



Genus: *Criorhina*



Criorhina asilica male habitus

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Genus: *Criorhina* Meigen, 1822

Family:

Syrphidae

Subfamily:

Eristalinae

Tribe:

Milesiini

Number of species of this genus found in Europe: 6

Description

Head

The face is hairy and predominantly to entirely dusted. The lower part of the face projects conically antero-ventrally and has a distinct facial tubercle. The basoflagellomere is much higher than long, with a bare arista. The eyes are bare and dichoptic in both sexes. The eyes are relatively small, resulting in broad parafacia and a broad postocular orbit.

Thorax

The thorax is long and densely haired, with a dusted pattern sometimes visible through the dense hairs. The postpronotum is hairy. The katepimeron is usually hairy, but in some species it is bare. The metasternum is hairy. There is an incomplete postmetacoxal bridge. The scutellum has a marginal rim and a ventral hair fringe.

Wings

The intersection between veins R_1 and C is narrow and the distance between the ends of veins R_1 and R_{2+3} in the vein C is more than twice the length of crossvein m-cu. Vein $R_{4+5}+M_1$ is no longer than crossvein m-cu. Crossvein r-m is strongly oblique and lies in the outer half of cell dm. Vein R_{4+5} is almost straight.

Legs

The legs have no modifications or conspicuous hairs next to the normal hairs. The femora are slightly to very strongly enlarged.

Abdomen

The abdomen is either entirely and densely hairy or with more scattered hairs and the ground colour visible with orange-brown and grey dusting pattern on the tergites. The hairs are predominantly erect.



Criorhina ranunculi female head
lateral



Criorhina asilica male femur



Criorhina pachymera male femur



Criorhina asilica male habitus



Criorhina asilica female abdomen



Criorhina ranunculi male abdomen

General comments on identification to species level

Differential diagnosis

These are medium to large (12-19 mm) densely hairy bumblebee or honey-bee mimics. The face protrudes strongly antero-ventrally with a well-developed facial tubercle and broad parafacia. The antennae are shorter than the length of the head. The arista is bare. The postpronotum and metasternum are both hairy and the scutellum has a marginal rim. Vein R_{4+5} is straight, whilst crossvein r-m is situated in the outer half of cell dm and lies at a strongly oblique angle.

The genera *Criorhina* and *Matsumyia* are very closely related and only differ by the following characteristics: The intersection of R_1 with C is narrow in *Criorhina* whereas in *Matsumyia* it is broad. The distance between the ending of veins R_1 and R_{2+3} in vein C is more than twice the length of crossvein m-cu whereas in *Matsumyia* this distance is only slightly more than m-cu.

Both *Brachypalpus* species and *Chalcosyrphus eunotus* resemble *Criorhina asilica* and *C. pachymera*, and can be differentiated by: the shape of the face, which in *Criorhina* spp. includes a facial tubercle that is lacking in *Brachypalpus* spp. and *Chalcosyrphus* spp.. The scutellum has a marginal rim in *Criorhina* spp. whereas in *Brachypalpus* spp. and *Chalcosyrphus* spp. the scutellum lacks a marginal rim. With the exception of *C. floccosa*, the katepimeron of most *Criorhina* spp. is bare, but is hairy in *Brachypalpus* spp. and in *Chalcosyrphus* spp.. Hairs are confined to the ventral surface of the hind

femora of *Criorhina* spp. whereas in *Brachypalpus* spp. and *Chalcosyrphus* spp. the hind femur has also short bristles.

Criorhina floccosa and *C. ranunculi* are superficially similar to *Pocota personata*, but the head is bigger in these species and the animals do not have a 'hunched' appearance. *P. personata* has a relatively small head and a bit of a hunched appearance.



Criorhina asilica male head lateral



Brachypalpus laphriformis male head lateral



Chalcosyrphus eunotus male head lateral

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Geographical distribution and global diversity

Criorhina is a genus that is found in the Palearctic, Nearctic, Neotropical and oriental region. Worldwide there are about 50 species, in the western Palearctic there are 4 species. A detailed overview of the genus and related genera is given by Moran et al. (2022).

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, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation - European Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

Biology

Adult behaviour and flower preferences. Adults are mainly arboreal but are often encountered on flowering shrubs and, less frequently, on flowering herbs. They are also found sun-basking on leaves. They can also be found on and around wet trunk-base roots looking for the place for oviposition (females) or hovering (males). The males are strong fliers and patrol around flowering shrubs and zigzag quickly through the vegetation. They often behave aggressively towards other large flower-visiting insects and can be found sitting at the base of old senescent trees defending a territory. Sometimes they are found in groups on and around tree trunks that are suitable for egg deposition. The females are also observed at the trunk base of large, old deciduous trees, apparently investigating sites for egg deposition. The adults can occasionally be found at localities several kilometres away from any habitat suitable for egg-deposition.

Flowers visited by the adults include white umbellifers, *Allium ursinum*, *Berberis*, *Crataegus*, *Euonymus*, *Frangula alnus*, *Hieracium*, *Ligustrum vulgare*, *Lonicera xylosteum*, *Rhamnus catharticus*, *Rubus idaeus*, *Sorbus aucuparia*, *Cornus sanguinea*, *Filipendula*, *Frangula alnus*, *Hypericum*, *Photinia*, *Ranunculus*, *Rosa*, *Salix*, *Taraxacum*, *Viburnum opulus*, *Heracleum*, *Rhododendron aureum*, *Weigela middendorffiana*, *Berberis*, *Prunus spinosa*, *Ribes alpina*, *Sorbus aucuparia*, *S. aria*, *S. torminalis*, *Cardamine pratensis*.

Reproduction and larval biology. The larvae develop in decaying wood (trunks, roots) of living or dead deciduous trees, such as tree humus in a trunk cavity of *Fagus* spp.,

and pupae in or near rot holes of *Betula* spp. and *Populus tremula*. Other trees include *Acer pseudoplatanus*, *Fagus sylvestris*, *Fraxinus excelsior*, *Quercus faginea*, *Quercus pyrenaica*, and *Ulmus* spp.

Seasonal life cycle. The flight season ranges from the end of March until August, but most of the species have a spring generation that flies until May/june. Only *C. floccosa* flies until August, together with *Matsumyia berberina*. The species are probably univoltine.



Type species: *Syrphus asilicus* Fallén, 1816

Common names:

FI – paarmapuuhariti;

NB – pelsblomsterfluer;

SV – pälsblomflugor

List of species found in Europe:

1. *Criorhina asilica* (Fallén, 1816)
2. *Criorhina brevipila* Loew, 1871
3. *Criorhina floccosa* (Meigen, 1822)
4. *Criorhina hispanica* Gil Collado, 1930
5. *Criorhina pachymera* Egger, 1858
6. *Criorhina ranunculi* (Panzer, 1804)

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