sphecomyia vespiformis male head lateral

Temnostoma apiforme male habitus

Geographical distribution and global diversity

Sphecomyia vespiformis occur from southern Norway to northern Sweden, Finland and Russian Karelia, the Baltic States, Poland, and on into Siberia and southern Far East (Barkalov & Mutin 2018, Speight 2020).

Presence in Europe

Belarus, Estonia, Finland, Latvia, Lithuania, Norway, Poland, Russian Federation - European Russia, Sweden.

Biology

Adults occur between May and early September but mainly occur in June and July. They can be found along rivers and streams in *Betula* / *Pinus* forest, and also in humid riverine forests with aspen and have been reported to visit *Berberis vulgaris*, *Hesperis matronalis*, *Rubus idaeus*, *Sorbus aucuparia*, *Pimpinella saxifraga*, *Spirea salicifolia*, *Syringa josikaea*, *Syringa* sp. and *Spiraea* sp.

The developmental stages are not described, but according to Bartsch (1997) they are probably associated with sap-runs or lesions in the trunk of *Populus tremula*. The development of the larva probably takes more than one year and may take several years.

Type species: *Chrysotoxum vittatum* Wiedemann, 1830

Common names:
FI - sarvipuuharit
SV -tajgablomflugor
NB - taigablomsterfluer

List of species found in Europe:

1. *Sphecomyia vespiformis* (Gorski, 1852)

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