



Genus: *Eumerus*



Eumerus strigatus male

(© Sander Bot, licensed to the EU under CC-BY-NC 4.0)

Genus: *Eumerus* Meigen, 1822

Family: Syrphidae

Subfamily: Eristalinae

Tribe: Merodontini

Number of species of this genus found in Europe: 77

Description

Head

In *Eumerus* the face is flat, without a facial tubercle and usually densely dusted and hairy. The eyes are hairy, ranging from very sparse and short hairs (which may look like the eyes are bare) to very dense and long hairs in some species. The eyes in males are mostly holoptic, though in some species of the tricolor group they are slightly dichoptic. In females the eyes are always dichoptic. The shape of the basoflagellomere varies from oval to rectangular or ventrally pointed. The female antenna is usually enlarged compared to the male which is particularly noticeable in the *tricolor* group. The arista is thickened basally and inserted dorsally on basoflagellomere. The fossette, which is located laterally on basoflagellomere, is usually not visible although in some species it may be noticeable; in the *tricolor* group it is clearly expressed as an ellipsoidal apical area.



Eumerus strigatus male habitus



Eumerus crassus male habitus



Eumerus niveitibia male habitus

(© Sander Bot, licensed to the EU under CC-BY-NC 4.0)

Thorax

The thorax in *Eumerus* is always entirely brown to black without colour markings although usually with a pair of longitudinal dust stripes or, at least, with a pair of triangular dusted spots anteriorly on the scutum. It often has a metallic sheen and is hairy, ranging from very short to very long hairs in some species. In the supra-alar area a row of short black setulae is present. The dorsal and ventral hair patches of katepisternum are separated except in the *tricolor* group where the katepisternum is completely hairy.

Wings

The *Eumerus* wing is hyaline, sometimes with a brownish tinge and usually almost entirely covered in microtrichia. The wing vein M_1 is recurrent, sometimes with two small appendices. The vein R_{4+5} is in some species curved into the cell r_{4+5} , but never as deeply as in *Merodon*.

Legs

The legs in *Eumerus* are usually from yellowish-brown to black coloured and hairy. The hind femur has two rows of setae postero-ventrally whose number and shape depend upon the species. The length of the ventral hairs on the hind femur differs according to species. The length and ratio of the leg segments also differ from species to species and can vary from having extremely elongated segments of the hind leg to some segments being very shortened.



Eumerus truncatus male
basoflagellomere



Eumerus tenuitarsis male habitus



Eumerus torsicus male hind tarsus

(© Sander Bot, licensed to the EU under CC-BY-NC 4.0)

Abdomen

The abdomen is usually black although in the *tricolor* group the tergites are often partially or completely reddish. Hairs on the tergites range from very short and adpressed to medium long. The length and the width of sternites are variable between the groups of species, however, for most species, sternite 4 has a characteristic shape and is an important distinguishing character.

General comments on identification to species level

The genus *Eumerus* comprises mainly dark bodied species with a flattened face without a tubercle, usually with pairs of white or grey dust spots on the tergites and an elongated or oval abdomen. Members of this genus are recognisable by the basoflagellomere with a fossette positioned laterally, the recurrent wing vein M_1 , the usually thickened hind femur with two rows of posteroventral setae subapically and by the presence of L-shaped appendages attached to

the posterolateral apices of the aedeagal apodeme of the male hypandrium which is called the hamus.



Eumerus funeralis male head, lateral view



Eumerus sulcitibius male habitus



Eumerus crispus male hind femur, inner side

(© Sander Bot, licensed to the EU under CC-BY-NC 4.0)

Differential diagnosis

The most similar genera present in Europe are *Merodon* and *Platynochaetus*. In both these genera the fossette is positioned dorsally on the basoflagellomere and the face protrudes ventrally whereas *Eumerus* has a flat face in lateral view. In addition, the postero-ventral subapical setulae on the hind femur present in *Eumerus* are absent in *Merodon* which instead is characterised by the hind femur having an anterolateral apical triangular flange which bears slightly thickened setulae at its posterior margin (Doczkal and Pape 2009).



Merodon albifrons male
basoflagellomere

Merodon desuturinus male head,
lateral view

Merodon equestris male habitus

(© Sander Bot, licensed to the EU under CC-BY-NC 4.0)

Geographical distribution and global diversity

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

Adult behaviour and flower preferences. The adults usually fly among low-growing vegetation, often in partially-shaded conditions on the forest edges and settles on bare ground or on leaves of various low-growing plants. They visit different flowers from the following families: Asteraceae, Apiaceae, Euphorbiaceae, Crassulaceae, Araliaceae, Plantaginaceae, Convolvulaceae etc.

Reproduction and larval biology. *Eumerus* larvae are polyphagous and widely saprophagous, being able to live and feed on many different decaying substrates. They can be found in the

underground and other organs of both monocots and dicots, even in very different plants such as Orobanchaceae, Cactaceae, Euphorbiaceae or Asteraceae (Ricarte et al. 2017). Some species are considered pests of diverse ornamental bulbs and ginger (Collin 1920, Smith 1928, Martin 1934, Pérez-Bañón and Marcos-García 1998, Ricarte et al. 2008, Choi et al. 2021).

Seasonal life cycle. Depending on the region, they have one or few generations per year.

i **Type species:** *Syrphus tricolor* Fabricius, 1798

Common names:

SV - månblomflugor;

FI - siplarit;

NO - måneflekkfluer

List of species found in Europe:

A full listing of species occurring in Europe will be provided on the Pollinators web platform.

References

Choi DS, Park DK, Lee YB & Hong KJ (2021) A new species of the genus *Eumerus* (Diptera: Syrphidae) infesting roots of Campanulaceae crops in South Korea. *Journal of Asia-Pacific Entomology*, 24(1), 402–408.

Collin JE (1920) *Eumerus strigatus* Fallen and *tuberculatus* Rondani (Diptera, Syrphidae). *Ent mon Mag*; 56: 102±106.

Martin CH (1934) Notes on the larval feeding habits and life history of *Eumerus tuberculatus* Rondani. *Bull Brooklyn Ent Soc*, 29, 27–36.

Pérez-Bañón C, and Marcos-García MÁ (2013) Life history and description of the immature stages of *Eumerus purpurariae* (Diptera: Syrphidae) developing in *Opuntia maxima*. *EJE*, 95(3), 373–382.

Ricarte A, Marcos-García MÁ & Rotheray G (2008) The early stages and life histories of three *Eumerus* and two *Merodon* species (Diptera: Syrphidae) from the Mediterranean region. *Entomologica Fennica*, 19(3), 129–141.

Ricarte A, Souba-Dols GJ, Hauser M, & Marcos-García MÁ (2017) A review of the early stages and host plants of the genera *Eumerus* and *Merodon* (Diptera: Syrphidae), with new data on four species. *PLoS One*, 12(12), e0189852.

Smith LM (1928) Distinction between three species of *Eumerus* (Syrphidae, Diptera), with description of a new species. *Pan-Pac Entomol*, 4, 137–139.

Attributions

This factsheet was created by Taxo-Fly and is one of the outputs from a network of European Initiatives dedicated to pollinators, such as the EU Pollinator Monitoring Scheme (EUPoMS), the Preparatory Action for EU Pollinator Monitoring Scheme and Indicators (SPRING project), the Horizon 2020 Europe research projects (POSHBEE, SAFEGUARD), and European National action plans for pollinators.

Authors

Photographs: Sander Bot (Taxo-Fly team)

Text: Ana Grković (Taxo-Fly team)

Reviewer: Chris Palmer (Taxo-Fly team)

License

The content of this factsheet is licensed under a Creative Commons Attribution-ShareAlike ([CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/)).

Image rights

Most images created under the Taxo-Fly project have an open Creative Commons license ([CC BY 4.0](#)). However, some images are licensed to the European Union and shared under the Creative Commons license Attribution-NonCommercial 4.0 International ([CC-BY-NC 4.0](#)). This is indicated in the image caption.

