



Genus: *Eristalinus*



Eristalinus sepulchralis male habitus

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Genus: *Eristalinus* Rondani, 1845

Family: Syrphidae

Subfamily: Eristalinae

Tribe: Eristalini

Number of species of this genus found in Europe: 4

Description

Head

The face is black in ground colour, covered with dense yellowish-white hairs and dense silvery to yellowish-grey dust, except for the top of the facial tubercle, which is shiny black and hairless. Some species also have a pair of shiny black vertical stripes between the facial tubercle and the eyes. The oral margin and gena are at least partly shiny black, otherwise they are dusted as the face. The bicoloured eyes are covered with dense extensive hairs often only on the dorsal part, and the dark reddish dots on the eyes are frequently more or less aggregated, sometimes in several vertical stripes. The male head is holoptic or dichoptic. The female head is broadly dichoptic, the frons is black and usually dusted as the face, shiny only above antenna and on a central small prominence, if present. The vertical triangle is black and mostly shiny. The antenna is short, reddish-brown to black from above and usually partly yellow below, at least on the basoflagellomere. The basoflagellomere is oval, about as long as high, or only slightly elongated, about as long as the scape and the pedicel together or only slightly longer. The arista is virtually bare, yellow to light brown and is situated dorsally close to base of the basoflagellomere.

Thorax

The thorax is black in ground colour, sometimes except for the scutellum, largely densely silvery to yellowish-grey dusted and covered with long erect predominantly yellowish-white to brownish-yellow hairs, but sometimes black hairs are also present on the scutum. The scutum is dull or shiny with more or less marked longitudinal dust stripes situated medially and on the lateral margins. The scutellum is completely black or partly reddish-yellow and has yellow or black hairs. The subscutellar fringe may

be absent or present. The anterior anepisternum is bare or hairy, while the metasternum has long hairs. The haltere is yellowish white like the calypter.

Wings

The wing membrane is usually hyaline, virtually completely without microtrichia, undulating near the posterior margin,. The pterostigma is short, squarish, bicoloured (usually dark brown in the basal part and the distal part is longer, light brown almost transparent and sometimes invisible). Wing cell r_1 is closed and markedly petiolate, and wing vein R_{4+5} is strongly looped into the cell r_{4+5} . The vena spuria is hardly visible or absent. The calypter is yellowish-white, with the ventral lobe conspicuously enlarged, about twice as large as the dorsal lobe.

Legs

The legs are bicoloured (brownish-black and yellow) and simple; only the hind femur and tibia are sometimes thickened, with black setae on the ventral surface of the distal part of the femur and with a carina covered with short black setae on the ventral surface at the base of the tibia. All femora have a patch of small black setae anterobasally.

Abdomen

The abdomen is variable in colouration, either completely black or with yellow to reddish-yellow areas laterally on tergites 1 – 3. The tergites are shiny or partly to largely dusted, and some species may have grey-dusted transverse bands on the tergites, usually well-defined in the females. The sternites are black or largely yellow to reddish-yellow, sometimes brownish in the midline to whole brownish-black, especially in the case of sternite 4 or 5.



Eristalinus megacephalus
male head frontal



Eristalinus megacephalus
male habitus



Eristalinus taeniops male
habitus



Eristalinus megacephalus
female abdomen

General comments on identification to species level

Differential diagnosis

The genus *Eristalinus* comprises average-sized to robust hoverflies (7 – 14 mm), mostly honeybee mimics or solitary bee mimics. Overall, *Eristalinus* species are morphologically similar to those of the genus *Eristalis*, which also have the vein R_{4+5} strongly looped into cell r_{4+5} , wing cell r_1 closed and markedly petiolate, and wing membrane almost without microtrichia (as species of the genus *Eristalis*). Nevertheless, *Eristalinus* is easily distinguished from *Eristalis* and other similar hoverflies thanks to the bicoloured compound eyes, with dark reddish spots that may be aggregated also into stripes. These are obvious in the field; the colour pattern on parts of the compound eye is sometimes lost in preserved specimens, but rarely over the whole surface. All other European hoverflies have the eyes unicoloured, except for the species of the genus *Spilomyia* that also have bicoloured compound eyes, but they are much larger hoverflies that are excellent mimics of wasp.



Eristalis arbustorum male habitus



Eristalinus aeneus male head frontal



Spilomyia manicata head lateral

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Geographical distribution and global diversity

The genus *Eristalinus* is a large genus with 87 named species and with worldwide distribution at present, although the few species known from Nearctic and Neotropic regions were introduced from the Old World. The richest diversity of the genus is found in the Afrotropical region, where more than 60 species are present and all known subgenera of the genus *Eristalinus* occur. In the Palearctic region there are about 16 species, nearly 30 species are known from the Oriental region and nearly 20 from Australasian and Oceania regions (Bartsch *et al.* 2009a, Dirickx 1998, Knutson *et al.* 1975, Ssymank *et al.* 2021, Thompson 2003, Thompson & Vockeroth 2016, Vujić *et al.* 2019). Only four *Eristalinus* species occur in Europe. Two species, *Eristalinus aeneus* and *E. sepulchralis*, are widely distributed virtually across Europe, and two species, *Eristalinus megacephalus* and *E. taeniops*, are known only from countries in or close to the Mediterranean Basin.

Presence in Europe

Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Hungary, Ireland, Isle of Man, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation - European Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom.

Biology

Adults of *Eristalinus* occur in a wide variety of habitat types and are found preferably on yellow composite flowers of Asteraceae, white umbellifers of Apiaceae and on Euphorbiaceae. They can also occur far from suitable larval habitats, which are marshy areas and wetlands, lake and river margins, ponds and ditches often in urban areas. The larvae have an elongated posterior section and are aquatic or semiaquatic, feeding by filtering macroorganisms in shallow water with rotting organic matter. These rat-tailed larvae were described or redescribed by Pérez-Bañón *et al.* (2003) for all European *Eristalinus* species.



Type species: *Musca sepulchralis* Linnaeus (subsequent designation) Rondani 1857: 38.

Common names:

FI – leväsurrit;

NB – dronefluer;

SV – slamflugor

List of species found in Europe:

1. *Eristalinus aeneus* (Scopoli, 1763)
 2. *Eristalinus megacephalus* (Rossi, 1794)
 3. *Eristalinus sepulchralis* (Linnaeus, 1758)
 4. *Eristalinus taeniops* (Wiedemann, 1818)
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