



Pollinator Academy

# Genus: *Sphiximorpha*



**Genus:** *Sphiximorpha* Rondani 1850

**Family:** Syrphidae

**Subfamily:** Eristalinae

**Tribe:** Cerioidini

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

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## Description

### Head

The antennifer is much shorter than wide. The face has a long paraface and a large or deep anterior tentorial pit. The facial tubercle is weak to nearly absent. The eye is bare.

### Thorax

The hairs on the thorax and tergites are comparatively long. The postpronotum is hairy. The basisternum is higher than wide, with a nearly straight dorsal margin and two triangular lobes on the ventral margin. The anepisternum and the anepimeron are separated by a membranous area. The metasternum with long hairs and without modifications. The postmetacoxal bridge is incomplete.

### Wings

The anterior half of the wing is darkened, brownish. Vein  $R_{4+5}$  is straight with an appendix into cell  $r_{4+5}$ . Crossvein  $r-m$  lies on the apical 1/3 of cell  $dm$ . Cell  $r_1$  is open. The dorsal lobe of the calypter has a fringe of short and rather dense hairs.

### Legs

The front coxa is broad, about as wide as long, with a short groove dorsally.

### Abdomen

Tergite 2 is somewhat longer than wide and slightly constricted anteromedially. The callus of tergite I is absent. The callus of sternite 1 is elongate, oval and partly sclerotized.

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## General comments on identification to species level

### Differential diagnosis

*Sphiximorpha* is placed within the Eristalinae and the tribe Cerioidini, together with *Ceriana* and *Primocerioides*, based on the following characteristics: The postpronotum and metasternum are hairy. The antennae have a terminal arista. Cross-vein r-m is oblique and lies beyond the middle of cell dm. The bases of the femora lack spines.

The species of this genus are black and yellow, virtually hairless and resemble potter wasps (Hymenoptera, Vespidae, Eumeninae). The head has long black or yellow antennae. The thorax has yellow spots and stripes and the scutellum is at least partly yellow. The abdomen has yellow bands and in some species there are also extensive grey-yellow dust markings.

*Sphiximorpha* is further differentiated from *Ceriana* and *Primocerioides* by the following characteristics: The frontal prominence is almost absent as it is in *Primocerioides*, whereas in *Ceriana* the frontal prominence is much longer than the scape of the antenna. The eye of *Sphiximorpha* is bare as it is in *Ceriana*, whereas it is hairy in *Primocerioides*. Tergite 2 is longer than wide in *Sphiximorpha* and clearly constricted whereas in *Ceriana* and *Primocerioides* tergite 2 is wider than long and is not constricted.



*Sphiximorpha petronillae* male habitus



*Ceriana conopsoides* male habitus



*Primocerioides regale* male habitus

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## Geographical distribution and global diversity

This is a cosmopolitan genus that occurs in all geographical regions except for New Zealand and Antarctica. It comprises around 55 described species and several undescribed species, especially from tropical regions (Ssymank et al. 2021).

There are 4 species in the Western Palearctic.

### Presence in Europe

Albania, Austria, Belarus, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Czech Republic, France, Germany, Greece, Hungary, Italy, Montenegro, Netherlands, North Macedonia, Poland, Romania, Russian Federation - European Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey - European part, Ukraine.

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## Biology

**Adult behaviour and flower preferences.** Adults of *Sphiximorpha* are found in alluvial soft- and hardwood forests with *Populus nigra*, as well as riverine gallery forest with *Alnus* and *Salix*, Mediterranean *Fraxinus angustifolia* and *Quercus faginea* forest, Mediterranean wet *Liquidamber orientalis* forest and *Quercus* and *Pinus* forest. They can also be found in urban parks and avenues where old trees such as *Populus* and *Aesculus hippocastanum* are present. Sometimes the habitat is very specific, in veteran thermophilous *Quercus cerris* forest, *Quercus frainetto* and humid *Castanea*, *Quercus* and *Laurus* forest.

The adults of *S. garibaldii* fly into oak cavities with narrow openings. In the evening, males sit sunning themselves on the bark of veteran trees, apparently awaiting the arrival of females. After rain, the adults visit damp mud and drying puddles to drink. After rain on hot days, individuals of *S. euprosopa* have been observed drinking at puddles on forest tracks. Adults have been observed visiting flowers of *Euphorbia*, *Pyracantha coccinea*, *Smyrnum*, *Crataegus* and *Pyrus amygdaliformis*.

**Reproduction and larval biology.** The larvae of some of the species have yet to be described. *S. subsessilis* is a species with a saproxylic larva that develops in sap runs and under-bark cavities on the trunks of old deciduous trees (eg. *Populus*, *Alnus*, *Salix*) and veteran Evergreen Oak (*Quercus suber*) trees. The larvae were first studied by Rotheray et al. (2006) from larvae collected from exuding sap at the base of an *Abies alba* tree.

**Seasonal life cycle.** Adults fly from April to June and are probably univoltine.



**Type species:** *Ceria subsessilis* Illiger, 1807

## List of species found in Europe:

1. *Sphiximorpha euprosopa* (Loew, 1869)
2. *Sphiximorpha garibaldii* Rondani, 1860
3. *Sphiximorpha petronillae* Rondani, 1850
4. *Sphiximorpha subsessilis* (Illiger in Rossi, 1807)

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## Attributions

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