



## Genus: *Leucozона*



*Leucozона glauca* male

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**Genus:** *Leucozона* Schiner, 1860

**Family:** Syrphidae

**Subfamily:** Syrphinae

**Tribe:** Syrphini

**Number of species of this genus found in Europe: 4**

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## Description

### Head

The face is rather narrow, but distinctly broadened ventrally. It is densely to moderately whitish grey dusted, dull yellow with a conspicuous facial tubercle and a broad shining brownish black median stripe and oral margin (s.g. *Leucozona*), otherwise almost entirely yellow without a distinct facial stripe (s.g. *Ischyrosyrphus*). Males are holoptic, females dichoptic. The eye is densely covered in long hairs, usually about 0.15 mm. The frontal triangle is black in ground colour, black haired and densely broadly dusted along eyes like the face, it is shiny black only above the antenna. The frons of the female is the same, only sometimes it is predominantly yellow haired with black hairs only on the shiny black area above the antenna. The anterior angle of approximation of the eyes is around 90°. The vertical triangle is black, black haired and usually densely yellowish grey dusted. The antenna is brownish black, simple and short, the basoflagellomere is rounded or slightly elongated oval, up to 1.5 times longer than high.

### Thorax

The scutum is black, rather dull, densely yellowish grey dusted. The scutellum is dull yellow to dark brown, often with brownish black anterolateral corners and anterior margin. Subscutellar fringe is present. The mesopleuron is black, semishiny, grey silvery dusted with faint bluish shiny. The anterior anepisternum, meron, metepisternum and metepimeron are bare. The dorsal and ventral katepisternal hair patches are narrowly joined posteriorly, otherwise separated and the metasternum is bare. The haltere is yellow or brown.

### Wings

The wing membrane is hyaline unmarked (in s.g. *Ischyrosyrphus*) or with a prominent dark brown rather transverse spot in the mid length of each wing (in s.g. *Leucozona*). The wing membrane is entirely microtrichose or with bare areas on about the basal one third. The vein R<sub>4+5</sub> is almost straight. The pterostigma is dark brown, unicolour and fills cell sc to its apex. The surface of the lower lobe of the calypter is without long erect hairs.

## Legs

The legs are simple, mostly brownish black with knees and basal halves of tibiae dull yellow or with front and mid tibiae and tarsi yellow and only slightly brownish.

## Abdomen

The abdomen is largely black with tergite 2 mostly or entirely yellowish white to whole submetallic bluish grey, but usually the lateral margins of the tergite remain yellow. It is in two types of shapes and colour patterns. In the case of the subgenus *Leucozona*, the abdomen is rather broadly oval, with a strong marginal sulcus from the base of tergite 3, and with tergites 3 and 4 black (except for the narrow base of tergite 3) without distinct transverse bars. In the case of the subgenus *Ischyrosyrphus* the abdomen is narrow with almost parallel sides practically without marginal sulcus and with a pair of distinct narrow subbasal yellowish white or grey bars.

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*Leucozона lucorum* male habitus



*Leucozона glaucia* male habitus



*Leucozона glaucia* female abdomen

## General comments on identification to species level

### Differential diagnosis

Genus *Leucozона* comprises slender to robust medium sized hoverflies with densely haired eyes and with tergite 2 mostly or entirely yellowish white or submetallic bluish grey, while the following tergites are entirely black (subgenus *Leucozона*) or with only narrow bars of the same colour (subgenus *Ischyrosyrphus*). In the case of s.g. *Leucozона* the wing also has a prominent dark brown transverse spot at the mid length. Only *Epistrophe leiophthalma* has almost identical colouration to the subgenus *Ischyrosyrphus*, but this species has virtually bare eyes. Several next bumblebee mimic species superficially resembles the species of the subgenus *Leucozона* by the colouration of abdomen and the spot on the wing. At first it is *Eriozona syrphoides*, this species differs by a red abdominal apex and tergite 2 is black in ground colour, only whitish yellow haired. Also some bumble bee mimic species of unrelated genera are superficially similar, *Cheilisia illustrata* with black face and scutellum, and some species of the genus *Volucella* with plumose arista.



*Volucella pellucens* male habitus



*Cheilosia illustrata* male habitus



*Epistrophe leiophthalma* male habitus



*Eriozona syrphoides* male habitus

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## Geographical distribution and global diversity

Four of the 15 species of the genus *Leucozona* are widely distributed in Europe. Two belong to subgenus *Leucozona* s. str. and two to the subgenus *Ischyrosyrphus*. Another two species are known from the Palaearctic region, one of them even from the North Caucasus Mountains on the European border in Russia. Another three species are known from the Nearctic region and the rest six species were described south to Himalayas (India, Nepal) or from China (Vockeroth 1969 and 1992, Skevington et al. 2019, Ghorpadé 1994, Barkalov & Mutin 2018, Peck 1988, Doczkal 2000b).

### Presence in Europe

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

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## Biology

*Leucozonia* contains species of moist open areas in deciduous forests with stands of tall flowering herbs such as umbellifers. Adults are capable fliers but not migratory. The larvae are predators of aphids, probably mainly on tall herbs (Apiaceae, *Brevicoryne*, *Uroleucon*, *Rumex* etc.) and are probably also at least partly arboreal (Rojo et al. 2003, Bartsch et al. 2009b, Vockeroth 1992, Speight 2020a).



**Type species:** *Musca lucorum* Linnaeus, 1758

**Common names:**

FI - vyökirvarit;

SV - lyktblomflugor;

NB - lykteblomsterfluer

## List of species found in Europe:

1. *Leucozonia Ischyrosyrphus glauca* (Linnaeus, 1758)
2. *Leucozonia Leucozonia inopinata* Doczkal, 2000
3. *Leucozonia Ischyrosyrphus laternaria* (Müller, 1776)
4. *Leucozonia Leucozonia lucorum* (Linnaeus, 1758)

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