Pollinator Academy

Genus: Pseudoanthidium

Female

Male

Genus: *Pseudoanthidium* Friese 1898

Clade: Anthophila

Family: Megachilidae

SubFamily: Megachilinae

Tribe: Anthidiini

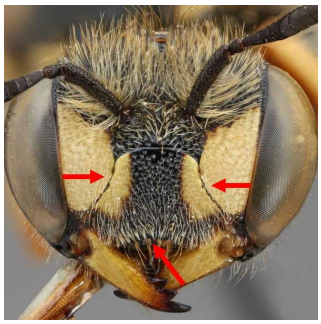
Number of species of this genus found in Europe: 10

Morphology & diagnosis

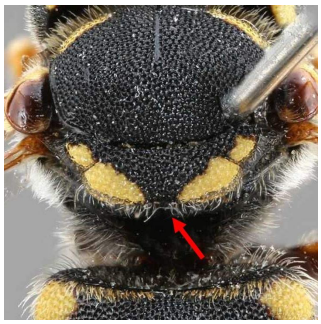
They are small to medium sized bees (7-9mm). They show multiple yellow spots across the body. They have long tongue morphology. They have mandibles with 5-18 sharp teeth separated by acute notches. The clypeus is not protruding in relation to the eyes, and it is apically twice as wide as basally (except in sugbenus *Royanthidium*, where it is 1.5 times as wide). The clypeus basal margin is convex upwards and the lateral margins are curved inwards, not delineating an angle. The basal margin of the clypeus is strongly arched, the same than the subantennal sutures. They normally lack a lower preoccipital carina, and when is present it does not reach the base of the mandible. They have two submarginal cells, and the second recurrent vein is postfurcal. The pronotal lobes are often carinate but only rarely elevated as translucent lamella. The scutellum has a posterior margin produced posteriorly, overhanging metanotum and propodeum and with wide emargination, almost bilobed. They have rounded axillae and detached from the scutellum. The propodeum is always mostly impunctate, smooth and glossy. They don't present arolium generally, sometimes it may be present as a slender tapering process between the tarsal claws. The tibiae are tuberculate on the outer surfaces. Females show a ventral scopa. The last sternum has long pilosity, similar to that of preceding sterna. The apical margin of tergite 7 in males is rounded, and tergite 6 has the apical margin simple, rounded or slightly carinated.

Summary of distinctive traits

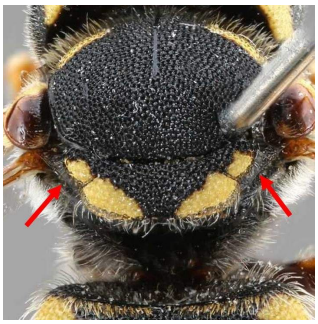
- The clypeus basal margin is convex upwards and the lateral margins are curved inwards, not delineating an angle (a)
- The scutellum has a posterior margin produced posteriorly, overhanging metanotum and propodeum and with wide emargination, almost bilobed (b)
- They have rounded axillae and detached from the scutellum (c)
- 2nd recurrent vein reaching beyond submarginal cell 2 (d)
- Absence of arolium (e)
- Subantennal sutures outwardly arcuate (f)



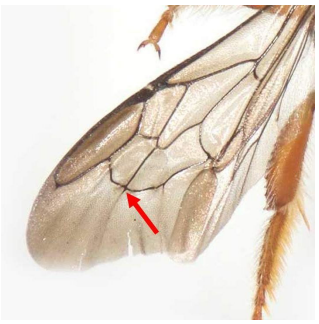
(a) *Pseudoanthidium eximium* Female



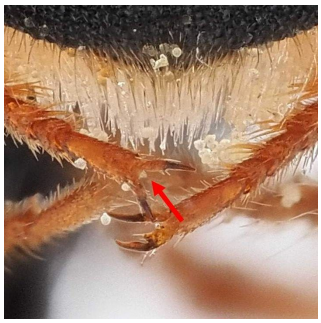
(b) *Pseudoanthidium stigmaticorne* Female



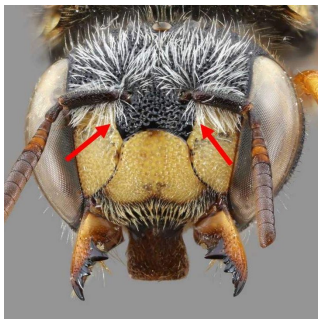
(c) *Pseudoanthidium stigmaticorne* Female



(d) *Pseudoanthidium nanum* Female



(e) *Pseudoanthidium scapulare* Female



(f) *Pseudoanthidium stigmaticorne* Female

General comments on identification to species level

Species can be distinguished based on lateral ornaments on metasomal tergites and mandible characters, easier to see when mandibles are open.

Morphologically similar genera, and how to distinguish them

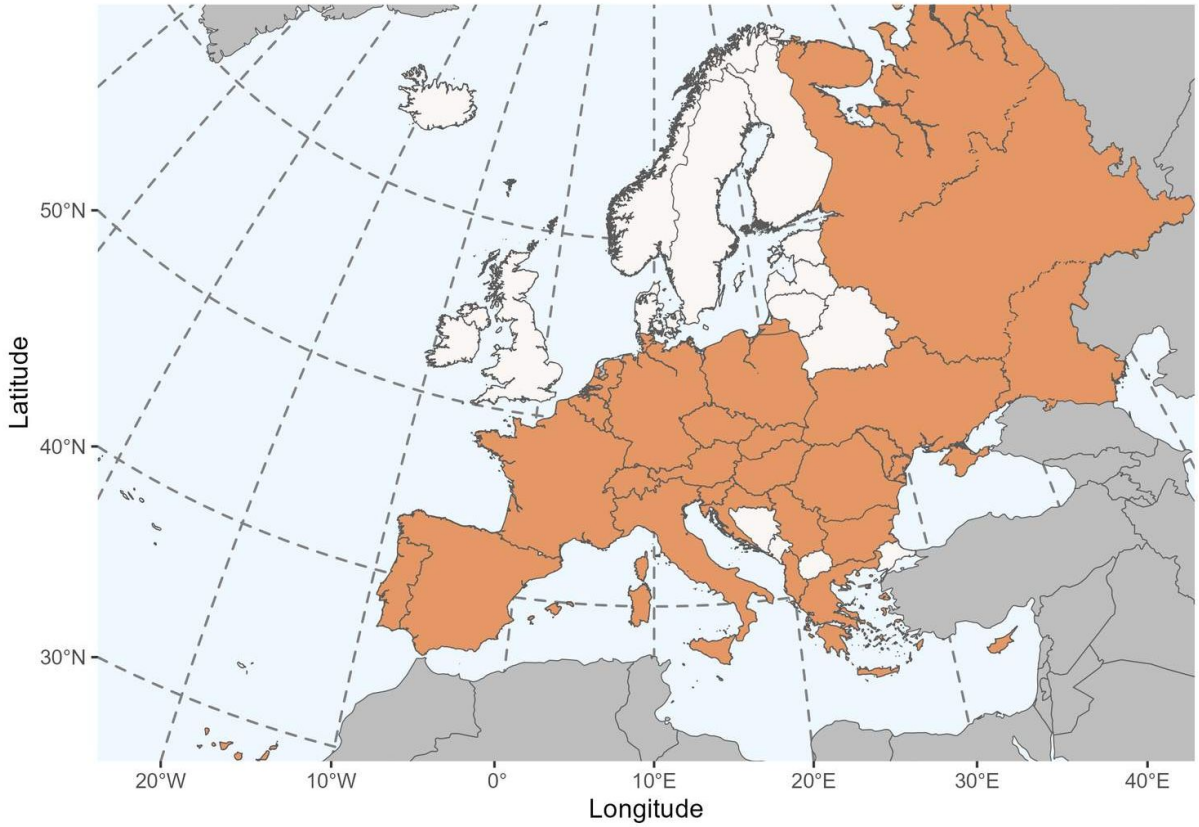
- ***Pseudoanthidium - Anthidium, Afranthidium & Icteranthidium***
  Pseudoanthidium species have rounded but produced axillae, their apex separated from the scutellum
  Anthidium, Afranthidium & Icteranthidium species have axillae pointed or not produced away from the scutellum.

- ***Pseudoanthidium - Anthidiellum, Eoanthidium, Rhodanthidium & Trachusa***
  Pseudoanthidium species don't have an arolium between their claws.
  Anthidiellum, Rhodanthidium & Trachusa species have an arolium between their claws.

- ***Pseudoanthidium - Stelis***
  Pseudoanthidium species have rounded axillae, males have one apical tooth (sometimes bifid) on their anterior and median tibiae and females have a ventral scopa.
  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.

Geographical distribution and global diversity

This genus shows an Old World distribution, encompassing the Palaearctic region and Africa. There are around 60 species described at the global scale, with the focus of diversity being Africa. From this genus, 12 subgenera have been described: *Branthidium, Exanthidium, Gnathanthidium, Immanthidium, Mesanthidiellum, Micranthidium, Neanthidium, Pseudoanthidium, Royanthidium, Semicarinella, Tuberanthidium* and *Zosteranthidium* (Litman et al. 2016).



Presence in Europe

Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Italy, Luxembourg, Malta, Moldova, Netherlands, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Switzerland, Ukraine.

Biology

Seasonal life cycle

They are univoltine and fly in spring and summer.

Reproduction

Details about their reproduction are not known.

Nesting

They are solitary and stem-nesting. They separate their cells with plant hairs that they cut from the plants presenting them.

Parasites

They are parasitized by species of the genus *Stelis, Stelis ornatula* and *Stelis punctulatissima.*

Floral preferences

Several of the species are known oligolectic on the tribe Cardueae.

Type species: *Anthidium limbiferum* Morawitz, 1875, by original designation.

Synonyms: *Paranthidiellum* Michener, 1948; *Trachusa (Orientotrachusa)* Gupta, 1993; *Reanthidium* Pasteels, 1969

Etymology: the origin of this name comes from the Greek root 'pseudo', meaning 'false or ressembling', in this case *Anthidium*

Common names: n/a

List of species found in Europe:

1. *Pseudoanthidium alpinum* (Morawitz, 1874)
2. *Pseudoanthidium canariense* (Mavromoustakis, 1954)

3. *Pseudoanthidium eximium* (Giraud, 1863)
4. *Pseudoanthidium kaspareki* Le Divelec & Litman, 2021
5. *Pseudoanthidium melanurum* (Klug, 1832)
6. *Pseudoanthidium nanum* (Mocsáry, 1880)
7. *Pseudoanthidium reticulatum* (Mocsáry, 1884)
8. *Pseudoanthidium scapulare* (Latreille, 1809)
9. *Pseudoanthidium stigmaticorne* (Dours, 1873)
10. *Pseudoanthidium tenellum* (Mocsáry, 1880)

Subgenera found in Europe:

1. *Exanthidium* Pasteels, 1969
2. *Pseudoanthidium* s.str. Friese, 1898
3. *Royanthidium* Pasteels, 1969

References

Litman, J. R., T. Griswold, Danforth B.N. (2016). Phylogenetic systematics and a revised generic classification of anthidiine bees (Hymenoptera: Megachilidae). Molecular Phylogenetics and Evolution 100: 183-198.

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.

Authors

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