



Genus: *Primocerioides*



Primocerioides regale female habitus

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Genus: *Primocerioides* Shannon 1927

Family:

Syrphidae

Subfamily:

Eristalinae

Tribe:

Cerioidini

Number of species of this genus found in Europe: 1

Description

Head

The antennifer is much shorter than wide at the base. The face has long parafacia and a large anterior tentorial pit. The facial tubercle is almost absent. The hairs on the face, frons, vertex, ocelli and dorsal surface of the head capsule are long and white. The hairs on the genae are longer, about twice as long as the width of the front femur. The eye is white pilose.

Thorax

The hairs on the thorax and terga are long. The postpronotum is hairy. The basisternum is higher than wide with a rounded dorsal margin and the ventral margin with two large triangular extensions. The anepisternum and the anepimeron are separated by a membranous area. The metasternum is long pilose and without modifications. The postmetacoxal bridge is incomplete.

Wings

The anterior half of the wing is brownish infuscated. Vein R_{4+5} is straight, with a short appendix into cell r_{4+5} . Cross-vein r-m lies in the apical 1/3 of cell dm. Cell r_1 is open.

The dorsal lobe of the calypter has a dense fringe of long hairs.

Legs

The legs are simple, the front coxa is broad, about as wide as long, and with a short and very weak groove dorsally.

Abdomen

Tergite 2 is wider than long and is not constricted. The callus of tergite 1 is absent. The callus of sternite 1 is narrow and elongate. The hypopygium is white pilose.

General comments on identification to species level

Differential diagnosis

These are almost perfect wasp mimics with black, yellow, orange and red markings and silvery grey dust on the body. The eyes and thorax are hairy, in contrast to all other genera within the tribe Cerioidini. The face has a characteristic pattern of black spots. The head lacks an antennifer. The antennae are long and orange-red coloured. The thorax has yellow spots and stripes and the scutellum is entirely yellow. The abdomen has yellow spots and bands and there is silvery-grey dust on the tergites 3 and 4. The legs are predominantly yellow.

In Europe there is only one species, *Primocerioides regale*, which is big for a hoverfly (13-17 mm). *Primocerioides* lies within the subfamily Eristalinae in the tribe Cerioidini, together with *Ceriana* and *Sphiximorpha*, based on the hairy postpronotum and the hairy metasternum. The antenna has a terminal arista. Cross-vein r-m is oblique and lies beyond the middle of cell dm. There are no spines on the base of the femora.

Primocerioides is also differentiated from *Ceriana* and *Sphiximorpha* by the following characteristics: the antennifer is almost absent, as in *Sphiximorpha*, whilst in *Ceriana* the antennifer is much longer than the scape of the antenna. The eye of

Primocerioides is hairy, whereas in *Ceriana* and *Sphiximorpha* it is bare. Tergite 2 of *Primocerioides* (and *Ceriana*) is wider than long and is not constricted whereas in *Sphiximorpha* tergite 2 is longer than wide, and clearly constricted.



Primocerioides relage
female head frontal



Primocerioides regale male
habitus



Sphiximorpha subsessilis
male habitus



Ceriana glaebose female
head lateral

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Geographical distribution and global diversity

This is a small genus from the Palearctic region. There are 3 species described, of which one is known from Europe. The other species are recorded from China and Japan.

The European species, *Primocerioides regale* is considered to be endemic to the Balkan Peninsula in Europe. It is known from three countries: Serbia, in the city of Belgrade, where it was first described and recently rediscovered in the same locality (van Steenis et al. 2019). In northeastern Greece, where it is known from four localities in Dardia National Park and from one locality on Lesvos Island (Ricarte et al. 2012 (as *Sphiximorpha hiemalis*), Vujić et al. 2020). It was found in the south of Cyprus (Speight

2020), although its continued presence here is uncertain as it is known from a single very old record.

Presence in Europe

Cyprus, Greece, Serbia.

Biology

Adult behaviour and flower preferences. The adults can be found on streams along thermophilous oak forests of *Carpinus* and *Quercus*, *Quercus frainetto* and *Quercus pubescens* and olive orchards - although only one record comes from olive orchards. It is normally found at low elevations (around 300 m in mainland Greece).

Reproduction and larval biology. This is known to be a saproxylic species, although the larval and pupal stages are not fully understood.

Seasonal life cycle. The adults are active from late February to late June.



Type species: *Ceriodes petri* Hervé-Bazin 1914

List of species found in Europe:

1. *Primocerioides regalis* Violovitsch, 1985

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