Pollinator Academy

Genus: Afranthidium

Female

Male

Genus: *Afranthidium* Michener 1948

Clade: Anthophila

Family: Megachilidae

SubFamily: Megachilinae

Tribe: Anthidiini

Number of species of this genus found in Europe: 2

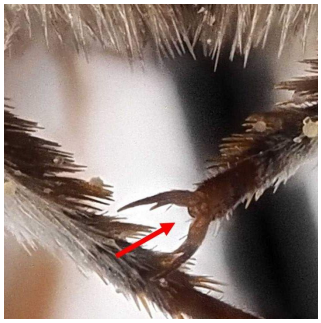
Morphology & diagnosis

They are medium sized bees (7-9mm). They present a 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, its basal margin is arched, and it is apically twice as wide as basally. The clypeus basal margin is convex upwards and the lateral margins are curved inwards, not delineating an angle. The basal margin of the subantennal sutures is curved, laterally convex. They normally lack a lower preoccipital carina, and when is present it does not reach the base of the mandible.Their forewings bear two submarginal cells, and the second recurrent vein is postfurcal. The pronotal lobe is often carinate. Their axillae are rounded and attached to the scutellum. The scutellum has a posterior margin produced posteriorly, overhanging metanotum and propodeum. At the same time, the posterior margin of the scutellum is regularly rounded, at most weakly notched in the middle. The propodeum 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. They present a ventral scopa and large yellow markings across the entire body. The last sternum has long pilosity, similar to that of preceding sterna. The terga are entirely punctate with a depressed marginal zone which is more finely punctated than the disc.

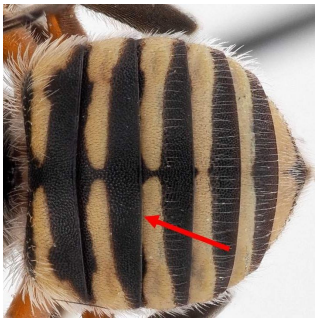
Summary of distinctive traits

- Females with ventral scopa (a)
- Lack of arolium (b)
- Terga entirely punctate with depressed marginal zone which is more finely punctate than disc (c)
- 2nd recurrent vein reaching beyond submarginal cell 2 (d)
- Subantennal suture weakly curved (e)
- Scutellum with posterior margin regularly rounded, at most weakly notched (f)
- Axillae rounded and attached to the scutellum (g)

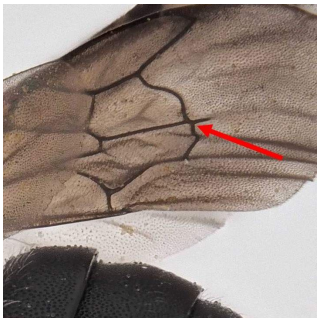
(a) *Afranthidium schulthessii* Female



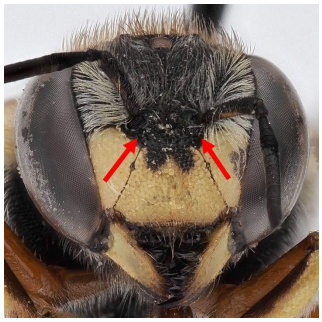
(b) *Afranthidium carduele* Female



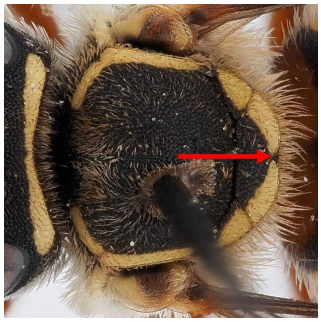
(c) *Afranthidium carduele* Female



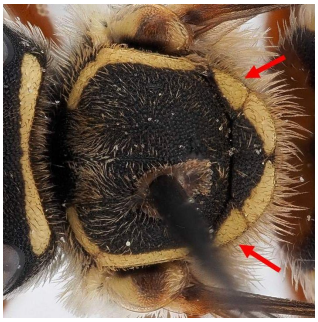
(d) *Afranthidium schulthessii* Female



(e) *Afranthidium carduele* Female



(f) *Afranthidium carduele* Female



(g) *Afranthidium carduele* Female

General comments on identification to species level

The different species of the genus can be recognised by the mandibular teeth, apical sternites and male genitalia. These traits have to be made clearly visible during specimen preparation.

Morphologically similar genera, and how to distinguish them

- ***Afranthidium - Anthidium***
  Afranthidium species have a basal margin of the clypeus and subantennal sutures arched.
  Anthidium species have a basal margin of the clypeus and subantennal suture straight.

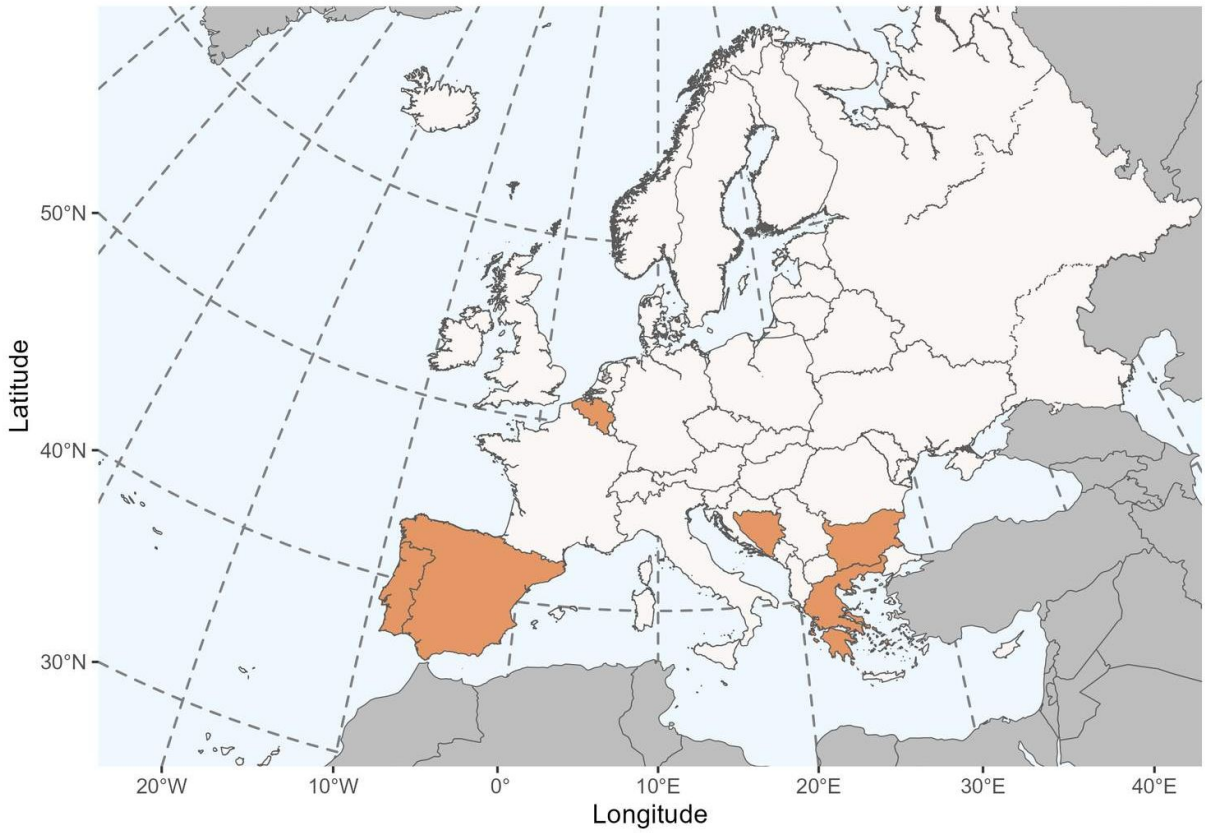
- ***Afranthidium - Icteranthidium & Pseudoanthidium***
  Afranthidium species have rounded axilae, not produced, aligned with the scutellum.
  Icteranthidium & Pseudoanthidium species have axilae pointed or produced, the apex separated from the scutellum.

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

- ***Afranthidium - Megachile, Lithurgus***
  Afranthidium species have a second recurrent vein anteriorly connecting after the second submarginal cell.
  Megachile and *Lithurgus* species have a second recurrent vein anteriorly connecting within or at the end of the second submarginal cell.

Geographical distribution and global diversity

They are distributed across the Old World, with their centre of diversity being Sub-Saharian Africa. There are 45 species described to date. The species found in Europe are basically found in the Mediterranean (specially Spain and Greece). This genus has been described to be composed of 7 subgenera: *Afranthidium*, *Capanthidium*, *Domanthidium, Mesanthidium, Nigranthidium, Oranthidium* and *Xenanthidium.*



Presence in Europe

Belgium, Bosnia and Herzegovina, Bulgaria, Greece (mainland), Portugal, Spain.

Biology

Seasonal life cycle

They fly from May to July.

Reproduction

Details about their reproduction are unknown.

Nesting

Details about their nesting habits are unknown.

Parasites

No broodparasitic bee has been associated to *Afranthidium* so far.

Floral preferences

They are thought to be oligolectic on members of the family Asteraceae (Ortiz-Sánchez 1990 ; Müller 1996).

Type species: *Hypanthidium halophilum* Cockerell, 1936, by original designation.

Synonyms: n.a.

Etymology: the etimology of this group means 'African Anthidium'

Common names: FR : les anthidies

List of species found in Europe:

1. *Afranthidium carduele* (Morawitz, 1876)
2. *Afranthidium schulthessii* (Friese, 1897)

References

Müller, A. 1996. Host plant specialization in western palearctic Anthidiini bees. Ecological Monographs 66(2): 235-257.

Ortiz-Sánchez, F.J. 1990. Contribución al conocimiento de las abejas del género Anthidium Fabricius, 1804 en Andalucía (Hym., Apoidea, Megachilidae). Boletín de la Asociación española de Entomología 14: 251-260.

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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