Pollinator Academy

Genus: *Seladonia*

Female

Male

Genus: *Seladonia* Robertson, 1918

Clade: Anthophila

Family: Halictidae

SubFamily: Halictinae

Tribe: Halictini

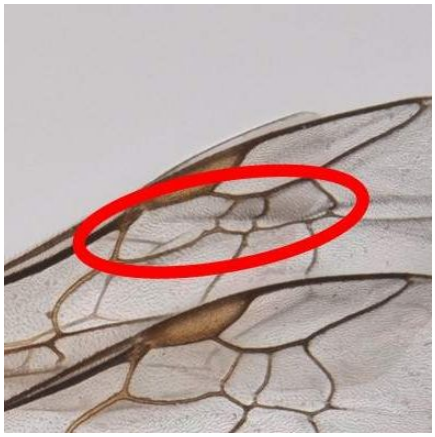
Number of species of this genus found in Europe: 27

Morphology & diagnosis

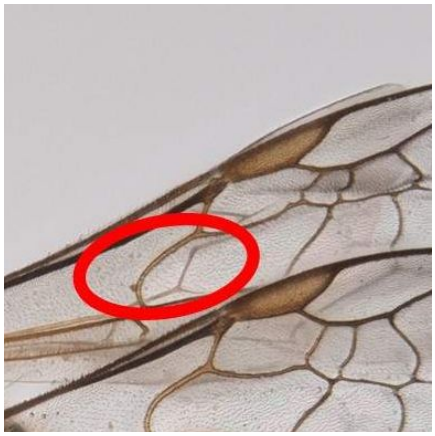
Seladonia are mostly small to medium sized species (4-15mm). They have a metallic cuticle, greenish or golden. The only yellow marks they may host are in the tips of the legs. They are short-tongued bees, with the antennal insertion high on the face, which makes them easy to differentiate from Rophitinae. Their forewings bear three submarginal cells, the first being the largest and the second the smallest. The basal vein from the wing is curved. They show short pilosity on the metasoma, forming bands that can be interrupted in the middle and the hair is situated near the apical margin of terga. Tergite 5 in females presents a furrow in the middle, the rima, being one of their most distinctive traits together with *Halictus* and *Lasioglossum*. Males can present a fine yellow line on the clypeus and are much slimmer than the females, sometimes even distinctly elongated, and present long antennae. They are also characterized by the apical part of gonostylus that can be bifid, with a deep longitudinal cleft forming a long thin lobe (but absent in *S. gemmea* (Dours, 1872)).

Summary of distinctive traits

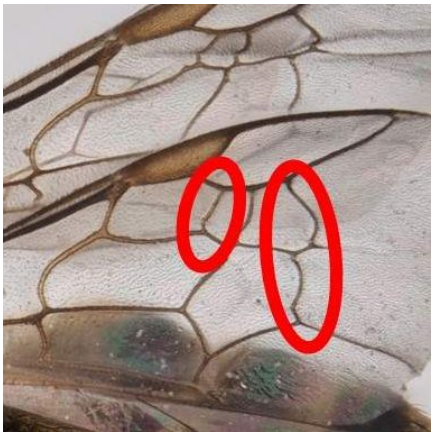
- At least head and mesosoma with metallic reflections, often green or golden
- 3 submarginal cells (a)
- Curved basal vein (b)
- Submarginal vein 3 and recurrent vein 2 of similar width than submarginal vein 1 (c)
- Females with an apical bald furrow (rima) on T5 (d)
- Main metasomal bands at the apex of the tergites (e)



(a) *Seladonia subaurata* Male

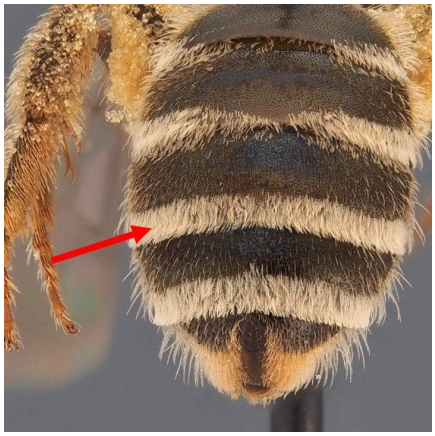


(b) *Seladonia subaurata* Male



(c) *Seladonia subaurata* Male

(d) *Seladonia confusa* Female



(e) *Seladonia confusa* Female

General comments on identification to species level

Some of the species identification criteria are located on the wing venation, head shape, legs, scutum, propodeum and first metasomal tergites. The legs and wings need

to be slightly spread out to reveal these characters. Male identification often requires genitalia extraction, in addition to antennae and sterna. In general, these characters should be made clearly visible.

Morphologically similar genera, and how to distinguish them

- ***Seladonia - Halictus***

  Seladonia species have at least head and mesosoma with golden or greenish metallic reflections. Some species terga are covered with dense appressed hairs that obscure the underlying surface (subgenera *Vestitohalictus* and *Mucoreohalictus*). In males, the apical part of the gonostylus can be bifid, with a deep longitudinal cleft forming a long thin lobe.

  Halictus species have the integument black and the terga are never entirely covered with dense appressed hairs. In males, the apical part of the gonostylus is never bifid.

- ***Seladonia - Lasioglossum***

  Seladonia species have submarginal vein 3 and recurrent vein 2 of similar strength than submarginal vein 1. Hairs bands on the metasoma are at the apex of the segments (not always clearly visible in *Vestitohalictus* and *Mucoreohalictus* subgenera).

  Lasioglossum species have submarginal vein 3 and recurrent vein 2 much less visible than submarginal vein 1. Hairs bands on the metasoma are at the basal part of the segments.

- ***Seladonia - Thrincohalictus***

  Seladonia females have a truncated clypeus extended downward at each side of labrum as a small, rather sharp, impunctate projection. Males head is rarely elongated (malar space < 1x flagellum width).

  Thrincohalictus females have a truncated clypeus with only a short, rounded projection. Males have a strongly elongated head (malar space > 2x flagellum width).

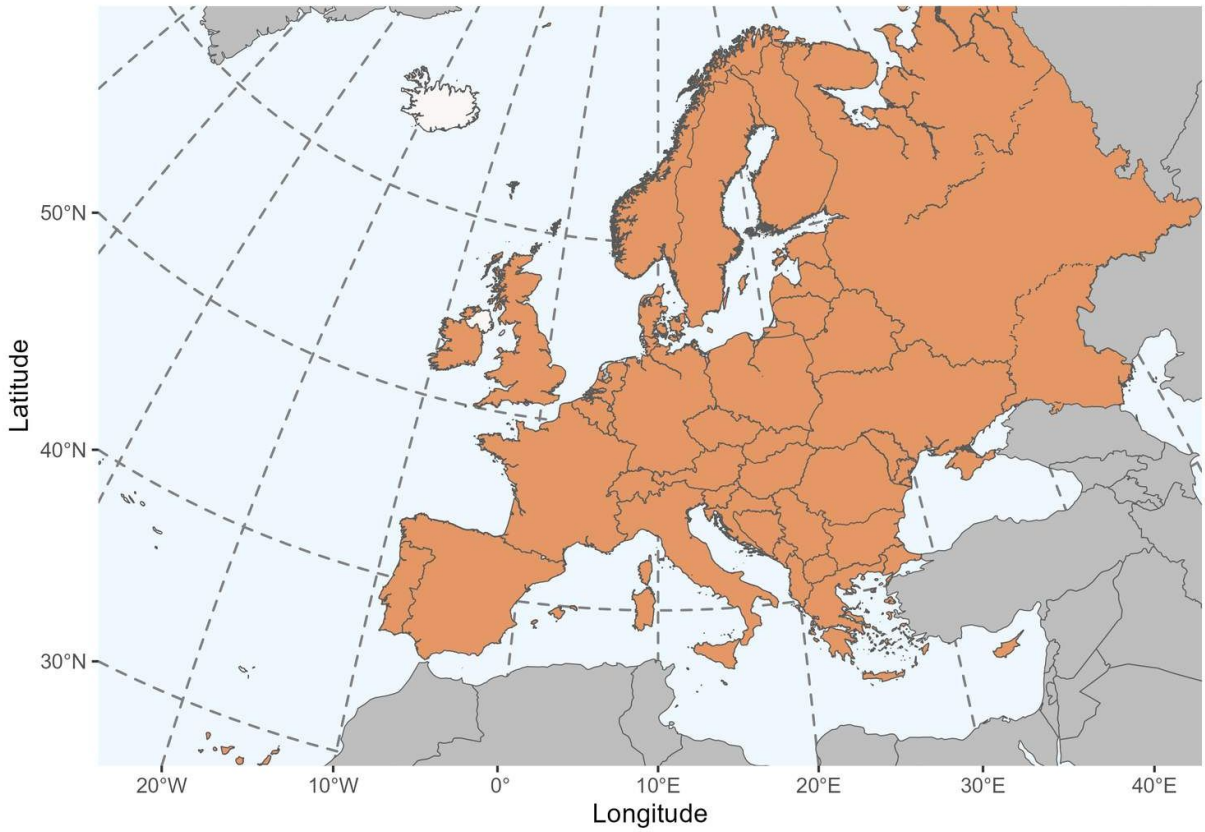
- ***Seladonia - Ceylalictus & Nomioides***

  Seladonia species are much larger with a marginal cell pointed. Females have a bald furrow (rima) on T5.

  Ceylalictus & *Nomioides* species are very small with a marginal cell rounded to truncated. Females have no rima on T5.

Geographical distribution and global diversity

This genus is almost cosmopolite, being distributed through Europe, Asia, Africa, North and South America. Most species occur in temperate areas of Europe, Asia and Africa. Southern Africa and South America are poorer in diversity.



Presence in Europe

Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland (including Åland Islands), France (including Corsica), Germany, Gibraltar, Greece (including East Aegean Islands and Kriti), Hungary, Ireland, Italy (including Sardegna and Sicily), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North, Macedonia, Norway, Poland, Portugal, Romania, European Russia, Serbia, Slovakia, Slovenia, Spain (including Balearic Islands and Canary Islands), Sweden, Switzerland, Turkey - European part, Ukraine (including Krym), United Kingdom.

Biology

Seasonal life cycle

Most species spend the winter in the form of adults. Normally they are uni- or bivoltine, a few species showing three generations per year. Their flight season is very long, starting at the beginning of spring until the end of summer. Males start flying later, at the beginning of summer. Fecundated females overwinter until the beginning of spring. Reproductive females are the only ones surviving the winter.

Reproduction

Fecundated females from last year emerge when weather conditions are appropriate. Sociality was found in every studied species, but with labile behavior and some solitary species depending on the length of the season. Once the foundress female starts the nest, the first generation in social and semisocial species work to help the second generation of brood. A part of these first-generation workers are sterile, the rest seem subdued by the larger foundress female. In northern countries with a shorter flight season, this first generation may not happen and foundresses may act as solitary species.

Nesting

They nest in the ground, in flat open areas or with sparse vegetation, occasionally in another substrate like rotting wood. There are commonly aggregations of nests, up to thousands of nests. In some species there is one female guarding the entrance of the nest with her head.

Parasites

The only known broodparasites are species of the genus *Sphecodes*.

Floral preferences

Their long flying period forces them to forage in what is available and thus most species are polylectic on accessible flowers. In any case, some species show floral preferences for members of the family Asteraceae.

Type species: *Apis seladonia* Fabricius, 1794, by original designation.

Synonyms: n/a

Etymology: From the French 'céladon', a green color, pale and bluish. This color name comes from the novel character Celadon, a shepherd carrying green ribbons.

Common names: n/a

List of species found in Europe:

1. *Seladonia (Seladonia) cephalica* (Morawitz, 1874)
2. *Seladonia (Vestitohalictus) concinna* (Brullé, 1840)
3. *Seladonia (Pachyceble) confusa* (Smith, 1853)
4. *Seladonia (Seladonia) cretella* Pauly & Devalez, 2015
5. *Seladonia (Mucoreohalictus) cyprica* (Blüthgen, 1937)

6. *Seladonia (Pachyceble) gavarnica* (Pérez, 1903)
7. *Seladonia (Seladonia) gemmea* (Dours, 1872)
8. *Seladonia (Seladonia) gemmella* Pauly, 2015
9. *Seladonia (Vestitohalictus) inpilosa* (Ebmer, 1975)
10. *Seladonia (Seladonia) kessleri* (Bramson, 1879)
11. *Seladonia (Pachyceble) leucahenea* (Ebmer, 1972)
12. *Seladonia (Vestitohalictus) microcardia* (Pérez, 1895)
13. *Seladonia (Mucoreohalictus) mucorea* (Eversmann, 1852)
14. *Seladonia (Seladonia) orientana* Pauly & Devalez, 2015
15. *Seladonia (Seladonia) phryganica* Pauly & Devalez, 2015
16. *Seladonia (Mucoreohalictus) pollinosa* (Sichel, 1860)
17. *Seladonia (Mucoreohalictus) pseudomucorea* (Ebmer, 1975)
18. *Seladonia (Vestitohalictus) pulverea* (Morawitz, 1874)
19. *Seladonia (Seladonia) seladonia* (Fabricius, 1794)
20. *Seladonia (Seladonia) semitecta* (Morawitz, 1874)
21. *Seladonia (Vestitohalictus) semitica* (Blüthgen, 1955)
22. *Seladonia (Seladonia) smaragdula* (Vachal, 1895)
23. *Seladonia (Seladonia) subaurata* (Rossi, 1792)
24. *Seladonia (Seladonia) submediterranea* Pauly, 2015
25. *Seladonia (Mucoreohalictus) tuberculata* (Blüthgen, 1925)
26. *Seladonia (Pachyceble) tumulorum* (Linnaeus, 1758)
27. *Seladonia (Vestitohalictus) vestita* (Lepeletier, 1841)

Subgenera found in Europe:

- *Mucoreohalictus* Pesenko, 2004
- *Pachyceble* Moure, 1940
- *Seladonia* Robertson, 1918

- *Vestitohalictus* Blüthgen, 1961

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Attributions

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Funded by the