Pollinator Academy

Genus: *Camptopoeum*

Female

Male

Genus: *Camptopoeum* Spinola, 1843

Clade: Anthophila

Family: Andrenidae

SubFamily: Panurginae

Tribe: Panurgini

Number of species of this genus found in Europe: 4

Morphology & diagnosis

They are small to medium sized bees (4-9mm). The head is as broad as the thorax, and they have a light-coloured spots on the cuticle (white on the males). The wings present two submarginal cells, the first having the same size as the second. The tip of the marginal cell is truncate. The first submarginal crossvein is far from the first recurrent vein. The metasoma is flat dorso-ventrally and devoid of light-coloured hair. The hind leg presents a long dense hair cover on the tibia and the first segment of the posterior tarsus.

Summary of distinctive traits

- Small bees with yellow markings on the body (a)
- 2 submarginal cells of equivalent size (b)
- Marginal cell truncate (c)
- First recurrent vein distant from the first submarginal crossvein (d)

(a) *Camptopoeum frontale* Male

(b) *Camptopoeum frontale* Male

(c) *Camptopoeum frontale* Male

(d) *Camptopoeum frontale* Male

General comments on identification to species level

In the males, genitalia should be extracted. It is not necessary to open mandibles and labrum. In females, the propodeal enclosure and the anal fringe are important traits, and so it is key to ensure the wings do not hide them.

Morphologically similar genera, and how to distinguish them

- ***Camptopoeum - Flavipanurgus***
  Camptopoeum can only reliably be separated from *Flavipanurgus* based on male genital morphology.

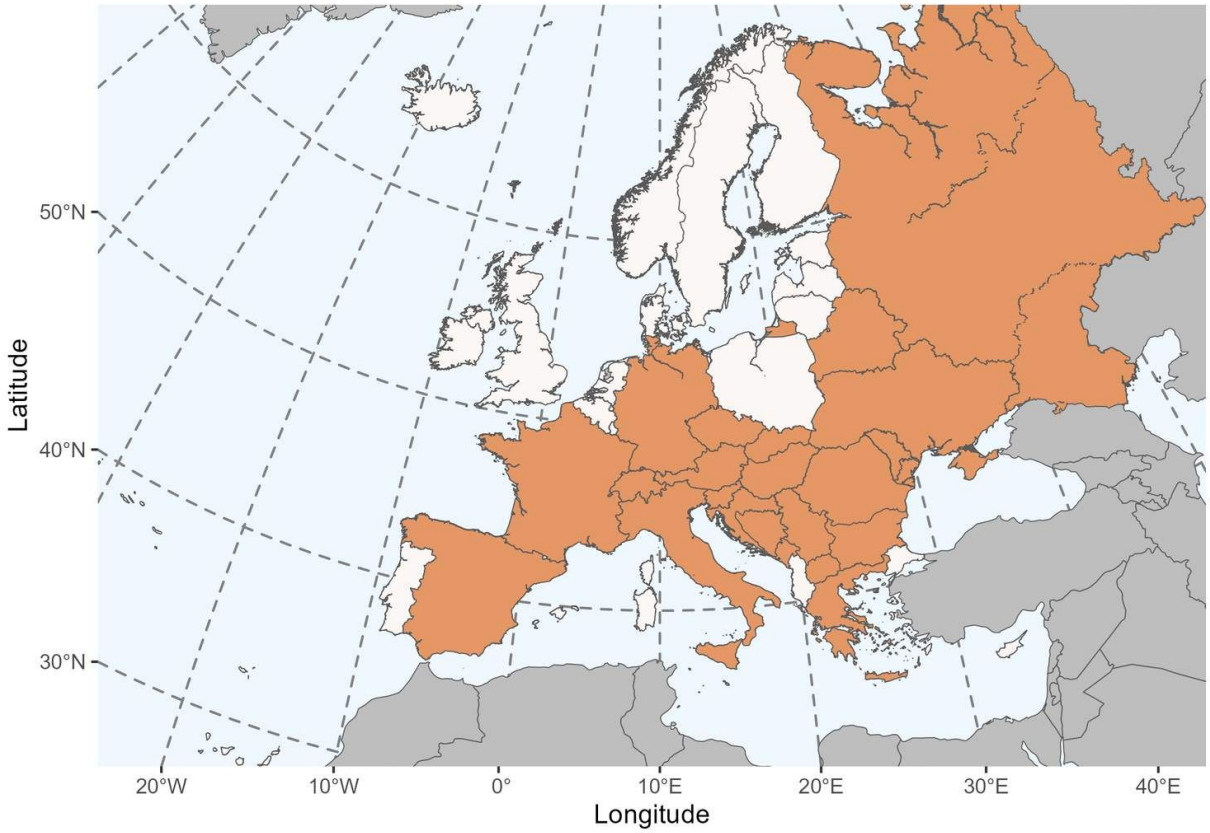
- ***Camptopoeum - Halopanurgus***
  Camptopoeum frons are densely punctate. Males have sternite 7 as broad as long or slightly longer, parallel or almost. The genital capsule is parallel sided and gonostily and penis valves are simple. They do not show gonocoxal points, gonocoxae show a smooth inner margin and curved inwards.
  Halopanurgus frons is smooth and almost impunctate. Males have sternite 7 broader than long. Gonocoxae produce strong apical triangular points.

- ***Camptopoeum - Panurgus***
  Camptopoeum species have a cuticle with yellow markings on the head and / or metasoma.
  Panurgus has a brown/black cuticle on the head and / or metasoma, never with yellow markings.

- ***Camptopoeum - Clavipanurgus & Panurginus***
  Camptopoeum species have submarginal cell 1 of similar size than cell 2, recurrent vein 1 distant from submarginal crossvein 1. Females have dense and long pilosity on posterior tibia and basitarsus.
  Clavipanurgus & Panurginus species have submarginal cell 2 smaller than cell 1, recurrent vein 1 almost touching submarginal crossvein 1. Females have sparse and short hairs on posterior tibia and basitarsus.

Geographical distribution and global diversity

The genus occurs in the Palaearctic region, from the Mediterranean Basin to southern Russia and Central Asia (Michener 2007). There are around 20 species globally. In Europe, the distribution is centered on the East (Greece and Turkey) and the West (North-West Africa).



Presence in Europe

Austria, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, France (except Corsica), Germany, Greece (except East Aegean Islands), Hungary, Italy (excluding Sardinia), Moldova, Montenegro, North Macedonia, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain (mainland), Switzerland, Ukraine.

Biology

Seasonal life cycle

They are univoltine and fly mainly in summer.

Reproduction

They are solitary. The males emerge first, and patrol over the nests waiting for the females to emerge. As soon as they appear, a swarm of males flies to them to try to copulate.

Nesting

The nests are found in flat areas and slopes.

Parasites

They are parasitized by species of the genera *Parammobatodes.*

Floral preferences

Two of the species, *C. friesei* and *C. frontale*, are specialist on members of the family Asteraceae (mainly *Centaurea*).

Type species: *Prosopis frontalis* Fabricius, 1804, by original designation.

Etymology: the name *Camptopoeum* derives from the Greek root '*campto-*', meaning '*curve*', and the suffix '*-poeia*', meaning '*which produces*'.

Common names:
GER: der Buntbienen

List of species found in Europe:

1. *Camptopoeum (Camptopoeum) friesei* Mocsáry, 1894
2. *Camptopoeum (Camptopoeum) frontale* (Fabricius, 1804)
3. *Camptopoeum (Camptopoeum) nasutum* (Spinola, 1838)
4. *Camptopoeum (Epimethea) variegatum* (Morawitz, 1876)

Subgenera found in Europe:

- *Camptopoeum s. str*. Spinola, 1843;
- *Epimethea* Morawitz, 1876.

References

Michener CD, 2007. *The bees of the world*. Second edition. The Johns Hopkins University Press, Baltimore, 992pp.

Wood TJ, Patiny S, Bossert S (2022) An unexpected new genus of panurgine bees (Hymenoptera, Andrenidae) from Europe discovered after phylogenomic analysis. *Journal of Hymenoptera Research* 89: 183–210.

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

Photographs: Paolo Rosa (ORBIT consortium)

Text: ORBIT consortium

Reviewers: Thomas J. Wood (ORBIT consortium)

License

Image rights

Funded by the European Commission