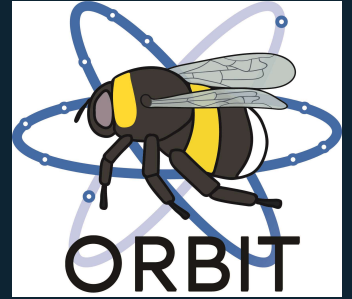




Pollinator Academy

# Genus: *Systropha*



Female

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Male

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**Genus:** *Systropha* Illiger, 1805

**Clade:** Anthophila

**Family:** Halictidae

**SubFamily:** Rophitinae

**Tribe:** Rophitini

**Number of species of this genus found in Europe: 3**

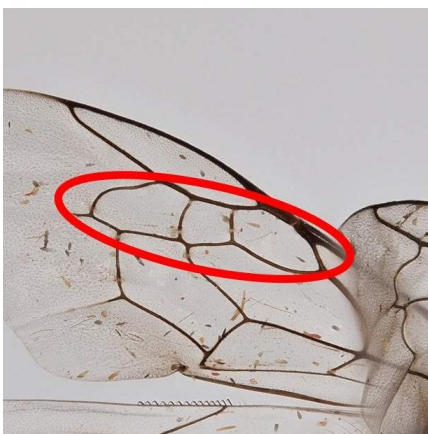
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# Morphology & diagnosis

*Systropha* are small to medium-sized bees (8-11mm). Their cuticula is black with some sparse grey pilosity. They are short-tongued bees. Their head is small in proportion, with a short clypeus. The antennae are club-shaped and are inserted very low on the face, as in all Rophitinae. Their wings show three submarginal cells, the first being the largest and the second the smallest. The basal vein of the wing is curved. The hair does not form metasomal bands. Females show a pollen brush covering the sides and most of the dorsal side of the metasoma, which makes them easily recognizable in the field. Males are also quite easy to recognize, as the last antennal segments are folded forming a triangle. Males also show spines in the second and third metasomal segments.

## Summary of distinctive traits

- 3 submarginal cells (a)
- Short clypeus and subantennal space so that the antennae are inserted below the middle of the eyes (b)
- Curled antennae in males (c)



(a) *Systropha planidens* Female



(b) *Systropha planidens* Female



(c) *Systropha planidens* Male

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# General comments on identification to species level

Sternites and genitalia should be visible for identification.

The two European species can be distinguished by the vertex length of the females (short in *S. curvicornis*), and the shape of teeth of the male's sternite 2 and 3 (pointed in *S. curvicornis*). Both species normally also fly at different times.

## Morphologically similar genera, and how to distinguish them

- ***Systropha* - *Dufourea*, *Rophites* and *Rophitoides***

*Systropha* have 3 submarginal cells.

*Dufourea*, *Rophites* and *Rophitoides* have 2 submarginal cells.

- ***Systropha* - *Halictus*, *Lasioglossum***

*Systropha* have a short clypeus and subantennal space so that the antennae are inserted very low on the face. The basal vein is slightly curved.

*Halictus* and *Lasioglossum* have longer clypeus and subantennal space. The basal vein is distinctly curved.

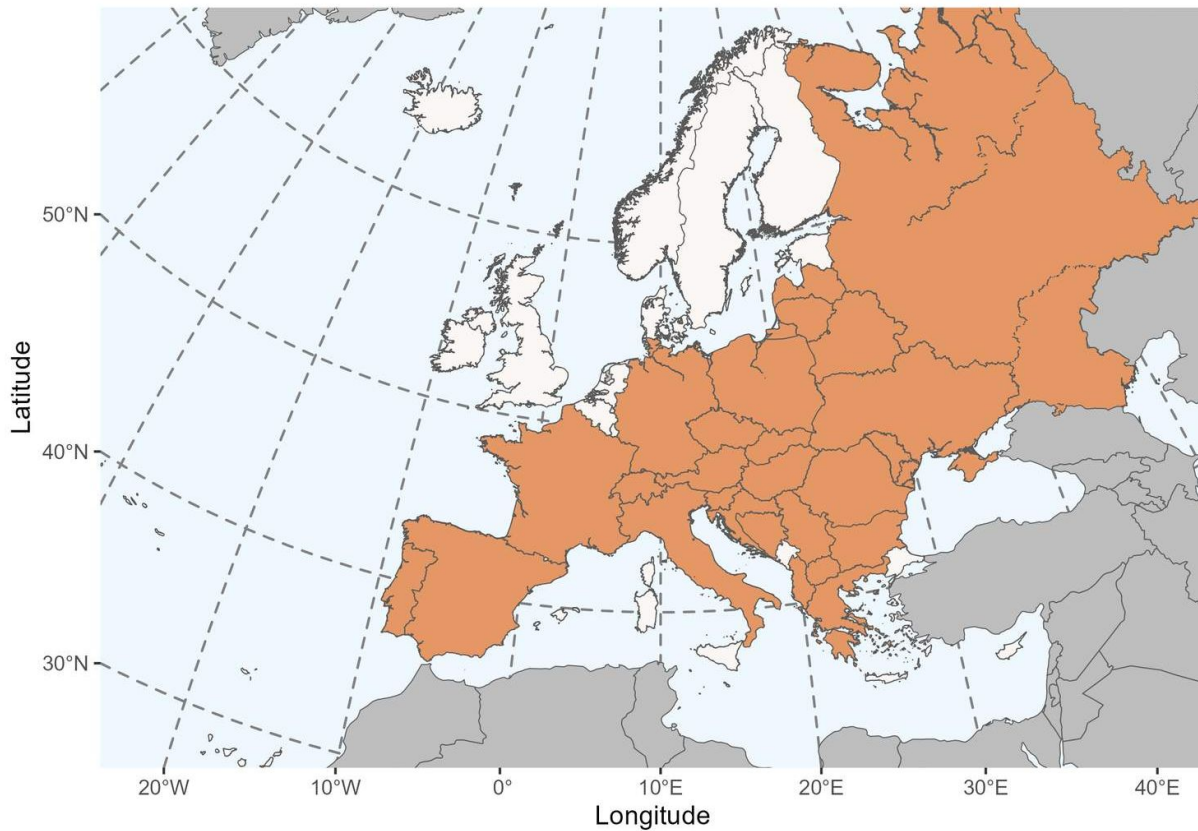
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# Geographical distribution and global diversity

The genus *Systropha* has 28 species in the Old World. It is distributed north up to Germany, Morocco in the West and Tajikistan in the East. It reaches southern Africa.

Three subgenera are recognized at the global scale (Patiny & Michez 2006): *Systropha*

s.str., distributed across the Palearctic and presenting the highest diversity with 17 species; *Austrosystropha*, distributed across Sub-Saharan Africa and presenting 10 species (Patiny et al. 2013); and *Systrophidia*, with only one species present in Southern Africa.



## Presence in Europe

Albania, Austria, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, France (mainland), Germany, Greece (mainland), Hungary, Italy (mainland), Latvia, Lithuania, Moldova, North Macedonia, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain (mainland), Switzerland, Ukraine

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## Biology

### Seasonal life cycle

They fly in summer and are univoltine. Males appear 2-3 weeks before the females. They hibernate as larvae.

### Reproduction

Details about their reproduction are not known.

### Nesting

These two species are solitary but sometimes nest in dense aggregations. They are ground-dwelling and prefer ground with poor or sparse vegetation.

### Parasites

They are parasitized by *Biastes brevicornis*.

### Floral preferences

They are oligolectic on the genus *Convolvulus* (Convolvulaceae). They forage mostly in the morning. Females show a unique trait, that pollen is carried on the dorsal side of the metasoma.



**Type species:** *Andrena spiralis* Olivier, 1789 = *Eucera curvicornis* Scopoli, 1770, monobasic.

**Synonyms:** n/a

**Etymology:** from Greek *syn-* = with, and *troph-* = to feed (by extension, grow, develop); according to Friese, from Greek rolled up, referring to rolled antennae of male.

**Common names:**

FR: les systrophes

GER: der Spiralhornbienen (= bee with spiral antennae)

**List of species found in Europe:**

1. *Systropha (Systropha) curvicornis* (Scopoli, 1770)
2. *Systropha (Systropha) grandimargo* Pérez, 1905
3. *Systropha (Systropha) planidens* Giraud, 1861

**References**

Patiny S., Baldock D. & Michez D. 2013. Systematics of the bee subgenus *Systropha* (*Austrosystropha*) (Hymenoptera: Halictidae): Description of a new species and proposal of a new sex association. *Zootaxa*, 3647: 577-584.

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Pesenko, Y.A., Banaszak, J., Radchenko, V.G. and Cierzniak, T. 2000. Bees of the family Halictidae (excluding *Sphecodes*) of Poland. Wydawnictwo Uczelniane Wyższej Szkoły Pedagogicznej w Bydgoszczy, Bydgoszcz.

Westrich, P. 1989. Die Wildbienen Baden-Württembergs. Eugen Ulmer GmbH, Stuttgart.

## Attributions

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### Authors

Photographs: Paolo Rosa (ORBIT consortium)

Text: ORBIT consortium

Reviewers: Simone Flaminio (ORBIT consortium)

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