Pollinator Academy

Genus: *Rophites*

Female

Genus: *Rophites* Spinola, 1808

Clade: Anthophila

Family: Halictidae

SubFamily: Rophitinae

Tribe: Rophitini

Number of species of this genus found in Europe: 7

Morphology & diagnosis

Rophites are medium-sized bees (7-10mm) with the cuticle entirely black and shiny. They show short clypeus and subantennal sutures, thus the antennae appear abnormally low on the face. They have short tongues. They present a unique trait that are spines on the forehead, formed of thick hardened short hair that they use to forage. The antennae are short on the females and long on the males. Their wings present two submarginal cells, the tip of the marginal cell tightly attached to the wing margin, and the basal vein shows an angle. The scutellum is longer than the propodeal enclosure. When seen from the side, it forms a characteristic angle with the propodeum. They show bands of hair on the metasoma, light in colour. The male antennae are light in colour, the segments being longer than broad in some parts. Males also show teeth on the lateral margins of the 6th sternite.

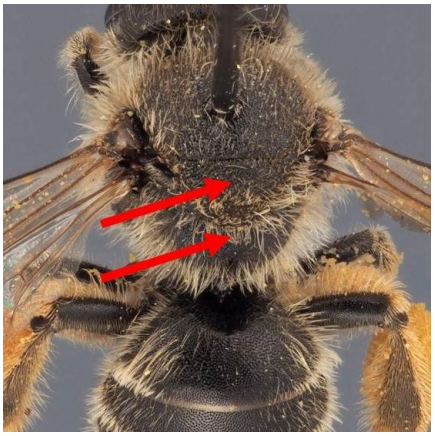
Summary of distinctive traits

- 2 submarginal cells (a)
- Short clypeus so that antennae are inserted below the middle of the eyes (b)
- Females have frontal spines (c)
- Scutellum longer than the propodeal horizontal area (d)

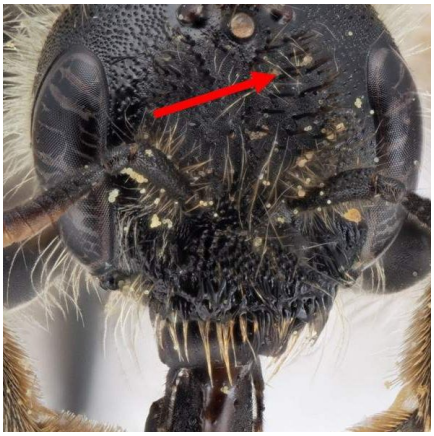
- Labial palpi segments very elongated (e)

(a) *Rophites algirus* Female

(b) *Rophites algirus* Female



(c) *Rophites algirus* Female



(d) *Rophites algirus* Female

(e) *Rophites algirus* Female

General comments on identification to species level

In the field they can be identified to genus, but not to species level. Species identification involves criteria on sternites, legs and body sculpture, so legs and wings

should be spread out.

Morphologically similar genera, and how to distinguish them

- ***Rophites - Rophitoides***
  Rophites species have very elongated labial palpi, with segments 1-3 much longer than those of maxillary palpi. Females have frontal spines. Males have long antennae, with segments distinctly longer than wide.
  Rophitoides species have labial palpi not very elongate, with segments 1-3 about the length of those of maxillary palpi. Females have no frontal spines. Males have antennae with segments about as long as wide.

- ***Rophites - Dufourea***
  Rophitoides have metasomal hairs bands and a propodeal horizontal area shorter than the scutellum and forming a clear angle with the posterior face of the propodeum.
  Dufourea have no metasomal hairs band, and a propodeal horizontal area longer than the scutellum and posteriorly rounded.

Geographical distribution and global diversity

The genus *Rophites* is distributed on the Palaearctic region, from Spain to eastern China. The genus counts with around 16 species in total, with a hotspot of diversity on the eastern Mediterranean region.

Presence in Europe

Albania, Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece (mainland), Hungary, Italy (mainland), Latvia, Lithuania, Moldova, Netherlands, North Macedonia, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain (mainland), Sweden, Switzerland, Ukraine, United Kingdom.

Biology

Seasonal life cycle

They are summer species and univoltine.

Reproduction

Males patrol the flowers continuously in search of females.

Nesting

They are mainly solitary but show aggregations of nests, of 20-30 nests. They are ground-dwelling, preferring sunny patches of soil with sparse vegetation. Nest entrances are at the base of plant stems and they are circular, around 5mm in diameter. They generate a tumuli close to the nest entrance, which is never closed.

Parasites

Some species are parasitized by *Biastes emarginatus*.

Floral preferences

Some species are oligolectic on Lamiaceae, particularly on species of the genera *Ballota* spp., *Clinopodium* spp. and *Stachys* spp.. They have a special collecting trait (spines on

the forehead) to collect the pollen from those species. They buzz to detach the pollen from the flowers. Males are easily seen around females, but they are polylectic.

Type species: *Rophites quinquespinosus* Spinola, 1808, monobasic.

Synonyms: *Rhophites* Agassiz, 1846.

Etymology: The name comes from the Greek root '*rhophitis*', meaning '*swallower, dribbler*'.

Common names:
FR: les rophites
GER: der Schlürf- und Graubienen (= slow bees or grey bees)
NL: de slurfbijen (= slow bees)
EN: the Rophites

List of species found in Europe:

1. *Rophites (Rophites) algirus* Pérez, 1895
2. *Rophites (Rophites) clypealis* Schwammberger, 1976
3. *Rophites (Rophites) hartmanni* Friese, 1902
4. *Rophites (Rophites) hellenicus* Ebmer, 1984
5. *Rophites (Rophites) leclercqi* Schwammberger, 1971
6. *Rophites (Rophites) quinquespinosus* Spinola, 1808
7. *Rophites (Rophites) thracius* Ebmer, 1993

References

Ebmer, A.W., Schwammberger, K. - H. (1986). Die Bienengattung *Rophites* Spinola 1808 (Hymenoptera, Apoidea, Halictidae). *Illustrierte Bestimmungstabellen. Senckenbergiana biologica*, 66: 271 – 304.

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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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