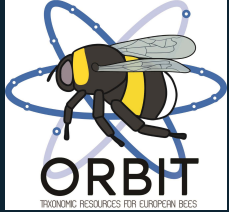




Pollinator Academy

# Genus: *Stelis*



Female

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Male

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**Genus:** *Stelis* Panzer 1806

**Clade:** Anthophila

**Family:** Megachilidae

**SubFamily:** Megachilinae

**Tribe:** Anthidiini

**Number of species of this genus found in Europe:** 26

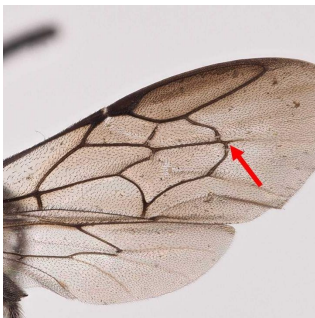
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# Morphology & diagnosis

They are small to medium sized bees (4-12mm). They are small robust black bees, and some species, as most of the Anthidini, present yellow markings across the body. Pilosity is almost absent. The clypeus is not protruding in relation to the eyes. Their forewings bear two submarginal cells and the second recurrent vein is postfurcal. They show modified tooth-like axillae. They do present arolium between the claws, and males show two teeth on the apex of anterior and median tibia. As they are cleptoparasites, females do not show ventral scopa.

## Summary of distinctive traits

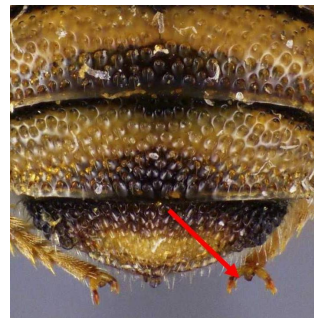
- 2nd recurrent vein reaching beyond submarginal cell 2 (a)
- No ventral scopa in females (cleptoparasitic bees) (b)
- Presence of arolium (c)
- Two widely separated apical teeth on anterior and median tibiae (in the *Stelidomorpha* subgenus one tooth is much larger than the second) (d)
- Axillae apically separated from the scutellum (e)



(a) *Stelis breviscula*  
Female



(b) *Stelis breviscula*  
Female



(c) *Stelis denticulata* Male



(d) *Stelis signata* Male



(e) *Stelis signata* Male

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## General comments on identification to species level

Species identification relies on different criteria including overall size, pilosity, as well as shape, coloration and punctuation of the head, clypeus, mesepisternum, propodeum, hind-basitarsus and metasomal tergites. It is recommended to open the mandibles and the wings.

### Morphologically similar genera, and how to distinguish them

- ***Stelis* - *Afranthidium*, *Anthidium*, *Icteranthidium* & *Pseudoanthidium***

*Stelis* species do have an arolium between their claws, and females don't have a ventral scopa.

*Afranthidium*, *Anthidium*, *Icteranthidium* & *Pseudoanthidium* species don't have an arolium between their claws, and females do have a ventral scopa.

- ***Stelis* - *Anthidiellum*, *Eoanthidium*, *Rhodanthidium* & *Trachusa***

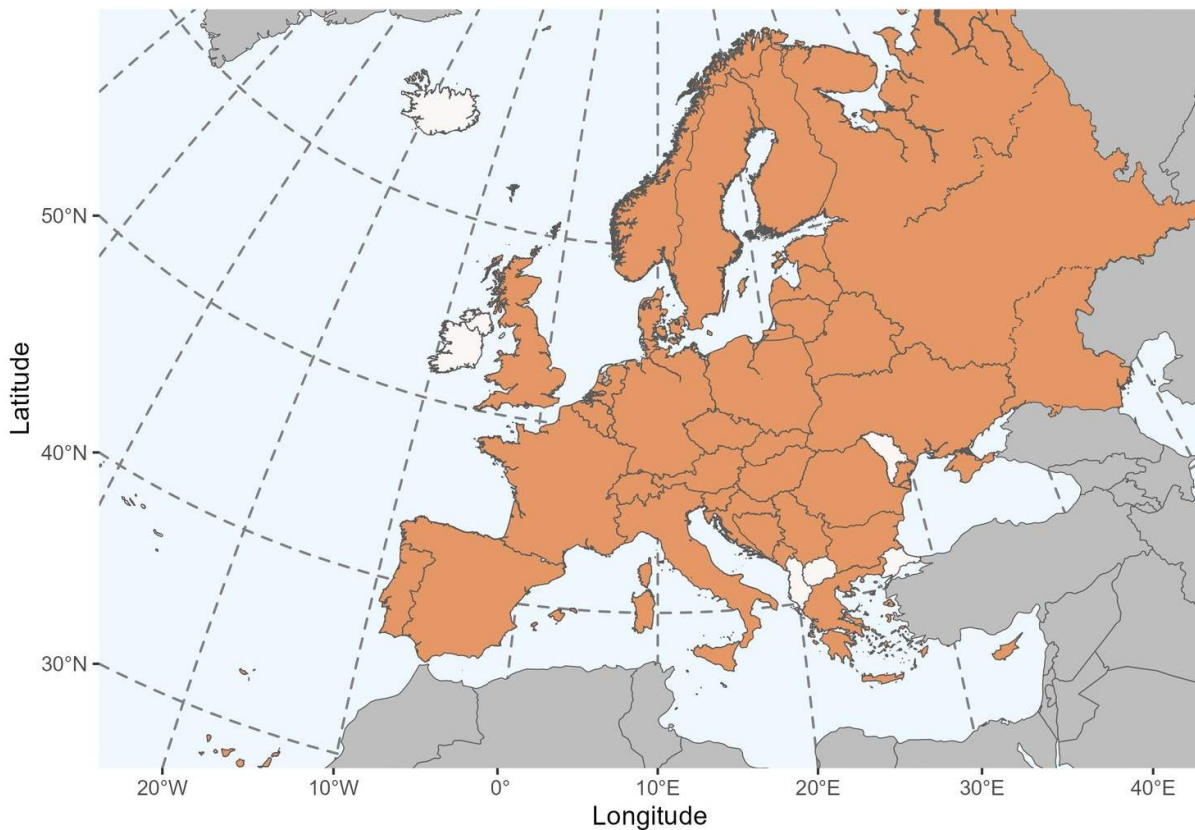
*Stelis* species may have pointed axillae, males have two widely separated apical teeth on their anterior and median tibiae and females have no ventral scopa.

*Anthidiellum*, *Eoanthidium*, *Rhodanthidium* & *Trachusa* species have rounded

axillae, males have one apical tooth (sometimes bifid) on their anterior and median tibiae and females have a ventral scopa.

## Geographical distribution and global diversity

The genus *Stelis* shows a Holarctic distribution, extending to Eastern Africa, Central America and Malaysia. There are 22 species described in the Western Palearctic. At the global scale, this genus presents 7 subgenera, from which 5 are present in Europe. Population densities are normally very low.



### Presence in Europe

Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Montenegro, Netherlands, Norway, Poland Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, UK.

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## Biology

### Seasonal life cycle

They are summer species. They hibernate in the form of larvae.

### Reproduction

Details of their reproduction are unknown.

### Nesting

They are all brood parasitic bees.

### Host species

They parasitize mainly other species of the tribe Anthidiini, along with other genera of the Megachilidae family, principally *Heriades*, *Hoplitis* and *Osmia*, and possibly also *Ceratina* (Apidae). Some species are highly specialist on their host choice, other parasitize a wider range of host species.

### Floral preferences

They are polylectic, as they only forage for nectar.

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**Type species:** *Apis aterrima* Panzer, 1798 (not Christ, 1791) = *Apis punctulatissima* Kirby, 1802, monobasic.

**Synonyms:** *Doxanthidium* Pasteels, 1969; *Trachusa* Jurine, 1801; *Gyrodroma* Klug in Illiger, 1807; *Gymnus* Spinola, 1808; *Ceraplastes* Gistel, 1848; *Chelynia* Provancher, 1888; *Melanostelis* Ashmead, 1898; *Stelidium* Robertson, 1902; *Microstelis* Robertson, 1903.

**Etymology:** the name derives from the Greek root 'stele', meaning 'column'

**Common names:**

FR : les stelis

GER : der Dusterbienen

NL : de tubebijen

EN : the dark bees

## List of species found in Europe:

1. *Stelis (Stelis) aculeata* Morawitz, 1880
2. *Stelis (Stelidomorpha) aegyptiaca* (Radoszkowski, 1876)
3. *Stelis (Heterostelis) annulata* (Lepeletier, 1841)
4. *Stelis (Stelis) breviscula* (Nylander, 1848)
5. *Stelis (Pseudostelis) denticulata* Friese, 1899
6. *Stelis (Stelis) franconica* Blüthgen, 1930
7. *Stelis (Heterostelis) gigantea* Friese, 1921
8. *Stelis (Heterostelis) hispanica* Dusmet y Alonso, 1921
9. *Stelis (Heterostelis) hungarica* Noskiewicz, 1962
10. *Stelis (Stelis) iugae* Noskiewicz, 1962
11. *Stelis (Stelis) minima* Schenck, 1861

12. *Stelis (Pseudostelis) minuta* Lepeletier & Audinet-Serville, 1825
13. *Stelis (Stelis) murina* Pérez, 1884
14. *Stelis (Stelidomorpha) nasuta* (Latreille, 1809)
15. *Stelis (Stelis) odontopyga* Noskiewicz, 1926
16. *Stelis (Stelis) orientalis* Warncke, 1992
17. *Stelis (Stelis) ornatula* (Klug, 1807)
18. *Stelis (incertae sedis) ortizi* Schwarz & Gusenleitner, 2010
19. *Stelis (Stelidomorpha) pentelica* Mavromoustakis, 1963
20. *Stelis (Stelis) phaeoptera* (Kirby, 1802)
21. *Stelis (Stelis) punctulatissima* (Kirby, 1802)
22. *Stelis (incertae sedis) rhodia* Mavromoustakis, 1960
23. *Stelis (Heterostelis) ruficornis* Morawitz, 1872
24. *Stelis (Stelis) scutellaris* Morawitz, 1894
25. *Stelis (Protostelis) signata* (Latreille, 1809)
26. *Stelis (Stelis) simillima* Morawitz, 1876

### **Subgenera found in Europe:**

1. *Heterostelis* Timberlake, 1941
2. *Protostelis* Friese, 1895
3. *Pseudostelis* Popov, 1956
4. *Stelidomorpha* Morawitz, 1875
5. *Stelis* s. str Panzer, 1806

# References

## Attributions

This factsheet was created by ORBIT and is one of the outputs from a network of European Initiatives dedicated to pollinators, such as the EU Pollinator Monitoring Scheme (EUPoMS), the Preparatory Action for EU Pollinator Monitoring Scheme and Indicators (SPRING project), the Horizon 2020 Europe research projects (POSHBEE, SAFEGUARD), and European National action plans for pollinators.

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