



Genus: *Rhingia*



Rhingia campestris male habitus

Genus: *Rhingia* Scopoli, 1763

Family: Syrphidae

Subfamily: Eristalinae

Tribe: Rhingiini

Number of species of this genus found in Europe: 3

Description

Head

The face is bare and there is no tubercle but the antero-ventral margin is very strongly produced. The facial grooves are short and the parafacia are well developed. The frons and ocellar triangle are relatively small and are clearly shorter than the eye-contiguity. The eyes are bare and holoptic in the male. The antenna is shorter than the head and has a very long arista that is clearly longer than the antenna. The arista is either bare or has short pilosity.

Thorax

The pro-anepimeron, pro-anepisternum and metasternum are hairy. The meso-anepisternum is also hairy, except anteriorly where it is bare. The scutum has long black bristles along the lateral margins. There are separate dorsal and ventral hair patches on the sterno-pleuron. The scutellum is normally shaped without an apical rim and has a ventral hair fringe.

Wings

The apical cell is acute and the anterior crossvein is placed well before the middle of cell dm. The costa extends well beyond the apex of the wing. The alula is about 3 times longer than wide and otherwise of normal appearance.

Legs

The legs are black and orange-yellow colored and are unmodified.

Abdomen

The abdomen is predominantly red-orange and is oval shaped and emarginate.

General comments on identification to species level

Differential diagnosis

These are small to medium sized (6-11 mm) species in which the antero-ventral part of the face is very strongly produced to form a long “snout”. The face is concave below the antennae, and lacks a facial tubercle; the genae along the ventral eye-margin are well developed. The frons has greyish dusting. The antennae are comparatively short. The basoflagellomere is rounded to oval, and about 1,5 times longer than high. The thorax is black and, in some species, has extensive grey dusting. There is a mixture of black and yellow hairs on the thorax together with long black bristles along the postero-lateral margin of the scutum, on the anepisternum and on the posterior margin of the scutellum. The legs vary in colour from extensively black to largely orange-red. The abdomen is oval, and is relatively broad and predominantly red, usually with a black posterior margin, but it can be completely red. The lateral margins and median part of the abdomen may also have black stripes.

The genus belongs to the tribe Rhingiini with the following characteristics: a pilose postpronotum; a two-segmented aedeagus of the male genitalia; the face has well-defined parafacia; the antenna is shorter than head; in the wing cell r_{4+5} acute, with long petiole; the anterior crossvein (r-m) before the middle of cell dm (but r-m at middle position in *Ferdinandea*); the upper outer cross vein (M_1) is more or less straight; vein R_{4+5} is almost straight.

In *Rhingia* spp. the hairs on the arista are much less than 4 times its maximum width, in the Western European species the arista is bare or has short pilosity. The

postpronotum is hairy. The posterior margin of the scutellum lacks an apical rim. Cross-vein r-m is straight and placed well before the middle of cell dm and vein R₄₊₅ is straight. The femora lack a basal patch of spiny hairs and there are no ventral spines. The first abdominal spiracle is embedded in the meta-epimeron.

Rhingia are instantly recognizable and differ from all the previously mentioned genera because the face is strongly produced; in all other genera the face at most is weakly protruding. The face lacks a facial tubercle. The arista is placed basally on the basoflagellomere. A spiracular hair patch is present on the metathorax; the metasternum is hairy. The costa extends well beyond the apex of the wing whereas in all other genera it ends before the apex. The alula of *Rhingia* spp. is less than 3 times longer than wide. Some species of the genus *Brachyopa* could be misidentified as species of the genus *Rhingia* based on the similarity of the colour of the thorax and abdomen. The long snout-like face immediately separates *Rhingia* from the much less protruding face in the grey-red coloured species of *Brachyopa*.



Rhingia campestris female
head lateral



Cheilosia personata male
head lateral



Portevinia maculata male
head lateral



Rhingia borealis female
antenna



Rhingia rostrata male habitus



Brachyopa bicolor male habitus



Brachyopa bicolor male head lateral

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Geographical distribution and global diversity

This genus occurs in all regions except the Australian region and Antarctica. There are 37 described species, of which 5 are recognised in the Palearctic region, 3 of which are found in the Western Palearctic. In the Nearctic there is 1 known species, and in the Neotropical region there are two known species. In the Afrotropics there are 16 described species and in the Oriental region there are 13 known species.

Presence in Europe

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

Biology

Adult behaviour and flower preferences. These species can be found in many semi-natural habitats and may also occur in rural gardens. One species (*R. borealis*) typically occurs in forested stream valleys, in shady and semi-shady conditions.

Adults are often observed flying around or sitting on sunlit leaves in shady forest edges, along forest trails and clearings which are rich in vegetation. They also visit flowers with concealed nectar sources, which they can reach with their elongated mouthparts.

The adults visit many species of herbs and shrubs, with or without concealed nectar such as *Geum rivale*, *Aegopodium podagraria*, *Ajuga reptans*, *Anchusa officinalis*, *Anthriscus sylvestris*, *Angelica archangelica*, *Ballota nigra*, *Berberis vulgaris*, *Calluna vulgaris*, *Caltha palustris*, *Cardamine pratensis*, *Centaurea* spp., *Crataegus* spp., *Crepis* spp., *Dactylorrhiza* spp., *Echium vulgare*, *Frangula alnus*, *Geranium sylvaticum*, *Geranium robertianum*, *Iris pseudacorus*, *Lamium* spp., *Mentha aquatica*, *Prunus spinosa*, *Rubus arcticus*, *Rubus idaeus*, *Salix caprea*, *Sorbus aucuparia*, *Linnaea borealis*, *Potentilla erecta*, *Ranunculus acris*, *Lonicera xylosteum*, *Lychnis flos-cuculi*, *Saxifraga* spp., *Cirsium* spp. *Hypericum* spp., *Succisa pratensis*, *Veronica* spp. and also *Campanula trachelium*, *Phyteuma spicatum*, *Silene dioica* and *Senecio ovatus*.

Reproduction and larval biology. The larvae of *R. campestris* are subaquatic, living as saprophages in moist cow dung and probably in dung of other animals, and can be expected to be able to live in accumulated rotten foliage. The larval stages of *R. rostrata* are not described, but it is expected to live in the droppings of large animals. It has, however, been bred from 'hoverfly lagoons' (see Rotheray undated) so it looks as though this species also has some form of semi-aquatic preferences.

Seasonal life cycle. *Rhingia* species in Western Europe are bivoltine. *R. campestris* flies from April until October, with peaks in May-June and August. The flight period of *R. borealis* is from May until August, and in Scandinavia from early June until early

September. In central Europe, it probably has separate spring (May/June) and summer (July/August) generations.

R. rostrata has a spring generation from late April to early June and the summer generation from mid-July until early September, or somewhat later until October in Great Britain and further North.



Type species: *Conops rostrata* Linnaeus, 1758

Common names:

FI - nokkakeilaset;

NB - snuteblomsterfluer;

SV - näbblomflugor

List of species found in Europe:

1. *Rhingia borealis* Ringdahl, 1928
2. *Rhingia campestris* Meigen, 1822
3. *Rhingia rostrata* (Linnaeus, 1758)

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Attributions

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