Pollinator Academy

Genus: *Trichopsomyia*

Trichopsomyia joratensis male habitus

(© Sander Bot)

Genus: *Trichopsomyia* Williston 1888

Family:

Syrphidae

Subfamily:

Pipizinae

Tribe:

Pipizini

Number of species of this genus found in Europe: 3

Description

Head

The face is flat and shiny black, and it lacks either a frontal prominence or a central knob, and is covered with mixed black and white hairs. The mouth opening is round and there is no demarcated mouth-edge. The frons, which is slightly swollen with a median grove, is black, shiny and predominantly black haired. The vertex has a small ocellar triangle, which is black and predominantly black haired. The eyes are hairy: holoptic in the male and dichoptic in the female. The antennae are black or brownish, elongate and about as long as the length of the head. The basoflagellomere is oval to elongate with a red-brownish spot baso-ventrally.

Thorax

The thorax is black, shiny, and with a mixture of comparatively long black and white hairs in males and predominantly to entirely white haired in females. The postpronotum is hairy, but the metasternum is bare. The anterior anepisternum is hairy. The metanotum is partly microtrichose and dull.

Wings

Cross-vein r-m is located before the point where vein Sc meets the costa. Cross-vein r-m is located on basal 1/4 of cell dm. Vein M_1 ends slightly to strongly oblique on vein R_{4+5}, which is straight, and cell r_1 is open.

Legs

The legs are slender, black, and in some species the tarsi are extensively yellow. The hairs on the legs are a mixture of black and white, and are comparatively long on the femora and the dorsal surface of the hind tibia. The antero-lateral surface of the hind femur is dull and has microtrichia.

Abdomen

The abdomen is elongate and slender, or more rounded to oval. It is black with mixed black and white pile. In some females tergite 2 has orange to yellowish spots.

General comments on identification to species level

Differential diagnosis

This genus belongs to the subfamily Pipizinae based on the hairy postpronotum,the flat hairy face and the absence of a facial tubercle. They have an evenly rounded, un-notched mouth edge. The eyes are hairy, the metasternum is bare and cross-vein r-m lies before the point where vein Sc meets the costa.

These are small (5-8 mm), predominantly black flies. The face is flat and lacks a frontal prominence, a facial tubercle or a notched mouth edge. The basoflagellomere is oval to elongate. The eyes are hairy, the male is holoptic and the female is dichoptic. The postpronotum and the anterior anepisternum are hairy. The metanotum is partly microtrichose and dull. The metasternum is bare. Cross-vein r-m is located before the point where the vein Sc meets the costa. Vein M_1 is almost perpendicular to strongly oblique. The legs, which are narrow, elongate and unmodified, are predominantly black with partly yellow tarsi. The abdomen is black, but in some females there are orange to yellowish spots on tergite 2.

Trichopsomyia and *Triglyphus* are the only pipizines with long erect pile on the anterior anepisternum, which is bare in all other pipizine genera. *Triglyphus* is easily separated from *Trichopsomyia*: as the name implies, it has only three well developed abdominal segments, whereas *Trichopsomyia* typically has four well developed segments.

In the field *Trichopsomyia* could be mistaken for a small *Cheilosia*, but *Cheilosia* have a well-developed facial tubercle, which *Trichopsomyia* lacks.

Trichopsomyia joratensis male head lateral

Trichopsomyia lucida female head lateral

Trichopsomyia lucida female abdomen

(© Sander Bot)

Geographical distribution and global diversity

This is a mainly a north temperate genus (Palaearctic, Nearctic) whose distribution extends into Australia and the Neotropical Region (south to Brazil). While the genus was originally based on two species from Brazil, it is now known from all biotic regions except the Afrotropics. There are 29 described species from the Palaearctic (6), Nearctic (11), Neotropics (12) with undescribed species from the Oriental (2) and

Australian (1) regions (Thompson et al. 2010, Skevington et al. 2019, Downes et al. 2017, van Steenis et al. 2018)

In the Western Palearctic there are 3 species recorded. (IUCN 2021, Bot & van de Meutter 2019, Speight 2006)

Presence in Europe

Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Isle of Man, Italy, Latvia, Liechtenstein, Lithuania, Montenegro, Netherlands, Norway, Poland, Romania, Russian Federation - European Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

Biology

Adult behaviour and flower preferences. Adults can be found in wet and often nutrient-poor habitats, such as wet heath- and grasslands, along fens, streams, and peat bogs, which are often situated at the edges of wet forests or above the treeline. Others prefer open, herb-rich places, and occur in moist deciduous or conifer (often *Abies* spp.) forests. They often appear on nutrient-poor, generally acid soils and near streams or other wet places.

T. lucida is found in open places, in and around moist deciduous or alluvial forests (*Quercus*, *Populus*, *Ulmus*) on nutrient-rich soils at forest edges with tall-herb vegetation and a high groundwater level.

Adults fly low through dense vegetation and are difficult to detect except when visiting flowers. They also have been observed drinking water from moist sandy soils along trails. Males hover at a height of one or two metres, often near bushes, or sit on leaves. Males of *T. joratensis* are encountered much less frequently than females, which may be because they spend most of the time high up in the canopy.

Adults visit the flowers of *Aegopodium podagraria*, *Berteroa incana*, *Caltha palustris*, *Chaerophyllum temulum*, *Frangula alnus*, *Narthecium ossifragum*, *Potentilla erecta*, *Ranunculus repens*, *Anthriscus sylvestris*, *Crataegus* spp., *Prunus serotina*, *Rubus* spp.

Reproduction and larval biology. The larvae are predatory on psyllids and other Sternorrhyncha. The larvae of *T. flavitarsus* have been found in the galls of the gall-making psyllid *Livia juncorum* (Homoptera) on stems of *Juncus articulatus* (Rotheray 1997). The larvae of *T. joratensis* are expected to feed on gall-forming aphids on coniferous trees, because a puparium was found on the main stem of *Picea abies*. The larval stages of *T. lucida* are unknown.

Seasonal life cycle. They are probably univoltine and fly from the end of April until late August, although late specimens of *T. flavitarsus* may appear in September.

Type species: *Trichopsomyia polita* Williston, 1888

Common names:
FI - nilkkasysiset;
NB - galleblomsterfluer

List of species found in Europe:

1. *Trichopsomyia flavitarsis* (Meigen, 1822)
2. *Trichopsomyia joratensis* Goeldlin, 1997
3. *Trichopsomyia lucida* (Meigen, 1822)

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Attributions

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