



Pollinator Academy

**Genus: *Eucera***



Female



Male

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**Genus:** *Eucera* Scopoli, 1770

**Clade:** Anthophila

**Family:** Apidae

**SubFamily:** Apinae

**Tribe:** Eucerini

**Number of species of this genus found in Europe:** 89

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# Morphology & diagnosis

*Eucera* are long-tongued bees. They are robust, medium to large-size bees (8-20mm), with oval body shape, and a dense pilosity. The clypeus is protuberant to rather flattened, showing a conspicuous yellow maculation in the males, and the absence thereof in the females of most species. In species with protuberant clypeus (such as in the subgenus *Synhalonia*), the malar space is usually non-linear, the upper malar distance being almost always greater than the lower malar distance, and, in females, usually conspicuously longer than the basal width of the first flagellar segment (in contrast to the closely related genus *Tetralonia*). The majority of the species of the genus only have two submarginal cells, and only the subgenus *Synhalonia* has 3 submarginal cells. The females have thick scopa on the hind legs, particularly on the tibia and first tarsal segment. The scopal hairs are usually unbranched, with some branched hairs restricted to the posterior margin of the tibia, occasionally the entire scopa is weakly to strongly branched. Males have characteristically long antennae, reaching well beyond the anterior, and sometimes attaining the posterior of the metasoma, but shorter, barely attaining the metasoma in some species (such as in the subgenus *Cubitalia*). The genitalia and associated S7 and S8 of males are structurally complex, with variably modified projections or lobes.

## Summary of distinctive traits

- Males with very long antennae (a)
- Females with basitibial plate (b)
- Elevated clypeus (c)
- Long mouthparts (d)
- Submarginal cells of different sizes when 3 submarginal cells
- Unbranched scopal hairs (e)



(a) *Eucera nigrifacies* Male



(b) *Eucera longicornis* Female



(c) *Eucera longicornis* Female



(d) *Eucera longicornis* Female



(e) *Eucera alternans* Female

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## General comments on identification to species level

Currently, *Eucera* species are among the most difficult bees to identify in Europe. In absence of a revision of the european species, we lack proper criteria for species

identification, and putting a species name on specimens without having proper reference specimens compared to type material is not recommended. Unless you are in species poor regions, an expert's eye will be required to sort out the specimens. Preparation of specimens for laboratory identification requires several manipulations. For all specimens, the legs should be separated from the body in order to ensure the visibility of secondary sexual characteristics. The male genitalia should be extracted, and the associated sternites (S6-S8) exposed. Females should be pinned on one side of the scutum, and the wings stretched apart in order to expose the informative surface sculpture of the medial region of the scutum.

## Morphologically similar genera, and how to distinguish them

- ***Eucera* - *Tetralonia***

*Eucera* species have two or three submarginal cells in the forewing, in the three celled species there is a comparatively protuberant clypeus, a nonlinear malar space, and the females often have unbranched scopal hairs.

*Tetralonia* species always have three submarginal cells, a comparatively flat clypeus, a short linear malar space and normally plumose scopal hairs.

- ***Eucera* - *Anthophora*, *Amegilla* & *Habropoda***

*Eucera* species have submarginal cells of different sizes in the forewing, if three then submarginal cell 2 rectangular.

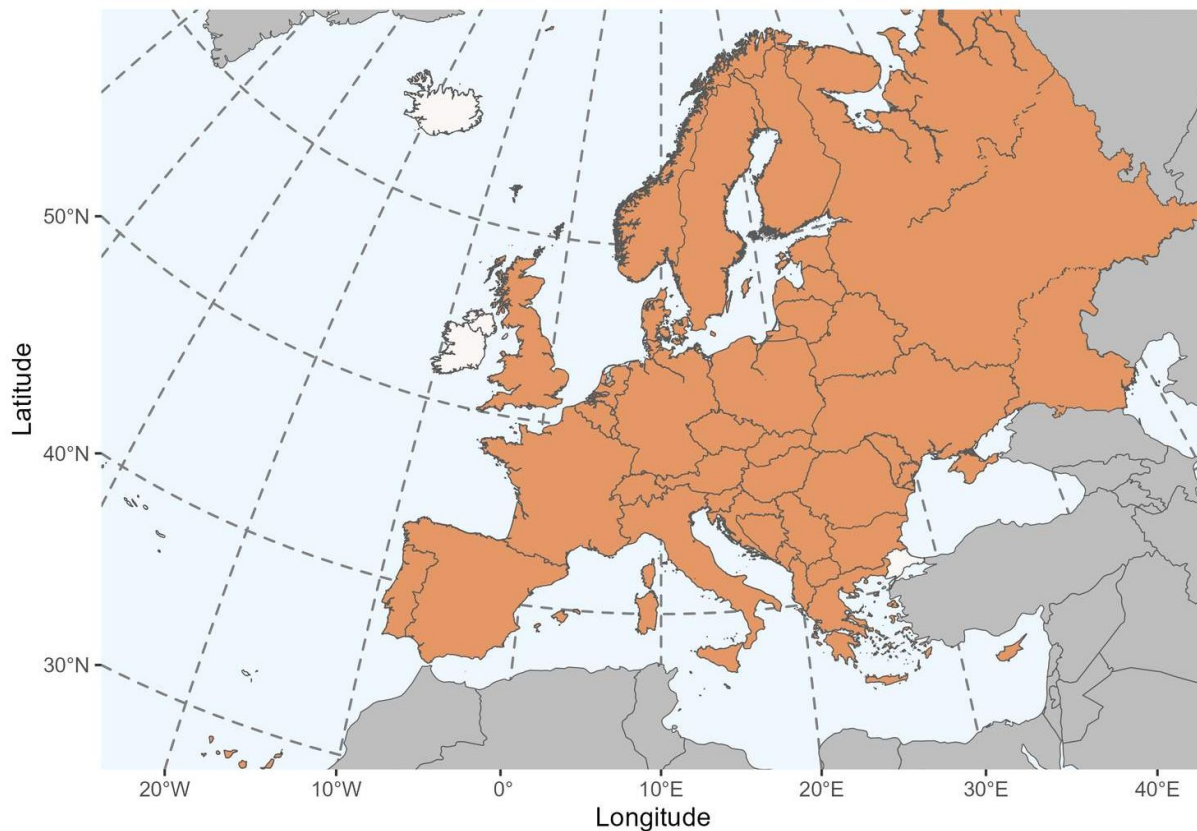
*Anthophora*, *Amegilla* & *Habropoda* have submarginal cells of equivalent sizes, where submarginal cell 2 is pentagonal with posteromedial angle in most species.

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# Geographical distribution and global diversity

*Eucera* has a cosmopolite distribution except for Australia (Michener 2007). The genus consists of around 335 species described in the world, with the centre of distribution

around the Mediterranean basin and Central Asia. In Europe, the genus consists of 89 described species, being distributed along the entire continent except for some islands.



## Presence in Europe

Albania, Austria, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

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## Biology

### Seasonal life cycle

They are univoltine, and the seasonality depends on the species. They are spring or summer species.

### Reproduction

Some males exhibit patrolling behaviour, targeting the host plant or plants of the females of their species. When a female appears, they perform approach flights, and if those are accepted they start the copula with the male positioned at almost right angle to the female's body.

### Nesting

They are ground-dwelling, and sometimes can nest in aggregations.

### Parasites

They have several cleptoparasite species, including species of the genera *Coelioxys* and *Nomada*.

### Floral preferences

Many species are pollen specialists, associated with mainly the Fabaceae, Boraginaceae or Asteraceae as host plants, while others are polylectic, combining pollen from the same floral hosts with others.



**Type species:** *Apis longicornis* Linnaeus, 1758, by designation of Latreille, 1810: 439.

**Synonyms:** *Cubitalia* Friese 1911; *Pseudeucera* Tkalců 1978; *Opacula* Pesenko & Sitdikov 1988; *Synhalonia* Patton 1879; *Eusynhalonia* Ashmead 1899; *Synalonia* Robertson 1905.

**Etymology:** originated from the Greek root 'cera', meaning 'horn', and the prefix 'eu', meaning 'true', referring to the very long male antennae

**Common names:**

FR: les eucères ou macrocères

GER: der Langhornbienen

NL: de langhoornbijen (bees with long antennae)

EN: the longhorn bee

## List of species found in Europe:

1. *Eucera (Eucera) aequata* Vachal, 1907
2. *Eucera (Eucera) albofasciata* Friese, 1895
3. *Eucera (Synhalonia) alborufa* (Radoszkowski, 1872)
4. *Eucera (Eucera) algira* Lepeletier, 1841
5. *Eucera (Eucera) atriceps* Morawitz, 1877
6. *Eucera (Eucera) barbiventris* Pérez, 1902
7. *Eucera (Eucera) bidentata* Pérez, 1887
8. *Eucera (Synhalonia) brachycera* (Gribodo, 1893)
9. *Eucera (Cubitalia) breviceps* Friese, 1911
10. *Eucera (Eucera) caerulescens* Friese, 1899
11. *Eucera (Eucera) caspica* Morawitz, 1873
12. *Eucera (Eucera) cineraria* Eversmann, 1852
13. *Eucera (Eucera) clypeata* Erichson, 1835
14. *Eucera (Eucera) codinai* Dusmet y Alonso, 1926

15. *Eucera (Eucera) collaris* Dours, 1873
16. *Eucera (Eucera) confinis* Pérez, 1895
17. *Eucera (Eucera) curvitaris* Mocsáry, 1879
18. *Eucera (Eucera) cypria* Alfken, 1933
19. *Eucera (Eucera) dafnii* Dorchin, 2019
20. *Eucera (Eucera) dalmatica* Lepeletier, 1841
21. *Eucera (Eucera) digitata* Friese, 1896
22. *Eucera (Eucera) dimidiata* Brullé, 1832
23. *Eucera (Eucera) ebmeri* Risch, 1999
24. *Eucera (Eucera) elongatula* Vachal, 1907
25. *Eucera (Eucera) excisa* Mocsáry, 1879
26. *Eucera (Eucera) fasciata* Risch, 1999
27. *Eucera (Eucera) ferghanica* Morawitz, 1875
28. *Eucera (Eucera) flavicornis* Risch, 2003
29. *Eucera (Eucera) furfurea* Vachal, 1907
30. *Eucera (Eucera) gaullei* Vachal, 1907
31. *Eucera (Eucera) gracilipes* Pérez, 1895
32. *Eucera (Eucera) grisea* Fabricius, 1793
33. *Eucera (Eucera) helvola* Klug, 1845
34. *Eucera (Eucera) hispana* Lepeletier, 1841
35. *Eucera (Synhalonia) hungarica* Friese, 1896
36. *Eucera (Synhalonia) intermedia* (Morawitz, 1875)
37. *Eucera (Eucera) interrupta* Bär, 1850

38. *Eucera (Eucera) kullenbergi* Tkalčů, 1978
39. *Eucera (Synhalonia) lanuginosa* Klug, 1845
40. *Eucera (Eucera) laxiscopa* Alfken, 1935
41. *Eucera (Eucera) longicornis* (Linnaeus, 1758)
42. *Eucera (Synhalonia) maroccana* (Dusmet y Alonso, 1928)
43. *Eucera (Synhalonia) mastrucata* (Morawitz, 1875)
44. *Eucera (Eucera) matalae* Tkalčů, 2003
45. *Eucera (Synhalonia) mediterranea* Friese, 1896
46. *Eucera (Synhalonia) melectoides* (Radoszkowski, 1893)
47. *Eucera (Eucera) microsoma* Cockerell, 1922
48. *Eucera (Cubitalia) morio* Friese, 1911
49. *Eucera (Eucera) nigrescens* Pérez, 1879
50. *Eucera (Eucera) nigrifacies* Lepeletier, 1841
51. *Eucera (Eucera) nigrilabris* Lepeletier, 1841
52. *Eucera (Eucera) notata* Lepeletier, 1841
53. *Eucera (Eucera) numida* Lepeletier, 1841
54. *Eucera (Eucera) obliterated* Pérez, 1896
55. *Eucera (Synhalonia) obscura* (Brullé, 1832)
56. *Eucera (Eucera) oraniensis* Lepeletier, 1841
57. *Eucera (Eucera) palaestinae* Friese, 1922
58. *Eucera (Eucera) pannonica* Mocsáry, 1878
59. *Eucera (Eucera) paraclypeata* Sitdikov, 1988
60. *Eucera (Eucera) parnassia* Pérez, 1902

61. *Eucera (Cubitalia) parvicornis* Mocsáry, 1878
62. *Eucera (Eucera) penicillata* Risch, 1997
63. *Eucera (Synhalonia) plumigera* (Kohl, 1905)
64. *Eucera (Synhalonia) pollinaris* (Kirby, 1802)
65. *Eucera (Eucera) pollinosa* Smith, 1854
66. *Eucera (Eucera) proxima* Morawitz, 1875
67. *Eucera (Eucera) pseudeucnemidea* Risch, 1997
68. *Eucera (Eucera) punctatissima* Pérez, 1895
69. *Eucera (Eucera) puncticollis* Morawitz, 1876
70. *Eucera (Eucera) punctulata* Alfken, 1942
71. *Eucera (Eucera) pythagoras* Risch, 2003
72. *Eucera (Synhalonia) quilisi* (Dusmet y Alonso, 1926)
73. *Eucera (Synhalonia) rufa* (Lepeletier, 1841)
74. *Eucera (Synhalonia) ruficollis* (Brullé, 1832)
75. *Eucera (Eucera) rufipes* Smith, 1879
76. *Eucera (Eucera) seminuda* Brullé, 1832
77. *Eucera (Eucera) sogdiana* Morawitz, 1875
78. *Eucera (Eucera) squamosa* Lepeletier, 1841
79. *Eucera (Eucera) syriaca* Dalla Torre, 1896
80. *Eucera (Eucera) taurea* Vachal, 1907
81. *Eucera (Eucera) taurica* Morawitz, 1871
82. *Eucera (Eucera) terminata* Pérez, 1895
83. *Eucera (Synhalonia) transitoria* (Morawitz, 1875)

84. *Eucera (Synhalonia) tricincta* Erichson, 1835
85. *Eucera (Cubitalia) tristis* Morawitz, 1875
86. *Eucera (Synhalonia) velutina* (Morawitz, 1873)
87. *Eucera (Synhalonia) vernalis* (Morawitz, 1875)
88. *Eucera (Eucera) vittulata* Noskiewicz, 1934
89. *Eucera (Eucera) vulpes* Brullé, 1832

## Subgenera found in Europe:

- *Eucera* s.str.
- *Synhalonia*
- *Cubitalia*

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