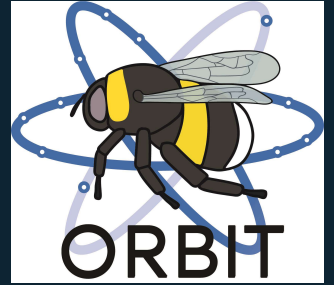




Pollinator Academy

Genus: *Lasioglossum*



Female



Male

Genus: *Lasioglossum* Curtis 1833

Clade: Anthophila

Family: Halictidae

SubFamily: Halictinae

Tribe: Halictini

Number of species of this genus found in Europe: 180

Morphology & diagnosis

They are mostly small to medium sized species (4-11mm). They have a completely black or very dark cuticle. The only yellow mark 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 host three submarginal cells, the first being the largest and the second the smallest. The basal vein from the wing is curved, and the most distal veins of the wings are obviously less marked than the others. They show short pilosity on the abdomen, forming bands that can be interrupted in the middle and the hair is situated in the base of the tergites. Tergite 5 in females presents a furrow in the middle, being this their most distinctive trait together with *Halictus*. Males can present a fine yellow line on the clypeus and also the labrum and the base of mandibles can be yellow.

Summary of distinctive traits

- 3 submarginal cells (a)
- Curved basal vein (a)
- Females with an apical bald furrow on T5 (b)
- Submarginal crossvein 3 and recurrent vein 2 less visible than submarginal crossvein 1 (c)
- Abdominal hairs at the base of the terga (not always) (d)



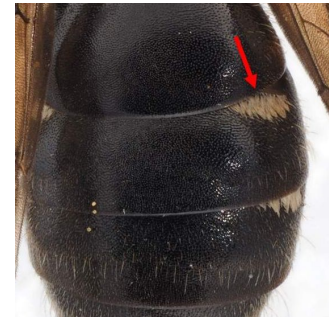
(a) *Lasioglossum albocinctum* Male



(b) *Lasioglossum lineare* Female



(c) *Lasioglossum glabriusculum* Male



(d) *Lasioglossum interruptum* Female

General comments on identification to species level

Wing venation, head shape, legs, scutum, propodeum, tibial spurs of hind legs, and first abdominal tergites carry identification criteria. The legs and wings need to be slightly spread out to reveal these characters. Male identification requires the antennae to be made clearly visible. It also requires sternites and genitalia extraction.

Morphologically similar genera, and how to distinguish them

- ***Lasioglossum* - *Halictus* & *Thrincohalictus***

Lasioglossum species have submarginal crossvein 3 and recurrent vein 2 less visible than submarginal crossvein 1. Hairs bands on the abdomen are at the basal part of the segments. *Halictus* & *Thrincohalictus* species have submarginal crossvein 3 and recurrent vein 2 of similar strength than submarginal crossvein 1. Hairs bands on the abdomen are at the apex of the segments (not always clearly visible in *Seladonia* and *Vestitohalictus*).

- ***Lasioglossum* - *Ceylalictus* & *Nomioides***

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

- ***Lasioglossum* - *Andrena***

Lasioglossum species have a strongly curved basal vein.

Andrena species have a basal vein straight or at most slightly curved.

- ***Lasioglossum* - *Apidae* (e.g. *Ceratina*), *Megachilidae* (e.g. *Osmia*, *Heriades*)**

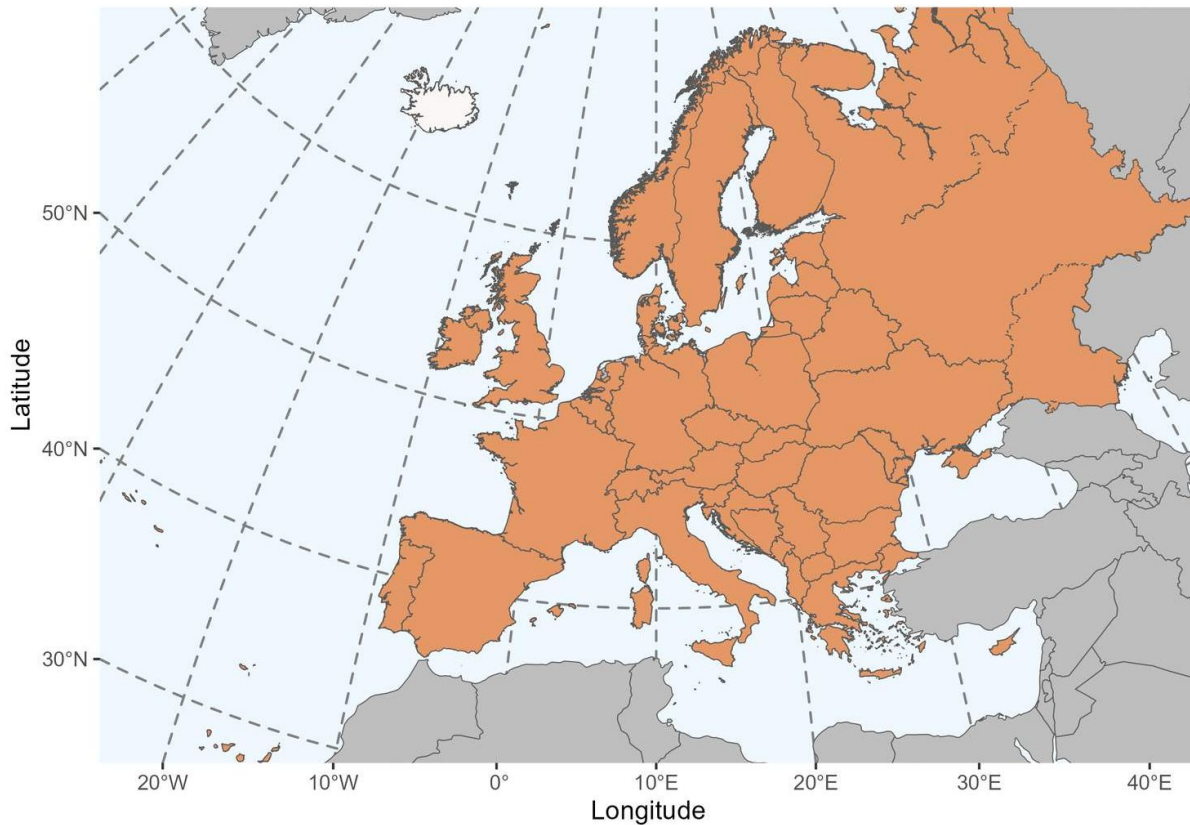
Lasioglossum have short mouthparts (short-tongue morphology).

Apidae and *Megachilidae* have long mouthparts (long-tongue morphology).

Geographical distribution and global diversity

The taxonomy of this group is particularly complicated as certain authors recognize this genus as a subgenus of *Halictus* (Vachal 1911, Warncke 1973). The other authors consider *Lasioglossum* a separated group from *Halictus* (Ebmer 1988, Michener 2007, Nieto et al. 2014).

At the global scale there are 1210 species of *Lasioglossum* (Michener 2007). They are a cosmopolite genus, with a high diversity of species everywhere except in Australia and South America. Apart from species rich, it is normally abundant at the local scale.



Presence in Europe

They are present in the entire Europe except Iceland.

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. They show the entire range of social behaviors, from solitary to eusocial, but the sociality in this genus is

highly flexible: it can change between species and even within species. There are species representing all intermediate stages. For many species is still not known. Danforth et al. (2003) concluded that eusociality appeared once in the evolution of *Lasioglossum* and many species went back to solitary stages, being secondarily solitary. Once the foundress female starts the nest, the next generation in social and semisocial species work for her, and in many cases they are chemically castrated.

Nesting

They nest in the ground, in flat open areas or with sparse vegetation. 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 cleptoparasites are species of the genus *Sphecodes* and some species of the genus *Nomada* Scopoli 1770.

Floral preferences

Their long flying period forces them to forage in what it 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, and there are even two known species oligolectic on *Campanula*: *Lasioglossum costulatum* and *L. lissonotum* (Pauly 2016a).

i **Type species:** *Lasioglossum tricingulum* Curtis, 1833 = *Melitta xanthopus* Kirby, 1802, by original designation.

Subgenera found in Europe: *Dialictus* Robertson, 1902; *Evylaeus* Robertson, 1902c; *Lasioglossum* s.str. Curtis, 1833.

Synonyms: *Paralictus* Robertson, 1901; *Chloralictus* Robertson, 1902; *Halictomorpha* Schrottky, 1911; *Prosopalictus* Strand, 1913; *Rhynchalictus* Moure, 1947;

Etymology: The genus name comes from the Greek root '*lasio*', meaning 'hairy', and '*glossa*', meaning 'tongue', as a reference to their hirsute tongue

Common names:

FR: les lasioglosses

GER: der Furchenbienen (= furrow bees)

NL: de groefbijen (= bee with groove)

EN: the furrow bees

IT: I lasioglossi

List of species found in Europe:

1. *Lasioglossum (Lasioglossum) acephaloides* (Blüthgen, 1931)
2. *Lasioglossum (Leuchalictus) aegyptiellum* (Strand, 1909)
3. *Lasioglossum (Dialictus) aeratum* (Kirby, 1802)
4. *Lasioglossum (Dialictus) akroundicum* (Blüthgen, 1937)
5. *Lasioglossum (Sphecodogastra) albipes* (Fabricius, 1781)
6. *Lasioglossum (Leuchalictus) albocinctum* (Lucas, 1849)
7. *Lasioglossum (Dialictus) albovirens* (Pérez, 1895)
8. *Lasioglossum (Sphecodogastra) algericolellum* (Strand, 1909)
9. *Lasioglossum (Dialictus) algirum* (Blüthgen, 1923)
10. *Lasioglossum (Leuchalictus) alinense* (Cockerell, 1924)
11. *Lasioglossum (Dialictus) alpigenum* (Dalla Torre, 1877)
12. *Lasioglossum (Dialictus) andromeda* Ebmer, 1978
13. *Lasioglossum (Sphecodogastra) anellum* (Vachal, 1905)
14. *Lasioglossum (Hemihalictus) angusticeps* (Perkins, 1895)
15. *Lasioglossum (Hemihalictus) angustipes* Ebmer, 1972

16. *Lasioglossum (Dialictus) annulipes* (Morawitz, 1876)
17. *Lasioglossum (Lasioglossum) aphrodite* Ebmer, 2014
18. *Lasioglossum (Dialictus) apostoli* Ebmer, 1970
19. *Lasioglossum (Hemihalictus) arctifrons* (Saunders, 1903)
20. *Lasioglossum (Dialictus) ariadne* Ebmer, 1981
21. *Lasioglossum (Sphecodogastra) articulare* (Pérez, 1895)
22. *Lasioglossum (Hemihalictus) asellum* (Pérez, 1895)
23. *Lasioglossum (Dialictus) aureimontanum* Ebmer, 1970
24. *Lasioglossum (Dialictus) aureolum* (Pérez, 1903)
25. *Lasioglossum (Dialictus) bavaricum* (Blüthgen, 1930)
26. *Lasioglossum (Lasioglossum) bicallosum* (Morawitz, 1873)
27. *Lasioglossum (Lasioglossum) bimaculatum* (Dours, 1872)
28. *Lasioglossum (Lasioglossum) bischoffi* (Blüthgen, 1931)
29. *Lasioglossum (Hemihalictus) bluethgeni* Ebmer, 1971
30. *Lasioglossum (Sphecodogastra) boreale* Svensson, Ebmer & Sakagami, 1977
31. *Lasioglossum (Hemihalictus) brevicorne* (Schenck, 1870)
32. *Lasioglossum (Lasioglossum) breviventre* (Schenck, 1853)
33. *Lasioglossum (Hemihalictus) buccale* (Pérez, 1903)
34. *Lasioglossum (Sphecodogastra) calceatum* (Scopoli, 1763)
35. *Lasioglossum (Leuchalictus) callizonium* (Pérez, 1896)
36. *Lasioglossum (Sphecodogastra) capitale* (Pérez, 1903)
37. *Lasioglossum (Pygmalictus) castilianum* (Blüthgen, 1931)
38. *Lasioglossum (Lasioglossum) chalcodes* (Brullé, 1839)

39. *Lasioglossum (Hemihalictus) clypeare* (Schenck, 1853)
40. *Lasioglossum (Hemihalictus) clypeiferellum* (Strand, 1909)
41. *Lasioglossum (Dialictus) collopiense* (Pérez, 1903)
42. *Lasioglossum (Hemihalictus) convexiusculum* (Schenck, 1853)
43. *Lasioglossum (Dialictus) corsicanum* (Blüthgen, 1931)
44. *Lasioglossum (Hemihalictus) corvinum* (Morawitz, 1877)
45. *Lasioglossum (Lasioglossum) costulatum* (Kriechbaumer, 1873)
46. *Lasioglossum (Hemihalictus) crassepunctatum* (Blüthgen, 1923)
47. *Lasioglossum (Lasioglossum) cristula* (Pérez, 1896)
48. *Lasioglossum (Dialictus) cupromicans* (Pérez, 1903)
49. *Lasioglossum (Sphecodogastra) damascenum* (Pérez, 1910)
50. *Lasioglossum (Dialictus) danuvium* (Blüthgen, 1944)
51. *Lasioglossum (Sphecodogastra) debilior* (Pérez, 1910)
52. *Lasioglossum (Hemihalictus) denislucum* (Strand, 1909)
53. *Lasioglossum (Leuchalictus) discus* (Smith, 1853)
54. *Lasioglossum (Hemihalictus) dolichocephalum* (Blüthgen, 1923)
55. *Lasioglossum (Dialictus) duckei* (Alfken, 1909)
56. *Lasioglossum (Sphecodogastra) dusmeti* (Blüthgen, 1924)
57. *Lasioglossum (Sphecodogastra) edessae* Ebmer, 1974
58. *Lasioglossum (Hemihalictus) elegans* (Lepelletier, 1841)
59. *Lasioglossum (Dialictus) ellipticeps* (Blüthgen, 1923)
60. *Lasioglossum (Sphecodogastra) epipygiale* (Blüthgen, 1924)
61. *Lasioglossum (Hemihalictus) erraticum* (Blüthgen, 1931)

62. *Lasioglossum (Sphecodogastra) euboense* (Strand, 1909)
63. *Lasioglossum (Lasioglossum) eurasicum* Ebmer, 1972
64. *Lasioglossum (Lasioglossum) euxanthopus* Pesenko, 1986
65. *Lasioglossum (Lasioglossum) euxinicum* Ebmer, 1972
66. *Lasioglossum (Lasioglossum) fallax* (Morawitz, 1874)
67. *Lasioglossum (Sphecodogastra) fratellum* (Pérez, 1903)
68. *Lasioglossum (Sphecodogastra) fulvicorne* (Kirby, 1802)
69. *Lasioglossum (Dialictus) gilanum* (Blüthgen, 1931)
70. *Lasioglossum (Pyghalictus) glabriusculum* (Morawitz, 1872)
71. *Lasioglossum (Lasioglossum) glaciegenitum* Ebmer, 1972
72. *Lasioglossum (Leuchalictus) gorkiense* (Blüthgen, 1931)
73. *Lasioglossum (Hemihalictus) griseolum* (Morawitz, 1872)
74. *Lasioglossum (Lasioglossum) haesitans* (Blüthgen, 1931)
75. *Lasioglossum (Dialictus) hethiticum* Ebmer, 1970
76. *Lasioglossum (Hemihalictus) hilare* Ebmer, 1972
77. *Lasioglossum (Hemihalictus) ibericum* Ebmer, 1975
78. *Lasioglossum (Sphecodogastra) imbecillum* Ebmer, 1974
79. *Lasioglossum (Sphecodogastra) immunitum* (Vachal, 1895)
80. *Lasioglossum (Hemihalictus) intermedium* (Schenck, 1870)
81. *Lasioglossum (Sphecodogastra) interruptum* (Panzer, 1798)
82. *Lasioglossum (Dialictus) kirgisicum* Ebmer, 1972
83. *Lasioglossum (Lasioglossum) kotschyi* Ebmer, 1981
84. *Lasioglossum (Lasioglossum) kussariense* (Blüthgen, 1925)

85. *Lasioglossum (Sphecodogastra) laeve* (Kirby, 1802)
86. *Lasioglossum (Hemihalictus) laevidorsum* (Blüthgen, 1923)
87. *Lasioglossum (Lasioglossum) laevigatum* (Kirby, 1802)
88. *Lasioglossum (Lasioglossum) laterale* (Brullé, 1832)
89. *Lasioglossum (Sphecodogastra) laticeps* (Schenck, 1870)
90. *Lasioglossum (Lasioglossum) lativentre* (Schenck, 1853)
91. *Lasioglossum (Lasioglossum) leucomontanum* Ebmer, 1981
92. *Lasioglossum (Dialictus) leucopus* (Kirby, 1802)
93. *Lasioglossum (Leuchalictus) leucozonium* (Schrank, 1781)
94. *Lasioglossum (Sphecodogastra) limbelloides* (Blüthgen, 1931)
95. *Lasioglossum (Hemihalictus) limbellum* (Morawitz, 1876)
96. *Lasioglossum (Sphecodogastra) lineare* (Schenck, 1870)
97. *Lasioglossum (Dialictus) lissonotum* (Noskiewicz, 1926)
98. *Lasioglossum (Dialictus) littorale* (Blüthgen, 1924)
99. *Lasioglossum (Dialictus) loetum* (Brullé, 1840)
100. *Lasioglossum (Rostrohalictus) longirostre* (Morawitz, 1876)
101. *Lasioglossum (Hemihalictus) lucidulum* (Schenck, 1861)
102. *Lasioglossum (Leuchalictus) majus* (Nylander, 1852)
103. *Lasioglossum (Sphecodogastra) malachurum* (Kirby, 1802)
104. *Lasioglossum (Dialictus) mandibulare* (Morawitz, 1866)
105. *Lasioglossum (Biennialaeus) marginatum* (Brullé, 1832)
106. *Lasioglossum (Hemihalictus) marginellum* (Schenck, 1853)
107. *Lasioglossum (Hemihalictus) maurusium* (Blüthgen, 1935)

108. *Lasioglossum (Hemihalictus) medinai* (Vachal, 1895)
109. *Lasioglossum (Sphecodogastra) mediterraneum* (Blüthgen, 1926)
110. *Lasioglossum (Hemihalictus) mesosclerum* (Pérez, 1903)
111. *Lasioglossum (Hemihalictus) minutissimum* (Kirby, 1802)
112. *Lasioglossum (Sphecodogastra) minutulum* (Schenck, 1853)
113. *Lasioglossum (Hemihalictus) monstrificum* (Morawitz, 1891)
114. *Lasioglossum (Dialictus) montivolans* Ebmer, 1970
115. *Lasioglossum (Dialictus) morio* (Fabricius, 1793)
116. *Lasioglossum (Dialictus) musculooides* Ebmer, 1974
117. *Lasioglossum (Sphecodogastra) nigripes* (Lepeletier, 1841)
118. *Lasioglossum (Hemihalictus) nitidiusculum* (Kirby, 1802)
119. *Lasioglossum (Dialictus) nitidulum* (Fabricius, 1804)
120. *Lasioglossum (Lasioglossum) niveocinctum* (Blüthgen, 1923)
121. *Lasioglossum (Sphecodogastra) obscuratum* (Morawitz, 1876)
122. *Lasioglossum (Dialictus) orihuelicum* (Blüthgen, 1924)
123. *Lasioglossum (Lasioglossum) pallens* (Brullé, 1832)
124. *Lasioglossum (Hemihalictus) pallidum* (Radoszkowski, 1888)
125. *Lasioglossum (Hemihalictus) parvulum* (Schenck, 1853)
126. *Lasioglossum (Hemihalictus) pauperatum* (Brullé, 1832)
127. *Lasioglossum (Sphecodogastra) pauxillum* (Schenck, 1853)
128. *Lasioglossum (Lasioglossum) perclavipes* (Blüthgen, 1934)
129. *Lasioglossum (Hemihalictus) peregrinum* (Blüthgen, 1923)
130. *Lasioglossum (Hemihalictus) phoenicurum* (Warncke, 1975)

131. *Lasioglossum (Hemihalictus) pleurospeculum* Herrmann, 2001
132. *Lasioglossum (Dialictus) podolicum* (Noskiewicz, 1925)
133. *Lasioglossum (Pygmalictus) politum* (Schenck, 1853)
134. *Lasioglossum (Lasioglossum) prasinum* (Smith, 1848)
135. *Lasioglossum (Hemihalictus) pressithorax* Ebmer, 1974
136. *Lasioglossum (Lasioglossum) prunellum* (Warncke, 1975)
137. *Lasioglossum (Lasioglossum) pseudocaspicum* (Blüthgen, 1923)
138. *Lasioglossum (Dialictus) pseudoleptocephalum* (Blüthgen, 1923)
139. *Lasioglossum (Hemihalictus) pseudoplanulum* (Blüthgen, 1924)
140. *Lasioglossum (Hemihalictus) punctatissimum* (Schenck, 1853)
141. *Lasioglossum (Hemihalictus) puncticolle* (Morawitz, 1872)
142. *Lasioglossum (Hemihalictus) pygmaeum* (Schenck, 1853)
143. *Lasioglossum (Hemihalictus) quadrinotatum* (Schenck, 1861)
144. *Lasioglossum (Lasioglossum) quadrinotatum* (Kirby, 1802)
145. *Lasioglossum (Hemihalictus) quadrisignatum* (Schenck, 1853)
146. *Lasioglossum (Lasioglossum) ragusanum* (Blüthgen, 1931)
147. *Lasioglossum (Lasioglossum) rostratum* (Eversmann, 1852)
148. *Lasioglossum (Hemihalictus) rufitarse* (Zetterstedt, 1838)
149. *Lasioglossum (Hemihalictus) salinum* (Morawitz, 1876)
150. *Lasioglossum (Hemihalictus) samaricum* (Blüthgen, 1935)
151. *Lasioglossum (Hemihalictus) semilucens* (Alfken, 1914)
152. *Lasioglossum (Sphecodogastra) setulellum* (Strand, 1909)
153. *Lasioglossum (Sphecodogastra) setulosum* (Strand, 1909)

154. *Lasioglossum (Lasioglossum) sexmaculatum* (Schenck, 1853)
155. *Lasioglossum (Lasioglossum) sexnotatum* (Nylander, 1852)
156. *Lasioglossum (Lasioglossum) sexnotatum* (Kirby, 1802)
157. *Lasioglossum (Hemihalictus) sexstrigatum* (Schenck, 1870)
158. *Lasioglossum (Dialictus) smeathmanellum* (Kirby, 1802)
159. *Lasioglossum (Dialictus) soror* (Saunders, 1901)
160. *Lasioglossum (Hemihalictus) sphecodimorphum* (Vachal, 1892)
161. *Lasioglossum (Hemihalictus) strictifrons* (Vachal, 1895)
162. *Lasioglossum (Hemihalictus) subaenescens* (Pérez, 1896)
163. *Lasioglossum (Lasioglossum) subfasciatum* (Imhoff, 1832)
164. *Lasioglossum (Sphecodogastra) subfulvicorne* (Blüthgen, 1934)
165. *Lasioglossum (Sphecodogastra) subhirtum* (Lepeletier, 1841)
166. *Lasioglossum (Hemihalictus) tarsatum* (Schenck, 1870)
167. *Lasioglossum (Dialictus) tauricum* Ebmer, 1972
168. *Lasioglossum (Hemihalictus) transitorium* (Schenck, 1870)
169. *Lasioglossum (Pygmalictus) trichopygum* (Blüthgen, 1923)
170. *Lasioglossum (Sphecodogastra) tricinatum* (Schenck, 1874)
171. *Lasioglossum (Hemihalictus) truncaticolle* (Morawitz, 1877)
172. *Lasioglossum (Hemihalictus) tschibuklinum* (Blüthgen, 1931)
173. *Lasioglossum (Lasioglossum) tungusicum* Ebmer, 1978
174. *Lasioglossum (Sphecodogastra) vergilianum* (Pérez, 1903)
175. *Lasioglossum (Hemihalictus) villosulum* (Kirby, 1802)
176. *Lasioglossum (Dialictus) virens* (Erichson, 1835)

177. *Lasioglossum (Dialictus) viride* (Brullé, 1840)
178. *Lasioglossum (Dialictus) wollastoni* (Cockerell, 1922)
179. *Lasioglossum (Lasioglossum) xanthopus* (Kirby, 1802)
180. *Lasioglossum (Leuchalictus) zonulum* (Smith, 1848)
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