



Genus: *Megasyrphus*



Megasyrphus erraticus male

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Genus: *Megasyrphus* (Linnaeus, 1758)

Family: Syrphidae

Subfamily: Syrphinae

Tribe: Syrphini

Number of species of this genus found in Europe: 1

Description

The single European species, now known as *Megasyrphus erraticus* (Linnaeus, 1758), was for a long time regarded as a species of *Syrphus*. Subsequently it was consigned to the genus *Eriozona*, as *Eriozona erratica* at first, and later as *Eriozona annulipes* (Zetterstedt), under which name it appears in much recent literature. It has also been referred to as *Syrphoides annulipes*. The general appearance of the adult insect is such that it is easy to confuse with European species belonging to various other genera, such as *Didea*, *Epistrophe* and *Syrphus*. Because it is the only European species in its genus, *M. erraticus* can be distinguished from the species of other syrphid genera using identification keys to the genera of syrphids occurring in Europe.

Head

Eye is hairy. Face is yellow with a dark brown to black median stripe that is as broad as 1/4 to 1/3 of the width of the face and overlaps the facial tubercle to the antennal sockets.

There is little sexual dimorphism. The eyes do not meet on the frons in the female, as they do in the male.

Thorax

Scutum is black, shiny. Scutellum is yellow-brown. The pleuron is almost black and shiny. The anepisternum posteriorly and the katepisternum dorsally are grey dusted. The dorsal and ventral katepisternal hair patches are narrowly separated posteriorly, and more widely separated anteriorly. Metasternum is hairy.

Wings

The wing membrane is hyaline and entirely covered in microtrichia. The vein R_{4+5} is distinctly sinuate.

Legs

The legs are extensively yellow, with the tarsi and basal part of femora of all legs darkened to dark brown. The hind coxa apically has a postero-medial tuft of strong hairs.

Abdomen

In shape, the abdomen is broadly oval and distinctly convex, with a strongly developed marginal sulcus on its lateral margins from tergite 2 to tergite 5; tergites 2 – 4 have yellow markings which extend to the lateral margins, a pair of spots on tergite 2 and a complete transverse band on tergites 3 and 4, its posterior margin concave medially. Sternites are yellow, sternites 2 – 4 each have a sub-apical sharply defined black band that is expanded medially.

General comments on identification to species level

Differential diagnosis

In *Megasyrphus erraticus* there is very little sexual dimorphism, and the male and female can be considered together. The species has a body length of 12 – 14mm. The median black stripe on its face, between the antennal insertions and the oral margin distinguishes *M. erraticus* from species of *Epistrophe* and *Syrphus* (in which the face is yellow medially). Its densely hairy eyes distinguish it from *Eupeodes* species and its deeply sinuous wing-vein R_{4+5} , distinguishes it from European species of *Syrphus* and *Parasyrphus* (in which R_{4+5} is almost straight. The fact that the yellow bands on tergites 3 and 4 reach the side margins of the abdomen separate it from *Didea* species (in which the lateral margins of tergites 3 and 4 are continuously black or at least continuously black-haired) and its abdomen is distinctly broader than the thorax,

separating it from many other syrphine genera. Its hairy metasternum distinguishes it from *Dasysyrphus*, *Leucozona*, *Melangyna*, *Scaeva* and *Xanthogramma* species. In many of its morphological features *Megasyrphus* resembles *Eriozona*, though the two genera differ greatly in general appearance. The wings of *Megasyrphus* are hyaline, tergites 2 – 4 have transverse yellow markings and tergite 5 is mostly black. In *Eriozona* there is an infuscated area in the middle of the wing, tergites 2 and 3 are without yellow markings and tergite 5 is entirely reddish yellow.



Syrphus torvus male habitus



Didea fasciata male habitus



Megasyrphus erraticus female abdomen

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Geographical distribution and global diversity

Absent from the Arctic zone, but otherwise occurring from Northern Fennoscandia to the Mediterranean and from Iberia to the Urals and the Caucasus. Increasingly montane towards southern parts of Europe.

The genus *Megasyrphus* includes six species in the Palearctic, Nearctic and northern Oriental regions. One species, *M. erraticus*, is widespread throughout the boreal and temperate forest zone of the Palearctic region, two species are known from the Nearctic region, and another two species were described from China, and one species is known from Himalayas (Nepal and India) (Barkalov & Mutin 2018, Vockeroth 1969 and 1992, Peck 1988, Skevington et al. 2019, Claussen & Weipert 2003). Further East in the Palearctic zone *Megasyrphus erraticus* occurs through Siberia to the Pacific coast (Sakhalin and Kunashir islands) and south to the Himalayas.

Presence in Europe

Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Montenegro, Netherlands, North Macedonia, Norway, Poland, Russian Federation - European Russia, Serbia, Slovakia, Slovenia, Switzerland, Ukraine, United Kingdom.

Biology

Megasyrphus erraticus is a fast-flying, univoltine species with a flight season from May to August, but mostly observed in June and July. It visits the flowers of a wide variety of herbs, shrubs and trees, including the pollen-only male flowers of *Salix* species. Its larvae are aphid-feeding in the foliage of conifers and are known to overwinter in the litter layer of the forest floor. The species occurs in humid *Abies*, *Picea* and *Pinus* forest, and in conifer plantations of northern, temperate and central parts of Europe and mountain massifs of southern Europe.



Type species: *Scaeva annulipes* Zetterstedt, 1838

Common names:

Fl - jymykirvarit

List of species found in Europe:

1. *Megasyrphus erraticus* (Linnaeus, 1758)

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