

Prerevisional checklist and synonymy of the bees of Sweden (Hymenoptera: Apoidea)



Preliminary report
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Swedish Wild Bee Project



ArtDatabanken

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Cover: *Melitta tricincta* female. The species is presently known from only one local population in Skåne. (Photo: Anders Nilsson 2002).

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Summary

The present work is a preliminary checklist of the taxa of bees of Swedish origin principally according to literature sources 1742–2002. Valid taxa of species and races are subtended by their respective historical record of invalid names. The major purpose of the list is threefold. First, to create the pre-condition for producing a National Key that rests on a correct revision of the Swedish bee species and their distribution. Second, to contribute to an updated correctly species-tied facts basis for the production of a new edition of the Swedish red-list in 2005. Third, to pave the way for the production of a species-correct nature protection guide to the bees that will serve toward a sustainable development with nature in this country.

The current state of knowledge in international bee taxonomic research has provided the basis for the acceptance and arrangement of list taxa. Annotations comment the important changes in relation to the previous major lists (Catalogus Insectorum Sveciae from 1988–1991, and Redlist 2000) and address the remaining problems that have to be solved for efficient bee conservation in Sweden. Following the world revision of bees by Michener (2000), a number of systematic changes are accepted. *Hoplosmia* is upgraded to genus, *Aglaopis* includes *A. tridentata* (former *Dioxys*), and *Psithyrus* is downgraded to a subgenus of the genus *Bombus*. Subgeneric changes include additions of the taxa *Nesoprosopis*, *Monilapis*, *Protohalictus*, *Dialictus*, *Dasymegilla*, *Melea*, and *Pyganthophora*, and reclassifications involving *Evylaeus*, *Chelostoma*, *Alcidamea*, *Helicosmia*, *Melanosmia*, *Boreocoelioxys*, and *Xanthosarus*. Subgeneric classification is ignored in the genera *Colletes* and *Dufourea*. Species that are transferred to another subgenus are *Hylaeus difformis* (to *Hylaeus* s. str.), *Andrena coitana* (to *Oreomelissa*), *A. tarsata* (to *Tarsandrena*), *A. haemorrhoea* (to *Trachandrena*), and *Hoplitis tuberculata* (to *Monumetha*).

In total, 284 bee species are listed as Swedish. Eleven species are excluded: *Hylaeus sinuatus* (apparent casual import), *H. leptocephalus*, *Andrena simillima*, *A. schencki*, *A. angustior*, *A. dorsata*, *Lasioglossum lucidulum*, *L. smeathmanellum*, *L. parvulum*, *Osmia xanthomelana* and *Anthophora borealis* (records of these ten stemming from misidentifications). The following nine species and one subspecies are additions: *Andrena batava*, *A. fulva*, *A. nanula*, *A. chrysoceles*, *A. bluethgeni*, *A. flavipes*, *A. gravida*, *Nomada montana*, *N. fucata*, and *Bombus pascuorum mniorum*. Moreover, *Halictus quadricinctus* is listed for the first time from a valid record. Further, species reinstatements and upgradings are accepted of *Andrena gallica*, *A. morawitzi*, *A. nigrospina*, *A. propinqua*, *A. albofasciata* and *Nomada baccata*. Species status is accepted of *Osmia hyperborea* and *O. svenssoni*. It is stated that *Andrena violascens* is a junior synonym of *A. fulvida* (and not *A. bicolor* as internationally reputed). Species homogeneity tests are needed in the taxa *Andrena bicolor*, *A. barbilabris*, *Nomada panzeri*, *N. fulvicornis*, *Epeolus alpinus*, and *E. cruciger*. Uncertainty about Swedish occurrence exists in the cases of *Andrena trimmerana*, *Lasioglossum subfulvicorne*, *Dasypoda argentata*, *Megachile leachella*, *M. bombycina*, and *Nomada succincta*. The single Swedish specimen of reputed *Megachile maackii*, pirated in the 1930s by J. D. Alfken (Germany), needs re-confirmation. Distribution corrections are made for *Andrena varians*, *A. curvungula*, *A. ovatula*, *Dufourea halictula*, *Rophites quinquespinosus*, and *Halictus quadricinctus*. Data indicate that *Rophites quinquespinosus* (VU redlisted) is regionally extinct (no records after 1872), but that *Lasioglossum brevicorne* (RE redlisted) is surviving in two provinces. The bees *Coelioxys obtusispina* and *Bombus pascuorum gotlandicus* are globally confined to the island of Gotland in the Baltic, providing summit cases for regional and provincial protection.

This report initiates the execution of revision of the documented materials (in museums and other collections) and search and evaluation of the living populations of the species of bees by the Swedish Wild-bee Project.

Format guide

Source

The source of information has been the literature that has used names on wild bees of Swedish origin (see last section: The literature on Swedish wild-bees). **For literature that has used names on non-Swedish wild bees the reader should consult Schwarz & al. (1996).**

Systematics

Systematic groups above the species level follow the phylogenetic classification of Michener (2000), except in *Nomada* and *Bombus* where they follow Alexander (1994) and Williams (2002), respectively. Grouped species are in alphabetical order. The lowest taxonomic unit recognized is subspecies ("subsp.", "ssp.", race), conforming to the international practice that variety ("var."), forma ("f.") and morph ("m.") lack recognition in biodiversity conservation.

Inclusion restriction of scientific names

Only scientific names that have been used (or are here nationally introduced) for bees of Swedish origin are listed. For further names, e.g. synonyms of material of other geographic regions, the reader should consult Schwarz & al. (1996). A valid accepted scientific name of a taxon is listed once. Species and subspecies are subtended by their respective historical record of unaccepted names.

Valid scientific names

The current state of knowledge in international bee taxonomic research has provided the scientific names that are used on the list. Valid genus, subgenus, species and subspecies as well as species-group name are referenced by the sequence of auctor name(s), year of publication and description entry page number. Where either the original description of a species or subspecies was made under another genus name (as indicated) or at another taxonomic level, the name reference is in parenthesis. A nominate subspecies epithet is not referenced (reference identical with the species epithet reference). A species name conserved by the International Commission of Zoological Nomenclature (ICZN) is referenced by the sequence of auct. (abbreviation of "auctores" in terms of user authors), nec ("not"), name of (generally misinterpreted) auctor, year of publication and description entry page number.

Synonyms

A taxonomic (auctor-generated) synonym is written as it stood and referenced by the sequence of auctor name, year of publication and description entry page number. A usage (author-generated) synonym, i.e. an erroneous name from misidentification, mixing up of names, mislabelling or meaning-altering misprint, is written as it stood and referenced by the user-mentioned auctor reference (if any) plus the sequence of user name, publishing-year and name-use entry page number. However, any enumeration number of a user-mentioned reference (especially old literature often referred to number rather than page) has in the present list been substituted by the actual page number in order to facilitate the intra-checklist comparability. Author guess of synonym is indicated by a pre-standing question mark. "Synonymous" erroneous placement under label in a historically important personal collection is referenced by the person's name plus Coll. ("collection"). If a synonym only is for part of a previously named material, its reference ends with partim ("partly")

or, if the part is congruent with one of the sexes, a sex symbol. Random misprints are not listed due to lack of meaning. Source (usually author, year of publication and statement entry page number) of synonymy between a used invalid name and the valid name is listed chronologically in a subtending paragraph entitled **Syn. ref.**

Type locality

Extra national conservation responsibility exists where a valid scientific name rests on bee type material of Swedish origin. Type population area of such name-defining material is listed after the letters LT (locus typicus) at the right-hand margin on the line.

Abbreviations

The following abbreviations are used for different regions of Sweden:

Bo = Bohuslän	Lu Lpm = Lule Lappmark	S-SE = South Sweden
Dr = Dalarna	Nb = Norrbotten	T Lpm = Torne Lappmark
E-SE = East Sweden	N-SE = North Sweden	Up = Uppland
Go = Gotland	SE = Sweden	Vg = Västergötland
Hs = Hälsingland	Sk = Skåne	Ög = Östergötland
Lpl = Lappland	Sm = Småland	Öl = Öland

Annotations

Noteworthy changes in relation to the previous major lists, viz. *Catalogus Insectorum Sveciae* (Erlandsson & al. 1988, Svensson & al. 1990, Janzon & al. 1991) and *Redlist 2000* (Gärdenfors 2000), and the remaining problems that have to be solved for knowledge of diversity are commented under the headings *NOTE*.

Font

Valid accepted names above and at subspecies level are written in bold face. Latin and Swedish names are written in italics. Person names and word abbreviations are written in plain verticals.

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The present work is the result of contributions from many helpful and enthusiastic persons. The Biology Library section (Kristina Lönn, Lena Pavasson) of the Carolina Rediviva (Uppsala University Library) made an extraordinary search for, and administered the loans of, all the literature. Help to find references and papers was kindly given by Hugo Andersson, Stefan Andersson, Björn Cederberg, Ingemar Fries, Gunnar Hallin, Sven Hellqvist, Lars-Åke Janzon, Ulf Molau, Göran E. Nilsson, Lars Norén, Antti Pekkarinen, N. Erik Sjödin, Bo G. Svensson, Mikael Sörensson, Jan Tengö, Jon Ågren and Lennart Ågren.

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Checklist and Synonymy

COLLETIDAE

Colletinae

Colletes Latreille 1802:423

NOTE. -Subgeneric declassification- Colletes Latreille 1802:423 s. str., *Simcolletes* Warncke 1978:348, *Albocolletes* Warncke 1978:353 and *Pachycolletes* Bischoff 1954:73 were used as subgenera of the genus *Colletes* in Erlandsson & al. (1988:162). According to Michener (2000:136), any subgeneric classification should be ignored until the genus is reviewed worldwide; the former subgeneric taxa are presently best treated as generic synonyms.

Colletes cunicularius (Linné 1761:422 ♀ (*Apis*)) *cunicularius*

LT: SE

Apis subterranea Linné 1758:577 ♀

Syn. ref.: Jackson 1913:35, Day 1979:61, Warncke 1978:364, 1986:95, Vikberg 1986b:79, Erlandsson & al. 1988:162, Schwarz & al. 1996:21, Söderman & Vikberg 2002:54.

Colletes daviesanus Smith 1846:1278 *daviesanus*

Colletes floralis Eversmann 1852:46 *floralis*

Colletes suecica Aurivillius 1903a:214

Syn. ref.: Forsius & Nordström 1921:71, Jansson 1922:22, 1927:151, Forsius 1935:13(sic *succinctus*), Noskiewicz 1936:437, Elfving 1968:11, Warncke 1978:354, Vikberg 1986b:79, Erlandsson & al. 1988:162, Schwarz & al. 1996:21, Söderman & Vikberg 2002:54.

Colletes suecica Aurivillius 1903b:86

Colletes montanus Morawitz: Alfken 1912a:24

Colletes montana Fabricius: [*suecica* Aurivillius] Jansson 1922:22

Colletes montana Fabricius: [*suecica* Aurivillius] Jansson 1927:151

Colletes montanus Morawitz: [*suecicus* Aurivillius] Schmiedeknecht 1930:893

Colletes montanus Morawitz: [*suecicus* Aurivillius] F. K. Stoeckhert 1933:63

Colletes montanus Morawitz: Lundblad 1958:48

Colletes fodiens (Geoffroy 1785:444 (*Apis*)) *fodiens*

Andrena fodiens Panzer: Zetterstedt 1838:461

Colletes marginata (Smith): Thomson 1870:314

Syn. ref.: Alfken 1899c:146, 1912a:23, Noskiewicz 1936:298, J. F. Perkins 1942:193.

Colletes marginata Smith 1846:1277: [Thomson 1870:314] Thomson 1872:165

Syn. ref.: Alfken 1899c:146, 1912a:23, Noskiewicz 1936:298, J. F. Perkins 1942:193.

Colletes impunctatus Nylander 1852b:249

LT: N-SE

Colletes marginatus Smith 1846:1277 *marginatus*

Colletes succincta Linné: Nylander 1848:206

Syn. ref.: Nylander 1852b:248, Smith 1853:2, 1855:5, 1876:4, Dalla Torre & Friese 1895:25, Dalla Torre 1896:42.

Colletes balteata Nylander: Thomson 1870:315

Syn. ref.: Saunders 1882:185, Alfken 1904b:126, Jansson 1927:151, Forsius 1935:13, Elfving 1968:10.

Colletes balteata Nylander 1852b:248: [Thomson 1870:315] Thomson 1872:166

Syn. ref.: Saunders 1882:185, Noskiewicz 1936:463, Erlandsson & al. 1988:162.

Colletes balteatus Nylander 1852b:248: [Thomson 1870:315, 1872:166] Dalla Torre 1896:37

Colletes balteata Thomson: Aurivillius 1903a:215

Colletes balteata Thomson: Aurivillius 1903b:87

Colletes thomsoni Alfken 1899c:146 [*balteatus* Thomson]

Syn. ref.: Noskiewicz 1936:463, Warncke 1978:358, Erlandsson & al. 1988:162, Söderman & Vikberg 2002:54.

Colletes similis Schenck 1853:172

Colletes picistigma Thomson 1872:165

Syn. ref.: Blüthgen 1930b:194, Schmiedeknecht 1930:891, F. K. Stoeckhert 1933:62, Noskiewicz 1936:304, Elfving 1968:10, Richards 1978:135, Warncke 1978:352, Vikberg 1986b:79, Erlandsson & al. 1988:162, Schwarz & al. 1996:22, Söderman & Vikberg 2002:54.

Colletes picistigma Thomson 1872:165: Dalla Torre 1896:43

Colletes picistigma Thomson: Nordenström 1900:207

Colletes picistigma Thomson: Aurivillius 1903a:215

Colletes picistigma Thomson: Aurivillius 1903b:87

Colletes picistigma Thomson: Alfken 1912a:24

Colletes floralis Eversmann: [*picistigma* Thomson] Dalla Torre & Friese 1895:25

Colletes succinctus (Linné 1758:576 ♀ (*Apis*)) ***succinctus***

LT: SE

Apis n. 1007 Linné 1746:302

Syn. ref.: Linné 1761:421.

Andrena calendarum Illiger: Zetterstedt 1838:461

Colletes fodiens (Kirby 1802:34): Nylander 1848:206

Syn. ref.: Nylander 1852b:248, Smith 1855:3, Thomson 1872:163.

Hylaeinae

Hylaeus Fabricius 1793:302

Subg. ***Dentigera*** Popov 1939:168

Hylaeus brevicornis Nylander 1852a:95

LT: Bo, Vg, Sm

Prosopis minuta Fabricius: [*brevicornis* Nylander] Alfken 1913:13

Syn. ref.: Elfving 1951:83.

Prosopis minuta Fabricius: [*brevicornis* Nylander] Forsius & Nordström 1921:71

Subg. ***Hylaeus*** (Fabricius 1793:302) s. str.

Hylaeus angustatus (Schenck 1861:315/321 (*Prosopis*)) ***angustatus***

Hylaeus submarginatus Thomson 1872:130

Syn. ref.: Schmiedeknecht 1907:109, 1930:880, Forsius 1935:13, Elfving 1951:67, 1968:8, Warncke 1972:752, Dathe 1980:258, Vikberg 1986b:79, Erlandsson & al. 1988:162, Schwarz & al. 1996:11, Söderman & Vikberg 2002:54.

Prosopis submarginata Thomson: Dalla Torre & Friese 1895:25

Prosopis submarginata (Thomson 1872:130): Dalla Torre 1896:33

Prosopis submarginata Thomson: Aurivillius 1903a:218

Prosopis submarginata Thomson: Aurivillius 1903b:90

Prosopis submarginata Thomson: Jansson 1922:23

Prosopis submarginata Thomson: D. Gaunitz 1946:158

Prosopis bisinuata Förster: Wolf 1960:99 partim

Syn. ref.: E. Valkeila rev. det. (2 ♀♀, ZML), confirm. L. Norén 2002.

Hylaeus annulatus (Linné 1758:578 (*Apis*))

Prosopis dilatata Nylander 1848:188

Syn. ref.: Thomson 1872:129.

Hylaeus borealis Nylander 1852a:94 ♂

Syn. ref.: Nylander 1852b:234, Smith 1853:19, Thomson 1872:129, Schenck 1874a:169, Schmiedeknecht 1930:880, Méhely 1935:169, Elfving 1951:75, 1968:7, Blüthgen 1961:29, Warncke 1972:756, Dathe 1980:257, Vikberg 1986b:79, Erlandsson & al. 1988:162 Schwarz & al. 1996:11, Söderman & Vikberg 2002:54.

Prosopis borealis Nylander: Alfken 1912a:19

Prosopis borealis: [*annulata* Linné] Forsius & Nordström 1921:71

Hylaeus borealis Nylander 1852: [*annulata* Linné 1758] Richards 1935a:170

Prosopis communis Nylander: Lundblad 1924:21

Syn. ref.: D. Gaunitz 1929:199.

Hylaeus cardioscapus Cockerell 1924:276

Hylaeus communis Nylander 1852b:234 ***communis***

?*Apis* n. 1001: Linné 1746:301 ♂

?*Apis cariosa* Linné 1758:578: [n. 1001 Linné 1746:301]

Syn. ref.: Day 1979:58, Dathe 1980:259, Vikberg 1986b:79, Schwarz & al. 1996:12, Söderman & Vikberg 2002:54.

?*Apis cariosa*: [n. 1001: Linné 1746:301] Linné 1761:424 ♂

?*Apis cariosa*: [Linné 1761:424] Linné 1767:959 ♂

?*Apis cariosa*: [Linné 1761:424] Villers 1789:298

?*Apis cariosa*: [Linné 1761:424] Gmelin 1790:2780

Hylaeus annulatus (Linné 1761:423): Zetterstedt 1838:463

Syn. ref.: Smith 1855:8, Friese 1902:480.

Prosopis annulata (Linné 1761:423): Nylander 1848:187

Syn. ref.: Nylander 1852b:234, Smith 1853:19, 1855:8.

Prosopis annulata Kirby: [*communis* Nylander] Schenck 1874a:167 ♀

Prosopis annulata Linné: [*communis* Nylander] Schmiedeknecht 1907:108

Prosopis annulata Linné: [*communis* Nylander] Alfken 1912a:20

Prosopis annulata Linné: [*communis* Nylander] Alfken 1913:12

Prosopis annulata Linné: [*communis* Nylander] Forsius & Nordström 1921:71

Prosopis bisinuata Förster: Wolf 1960:99 partim

Syn. ref.: E. Valkeila rev. det. (1 ♀, ZML), confirm. L. Norén 2002.

Hylaeus difformis* (Eversmann 1852:52 (*Prosopis*)) *difformis

Hylaeus marginatus Thomson 1870:306

Syn. ref.: Dalla Torre & Friese 1895:23, Dalla Torre 1896:21, Schmiedeknecht 1907:107, Warncke 1972:756, Dathe 1980:266, Erlandsson & al 1988:162, Schwarz & al. 1996:13, Söderman & Vikberg 2002:54.

Hylaeus marginatus Thomson 1870:306: Thomson 1872:126

NOTE. -Species reclassification- This species was listed in Erlandsson & al. (1988:162) under the subgenus *Patagiata* Blüthgen 1949:77. According to Michener (2000:198), *Patagiata* is probably a derivative of, and a junior synonym of, the subgenus *Hylaeus* s. str.

***Hylaeus gracilicornis* (Morawitz 1867:56 (*Prosopis*))**

[*Hylaeus leptocephalus* (Morawitz 1870:324 (*Prosopis*))]

Prosopis bisinuata (Förster): Wolf 1960:99

NOTE. -Species exclusion- Wolf (1960:99) reported the species *Prosopis bisinuata* from Sweden: Småland, Öland and Gotland. These records were not mentioned in Erlandsson & al. (1988). The taxon *P. bisinuata* is a junior synonym of *Hylaeus leptocephalus* (Warncke 1986:76, Schwarz & al. 1996:15). Recovery of the actual specimens (3 ♀♀, ZML) revealed misidentified *H. angustatus* and *H. communis* (rev. det. E. Valkeila, confirm. L. Norén 2002).

Subg. ***Lambdopsis*** Popov 1939:169

***Hylaeus annularis* (Kirby 1802:38 (*Melitta*))**

Prosopis labiata Fabricius: Billberg 1820:109

Prosopis dilatata (Kirby 1802:39): Nylander 1848:188

Prosopis dilatata (Kirby 1802:39): Nylander 1852a:94

Prosopis dilatata (Kirby 1802:39): [Nylander 1848:188] Smith 1853:20

Hylaeus dilatatus (Kirby 1802:39): [Nylander 1852a:94] Thomson 1872:132

Prosopis dilatata (Kirby 1802:39): [Nylander 1848:188, Thomson 1872:132] Smith 1876:8

Prosopis dilatata (Kirby 1802:39): [Thomson 1872:132] Dalla Torre 1896:21

Prosopis dilatata Kirby: Aurivillius 1903a:218

Syn. ref.: Alfken in Jansson 1927:150.

Prosopis dilatata Kirby: Aurivillius 1903b:90

Hylaeus annulatus (Linné): Thomson 1870:307

Prosopis annulata Thomson: Lundblad 1913:214

Prosopis borealis Nylande: [*dilatata* Nylander] Dalla Torre & Friese 1895:22

Prosopis borealis (Nylander 1852b:234): [*dilatata* Nylander 1848:188, 1852a:94, *annulatus* Thomson 1870:307, 1872:129]: Dalla Torre 1896:16

Prosopis cervicornis Costa: Jansson 1927:150

***Hylaeus pfankuchi* (Alfken 1919:269 (*Prosopis*))**

***Hylaeus rinki* (Gorski 1852:181 (*Prosopis*))**

Hylaeus clathratus Thomson 1870:307 ♀

Syn. ref.: Thomson 1872:133, Dalla Torre & Friese 1895:24, Dalla Torre 1896:31, Warncke 1972:767, Dathe 1980:269, Erlandsson & al. 1988:162, Schwarz & al. 1996:17.

Subg. ***Nesoprosopis*** (R. C. L. Perkins 1899:75)

NOTE. -Subgenus addition- Erlandsson & al. (1988:162) listed the species *Hylaeus pectoralis* in the subgenus *Prosopis* Fabricius 1804:293. However, Michener (2000:201) found evidence that this species belongs to the subgenus *Nesoprosopis*.

***Hylaeus pectoralis* Förster 1871:972**

Subg. ***Paraprosopis*** Popov 1939:169

***Hylaeus pictipes* Nylander 1852a:95**

LT: Vg

Hylaeus annularis (Kirby): [*pictipes* Nylander] Thomson 1870:306

Syn. ref.: Thomson 1872:127, Dalla Torre & Friese 1895:24, Dalla Torre 1896:29.

[*Hylaeus sinuatus* (Schenck 1853:216 (*Prosopis*))]

NOTE. -Species exclusion- The species was reported for Sweden by Erlandsson (1984:103) due to a single ♀ with the label text "Lund, Botaniska trädgården 7 V 1838, leg. A. G. Dahlbom" in ZML. *Hylaeus sinuatus* was subsequently listed as Swedish (Erlandsson & al. 1988:162, Gärdenfors 2000:183). The Botanic Garden as the place of capture in

combination with the off-season early date for a *Hylaeus* indicates that the specimen had emerged from imported garden sticks in the greenhouse; there is no evidence of any Swedish natural population.

Subg. ***Prosopis*** (Fabricius 1804:293)

Hylaeus confusus Nylander 1852b:232

Hylaeus annulatus (Linné 1761:423) var. *b* Zetterstedt 1838:464

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Prosopis signata (Kirby 1802:41): Nylander 1848:190

Syn. ref.: Nylander 1852b:232, Smith 1853:20, Thomson 1872:125, Dalla Torre & Friese 1895:23, Dalla Torre 1896:20, Elfving 1951:80, 1968:8, Warncke 1972:759.

Prosopis signata (Kirby 1802:41): [Nylander 1848:190] Smith 1876:11

Prosopis gibba ssp. *confusa* (Nylander 1852): Warncke 1992c:750

Hylaeus gibbus Saunders 1850:59

Hylaeus genalis Thomson 1872:124

Syn. ref.: Alfken 1912a:22, 1912b:120, 1913:15, Forsius & Nordström 1921:71, Jansson 1925:144, Schmiedeknecht 1930:881, F. K. Stoeckert 1933:57, Forsius 1935:13, Méhelý 1935:147, Elfving 1951:67, 1968:9, Tjeder 1954:69, Richards 1978:135, Dathe 1980:224, Vikberg 1986b:79, Erlandsson & al. 1988:162, Schwarz & al. 1996:14, Söderman & Vikberg 2002:54.

Prosopis genalis (Thomson 1872:124): Dalla Torre 1896:23

Prosopis genalis Thomson: Aurivillius 1903a:217

Prosopis genalis Thomson: Aurivillius 1903b:89

Prosopis gibba (Saunders 1850) ssp. *confusa* (Nylander 1852): [*genalis* Thomson 1872] Warncke 1972:759

Hylaeus signatus (Panzer 1798:53 (*Sphex*)) ***signatus***

Subg. ***Spatulariella*** Popov 1939:169

Hylaeus hyalinatus Smith 1842:58 ***hyalinatus***

Prosopis armillata Nylander 1848:189

Syn. ref.: Dalla Torre & Friese 1895:23, Friese 1895b:198, Dalla Torre 1896:24, Alfken 1912a:22, J. F. Perkins 1942:193, Elfving 1951:79, 1968:8, Warncke 1972:758, Dathe 1980:280, Vikberg 1986b:79, Erlandsson & al. 1988:162, Schwarz & al. 1996:14, Söderman & Vikberg 2002:54.

Prosopis armillata: Nylander 1852a:94

Syn. ref.: Dalla Torre & Friese 1895:23, Friese 1895b:198.

Hylaeus armillatus (Nylander): Thomson 1870:305

Syn. ref.: Dalla Torre 1896:24.

Hylaeus armillatus (Nylander 1848:189): [Thomson 1870:305] Thomson 1872:123

Prosopis annularis (Kirby 1802:38): [*armillata* Nylander 1848:189] Nylander 1852b:233

Prosopis annularis (Kirby 1802:38): [*armillata* Nylander 1848:189] Smith 1853:19

Prosopis annularis (Kirby 1802:38): [*armillata* Nylander 1848:189] Smith 1855:9

ANDRENIDAE

Andreninae

Andrena Fabricius 1775:376

Subg. ***Andrena*** (Fabricius 1775:376) s. str.

Andrena apicata Smith 1847:1748

Andrena batava Pérez 1902:clxxiv

NOTE. -Species addition- Sörensson (2000b:4) reported *A. batava* (det. J. van der Smitsen) to occur in Sweden (1 ♀: Skåne, Torna Hällestad, 1999). It was found at Krankesjön in 2000 (1 ♀ leg. & det. L. Norén pers. comm.), and was not uncommon at the Torna Hällestad site in 2001 (B. Cederberg & L. A. Nilsson pers. obs.). The species was also found to have been documented from nearby Revingefältet in 1977 (1 ♀ leg. & Coll. B. G. Svensson, det. L. A. Nilsson). A total of six documented specimens (leg. O Ringdahl, det. H. Wolf, ZML, and L. A. Nilsson, NRM) from the Helsingborg area, SW Scania, in the period 1916-1925 indicate non-recent spread of the species to Sweden. It is a rare bee in this country, recorded from a total of three Scanian localities. The taxon is not conspecific with *A. apicata* (E. Stoeckert 1930:923-924, 962-963, Kocourek 1966:35-36, Schmid-Egger & Scheuchl 1997:53-54), although the opposite opinion has been expressed (Warncke 1967:190, 1986:45, Dylewska 1987:629, Schwarz & al. 1996:30). In Sweden,

representatives of *A. apicata* and *A. batava* display absolute, non-overlapping species characters (L. A. Nilsson & al. MS).

***Andrena clarkella* (Kirby 1802:130 (*Melitta*))**

Andrena haemorrhoidalis Fabricius 1804:327: [*chrysoira* Fallén Coll.] Zetterstedt 1838:459 ♀ *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena haemorrhoidalis: Thomson 1862:300

Andrena haemorrhoidalis Fabricius 1793:313: [Zetterstedt 1838:459] Smith 1876:76

Melitta haemorrhoidalis: Fabricius: [Zetterstedt 1838:459] Friese 1902:481

Andrena dispar Zetterstedt 1838:460

Syn. ref.: Nylander 1848:212, Smith 1855:65, 1876:39, Thomson 1872:89, Schmiedeknecht 1882-1884:837, Dalla Torre & Friese 1895:42, Friese 1895b:200, Dalla Torre 1896:112, Sparre Schneider 1909:117, Warncke 1967:266, Vikberg 1986b:80, Dylewska 1987:633, Svensson & al. 1990:48, Schwarz & al. 1996:33, Söderman & Vikberg 2002:55, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena dispar Zetterstedt 1838:460: Smith 1853:101

Andrena clarkella Illiger: Zetterstedt 1838:461

Andrena bicolor Fabricius 1793:310: [*dispar* Zetterstedt 1838:460 ♀, *clarkella* Nylander 1848:212 ♀] Smith 1851:68

Andrena bicolor Fabricius 1793:310: [*dispar* Zetterstedt 1838:460 ♀, *clarkella* Nylander 1848:212 ♀] Smith 1853:94

***Andrena fucata* Smith 1847:1743**

Andrena clypearis Nylander 1848:215

Syn. ref.: Nylander 1852b:254, Smith 1853:100 (sic *A. clypeata*), Smith 1855:82 (sic *A. clypeata*), 1876:54, Morawitz 1865:64, Thomson 1872:93, Saunders 1882:256, Schmiedeknecht 1882-1884:612, Dalla Torre 1896:125, Alfken 1912a:50, Warncke 1967:261, Vikberg 1986b:80, Dylewska 1987:627, Svensson & al. 1990:48, Schwarz & al. 1996:38, Söderman & Vikberg 2002:55.

Andrena clypearis Nylander 1848:215: Smith 1853:103

Anthrena fuscata Smith: [*clypearis* Nylander] Dalla Torre & Friese 1895:44

***Andrena fulva* (Müller 1766:197 (*Apis*))**

NOTE. -Species addition- Nylander (1848:214) wrote that *A. fulva* occurred in "eastern and middle Sweden". His *A. fulva* was revised to *Andrena nigriceps* (Nylander 1852a:99, Morawitz 1865:67, Dalla Torre 1896:140). Still, Smith (1851:68, 1853:94, 1855:64, 1876:38) and Schmiedeknecht (1882-1884:835) listed Nylander's original record as correct *A. fulva*. Several, unlabeled individuals of undisputable *A. fulva* are in Nylander's collection (B. Cederberg pers. obs. 2001). These are of non-Swedish origin (A. Pekkarinen pers. comm. 2001). Nonetheless, *Andrena fulva* was found at two sites in E Scania in 2000 (L. Norén, N. E. Sjödin in litt. 2000) and at further Scania sites in 2001 and 2002 (L. Norén, S. Persson, M. Sörensson pers. comm.). The species has recently been found new to Denmark (C. Skov in litt. 2000).

***Andrena helvola* (Linné 1758:575 ♀ (*Apis*))**

Andrena angulosa (Kirby 1802:127): Thomson 1872:91

Syn. ref.: Dalla Torre 1896:160, Aurivillius 1903a:203, 1903b:75.

Andrena varians (Kirby 1802:117 ♀): [*helvola* Linné 1767:955, Nylander 1852a:99, *angulosa* Thomson 1872:91] Schmiedeknecht 1882-1884:607

Anthrena varians Kirby var. *helvola* Linné: Dalla Torre & Friese 1895:49

Anthrena varians (Kirby 1802:117) var. *helvola* (Linné 1758:575): Dalla Torre 1896:159

Andrena varians Kirby var. *helvola* Linné: Schmiedeknecht 1907:80

Andrena varians Kirby: Jansson 1925:143

Syn. ref.: L. A. Nilsson det. in Jansson Coll. ZML.

Andrena mixta Schenck: [J. D. Alfken det.] Jansson 1927:153

Syn. ref.: L. A. Nilsson det. in Jansson Coll. ZML.

***Andrena lapponica* Zetterstedt 1838:460**

LT: N-SE

Andrena lapponica var. *alpina* Zetterstedt 1838:461 ♀

Syn. ref.: Warncke 1967:249, Vikberg 1986b:80, Dylewska 1987:625 (sic *A. alpina*), Svensson & al. 1990:48, Söderman & Vikberg 2002:55, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena varians (Kirby 1802:117): [*lapponica* Zetterstedt 1838:460] Nylander 1848:213

Syn. ref.: Morawitz 1865:66.

Andrena varians (Kirby 1802:117): [Nylander 1848:213, *?lapponica* Zetterstedt 1838:460] Smith 1851:66

Andrena varians (Kirby 1802:117): [*lapponica* Zetterstedt 1838:460] Nylander 1852a:101 ♂

Andrena varians (Kirby 1802:117): [Nylander 1848:213, 1852b:253, *?lapponica* Zetterstedt 1838:460] Smith 1853:97

Andrena varians Rossi: Svensson 1974:123

***Andrena praecox* (Scopoli 1763:301 (*Apis*))**

Andrena helvola (Linné): Thomson 1870:149

Syn. ref.: Aurivillius 1903a:203, 1903b:75, J. F. Perkins 1942:194.

Andrena helvola (Linné 1761:421): Thomson 1872:90

Syn. ref.: Schmiedeknecht 1882-1884:602.

Andrena angustior Kirby: [J. D. Alfken det.] Jansson 1927:153 ♀

Syn. ref.: L. A. Nilsson rev. det., confirm. C. Schmid-Egger, Coll. ZML.

***Andrena varians* (Kirby 1802:117 (*Melitta*))**

Andrena varians (Rossi): Thomson 1870:149

NOTE. -Occurrence correction- Jansson (1927:153) reported *Andrena mixta*, a junior synonym of *A. varians*, from the province of Närke (2 ♀♀, Almby, Ormesta 11. 5 1919, det. J. D. Alfken). This was subsequently listed as a record of *A. varians* (Svensson & al. 1990:48, Gårdenfors 2000:182). Material under the label *A. mixta* in Coll. Jansson (ZML) is *A. helvola* (det. L. A. Nilsson 2001). The species must be deleted for Närke. It has been reported (Andersson & al 1987:72, Ehnström & al. 1993:44) that *A. varians* is extinct in Sweden. However, documented specimens (Sk) also from recent years are in ZML (L. A. Nilsson pers. obs. 2002).

Subg. ***Charitandrena*** Hedicke 1933:210

***Andrena hattorfiana* (Fabricius 1775:389 (*Nomada*))**

Andrena equestris Fabricius: Fallén 1813:34

Andrena equestris Panzer: Zetterstedt 1838:461

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Subg. ***Chlorandrena*** Pérez 1890:172

***Andrena humilis* Imhoff 1832:1201**

Andrena cinerascens Nylander 1848:216 ♀

Syn. ref.: Dalla Torre & Friese 1895:45, Friese 1895b:202, Dalla Torre 1896:131, Warncke 1967:260, Dylewska 1987:649, Schwarz & al. 1996:41, Söderman & Vikberg 2002:54.

Andrena cinerascens Nylander 1848:216: Smith 1853:98

Andrena fulvescens Smith: [*cinerascens* Nylander 1848:216] Nylander 1852b:255 ♂

Syn. ref.: Morawitz 1865:65.

Andrena fulvescens Smith 1855:89: [*cinerascens* Nylander 1848:216 ♀, 1852b:255 ♂, *nasalis* Thomson 1870:156] Thomson 1872:111

Syn. ref.: Dalla Torre 1896:132.

Andrena fulvescens: [*cinerascens* Nylander] Schenck 1874b:340

Andrena fulvescens Smith 1847:1732: [Thomson 1872:111, *cinerascens* Nylander 1848:216, *nasalis* Thomson 1870:156] Smith 1876:60

Syn. ref.: Saunders 1882:275.

Andrena fulvescens Smith 1847:1732: [Thomson 1872:111, *cinerascens* Nylander 1848:216 ♀, 1852b:255 ♂, *nasalis* Thomson 1870:156], Schmiedeknecht 1882-1884:575

Andrena nasalis (Kirby): Thomson 1870:156

Syn. ref.: Dalla Torre & Friese 1895:45, Friese 1895b:202, Dalla Torre 1896:132, Warncke 1967:290, Dylewska 1987:649, Svensson & al. 1990:49, Schwarz & al. 1996:41, Söderman & Vikberg 2002:54.

Subg. ***Chrysandrena*** Hedicke 1933:21

***Andrena fulvago* (Christ 1791:189 (*Apis*))**

Subg. ***Cnemidandrena*** Hedicke 1933:213

***Andrena denticulata* (Kirby 1802:133 (*Melitta*))**

Andrena listerella (Kirby 1802:137): Nylander 1848:219

Syn. ref.: Smith 1851:70, 1853:99, 1855:81, 1876:53, Dalla Torre 1896:117.

Andrena listerella (Kirby): Nylander 1852b:282

Andrena listerella (Kirby): Thomson 1870:148

Syn. ref.: Smith 1876:53, Dalla Torre 1896:117.

Andrena listerella (Kirby 1802:137): [Nylander 1848:219, Thomson 1870:148] Thomson 1872:88

Syn.ref.: Smith 1876:53.

Andrena listerella (Kirby 1802:137): [Nylander 1848:219, Thomson 1872:88] Schmiedeknecht 1882-1884:812

***Andrena fuscipes* (Kirby 1802:136 (*Melitta*))**

Andrena cincta Nylander 1848:220

Syn. ref.: Nylander 1852b:256, Thomson 1872:87, Dalla Torre & Friese 1895:44, Friese 1895b:201, Dalla Torre 1896:127, Warncke 1967:260, Söderman & Vikberg 2002:55.

Vikberg 1986b:80, Dylewska 1987:599, Svensson & al. 1990:48, Schwarz & al. 1996:39

Andrena pubescens (Kirby 1802:141): [*cincta* Nylander 1848:220] Smith 1851:70

Andrena pubescens (Kirby 1802:141): [*cincta* Nylander 1848:220] Smith 1853:100

Andrena pubescens (Kirby): [*cincta* Nylander] Morawitz 1865:68

Andrena pubescens (Kirby 1802:141): [*cincta* Nylander 1848:220, *fuscipes* Nylander 1852b:256, Thomson 1870:148, 1872:87] Smith 1876:51

Syn. ref.: Saunders 1882:262.

Andrena pubescens (Kirby 1802:141 ♂): [*cincta* Nylander 1848:220, *fuscipes* Nylander 1852b:256, Thomson 1872:87] Schmiedeknecht 1882-1884:814
Andrena bremensis Alfken: [J. D. Alfken det.] Jansson 1927:153 ♀
Syn. ref.: L. A. Nilsson det. in Jansson Coll. ZML.
Andrena simillima Smith: [J. D. Alfken det.] Jansson 1927: 153 ♀
Syn. ref.: L. A. Nilsson det. in Jansson Coll. ZML.
Andrena simillima Smith 1851: [Jansson 1927 ♀] Svensson & al. 1990:50

***Andrena nigriceps* (Kirby 1802:134 (*Melitta*))**

Andrena nigripes Illiger: Zetterstedt 1838:461
Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.
Andrena fulva Lepelletier 1841:145: Nylander 1848:214 ♀
Syn. ref.: Nylander 1852a:99, Morawitz 1865:67, Schmiedeknecht 1882-1884:817, Dalla Torre & Friese 1895:46, Dalla Torre 1896:140.
Andrena fulva (Schrank 1781:400): [Nylander 1848:214 ♀] Smith 1851:68
Andrena fulva (Schrank 1781:400): [Nylander 1848:214 ♀] Smith 1853:94
Andrena fulva (Schrank 1781:400): [Nylander 1848:214 ♀] Smith 1855:64
Andrena fulva (Schrank 1781:400): [Nylander 1848:214] Smith 1876:38
Andrena fulva (Schrank 1781:400): [Nylander 1848:214] Schmiedeknecht 1882-1884:835
Andrena simillima Smith 1851: [leg. E. Wieslander, det K. Warncke NRM ♂] Svensson & al. 1990:50
Syn. ref.: L. A. Nilsson det., Coll. NRM.

[*Andrena simillima* Smith 1851:122]

Andrena simillima Smith ssp. *bremensis* Alfken: Warncke 1988b:101
NOTE. -Species exclusion- Jansson (1927:153) reported this species from Sweden (Närke, 1 ♀ *A. bremensis* Alfken, Örebro-trakten and 1 ♀ *A. simillima* F. Smith, Adolfsberg, det. J. D. Alfken). Material under the labels *A. bremensis* and *A. simillima* in Coll. Jansson (ZML) is *Andrena fuscipes* (det. L. A. Nilsson 2001). Svensson & al. (1990:50) mentioned a further Swedish *A. simillima* (1 ♂: Skåne, Barkåkra 1951, leg. E. Wieslander, det. K. Warncke, NRM). The specimen is *Andrena nigriceps* (det. L. A. Nilsson 2002). There exists no valid record (cf. Ehnström & al. 1993:44, Gärdenfors 2000:182) of *A. simillima* from Sweden.

Subg. ***Euandrena*** Hedicke 1933:213

Andrena bicolor* Fabricius 1775:376 *bicolor

Andrena lucida Panzer: Zetterstedt 1838:461
Andrena gwynana (Kirby 1802:120): Nylander 1848:213
Syn. ref.: Nylander 1852b:253.
Andrena gwynana (Kirby 1802:120): [Nylander 1848:213, *helvola* Linné 1761:421, Coll. *partim*] Smith 1851:67
Andrena gwynana: Nylander 1852a:98
Andrena gwynana (Kirby): [*cinerascens* Nylander 1848:216 ♂] Nylander 1852b:255
Andrena gwynana (Kirby 1802:120): [Nylander 1848:213, 1852b:253] Smith 1853:95
Andrena gwynana (Kirby 1802:120): [Nylander 1848:213] Smith 1855:67
Andrena gwynana (Kirby 1802:120): [Nylander 1848:113(sic,=213)] Smith 1876:40
Andrena gwynana (Kirby 1802:120): [Nylander 1848:213, 1852b:253, *bicolor* Nylander 1852b:253, Thomson 1872:95] Schmiedeknecht 1882-1884:588
Anthrena gwynana (Kirby 1802:120): [Nylander 1848:213, 1852a:98, 1852b:253] Dalla Torre 1896:129
Andrena gwynana Kirby: Aurivillius 1903a:204
Andrena gwynana Kirby: Aurivillius 1903b:76
Andrena gwynana Kirby: Tullgren & Wahlgren 1920-1922:590
Andrena cinerascens Nylander 1848:216 ♂
Andrena violascens Thomson 1870:151
Syn. ref.: Warncke 1967:317, Dylewska 1987:604, Svensson & al. 1990:48, Schwarz & al. 1996:31.
NOTE. -Species addition?- This species is currently generally interpreted as being bivoltine: a spring (late March–May) and a summer (late June–August) generation. The early-flying was described as *A. gwynana* and the late-flying has often been referred to as *A. bicolor* (or *A. aestiva* Smith). In addition to the phenological separation, there seem to be between-taxon morphological and ecological differences that may reflect reproductive isolation (L. A. Nilsson pers. obs.). The reputed conspecificity should be tested by, e. g., comparative investigation of sex pheromones.

***Andrena fulvida* Schenck 1853:130**

Andrena violascens Thomson 1870:151
Syn. ref.: Forsius & Nordström 1923:114, Forsius 1935:13, Elfving 1968:18, L. A. Nilsson pers. obs. Thomson Coll. ZML.
Andrena violascens Thomson 1870:151: Thomson 1872:96
Syn. ref.: Forsius & Nordström 1923:114, L. A. Nilsson pers. obs. Thomson Coll. ZML.
Andrena violascens Thomson 1870:151: [Thomson 1872:96] Schmiedeknecht 1882-1884:596
Anthrena violascens Thomson: Dalla Torre & Friese 1895:49
Anthrena violascens Thomson 1870:151: [Thomson 1872:96]: Dalla Torre 1896:161
Andrena violascens Thomson: Aurivillius 1903a:204
Andrena violascens Thomson: Aurivillius 1903b:76
? *Anthrena violascens* Thomson: Lundblad 1924:21

Andrena bicolor Fabricius 1775:376: [*violascens* Thomson 1870:151] Warncke 1967:317
Andrena bicolor Fabricius 1775:376: [*violascens* Thomson 1870:151] Dylewska 1987:604
Andrena bicolor Fabricius 1775: [*violascens* Thomson 1870] Svensson & al. 1990:48
Andrena bicolor Fabricius 1775:376: [*violascens* Thomson 1870:151] Schwarz & al. 1996:31
? *Andrena gwynana* (Kirby 1802:120) var. *aestiva* Smith 1849:60: [*violascens* Thomson 1870:151, 1872:96] Schmiedeknecht 1882-1884:596

NOTE. -Species synonymy- Warncke (1967:317) wrote that the taxon *Andrena violascens*, described by Thomson (1870:151) from material of Swedish origin (Hälsingland), is a junior synonym of *Andrena bicolor* Fabricius 1775:376. This synonymy has been repeated (Dylewska 1987:604, Svensson & al. 1990:48, Schwarz & al. 1996:31). However, Thomson described (1870:151, 1872:96) that *A. violascens* was, for example, completely light-haired, a trait that does not exist in *A. bicolor*. Aurivillius (1903a:204, 1903b:76) used *A. violascens* accordingly for Thomson's species. Forsius & Nordström (1923:114), Forsius (1935:13) and Elfving (1968:18) stated that Thomson's *A. violascens* is a junior synonym of *Andrena fulvida*. The material under the name *A. violascens* in Coll. Thomson (ZML) is *A. fulvida* (L. A. Nilsson pers. obs. 2002).

***Andrena ruficrus* Nylander 1848:217**

LT: N-SE

Andrena rufitarsis Zetterstedt 1838:461

Syn. ref.: Nylander 1848:217, Morawitz 1865:63, Thomson 1872:97, Schmiedeknecht 1882-1884:599, D. Gaunitz 1929:198, E. Stoeckhert 1930:917, F. K. Stoeckhert 1933:119, Forsius 1935:13, Warncke 1967:304, Elfving 1968:17, Vikberg 1986b:80, Dylewska 1987:607, Svensson & al. 1990:48, Schwarz & al. 1996:51, Söderman & Vikberg 2002:55, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena rufitarsis Zetterstedt 1838:461: Smith 1853:104

Anthrena rufitarsis Zetterstedt: [*ruficrus* Nylander] Dalla Torre & Friese 1895:48

Anthrena rufitarsis Zetterstedt 1838:461: [*ruficrus* Nylander 1848:217, Thomson 1870:151, 1872:97] Dalla Torre 1896:149

Andrena rufitarsis Zetterstedt 1838:461: Friese 1902:481

Andrena rufitarsis Zetterstedt: Aurivillius 1903a:204

Andrena rufitarsis Zetterstedt: Aurivillius 1903b:76

Andraena rufitarsis Zetterstedt: Muchardt 1906:131

Andraena rufitarsis Zetterstedt 1838:461: Sparre Schneider 1909:118

Andrena rufitarsis Zetterstedt: Alfken 1912a:51

Anthrena rufitarsis Zetterstedt: Lundblad 1924:21

[*Andrena schencki* Morawitz 1866:18]

NOTE. -Species exclusion- Wolf (1960:99) reported this species from Sweden (Öland, 2 ♀♀ leg. E. Wieslander). It was subsequently listed for this country (viz. Svensson & al. 1990:49, Ehnström & al. 1993:44, Gårdenfors 2000:182). Re-examination of the actual 2 ♀♀ (ZML) revealed that they are *Andrena labialis* (det. L. A. Nilsson 2002).

Subg. ***Holandrena* Pérez 1890:176**

***Andrena labialis* (Kirby 1802:148 (*Melitta*))**

Andrena schencki Morawitz: Wolf 1960:99 ♀

Syn. ref.: L. A. Nilsson det. in Coll. Wieslander ZML.

Subg. ***Hoplاندrena* Pérez 1890:170**

***Andrena carantonica* Pérez 1902:clxxv**

Andrena nitida (Kirby): Nylander 1852b:253

Andrena nitida (Müller): Thomson 1870:147

Andrena trimmerana (Kirby 1802:116): [*nitida* Nylander 1852b:253, Thomson 1870:147] Thomson 1872:85

Andrena trimmerana (Kirby 1802:116): [Thomson 1872:85] Smith 1876:46

Andrena trimmerana (Kirby 1802:116): [Thomson 1872:85, ?*nitida* Nylander 1852b:253] Schmiedeknecht 1882-1884:551

Anthrena trimmerana Kirby: [*nitida* Nylander] Dalla Torre & Friese 1895:49

Anthrena trimmerana Kirby: [*nitida* Nylander] Friese 1895b:203

Anthrena trimmerana (Kirby 1802:116): [Nylander 1852b:252, Thomson 1872:85, *nitida* Nylander 1852b:253] Dalla Torre 1896:157

Andrena trimmerana Kirby: Aurivillius 1903a:203

Andrena trimmerana Kirby: Aurivillius 1903b:75

Andrena trimmerana Kirby: Wahlgren 1917:33

Andrena trimmerana Kirby: Lundblad 1924:26

Andrena trimmerana Kirby: Kullenberg 1950b:56

Andrena trimmerana Kirby: Kullenberg 1951:64

Andrena trimmerana Kirby: Kullenberg & Nyholm 1952:136

Andrena trimmerana (Kirby 1802:116): Dylewska 1987:613

Andrena jacobi Perkins: [*trimmerana* auct.] J. F. Perkins 1942:194

Andrena jacobi Perkins: Erlandsson 1960b:125

Andrena jacobi Perkins 1921: Svensson & al. 1990:48

Andrena jacobi Perkins: Paxton & Tengö 1995:96

Andrena jacobi Perkins: Paxton & al. 1995:T8

Andrena jacobi Perkins: Paxton & Tengö 1996:441

Andrena jacobi Perkins: Paxton & al. 1996:511
Andrena jacobi Perkins: Paxton & Tengö 1998:19
Andrena jacobi Perkins var. *scotica* Perkins: Jansson 1927:153
Andrena sabulosa (Scopoli): Janzon & Svensson 1984:183 ♀
Andrena scotica Perkins: Paxton & al. 1996:165
Andrena scotica Perkins: Paxton & al. 1997:129
Andrena scotica Perkins: Fries & al. 1999:183
Andrena scotica Perkins: Paxton & al. 1999:109
Andrena scotica Perkins: Paxton & al. 2000:483

NOTE. -Species synonymy- Schwarz & al. (1996:32-33) wrote that *A. carantonica* is a senior synonym of *A. jacobi* and *A. scotica* while the older candidate *A. sabulosa* is a nomen dubium. Westrich & Dathe (1997:16) pointed out that *A. scotica* is the formally correct name of this species according to the ICZN since the lectotypification of *A. carantonica* by Warncke (1967:190) was not based on a syntype. The relative unuse of *A. scotica* since 1950 may however be a decisive fact in favour of a maintained use of *A. carantonica*.

[*Andrena trimmerana* (Kirby 1802:116)]

NOTE. -Species-presence uncertainty- This taxon has been reported to occur in Sweden (Thomson 1872:85, Smith 1876:46, Schmiedeknecht 1882-1884:551, Dalla Torre & Friese 1895:49, Friese 1995b:203, Dalla Torre 1896:157, Aurivillius 1903a:203, 1903b:75, Wahlgren 1917:33, Lundblad 1924:26, Kullenberg 1950b:56, 1951:64, Kullenberg & Nyholm 1952:136, Dylewska 1987:613). It is generally believed and here preliminarily interpreted that the records are due to misidentified *A. carantonica*. Decisive revision remains.

Subg. *Lepidandrena* Hedicke 1933:215

***Andrena curvungula* Thomson 1870:155**

LT: S-SE

Andrena pandellei (Pérez): [leg. O. Ringdahl] H. Wolf det. 1958 Coll. ZML ♀

Syn. ref.: L. A. Nilsson det., Coll. ZML.

NOTE. -Occurrence correction- Listed distribution of this species in Sweden has been Scania and Gotland (Aurivillius 1903a:205, 1903b:77, Svensson & al. 1990:49, Gårdenfors 2000:181). In addition, Nordenström (1900:207) reported *A. curvungula* from Småland, Nye VI; the record was probably from one of the years 1896-1899.

Subg. *Leucandrena* Hedicke 1933:215

***Andrena argentata* Smith 1844:409**

Andrena proxima (Kirby): Thomson 1870:152

Syn. ref.: Thomson 1872:99, Schmiedeknecht 1882-1884:751, L. Norén det., Thomson Coll. ZML.

Andrena proxima (Kirby 1802:146): Thomson 1872:99

Syn. ref.: L. Norén det. Thomson Coll. ZML, 2002.

Andrena proxima (Kirby 1802:146): [Thomson 1872:99] Schmiedeknecht 1882-1884:753

Anthrena proxima (Kirby 1802:146): [Thomson 1872:99] Dalla Torre 1896:147

Andrena collinsonana (Kirby 1802:153): [*proxima* Thomson 1872:99] Smith 1876:73

Andrena thomsoni Aurivillius 1903a:204 ♀ [*proxima* Thomson]

Syn. ref.: Warncke 1967:207, Dylewska 1987:542, Svensson & al. 1990:48, Schwarz & al. 1996:36.

Andrena thomsoni Aurivillius 1903b:76 ♀ [*proxima* Thomson]

Andrena thomsoni Aurivillius: Ringdahl 1921:25

Andrena barbilabris* (Kirby 1802:151 (*Melitta*)) *barbilabris

Prosopis similis Fabricius: Billberg 1820:109

Andrena albo-cincta Zetterstedt 1838:460 ♀

Syn. ref.: Warncke 1967:248, Vikberg 1986b:80, Dylewska 1987:572, Svensson & al. 1990:48, Schwarz & al. 1996:31, Söderman & Vikberg 2002:55, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena albo-cincta Zetterstedt 1838:460: Smith 1853:102

Anthrena albocincta Zetterstedt: [*barbatula* Zetterstedt] Dalla Torre & Friese 1895:41

Anthrena albocincta Zetterstedt 1838:460: [*barbatula* Zetterstedt 1838:461, Nylander 1848:218] Dalla Torre 1896:101

Andrena albocincta Zetterstedt: [*barbatula* Zetterstedt 1838:461] Friese 1902:481

Andrena barbatula Zetterstedt 1838:461 ♂

Syn. ref.: Warncke 1967:254, Dylewska 1987:572, Svensson & al. 1990:48, Schwarz & al. 1996:31, Söderman & Vikberg 2002:55, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena barbatula Zetterstedt 1838:461 ♂: [*albocincta* Zetterstedt 1838:460 ♀] Nylander 1848:218

Andrena barbatula Zetterstedt 1838:461: Smith 1853:102

Andrena combinata (Kirby 1802:153): [*barbatula* Nylander 1848:218 ♀] Smith 1851:72

Andrena combinata (Kirby 1802:153): [*barbatula* Nylander 1848:218 ♀] Smith 1853:102

Andrena albicrus (Kirby): [*barbatula* Zetterstedt, Nylander 1848] Nylander 1852b:256

Andrena albicrus (Kirby 1802:156): Smith 1853:102

Andrena albicrus (Kirby): [*barbatula* Zetterstedt] Thomson 1870:152

Andrena albicrus (Kirby 1802:156): [Nylander 1852b:256, Thomson 1870:152, *albocincta* Zetterstedt 1838:460 ♀, *barbatula* Zetterstedt 1838:461 ♂, Nylander 1848:218] Thomson 1872:97

Andrena albicrus (Kirby 1802:156): [Thomson 1870:152, 1872:97] Smith 1876:61

Andrena albicus (Kirby 1802:156): [Thomson 1872:97] Schmiedeknecht 1882-1884:624
Andrena albicus: Nerén 1892:101
Anthrena albicus (Kirby 1802:156): [Thomson 1870:152, 1872:97, *angustipes* Thomson 1870:150] Dalla Torre 1896:100
Andrena albicus Kirby: Aurivillius 1903a:204
Andrena albicus Kirby: Aurivillius 1903b:76
Andrena albicus Kirby: [*albocincta* Zetterstedt 1838:460 ♀] Sparre Schneider 1909:119
Andrena albicus Kirby: Jansson 1922:13
Anthrena albicus Kirby: Lundblad 1924:26
Andrena argentata Smith 1844:409: [*barbatula* Zetterstedt 1838:461] Smith 1853:101
Andrena argentata Smith 1844:409: [*barbatula* Zetterstedt 1838:461] Smith 1855:98
? *Andrena angustipes* (Schenck): [*barbatula* Zetterstedt] Thomson 1870:150
Andrena sericea Christ: [*albicus* Kirby] Jansson 1925:143
Andrena sericea Christ: [*albicus* Kirby] Jansson 1935:83

[*Andrena* cf. *barbilabris* (Kirby 1802:151 (*Melitta*))

NOTE. -Species addition?- Vegter (1994) found evidence in Holland for the existence of two sibling species with separate flight periods (ca. a month difference) within the species generally interpreted as *A. barbilabris*. If the two sibling species also occur in Sweden has not yet been studied.

Subg. *Margandrena* Warncke 1968:91

***Andrena marginata* Fabricius 1776:246**

Apis obscura Linné 1764:417 ♀

Syn. ref.: Warncke 1970:30, 1986:106, Schwarz & al. 1996:44, but see Day 1979:68.

Nomada cingulata Fabricius 1775:390 ♂

Syn. ref.: Warncke 1970:32, 1986:45, Richards 1978:136, Schwarz & al. 1996:44.

Apis marginella Gmelin 1790:2793

Syn. ref.: Dalla Torre & Friese 1895:46, Warncke 1967:286, 1986:104.

Andrena cetii (Schrank 1781:405): [*marginata* Nylander 1848:209] Smith 1851:62

Andrena cetii (Schrank 1781:405): [*marginata* Nylander 1848:209, 1852b:251] Smith 1853:92

Andrena cetii (Schrank 1781:405): [*marginata* Nylander 1848:209, 1852b:251] Smith 1855:55

Andrena cetii (Schrank 1781:405): Thomson 1872:74

Syn. ref.: Dalla Torre 1896:136.

Andrena cetii (Schrank 1781:405): [Thomson 1872:74, *marginata* Nylander 1852b:251, Thomson 1870:142] Smith 1876:31

Andrena cetii Schrank: [*marginata* Fabricius] Schmiedeknecht 1880:9

Andrena cetii (Schrank 1781:405): [Thomson 1872:74, *marginata* Nylander 1848:209, Thomson 1870:142] Schmiedeknecht 1882-1884:647

Andrena marginata Fabricius var. *nigrescens* Aurivillius 1903a:202 ♀

Syn. ref.: Warncke 1967:291, Dylewska 1987:673 (sic *A. nigrescens*), Schwarz & al. 1996:44.

Andrena marginata Fabricius var. *nigrescens* Aurivillius 1903b:74 ♀

Subg. *Melandrena* Pérez 1890:170

***Andrena cineraria* (Linné 1758:575 ♀ (*Apis*))**

Andrena cineraria Fabricius: Zetterstedt 1838:461

Syn. ref.: L. A. Nilsson pers obs. Zetterstedt Coll. ZML.

Andrena cineraria Fabricius 1804:323: [Linné 1761:420] Nylander 1848:211

***Andrena gallica* Schmiedeknecht 1883:549**

Andrena assimilis Radoszkowski 1876:84 *gallica* Schmiedeknecht 1883:549: Dylewska 1987:480

Andrena assimilis Radoszkowski 1876 ssp. *gallica* Schmiedeknecht 1883: Svensson & al. 1990:48

Andrena assimilis ssp. *gallica*: Ehnström & al. 1993:44

NOTE. -Subspecies upgrading- The bee was listed in Svensson & al. (1990:48) and Ehnström & al. (1993:44) as a subspecies of *Andrena assimilis*. Osychnjuk (1978) considered *A. gallica* to be a distinct species, but Schmid-Egger & Scheuchl (1997:82) wrote *A. gallica* as a junior synonym of the species *A. assimilis*. As long as the taxonomical status have not been clarified, *gallica* should be used as the species epithet of the European populations (Schwarz & al. 1996:39).

***Andrena nigroaenea* (Kirby 1802:109 (*Melitta*))**

Andrena gwynana var.: Nylander 1852a:98 ♀

Syn. ref.: Thomson 1872:84.

***Andrena nitida* (Müller 1776:164 (*Apis*))**

Andrena nitida (Kirby): Thomson 1870:147

Andrena vitrea Smith 1847:1737: [*melanocephala* Thomson 1870:146, *thoracia* var. Nylander 1852a:98] Thomson 1872:83

Andrena vitrea Smith 1847:1737: [Thomson 1872:83] Smith 1876:36

Andrena pectoralis Pérez in litt.: [*vitrea* Thomson 1872:83] Schmiedeknecht 1882-1884:526

Andrena pectoralis Pérez: Aurivillius 1903a:203
Andrena pectoralis Pérez: Aurivillius 1903b:75
Andrena pectoralis (Pérez) Schmiedeknecht: [*vitrea* Thomson, nec Smith] J. F. Perkins 1942:194 ♀
Andrena pectoralis Schmiedeknecht: Herrström 1951:96
Andrena pubescens Oliver *omissa* Valkeila 1954:172: [*vitrea* Thomson 1872, *pectoralis* Aurivillius 1903b:75]
Syn. ref.: Dylewska 1987:485 (sic *A. omissa*), Schwarz & al. 1996:47.
Andrena nitida (Müller 1776:164) ssp. *omissa* Valkeila 1954:172: [*pubescens* ssp. *omissa* Valkeila 1954:172] Warncke 1967:295
NOTE. -Species confirmation- The taxon *Andrena pectoralis* has been mentioned repeatedly to occur in Sweden (see above). Further Swedish material (4 ♀♀: Västergötland, Hjo 27 VI 1943, leg. E. Wieslander, det. S. Erlandsson) identified as this taxon is in NRM. Warncke (1986:48) treated *A. pectoralis* as identical to *Andrena nitida* ssp. *limata*. Svensson & al. (1990:48) listed Swedish *A. pectoralis* as possible misidentification of *A. nitida*. Schwarz & al. (1996:43), and earlier also Warncke (1967:298), listed *A. pectoralis* as a junior synonym of *A. limata*. All Swedish material labeled *A. pectoralis* or *A. limata* that has been re-examined is *A. nitida* (det. L. Norén & L. A. Nilsson 2002).

***Andrena thoracica* (Fabricius 1775:383 (*Apis*))**

Andrena melanocephala (Kirby): Thomson 1870:146
Syn. ref.: Smith 1876:35, Dalla Torre & Friese 1895:48.

***Andrena vaga* Panzer 1799:18**

Andrena pratensis (Kirby 1802:100): Nylander 1848:211
Andrena pratensis (Kirby 1802:100): Nylander 1852b:252
Andrena pratensis (Kirby): Thomson 1870:146
Andrena pratensis (Müller 1776:164): [Nylander 1848:211, Thomson 1970:146]: Thomson 1872:82
Andrena pilipes Fabricius 1787:298: [*pratensis* Nylander 1848:211] Smith 1851:64
Andrena pilipes Fabricius 1787:298: [*pratensis* Nylander 1848:211] Smith 1853:93
Andrena pilipes Fabricius 1781:474: [*pratensis* Nylander 1848:211] Smith 1855:59
Andrena pilipes Fabricius 1793:312: [?*pratensis* Thomson 1870:146] Smith 1876:34
Andrena ovina Klug 1810:269: [*pratensis* Nylander 1848:211, Thomson 1870:146, 1872:82] Schmiedeknecht 1882-1884:533
Anthrena ovina Klug: [*pratensis* Nylander] Dalla Torre & Friese 1895:47
Anthrena ovina Klug: [*pratensis* Nylander] Friese 1895b:202
Anthrena ovina Klug 1810:226: [*pratensis* Nylander 1848:211, Thomson 1870:146, 1872:82] Dalla Torre 1896:144
Andrena ovina Klug: Aurivillius 1903a:203
Andrena ovina Klug: Aurivillius 1903b:75
Andrena ovina (Kirby): [*pratensis* Thomson] Nordenström 1916:59
Andrena ovina: Selander 1941:95
Andrena ovina: Lyneborg & Coulianos 1976:36

Subg. ***Micrandrena*** (Ashmead 1899:89)

Andrena alfkenella R. C. L. Perkins 1914:72

Andrena floricola Eversmann: H. Wolf det. 1958 Coll. ZML ♂♂
Syn. ref.: L. A. Nilsson det. & C. Schmid-Egger confirm. Coll. ZML.

Andrena falsifica R. C. L. Perkins 1915:215

***Andrena minutula* (Kirby 1802:161 (*Melitta*))**

Andrena parvula (Kirby): Nylander 1852b:258
Syn. ref.: Smith 1855:96.
Anthrena parvula Kirby: [*nana* Thomson] Dalla Torre & Friese 1895:47
Andrena parvula Kirby: Aurivillius 1903a:204
Andrena parvula Kirby: Aurivillius 1903b:76
Anthrena parvula Kirby var. *minutula* Kirby: Lundblad 1924:26
Andrena nana (Kirby): Thomson 1870:153
Syn. ref.: Dalla Torre 1896:138.
Andrena nana (Kirby 1802:161): Thomson 1872:104
Syn. ref.: Schmiedeknecht 1882-1884:631.

Andrena minutuloides R. C. L. Perkins 1914:73

Andrena nanula Nylander 1848:222

Andrena minutula Kirby: [*nanula* Nylander 1848:222] Morawitz 1865:71
Andrena minutula (Kirby 1802:161): [*nanula* Nylander 1848:222] Dalla Torre 1896:138
Andrena nana (Kirby 1802:161): [*nanula* Nylander 1848:222] Thomson 1872:104
Anthrena parvula Kirby: [*nanula* Nylander] Dalla Torre & Friese 1895:47
Andrena alfkenella Alfken: Norén & al. 1998:139
Syn. ref.: L. Norén pers. comm. 2002.

LT: SE

NOTE. -Species addition- The taxon was described from material of partly E Swedish origin by Nylander (1848:222). Morawitz (1865:71) and Dalla Torre (1896:138) desk-revised Nylander's bee to *A. minutula*. However, *A. nanula* is an accepted distinct species with a valid name (e.g. Schwarz & al. 1996:46), and Warncke (1967:290) and Dylewska (1987:519) wrote that the type area of the species is Sweden. The latest known records are from the province of Södermanland in 1984-2002 (leg. & det. L. Norén & L. A. Nilsson).

***Andrena niveata* Friese 1887:25**

Andrena nana (Kirby 1802:161): Nylander 1848:221 ♀

Syn. ref.: Alfken 1927:139.

Andrena nana (Kirby 1802:161): [Nylander 1848:221 ♀] Smith 1851:72

Andrena nana (Kirby 1802:161): Nylander 1852b:258 ♀

Syn. ref.: Alfken 1927:139.

Andrena nana (Kirby 1802:161): [Nylander 1848:221] Smith 1853:104

Andrena coitana (Kirby 1802:147): [*nana* Nylander 1848:221 ♀, 1852b:258] Smith 1853:103

***Andrena semilaevis* Pérez 1903:lxxxix**

Andrena nana: Nylander 1852a:101

Syn. ref.: Forsius & Nordström 1923:114.

Andrena nana (Kirby): Nylander 1852b:258

Syn. ref.: Forsius & Nordström 1923:114.

Andrena nana (Kirby 1802:161): [Nylander 1852b:258] Smith 1855:97

Andrena nana (Kirby): Thomson 1870:153

Andrena nana (Kirby 1802:161): [Thomson 1870:153]: Thomson 1872:104

Andrena nana (Kirby 1802:161): [?Nylander 1848:221, Thomson 1872:104] Smith 1876:67

Andrena nana (Kirby): Nordenström 1900:207

Andrena nana Kirby: Aurivillius 1903a:204

Andrena nana Kirby: Aurivillius 1903b:76

Andrena nana Kirby: Jansson 1922:22

Andrena nana Kirby: Lundblad 1924:26

Anthrena parvula Kirby: [*nana* Thomson] Dalla Torre & Friese 1895:47

Andrena saundersella Perkins: Jansson 1927:153

Andrena saundersella Perkins: Lundblad 1950:209

Andrena saundersella Perkins: Lundblad 1955:113

Andrena saundersella Perkins: Erlandsson 1960b:125

Andrena saundersella Perkins: Norén 1988:11

NOTE. -Species synonymy- According to Warncke (1975:133), this taxon is a senior synonym of *A. saundersella*. The name substitution was accepted (Schwarz & al. 1996, Westrich & Dathe 1997, Söderman & Vikberg 2002:55). However, Schmid-Egger & Scheuchl (1997) pointed out that a revision of the species-group is needed before any decisive argument may be produced, and maintained using the name *A. saundersella*.

***Andrena subopaca* Nylander 1848:221**

Andrena parvula (Kirby): [*subopaca* Nylander 1848:221] Nylander 1852b:258

Syn. ref.: Forsius & Nordström 1932:114.

Andrena parvula (Kirby 1802:162): [Nylander 1852b:258, *subopaca* Nylander 1848:221] Smith 1853:104

Andrena parvula (Kirby): Thomson 1870:153

Andrena parvula (Kirby 1802:162): [Nylander 1852b:258, Thomson 1870:153, *subopaca* Nylander 1848:221] Thomson 1872:103

Andrena parvula (Kirby 1802:162): [Nylander 1852b:258, Thomson 1870:153, 1872:108, *subopaca* Nylander 1848:221] Smith 1876:65

Anthrena parvula (Kirby 1802:162): [Nylander 1852b:258, Thomson 1872:103, *subopaca* Nylander 1848:221] Schmiedeknecht 1882-1884:629

Andrena parvula: Nerén 1892:101

Anthrena parvula Kirby: [*subopaca* Nylander] Friese 1895b:202

Anthrena parvula Kirby: [*subopaca* Nylander] Dalla Torre & Friese 1995:47

Anthrena parvula (Kirby 1802:162): [Nylander 1852b:258, Thomson 1870:153, 1872:103, *subopaca* Nylander 1848:221] Dalla Torre 1896:145

Andrena parvula Kirby: Aurivillius 1903a:204 *partim*

Andrena parvula Kirby: Aurivillius 1903b:76 *partim*

Andrena parvula Kirby: Tullgren & Wahlgren 1920-1922:590

Anthrena parvula Kirby: Lundblad 1924:26

Andrena minutula (Kirby 1802:161): [*subopaca* Nylander 1848:221] Smith 1855:96

Subg. ***Notandrena*** Pérez 1890:173

***Andrena chrysosceles* (Kirby 1802:143 (*Melitta*))**

NOTE. -Species addition- The taxon was reported from "eastern and middle Sweden" by Nylander (1848:218), who soon (1852a:100) revised his bee to *Andrena xanthura* of Kirby (1802:164, as *Melitta*). Much later it has been stated that Kirby's *A. xanthura* is a later-page synonym of Kirby's *A. wilkella* (Warncke 1967:318, Dylewska 1987:536, Schwarz & al. 1996:57). Nylander's synonymy was subsequently listed (Smith 1853:102, 1855:106, Thomson

1872:105, Dalla Torre & Friese 1895:49, Friese 1895b:203, Dalla Torre 1896:162), although his original record was also listed as correct *A. chrysoceles* by Smith (1853:103, 1855:93). Also Niemelä (1949:101), who studied Nylander's collection, concluded that *A. chrysoceles* (sic) sensu Nylander was *A. xanthura* of Kirby. Some authors (Jørgensen 1925:166, J. F. Perkins 1942:194, Niemelä 1949:105) have concluded that *A. xanthura* sensu Thomson (1870:143, 1872:105) is *Andrena lathyri* of Alfken (1899:103). Material under the label *A. xanthura* in Coll. Thomson (ZML) is *A. lathyri* (L. A. Nilsson pers. obs. 2002). It seems therefore as if Thomson considered the taxa *A. chrysoceles* and *A. lathyri* the same species. Under the box-bottom label *Andrena tarsata* in Coll. Thomson there is a ♀ with the labels "Scania" and "A. chrysoceles" (sic). However, this is *Andrena fulvago* (det. L. A. Nilsson). Sörensson (2000a) recorded *A. chrysoceles* (1 ♂, det. J. van der Smissen) at Arendala, Scania, in 1998. The species was also found in Lund, Scania, in 1970 (3 ♀♀ 29 V, leg. H. Andersson, det. L. A. Nilsson, ZML) and 2002 (M. Sörensson pers. comm.), and in Landskrona, Sandvik, in 2002 (1 ♀ 19. V, leg. S. Persson, det. B. Cederberg).

Subg. **Oreomelissa** Hirashima & Tadauchi 1975:176

Andrena coitana (Kirby 1802:147 (*Melitta*))

Andrena nana (Kirby 1802:161): Nylander 1848:221 ♂

Syn. ref.: Smith 1851:61, 1853:103, 1855:94, 1876:64 (sic 213,=221), Nylander 1852b:258, Alfken 1927:139.

Andrena shawella (Kirby): Thomson 1870:152

Syn. ref.: Smith 1876:64.

Andrena shawella (Kirby 1802:160 ♀): [Thomson 1870:152, *nana* Nylander 1848:221] Thomson 1872:101

Syn. Ref.: Smith 1876:64.

Andrena shawella (Kirby 1802:160 ♀): [Thomson 1872:101, *nana* Nylander 1848:221] Schmiedeknecht 1882-1884:763

Anthrena shawella Kirby: [*nana* Nylander, *nylanderi* Morawitz] Dalla Torre & Friese 1895:48

Andrena shawella Kirby: [*nana* Nylander, *nylanderi* Morawitz] Friese 1895b:203

Anthrena shawella (Kirby 1802:147): [Thomson 1870:152, 1872:101, *nana* Nylander 1848:221, 1852b:258] Dalla Torre 1896:151

Anthrena shawella Kirby: Lundblad 1924:26

Andrena shawella W. Kirby: [*nana* Nylander ♂] Alfken 1927:139

Andrena shawella Kirby: Jansson 1927:153

NOTE. -Species reclassification- Hirashima & Tadauchi (1975) stated that the species *Andrena coitana* belongs to the subgenus *Oreomelissa* Hirashima & Tadauchi 1975:176, not to *Stenomelissa* Hirashima & LaBerge 1965:500 as placed by Warncke (1968:42) and subsequently listed in Svensson & al. (1990:48).

Subg. **Plastandrena** Hedicke 1933:217

Andrena bimaculata (Kirby 1802:115 (*Melitta*))

Andrena bluethgeni E. Stoeckhert 1930:910/930

NOTE. -Species addition- A bee species conforming to this taxon has been found in sandy areas of central Scania (L. A. Nilsson pers. obs. 2000). It is syntopic and ca. synchronous with *A. bimaculata*, a species with which it thus cannot be conspecific (cf. Schwarz & al. 1996:31). The species has also been reported to occur in Karelia (Elfving 1968:17).

Andrena morawitzi Thomson 1872:78 ♀

LT: Sk

Andrena bicolor Fabricius: Nylander 1852b:253 ♀

Syn. ref.: Thomson 1872:78, Schmiedeknecht 1882-1884:541, Dalla Torre & Friese 1895:46, Dalla Torre 1896:138.

Andrena bimaculata Kirby ssp. *morawitzi* Thomson: Alfken 1909:41

Andrena bimaculata Kirby ssp. *morawitzi* Thomson: Alfken 1912a:47

Andrena bimaculata ssp. *morawitzi* Thomson 1872:78: Warncke 1967:289

Andrena bimaculata ssp. *morawitzi* Thomson 1872: [blüthgeni Stöckhert 1930] Warncke 1986:45

Andrena bimaculata (Kirby 1802:115): [*morawitzi* Thomson 1872:78] Dylewska 1987:432

Andrena bimaculata (Kirby 1802): [*morawitzi* Thomson 1872] Svensson & al. 1990:48

Andrena bimaculata (Kirby 1802:115): [*morawitzi* Thomson 1872:78] Schwarz & al. 1996:32

NOTE. -Species reinstatement- The species was described from material of Scanian origin by Thomson (1872:78). This species in Scania had previously been reported (Nylander 1852b:253) under the name *Andrena bicolor* (Thomson 1872:79, Dalla Torre & Friese 1895:46, Dalla Torre 1896:138). Alfken (1909:41) and Warncke (1967:289, 1986:47) treated Thomson's bee as *Andrena bimaculata* ssp. *morawitzi*, and some authors (e.g. Dylewska 1987:432, Svensson & al. 1990:48, Schwarz & al. 1996:32) have simply listed *A. morawitzi* as a junior synonym of *A. bimaculata*. However, *A. morawitzi* is neither a race of nor conspecific with *A. bimaculata* (Alfken 1914:79, E. Stoeckhert 1930, F. K. Stoeckhert 1933:114, Schmid-Egger & Scheuchl 1997, L. A. Nilsson pers. obs.).

Andrena nigrospina Thomson 1872:80

LT: Sk

Andrena pilipes Fabricius: Zetterstedt 1838:461

Andrena pilipes Fabricius 1804:322: Nylander 1848:210

Andrena pilipes Fabricius 1787:298: [Nylander 1848:210] Smith 1851:64

Andrena pilipes Fabricius 1814:322: Nylander 1852a:101

Andrena pilipes Fabricius 1814:322: Nylander 1852b:282

Andrena pilipes Fabricius 1787:298: [Nylander 1848:210] Smith 1853:93

Andrena pilipes Fabricius 1781:474: [Nylander 1848:210] Smith 1855:59

Andrena pilipes (Fabricius): Thomson 1870:144
Andrena pilipes (Kirby 1802:96): [Nylander 1848:210, Thomson 1870:144] Thomson 1872:79
Andrena pilipes Fabricius 1793:312: [Nylander 1848:210, Thomson 1870:144, 1872:79] Smith 1876:34
Andrena pilipes Fabricius 1793:312: [Nylander 1848:210, Thomson 1872:79] Schmiedeknecht 1882-1884:509
Andrena pilipes (Fabricius): Nordenström 1900:206
Andrena pilipes Fabricius 1781: [*nigrospina* Thomson 1872] Vikberg 1986b:79
Andrena pilipes (Fabricius 1781): [*nigrospina* Thomson 1872] Svensson & al. 1990:48
Andrena pilipes: Chinery 1993:244
Andrena pilipes (Fabricius 1781:474): [*nigrospina* Thomson 1872:80] Schwarz & al. 1996:49
Andrena pilipes: Gårdenfors 2000:182
Andrena pilipes Fabricius 1781: [*nigrospina* Thomson 1872] Söderman & Vikberg 2002:54
Andrena carbonaria Fabricius: Zetterstedt 1838:461
Anthrena carbonaria (Linné 1767:953): [*pilipes* Nylander 1848:210, 1852b:252, Thomson 1870:144, 1872:79] Dalla Torre 1896:108
Andrena carbonaria Linné: Aurivillius 1903a:203
Andrena carbonaria Linné: Aurivillius 1903b:75
Andrena carbonaria Linné: [*nigrospina* Thomson] Alfken 1909:41
Andrena carbonaria (Linné): Nordenström 1910:24
Andrena carbonaria: Adlerz 1912:158
Andrena carbonaria Linné var. *nigrospina* Thomson: Alfken 1913:78
Andrena carbonaria (Linné): [*pilipes* Thomson] Nordenström 1916:59 ♀
Andrena carbonaria Linné var. *nigrospina* Thomson: Forsius & Nordström 1921:73
Andrena carbonaria Linné: J. F. Perkins 1942:193 ♀
Andrena carbonaria Linné: Erlandsson 1960b:125
Andrena carbonaria: E. Eriksson 1975:13
Andrena carbonaria: Hedqvist & Janzon 1979:25
Andrena carbonaria Linné 1767: [*nigrospina* Thomson 1872] Warncke 1986:47
Andrena carbonaria Fabricius 1793:312: [*nigrospina* Thomson 1872:80] Dylewska 1987:435
Syn. ref.: Baker 1994b:281, Schmid-Egger & Scheuchl 1997:172.
Andrena carbonaria ssp. *praetexta* Smith: [*nigrospina* Thomson 1872:80 ♀] Warncke 1967:292
Andrena flessae (Lepelletier): Thomson 1870:145
Syn. ref.: Thomson 1872:80, Schmiedeknecht 1882-1884:521, Dalla Torre & Friese 1895:46.

NOTE. -Taxon reinstatement- The taxon *A. nigrospina* was described from material of Scanian origin by Thomson (1872:80). It has mostly been considered a junior synonym of *Andrena pilipes* and/or *Andrena carbonaria* (e.g. Svensson & al. 1990:48, Schwarz & al. 1996:49). Warncke (1967:292) applied the name *Andrena carbonaria* ssp. *praetexta*. In a study of the relevant part of the *A. tibialis*-group in W Europe, Baker (1994) showed the existence of two "sibling species" with available name *A. nigrospina* respectively *A. spectabilis*. His study material from Sweden consisted of *A. nigrospina* from Scania and Östergötland. Schmid-Egger & al. (1997) concluded that *A. nigrospina* and *A. pilipes* are distinct species but that there exists a transition zone between them in western C Europe. Swedish bees labeled *A. pilipes* or *A. carbonaria* tentatively represent the species *A. nigrospina*.

***Andrena tibialis* (Kirby 1802:107 (*Melitta*))**

Andrena atriceps (Kirby 1802:114): [*tibialis* Nylander 1852a:98, Thomson 1870:144, 1872:77] Smith 1876:43

Subg. ***Poecilandrena*** Hedicke 1933:218

Andrena labiata* Fabricius 1781:472 *labiata

Nomada cingulata Fabricius 1775:390 ♀
Syn. ref.: Richards 1936:172, Warncke 1967:260, Dylewska 1987:671, Svensson & al. 1990:49, Schwarz & al. 1996:44.
Nomada cingulata: Fabricius 1781:488
Apis cingulata Fabricius: Villers 1789:314
Nomada cingulata: Fabricius 1793:349 ♀
Syn. ref.: Smith 1851:62.
Nomada cingulata: Fabricius 1804:394
Nomada cingulata Fabricius: Zetterstedt 1838:471
Andrena cingulata (Kirby 1802:88): [Fabricius 1804:394]: Nylander 1848:210
Syn. ref.: Smith 1851:62.
Andrena cingulata (Kirby): [Nylander 1848:210] Nylander 1852b:251
Andrena cingulata (Fabricius 1793:349 ♀): [Nylander 1848:210, 1852b:251] Smith 1853:92
Andrena cingulata (Fabricius 1781:488 ♀): [Fabricius 1793:349, 1804:394, Nylander 1848:210, 1852b:251] Smith 1855:57
Andrena cingulata (Kirby): Thomson 1870:143
Andrena cingulata (Fabricius 1781:488): [Nylander 1848:210, Thomson 1870:143] Thomson 1872:75
Andrena cingulata (Fabricius 1793:349): [Fabricius 1804:394, Nylander 1848:210, Thomson 1870:143, 1872:75] Smith 1876:32
Anthrena cingulata (Fabricius 1781:448): [Fabricius 1793:349 ♀, Nylander 1848:210, Thomson 1872:75] Schmiedeknecht 1882-1884:690
Anthrena cingulata Fabricius: [*suecica* Gmelin] Dalla Torre & Friese 1895:42
Anthrena cingulata Fabricius: [*suecica* Gmelin] Friese 1895b:200
Anthrena cingulata (Fabricius 1775:390): [Nylander 1848:210, 1852b:251, Thomson 1870:143, 1872:75, *suecica* Gmelin 1790:2794] Dalla Torre 1896:111

Andrena cingulata Fabricius: Roth 1897:136
Andrena cingulata Fabricius: Aurivillius 1903a:203
Andrena cingulata Fabricius: Aurivillius 1903b:75
Andrena cingulata Fabricius: Erlandsson 1949a:178
Andrena cingulata (Fabricius): Norén 1988:11
Apis sphegoides Schrank 1781:409; Villers 1789:303
Apis suecica Gmelin 1790:2794 [*cingulata* Fabricius 1781:488, 1787:307]
Syn. ref.: Warncke 1967:312, 1970:31, Dylewska 1987:671 (sic *A. succisa*), Schwarz & al. 1996:44.
Andrena florea Fabricius: Billberg 1820:110
Andrena florea Fabricius: Zetterstedt 1838:461
Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Subg. ***Ptilandrena*** (Robertson 1902:187/192)

[*Andrena angustior* (Kirby 1802)]

NOTE.-Species exclusion- This species was reported from Sweden (1 ♀: Örebro-trakten, leg. A. Jansson, det. J. D. Alfken) by Jansson (1927:153) and subsequently mentioned to occur in this country (Dylewska 1987:641, Svensson & al. 1990:47). A ♀ under the box-bottom label plus with the pin-attached label "A. *angustior* W. K." in Coll. Jansson (ZML) is *Andrena praecox* (det. L. A. Nilsson 2001).

Subg. ***Simandrena*** Pérez 1890:174

[*Andrena dorsata* (Kirby 1802:144 (*Melitta*))]

NOTE.-Species exclusion- The species reported under this name from Sweden was based on incorrect synonymy of *A. propinqua*, see next annotation. The taxon *A. proxima* was used by Thomson (1872:99), and his bee was subsequently synonymized with *A. collinsonana* by Smith (1876:73) and *A. thomsoni* by Aurivillius (1903a:204, 1903b:76). The latter two taxa are generally considered junior synonyms to *A. dorsata* (e.g. Schwarz & al. 1996:36) but it remains to be confirmed that any of the Swedish bees in question belongs to this species. Material under the label *A. proxima* in the Thomson Coll. (ZML) consists of four specimens: 3 ♀♀ of *Andrena argentata* and 1 ♂ of *A. barbilabris* (L. Norén pers. obs. 2002).

Andrena propinqua Schenck 1853:134

Andrena dorsata (Kirby 1802): Svensson & al. 1990:47

NOTE.-Species reinstatement- As mentioned by Svensson & al. (1990:47) a female of this taxon (det. K. Warncke) from Södermanland (Tyresö-Brevik, probably from 1920-1940, leg. M. Richter) is in NRM. Svensson & al. (1990:48) treated *A. propinqua* as conspecific with and a junior synonym of *A. dorsata*. It seems now clear that *A. propinqua* and *A. dorsata* are distinct species (Schmid-Egger & Scheuchl 1997).

Subg. ***Taeniandrena*** Hedicke 1933:219

Andrena albofasciata Thomson 1870:154

LT: Sk

Anthrena convexiuscula Kirby var. *albofasciata* Thomson: Dalla Torre & Friese 1895:43
Anthrena convexiuscula Kirby 1802:166 var. *albofasciata* Thomson 1870:154: Dalla Torre 1896:115
Anthrena afzeliella Kirby: [*albo-fasciata* Thomson] Alfken 1899a:103
Andrena afzeliella Kirby: [*albofasciata* Thomson] Schmiedeknecht 1907:85
Andrena afzeliella Kirby: [*albofasciata* Thomson] Alfken 1913:98
Andrena afzeliella Kirby: [*albofasciata* Thomson] Strohm 1924:128
Andrena ovatula ovatula (Kirby 1802:149): [*albofasciata* Thomson 1870:154] Warncke 1967:206
Andrena ovatula (Kirby 1802): [*albofasciata* Thomson 1870] Warncke 1986:45
Andrena ovatula (Kirby 1802): [*albofasciata* Thomson 1870] Richards 1978:136
Andrena ovatula (Kirby 1802): Janzon & Svensson 1984:183 ♂
Andrena ovatula (Kirby 1802): [*albofasciata* Thomson 1870] Vikberg 1986b:79
Andrena ovatula (Kirby 1802:149): [*albofasciata* Thomson 1870:154] Dylewska 1987:534
Andrena ovatula (Kirby 1802): [*albofasciata* Thomson 1870] Svensson & al. 1990:49
Andrena ovatula (Kirby 1802:149): [*albofasciata* Thomson 1870:154] Schwarz & al. 1996:48
Andrena ovatula (Kirby 1802): [*albofasciata* Thomson 1870] Berg 2000:178

NOTE.-Species reinstatement- Thomson (1870:154, 1872:107) described this taxon from material of Swedish origin, and mentioned that the species occurred in sandy areas of Scania. He mentioned (1872:107) that his taxon was identical to *Andrena afzeliella* var. *g* of Kirby (1802:175). Thomson's taxon was desk-revised to *Andrena convexiuscula* var. *albofasciata*, *Andrena afzeliella*, and *Andrena ovatula* (see above). However, E. Stoeckhert (1930) recognized *A. albofasciata* as a distinct species. Also Niemelä (1949), who studied all species of the subgenus *Taeniandrena* in N Europe including part of Thomson's type material (ZML) of *A. albofasciata*, concluded that *A. albofasciata* represents a distinct species. *Andrena albofasciata* has been reported also to occur in Germany (e.g. F. K. Stoeckhert 1933:149, Smissen 2001:97) and Finland (Niemelä 1949:118, Elfving 1968:22). In Germany it is a common species while the morphologically close *A. ovatula* is a rare species (F. Burger in litt. 2002).

***Andrena gelriae* van der Vecht 1927:87**

Anthrena xanthura (Kirby) Smith: Nylander 1852b:257

Syn. ref.: Niemelä 1949:112.

Anthrena xanthura (Kirby 1802:164); [*chrysosceles* Nylander 1848:218] Dalla Torre 1896:162

***Andrena intermedia* Thomson 1870:154**

LT: Sk

?*Andrena convexiuscula* Nylander 1952b:257 *partim*

Syn. ref.: Niemelä 1949:107.

Andrena convexiuscula (Kirby 1802:166) var. *intermedia* Thomson 1870:154: Schmiedeknecht 1882-1884:796

Syn. ref.: Dylewska 1987:541.

Anthrena convexiuscula Kirby var. *intermedia* Thomson: Dalla Torre & Friese 1895:43

Anthrena convexiuscula (Kirby 1802:166) var. *intermedia* Thomson 1870:154: Dalla Torre 1896:116

Andrena convexiuscula: Aurivillius 1903a:205 *partim*

Andrena convexiuscula: Aurivillius 1903b:77 *partim*

Syn. ref.: Niemelä 1949:107.

Andrena afzeliella Kirby var. *intermedia* Thomson: R. C. L. Perkins 1888:128

Anthrena afzeliella Kirby: [*intermedia* Thomson] Alfken 1899a:103

***Andrena lathyri* Alfken 1899a:103**

Andrena succincta Fabricius: Zetterstedt 1838:461

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Andrena xanthura (Kirby) Smith: Nylander 1852b:257

Andrena xanthura (Kirby): Thomson 1870:143

Syn. ref.: Alfken 1899a:103, Jørgensen 1925:166, J. F. Perkins 1942:194, Niemelä 1949:105, L. A. Nilsson pers. obs. ZML.

Andrena xanthura (Kirby 1802:164): [*chrysoscelis* Nylander 1848:257(sic,=218)] Thomson 1872:105

Syn. ref.: Alfken 1899a:103, Jørgensen 1925:166, J. F. Perkins 1942:194, Niemelä 1949:105, L. A. Nilsson pers. obs. ZML.

Andrena xanthura (Kirby 1802:164): [Nylander 1852b:257, Thomson 1870:143, 1872:105] Smith 1876:74

Andrena xanthura (Kirby 1802:164 ♀): [Nylander 1852b:257, Thomson 1872:105, *chrysoscelis* Nylander 1848:257(sic,=218)]

Schmiedeknecht 1882-1884:793

Anthrena convexiuscula Kirby: [*xanthura* Nylander] Dalla Torre & Friese 1895:43

Anthrena convexiuscula Kirby: [*xanthura* Nylander] Friese 1895b:201

Anthrena xanthura (Kirby 1802:164): [Nylander 1852b:257, Thomson 1870:143, 1872:105] Dalla Torre 1896:162

Andrena wilkella Kirby: Aurivillius 1903a:205

Syn. ref.: Forsius & Nordström 1923:114, Niemelä 1949:102.

Andrena wilkella Kirby: Aurivillius 1903b:77

Andrena wilkella Kirby: Lundblad 1924:26

Andrena ovatula* (Kirby 1802:149 (*Melitta*)) *ovatula

Andrena ovatula var. *fuscata* W. K.: Det J. D. Alfken 1938 Coll. ZML ♂

Syn. ref.: L. A. Nilsson pers obs. 2002.

NOTE. -Occurrence correction- The Swedish material referred to as this species is in all but one case *A. albofasciata* (see preceding annotation). Niemelä (1949:119) mentioned that he had seen *A. ovatula* from S Sweden in Coll. D. Gaunitz. A complete survey of the Swedish material labeled *A. ovatula* or *A. albofasciata* revealed a single male (Go. Visborgsslätt, ö. Skjutfältet 16 V 1937, leg. C. B. Gaunitz). In addition to the label of J. D. Alfken (see above) it bears the label "A. ovatula K." of B. Pittioni.

***Andrena similis* Smith 1849:lx**

Andrena ocreata (Christ): Janzon 1983a:172

Andrena ocreata (Christ): K. Warncke det. in NRM & GMNH Colls.

Syn. ref.: L. A. Nilsson det. 2002 in NRM & GMNH Colls.

***Andrena wilkella* (Kirby 1802:145 (*Melitta*))**

Andrena chrysosceles (Kirby 1802:143): Nylander 1848:218

Andrena chrysosceles (Kirby 1802:143): [Nylander 1848:218] Smith 1851:61

Andrena chrysosceles (Kirby 1802:143): [Nylander 1848:218] Smith 1853:103

Andrena chrysosceles (Kirby 1802:143): [Nylander 1848:218] Smith 1855:93

?*Andrena convexiuscula* (Kirby) Smith: [*xanthura* Nylander 1952a:100] Nylander 1852b:257

Syn. ref.: Niemelä 1949:106.

Andrena convexiuscula (Kirby 1802:166): [*xanthura* Nylander 1952a:100] Smith 1853:99

Andrena convexiuscula (Kirby 1802:166): [Nylander 1852b:257, *xanthura* Nylander 1852a:100] Smith 1855:102

Andrena convexiuscula (Kirby): Thomson 1870:154

Syn. ref.: J. F. Perkins 1942:194.

Andrena convexiuscula (Kirby 1802:166): [*xanthura* Nylander 1852a:100] Thomson 1872:106

Andrena convexiuscula (Kirby 1802:166): [Nylander 1852b:257, Thomson 1870:157(sic,=154), 1872:106, *xanthura* Nylander 1852a:100] Smith 1876:72

Andrena convexiuscula (Kirby 1802:166): [Nylander 1852b:257, Thomson 1872:106, *xanthura* Nylander 1852a:100] Schmiedeknecht 1882-1884:796
Andrena convexiuscula: Nerén 1892:101
Anthrena convexiuscula Kirby: [*xanthura* Nylander] Dalla Torre & Friese 1895:43
Anthrena convexiuscula Kirby: [*xanthura* Nylander] Friese 1895b:201
Anthrena convexiuscula (Kirby 1802:166): [Nylander 1852b:257, Thomson 1870:154, 1872:106, *xanthura* Nylander 1852a:100] Dalla Torre 1896:114
Andrena convexiuscula Kirby: Aurivillius 1903a:205 *partim*
Andrena convexiuscula Kirby: Aurivillius 1903b:77 *partim*
Syn. ref.: Niemelä 1949:106.
Andrena convexiuscula Kirby: Wahlgren 1915:24
Andrena convexiuscula: Wahlgren 1917:11
Anthrena convexiuscula Kirby: Lundblad 1924:26
Andrena xanthura (Kirby 1802:164): Nylander 1852a:100
Andrena xanthura (Kirby 1802:164): [*chrysoseles* Nylander 1848:218 ♀] Smith 1853:102
Andrena xanthura (Kirby 1802:164): [*chrysoseles* Nylander 1848:218] Smith 1855:106
Anthrena xanthura Kirby: [*chrysoseles* Nylander] Dalla Torre & Friese 1895:49
Anthrena xanthura Kirby: [*chrysoseles* Nylander] Friese 1895b:203
Anthrena xanthura (Kirby 1802:164): [*chrysoseles* Nylander 1848:218] Dalla Torre 1896:162
Andrena xanthura Kirby: [*convexiuscula* Kirby] Jansson 1925:144
Andrena xanthura Kirby: Kullenberg 1956:2

Subg. *Tarsandrena* Osychnjuk 1984:24

Andrena tarsata Nylander 1848:223

Andrena analis Panzer: Zetterstedt 1838:463
Andrena analis Panzer 1805:14: [?*tarsata* Nylander 1852b:259] Smith 1853:104
Andrena analis Panzer 1805:14: [*tarsata* Nylander 1852b:259 ♂] Smith 1855:95
Andrena analis Smith: [*tarsata* Nylander] Schenck 1874b:339
Andrena analis Panzer: [*tarsata* Nylander] Alfken 1912a:53
Andrena analis Panzer: [*tarsata* Nylander] Alfken 1912b:146

NOTE. -Species reclassification- Osychnjuk (1984:24) found evidence that the species *Andrena tarsata* belongs to the subgenus *Tarsandrena*, rather than to the subgenus *Poliandrena* Warncke 1968:71 as placed by Warncke (1968:72) and subsequently listed in Svensson & al. (1990:48).

Subg. *Trachandrena* (Robertson 1902:187)

Andrena haemorrhoea (Fabricius 1781:481 (*Apis*))

Andrena albicans (Kirby 1802:94): Nylander 1848:215
Andrena albicans (Kirby 1802:94): [Nylander 1848:215] Smith 1851:64
Andrena albicans (Kirby 1802:94): [Nylander 1848:215] Smith 1853:98
Andrena albicans (Kirby 1802:94): Nylander 1852a:101 ♂
Andrena albicans (Kirby 1802:94): Nylander 1852b:282
Andrena albicans: Boheman 1853:188
Andrena albicans (Kirby 1802:94): [Nylander 1848:215] Smith 1855:62
Andrena albicans (Müller): Thomson 1870:144
Andrena albicans (Müller 1776:165): [Nylander 1848:215, Smith 1855:62, Thomson 1870:144] Thomson 1872:76
Andrena albicans (Kirby 1802:64): [Nylander 1848:215, Thomson 1872:76] Smith 1876:37
Andrena albicans (Müller 1776:165): [Nylander 1848:215, Thomson 1872:76] Schmiedeknecht 1882-1884:535
Anthrena albicans (Müller 1776:165): [Nylander 1848:215, 1852a:101, Thomson 1870:144, 1872:76] Dalla Torre 1896:100
Andrena albicans Müller: Aurivillius 1903a:203
Andrena albicans Müller: Aurivillius 1903b:75
Anthrena albicans Müller: Wahlgren 1915:24
Anthrena albicans Müller: Wahlgren 1917:30
Anthrena albicans Müller: Tullgren & Wahlgren 1920-1922:589
Anthrena albicans Müller: Jansson 1922:22
Anthrena albicans Müller: Lundblad 1924:20
Andrena albicans Müller: Brehm 1930:208
Andrena albicans Müller: Kullenberg 1956:47
Andrena albicans Müller: Hedström & al. 1959:33
Andrena albicans: Tunblad 1968:389
Andrena albicans Müller: Brinck & al. 1973:541

NOTE. -Species reclassification- The species *Andrena haemorrhoea* belongs to the subgenus *Trachandrena* (LaBerge 1973:238), not to *Biareolina* Dours 1873:288 as placed by Warncke (1968:68) and subsequently listed in Svensson & al. (1990:48).

Subg. *Zonandrena* Hedicke 1933:220

Andrena chrysoptera Schenck 1853:139

Andrena integra Thomson 1870:155

Syn. ref.: Schmiedeknecht 1882-1884:790, Dalla Torre & Friese 1895:42, Friese 1895b:200, Dalla Torre 1896:109, Warncke 1967:279, Dylewska 1987:494, Svensson & al. 1990:48, Schwarz & al. 1996:33.

Andrena integra Thomson 1870:155: Thomson 1872:109

Syn. ref.: Schmiedeknecht 1882-1884:790, Dalla Torre & Friese 1895:42, Friese 1895b:200.

Andrena flavipes Panzer 1799:20

NOTE. -Species addition- This species was recently reported to occur in Sweden: Skåne and Dalarna (Cederberg & Nilsson 2000). It has also been documented from Västergötland (Kinnekulle, 24-25 VI 1974, 1 ♀ leg. H. Wollin, det. L. A. Nilsson, GMNH).

Andrena gravida Imhoff 1832:1205

NOTE. -Species addition- Dylewska (1987:494) mentioned S-Sweden in the distribution of the species, which was subsequently listed in Svensson & al. (1990:48). There exists no indication of such early documentation (materials or published records) from Sweden, however (Cederberg & Nilsson 2000:196). *Andrena gravida* (det. J. van der Smitten) was discovered in Sweden in 2001 (1 ♀ Skåne: Löderup, M. Sörensson in prep.). The species has also been recorded in Denmark (Jørgensen 1925:163, H. B. Madsen in litt. to B. Cederberg 2001).

Panurginae

Panurgini

Panurgus Panzer 1806:209

Subg. ***Panurgus*** (Panzer 1806:209) s. str.

Panurgus banksianus (Kirby 1802:179 (*Apis*)) ***banksianus***

Panurgus ursinus: Dahlbom 1843-1845:201

Panurgus ursinus (Kirby 1802:178): [*ater* Nylander 1848:224] Thomson 1872:113

Syn. ref.: Smith 1876:107, Dalla Torre 1896:180, Friese 1897a:84, 1901:102.

Panurgus ursinus: [Dahlbom] Nerén 1892:105

Panurgus ater Latreille 1811:720: Nylander 1848:224

Syn. ref.: Smith 1851:76, 1853:127, 1855:115, 1876:107, Dalla Torre 1896:180, Friese 1897a:84, 1901:102.

Panurgus ater Latreille: Nylander 1852b:283

Panurgus calcaratus (Scopoli 1763:301 (*Apis*))

Panurgus lobatus Latreille 1811:719: Nylander 1848:225

Syn. ref.: Smith 1851:75, 1853:126, 1855:114, 1876:106, Thomson 1872:114, Dalla Torre 1896:181, Vikberg 1986b:80.

Panurgus lobatus Latreille: Nylander 1852b:283

Panurgus lobatus: Boheman 1853:188

Panurgus lobatus: Thomson 1862:301

Panurginus Nylander 1848:223

Panurginus romani Aurivillius 1914:96

LT: Hs

HALICTIDAE

Rophitinae

Dufourea Lepeletier 1841:227

NOTE. -Subgeneric declassification- The taxa *Dufourea* Lepeletier 1841:227 s. str. and *Halictoides* Nylander 1848:195 were used as subgenera of the genus *Dufourea* in Svensson & al. (1990:50). However, Michener (2000:312) concluded that current state of systematic knowledge about the members of this large Holarctic genus does not justify subgeneric classification.

Dufourea dentiventris (Nylander 1848:195 (*Halictoides*))

Rophites dejeanii (Lepeletier 1841: 228): [*dentiventris* Nylander 1848:195, 1852b:236] Smith 1853:133

Dufourea dejeani Lepeletier 1841: [*dentiventris* Nylander 1848] Smith in Thomson 1872:119

Halictoides dejeanii (Lepelletier 1841:228 ♂): [*dentiventris* Nylander 1848:195] Baker 1994a:1199

Syn. ref.: Schwarz & al. 1996:88, Ebmer 2001:32.

***Dufourea halictula* (Nylander 1852b:236 (*Rhophites*))**

LT: Sk

Rhophites minutus (Lepelletier 1841): [*halictulus* Nylander 1852] Warncke 1979:127

Syn. ref.: Morawitz 1865:78, Ebmer 1999b:184.

Dufourea minuta Lepelletier 1941:228: Ebmer 1984:350

Syn. ref.: Baker 1994a:1199, Ebmer 1999b:184.

Rhophites minutus (Lepelletier): [*halictulus* Nylander] Janzon & Svensson 1984:183 ♀

Dufourea minuta Lepelletier 1841:228: [*halictula* Nylander 1852b:236] Ebmer 1988b:681

Dufourea minuta Lepelletier 1841: Ebmer 1989:194

Dufourea minuta Lepelletier 1841: [*halictula* Nylander 1852] Svensson & al. 1990:50

Dufourea minuta Lepelletier 1841: Westrich 1990:625

NOTE. -Occurrence correction- The distribution of this species was recently listed to include Närke (Gårdenfors 2000:182) due to a single male bee below the box-bottom label *D. minuta* Lep. in Coll A. Jansson ZML (R. Hall, data file report to ArtDatabanken 2000). Re-examination of the actual bee revealed a misplaced *Chelostoma campanularum* (det. L. A. Nilsson 2000).

***Dufourea inermis* (Nylander 1848:197 (*Halictoides*))**

***Dufourea minuta* Lepelletier 1841:228**

Rhophites vulgaris (Schenck): Thomson 1872:120 ♀

Dufourea vulgaris Schenck 1859:206: [Thomson 1872:120] Dalla Torre 1896:172

Dufourea vulgaris Schenck 1859:206: [Thomson 1872:120] Friese 1901:38

Rhophites vulgaris Schenck: Aurivillius 1903a:189

Rhophites vulgaris Schenck: Aurivillius 1903b:61

Dufourea vulgaris Schenck: Erlandsson 1976:20

Dufourea vulgaris Schenck 1861: Svensson & al. 1990:50

***Rhophites* Spinola 1808:8**

Subg. ***Rhophites*** (Spinola 1808:8) s. str.

***Rhophites quinquespinosus* Spinola 1808:72**

Dasygoda appendiculata Zetterstedt 1838:464 ♂ sine descr.

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Rhophites möschleri Blüthgen 1961:31 sine descr.

Rhophites moeschleri Schwammberger 1971:579

Syn. ref.: Warncke 1980a:41, Ebmer & Schwammberger 1986:281, Ebmer 1988:686.

NOTE. -Occurrence correction- Zetterstedt (1838:464) mentioned a Swedish bee for which he pre-announced the name *Dasygoda appendiculata*. Since he never published a description the bee remained mysterious and with a nomen nudum. Recovery of the actual specimen (ZML) with Zetterstedt's handwritten species name label revealed that it is a male of *R. quinquespinosus* (det. L. A. Nilsson 2001); the pin bears also an additional label stating the locality "Scania, Högestad". Occurrence of the taxon *R. quinquespinosus* in Sweden was first reported by Thomson (1870:316, 1872:117), who mentioned the localities Fågelsång and Ilstorp in Scania. Re-examination of Thomson's material (ZML) provided evidence also of a fourth locality, viz. Lindholmen (Schwammberger 1971:581). On request to NRM, Warncke (1980:41) received the erroneous information that Lindholmen, one of Thomson's classical localities in Scania, was located "between Stockholm and Norrtelje", thus in the province of Uppland. That *R. quinquespinosus* occurs up to Stockholm or in Uppland has since been mentioned in the literature (viz. Ebmer & Schwammberger 1986:283, Svensson & al. 1990:50, Ebmer 1988:686, 1993:29, Douwes & al. 1997:126, Gårdenfors 2000:184). Thomson did not report Lindholmen in his work (1870, 1872), and thus his additional specimens were probably captured later during the 1870ies. The species has not been recorded further in Sweden. The (VU classed) species (Gårdenfors 2000:184) qualifies for RE, adjoining to a general trend of decline in W Europe. The bee has not been recorded in Denmark since 1915 (H. B. Madsen in litt. 2001), and is extinct in Britain (Day 1991:xxiii). It occurs in Poland (Pesenko & al. 2000:127), which may offer the opportunity of a reintroduction to Sweden of this fascinating species. *Rhophites quinquespinosus* is adapted exclusively to a few Lamiaceae from the dorsiventral flowers of which it collects pollen via specialized frontal bristles. A seemingly suitable Scanian locality for a reintroduction would in fact be Lindholmen that harbours a large floral resource of the known favourite pollen host plant *Ballota nigra* (L. A. Nilsson pers. obs. 2000).

Halictinae

Halictini

Halictus Latreille 1804:182

Subg. **Argalictus** Pesenko 1984:348

Halictus sexcinctus (Fabricius 1775:387 (*Apis*))

Subg. **Halictus** (Latreille 1804:182) s. str.

Halictus quadricinctus (Fabricius 1776:247 (*Apis*))

NOTE. -Occurrence correction- The taxon in the erroneous sense of Kirby (1802) was for long reported to occur in Sweden (viz. Zetterstedt 1838:463, Nylander 1848:198, 1852b:241, Smith 1853:44, 1855:26, 1876:80, Thomson 1862:301, 1870:310, 1872:137, Nordenström 1900:207, Aurivillius 1903a:208, 1903b:80). F. K. Stoeckert (1933:69) wrote specifically that in the correct sense of Fabricius (1776) the taxon did not occur in Sweden. As pointed out by D. Gaunitz (1938:165), the till then existing Swedish records represented a species for which Blüthgen (1930:731) had provided the replacement name *Halictus eurygnathus*. There are further reports of the taxon *H. quadricinctus* from Sweden (viz. Tullgren 1943:9, Gustafsson 1979:236, Svensson & al. 1990:49, Gärdenfors 2000:182), but apparently the information in question is due to *H. eurygnathus*. In addition, Erlandsson (1960b:126) reported *H. quadricinctus* (sic) from several localities in SE Sweden. Re-examination of his actual specimens (NRM) showed that they are *Lasioglossum quadrinotatus* (L. Norén & L. A. Nilsson pers. obs. 2002). The first and only Swedish record of true (sensu Fabricius) *H. quadricinctus* known to the present author is an unreported one from 1948 (2 ♂♂ Skåne, Rörum 31 VIII, leg. K. Ander, det. H. Wolf, ZML, L. A. Nilsson pers. obs. 2001).

Subg. **Monilapis** Cockerell 1931:529

NOTE. -Subgenus addition- Svensson & al. (1990:49) listed the species *Halictus eurygnathus* in the subgenus *Halictus* s. str. However, Michener (2000:352) found evidence that this species is best placed in the subgenus *Monilapis*.

Halictus eurygnathus Blüthgen 1930:731

Hylaeus 4-cinctus Fabricius: Zetterstedt 1838:463

Halictus quadricinctus (Kirby 1802:51): Nylander 1848:198

Halictus 4-cinctus (Kirby): Nylander 1852b:241

Halictus quadricinctus (Fabricius 1787:305): [Nylander 1848:189(sic,=198), 1852b:241] Smith 1853:44

Halictus quadricinctus (Fabricius 1793:303): [Nylander 1848:198] Smith 1855:26

Halictus 4-cinctus: Thomson 1862:301

Halictus 4-cinctus (Fabricius): Thomson 1870:310

Halictus 4-cinctus (Kirby 1802:303): [Nylander 1848:198, Thomson 1870:310] Thomson 1872:137

Halictus quadricinctus (Fabricius 1793:303): [Nylander 1848:198, Thomson 1870:310, 1872:137] Smith 1876:80

Halictus 4-cinctus (Fabricius, Kirby): Nordenström 1900:207

Halictus quadricinctus (Fabricius) Thomson: Aurivillius 1903a:208

Syn. ref.: D. Gaunitz 1938a:165.

Halictus quadricinctus (Fabricius) Thomson: Aurivillius 1903b:80

Halictus quadricinctus: Tullgren 1943:9

Halictus quadricinctus: Gustafsson 1979:236

Halictus quadricinctus (Fabricius 1776): Svensson & al. 1990:49

Halictus quadricinctus: Gärdenfors 2000:182

Halictus tomentosus Eversmann: [*quadricinctus* Thomson] Jansson 1927:151

NOTE. -Species synonymy- The Swedish bee material for which the species epithets *tomentosus* (Jansson 1927:151) and *eurygnathus* (F. K. Stoeckert 1933:70, D. Gaunitz 1938a:165, Lundblad 1958:49, Wolf 1960:99, Andersson & Danielsson 1980:81, Ebmer 1988:560, Svensson & al. 1990:49, Gärdenfors 2000:182) have been used can be referred to as *H. compressus* (cf. Pesenko 1984:79-80, Pesenko & al. 2000:158, but see also Ebmer 1988:693 who maintained accepting *eurygnathus*). The ambiguity and almost complete unuse of the name *H. compressus* should however be a decisive fact in favour of a persistent use of *H. eurygnathus* for the species (A. W. Ebmer in litt. 2002).

Subg. **Protohalictus** Pesenko 1986:631

NOTE. -Subgenus addition- Svensson & al. (1990:49) listed *Halictus rubicundus* in the subgenus *Halictus* s. str. However, Pesenko (1986:631) placed this species to typify the subgenus *Protohalictus*, a taxonomy that has gained acceptance (Michener 2000:353).

Halictus rubicundus (Christ 1791:109 (*Apis*))

Hylaeus rubicundus Illiger: Zetterstedt 1838:463

Halictus rubicundus (Kirby): Thomson 1870:310

Subg. **Seladonia** (Robertson 1918:91)

Halictus confusus Smith 1853:70 **perkinsi** (Blüthgen 1926:417)

Halictus flavipes Thomson Coll. ♂ *partim*

Syn. ref.: D. Gaunitz 1931:226.

Halictus perkinsi Blüthgen: D. Gaunitz 1931:225

Halictus perkinsi Blüthgen: J. F. Perkins 1942:195

Halictus perkinsi Blüthgen: D. Gaunitz 1946:158

Halictus perkinsi (Blüthgen 1925): Blüthgen 1958:192

***Halictus leucaheneus* Ebmer 1972:225 *arenosus* (Ebmer 1976:2)**

LT: E-SE

Halictus fasciatus: Nylander 1848:275

Halictus fasciatus Nylander 1848:275: Smith 1876:94

Halictus fasciatus Nylander 1848:275: [*tumulorum* Nylander 1852b:247, Thomson 1870:312, 1872:148] Alfken 1899b:122

Halictus fasciatus Nylander: Alfken 1912a:34

Halictus fasciatus Nylander: [*tumulorum* Thomson, Aurivillius] D. Gaunitz 1931:224

Halictus fasciatus Nylander: F. K. Stoeckhert 1933:73

Halictus fasciatus Nylander: D. Gaunitz 1938a:163

Halictus fasciatus Nylander: [*tumulorum* Thomson, Aurivillius] D. Gaunitz 1946:158

Halictus fasciatus Nylander: Erlandsson 1960b:126

Halictus fasciatus Nylander 1848: [*arenosus* Ebmer 1976] Warncke 1986:62

Halictus tumulorum (Linné): [*fasciatus* Nylander] Nylander 1852b:247

Halictus tumulorum (Linné): [*fasciatus* Nylander] Thomson 1870:312

Halictus tumulorum (Linné 1761:419): [Thomson 1870:312, *fasciatus* Nylander 1848:247] Thomson 1872:148

Halictus tumulorum Linné: Aurivillius 1903a:209

Halictus tumulorum Linné: Aurivillius 1903b:81

Halictus arenosus Ebmer 1976a:2 ♂

Halictus tumulorum* (Linné 1758:574 ♂ (*Apis*)) *tumulorum

LT: Sm

Apis nigra Linné 1745:336

Syn. ref.: Villers 1789:286, Gmelin 1790:2770.

Apis n. 1000 Linné 1746:301: [*nigra* Linné 1745:336]

Syn. ref.: Linné 1758:574, 1761:419.

Halictus flavipes (Fabricius): Fallén 1813:34

Hylaeus flavipes Fabricius: Zetterstedt 1838:463

Syn. ref.: Zetterstedt 1838:469.

Halictus flavipes (Fabricius): [*seladonius* Nylander 1848:203 ♂] Nylander 1852b:247

Syn. ref.: Smith 1876:93, Ebmer 1976a:3.

Halictus flavipes (Fabricius 1787:305): [*seladonius* Nylander 1848:203, 1852b:247] Smith 1853:48

Halictus flavipes (Fabricius 1787:305): [*seladonius* Nylander 1848:203] Smith 1855:34

Halictus flavipes: Thomson 1862:301

Halictus flavipes (Fabricius): Thomson 1870:312

Syn. ref.: Alfken 1899b:115, D. Gaunitz 1931:225, 1946:158.

Halictus flavipes (Fabricius 1787:305): [*seladonius* Nylander 1848:203] Thomson 1872:149

Syn. ref.: Smith 1876:93, Alfken 1899b:115.

Halictus flavipes Fabricius: Aurivillius 1903a:209

Syn. ref.: D. Gaunitz 1931:225, 1946:158.

Halictus flavipes Fabricius: Aurivillius 1903b:81

Halictus flavipes Fabricius: Wahlgren 1917:106

Halictus flavipes Fabricius: Tullgren & Wahlgren 1920-1922:590

Halictus flavipes Fabricius: Jansson 1922:22

Halictus flavipes Fabricius: Kullenberg 1953d:2

Halictus seladonicus Latreille: Zetterstedt 1838:463

Halictus seladonius (Kirby 1802:57): Nylander 1848:203

Syn. ref.: Smith 1851:56, Alfken 1899b:124.

Halictus fasciatus Nylander 1848:275 ♀

Syn. ref.: Smith 1851:121, Schenck 1873:258, Dalla Torre & Friese 1895:41, Friese 1895b:200, Ebmer 1976a:2, 1988:569, Schwarz & al. 1996:67.

Halictus fasciatus Nylander 1852b:247 ♀

Syn. ref.: Smith 1853:49.

***Lasioglossum* Curtis 1833:448**

Subg. ***Dialictus*** (Robertson 1902:48)

NOTE. -Subgenus addition- Svensson & al. (1990:49-50) listed 21 Swedish species in the subgenus *Evyllaeus*. Most of these species have later been placed in the subgenus *Dialictus* (e.g. Michener 2000, Pesenko & al. 2000).

***Lasioglossum aeratum* (Kirby 1802:58 (*Melitta*))**

Lasioglossum viridi-aeneus Blüthgen: J. F. Perkins 1942:192

Lasioglossum brevicorne* (Schenck 1870:310 (*Halictus*)) *brevicorne

NOTE. -Occurrence correction- This species has been listed as regionally extinct (Gärdenfors 2000:183). Recent data show that it still occurs in Sweden. In 2000 *L. brevicorne* was recorded new to Öland (leg. & det. L. A. Nilsson, confirm. A. W. Ebmer) and in 2002 it was locally frequent in the Vomb-Revinge area, central Scania (M. Sörensson & L. A. Nilsson pers obs.).

***Lasioglossum leucopus* (Kirby 1802:59 (*Melitta*))**

Halictus malachinus Illiger: Zetterstedt 1838:463 *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

[*Lasioglossum lucidulum* (Schenck 1861:242 (*Hylaeus*))]

NOTE. -Species exclusion- This species has been reported to occur in Sweden (Jansson 1927:152 (1 ♂ det. J. D. Alfken), Janzon & Svensson 1984:183, Svensson & al. 1990:49). A male bearing the label "*lucidulus* Schck." in Coll. Jansson and a total of 12 specimens identified as *Halictus lucidulus* by H. Wolf in 1958 (ZML) are *Lasioglossum semilucens* (det. L. A. Nilsson & confirm. A. W. Ebmer 2002). Ebmer (1988:664) surveyed the European non-parasitic Halictidae and wrote that *L. lucidulum* was not known from Sweden. Still, a female (Öland: Aledal 22 VI 1981, leg. & Coll. L.-Å. Janzon) bore Ebmer's determination label *L. lucidulum* from 1982 (L.-Å. Janzon pers. comm. 2002) and had been reported in Janzon & Svensson (1984:183). A. W. Ebmer (in litt. 2002) has recently revised this specimen to *L. semilucens*. Thereby no valid record of the species exists from Sweden.

***Lasioglossum minutissimum* (Kirby 1802:63 (*Melitta*))**

Lasioglossum morio* (Fabricius 1793:306 (*Hylaeus*)) *morio

Halictus malachinus Illiger: Zetterstedt 1838:463 *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Halictus morio (Kirby): Thomson 1870:313

Lasioglossum nitidiusculum* (Kirby 1802:64 (*Melitta*)) *nitidiusculum

Halictus morio Fabricius: Zetterstedt 1838:462 ♀

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Halictus minutus (Kirby 1802:61): Nylander 1848:202

Syn. ref.: Thomson 1872:146.

Halictus minutus (Kirby 1802:61): [Nylander 1848:202] Smith 1851:57

Halictus minutus (Kirby): Nylander 1852b:246

Halictus minutus (Kirby 1802:61): [Nylander 1848:202, 1852b:246] Smith 1853:47

Halictus minutus (Kirby 1802:61): [Nylander 1848:202] Smith 1855:42

Halictus minutus (Kirby 1802:61): [Nylander 1848:202] Smith 1876:100

Halictus fulvicornis Illiger: [Dahlbom Coll. = *minutus* (Kirby)] Nylander 1848:203

Lasioglossum nitidulum* (Fabricius 1804:294 (*Prosopis*)) *nitidulum

Halictus smeathmanellus (Kirby): Thomson 1870:313

Halictus smeathmanellus (Kirby 1802:375): [Thomson 1870:313] Thomson 1872:152

Halictus smeathmanellus (Kirby 1802:375): [Thomson 1872:152] Smith 1876:95

Halictus smeathmanellus Kirby: Aurivillius 1903a:209

Halictus smeathmanellus Kirby: Aurivillius 1903b:81

Halictus smeathmanellus Kirby: Muchardt 1906:131

Halictus smeathmanellus Kirby: [*leucophus* Gyllenhal Coll.] Strand 1909:16 ♂

Halictus smeathmanellus Kirby: F. K. Stoeckert 1933:95

Lasioglossum smeathmanellum (Kirby 1802): Svensson & al. 1990:49

Lasioglossum smeathmanellum: Chinery 1993:244

Lasioglossum smeathmanellum: Ehnström & al. 1993:44

Lasioglossum smeathmanellum: Gärdenfors 2000:183

Halictus continentalis Blüthgen: Blüthgen 1958:194

Syn. ref.: Svensson & al. 1990:49.

Halictus continentalis Blüthgen: Wolf 1960:99

[*Lasioglossum smeathmanellum* (Kirby 1802:375)]

NOTE. -Species exclusion- Blüthgen (1958:194) expressed the opinion that all hitherto reported Swedish *Halictus smeathmanellus* (see *L. nitidulum* above) were not that species, but conspecific with *Halictus continentalis*. However, *H. continentalis* was found to be a junior synonym of *Lasioglossum nitidulum* (Ebmer 1976:401, Schwarz & al. 1996:75). The species *L. smeathmanellum* has also recently been listed to occur in Sweden (Svensson & al. 1990:49, Chinery 1993:244, Ehnström & al. 1993:44, Gärdenfors 2000:183), but has an atlanto-mediterranean distribution excluding this country (Ebmer 1988:625).

[*Lasioglossum parvulum* (Schenck 1853:153 (*Hylaeus*))]

NOTE. -Species exclusion- This species has been reported to occur in Sweden (Ebmer & Sakagami 1985:304, Ebmer 1988:658, Norén & al. 1998:139, Svensson & al. 1990:49, Ehnström & al. 1993:44, Gärdenfors 2000:183). However, the reference to the taxon *Halictus minutus* in Aurivillius (1903a:209, 1903b:81) represents *L. rufitarse* as mentioned

by Alfken (1927:139), not *L. parvulum* as mentioned by Svensson & al. (1990:51). The total *parvulum*-labeled Swedish material apparently consists of 7 specimens: 4 ♀♀ in ZML (det. H. Wolf), 1 ♂ in Coll. B. G. Svensson, 1 ♀ in Coll. L. Norén, and 1 ♀ in ZML (the latter ♂ and 2 ♀♀ det. A. W. Ebmer). All of these have showed to be misidentified (rev. det. L. A. Nilsson, the revised determination of the last 3 bees confirm. A. Pauly 2002). There is no valid record of this species from Sweden.

***Lasioglossum punctatissimum* (Schenck 1853:147 (*Hylaeus*))**

Lasioglossum punctatissimum (Schenck): Janzon & Svensson 1984:183 ♀

***Lasioglossum rufitarse* (Zetterstedt 1838:462 (*Halictus*))**

LT: Lpl

Halictus minutus (Kirby): Thomson 1870:311 *partim*

Syn. ref.: Alfken 1904b:125, 1912a:31, 1912b:127, J. F. Perkins 1942:195, Blüthgen 1958:194.

Halictus minutus (Kirby 1802:61): [Thomson 1870:311, *rufitarsis* Zetterstedt 1838:462, Nylander 1848:201] Thomson 1872:146 *partim*

Syn. ref.: Alfken 1904b:125, 1912a:31, 1912b:127, J. F. Perkins 1942:195.

Halictus minutus (Kirby 1802:61): [Thomson 1870:311, 1872:146] Smith 1876:100

Halictus minutus Schrank: Aurivillius 1903a:209

Syn. ref.: Alfken 1927:139, Alfken in Jansson 1927:152.

Halictus minutus Schrank: Aurivillius 1903b:81

Halictus minutus Schrank: [*rufitarsis* Zetterstedt 1838:462] Sparre Schneider 1909:117

Halictus minutus Schrank: Jansson 1922:22

Halictus minutus Kirby: Lundblad 1955:113

Lasioglossum parvulum (Schenck): [A. W. Ebmer det.] Norén & al. 1998:139 ♀

Syn. ref.: L. A. Nilsson rev. det. & A. Pauly confirm. 2002.

***Lasioglossum semilucens* (Alfken 1914:281 (*Hylaeus*))**

Halictus minutissimus Kirby: Aurivillius 1903a:209

Halictus minutissimus Kirby: Aurivillius 1903b:81

Halictus lucidulus Schenck: [J. D. Alfken det.] Jansson 1927:152

Syn. ref.: L. A. Nilsson det. & A. W. Ebmer confirm. 2002 Jansson Coll. ZML.

Lasioglossum lucidulum (Schenck): [A. W. Ebmer det.] Janzon & Svensson 1984:183 ♀

Syn. ref.: A. W. Ebmer in litt. rev. det. 2002.

***Lasioglossum sexstrigatum* (Schenck 1870:310 (*Halictus*))**

***Lasioglossum tarsatum* (Schenck 1870:309 (*Halictus*))**

NOTE. -Occurrence correction- This species, repeatedly reported from Skåne, has been listed to occur in Öland due to a single ♀ (Högby, det. J. D. Alfken) found and reported by Jansson (1927:152). A ♀ with the actual data (“Hornsjö.” (=Hornsjön, in Högby parish), “*Hal. tarsatus* Schck” in Alfken’s handwriting) in Jansson Coll. (ZML) is *Lasioglossum semilucens* (det. L. A. Nilsson, confirm. A. W. Ebmer 2002). The species must be deleted for Öland. In Boheman Coll. (NRM) a ♀ of *L. tarsatum* (det. L. Norén 2002) bears the label “Hall.” (=Halland), anyway adding a second province of distribution. The species has recently been rediscovered in Halland (J. Abenius pers. comm. 2002).

***Lasioglossum villosulum* (Kirby 1802:62 (*Melitta*))**

Halictus rufitarsis (Nylander): Thomson 1870:311

Syn. ref.: Dalla Torre & Friese 1895:41, Friese 1895b:200.

Halictus punctulatus (Kirby 1802:66): [*villosulum* Nylander 1852b:246, *rufitarsis* Thomson 1870:311] Thomson 1872:145

Syn. ref.: Smith 1876:91, J. F. Perkins 1942:195.

Halictus malachurus: Gyllenhal Coll. ♀

Syn. ref.: Strand 1909:18.

Subg. ***Evylaeus*** (Robertson 1902:247)

Lasioglossum albipes* (Fabricius 1781:486 (*Apis*)) *albipes

?*Apis rybyensis* Linné 1771:13 ♂

Syn. ref.: Ebmer 1988b:692.

Halictus abdominalis Panzer: Fallén 1813:34

Hylaeus abdominalis Panzer: Zetterstedt 1838:463

Halictus fulvocinctus (Kirby 1802:68): Nylander 1848:199 ♂ var.

Syn. ref.: Smith 1851:58, 1853:46.

Halictus obovatus (Kirby): Nylander 1852b:244

Syn. ref.: Thomson 1872:141, Smith 1876:89.

Halictus obovatus (Kirby): [♂=*albipes* Kirby] Thomson 1870:309

Syn. ref.: Thomson 1872:141, Smith 1876:89.

Lasioglossum boreale Svensson, Ebmer & Sakagami 1977:219

LT: T Lpm

Halictus niger Viereck: [K. Warncke det.] in Svensson & al. 1977:219.

Syn. ref.: Svensson & al. 1977:219.

Halictus niger ssp. *fratellus* Pérez 1903: [*borealis* (Svensson, Ebmer & Sakagami 1977)] Warncke 1986:63

Lasioglossum calceatum (Scopoli 1763:301 (*Apis*))

?*Apis cariosa* Linné 1758:578 ♂: [n. 100 Linné 1746:301]

Syn. ref.: Warncke 1973b:27, 1986:93.

Apis rybyensis Linné 1771:13 ♂

Syn. ref.: Warncke 1986:110.

Halictus cylindricus (Fabricius 1804:319): Zetterstedt 1838:462

Syn. ref.: Friese 1902:480.

Halictus cylindricus (Fabricius 1793:302): [*fulvocinctus* Nylander 1848:199] Smith 1855:30

Halictus cylindricus (Fabricius 1793:302): [*fulvocinctus* Nylander 1848:199, *abdominalis* Thomson 1870:309] Thomson 1872:140

Halictus cylindricus (Fabricius 1793:302): [Thomson 1870:309, 1872:140, *fulvocinctus* Nylander 1848:199] Smith 1876:87

Halictus fulvo-cinctus (Kirby 1802:68): [*cylindricus* Zetterstedt 1838:462 ♂] Nylander 1848:199

Halictus fulvocinctus (Kirby): Nylander 1852b:242

Halictus fulvo-cinctus: Thomson 1862:301

Halictus abdominalis (Panzer 1798:18): [*fulvocinctus* Nylander 1848:199] Smith 1851:58

Halictus abdominalis (Panzer 1798:18): [*fulvocinctus* Nylander 1848:199, 1852b:242] Smith 1853:45

Halictus abdominalis: Thomson 1870:309

Lasioglossum fratellum (Pérez 1903:ccxiv (*Halictus*)) ***fratellum***

Halictus rufitarsis: Zetterstedt Coll. *partim*

Syn. ref.: Ebmer 1982:219, L. A. Nilsson pers. obs. Zetterstedt Coll. ZML.

Halictus subfasciatus Nylander 1848:200 [? *morio* Zetterstedt 1838:462 ♀]

Syn. ref.: F. K. Stoeckhert 1933:90, Ebmer 1976a:2, 1988b:615, Svensson & al. 1990:49, Schwarz & al. 1996:71, Söderman & Vikberg 2002:56.

Halictus subfasciatus Nylander 1848:200: Nylander 1852b:245

Halictus subfasciatus Nylander 1848:200: [Nylander 1852b:245] Smith 1853:46

Halictus subfasciatus Nylander 1848:200: Smith 1855:41

Halictus subfasciatus Nylander: Thomson 1870:310

Halictus subfasciatus Nylander 1848:200: Smith 1876:92

Halictus subfasciatus Nylander: [*laevis* Thomson] Alfken 1904b:125

Halictus laevis (Kirby 1802:65): [*subfasciatus* Nylander 1848:200, Thomson 1870:310] Thomson 1872:142

Halictus laevis (Kirby 1802:65): [Thomson 1872:142] Smith 1876:98

Halictus laevis Kirby: [*subfasciatus* Nylander] Dalla Torre & Friese 1895:38

Halictus frey-gessneri Alfken 1904a:69 [*subfasciatus* Nylander 1848:200, 1852b:245, Thomson 1870:310, *laevis* Thomson 1972:142]

Halictus frey-gessneri Alfken: Strand 1909:7 ♀

Halictus frey-gessneri Alfken: [*subfasciatus* Nylander] Alfken 1912a:30

Halictus frey-gessneri Alfken: [*subfasciatus* Nylander, *laevis* Thomson] Alfken 1912b:126

Halictus fulvicornis Kirby: Lundblad 1924:21

Syn. ref.: D. Gaunitz 1929:198.

Lasioglossum nigrum (Viereck): Peters 1975:118

Lasioglossum fulvicorne (Kirby 1802:67 (*Melitta*)) ***fulvicorne***

Lasioglossum subfulvicorne (Blüthgen 1934:11 (*Halictus*)) ***austriacum*** (Ebmer 1974:132)

Lasioglossum austriacum Ebmer: Ebmer 1978:318

NOTE. -Species-presence uncertainty- This species has been reported to occur in Sweden (Ebmer 1988:610, Svensson & al. 1990:49). However, as stated by these authors only females have been found in this country. According to Ebmer (1974:133), females of *L. subfulvicorne* can only be distinguished from those of its close relative *L. fratellum* by the length-to-width ratio of the head. Since the variation range of head shape in Scandinavian *L. fratellum*, a common and widely distributed species, has not yet been extensively investigated, it is not possible to exclude the possibility of misidentified *L. fratellum*. The lack of records of male *L. subfulvicorne* suggests misidentification since the hitherto reputed absolute species characters have been found in this sex, no absolute character is yet known in the female sex. Presently, A. W. Ebmer (in litt. 2002) doubts whether *L. subfulvicorne* occurs in N Europe. However, the species has been recently listed to occur in several provinces in Finland (Söderman & Vikberg 2002:56, G. Söderman in litt. 2003).

Subg. ***Lasioglossum*** (Curtis 1833:Pl.448) s. str.

Lasioglossum lativentre (Schenck 1853:151 (*Hylaeus*))

Halictus 4-notatulus (Kirby 1802:79 as *4-notata*): Thomson 1872:144 *partim*

Syn. ref.: J. F. Perkins 1942:195, Blüthgen 1958:194.

Halictus quadrinotatulus Schenck: Dalla Torre & Friese 1895:39

Halictus quadrinotatus Kirby: Aurivillius 1903a:209

Syn. ref.: Alfken 1927:139.

Halictus quadrinotatus Kirby: Aurivillius 1903b:81

***Lasioglossum leucozonium* (Schrank 1781:406 (*Apis*))**

Halictus cylindricus (Fabricius 1804:319): Zetterstedt 1838:462 ♂

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

***Lasioglossum quadrinotatum* (Kirby 1802:79 (*Melitta*))**

Halictus 4-notatulus (Kirby 1802:79 as *4-notata*): Thomson 1872:144 ♀ *partim*

Syn. ref.: Alfken 1904b:125, Blüthgen 1958:194.

Halictus quadrinotatulus Schenck: Dalla Torre & Friese 1895:39

Halictus quadricinctus Fabricius: Erlandsson 1960b:126

Syn. ref.: L. A. Nilsson pers. obs. ex. leg. Erlandsson NRM.

***Lasioglossum sexmaculatum* (Schenck 1853:142 (*Hylaeus*))**

Hylaeus obovatus Illiger, Kirby: Thomson Coll. ♀

Syn. ref.: Blüthgen 1958:192.

Halictus laevigatus: Thomson Coll. ♀

Syn. ref.: Blüthgen 1958:192.

Halictus 6-notatulus Nylander: Thomson Coll. ♀

Syn. ref.: Blüthgen 1958:192.

Halictus 4-notatus (Kirby): Thomson 1870:309

Syn. ref.: Alfken 1897a:107.

Halictus 4-notatulus (Kirby 1802:79): Thomson 1872:144 ♂

Syn. ref.: Alfken 1897a:107, Blüthgen 1958:194.

***Lasioglossum sexnotatum* (Nylander 1852b:239 (*Halictus*))**

LT: Vg

Halictus 6-notatus Nylander 1852a:93, 97

Syn. ref.: Nylander 1852b:239, Morawitz 1865:71, Thomson 1872:144, Ebmer 1975:71.

Halictus sexnotatus (Kirby 1802:82): [Nylander 1852b:239] Smith 1853:45

Halictus sexnotatus (Kirby 1802:82): [Nylander 1852b:239] Smith 1855:28

Halictus sexnotatus (Kirby 1802:82): [Nylander 1852b:239, Thomson 1870:308, 1872:144] Smith 1876:84

Halictus 6-notatus (Nylander): Nordenström 1900:207

Halictus sexnotatulus Schenck: Aurivillius 1903a:208

Syn. ref.: Alfken 1927:139.

Halictus sexnotatulus Schenck: Aurivillius 1903b:80

***Lasioglossum xanthopus* (Kirby 1802:78 (*Melitta*))**

NOTE. -Distribution addition- Listed distribution of this species in Sweden has only been Scania (Aurivillius 1903a:208, 1903b:80, Svensson & al. 1990:49, Gärdenfors 2000:183). Nordenström (1900:207) reported *L.* (as *Halictus*) *xanthopus* from Småland, Värnamo; the record was probably from one of the years 1896-1899.

***Lasioglossum zonulum* (Smith 1848:2171 (*Halictus*))**

***Sphecodes* Latreille 1804:182**

***Sphecodes albilabris* (Fabricius 1793:349 (*Nomada*))**

***Sphecodes crassus* Thomson 1870:100**

LT: SE

Sphecodes similis Wesmael: Thomson Coll. ♂ *partim*

Syn. ref.: Kjellander 1959:16.

***Sphecodes cristatus* von Hagens 1882:218**

***Sphecodes ephippius* (Linné 1767:944 ♂ (*Sphex*))**

LT: SE

Sphecodes similis Wesmael 1835:6: Nylander 1848:192

Sphecodes similis (Wesmael): Thomson 1870:99

Sphecodes similis Wesmael 1835:6: [Thomson 1870:99] Thomson 1872:156

Sphecodes similis Wesmael: Thomson Coll. *partim*

Sphecodes similis Wesmael: Aurivillius 1903a:211

Sphecodes similis Wesmael: Aurivillius 1903b:83

Sphecodes similis Wesmael: Kullenberg 1950b:56

Sphecodes similis Wesmael: Kullenberg 1951b:2

Sphecodes similis Wesmael: Kullenberg & Nyholm 1952:3

Sphecodes similis Wesmael: Kullenberg 1958:2

Sphecodes similis Wesmael: Hedström & al. 1963:15
Sphecodes geoffrellus (Kirby 1802:45): Nylander 1848:194
Syn. ref.: Smith 1855:19, 1876:20.
Sphecodes geoffrellus (Kirby): Thomson 1870:100
Syn. ref.: Smith 1876:20.
Sphecodes geoffrellus (Kirby 1802:45): [Nylander 1848:194, Thomson 1870:100] Thomson 1872:159
Syn. ref.: Smith 1876:20.
Sphecodes divisus (Kirby): Nylander 1852b:234
Sphecodes divisus Kirby: Lundblad 1958:49
Sphecodes divisus (Kirby): [*ephippius* (Linné), *similis* Thomson] Kjellander 1959:16
Sphecodes pilifrons Thomson: Thomson Coll. *partim*
Syn. ref.: Kjellander 1959:16.
Sphecodes puncticeps Thomson: Thomson Coll. ♀ *partim*
Syn. ref.: Kjellander 1959:16.
Sphecodes subquadratus Smith: Thomson Coll. ♂ *partim*
Syn. ref.: Kjellander 1959:15.

***Sphecodes ferruginatus* von Hagens 1882:221**

Sphecodes crassus Thomson: Thomson Coll. *partim*
Syn. ref.: Kjellander 1959:16.

***Sphecodes geoffrellus* (Kirby 1802:45 (*Melitta*))**

Sphecodes ephippius Linné: Aurivillius 1903a:212
Sphecodes ephippius Linné: Aurivillius 1903b:84
Sphecodes dimidiatus von Hagens: [*ephippius* Linné] Forsius & Nordström 1921:73
Sphecodes fasciatus von Hagens: [*geoffrellus* Thomson *partim*] J. F. Perkins 1942:192
Sphecodes fasciatus von Hagens: [*geoffrellus* Thomson Coll. *partim*] Kjellander 1959:17
Sphecodes fasciatus von Hagens: Erlandsson 1960b:126
Sphecodes fasciatus: Cederberg 1982:38
Sphecodes fasciatus von Hagens: Janzon 1983a:172 ♂
Sphecodes fasciatus von Hagens: Janzon & Svensson 1984:183 ♀

NOTE. -Spelling correction- The correct spelling of the species epithet is with "ff", as written in the original description (Kirby 1802:45).

***Sphecodes gibbus* (Linné 1758:571 ♀ (*Sphex*))**

LT: SE

Sphecodes reticulatus Thomson: Thomson Coll. ♀
Syn. ref.: Kjellander 1959:15.

***Sphecodes hyalinatus* von Hagens 1882:222**

Sphecodes crassus Thomson: Thomson Coll. *partim*
Syn. ref.: Kjellander 1959:16.
Sphecodes subquadratus Smith: Thomson Coll. ♂ *partim*
Syn. ref.: Kjellander 1959:15.

***Sphecodes miniatus* von Hagens 1882:223**

Sphecodes geoffrellus (Kirby): Thomson Coll. *partim*
Syn. ref.: Kjellander 1959:17.

***Sphecodes monilicornis* (Kirby 1802:47 (*Melitta*))**

Sphecodes subquadratus Smith: Nylander 1852b:235
Sphecodes subquadratus (Smith): Thomson 1870:98
Syn. ref.: Kjellander 1959:15.
Sphecodes subquadratus Smith 1845:1014: [Thomson 1870:98] Thomson 1872:155
Syn. ref.: Kjellander 1959:15.
Sphecodes subquadratus Smith 1845:1014: [Nylander 1852b:235, Thomson 1870:98, 1872:155] Smith 1876:19
Sphecodes subquadratus Wesmael: Aurivillius 1903a:211
Sphecodes subquadratus Wesmael: Aurivillius 1903b:83
Sphecodes subquadratus Wesmael: Jansson 1922:22
Sphecodes subquadratus Wesmael: Hedqvist & Janzon 1979:25

***Sphecodes pellucidus* Smith 1845:1014**

Proabeille noire et rousse De Geer 1771:755
Syn. ref.: Smith 1855:17.

Sphecodes pilifrons Thomson 1870:99

Syn. ref.: R. C. L. Perkins 1917:46, Blüthgen 1930:726, 1934:42, F. K. Stoeckert 1933:103, Forsius 1935:13, J. F. Perkins 1942:195, Kjellander 1959:16, Elfving 1968:13, Richards 1978:137, Vikberg 1986b:81, Svensson & al. 1990:50, Warncke 1992a:20, Schwarz & al. 1996:84, Söderman & Vikberg 2002:5.

Sphecodes pilifrons Thomson 1870:99: Thomson 1872:157

Syn. ref.: R. C. L. Perkins 1917:46, J. F. Perkins 1942:195, Kjellander 1959:16.
Sphecodes pilifrons Thomson: Thomson Coll. *partim*
Syn. ref.: Kjellander 1959:16.
Sphecodes pilifrons Thomson: Aurivillius 1903a:211
Sphecodes pilifrons Thomson: Aurivillius 1903b:83
Sphecodes pilifrons Thomson: Tullgren & Wahlgren 1920-1922:590
Sphecodes subquadratus Smith: Thomson Coll. ♂ *partim*
Syn. ref.: Kjellander 1959:15.

***Sphecodes puncticeps* Thomson 1870:99**

LT: SE

Sphecodes pilifrons Thomson: Thomson Coll. ♂ *partim*
Syn. ref.: Kjellander 1959:16.

***Sphecodes reticulatus* Thomson 1870:98**

LT: SE

Sphecodes subquadratus Smith: Thomson Coll. ♂ *partim*
Syn. ref.: Kjellander 1959:15.

MELITTIDAE

Dasypodainae

Dasypodaini

***Dasypoda* Latreille 1802:424**

Dasypoda argentata* Panzer 1809:15 *argentata

Dasypoda plumipes Panzer 1809:16: Zetterstedt 1838:464

Dasypoda plumipes: Boheman 1853:188

Dasypoda plumipes Latreille: Nylander 1852b:259 ♀

Syn. ref.: Schletterer 1890:43, J. F. Perkins 1942:195.

Dasypoda plumipes Latreille 1809:152: [Nylander 1852b:259] Smith 1853:125

Dasypoda plumipes Panzer 1809:15: [Nylander 1852b:259] Thomson 1872:63

Syn. ref.: Schletterer 1890:43, Dalla Torre 1896:183, Friese 1901:140, Aurivillius 1903a:188, 1903b:60.

Dasypoda braccata Eversmann 1847: Thomson 1872:62 ♀

Syn. ref.: Schletterer 1890:43, Dalla Torre 1896:183.

NOTE. -Species-identity uncertainty- It is presently unclear if this species, listed repeatedly to occur in Sweden (e.g. Erlandsson & al. 1988:162, Ehnström & al. 1993:44, Gärdenfors 2000:182), has been recorded in this country. All Polish bees that formerly had been identified to *D. argentata* have recently been revised to the species *Dasypoda thoracica* (W. Celary pers. comm. 2002).

Dasypoda hirtipes* (Fabricius 1793:312 (*Andrena*)) *hirtipes

Dasypoda plumipes (Panzer 1797:46): [*hirtipes* Nylander 1848:225, Thomson 1872:63] Schletterer 1890:24

Dasypoda plumipes (Panzer 1797:46): [*hirtipes* Nylander 1848:225, Thomson 1872:63] Dalla Torre 1896:186

Dasypoda plumipes Panzer: [*hirtipes* Thomson] Aurivillius 1903a:187

Dasypoda plumipes Panzer: [*hirtipes* Thomson] Aurivillius 1903b:59

Dasypoda plumipes Panzer: Lundblad 1913:213

Dasypoda plumipes Panzer: Tullgren & Wahlgren 1920-1922:589

Dasypoda plumipes Panzer: Ringdahl 1921:26

Dasypoda plumipes Panzer: Brehm 1930:209

Dasypoda plumipes: Herrström 1956:247

Dasypoda plumipes Panzer: Hanson 1962:40/Tavla 35

Dasypoda plumipes Panzer: Brinck & al. 1973:543

Dasypoda plumipes Panzer: Tengö 1979c:136

Dasypoda plumipes Panzer: Tengö 1979d:24

Dasypoda altercator (Harris): Bergmark & al. 1984:137

Dasypoda altercator (Harris): Janzon & Svensson 1984:183 ♂

Dasypoda altercator: Chinery 1993:246

***Dasypoda suripes* (Christ 1791:163 (*Apis*))**

Dasypoda braccata Eversmann 1847: Thomson 1872:62 ♂

Dasypoda thomsonii Schletterer 1890:52: [*braccata* Thomson 1872:62 ♂]

Dasypoda thomsonii Schletterer: [*braccata* Thomson] Dalla Torre & Friese 1895:55

Dasypoda thomsonii Schletterer 1890:52: [*braccata* Thomson 1872:62 ♂] Dalla Torre 1896:187

Dasypoda thomsonii Schletterer 1890:52: [*braccata* Thomson 1872:62] Friese 1901:144

Dasygaster thomsoni Schletterer: [*braccata* Thomson] Aurivillius 1903a:187
Dasygaster thomsoni Schletterer: [*braccata* Thomson] Aurivillius 1903b:59
Dasygaster thomsoni Schletterer: Schmiedeknecht 1907:70
Dasygaster thomsoni Schletterer: F. K. Stoeckert 1933:183
Dasygaster thomsoni: Herrström 1956:247
Dasygaster mixta Radoszkowski: [*thomsoni* Schletterer] Erlandsson 1960b:127

Melittinae

Macropis Panzer 1809:16

Subg. **Macropis** (Panzer 1809:16) s. str.

Macropis europaea Warncke 1973:112

Macropis labiata Panzer 1809:16: Nylander 1848:248
Macropis labiata Panzer 1809:16: [Nylander 1848:248] Smith 1851:74
Macropis labiata Panzer 1809:16: Nylander 1852b:269
Macropis labiata: Boheman 1853:188
Macropis labiata (Fabricius 1804:333): [Nylander 1848:248, 1852b:269] Smith 1853:126
Macropis labiata (Fabricius 1804:333): [Nylander 1848:248, 1852b:269] Smith 1855:107
Macropis labiata Panzer: Boheman 1863:60
Macropis labiata Panzer 1809:16: [Nylander 1848:248, 1852b:269, Smith 1855:107] Thomson 1872:60
Macropis labiata (Fabricius 1804:333): [Nylander 1848:248, Thomson 1872:60] Smith 1876:104
Macropis labiata (Fabricius 1804:333): [Nylander 1848:248, 1852b:269, Thomson 1872:60] Dalla Torre 1896:194
Macropis labiata (Fabricius 1804:333): [Nylander 1848:248, Thomson 1872:60] Friese 1901:180
Macropis labiata Fabricius: Aurivillius 1903a:190
Macropis labiata Fabricius: Aurivillius 1903b:62
Macropis labiata Fabricius: Tullgren & Wahlgren 1920-1922:589
Macropis labiata Panzer: Erlandsson 1951:39
Macropis labiata Fabricius: Kullenberg 1953b:81
Macropis labiata Fabricius: Kullenberg 1953d:2
Macropis labiata Fabricius: Kullenberg 1954:3
Macropis labiata Fabricius: Lundblad 1954:57
Macropis labiata Fabricius: Lundblad 1955:113
Macropis labiata Fabricius: Kullenberg 1956b:3
Macropis labiata Fabricius: Kullenberg 1957b:4
Macropis labiata Fabricius: Kullenberg 1958a:5
Macropis labiata Fabricius: Erlandsson 1960b:127
Macropis labiata Fabricius: Andersson & Danielsson 1980:81
Macropis labiata (Fabricius): G. E. Nilsson 1991:84

Melitta Kirby 1802:117

Subg. **Melitta** (Kirby 1802:117) s. str.

Melitta haemorrhoidalis (Fabricius 1775:377 (*Andrena*)) **haemorrhoidalis**

LT: SE

Apis sordida Scopoli 1763: [? *Andrena haemorrhoidalis* Fabricius 1781:474] Villers 1789:306
Andrena dichroa Gmelin 1790:2792 [*haemorrhoidalis* Fabricius 1781:474, 1787:299]
Syn. ref.: Dalla Torre & Friese 1895:55, Friese 1895b:204, 1901:167, Warncke 1973:108, 1986:95, Schwarz & al. 1996:91.
Andrena chrysoura Illiger: Fallén Coll.
Syn. ref.: Zetterstedt 1838:459.
Kirbya chrysoura (Kirby 1802:172): [*haemorrhoidalis* Fabricius 1804:327, Zetterstedt 1838:459] Nylander 1848:246
Syn. ref.: Smith 1851:74, 1853:122, 1855:109, 1876:76, Nylander 1852b:268, Dalla Torre 1896:188.

Melitta leporina (Panzer 1799:21 (*Apis*))

Kirbya tricincta (Kirby 1802:171): Nylander 1852a:102 ♀
Syn. ref.: Smith 1855:110, 1876:77.
Cilissa tricincta (Kirby): [Nylander 1852a:102] Nylander 1852b:267
Syn. ref.: Smith 1855:110, Thomson 1872:66, Smith 1876:77, Friese 1901:162.
Cilissa tricincta (Kirby 1802:171): [Nylander 1852b:267, 1852a:102] Smith 1853:122
Melitta leporina Panzer *nigrinotum* Alfken 1927: D. Gaunitz 1935:92
Melitta leporina Panzer *nigrinotum* Alfken 1927: D. Gaunitz 1946:158

Melitta tricincta Kirby 1802:171

Kirbya melanura Nylander 1852a:101 ♀

Syn. ref.: R. C. L. Perkins 1917:52, Blüthgen 1930:775, F. K. Stoeckert 1933:192, Erlandsson 1960b:127, Warncke 1973:107, Richards 1978:137, Erlandsson & al. 1988:162, Scheuchl 1996:109.

Cilissa melanura Nylander 1852a:101: Nylander 1852b:268 ♂

Syn. ref.: R. C. L. Perkins 1917:52, Blüthgen 1930:775.

Cilissa melanura Nylander 1852a:101: [Nylander 1852b:268] Smith 1853:123

Cilissa melanura Nylander 1852a:101: [Nylander 1852b:268] Thomson 1872:66

Melitta melanura (Nylander 1852b:268): [Thomson 1872:66] Dalla Torre 1896:190

Melitta melanura (Nylander 1852a:101): [Nylander 1852b:268 ♂, Thomson 1872:66] Friese 1901:164

Melitta melanura Nylander: Aurivillius 1903a:190

Melitta melanura Nylander: Aurivillius 1903b:62

Melitta melanura Nylander: Muchardt 1906:131

Melitta nigricans Alfken: [*melanura* Thomson] Schmiedeknecht 1907:65

Melitta wankowiczi (Radoszkowski 1891:237 (*Cilissa*))

Melitta ?sibirica Morawitz: [?J. D. Alfken det.] Jansson Coll. ZML ♀

Syn. ref.: L. A. Nilsson det. in Jansson Coll. ZML.

MEGACHILIDAE

Megachilinae

Osmiini

Chelostoma Latreille 1809:161

NOTE. -Subgeneric classification- Recent systematics of the genus (Griswold & Michener 1998) placed the three Swedish species in separate subgenera: *Chelostoma* s. str., *Foveosmia* and *Gyrodromella*. The last is a replacement name created by Michener (1997:27) for the subgeneric taxon *Gyrodroma* Thomson 1872:259.

Subg. **Chelostoma** (Latreille 1809:161) s. str.

Chelostoma florissomne (Linné 1758:577 ♂ (*Apis*))

Apis maxillosa Linné 1767:954 ♀

Syn. ref.: Kirby 1802:252, Smith 1851:93, 1854:219, 1855:189, 1876:165, Kriechbaumer 1879:313, Schletterer 1889:609, Dalla Torre & Friese 1895:69, Friese 1895b:207, Dalla Torre 1896:376, Friese 1898:52, Alfken 1912a:38, Forsius & Nordström 1921:72, Forsius 1935:14, Richards 1935a:176, 1978:138, Tkalců 1974:328, Day 1979:67, Vikberg 1986b:82, Warncke 1986:5, 1986:57, Janzon & al. 1991:94, Schwarz & al. 1996:116, Scheuchl 1996:107, Söderman & Vikberg 2002:57.

Anthophora maxillosa Illiger: Fallén 1813:33

Chelostoma maxillosa Linné ab.: Billberg 1820:110

Heriades maxillosa (Linné 1767:954): Zetterstedt 1838:467

Syn. ref.: Smith 1851:93, 1854:219, 1855:189, 1876:165, Schletterer 1889:609, Dalla Torre 1896:376, Friese 1902:482, confirm. L. A. Nilsson in Zetterstedt Coll. ZML.

Heriades maxillosa (Linné 1767:954): [Zetterstedt 1838:467 ♀, *florissomnis* Linné 1761:423] Nylander 1848:268

Syn. ref.: Smith 1851:93, 1854:219, 1855:189, 1876:165, Schletterer 1889:609, Dalla Torre 1896:376.

Heriades maxillosa Zetterstedt: Nylander 1852b:277

Syn. ref.: Smith 1854:219, 1855:189, Schletterer 1889:609, Dalla Torre 1896:376, Friese 1898:52.

Heriades maxillosa (Linné 1767:954): Nylander 1856:107

Syn. ref.: Smith 1876:165, Schletterer 1889:609.

Chelostoma maxillosa: Thomson 1862:308

Chelostoma maxillosa (Linné 1767:954): [Zetterstedt 1838:467, Nylander 1848:268] Thomson 1872:257

Syn. ref.: Kriechbaumer 1879:313, Schletterer 1889:609, Alfken in Jansson 1927:151.

Chelostoma maxillosa Linné: Nerén 1892:112

Heriades maxillosa Linné: Aurivillius 1903a:172

Syn. ref.: Alfken in Jansson 1927:151.

Heriades maxillosa Linné: Aurivillius 1903b:44

Heriades maxillosa Linné: Trägårdh 1914:109

Heriades maxillosa Linné: Nordström 1917:322

Eriades maxillosa Linné: Tullgren & Wahlgren 1920-1922:591

Heriades maxillosa Linné: Aurivillius 1927:143

Eriades maxillosa Linné: [*florissomnis* auct., nec Linné] F. K. Stoeckert 1933:195

Heriades maxillosa Linné: Lundblad 1954:57

Chelostoma maxillosa Linné: [*florissomne* auct., Linné 1758] Elfving 1968:43

Chelostoma maxillosum (Linné): Andersson & Danielsson 1980:80

Chelostoma maxillosum: Cederberg 1982:38

Subg. **Foveosmia** Warncke 1991:267

Chelostoma campanularum (Kirby 1802:256 (*Apis*))

Gyrodroma florissomnis (Linné 1761:423): [*campanularum* Nylander 1848:273] Thomson 1872:262

Syn. ref.: Smith 1876:166, Schletterer 1889:631, Dalla Torre & Friese 1895:69, Friese 1895b:207, Dalla Torre 1896:374, Friese 1898:50, Forsius & Nordström 1921:72, Alfken in Jansson 1927:151, Elfving 1968:43.

Gyrodroma florissomnis Linné: Nerén 1892:115

Heriades florissomnis Linné: Aurivillius 1903a:172

Syn. ref.: Alfken in Jansson 1927:151.

Heriades florissomnis Linné: Aurivillius 1903b:44

Heriades florissomnis (Linné 1758:577 ♂): [Linné 1761:423 ♂] Aurivillius 1927:143

Syn. ref.: Richards 1935:176.

Subg. **Gyrodromella** Michener 1997:27

Chelostoma rapunculi (Lepeletier 1841:406 (*Heriades*))

Heriades nigricornis Nylander 1848:269

Syn. ref.: Elfving 1968:43, Vikberg 1986b:82, Janzon & al. 1991:94, Scheuchl 1996:107, Schwarz & al. 1996:116, Söderman & Vikberg 2002:57.

Heriades nigricornis Nylander 1848:269: Nylander 1852b:277

Chelostoma nigricorne (Nylander 1848:269): Smith 1854:220

Heriades nigricornis Nylander 1848:269: Nylander 1856:108

Gyrodroma nigricornis (Nylander 1848:269): [*truncorum* Linné 1761:421] Thomson 1872:260

Gyrodroma nigricornis: [*truncorum* Linné] Thomson 1888:1217

Chelostoma nigricorne Nylander 1848:269: [Nylander 1856:108, Thomson 1872:260] Schletterer 1889:640

Gyrodroma nigricornis Nylander: Nerén 1892:115

Eriades nigricornis (Nylander 1848:269): [Nylander 1856:108, Thomson 1872:260] Dalla Torre 1896:378

Eriades nigricornis (Nylander 1848:269): [Nylander 1856:108, Thomson 1872:260] Friese 1898:40

Heriades nigricornis Nylander: Aurivillius 1903a:172

Heriades nigricornis Nylander: Aurivillius 1903b:44

Heriades nigricornis Nylander: Jansson 1922:21

Chelostoma nigricornis Nylander: J. F. Perkins 1942:197 ♀

Eriades nigricornis Nylander: Tjeder 1954:206

Chelostoma nigricorne Nylander: Erlandsson 1960b:127

Chelostoma nigricorne: Cederberg 1982:38

Eriades fuliginosus Panzer: [*nigricornis* Nylander] Alfken 1912a:13/38

Heriades fuliginosus Panzer: [*nigricornis* Nylander] Alfken 1912b:132

Heriades fuliginosus Panzer: [*nigricornis* Nylander] Alfken 1913:63

Heriades fuliginosus Panzer: [*nigricornis* Nylander] Jansson 1927:151

Eriades fuliginosus Panzer: [*nigricornis* Nylander] F. K. Stoeckert 1933:193

Chelostoma fuliginosum (Panzer): Janzon 1983b:156 ♀

Chelostoma fuliginosum (Panzer): L. A. Nilsson 1983b:799

Osmia fuliginosa (Panzer 1798): [*nigricorne* Nylander 1848] Warncke 1986:57

Chelostoma fuliginosum (Panzer 1798): Janzon & al. 1991:94

Chelostoma fuliginosum: Björck 2000:3

Heriades Spinola 1808:7

Subg. ***Heriades*** (Spinola 1808:7) s. str.

Heriades truncorum (Linné 1758:575 ♀ (*Apis*))

Hoplitis Klug 1807:225

Subg. ***Alcidamea*** (Cresson 1864:385)

NOTE. -Subgeneric reclassification- The subgenera *Acanthosmia* Thomson 1872:233 and *Liosmia* Thomson 1872:233 of the genus *Hoplitis* were used in Janzon & al. (1991:94). Recent systematics of this genus (Griswold & Michener 1998:210) placed *Alcidamea* as a senior subgeneric synonym of both.

Hoplitis claviventris (Thomson 1872:254 (*Osmia*))

LT: SE

Osmia leucomelana (Kirby 1802:260): Nylander 1848:263 ♀

Syn. ref.: Thomson 1872:254, Schmiedeknecht 1885-1886:133, Dalla Torre 1896:390, Yarrow 1970a:66.

Osmia leucomelana (Kirby 1802:260): [Nylander 1848:263 ♂, 1852a:105 ♀] Smith 1851:81

Syn. ref.: Yarrow 1970a:66.

Osmia leucomelana: Nylander 1852a:105 ♂

Osmia leucomelana (Kirby): [Nylander 1852a:105] Nylander 1852b:272
Osmia leucomelana (Kirby 1802:260): [Nylander 1848:263 ♂, 1852a:105 ♀] Smith 1853:134
Osmia leucomelana (Kirby 1802:260): [Nylander 1848:243 ♀(sic,=263 ♂), 1852a:105 ♂(sic,=♀)] Smith 1855:171
Syn. ref.: Yarrow 1970a:66.
Osmia leucomelana Smith 1844:741: [Nylander 1848:263 ♀, 1852a:105 ♂, *claviventris* Thomson 1872:254] Smith 1876:161
Syn. ref.: Yarrow 1970a:66.
Osmia leucomelaena Kirby: [*claviventris* Thomson] Aurivillius 1903a:171
Osmia leucomelaena Kirby: [*claviventris* Thomson] Aurivillius 1903b:43
Osmia leucomelaena Kirby: [*claviventris* Thomson] Alfken 1912a:38
Syn. ref.: Yarrow 1970a:66.
Osmia leucomelaena Kirby: [*claviventris* Thomson] Forsius & Nordström 1921:72
Osmia leucomelaena Kirby: Jansson 1925:144
Osmia leucomelaena (Kirby): [*claviventris* Thomson] Blüthgen 1930:814
Osmia leucomelaena Kirby: [*claviventris* Thomson] F. K. Stoeckert 1933:196
Syn. ref.: Yarrow 1970a:66.
Osmia leucomelaena Kirby: Jansson 1935:84
Osmia leucomelaena (Kirby): Janzon 1983a:173 ♂
Osmia leucomelaena (Kirby): Janzon & Svensson 1984:183 ♀

***Hoplitis leucomelana* (Kirby 1802:260 (*Apis*))**

Osmia parvula Dufour: Aurivillius 1903a:171
Osmia parvula Dufour: Aurivillius 1903b:43
Osmia parvula Dufour: Jansson 1922:21
Osmia parvula (Dufour): Janzon & Svensson 1984:183

Hoplitis mitis* (Nylander 1852b:272 (*Osmia*)) *mitis

LT: ÖI, Go

Osmia tuberculata: Nylander 1852a:105 ♂
Syn. ref.: Dalla Torre & Friese 1895:72, Dalla Torre 1896:402.
Osmia montivaga Morawitz 187?:361: [*mitis* Thomson 1872:252, ?Nylander 1852b:272] Schmiedeknecht 1885-1886:129
Osmia montivaga Morawitz: Dalla Torre & Friese 1895:72
Osmia montivaga Morawitz: [*mitis* Thomson] Schmiedeknecht 1907:126
Acanthosmia montivaga Morawitz: [*mitis* Nylander, Thomson] J. F. Perkins 1942:192 ♂

Subg. ***Monumetha*** (Cresson 1864:387)

NOTE. -Species reclassification- Janzon & al. (1991:94) listed the species *Hoplitis tuberculata* in the subgenus *Cyrtosmia* Michener 1947:292. Griswold & Michener (1998:225) found evidence that this species belongs to the subgenus *Monumetha*.

Hoplitis tuberculata* (Nylander 1848:263 (*Osmia*)) *tuberculata

Hoplosmia (Thomson 1872:233)

NOTE. -Generic reclassification- Janzon & al. (1991:94), following Tkalcù (1974a), placed the species *Anthocopa spinulosa* in the subgenus *Hoplosmia*. According to Michener (2000:457), *Hoplosmia* is better treated as a genus, typified by the species *H. spinulosa*.

Subg. ***Hoplosmia*** Thomson 1872:233 s. str.

***Hoplosmia spinulosa* (Kirby 1802:261 (*Apis*))**

Osmia Panzer 1806:230

Subg. ***Helicosmia*** Thomson 1872:233

NOTE. -Subgeneric reclassification- The subgenus *Chalcosmia* Schmiedeknecht 1885:20 of the genus *Osmia* was used in Janzon & al. (1991:94). According to Griswold & Michener (1998:210), *Chalcosmia* is a junior subgeneric synonym of *Helicosmia*.

Osmia aurulenta Panzer 1799:22

Osmia caerulescens* (Linné 1758:576 ♀ (*Apis*)) *caerulescens

Apis aenea Linné 1761:421 ♂

Syn. ref.: Kirby 1802:264, Nylander 1848:166, Thomson 1872:240, Dalla Torre & Friese 1895:70, Friese 1895b:207, Dalla Torre 1896:388, Alfken 1912a:39, Blüthgen 1930:809, Richards 1935a:175, 1978:138, Elfving 1968:40, Tkalcù 1974:336, Warncke 1986:73, 1988a:20, Janzon & al. 1991:94, Scheuchl 1996:109, Schwarz & al. 1996:122.

Apis aenea: [Linné 1761:421] Linné 1767:955 ♂

Apis aenea Linné 1761:421: Villers 1789:291

Syn. ref.: Dalla Torre 1896:388.
Apis aenea Linné 1761:421; Gmelin 1790:2793
Syn. ref.: Dalla Torre 1896:388.
Anthophora aenea (Linné ♂): [Fabricius, Billberg, *caerulescens* Linné ♀] Zetterstedt 1838:467
Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.
Osmia aenea (Linné 1761:421 ♂): [Linné 1767:955 ♀, *caerulescens* Linné 1761:421 ♀, 1767:955, Nylander 1848:262] Smith 1851:80
Osmia aenea (Linné 1761:421): [Linné 1767:955 ♀, *caerulescens* Linné 1761:421 ♀, 1767:955, Nylander 1848:262, 1852b:271] Smith 1853:135
Osmia aenea (Linné 1761:421): [Linné 1767:955 ♀, *caerulescens* Linné 1761:421 ♀, 1767:995(sic.=955), Nylander 1848:262] Smith 1855:170
Osmia aenea (Linné 1761:421): [Linné 1767:955 ♀, *caerulescens* Linné 1767:955 ♀, Nylander 1848:262, Thomson 1872:240] Smith 1876:153
Syn. ref.: Saunders 1884:208.
Osmia aenea (Linné 1761:421 ♂): [Linné 1767:955 ♂, *caerulescens* Linné 1767:955 ♀, Nylander 1848:262, Thomson 1872:240] Schmiedeknecht 1885-1886:90
Osmia aenea Linné: Aurivillius 1903a:170
Osmia aenea Linné: Aurivillius 1903b:42
Osmia aenea Linné: [*caerulescens* Linné] Schmiedeknecht 1907:122
Apis aenea Linné 1767: Jackson 1913:35
Osmia aenea Linné: Wahlgren 1917:106
Osmia aenea Linné: Klefbeck 1918:344
Osmia aenea Linné: Tullgren & Wahlgren 1920-1922:591
Osmia aenea Linné: Jansson 1922:20
Osmia aenea Linné: [*caerulescens* Linné] Blüthgen 1930:809
Abeille maconne & c. De Geer 1771:751
Syn. ref.: Smith 1851:80, 1853:135, 1855:170.
Apis muraria Retzius 1783:60
Syn. ref.: Warncke 1986:105, Schwarz & al. 1996:122.
Osmia caerulescens Linné var. *b*, *aenea* Linné: Billberg 1820:110

***Osmia leaiana* (Kirby 1802:263 (*Apis*)) *truncatula* (Thomson 1872:239)**

LT: Sk

Osmia hirta (Fourcroy 1785:444): [*leaiana* Nylander 1848:262 ♀] Smith 1851:80
Osmia hirta (Fourcroy 1785:444): [*leaiana* Nylander 1848:262 ♀, *fulviventris* Nylander 1852b:272] Smith 1853:136
Osmia fulviventris Latreille 1809:165: [*lediana*(sic.=*leaiana*)] Nylander 1852a:105
Osmia fulviventris (Panzer 1798:18): [Nylander 1852b:272, *leaiana* Nylander 1848:262 ♀] Smith 1855:168
Osmia fulviventris (Panzer 1798:18): Thomson 1872:238 ♂
Syn. ref.: Blüthgen 1949:85.
Osmia fulviventris (Panzer 1798:18): [Nylander 1852b:272, Thomson 1872:238]: Smith 1876:154
Osmia truncatula Thomson 1872:239 ♀
Syn. ref.: Tkalčú 1975:311, Vikberg 1986b:82, Söderman & Vikberg 2002:57.
Osmia solskyi Morawitz 1870:317: [*truncatula* Thomson 1872:239] Schmiedeknecht 1885-1886:239
Osmia solskyi Morawitz: [*truncatula* Thomson] Dalla Torre & Friese 1895:72
Osmia solskyi Morawitz: [*truncatula* Thomson] Friese 1895b:208
Osmia solskyi Morawitz 1871:317: [*truncatula* Thomson 1872:239] Dalla Torre 1896:411
Osmia solskyi Morawitz: [*truncatula* Thomson] Schmiedeknecht 1907:125
Osmia ventralis Panzer: Alfken 1927:141
Osmia ventralis Panzer: [*leaiana* Kirby] J. F. Perkins 1942:197 ♂
Osmia ventralis (Panzer 1798:20): [*truncatula* Thomson 1872:239] Warncke 1988a:30

***Osmia niveata* (Fabricius 1804:377 (*Anthophora*))**

Osmia fulviventris Latreille: Nylander 1852b:272
Osmia fulviventris (Panzer 1798:18): [Nylander 1852b:272] Thomson 1872:238 ♀
Osmia fulviventris (Panzer 1798:18): [Nylander 1852b:272, Thomson 1872:238] Smith 1876:154
Osmia fulviventris (Panzer 1798:18): [Nylander 1852b:272, Thomson 1872:238] Schmiedeknecht 1885-1886:239
Osmia fulviventris Panzer: Nerén 1892:115
Osmia fulviventris (Panzer 1798:18): [Nylander 1852a:105, 1852b:272, Thomson 1872:238, *leaiana* Nylander 1848:262] Dalla Torre 1896:396
Osmia fulviventris Panzer: Aurivillius 1903a:169
Osmia fulviventris Panzer: Aurivillius 1903b:41
Osmia fulviventris Panzer: Tjeder 1954:206
Osmia fulviventris Panzer: Erlandsson 1960b:128
Osmia fulviventris (Panzer): Wolf 1960:99
Osmia fulviventris (Panzer 1798): Janson & al. 1991:94
Osmia truncatula Thomson 1872:239 ♂
Syn. ref.: Blüthgen 1949:85, Tkalčú 1975:311.
Osmia ventralis Panzer: Kullenberg 1957:1
Osmia ventralis: Tunblad 1968:387
Osmia ventralis (Panzer): Norén 1988:11

Subg. **Melanosmia** Schmiedeknecht 1885:19[885]

NOTE. -Subgeneric reclassification- The subgenera *Chenosmia* Sinha 1958:233 and *Centrosmia* Robertson 1903:165 of the genus *Osmia* were used in Janzon & al. (1991:94). According to Michener (2000:465), *Melanosmia* is a senior subgeneric synonym of both.

Osmia hyperborea Tkalčú 1983:156

LT: T. Lpm.

Osmia parietina Curtis 1828:222: [*hyperborea* Tkalčú 1983:156] Schwarz & al. 1996:126

NOTE. -Species status- The species, described from material of Swedish origin by Tkalčú (1983:156), was desk-revised to *Osmia parietina* by Schwarz & al. (1996:126). A study by Haeseler (1999) supported that *O. hyperborea* is a distinct species, and thus valid as in Janzon & al. (1991:94).

Osmia inermis (Zetterstedt 1838:466 (*Anthophora*)) *inermis*

LT: Go

Anthophora angustula Zetterstedt 1838:466 ♂

Syn. ref.: Tkalčú 1983:153, L. A. Nilsson pers. obs. Zetterstedt Coll. ZML.

Osmia nigriventris Zetterstedt 1838:465: [*inermis* Zetterstedt 1838:466] Nylander 1848:260

Osmia parietina Curtis 1828:222: [*inermis* Zetterstedt 1838:466 ♀] Smith 1851:81

Osmia parietina Curtis 1828:222: [*inermis* Zetterstedt 1838:466 ♀, Nylander 1852b:270] Smith 1853:134

Osmia vulpecula Gerstaecker 1869:135(sic,=335): [*inermis* Nylander 1852b:270, Thomson 1872:243, ?Zetterstedt 1838:466] Schmiedeknecht 1885-1886:86

Osmia vulpecula Gerstaecker: [*inermis* Nylander, Thomson] Friese 1891:262

Osmia maritima Friese 1885:85

Osmia xanthomelana (Kirby 1802:246): Thomson 1872:247

Syn. ref.: Friese 1891:262, Dalla Torre & Friese 1895:71, Dalla Torre 1896:401, Ducke 1900:260, Aurivillius 1907a:126, Friese 1911c:122, Tkalčú 1983:152.

Osmia xanthomelana Thomson 1872:247: Smith 1876:155

Osmia xanthomelana (Kirby): Warncke 1988:108

Osmia xanthomelana (Kirby): Janzon & al. 1991:97

Osmia xanthomelana: Gärdenfors 2000:184

Osmia fuciformis Latreille 1811:579: [*xanthomelana* Thomson 1872:247 ♀] Schmiedeknecht 1885-1886:76

Osmia pilicornis Smith 1846:1567: [*xanthomelana* Thomson 1872:247 ♂] Schmiedeknecht 1885-1886:82

[**Osmia xanthomelana** (Kirby 1802:246)]

NOTE. -Species exclusion- Nylander (1852b:270) reported the taxon from Sweden, Scania. Several authors (viz. Thomson 1872:244, Dalla Torre & Friese 1895:72, Dalla Torre 1896:403) desk-revised Nylander's *O. xanthomelana* to *Osmia nigriventris*. Thomson (1872:247) himself, however, reported *O. xanthomelana* from Torekov and Lomma in W Scania. As stated by many (Friese 1891:262, Dalla Torre & Friese 1895:71, Dalla Torre 1896:401, Ducke 1900:260, Aurivillius 1907a:126, Friese 1911:122, Tkalčú 1983:152), Thomson's bee was not identical to Kirby's *O. xanthomelana* but to a new species later described as *Osmia maritima* by Friese (1885:85). As a long-lasting consequence of Thomson's misidentification, *O. xanthomelana* was also recently mentioned to occur in Sweden (Warncke 1988:108, Janzon & al. 1991:97, Gärdenfors 2000:184).

Osmia nigriventris (Zetterstedt 1838:465 ♀ (*Anthophora*))

Osmia xanthomelana (Kirby 1802:246): [*nigriventris* Zetterstedt 1838:465 ♀] Smith 1851:80

Osmia xanthomelana (Kirby) Smith: Nylander 1852b:270

Syn. ref.: Thomson 1872:244, Friese 1891:262, Dalla Torre & Friese 1895:72, Dalla Torre 1896:403.

Osmia xanthomelana (Kirby 1802:246): [Nylander 1852b:270, *nigriventris* Zetterstedt 1838:465 ♀] Smith 1853:135

Osmia xanthomelana (Kirby 1802:246): [Nylander 1852b:270, *nigriventris* Zetterstedt 1838:465 ♀] Smith 1855:165

Osmia xanthomelana (Kirby 1802:246): [Nylander 1852b:270, *nigriventris* Zetterstedt 1838:465] Smith 1876:155

Osmia fuciformis Latreille 1811:579: [*nigriventris* Zetterstedt] Nylander 1852a:104

Osmia inermis (Zetterstedt 1838:465) var. *minor* Nylander 1848:260

Osmia corticalis (Gyllenhal in litt.) Gerstaecker 1869:331 ♀

Syn. ref.: Thomson 1872:244, Friese 1891:262, Dalla Torre & Friese 1895:72, Schmiedeknecht 1907:123, Friese 1911c:123, Blüthgen 1930:810, Scheuchl 1996:110.

Osmia corticalis (Gyllenhal in litt.) Gerstaecker: [*nigriventris* Thomson] Friese 1885:87

Osmia corticalis Gerstaecker 1869:331: [Gyllenhal in litt., *nigriventris* Zetterstedt 1838:465, Thomson 1872:244, *xanthomelana* Nylander 1852b:270] Schmiedeknecht 1885-1886:79

Osmia corticalis Gerstaecker: [*nigriventris* Thomson, *xanthomelana* Nylander] Friese 1891:262

Osmia maritima n. sp.: [?*nigriventris* Zetterstedt 1838:465] Friese 1885:87

Osmia parietina Curtis 1828:222

Anthophora angustula Zetterstedt 1838:466 ♀

Syn. ref.: Alfken 1912a:40, 1912b:133, 1924b:34, Jansson 1927:151, D. Gaunitz 1929:198, Blüthgen 1930:809, F. K. Stoeckhert 1933:208, Forsius 1935:14, Elfving 1968:40, Tkalčú 1983:156, Vikberg 1986b:82, Zanden 1988:126, Janzon & al. 1991:94, Scheuchl 1996:109, Schwarz & al. 1996:125, Söderman & Vikberg 2002:57, L. A. Nilsson pers. obs. Zetterstedt Coll. ZML.

Osmia angustula: Nylander 1852a:104

Osmia angustula Zetterstedt: Nylander 1852b:271

Osmia angustula Zetterstedt 1838:466: [Nylander 1852b:271] Smith 1853:138

Osmia angustula Zetterstedt 1838:466: [Nylander 1852b:271]: Thomson 1872:241
Osmia angustula Zetterstedt 1838:466: [Nylander 1852a:104, 1852b:271, Thomson 1872:241] Schmiedeknecht 1885-1886:86
Osmia angustula Zetterstedt 1838:466: [Nylander 1852a:104, 1852b:271, Thomson 1872:241] Dalla Torre 1896:384
Osmia angustula (Zetterstedt 1838:466): Friese 1902:482
Osmia angustula Zetterstedt: Aurivillius 1903a:170
Osmia angustula Zetterstedt: Aurivillius 1903b:42
Osmia angustula Zetterstedt 1838:466: Sparre Schneider 1909:120
Osmia angustula Zetterstedt: Jansson 1922:20
Osmia angustula Zetterstedt: Lundblad 1924:25
Osmia angustula Zetterstedt: [*parietina* Curtis] J. F. Perkins 1942:197 ♂

***Osmia pilicornis* Smith 1846:1567**

***Osmia svenssoni* Tkalčú 1983:154**

LT: T. Lpm.

Osmia uncinata Gerstaecker 1869:336: [*svenssoni* Tkalčú 1983:154] Schwarz & al. 1996:128
Osmia uncinata Gerstaecker 1869: [*svenssoni* Tkalčú 1983] Söderman & Vikberg 2002:57

NOTE. -Species status- The species, described from material of Swedish origin by Tkalčú (1983:154), was desk-revised to *Osmia uncinata* by Schwarz & al. (1996:128). Until discontinuity test has indicated conspecificity, the species *O. svenssoni* should be accepted valid as in Janzon & al. (1991:94).

***Osmia uncinata* Gerstaecker 1869:336**

Anthophora inermis Zetterstedt 1838:466 ♀ *partim*

Syn. ref.: Tkalčú 1983:154, L. A. Nilsson pers. obs. Zetterstedt Coll. ZML.

Osmia laticeps Thomson 1872:242 ♀

Syn. ref.: Schmiedeknecht 1885-1886:84, Friese 1891:262, Dalla Torre & Friese 1895:72, Dalla Torre 1896:414, Duce 1900:257, Schmiedeknecht 1907:123, Friese 1911c:121, Tkalčú 1983:154, Vikberg 1986b:82, Janzon & al. 1991:94, Schwarz & al. 1996:128.

Subg. ***Neosmia* Tkalčú 1974b:333**

***Osmia bicolor* (Schrank 1781:400 (*Apis*))**

Subg. ***Osmia* (Panzer 1806:230) s. str.**

Osmia rufa* (Linné 1758:575 ♂ (*Apis*)) *rufa

Apis n. 7 Linné 1742:124

Syn. ref.: Linné 1761:420.

Apis n. 1008 Linné 1746:303 ♀

Syn. ref.: Linné 1758:575, 1761:420, Dalla Torre 1896:407.

Apis n. 1009 Linné 1746:303 ♂

Syn. ref.: Linné 1758:575, 1761:420, Dalla Torre 1896:407.

Apis bicornis Linné 1758:575 ♀: [n. 1008 Linné 1746:303]

Syn. ref.: Kirby 1802:273, Nylander 1852b:269, Dalla Torre & Friese 1895:72, Friese 1895b:208, Dalla Torre 1896:407, Aurivillius 1903a:169, 1903b:41, Friese 1911c:126, Alfken 1912a:41, Blüthgen 1930:808, Richards 1935a:175, 1978:138, Tkalčú 1974:340, Day 1979:51, Warncke 1986:92, Janzon & al. 1991:94, Scheuchl 1996:109, Schwarz & al. 1996:126.

Apis bicornis: [n. 1008 Linné 1746:303] Linné 1761:420 ♀

Syn. ref.: Smith 1851:78, 1853:133, 1855:162.

Apis bicornis: [Linné 1761:420] Linné 1767:954 ♀

Syn. ref.: Smith 1853:133, 1855:162, 1876:152.

Apis bicornis: Linné 1771:13

Apis bicornis Linné 1761:420: Villers 1789:288

Syn. ref.: Dalla Torre 1896:407.

Anthophora bicornis: Fallén 1813:33

Osmia bicornis Linné: Billberg 1820:110

Osmia bicornis Linné var. *b.*, *rufa* Linné: Billberg 1820:110

Anthophora bicornis (Linné 1761:420): [*rufa* Linné 1761:420] Zetterstedt 1838:466

Syn. ref.: Smith 1851:78, 1853:133, 1855:162, 1876:152, Dalla Torre 1896:407, Friese 1902:483, L. A. Nilsson det. ex. in Zetterstedt Coll. ZML.

Osmia bicornis (Linné 1761:420 ♀): [Zetterstedt 1838:466, *rufa* Linné 1761:420 ♂] Nylander 1848:259

Syn. ref.: Smith 1851:78, 1853:133, 1855:162, 1876:152, Dalla Torre 1896:407.

Osmia bicornis: Thomson 1862:307

Osmia bicornis (Linné 1761:420): [Nylander 1848:259, *rufa* Linné 1761:420] Thomson 1872:235

Syn. ref.: Smith 1876:152, Dalla Torre 1896:407.

Osmia bicornis (Linné 1761:420 ♀): [Nylander 1848:259, Thomson 1872:235, *rufa* Linné 1761:420 ♂] Schmiedeknecht 1885-1886:65

Osmia bicornis Linné: Lampa 1889:156

Osmia bicornis Linné: [*rufa* Linné] Schmiedeknecht 1907:121

Apis bicornis Linné 1767: Jackson 1913:35

Osmia bicornis Linné: Tullgren & Wahlgren 1920-1922:591

Osmia rufa Linné var. *borealis* Ducke: Alfken 1927:141

Syn. ref.: D. Gaunitz 1935:88.

Osmia rufa var. *borealis* Friese: D. Gaunitz 1946:158

NOTE. -Species synonymy- As pointed out by Day (1979:71) and Westrich & Dathe (1997:27), *Osmia bicornis* is the formally correct name for the bee described from material of Swedish origin under the name *Apis rufa* by Linné (1758:575), subsequently *Osmia rufa* of many authors. The unuse of the epithet *bicornis* since 1950 may be a decisive fact for maintained use of the name *rufa*, however.

***Osmia rufa* (Linné 1758 (*Apis*)) *cornigera* (Rossi 1790:108)**

Anthophora fronticornis Fabricius: Zetterstedt 1838:467

Osmia fronticornis Latreille: [*rufa* Nylander 1848:260 *partim*] Nylander 1852b:269

Osmia fronticornis Panzer 1799:20: [Nylander 1852b:269] Smith 1853:137

Syn. ref.: Dalla Torre 1896:407.

Osmia bicornis (Linné 1761:420): [*fronticornis* Nylander 1852b:269] Thomson 1872:235

Osmia bicornis (Linné 1761:420 ♀): [*fronticornis* Nylander 1852b:269] Schmiedeknecht 1885-1886:65

Anthidiini

***Anthidium* Fabricius 1804:364**

Subg. ***Anthidium*** (Fabricius 1804:364) s. str.

Anthidium manicatum* (Linné 1758:577 ♂ (*Apis*)) *manicatum

Anthidium manicatum Linné var. *b* Fabricius: Billberg 1820:110

***Anthidium punctatum* Latreille 1809:43**

Anthophora globosa Fabricius: Zetterstedt 1838:467

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Anthidium minus Nylander 1848:266 [*Osmia globosa* Zetterstedt in Dahlbom pers. comm.]

Syn. ref.: Thomson 1872:219, Dalla Torre & Friese 1895:76, Friese 1895b:209, Dalla Torre 1896:468, Friese 1898:223, 1911c:360, Popov 1948:90, Tkalcù 1974:325, Warncke 1980b:190, Vikberg 1986b:81, Janzon & al. 1991:94, Scheuchl 1996:107, Schwarz & al. 1996:98, Söderman & Vikberg 2002:56.

Anthidium minus Nylander 1848:266: Nylander 1852b:284

Anthidium punctatum Latreille var. *bequaerti* Alfken: Alfken 1926:200

Syn. ref.: Alfken 1927:141, D. Gaunitz 1935:90, Popov 1948:90.

Anthidium punctatum Latreille var. *suecicum* Alfken 1927:141

Syn. ref.: D. Gaunitz 1935:90, Popov 1948:90, Erlandsson 1960b:127, Warncke 1980b:190, Schwarz et al. 1996:98.

Anthidium punctatum Latreille var. *suecicum* Alfken: D. Gaunitz 1935:90

Syn. ref.: Erlandsson 1960b:127.

Anthidium punctatum Latreille f. *minus* Nylander: Erlandsson 1960b:127

***Stelis* Panzer 1806:246**

Subg. ***Stelis*** (Panzer 1806:246) s. str.

***Stelis breviscula* (Nylander 1848:272 (*Heriades*))**

LT: Sk

Stelis minuta Lepeletier 1825:481: [*breviuscula* Nylander 1852a:106 ♀] Smith 1851:83

Stelis pusilla (Spinola): [*breviuscula* Nylander 1852a:106] Thomson 1872:267

Syn. ref.: Friese 1895a:37, Dalla Torre 1896:476.

Stelis pusilla Spinola: Nerén 1892:101

***Stelis ornata* (Klug 1807:55 (*Gyrodroma*))**

Stelis octomaculata Smith 1845:1155: [*ornata* Nylander 1852a:106] Smith 1851:83

Stelis 8-maculata Smith: Nylander 1852b:284

Stelis 8-maculata Smith 1845:1155: [*ornata* Nylander 1852a:106] Smith 1854:275

Stelis octomaculata Smith 1845:1155: [*ornata* Nylander 1852a:106 ♀] Smith 1855:153

Stelis 8-maculata Smith: [*ornata* Nylander 1852a:106] Thomson 1872:268

Syn. ref.: Friese 1895a:42, Dalla Torre 1896:478.

Stelis octomaculata Smith 1845:1155: [*ornata* Nylander 1852a:106, Thomson 1872:268] Smith 1876:140

Stelis octomaculata Smith: Lampa 1889:156

Stelis phaeoptera* (Kirby 1802:232 (*Apis*)) *phaeoptera

Stelis punctulatissima* (Kirby 1802:231 (*Apis*)) *punctulatissima

Stelis aterrima (Panzer 1798:15): Nylander 1848:275 ♀
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275] Smith 1851:82
Stelis aterrima Latreille: Nylander 1852b:278
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275] Smith 1854:274
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275] Smith 1855:151
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275] Thomson 1872:265
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275, Thomson 1872:265] Smith 1876:138
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275, Thomson 1872:265] Friese 1895a:35
Stelis aterrima (Panzer 1798:15): [Nylander 1848:275, Thomson 1872:265] Dalla Torre 1896:475
Stelis aterrima Panzer: Aurivillius 1903a:177
Stelis aterrima Panzer: Aurivillius 1903b:49

***Trachusa* Panzer 1805:Pl. 14-15**

Subg. ***Trachusa*** (Panzer 1805:Pl. 14-15) s. str.

***Trachusa byssina* (Panzer 1798:21 (*Apis*))**

Apis cunicularia: Bjerkander 1790:269
Anthophora leporina Fabricius: Zetterstedt 1838:467
Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.
Osmia serratulae (Panzer 1805:15): Nylander 1848:264
Osmia serratulae: [*byssina* Fabricius 1804:378] Nylander 1852a:106
Osmia serratulae (Panzer): Nylander 1852b:284
Trachusa serratulae: Boheman 1853:187
Osmia serratulae (Panzer 1805:15): [Nylander 1852b:273] Smith 1853:138
Diphysis serratulae (Panzer 1805:15): [Nylander 1852b:273] Thomson 1872:230
Trachusa serratulae (Panzer 1805:15): [Nylander 1848:264, 1852b:273, Boheman 1853:187, Thomson 1872:230] Dalla Torre 1896:454
Trachusa serratulae (Panzer 1805:15): [Nylander 1848:273, 1852b:284, Thomson 1872:230] Friese 1898:85
Trachusa serratulae Panzer: Aurivillius 1903a:165
Trachusa serratulae Panzer: Aurivillius 1903b:37
Trachusa serratulae Panzer: Adlerz 1904:121
Trachusa serratulae Panzer: Adlerz 1909:28
Trachusa serratulae (Panzer): Nordenström 1910:24
Trachusa serratula Panzer: Nordström 1917:322
Trachusa serratula Panzer: Tullgren & Wahlgren 1920-1922:591
Trachusa serratulae Panzer: Jansson 1922:20
Trachusa serratulae Panzer: J. F. Perkins 1942:192 ♂

Dioxyini

***Aglaopis* Cameron 1901:262**

NOTE. -Generic reclassification- The bee species generally in Sweden known under the name *Dioxys tridentata* has been shown to belong to the genus *Aglaopis* (Michener 2000:523).

***Aglaopis tridentata* (Nylander 1848:254 (*Coelioxys*))**

Megachilini

***Coelioxys* Latreille 1809:166**

Subg. ***Boreocoelioxys*** Mitchell 1973:37

NOTE. -Subgeneric reclassification- Janzon & al. (1991:95) listed seven Swedish species of *Coelioxys* in the subgenus *Schizocoelioxys* Mitchell 1973:50. It has been suggested, although on the basis of uncommunicated evidence (T. Griswold in Michener 2000:530), that *Schizocoelioxys* is a junior synonym of the subgenus *Boreocoelioxys*.

***Coelioxys conoidea* (Illiger 1806:105 (*Anthophora*))**

Coelioxys temporalis Nylander 1848:253 ♀
Syn. ref.: Gerstaecker 1869:169, Dalla Torre & Friese 1894a:35, Friese 1895a:56, Dalla Torre 1896:484, Warncke 1992b:46, Schwarz & al. 1996:112, Söderman & Vikberg 2002:57.
Coelioxys temporalis Nylander: Thomson 1869:41
Syn. ref.: Dalla Torre 1896:484.

Coelioxys vectis Curtis 1831:146: [*temporalis* Nylander 1848:253] Smith 1851:90
Coelioxys vectis Curtis: [*temporalis* Nylander 1848:253 ♀] Nylander 1852b:279 ♂
Syn. ref.: Friese 1895a:56, Dalla Torre 1896:484.
Coelioxys vectis Curtis 1831:146: [*temporalis* Nylander 1848:253] Smith 1854:259
Coelioxys vectis Curtis 1831:Pl. 349: [*temporalis* Nylander 1848:253] Smith 1855:150
Coelioxys vectis Curtis 1831:Pl. 349: [*temporalis* Nylander 1848:253, Thomson 1869:41] Thomson 1872:275
Syn. ref.: Friese 1895a:56, Dalla Torre 1896:484.
Coelioxys vectis Curtis 1831:146: [Thomson 1872:275, *temporalis* Nylander 1848:253] Smith 1876:146
Coelioxys vectis (Curtis): Nordenström 1900:207
Coelioxys vectis Curtis 1831: [*temporalis* Nylander 1848] Vikberg 1986b:82

***Coelioxys elongata* Lepeletier 1841:522**

?*Apis parietina* Linné 1751:222
Coelioxys simplex Nylander 1852b:279 ♀
Syn. ref.: Gerstaecker 1869:170, Smith 1876:142, Saunders 1884:195, Dalla Torre & Friese 1894:35, Friese 1895a:63, Dalla Torre 1896:485, Forsius & Nordström 1921:73, Vikberg 1986b:82, Janzon & al. 1991:95, Warncke 1992b:41, Scheuchl 1996:108, Schwarz & al. 1996:113, Söderman & Vikberg 2002:57.
Coelioxys simplex Nylander 1852b:279: Smith 1854:259
Coelioxys simplex Nylander 1852b:279 ♀: [?*mandibularis* Nylander 1848:252 var. ♀] Smith 1855:147
Syn. ref.: Saunders 1884:195.
Coelioxys simplex Nylander: Thomson 1869:42
Syn. ref.: Smith 1876:142, Dalla Torre 1896:485.
Coelioxys simplex Nylander 1852b:279: [Thomson 1869:42] Thomson 1872:278
Syn. ref.: Smith 1876:142, Friese 1895a:63.
?*Coelioxys simplex* Nylander: [*Apis parietina* Linné 1751:222] Bengtsson 1920a:101
?*Coelioxys mandibularis* Nylander 1848:253 ♀ var.
Syn. ref.: Smith 1876:142.

***Coelioxys inermis* (Kirby 1802:229 (*Apis*))**

Coelioxys lanceolata Nylander: Thomson 1869:43
Coelioxys acuminata Nylander 1852b:279: [*lanceolata* Thomson 1869:43] Thomson 1872:278
Syn. ref.: Richards 1978:138, Vikberg 1986b:82, Warncke 1986:58, 1992b:40, Söderman & Vikberg 2002:57.
Coelioxys acuminata Nylander 1852b:279: [Thomson 1872:278] Friese 1895a:65
Coelioxys acuminata Nylander 1852b:279: [Thomson 1872:278] Dalla Torre 1896:481
Coelioxys acuminata Nylander: Aurivillius 1903a:175
Coelioxys acuminata Nylander: Aurivillius 1903b:47
Coelioxys acuminata: Cederberg 1982:37
Coelioxys elongata var. *acuminata* Nylander: Dalla Torre & Friese 1894:35

***Coelioxys lanceolata* Nylander 1852b:279**

LT: Sm Vg

***Coelioxys mandibularis* Nylander 1848:252**

***Coelioxys obtusispina* Thomson 1872:277**

LT: Go

Coelioxys elongata Lepeletier: [*obtusispina* Thomson] Forsius & Nordström 1921:73
Coelioxys elongata Lepeletier: [*obtusispina* auct.] Forsius 1935:15
NOTE. -Species status- This taxon was described from material of Swedish origin by Thomson (1872:277). Its validity has been questioned. Forsius & Nordström (1921:76) expressed the opinion that *C. obtusispina* was based on somewhat spur-abnormal specimens of *C. elongata*, and thus a junior synonym as subsequently listed by Forsius (1935:15). The revision of the Swedish *Coelioxys* by Erlandsson (1955) removed the authoritative international doubts about *C. obtusispina* being a true species (e.g. Blüthgen 1961:37). The species displays a scattered geographic distribution in SE Sweden (see Erlandsson 1955:187), this being the total world distribution as indicated by the known records (see Warncke 1992b:67 who, in total, mapped the records listed in Erlandsson's paper). Co-occurrence and co-foraging on flowers, plus the large size of the bee, have indicated that the host is *Megachile lagopoda* (L. A. Nilsson pers obs. 1982). Since *M. lagopoda* has gone extinct on almost all of its many former sites in mainland Sweden (1 ♀ seen in Sk. Åhus only 2001, K.-J. Hedqvist pers. comm.), *C. obtusispina* has not been recorded there for long and probably survives only in Gotland. *Coelioxys obtusispina* constitutes the summit of conservation priority among Swedish wild bees.

***Coelioxys rufescens* Lepeletier & Serville 1825:109**

Coelioxys hebescens Nylander 1848:251
Syn. ref.: Smith 1854:259, 1855:149, 1876:145, Gerstaecker 1869:169, Thomson 1872:276, Dalla Torre & Friese 1894:36, Friese 1895a:54, 1895b:212, Dalla Torre 1896:485, Vikberg 1986b:82, Janzon & al. 1991:95, Warncke 1992b:42, Scheuchl 1996:108, Schwarz & al. 1996:114, Söderman & Vikberg 2002:57.
Coelioxys hebescens Nylander 1848:251: Nylander 1852b:279
Syn. ref.: Smith 1876:145.
Coelioxys hebescens Nylander: Thomson 1869:41
Syn. ref.: Thomson 1872:276, Friese 1895a:54.
Coelioxys rufescens Lepeletier 1825:109 var. *hebescens* Nylander 1848:251: Dalla Torre 1896:491

Coelioxys rufescens Lapeletier var. *hebescens* Nylander: Alfken 1912b:136
Coelioxys rufescens Lapeletier & Serville var. *hebescens* Nylander: Alfken 1913:76
Coelioxys rufescens Lapeletier & Serville var. *hebescens* Nylander: Forsius & Nordström 1921:73

Subg. **Coelioxys** (Latreille 1809:166) s. str.

Coelioxys quadridentata (Linné 1758:577 ♂ (*Apis*))

LT: SE

Apis n. 10 Linné 1742:124 ♀

Apis n. 1006 Linné 1746:302 ♀

Syn. ref.: Linné 1761:423, Dalla Torre 1896:489.

Apis conica Linné 1758:578 ♀: [n. 1006 Linné 1746:302]

Syn. ref.: Kirby 1802:227, Illiger 1806:105, Nylander 1848:166, Dalla Torre & Friese 1894:36, Friese 1895a:61, Friese 1895b:212, Dalla Torre 1896:489, Schmiedeknecht 1907:166, Alfken 1912a:45, Forsius & Nordström 1921:73, Schmiedeknecht 1930:838, Richards 1935a:175, Day 1979:60, Vikberg 1986b:22, Janzon & al. 1991:95, Warncke 1992b:45, Scheuchl 1996:107, Schwarz & al. 1996:114, Söderman & Vikberg 2002:57.

Apis conica: [n. 1006 Linné 1746:302] Linné 1761:423 ♀

Syn. ref.: Smith 1851:90, 1855:146, Dalla Torre 1896:489.

Apis conica: [Linné 1761:423] Linné 1767:958 ♀

Syn. ref.: Smith 1855:146.

Apis conica: Linné 1771:13

Apis conica Linné 1761:423: Villers 1789:297

Apis conica Linné 1761:423: Gmelin 1790:2779

Coelioxys conica Linné: Fallén 1813:33

Coelioxys conica Linné: Billberg 1820:111

Coelioxys conica (Linné 1761:423): Zetterstedt 1838:468

Syn. ref.: Smith 1851:90, 1854:258, 1855:146, Dalla Torre 1896:489, Friese 1902:482.

Coelioxys conica (Linné): [*acuta* Nylander 1848:250] Nylander 1852b:278

Syn. ref.: Smith 1851:90, 1854:258, 1855:146, Dalla Torre 1896:489.

Coelioxys conica: Thomson 1862:306

Coelioxys conica (Linné 1746(sic.=1761):423 ♀): [*quadridentata* Linné 1746(sic.=1761):423 ♂, *acuta* Nylander 1848:250 ♀] Gerstaecker 1869:170

Syn. ref.: Dalla Torre 1896:489.

Coelioxys conica Linné: [*acuta* Nylander] Thomson 1869:42

Coelioxys conica (Linné 1761:423 ♀): [*4-dentata* Linné 1761:423 ♂, *acuta* Nylander 1848:250, Nylander 1852b:278, Gerstaecker 1869:170, Thomson 1869:42] Thomson 1872:272

Syn. ref.: Smith 1876:141, Friese 1895a:61, Dalla Torre 1896:489.

Apis conica Linné 1767: Jackson 1913:35

Coelioxys acuta Nylander 1848:250 ♀

Syn. ref.: Nylander 1852b:278, Smith 1854:258, 1855:146, 1876:141, Dalla Torre & Friese 1894:36, Friese 1895a:61, 1895b:212, Dalla Torre 1896:489, Vikberg 1986b:82, Janzon & al. 1991:95, Warncke 1992b:45, Scheuchl 1996:107, Schwarz & al. 1996:114, Söderman & Vikberg 2002:57.

Coelioxys umbrina Smith 1845:1153: [*acuta* Nylander 1848:250] Smith 1851:90

NOTE. -Species synonymy- As drawn attention to by Day (1979:60) and emphasized by Westrich & Dathe (1997:19), *Coelioxys conica* is the formally correct name for the bee described from material of Swedish origin under the name *Apis quadridentata* by Linné (1758:577), subsequently *Coelioxys quadridentata* of many authors. However, the complete unuse of the epithet *conica* since 1950 favours maintained use of the name *quadridentata*.

Megachile Latreille 1802:434

Subg. **Eumegachile** (Friese 1898:198)

[*Megachile bombycina* Radozskowski 1874:139]

NOTE. -Species addition?- Erlandsson (1949a:176) reported this taxon to occur in Sweden (1 ♂ Småland, Höreda, 4 VI 1947). The reported identity has never been denied. However, the species was not listed in Janzon & al. (1990) with Erlandsson as one of the coauthors. This suggests misidentification. Search for the specimen in NRM has been negative (L. A. Nilsson pers. obs. & L.-Å. Janzon pers. comm. 2002).

Subg. **Eutricharaea** Thomson 1872:228

Megachile leachella Curtis 1828:219

Anthidium rotundatum Fabricius: Billberg 1820:110

Megachile rotundata Fabricius: Tjeder 1954:206

Megachile leachella (Kirby): Nylander 1852b:276 ♀

Megachile argentata (Fabricius 1793:336): [*leachella* Nylander 1852b:276] Smith 1853:150

Megachile argentata (Fabricius 1793:336 ♀): [*leachella* Nylander 1848:276] Smith 1855:179

Megachile argentata (Fabricius 1793:336): [*leachella* Nylander 1852b:276] Thomson 1872:228

Syn. ref.: Hurd 1967:8.

Megachile argentata (Fabricius 1793:336): [Thomson 1872:228] Smith 1876:176

Megachile argentata (Fabricius): [*leachella* Nylander] Dalla Torre & Friese 1895:73
Megachile argentata (Fabricius): [*leachella* Nylander] Friese 1895b:209
Megachile argentata (Fabricius 1793:336): [Thomson 1872:228, *leachella* Nylander 1852b:276] Dalla Torre 1896:420
Megachile argentata (Fabricius 1793:336): [Thomson 1872:228, *leachella* Nylander 1852b:276] Friese 1899:53
Megachile argentata Fabricius: Aurivillius 1903a:165
Megachile argentata Fabricius: Aurivillius 1903b:37
Megachile argentata Fabricius: Aurivillius 1907a:125
Megachile argentata Fabricius: Aurivillius 1909:88
Megachile argentata: Adlerz 1912:171
Megachile argentata Fabricius: Ringdahl 1921:26
Megachile argentata Fabricius: Jansson 1922:13
Megachile argentata Fabricius: Jansson 1929:69
Megachile argentata Fabricius: J. F. Perkins 1942:197 ♀
Megachile argentata Fabricius: Erlandsson 1960a:25
Megachile argentata Fabricius: Erlandsson 1960b:128
Megachile argentata: Lyneborg & Coulianos 1976:35

NOTE. -Species-presence uncertainty- The male genitalia of the Swedish material that is generally reputed to belong to this species (e.g. Erlandsson 1960a as *M. argentata*) conform to the illustration of those of *M. pilidens* in Scheuchl (1996:68) (B. Cederberg pers. obs.). The male genitalia of *M. leachella* and *M. pilidens* are almost identical (M. Schwarz in litt. 2003). It is presently unclear which taxon that exists in Sweden.

Subg. ***Megachile*** (Latreille 1802:434) s. str.

Megachile alpicola Alfken 1924:357 ***loekeniana*** Tkalčú 1977b:234

Megachile centuncularis (Linné 1758:575 ♀ (*Apis*)) ***centuncularis***

Apis n. 1010 Linné 1746:303 ♀

Syn. ref.: Linné 1758:575, 1761:420, Dalla Torre 1896:423.

Anthophora fulviventris (Panzer 1798:18): Zetterstedt 1838:465 ♀ *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Megachile fulviventris (Panzer 1898:18): [Zetterstedt 1838:465] Dalla Torre 1896:396

Megachile fulviventris Panzer: [Zetterstedt 1838:465] Friese 1902:483

Megachile lapponica Thomson 1872:227

LT: Lpl

Megachile ligniseca (Kirby 1802:243 (*Apis*)) ***borealis*** Niemelä 1936:95

Apis rupestris Linné Coll.

Syn. ref.: Day 1979:59.

Megachile pyrenaea Pérez 1890:192 ***elfvingi*** Tkalčú 1977b:234

Megachile versicolor Smith 1844:697

Megachile versicolor Smith var. *hiberniae* Perkins: Jansson 1927:151

Megachile versicolor Smith var. *hibernica* Perkins: Jansson 1935:84

Megachile versicolor Smith var. *hibernica* Perkins: Erlandsson 1960b:128

Subg. ***Xanthosarus*** Robertson 1903:168/169/172

NOTE. -Subgeneric reclassification- Janzon & al. (1991:95) used the subgenus *Macromegachile* Noskiewicz 1948:48 of the genus *Megachile*. Michener (2000:567) found reason that *Macromegachile* is better placed as a junior synonym of the subgenus *Xanthosarus*.

Megachile analis Nylander 1852b:275

Anthophora fulviventris (Panzer 1798:18): Zetterstedt 1838:465 ♀ *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Megachile fulviventris (Panzer 1898:18): [Zetterstedt 1838:465] Dalla Torre 1896:396

Megachile fulviventris Panzer: [Zetterstedt 1838:465] Friese 1902:483

Anthophora centuncularis (Linné 1761:420): Zetterstedt 1838:465 ♀ *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Megachile apicalis C. H. Boheman in litt.: Nylander 1848:257 ♀

Syn. ref.: Nylander 1852b:275, Smith 1853:153, Thomson 1872:225, Dalla Torre & Friese 1895:73, Dalla Torre 1896:419, Friese 1899:113, 1911c:191, Tkalčú 1974:343.

Megachile analis Nylander var. *künnemanni* Alfken 1897:161

Syn. ref.: Friese 1911c:191, Schwarz & al. 1996:105.

Megachile analis Nylander var. *künnemanni* Alfken: Erlandsson 1960b:128

Megachile analis Nylander var. *obscura* Alfken 1897:162

Syn. ref.: Friese 1911c:191, Schwarz & al. 1996:105.

Megachile analis Nylander var. *obscura* Alfken: Alfken 1924b:39

Megachile analis Nylander var. *obscura* Alfken 1897:161; Alfken 1926:200
Megachile analis Nylander var. *obscura* Alfken: Alfken 1927:141
Megachile analis Nylander ssp. *analis* Nylander: Alfken 1924b:39
Megachile analis Nylander ssp. *analis* Nylander: Alfken 1936:58

***Megachile circumcincta* (Kirby 1802:246 (*Apis*))**

Anthophora fulviventris (Panzer 1798:18): Zetterstedt 1838:465 ♂ *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Megachile fulviventris (Panzer 1898:18): [Zetterstedt 1838:465] Dalla Torre 1896:396

Megachile fulviventris Panzer: [Zetterstedt 1838:465] Friese 1902:483

Megachile circumcincta Kirby *fennica* Niemelä: Tjeder 1954:205

Megachile circumcincta Kirby *fennica* Niemelä: Erlandsson 1960b:128

***Megachile lagopoda* (Linné 1761:422 ♂ (*Apis*))**

LT: SE

Apis lagopus Linné Coll.

Syn. ref.: Kirby 1802:236, Richards 1935b:175, Day 1979:65.

Apis lagopus Linné 1761:422: Gmelin 1790:2776

Syn. ref.: Dalla Torre & Friese 1895:74, Friese 1895b:209, 1899:118, 1911c:193, Tkalců 1974:342, Schwarz & al. 1996:107.

Apis centuncularis: Linné Coll.

Syn. ref.: Kirby 1802:240.

***Megachile maackii* Radoszkowski 1874:135**

NOTE. -Species reconfirmation- The spelling (varying in the past) of the species epithet is with "ii", as written in the original description (Radoszkowski 1874:135). That this species is listed for Sweden is due to a single specimen (1 ♂: Småland, Korsberga 23 VIII, leg. D. Gaunitz) determined and reported by J. D. Alfken (1936) who unfortunately, in an act of personal gratification, pirated the unique specimen from Sweden for his private collection. The material of D. Gaunitz is the property of ZML. Alfken's collection is presently in Berlin, Germany. The specimen was last studied and seen by van der Zanden (1988:57). A recent request to the Berlin museum was negative, however: the Swedish male could not be re-found (F. Koch pers. comm. 2001 and 2002) and thus not yet decisively studied.

***Megachile nigriventris* Schenck 1870:324 *curvicrus* (Thomson 1872: 223)**

LT: SE

?*Megachile ligniseca* (Kirby 1802:243): Nylander 1852a:102

Megachile ligniseca (Kirby) var. : [Nylander 1852a:102] Nylander 1852b:275

Megachile curvicrus Thomson 1872:223: [*ligniseca* Nylander 1852b:275]

Syn. ref.: Dalla Torre & Friese 1895:74, Dalla Torre 1896:442, Friese 1899:114, 1911c:192, Schmiedeknecht 1907:114, Forsius & Nordström 1921:73, F. K. Stoeckhert 1933:217, Tkalců 1967:99, Niemelä 1936:91, Janzon & al. 1991:95, Scheuchl 1996:109, Schwarz & al. 1996:109.

Megachile curvicrus (Thomson): Nerén 1895:96

Megachile curvicrus (Thomson): Nordenström 1900:207

Megachile willughbiella* (Kirby 1802:233 (*Apis*)) *willughbiella

Anthophora lagopoda (Linné 1761:422): Zetterstedt 1838:464 ♀ *partim*

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Anthophora fulviventris (Panzer 1798:18): Zetterstedt 1838:465 ♂ *partim*

Syn. ref.: Nylander 1848:256, 1852b:274, Smith 1851:78, 1853:153, 1855:181, 1876:178, Thomson 1872:222, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Megachile fulviventris (Panzer 1898:18): [Zetterstedt 1838:465] Dalla Torre 1896:396

Megachile fulviventris Panzer: [Zetterstedt 1838:465] Friese 1902:483

Megachile centuncularis Linné var. *janssoni* Alfken 1926:200 ♀

Syn. ref.: D. Gaunitz 1930:139, Schwarz & al. 1996:110, Söderman & Vikberg 2002:57.

Megachile centuncularis Linné var. *janssoni* Alfken: Alfken 1927:141

APIDAE

Xylocopinae

Ceratinini

Ceratina Latreille 1802:380

Subg. ***Euceratina*** Hirashima, Moure & Daly, in Hirashima 1971:369

Ceratina cyanea (Kirby 1802:308 (*Apis*))

Nomadinae

Nomadini

Nomada Scopoli 1770:44

Species group *integra* Alexander 1994:212

Nomada argentata Herrich-Schaeffer 1839:276

Nomada brevicornis Schmiedeknecht: Thomson 1888:1216 ♂

Nomada brevicornis Schmiedeknecht: Thomson Coll. ♂

Syn. ref.: Schwarz 1986c:482.

Nomada brevicornis (Mocsáry 1882:39): [Thomson 1888:7216(sic,=1216)] Dalla Torre 1896:340

Nomada brevicornis Schmiedeknecht: Aurivillius 1903a:185

Nomada brevicornis Schmiedeknecht: Aurivillius 1903b:57

Nomada facilis Schwarz 1967:291

Nomada ferruginata (Kirby): Thomson 1870:94 ♀

Nomada ferruginata Kirby: Thomson Coll. ♀ *partim*

Syn. ref.: Schwarz 1986c:482.

Nomada integra Brullé 1832:347

Nomada germanica Fabricius, Panzer: Zetterstedt 1838:471

Nomada ferruginata (Kirby): Thomson 1870:94 ♀

Nomada ferruginata Kirby: Thomson Coll. *partim*

Syn. ref.: Schwarz 1986c:482.

Nomada stigma Fabricius 1804:393

Species group *roberjeotiana* Alexander 1994:218

Nomada obtusifrons Nylander 1848:184

Nomada obscurifrons Nylander: Dalla Torre & Friese 1894:41

LT: Sk, Ög

Nomada roberjeotiana Panzer 1799:18

Nomada roberjeotiana Fabricius: Zetterstedt 1838:471

Nomada obtusifrons Nylander: Thomson Coll. *partim*

Syn. ref.: Schwarz 1986c:483.

Nomada montana Mocsáry 1894:37

NOTE. -Species addition- This taxon has recently gained acceptance to be distinct from *N. roberjeotiana* (Scheuchl 2000:iii). In Sweden it has so far been documented (det. M. Schwarz) from Södermanland (L. Norén pers. comm. 2002). To reveal the regional distribution of *N. montana* will require a decisive revision of the Swedish "*N. roberjeotiana*" material.

Nomada rufipes Fabricius 1793:347

Nomada solidaginis Fabricius: Zetterstedt 1838:471

Nomada solidaginis Panzer 1799:21: Nylander 1848:176 ♀

Nomada solidaginis Panzer 1799:21: [Nylander 1848:176 ♀] Smith 1851:87

Nomada solidaginis Panzer: Nylander 1852b:229

Nomada solidaginis: Boheman 1853:187

Nomada solidaginis Panzer 1799:21: [Nylander 1848:176 ♀] Smith 1854:239

Nomada solidaginis Panzer 1799:18: [Nylander 1848:176] Smith 1855:136

Nomada solidaginis: Thomson 1862:306

Nomada solidaginis (Panzer): Thomson 1870:93

Nomada solidaginis Panzer 1799:18: [Nylander 1848:176, Thomson 1870:93] Thomson 1872:172

Nomada solidaginis Panzer: Thomson Coll.

Syn. ref.: Schwarz 1986c:470.

Nomada solidaginis Panzer 1799:21: [Nylander 1848:176, Thomson 1870:93, 1872:172] Smith 1876:127

Nomada solidaginis Panzer 1799:21: [Nylander 1848:176] Schmiedeknecht 1882-1884:79

Nomada solidaginis Panzer: Nerén 1892:101

Nomada solidaginis Panzer: Nerén 1895:91

Nomada solidaginis Panzer 1799:21. [Nylander 1848:176, 1852b:229, Thomson 1870:93, 1872:172] Dalla Torre 1896:368
Nomada solidaginis Panzer: Aurivillius 1903a:182
Nomada solidaginis Panzer: Aurivillius 1903b:54
Nomada solidaginis Panzer: Tullgren & Wahlgren 1920-1922:592
Nomada fennica Alfken: Wolf 1960:100
Nomada rufipes Fabricius (var. *fennica* Alfken): G. E. Nilsson 1992:55

Species group ***ruficornis*** Alexander & Schwarz 1994:222

Nomada alboguttata Herrich-Schaeffer 1839:282

Nomada ochrostoma Zetterstedt 1838:470 ♀ *partim* [*lateralis* Panzer: Fallén Coll.]

Syn. ref.: Schwarz 1986b:447, Söderman & Vikberg 2002:58.

Nomada ochrostoma Zetterstedt 1838:470 ♀: Nylander 1848:179

Nomada ochrostoma Zetterstedt 1838:470 ♀: Nylander 1852b:229

Nomada ochrostoma Zetterstedt 1838:470 ♀: [*quinquespinosa* Thomson 1870:93] Celary 1995:197

Nomada ochrostoma (Kirby 1802:209): [Nylander 1848:179] Smith 1851:85

Nomada ochrostoma (Kirby 1802:209): [Zetterstedt 1838:470, Nylander 1848:179, 1852b:229] Smith 1854:237

Nomada ochrostoma (Kirby 1802:209): [Nylander 1848:179, 1852b:229] Smith 1855:122

Nomada ochrostoma (Kirby 1802:209): [Zetterstedt 1838:470 ♀, Nylander 1848:179, 1852b:229] Dalla Torre 1896:359

Nomada ochrostoma Kirby: [Zetterstedt 1838:470] Friese 1902:482

Nomada 5-spinosa Thomson 1870:93

Syn. ref.: Dalla Torre & Friese 1894:38, Dalla Torre 1896:336, Alfken 1913:106, Forsius & Nordström 1921:74, E. Stoeckert 1930:1000, Pittioni 1953:273, Schwarz 1986c:472, Vikberg 1986b:83, Schwarz & al. 1996:152, Scheuchl 2000:151, Söderman & Vikberg 2002:58.

Nomada 5-spinosa Thomson 1870:93: [*ochrostoma* Zetterstedt 1838 *partim*, Nylander 1848:179 ♀, *obscura* Nylander 1848:178 ♂] Thomson 1872:186

Syn. ref.: Dalla Torre & Friese 1894:38, E. Stoeckert 1930:1000.

Nomada quinquespinosa Thomson: Thomson Coll.

Syn. ref.: Schwarz 1986c:472.

Nomada quinque-spinosa Thomson: Nerén 1892:101

Nomada alboguttata Herrich-Schaeffer 1839:282 var. *palescens* Herrich-Schaeffer 1839:281: [*spinosa* (sic,=*5-spinosa*) Thomson 1870:93, 1872:186] Dalla Torre 1896:336

Nomada baccata Smith 1844:409

Nomada laeta Thomson 1870:93

Syn. ref.: Smith 1876:120, F. K. Stoeckert 1933:170, Pittioni 1953:273, Schwarz 1986c:473, Vikberg 1986b:83, Schwarz & al. 1996:152, Scheuchl 2000:151, Söderman & Vikberg 2002:58.

Nomada laeta Thomson: Thomson Coll.

Syn. ref.: Schwarz 1986c:473.

Nomada laeta Thomson 1870:98(sic,=93): Thomson 1872:188

Syn. ref.: Smith 1876:120, Schwarz 1986c:473.

Nomada laeta Thomson: Nerén 1892:101

Nomada alboguttata Herrich-Schaeffer 1839:282 var. 3.: [*laeta* Thomson 1870:98, 1872:188] Schmiedeknecht 1882-1884:179

Nomada alboguttata Herrich-Schaeffer: [*laeta* Thomson] Dalla Torre & Friese 1894:38

Nomada alboguttata Herrich-Schaeffer 1839:282 var. *baccata* Smith 1844:409: [*laeta* Thomson 1870:93, 1872:188] Dalla Torre 1896:336

Nomada fucata Panzer: Sehestedt-Lund Coll. (leg. G. von Paykull) ♀

Syn. ref.: Schwarz 1974:728.

Nomada ochrostoma Zetterstedt 1838:470 ♀: [*laeta* Thomson 1870:93 ♀] Celary 1995:197

NOTE. -Species reinstatement- The bee was for a period considered conspecific with *Nomada alboguttata*, of which *N. baccata* was listed as a junior synonym (Janzon & al. 1991:95). But it is both morphologically distinct and an exclusive cleptoparasite of *Andrena argentata* (Schwarz & al. 1996:152, Scheuchl 2000:xvii). An old *N. baccata* (♀ leg. G. von Paykull, b. 1757 – d. 1826) of Swedish origin was found in the collection of the Zoological Museum of Copenhagen by Schwarz (1974:728). Nylander (1852b:230) mentioned material (NRM) of *N. baccata* from "southern Sweden". The species was further documented (Skåne: Torekov and Båstad) under the taxon *Nomada laeta* (Thomson 1870:93, 1872:188, Nerén 1892:101), a junior synonym of *N. baccata* (Smith 1876:120, Dalla Torre 1896:336, Pittioni 1953:273, Schwarz 1986c:474, Schwarz & al. 1996:152). It has also been recorded from Öland (Janzon & Svensson 1984:183).

Nomada fabriciana (Linné 1767:955 ♀ (*Apis*))

LT: Up

Nomada fabriciana Fabricius: Zetterstedt 1838:471

Nomada fabriciana (Kirby var. *b*): Thomson 1870:95

Nomada ferruginata (Linné 1767:958 ♀ (*Apis*))

LT: SE

Nomada germanica Panzer 1799:17: [*ferruginata* Nylander 1848:183] Smith 1851:87

Nomada germanica Panzer 1799:17: [*ferruginata* Nylander 1848:183] Smith 1854:235

Nomada germanica Panzer 1799:17: [*ferruginata* Nylander 1848:183] Smith 1855:134

Nomada germanica Panzer 1799:17: [*ferruginata* Nylander 1848:183, Thomson 1870:94, 1872:201] Smith 1876:126

Nomada germanica Panzer: [*ferruginata* auct.] J. F. Perkins 1942:196

***Nomada flava* Panzer 1798:21**

Nomada ruficornis Fabricius: Nylander 1852b:229

Nomada ruficornis (Linné 1761:423): [*flava* Nylander 1848:179] Smith 1851:84

Nomada ruficornis (Linné 1761:423): [*flava* Nylander 1848:179] Smith 1854:238

Nomada ruficornis (Linné 1761:423): [*flava* Nylander 1848:179] Smith 1855:118

Nomada ruficornis (Linné 1761:423): [*flava* Nylander 1848:179 ♂] Thomson 1872:189

Nomada ruficornis Linné: Thomson Coll. *partim*

Syn. ref.: Schwarz 1986c:474.

Nomada ruficornis (Linné 1767:958): [*flava* Nylander 1848:179] Smith 1876:110

Nomada ruficornis (Linné 1758:578) var. *flava* Panzer 1798:53: [*flava* Nylander 1848:179, 1852b:229] Dalla Torre 1896:363

Nomada glabella Thomson: Thomson Coll. ♂ *partim*

Syn. ref.: Schwarz 1986c:474.

***Nomada flavoguttata* (Kirby 1802:215 (*Apis*))**

Nomada minuta Fabricius: Zetterstedt 1838:471

Nomada minuta Fabricius 1804:394: Nylander 1848:184

Nomada minuta Fabricius: Nylander 1852b:281

Nomada minuta (Fabricius): Thomson 1870:94

Syn. ref.: Schenck 1874b:342, Dalla Torre & Friese 1894:39, Dalla Torre 1896:347, J. F. Perkins 1942:196.

Nomada minuta Fabricius 1804:394: [Nylander 1848:184, Thomson 1870:94] Thomson 1872:203

Syn. ref.: Schenck 1874b:342, Schmiedeknecht 1882-1884:189, Dalla Torre & Friese 1894:39, Perkins 1942:196.

Nomada minuta Fabricius: Thomson Coll.

Syn. ref.: Schwarz 1986c:482.

Nomada minuta Fabricius: Nerén 1892:101

Nomada furva Panzer 1798:25(sic,=23): [*minuta* Nylander 1848:184] Smith 1851:87

Nomada furva Panzer 1798:25(sic,=23): [*minuta* Nylander 1848:184] Smith 1854:234

Nomada furva Panzer 1798:23: [*minuta* Nylander 1848:184, Thomson 1870:94, 1872:203] Smith 1876:122

Nomada furva Panzer 1798:23: [*minuta* Nylander 1848:184] Dalla Torre 1896:349

Nomada fuscicornis Nylander: Thomson Coll. ♂ *partim*

Syn. ref.: Schwarz 1986c:482.

***Nomada flavopicta* (Kirby 1802:202 (*Apis*))**

Nomada jacobaeae Panzer 1799:20: Nylander 1848:175

Nomada jacobaeae Panzer 1799:20: [Nylander 1848:175] Smith 1851:88

Nomada jacobaeae Panzer: Nylander 1852b:228

Nomada jacobaeae: Boheman 1853:187

Nomada jacobaeae Panzer 1799:20: [Nylander 1848:175] Smith 1854:235

Nomada jacobaeae Panzer 1799:17: [Nylander 1848:175] Smith 1855:137

Nomada jacobaeae (Panzer): Thomson 1870:92

Nomada jacobaeae Panzer 1799:17: [Nylander 1848:175, Thomson 1870:92] Thomson 1872:173

Nomada jacobaeae Panzer: Thomson Coll.

Syn. ref.: Schwarz 1986c:470.

Nomada jacobaeae Panzer 1799:20: [Nylander 1848:175, Thomson 1870:92, 1872:173] Smith 1876:128

Nomada jacobaeae Panzer 1799:20: [Nylander 1848:175, 1872:173] Schmiedeknecht 1882-1884:91

Nomada jacobaeae Panzer 1799:PL.17: [Nylander 1848:175, 1852b:228, Thomson 1870:92, 1872:173] Dalla Torre 1896:351

Nomada jacobaeae Panzer: Aurivillius 1903a:182

Nomada jacobaeae Panzer: Aurivillius 1903b:54

Nomada jacobaeae Panzer: Lundblad 1911:209

Nomada jacobaeae: Adlerz 1912:158

Nomada lineola Panzer: Thomson Coll. ♀ *partim*

Syn. ref.: Schwarz 1986c:471.

***Nomada fulvicornis* Fabricius 1793:348**

Nomada lineola Panzer: Nylander 1852b:230

Nomada lineola Panzer 1798:23: Smith 1854:236

Nomada lineola (Panzer): Thomson 1870:97

Nomada lineola Panzer 1798:23: [Thomson 1870:97] Thomson 1872:177

Nomada lineola Panzer: Thomson Coll. *partim*

Syn. ref.: Schwarz 1986c:471.

Nomada lineola Panzer 1798:23: [Thomson 1870:97, 1872:177, *subcornuta* Thomson 1872:180, *cornigera* Thomson 1872:181] Smith 1876:129

Nomada lineola Panzer 1798:23: [Thomson 1872:177, *subcornuta* Thomson 1872:180, *cornigera* Thomson 1872:181] Schmiedeknecht 1882-1884:63

Nomada lineola Panzer: [*subcornuta* Thomson, *cornigera* Thomson] Dalla Torre & Friese 1894:40

Nomada lineola Panzer: [*subcornuta* Thomson, *cornigera* Thomson] Friese 1895b:214

Nomada lineola Panzer 1798:23: [Thomson 1870:97, 1872:177, *subcornuta* Thomson 1872:180, *cornigera* Thomson 1872:181] Dalla Torre 1896:355

Nomada lineola Panzer: Aurivillius 1903a:183
Nomada lineola Panzer: Aurivillius 1903b:55
Nomada lineola Panzer: Kullenberg 1950b:57
Nomada lineola Panzer: Kullenberg & Nyholm 1952:137
Nomada subcornuta (Kirby 1802:192): Thomson 1872:180
Nomada subcornuta Kirby: Thomson Coll.
Syn. ref.: Schwarz 1986c:471.
Nomada cornigera (Kirby 1802:190): Thomson 1872:181
Nomada cornigera Kirby: Thomson Coll.
Syn. ref.: Schwarz 1986c:471.
Nomada succincta Panzer: Thomson Coll. ♂ *partim*
Syn. ref.: Schwarz 1986c:471.

[*Nomada subcornuta* (Kirby 1802:192 (*Apis*))

NOTE. -Species uncertainty- Thomson (1872:180) reported this taxon from Scania. He made clear distinction between *N. subcornuta* vs. *N. fulvicornis* (as *N. lineola*). His record was revised to *N. lineola* (Smith 1876:129, Schmiedeknecht 1882-1884:63, Friese 1895b:214, Dalla Torre 1896:355) and *N. fulvicornis* (Dalla Torre & Friese 1894:40, Schwarz 1986c:471). However, *N. subcornuta* is distinct by stable morphological absolute characters (M. Sörensson & L. Norén pers. comm. 2002). There is evidence of geographic distinctiveness, but with extensive sympatry with *N. fulvicornis* (L. Norén pers. obs.). To conclude, future studies are predicted to show that *N. subcornuta* is a distinct species.

***Nomada fusca* Schwarz 1986a:434**

Nomada glabella Thomson: Thomson Coll. ♀ *partim*
Syn. ref.: Schwarz 1986c:474.
Nomada ruficornis Linné: Thomson Coll. *partim*
Syn. ref.: Schwarz 1986c:474.

***Nomada guttulata* Schenck 1861:391**

Nomada rufilabris Thomson 1870:95
Syn. ref.: Schenck 1874b:344, Saunders 1884:175, Dalla Torre & Friese 1894:39, Friese 1895b:214, Dalla Torre 1896:350, Schwarz 1986c:481, Janzon & al. 1991:95, Celary 1995:152, Schwarz & al. 1996:158, Scheuchl 2000:151.
Nomada rufilabris Thomson 1870:95: Thomson 1872:197
Syn. ref.: Schenck 1874b:344, Schmiedeknecht 1882-1884:147, Saunders 1884:175, Dalla Torre & Friese 1894:39, Friese 1895b:214, Schwarz 1986c:481.
Nomada rufilabris Thomson: Thomson Coll.
Syn. ref.: Schwarz 1986c:481.

***Nomada lathburiana* (Kirby 1802:183 (*Apis*))**

Ammobates rufiventris: Billberg 1820:111
Nomada rufiventris (Kirby): Nylander 1852b:230
Syn. ref.: Smith 1854:236.
Nomada rufiventris (Kirby 1802:187): [Nylander 1852b:230] Thomson 1872:184
Syn. ref.: Smith 1876:117, Schmiedeknecht 1882-1884:107, Dalla Torre 1896:354, J. F. Perkins 1942:196.
Nomada rufiventris Kirby: Thomson Coll.
Syn. ref.: Schwarz 1986c:472.
Nomada marshamella (Kirby 1802:188) f. *subcornuta* (Kirby 1802:192): Nylander 1848:177
Syn. ref.: Smith 1854:236, 1855:125, 1876:117, Schmiedeknecht 1882-1884:107, Dalla Torre & Friese 1894:40, Friese 1895b:214, Dalla Torre 1896:353.
Nomada lathburniana Kirby: Hanson 1962:41/Tavla 35

***Nomada leucophthalma* (Kirby 1802:197 (*Apis*))**

Nomada borealis Zetterstedt 1838:470 ♀
Syn. ref.: R. C. L. Perkins 1917:48, Forsius & Nordström 1921:74, D. Gaunitz 1929:198, E. Stoeckhert 1930:1013, F. K. Stoeckhert 1933:168, Pittioni 1953:274, Elfving 1968:48, Richards 1978:139, Schwarz 1986b:446, Vikberg 1986b:83, Janzon & al. 1991:95, Celary 1995:177, Schwarz & al. 1996:159, Scheuchl 2000:150, Söderman & Vikberg 2002:57, L. A. Nilsson det. in Zetterstedt Coll. ZML.
Nomada borealis Zetterstedt 1838:470: Nylander 1848:181
Nomada borealis Zetterstedt 1838:470: [Nylander 1848:181] Smith 1851:85
Nomada borealis Zetterstedt: Nylander 1852b:230
Nomada borealis Zetterstedt 1838:470 ♀: [Nylander 1848:181] Smith 1854:234
Nomada borealis Zetterstedt 1838:470: [Nylander 1848:181] Smith 1855:123
Nomada borealis Zetterstedt 1838:470: [Nylander 1848:181] Thomson 1872:192
Nomada borealis Zetterstedt: Thomson Coll.
Syn. ref.: Schwarz 1986c:476.
Nomada borealis Zetterstedt 1838:470 ♀: [Nylander 1848:181, Thomson 1872:192] Smith 1876:112
Nomada borealis Zetterstedt 1838:470 ♀: [Nylander 1848:181, Thomson 1872:192] Schmiedeknecht 1882-1884:186
Nomada borealis Zetterstedt: Nerén 1892:101
Nomada borealis Zetterstedt: Dalla Torre & Friese 1894:38
Nomada borealis Zetterstedt 1838:470: [Nylander 1848:181, Thomson 1872:192] Dalla Torre 1896:340
Nomada borealis Zetterstedt 1838:470: Friese 1902:482

Nomada borealis Zetterstedt: Aurivillius 1903a:184
Nomada borealis Zetterstedt: Aurivillius 1903b:56
Nomada borealis Zetterstedt: Alfken 1912a:62
Nomada borealis Zetterstedt: Lundblad 1950:209
Nomada lineola Panzer: Thomson Coll. ♀ *partim*
Syn. ref.: Schwarz 1986c:471.
Nomada ruficornis Linné var. *borealis* Zetterstedt: Lundblad 1924:20

***Nomada marshamella* (Kirby 1802:188 (*Apis*))**

Nomada 6-fasciata (Jurine): Thomson 1870:97
Syn. ref.: Thomson 1872:176.
Nomada 6-fasciata Jurine: Thomson Coll. ZML
Syn. ref.: Schwarz 1986c:471.
Nomada borealis Zetterstedt: Thomson Coll. ♂ *partim*
Syn. ref.: Schwarz 1986c:476.
Nomada lineola Panzer: Thomson Coll. ZML ♀ *partim*
Syn. ref.: Schwarz 1986c:471.
Nomada alternata (Kirby 1802:182): [*marshamella* Thomson 1872:176] Smith 1876:131
Nomada alternata (Kirby 1802:182): [*marshamella* Thomson 1872:176] Dalla Torre 1896:337
Nomada alternata Kirby: Aurivillius 1903a:183
Nomada alternata Kirby: Aurivillius 1903b:55
Nomada alternata Kirby: Lundblad 1924:25

***Nomada moeschleri* Alfken 1913:147**

Nomada bifida Thomson: Thomson Coll. ♂ *partim*
Syn. ref.: Schwarz 1986c:479.

***Nomada obscura* Zetterstedt 1838:470**

Nomada obscura Zetterstedt *bitincta* Alfken 1924:37
Syn. ref.: D. Gaunitz 1935:93, Schwarz & al. 1996:160.
Nomada obscura Zetterstedt var. *alfkeni* D. Gaunitz 1935:96
Syn. ref.: Schwarz & al. 1996:160.

LT: Nb

***Nomada opaca* Alfken 1913:105**

***Nomada panzeri* Lepeletier 1841:501**

Nomada ochrostoma Zetterstedt 1838:470 var. *b* ♀
Syn. ref.: Schwarz 1986b:447.
Nomada glabella Thomson 1870:96
Syn. ref.: Schwarz 1986c:474, Warncke 1986:72, Janzon & al. 1991:95, Celary 1995:172, Schwarz & al. 1996:160, Scheuchl 2000:151, Söderman & Vikberg 2002:58.
Nomada glabella Thomson 1870:96: [*ochrostoma* Zetterstedt 1838 *partim*] Thomson 1872:192
Syn. ref.: Schwarz 1986c:474.
Nomada glabella Thomson: J. F. Perkins 1942:196
Nomada glabella: Cederberg 1982:38
Nomada ruficornis Fabricius: Zetterstedt 1838:471
Nomada ruficornis Linné: Thomson Coll. *partim*
Syn. ref.: Schwarz 1986c:474.
Nomada ruficornis (Linné 1767:958): [Thomson 1872:189, *glabella* Thomson 1870:96, 1872:192] Schmiedeknecht 1882-1884:164
Nomada ruficornis Linné: Aurivillius 1903a:184
Nomada ruficornis Linné: Aurivillius 1903b:56
Nomada ruficornis Linné var. *glabella* Thomson: Dalla Torre & Friese 1894:41
Nomada ruficornis (Linné 1758:578) var. *glabella* Thomson 1870:96: [Thomson 1872:193] Dalla Torre 1896:365
Nomada ruficornis Linné var. *glabella* Thomson: Aurivillius 1903a:184
Nomada ruficornis Linné var. *glabella* Thomson: Aurivillius 1903b:56
Nomada ruficornis Linné var. *glabella* Thomson: Forsius & Nordström 1921:74
Nomada ruficornis Linné: [*glabella* Thomson] Forsius 1935:14

[*Nomada glabella* Thomson 1870:96]

NOTE. -Species uncertainty- This taxon was described from material of Swedish origin ("Ej sällsynt") by Thomson (1870:96). It was subsequently reported from this country, often as a variety of *N. ruficornis* (see above). *Nomada glabella* is generally considered a junior synonym of *N. panzeri* (Schwarz 1986c:474, Warncke 1986:72, Janzon & al. 1991:95, Celary 1995:172, Scheuchl 2000:151). Still, it is morphologically distinct in both sexes vs. *N. panzeri* and phenological and ecological evidence indicates association with *Andrena fucata* and *A. lapponica*, while *N. panzeri* is a cleptoparasite of *A. helvola* (L. A. Nilsson pers. obs.). Future studies including sex pheromone analyses should test the generally reputed conspecificity.

Nomada ruficornis (Linné 1758:578 ♀ (*Apis*))

Nomada bifida Thomson 1872:196

Syn. ref.: J. F. Perkins 1942:196, Pittioni 1953:268, Richards 1978:139, Vikberg 1986b:83, Celary 1995:124, Schwarz & al. 1996:161, Söderman & Vikberg 2002:58.

Nomada bifida Thomson: Dalla Torre & Friese 1894:38

Nomada bifida Thomson 1872:196: Dalla Torre 1896:339

Nomada bifida Thomson: Aurivillius 1903a:184

Nomada bifida Thomson: Aurivillius 1903b:56

Nomada bifida Thomson: Alfken 1912a:62

Nomada bifida Thomson: Lundblad 1924:25

Nomada bifida Thomson 1872: [*ruficornis* Linné 1758] Richards 1935:173

Nomada bifida Thomson: Herrström 1950:192

Nomada bifida Thomson: Hedström & al. 1959:33

Nomada bifida Thomson: [*ruficornis* Linné 1758] Elfving 1968:48

Nomada bifida Thomson: L. A. Nilsson 1979a:332

Nomada bifida Thomson: [*ochrostoma* Zetterstedt 1838:470 ♂ *partim*] Schwarz 1986b:448

Nomada bifida Thomson 1872:196: [*2-dentata* Thomson Coll. MS] Schwarz 1986c:479

Nomada bifida Thomson: G. E. Nilsson 1991:84

Nomada bifida Thomson 1872: Janzon & al. 1991:95

Nomada bifida: Sörensson 2000:56

Nomada panzeri Lepeletier 1841:501: [*ruficornis* Linné 1758:578 ♀] Warncke 1986:71

Nomada striata Fabricius 1793:348

Nomada punctiscuta Thomson 1870:96

Syn. ref.: Schwarz 1986c:477, Vikberg 1986b:83, Janzon & al. 1991:95, Celary 1995:144, Schwarz & al. 1996:163, Scheuchl 2000:151, Söderman & Vikberg 2002:58.

Nomada punctiscuta Thomson 1870:96: Thomson 1872:193

Nomada punctiscuta Thomson: Thomson Coll.

Syn. ref.: Schwarz 1986c:477.

Nomada punctiscuta Thomson: Nerén 1892:101

Nomada ruficornis Linné: Thomson Coll. ♂ *partim*

Syn. ref.: Schwarz 1986c:474.

Nomada ochrostoma (Kirby 1802:209): [*punctiscuta* Thomson 1872:193] Smith 1876:116

Nomada ochrostoma (Kirby 1802:209): [*punctiscuta* Thomson 1872:193] Schmiedeknecht 1882-1884:141

Nomada ochrostoma Kirby 1802:209: [*?punctiscuta* Thomson] Saunders 1884:180

Nomada ochrostoma Kirby: [*punctiscuta* Thomson] Friese 1895b:214

Nomada ochrostoma (Kirby 1802:209): [*punctiscuta* Thomson 1870:96, 1872:193] Dalla Torre 1896:359

Nomada ochrostoma Kirby: Aurivillius 1903a:184

Nomada ochrostoma Kirby: Aurivillius 1903b:56

Nomada ochrostoma Kirby: Tullgren & Wahlgren 1920-1922:593

Nomada ochrostoma Kirby: [*punctiscuta* Thomson] Forsius & Nordström 1921:74

Nomada ochrostoma Kirby: [*punctiscuta* Thomson] E. Stoeckert 1922:116

Nomada ochrostoma Kirby: Lundblad 1924:25

Nomada ochrostoma Kirby: [*punctiscuta* Thomson] J. F. Perkins 1942:196

Nomada hillana Kirby: [*punctiscuta* Thomson] E. Stoeckert 1930:1011

Nomada hillana Kirby: [*punctiscuta* Thomson] F. K. Stoeckert 1933:161

Nomada hillana Kirby: [*punctiscuta* Thomson] Pittioni 1953:271

Nomada hillana Kirby: [*punctiscuta* Thomson] Elfving 1968:48

Nomada villosa Thomson 1870:95

LT: Sk

Nomada ochrostoma (Kirby 1802:209): [*villosa* Thomson 1872:195] Schmiedeknecht 1882-1884:141

Nomada ochrostoma Kirby var. *villosa* Thomson: Dalla Torre & Friese 1894:41

Nomada ochrostoma (Kirby 1802:209) var. *villosa* Thomson 1870:95: Dalla Torre 1896:360

Nomada hillana Kirby: [*villosa* Thomson] E. Stoeckert 1922:122

Species group ***armata*** Alexander 1994:224

Nomada armata Herrich-Schaeffer 1839:279

Nomada cincticornis Nylander 1848:182 ♀

Syn. ref.: Nylander 1852b:232, Smith 1854:233, 1855:130, 1876:118, Thomson 1870:94, 1872:199, Schmiedeknecht 1882-1884:211, Dalla Torre & Friese 1894:38, Dalla Torre 1896:338, Alfken 1912a:63, Vikberg 1986b:83, Janzon & al. 1991:95, Celary 1995:41, Söderman & Vikberg 2002:58.

Nomada fuscicornis Nylander 1848:185

Nomada similis Morawitz 1872:386

Species group **superba** Alexander 1994:225

Nomada sexfasciata Panzer 1799:18
Nomada 6-fasciata Jurine: Nylander 1852b:228

Species group **bifasciata** Alexander 1994:228

Nomada fucata Panzer 1798:19

NOTE. -Species addition- The species was recorded for the first time in Sweden in 2001: Skåne, Bunkeflostrand 6 VII and Klagshamn 27 VII (Nilsson & Cederberg 2002). It was frequent at the latter site in 2002 (27 VI, L. A. Nilsson pers. obs.). *Nomada fucata* is an exclusive cleptoparasite of *Andrena flavipes*, a species recently reported to occur in Sweden (Cederberg & Nilsson 2000).

Nomada goodeniana (Kirby 1802:180 (*Apis*))

Nomada succincta Panzer 1798:21: Nylander 1848:175 ♂
Nomada succincta Panzer 1798:21: [Nylander 1848:175] Smith 1851:89
Nomada succincta Panzer 1798:21: Nylander 1852b:281
Nomada succincta Panzer 1798:21: [Nylander 1848:175] Smith 1854:239
Nomada succincta Panzer 1798:21: [Nylander 1848:175] Smith 1855:142
Nomada succincta (Panzer): Thomson 1870:97
Syn. ref.: J. F. Perkins 1942:196.
Nomada succincta Panzer 1798:21: [Nylander 1848:175, Thomson 1870:97] Thomson 1872:174
Syn. ref.: Alfken 1904a:74, J. F. Perkins 1942:196.
Nomada succincta Panzer: Thomson Coll. *partim*
Syn. ref.: Schwarz 1986c:471.
Nomada succincta Panzer 1798:21: [Nylander 1848:175, Thomson 1870:97, 1872:174] Smith 1876:132
Nomada succincta Panzer 1798:21: [Nylander 1848:175, Thomson 1872:174] Schmiedeknecht 1882-1884:59
Nomada succincta Panzer 1798:21: [Nylander 1848:175, Thomson 1870:97, 1872:174] Dalla Torre 1896:369
Nomada succincta Panzer: Aurivillius 1903a:183
Nomada succincta Panzer: Aurivillius 1903b:55
Nomada alternata Kirby: Lundblad 1924:25

[*Nomada succincta* Panzer 1798:21]

NOTE. -Species-presence uncertainty- This taxon has been reported to occur in Sweden but it is generally believed that the bees in question were misidentified *N. goodeniana* (see above). The decisive identity evaluation remains, however.

Epeolini

Epeolus Latreille 1802:427

Subg. **Epeolus** (Latreille 1802:427) s. str.

NOTE. -Species additions?- It has not been studied if or to what extent the Swedish material of *Epeolus* contains also the reputed species *E. marginatus*, *E. montanus*, *E. pilosus* and *E. similis* (cf. Scheuchl 2000). The taxon *montanus* has been reported to occur in Sweden (Tjeder 1954:206, Wolf 1960:100).

Epeolus alpinus Friese 1893:34

Epeolus variegatus (Linné): Thomson 1870:90
Epeolus variegatus Linné 1761:422: [Thomson 1870:90] Thomson 1872:213
Epeolus variegatus Linné: Aurivillius 1903a:178
Epeolus variegatus Linné: Aurivillius 1903b:50
Epeolus variegatus Linné: [glacialis Alfken] Forsius 1935:14
Epeolus glacialis Alfken 1913:36 [variegatus Thomson 1872]
Syn. ref.: Warncke 1986:60, Janzon & al. 1991:96, Schwarz & al. 1996:164, Scheuchl 2000:149.
Epeolus glacialis Alfken: [variegatus Thomson, nec Linné] Alfken 1924b:34
Epeolus glacialis Alfken: [variegatus Thomson] Bischoff 1930:8
Epeolus glacialis Alfken: Wolf 1960:100
Epeolus glacialis: Cederberg 1982:38
Epeolus glacialis Alfken: Janzon 1987:7
Epeolus glacialis Alfken: Sörensson 1989:36
Epeolus glacialis montanus Bischoff: Wolf 1960:100
Epeolus montanus Bischoff: Tjeder 1954:206

NOTE. -Species additions?- The biological inter-relevance of the taxa *Epeolus alpinus* s. str., *E. glacialis* and *E. montanus* has not been clarified. The taxa are readily synonymized (e.g. Schwarz & al. 1996) but may represent distinct species (Scheuchl 2000).

***Epeolus cruciger* Panzer 1799:20**

Epeolus rufipes Thomson 1870:91 ♀

Syn. ref.: Alfken 1904b:126, 1912a:26, 1913:34, Forsius & Nordström 1921:72, Jansson 1927:151, Forsius 1935:14, Richards 1937:90, 1978:139, Elfving 1968:50, Vikberg 1986b:83, Janzon & al. 1991:96, Schwarz & al. 1996:165, Söderman & Vikberg 2002:58.

Epeolus rufipes Thomson 1870:91: Thomson 1872:212

Epeolus rufipes (Thomson): Nordenström 1900:207

Epeolus rufipes Thomson: Aurivillius 1903a:178

Epeolus rufipes Thomson: Aurivillius 1903b:50

Epeolus variegatus Linné: [*rufipes* Thomson] Dalla Torre & Friese 1894:37

Epeolus variegatus (Linné 1758:577): [*rufipes* Thomson 1870:90(sic,=91) ♀] Friese 1895a:196

Epeolus variegatus (Linné 1758:577): [*rufipes* Thomson 1870:90(sic,=91) ♀] Friese 1895b:213

Epeolus variegata (Linné 1758:577): [Nylander 1848:174, Thomson 1870:90 ♀, *rufipes* Thomson 1870:90(sic,=91), 1872:212] Dalla Torre 1896:331

NOTE. -Species additions?- The biological inter-relevance of the taxa *Epeolus cruciger* s. str., *E. similis* and *E. marginatus* has not been clarified. The taxa are readily synonymized (e.g. Schwarz & al. 1996) but may represent distinct species (Scheuchl 2000). In addition to *E. cruciger* s. str. at least *E. marginatus* occurs in Sweden, Scania (L. A. Nilsson unpubl. data).

***Epeolus variegatus* (Linné 1758:577 ♂ (*Apis*))**

Epeolus variegatus Latreille: Nylander 1852b:281

Epeolus productus Thomson 1870:91

Syn. ref.: Richards 1937:90, 1978:139, Elfving 1968:49, Vikberg 1986b:83, Janzon & al. 1991:96, Schwarz & al. 1996:165, Scheuchl 2000:150, Söderman & Vikberg 2002:58.

Epeolus productus Thomson 1870:91: Thomson 1872:210

Syn. ref.: Dalla Torre 1896:331.

Epeolus productus Thomson 1870:91: [Thomson 1872:210] Friese 1895a:203

Epeolus productus Thomson 1870:91: [Thomson 1872:210] Dalla Torre 1896:330

Epeolus productus Thomson: Aurivillius 1903a:178

Epeolus productus Thomson: Aurivillius 1903b:50

Epeolus productus Thomson: Tullgren & Wahlgren 1920-1922:592

Epeolus productus Thomson: Jansson 1922:21

Epeolus productus Thomson 1870: [*variegatus* Linné 1758] Richards 1935a:173

Epeolus notatus (Christ 1791:188): [*productus* Thomson] Alfken 1904b:126

Epeolus notatus Christ: [*productus* Thomson] Alfken 1912a:26

Epeolus notatus Christ: [*productus* Thomson] Alfken 1913:35

Epeolus notatus Christ: [*productus* Thomson] Forsius & Nordström 1921:72

Epeolus notatus Christ: [*productus* Thomson] Jansson 1927:151

Epeolus notatus Christ: [*productus* Thomson] Forsius 1935:14

Biastini

***Biastes* Panzer 1806:239**

***Biastes truncatus* (Nylander 1848:186 (*Nomada*))**

Phileremus punctatus Lepeletier (sic Latreille) 1841:513: Nylander 1852a:93 ♀

Syn. ref.: Schenck 1873:251.

Phileremus punctatus Latreille: Nylander 1852b:281

Phileremus punctatus (Fabricius 1804:389): [*truncata* Nylander 1848:186 ♀] Gerstaecker 1869:142

Syn. ref.: Schenck 1873:251, Dalla Torre & Friese 1894:38, Friese 1895a:149, 1895b:212, Dalla Torre 1896:503.

Phileremus punctatus (Fabricius 1804:389): [*truncata* Nylander 1848:186] Thomson 1872:169

Syn. ref.: Dalla Torre & Friese 1894:38, Friese 1895a:149, 1895b:212.

Phileremus punctatus Fabricius: Nerén 1892:101

Apinae

Eucerini

***Eucera* Scopoli 1770:8**

Subg. ***Eucera*** (Scopoli 1770:8) s. str.

***Eucera longicornis* (Linné 1758:574 ♂ (*Apis*))**

Eucera linguaria Panzer 1799:22: Zetterstedt 1838:469

Syn. ref.: Dalla Torre 1896:238, L. A. Nilsson det. in Zetterstedt Coll. ZML.

Anthophorini

Anthophora Latreille 1803:167

Subg. *Anthophora* (Latreille 1803:167) s. str.

Anthophora plumipes (Pallas 1772:24 (*Apis*))

Anthophora acervorum Linné: Hanson 1962:40/Tavla 35
Anthophora acervorum (Linné): Erlandsson 1975:21
Anthophora acervorum (Linné): Andersson & al. 1987:72
Anthophora pilipes (Fabricius 1775): Janzon & al. 1991:96
Anthophora pilipes: Ehnström & al. 1993: 44

Subg. *Clisodon* (Patton 1879:149)

Anthophora furcata (Panzer 1798:8 (*Apis*))

“1009?” Linné Coll. ♀

Syn. ref.: Day 1979:71.

Megilla furcata (Kirby) f. *norvegica* Nylander 1852b:267

Syn. ref.: Schwarz & al. 1996:132.

Megilla fuscata Panzer var. *norvegica* Nylander: Dalla Torre & Friese 1895:60

Podalirius furcatus (Panzer 1798:8) var. *norvegicus* Nylander 1852b:267: Friese 1897c:282

Anthophora furcata Panzer var. *norvegica* Nylander: Alfken 1926:200

Syn. ref.: D. Gaunitz 1946:158.

Anthophora furcata Panzer var. *norvegica* Nylander: Alfken 1927:140

Anthophora furcata var. *norvegica* Friese: D. Gaunitz 1946:158

Anthophora fucata Panzer var. *norvegica* Nylander: Erlandsson 1960b:129

Anthophora furcata Panzer var. *obscurella* Alfken 1926:201

Syn. ref.: D. Gaunitz 1946:158.

Anthophora furcata var. *obscurella* Alfken: D. Gaunitz 1946:158

Anthophora furcata ssp. *violoscurella* Alfken: Andersson & Danielsson 1980:80

Subg. *Dasymegilla* Brooks 1988:486

NOTE. -Subgenus addition- Brooks (1988:466) introduced this subgenus and typified it by the species *Anthophora quadrimaculata*.

Anthophora quadrimaculata (Panzer 1798:7 (*Apis*))

Megilla maculata Fabricius: Fallén 1813:35

Podalirius vulpinus (Panzer 1798:6): [*quadrimaculata* Nylander 1848:244, 1852b:267, Thomson 1872:54] Dalla Torre 1896:295

Podalirius vulpinus (Panzer 1798:6): [*quadrimaculata* Nylander 1852b:267, Thomson 1872:54] Friese 1897c:150

Podalirius vulpinus Panzer: Aurivillius 1903a:159

Podalirius vulpinus Panzer: Aurivillius 1903b:31

Podalirius vulpinus Panzer: Wahlgren 1915:24

Podalirius vulpinus Panzer: Wahlgren 1917:20

Podalirius vulpinus Panzer: Jansson 1922:19

Anthophora vulpina Panzer: Lundblad 1924:20

Anthophora vulpina Panzer: Kullenberg 1953d:2

Anthophora borealis Morawitz: Wolf 1960:100 ♀

Syn. ref.: L. A. Nilsson det. in ZML.

Subg. *Melea* (Sandhouse 1943:569)

NOTE. -Subgenus addition- Brooks (1988:478) placed the species *Anthophora plagiata* in this subgenus, all members of which appear to be *Bombus* mimics (Michener 2000:727).

Anthophora plagiata (Illiger 1806:140 (*Megilla*))

Wägg-bi = ♂, stenhumla = ♀ Linné 1751:131

Syn. ref.: Bengtsson 1920a:101.

Megilla haverthana Kirby: Zetterstedt 1838:471

Syn. ref.: L. A. Nilsson det. in Zetterstedt Coll. ZML.

Megilla parietina Fabricius 1804:329: Nylander 1848:244

Megilla parietina Fabricius 1804: [Nylander 1848:244] Nylander 1852b:267

Anthophora parietina (Fabricius 1793:323): [Nylander 1848:244, 1852b:267] Smith 1854:321

Anthophora parietina: Thomson 1862:306

Megilla parietina (Fabricius 1793:323): [Linné 1751:131, Nylander 1848:244, 1852b:267] Thomson 1872:54

Podalirius parietinus (Fabricius 1793:323): [Nylander 1848:244, 1852b:267, Thomson 1872:54] Dalla Torre 1896:280
Podalirius parietinus (Fabricius): [Nylander, Thomson] Friese 1897:268
Podalirius parietinus Fabricius: Aurivillius 1903a:159
Podalirius parietinus Fabricius: Aurivillius 1903b:31
Podalirius parietinus (Fabricius): Nordenström 1910:25
Podalirius parietinus Fabricius: [Linné 1751:131] Lönnberg 1913:511
Anthophora parietina Fabricius: Brinck & al. 1973:546

Subg. ***Mystacanthophora*** Brooks 1988:466

[*Anthophora borealis* Morawitz 1864:447]

NOTE. -Species exclusion- Wolf (1960:100) identified and reported this species from Sweden (1 ♀: Skåne, Nosaby, VII 1909, leg. H. Rosén, ZML). The record was not mentioned in Janzon & al. (1991). Re-examination of the actual specimen revealed a misidentified *A. quadrimaculata* (det. L. A. Nilsson 2001).

Subg. ***Pyganthophora*** Brooks 1988:460

NOTE. -Subgenus addition- Brooks (1988:460) introduced this subgenus and typified it by the species *Anthophora retusa*.

Anthophora retusa (Linné 1758:575 ♀ (*Apis*))

Apis pennipes Forster: Linné Coll. MS

Syn. ref.: Kirby 1802:297, Day 1979:69.

?*Ceratina acervorum* Linné: Billberg 1820:111

Megilla acervorum Linné: [*retusa* Linné] Zetterstedt 1838:471

Melectini

Melecta Latreille 1802:427

Subg. ***Melecta*** (Latreille 1802:427) s. str.

Melecta luctuosa (Scopoli 1770:13 (*Apis*))

Melecta punctata Fabricius: [*luctuosa* Smith] Nylander 1852b:228

Melecta armata (Panzer 1799:221): [*punctata* Nylander 1852b:228] Dalla Torre 1896:313

Bombini

Bombus Latreille 1802:437

NOTE. -Generic reclassification- Janzon & al. (1991:96) used the subgeneric taxa *Ashtonipsithyrus* Frison 1927:69, *Allopsithyrus* Popov 1931:136, *Metapsithyrus* Popov 1931:135 and *Fernaldaepsithyrus* Frison 1927:70 within a genus *Psithyrus*. Cladistic analysis has indicated that this monophyletic group of social parasites is best treated as a subgenus to *Bombus* (Williams 1994). Accordingly, all the former *Psithyrus* subgenera are placed as synonyms to a subgenus *Psithyrus* (Williams 1998:102, Michener 2000:776).

Subg. ***Psithyrus*** (Lepeletier 1833:373)

Bombus barbutellus (Kirby 1802:343 (*Apis*))

Bombus saltuum Illiger 1806:174 var. *a* Dahlbom 1832:53 ♂

Syn. ref.: Dalla Torre 1896:566, Løken 1984:12.

Bombus saltuum Illiger 1806:174 var. *b* Dahlbom 1832:53 ♀

Syn. ref.: Lepeletier 1832:377, Schmiedeknecht 1882-1884:401, Dalla Torre 1896:566, Løken 1984:12.

Psithyrus saltuum Illiger 1806:174: [Dahlbom 1832:53] Kriechbaumer 1854:180

Syn. ref.: Dalla Torre 1896:566, Løken 1984:12.

Bombus saltuum Panzer: Wahlberg 1855a:201

Syn. ref.: Løken 1984:12.

Bombus saltuum Panzer: Wahlberg 1855b:231

Apathus campestris (Panzer): Thomson 1870:259

Syn. ref.: Dalla Torre 1896:566.

Apathus campestris (Panzer 1805:74(sic,=89)): [*saltuum* Dahlbom 1832:53] Thomson 1872:45

Syn. ref.: Schmiedeknecht 1882-1884:401, Dalla Torre 1896:566, Løken 1984:12.

Bombus aestivalis (Panzer 1805:89): Dahlbom 1832:51

Psithyrus aestivalis (Panzer 1805:89): [*vestalis* Dahlbom 1832:51, *saltuum* Dahlbom 1832:53] Nylander 1848:241

Psithyrus quadricolor (Lepeletier): Thomson 1870:260

Syn. ref.: Smith 1876:222.

Apathus sylvestris (Lepeletier 1832:377): Thomson 1872:49

Syn. ref.: Smith 1876:222.

***Bombus bohemicus* Seidl 1838:73**

Bombus frutetorum: Fallén Coll. ♂

Syn. ref.: Dahlbom 1832:52.

Bombus aestivalis (Panzer 1805:89): Dahlbom 1832:51 ♀

Syn. ref.: Løken 1984:8.

Apathus nemorum (Fabricius 1793:317): [*vestalis* Dahlbom 1832:51] Smith 1851:98

Apathus nemorum (Fabricius 1793:317): [*vestalis* Dahlbom 1832:51, *aestivalis* Nylander 1848:241] Smith 1854:383

Psithyrus vestalis (Kirby): Nylander 1852b:283

Psithyrus vestalis Geoffroy 1785:419(sic,=450): [*aestivalis* Dahlbom 1832:51] Kriechbaumer 1854:182

Syn. ref.: Løken 1984:8.

Apathus vestalis (Fourcroy 1785:450): [*aestivalis* Nylander 1848:241] Smith 1855:238

Psithyrus vestalis Geoffroy: Wahlberg 1855a:201

Syn. ref.: Løken 1984:8.

Psithyrus vestalis Geoffroy: Wahlberg 1855b:231

Apathus vestalis (Kirby): Thomson 1870:259

Syn. ref.: Løken 1984:8.

Apathus vestalis ((Fourcroy) Kirby 1802:347): [Thomson 1870:259, *aestivalis* Nylander 1848:241] Thomson 1872:46

Syn. ref.: Løken 1984:8.

Apathus vestalis (Fourcroy 1785:450): [Thomson 1870:259, 1872:46, *aestivalis* Dahlbom 1832:51 ♀, Nylander 1848:241] Smith 1876:221

Psithyrus vestalis (Fourcroy 1785:419(sic,=450)): [Thomson 1872:46, *aestivalis* Dahlbom 1832:51, Nylander 1848:241] Schmiedeknecht 1882-1884:404

Psithyrus vestalis (Fourcroy 1785:450): [Dahlbom 1832:51, Nylander 1848:241, 1852b:264, Thomson 1870:259, 1872:46] Dalla Torre 1896:573

Psithyrus vestalis Fourcroy: Aurivillius 1903a:157

Syn. ref.: Ander 1963:195, Løken 1984:8.

Psithyrus vestalis Fourcroy: Aurivillius 1903b:30

Psithyrus vestalis Fourcroy: Bengtsson 1904:124

Syn. ref.: Løken 1984:8.

Psithyrus vestalis Fourcroy: Muchardt 1904:204

Syn. ref.: Løken 1984:8.

Psithyrus vestalis Geoffroy: Jansson 1925:143

Syn. ref.: Jansson 1935:83, Løken 1984:8.

Psithyrus vestalis Fourcroy: Brehm 1930:228

Psithyrus vestalis Fourcroy: Bengtsson 1931:3

Syn. ref.: Løken 1984:8.

Psithyrus vestalis Geoffroy: Kullenberg 1958:11

Psithyrus vestalis Geoffroy: Hedström & al. 1959:2

Psithyrus vestalis Geoffroy: Hedström & al. 1961:7

Psithyrus vestalis Geoffroy: Fridén & al. 1962:18

Syn. ref.: Løken 1984:8.

Psithyrus vestalis Fourcroy: Hanson 1962:46/Tavla 39

Psithyrus vestalis Fourcroy: Hasselrot 1962:11

Syn. ref.: Løken 1984:8.

Psithyrus vestalis: Mandahl-Barth & Coulianos 1968:64/166

Psithyrus distinctus (Pérez): Palm 1948:10

Psithyrus distinctus Lepeletier: Palm 1949a:28

Psithyrus distinctus Lepeletier: Palm 1949b:13

Psithyrus distinctus: Brinck & Wingstrand 1949:24

Syn. ref.: Brinck 1951:64, Løken 1984:8.

Psithyrus distinctus Pérez: Lundblad 1955:112

***Bombus campestris* (Panzer 1801:11 (*Apis*))**

Bombus frutetorum: Fallén Coll. ♂

Syn. ref.: Dahlbom 1832:53.

Bombus saltuum: Fallén Coll. ♀

Syn. ref.: Dahlbom 1832:53.

Bombus saltuum Illiger 1806:174: Dahlbom 1832:53

Syn. ref.: Thomson 1872:45.

Bombus campestris Illiger 1806:173: Dahlbom 1832:52 ♀

Syn. ref.: Smith 1851:98, 1854:384, Dalla Torre 1896:567.

Bombus rossii Illiger 1806:165: Dahlbom 1832:40 ♂

Syn. ref.: Smith 1851:98, 1854:384, 1855:235, 1876:223, Nylander 1852a:101, Kriechbaumer 1854:177, Wahlberg 1855a:205, Schmiedeknecht 1882-1884:399, Løken 1984:18.

Apathus rossii (Kirby): Thomson 1870:260

Syn. ref.: Dalla Torre & Friese 1894:34, Friese 1895b:211, Dalla Torre 1896:567, Løken 1984:18.

Apathus rossii (Kirby 1802:331): [Thomson 1870:260] Thomson 1872:47

Syn. ref.: Smith 1876:223, Schmiedeknecht 1882-1884:399, Dalla Torre & Friese 1894:34, Friese 1895b:211, Dalla Torre 1896:567, Løken 1984:18.

Psithyrus campestris (Panzer 1801:74) var. *rossiellus* (Kirby 1802:331): [Dahlbom 1832:40] Dalla Torre 1896:568

***Bombus flavidus* Eversmann 1852:131**

Bombus campestris Illiger 1806:173: Dahlbom 1832:52 ♂

Syn. ref.: Løken 1984:28.

Bombus autumnalis Fabricius 1804:352: Zetterstedt 1838:474 ♀(sic,=♂)

Syn. ref.: Pittioni 1942:206, Løken 1984:28, Schwarz & al. 1996:175, Söderman & Vikberg 2002:59.

Bombus autumnalis (Fabricius 1793:324): [Zetterstedt 1838:474] Smith 1854:387

Apathus lissonurus Thomson 1872:49 ♂ [*autumnalis* Zetterstedt 1838:474 ♂]

Syn. ref.: Popov 1931:197, Pittioni 1942:207, Elfving 1968:55, Løken 1984:28, Vikberg 1986b:84, Janzon & al. 1991:96, Schwarz & al. 1996:175, Söderman & Vikberg 2002:59.

Psithyrus lissonurus (Thomson 1872:49): [*autumnalis* Zetterstedt 1838:474 ♂] Schmiedeknecht 1882-1884:408

Psithyrus lissonurus Thomson: Dalla Torre & Friese 1894:34

Syn. ref.: Pittioni 1942:207.

Psithyrus lissonurus (Thomson 1872:49): [*autumnalis* Zetterstedt 1838:474] Dalla Torre 1896:570

Syn. ref.: Pittioni 1942:207, Løken 1984:28.

Psithyrus lissonurus Thomson: [*autumnalis* Zetterstedt 1838:474 ♀] Friese 1902:484

Syn. ref.: Pittioni 1942:207, Løken 1984:28.

Psithyrus lissonurus Thomson: Aurivillius 1903a:157

Syn. ref.: Pittioni 1942:207, Løken 1984:28.

Psithyrus lissonurus Thomson: Aurivillius 1903b:30

Psithyrus lissonurus Thomson: Bengtsson 1904:124

Syn. ref.: Løken 1984:28.

Psithyrus lissonurus Thomson: [*autumnalis* Zetterstedt 1838:474 ♂ *partim*] Sparre Schneider 1909:159

Psithyrus lissonurus Thomson: Lundblad 1924:20

Syn. ref.: Løken 1984:28.

Psithyrus lissonurus (Thomson 1872:49): [Aurivillius 1903a:156, *autumnalis* Zetterstedt 1838:474 ♂] Richards 1928:355

Syn. ref.: Pittioni 1942:207, Løken 1984:28 .

Psithyrus lissonurus Thomson: Bengtsson 1931:3

Syn. ref.: Løken 1984:28.

Psithyrus lissonurus Thomson: Ander 1963:195

Syn. ref.: Løken 1984:28.

Psithyrus lissonurus Thomson: Ander 1965:137

Syn. ref.: Løken 1984:28.

Psithyrus lissonurus Thomson: [*autumnalis* Zetterstedt] Ander 1967:187

Syn. ref.: Løken 1984:28.

Psithyrus lissonurus Thomson: Wollin 1975:94

Syn. ref.: Løken 1984:28.

Psithyrus flavidus Eversmann var. *alpinus* Richards: Barendrecht 1941:335 ♂

Psithyrus flavidus ssp. *flavidus* m. *flavidus* (Eversmann): Pittioni 1943:40

Psithyrus flavidus ssp. *flavidus* m. *lissonurus* (Thomson): Pittioni 1943:39

Psithyrus flavidus Eversmann var. *lissonurus* Thomson: Barendrecht 1941:335 ♂

Psithyrus flavidus Eversmann *lissonurus* Thomson: Brinck 1951:63 ♀

Bombus flavidus Eversmann f. *latofasciatus* Pittioni: Brinck 1951:64 ♂

Syn. ref.: Løken 1984:28.

Bombus flavidus Eversmann f. *thomsoni* Pittioni: Brinck 1951:64 ♂

Syn. ref.: Løken 1984:28.

***Bombus norvegicus* (Sparre Schneider 1918:40 (*Psithyrus*))**

***Bombus quadricolor* (Lepelletier 1832:376 (*Psithyrus*)) *globosus* Eversmann 1852:126**

Bombus frutetorum Fabricius: Zetterstedt 1838:475 ♂

Syn. ref.: Løken 1984:23.

Psithyrus svaveolens Wahlberg 1855a:201/209

Syn. ref.: Richards 1928:347, Ander 1967:187, Løken 1984:23, Vikberg 1986b:84, Schwarz & al. 1996:183, Söderman & Vikberg 2002:59.

Psithyrus svaveolens: Wahlberg 1855b:230

Syn. ref.: Richards 1928:347, Popov 1931:193, Løken 1984:23.

Psithyrus suaveolens: Wahlberg 1857:134

Syn. ref.: Richards 1928:347.

Psithyrus suaveolens Wahlberg 1851(sic,=1855b):232: [Wahlberg 1854:206(sic,=1855a:209), 1857:134] Dalla Torre 1896:573

Psithyrus suaveolens Wahlberg: Friese 1902:484

Apathus globosus Kriechbaumer 1854:187: Thomson 1872:48

Syn. ref.: Richards 1928:347, Løken 1984:23.

Apathus globosus: Nerén 1895:95

Psithyrus globosus Eversmann 1852:126: [Thomson 1872:48] Dalla Torre 1896:569

Psithyrus globosus Eversmann: Aurivillius 1903a:157

Syn. ref.: Løken 1984:23.

Psithyrus globosus Eversmann: Aurivillius 1903b:30

Psithyrus globosus Eversmann: Muchardt 1904:204
Syn. ref.: Løken 1984:23.
Psithyrus globosus Eversmann: Ander 1965:137
Syn. ref.: Løken 1984:23.
Psithyrus globosus Eversmann: Kullenberg & al. 1970
Syn. ref.: Løken 1984:23.
Psithyrus globosus Eversmann: Bringer 1973:16
Syn. ref.: Løken 1984:23.
Psithyrus quadricolor Lepeletier var. *intercalarius* Müller 1913:122
Syn. ref.: Richards 1928:348, Løken 1984:23, Schwarz & al. 1996:183.
Psithyrus meridionalis Richards: [*globosus* Thomson] Forsius 1935:15

Bombus rupestris (Fabricius 1793:320 (*Apis*))

Bombus sylvestris (Lepeletier 1832:377 (*Psithyrus*))

Apathus quadricolor (Lepeletier): Thomson 1870:260 *partim*
Syn. ref.: Løken 1984:25.
Psithyrus quadricolor Lepeletier 1832:376: [*sylvestris* Thomson 1872:49] Schmiedeknecht 1882-1884:406
Psithyrus quadricolor Lepeletier: Handlirsch 1888:247
Psithyrus quadricolor Lepeletier 1832:376 var. *silvestris* Lepeletier 1832:376: [*silvestris* Thomson 1872:49] Dalla Torre 1896:571
Psithyrus quadricolor Lepeletier: Aurivillius 1903a:157
Syn. ref.: Ander 1963:195, Løken 1984:25.
Psithyrus quadricolor Lepeletier: Aurivillius 1903b:30
Psithyrus quadricolor Lepeletier: [*sylvestris* Thomson] Bengtsson 1904:124
Psithyrus quadricolor Lepeletier: Bengtsson 1931:3
Syn. ref.: Løken 1984:25.
Psithyrus silvestris Lepeletier var. *citrinus* Schmiedeknecht: Barendrecht 1941:335 ♂

Bombus vestalis (Geoffroy 1785:450 (*Apis*))

Subg. ***Thoracobombus*** Dalla Torre 1880:40

Bombus humilis Illiger 1806:171 ***hafsahli*** (Vogt 1909:36)

Apis n. 18 Linné 1742:124
Apis n. 1017 Linné 1746:305: [n. 18 Linné 1742:124]
Apis muscorum Linné 1758:579: [n. 1017 Linné 1746:305]
Syn. ref.: Richards 1935b:74.
Apis muscorum: [n. 18 Linné 1742:124, n. 1017 Linné 1746:305] Linné 1761:425
Apis muscorum: [Linné 1761:425] Linné 1767:960
Apis muscorum: Linné 1771:13
Apis muscorum Linné 1761:425: Villers 1789:324
Apis muscorum Linné 1761:425: Gmelin 1790:2782
Bombus muscorum Linné: Billberg 1820:111
Bombus muscorum (Linné 1767:960) var. *a*: Dahlbom 1832:46 *partim*
Syn. ref.: Løken 1973a:139.
Bombus muscorum (Linné 1767:960) var. *a* Dahlbom 1837:286 *partim*
Syn. ref.: Løken 1973a:139.
Bombus muscorum Fabricius, Linné: Zetterstedt 1838:476
Bombus muscorum (Linné 1761:425): [Dahlbom 1832:46] Nylander 1848:227
Bombus muscorum Linné: Wahlberg 1855a:201 *partim*
Syn. ref.: Løken 1973a:139.
Bombus muscorum Linné: Wahlberg 1855b:230
Bombus muscorum (Linné): Thomson 1870:252 *partim*
Syn. ref.: Løken 1973a:139, Schmiedeknecht 1878:425.
Bombus muscorum (Linné 1761:425): [Dahlbom 1832:47, Nylander 1848:227, Thomson 1870:252] Thomson 1872:28 *partim*
Syn. ref.: Løken 1973a:139, Schmiedeknecht 1878:425.
Bombus muscorum (Linné 1767:960 ♀): [Dahlbom 1832:46 ♀ var., Nylander 1848:227, Thomson 1872:28] Smith 1876:199
Bombus muscorum Linné: Aurivillius 1903a:153 *partim*
Syn. ref.: Sparre Schneider 1918:27, Løken 1973a:139.
Bombus muscorum Linné: Aurivillius 1903b:25 *partim*
Apis muscorum Linné 1767: Jackson 1913:35
Bombus senilis (Fabricius 1775:382): [*muscorum* Dahlbom 1832:47, Nylander 1848:227] Smith 1851:100
Bombus senilis (Fabricius 1775:382): [*muscorum* Dahlbom 1832:47, Nylander 1848:227] Smith 1854:386
Bombus senilis (Fabricius 1775:382): [*muscorum* Dahlbom 1832:47] Smith 1855:214
Bombus venustus Smith 1876:201: [*muscorum* Thomson 1872:28]
Bombus variabilis Schmiedeknecht 1878:424: [?*muscorum* Linné 1761:425, Dahlbom 1832:46, Nylander 1848:227, 1852b:260] Dalla Torre 1896:560

Bombus variabilis Schmiedeknecht: Bengtsson 1907:99
Syn. ref.: Løken 1973a:139.
Bombus variabilis Schmiedeknecht: Bengtsson 1908:238
Syn. ref.: Løken 1973a:139.
Bombus variabilis Schmiedeknecht: D. Gaunitz 1946:159
Bombus variabilis f. *hafsahli* Vogt: Krüger 1941:281
Syn. ref.: Løken 1973a:139.
Bombus cognatus Stephens 1846:17: [*muscorum* Dahlbom 1832:47 ♀, Thomson 1872:28] Schmiedeknecht 1882-1884:344
Bombus helferanus Seidl f. *hafsahli* Vogt 1909:36
Syn. ref.: Schwarz & al. 1996:176.
Bombus solstitialis Panzer: Sparre Schneider 1918:27
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Panzer: Erlandsson 1948:106
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Panzer: Ander 1953b:152
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Seidl: Hasselrot 1962:10
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Panzer: [*variabilis* Bengtsson] Ander 1963:190
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Panzer: Ander 1965:137
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Panzer: Fridén 1967a:70
Syn. ref.: Løken 1973a:139.
Bombus solstitialis Panzer: Fridén 1967b:84
Bombus solstitialis: Wijk 1981:5

***Bombus humilis* Illiger 1806:171 *hafsahlianus* (Vogt 1947:48)**

Bombus humilis hafsahlioides Vogt: Kruseman 1959:50
Syn. ref.: Løken 1973a:139.

Bombus muscorum* auct. (nec Linné 1758:579 ♀ (*Apis*)) *muscorum

LT: Up

Bombus laevis Vogt 1909:63
Syn. ref.: Schwarz & al. 1996:180.
Bombus ?laevis Vogt 1909: [*muscorum* Linné, auct.] Day 1979:68
Bombus smithianus White: Kruseman 1959:49
Bombus smithianus White: Ander 1965:138
Bombus smithianus White: Fridén 1967b:84

***Bombus muscorum* auct. (nec (Linné 1758:579 (*Apis*)) ? ssp. Løken 1973a:153**

LT: Dr

Bombus agrorum var. *arcticus* Dahlbom: Bengtsson 1908:242
Bombus muscorum (Linné) grex *smithianus* White ssp.: Kruseman 1964:245
Syn. ref.: Løken 1973a:153.
Bombus pascuorum (Scopoli 1793:306) *smithianus* White 1851:58: [*agrorum* var. *arcticus* Bengtsson 1908:242] Løken 1973a:153
NOTE. -**Subspecies uncertainty**- Løken (1973:153) announced the possible occurrence of a distinct subspecies from an isolated location in the province of Dalarna (4 ♀♀: Idre by, alt. 450 m). She provided no name and the material has apparently never become decisively studied.

***Bombus pascuorum* (Scopoli 1763:306 (*Apis*)) *gotlandicus* Erlandsson 1953a:78**

LT: Go

Bombus agrorum (Fabricius) var. *francillonella* Kirby: Thomson 1870:252
Syn. ref.: Ander 1963:193.
Bombus agrorum (Fabricius 1793:321) var. *c* (= *francillonella* (Kirby 1802:319)) Thomson 1872:28
Syn. ref.: Erlandsson 1953a:76, Ander 1963:193, Løken 1973a:154.
Bombus agrorum (Fabricius 1787:301) var. *francillonellus* (Kirby 1802:309): [Thomson 1872:29] Dalla Torre 1896:508
Bombus agrorum Fabricius var. *francillonellus*: Aurivillius 1903a:153
Syn. ref.: Ander 1963:193.
Bombus agrorum Fabricius var. *francillonellus*: Aurivillius 1903b:25
Bombus agrorum (Fabricius) *gotlandicus* Erlandsson: Kruseman 1958:76
Bombus agrorum (Fabricius) *gotlandicus* Erlandsson: Kruseman 1959:49

***Bombus pascuorum* (Scopoli 1763:306 (*Apis*)) *mniorum* Fabricius 1776:247**

Bombus mniorum Fabricius: Billberg 1820:111
Bombus mniorum Fabricius: [Billberg] Zetterstedt 1838:475
Bombus agrorum Fabricius 1793:321 var. *b* (= *mniorum* Fabricius 1804:350) Thomson 1972:28
Syn. ref.: Løken 1973a:154.
Bombus agrorum Fabricius var. *mniorum* Fabricius: Muchardt 1904:204
Bombus agrorum Fabricius var. *mniorum* Fabricius: Ander 1963:192

NOTE. -Subspecies addition- This subspecies was first reported from Sweden under the name *Bombus mniorum* by Billberg (1820:111), whose collection shortly thereafter became destroyed in a fire. The record was cited by Zetterstedt (1838:475). Both Muchardt (1904:204) and Ander (1963:192) reported that the bumblebee, under the name *B. agrorum* var. *mniorum*, occurred in Scania. Løken (1973a:168) mentioned that relatively dark-coated individuals of *B. pascuorum* were known from the extreme west coast of Scania but she did not evaluate if they belonged to the race *mniorum* or not. The race is widespread in nearby Denmark. A number of individuals labeled *B. pascuorum* ssp. *mniorum*, all from SW Scania (esp. the Kullaberg area), are in ZML (L. A. Nilsson pers. obs. 2001).

***Bombus pascuorum* (Scopoli 1793:306 (*Apis*)) *pallidofacies* Vogt 1911:55**

LT: Sk

Apis n. 18 Linné 1742:124

Syn. ref.: Dalla Torre 1896:504.

Apis n. 1017 Linné 1746:305

Syn. ref.: Dalla Torre 1896:504.

Bombus agrorum (Fabricius): Billberg 1820:111

Bombus agrorum (Fabricius 1793:321): Dahlbom 1832:47

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Dahlbom 1837:287

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius, Billberg: Zetterstedt 1838:476

Bombus agrorum Fabricius 1804:348: [Dahlbom 1832:47] Nylander 1848:228

Bombus agrorum Fabricius: Nylander 1852b:283

Bombus agrorum Fabricius: Wahlberg 1855a:201

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Wahlberg 1855b:231

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Wahlberg 1857:133

Bombus agrorum: Holmgren 1867:239

Bombus agrorum (Fabricius): Thomson 1870:252

Syn. ref.: Løken 1973a:154.

Bombus agrorum (Fabricius 1793:321): [Dahlbom 1832:43, Nylander 1848:228, Thomson 1870:252] Thomson 1872:28 ♀

Syn. ref.: Løken 1973a:154.

Bombus agrorum (Fabricius 1793:321): [Dahlbom 1832:43, Nylander 1848:228, Thomson 1872:6(sic.=28) ♀] Smith 1876:200

Bombus agrorum (Fabricius 1793:321): [Dahlbom 1832:47, Nylander 1848:228, Thomson 1870:252, 1872:28, *muscorum* Linné 1758:2782(sic.=579), 1761:425] Schmiedeknecht 1878:416

Bombus agrorum (Fabricius 1793:321): [Dahlbom 1832:47, Thomson 1872:28, *muscorum* Linné 1761:425 *partim*, 1767:960] Schmiedeknecht 1882-1884:341

Bombus agrorum Fabricius var. 3 Handlirsch 1888:219

Bombus agrorum Fabricius: Nerén 1892:99

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: [*muscorum* Linné, *autumnalis* Dahlbom] Dalla Torre & Friese 1895:77

Bombus agrorum Fabricius: [*muscorum* Linné, *autumnalis* Dahlbom] Friese 1895b:210

Bombus agrorum Fabricius: Aurivillius 1903a:153

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Aurivillius 1903b:25

Bombus agrorum Fabricius: Bengtsson 1903:210

Bombus agrorum Fabricius: Bengtsson 1908:245

Bombus agrorum (Fabricius): Wahlgren 1908:26

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Vogt 1919:54

Bombus agrorum Fabricius: Bengtsson 1920b:80

Bombus agrorum Fabricius: Tullgren & Wahlgren 1920-1922:589

Bombus agrorum Fabricius: D. Gaunitz 1929:197

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Brehm 1930:227

Bombus agrorum Fabricius: D. Gaunitz 1931:221

Bombus agrorum: Thorsell 1944:228

Bombus agrorum: Thorsell 1946:94

Bombus agrorum Fabricius: Åkerberg & Schwan 1947:77

Bombus agrorum: Erlandsson 1948:106

Bombus agrorum Fabricius: Palm 1948:10

Bombus agrorum Fabricius: Palm 1949a:28

Bombus agrorum: Wahlin 1951:23

Bombus agrorum Fabricius: Kullenberg 1952:6

Bombus agrorum Fabricius: Kullenberg & Nyholm 1952:5

Bombus agrorum Fabricius: Ander 1953a:58

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Ander 1953b:152

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Kullenberg 1954:2

Syn. ref.: Løken 1973a:154.

Bombus agrorum Fabricius: Lundblad 1954:57
Bombus agrorum Fabricius: Tjeder 1954:206
Syn. ref.: Løken 1973a:154.
Bombus agrorum Fabricius: Kemner 1955:89
Bombus agrorum Fabricius: Lundblad 1955:112
Bombus agrorum Fabricius: Kullenberg 1956:2
Bombus agrorum Fabricius: Kullenberg 1957:7
Bombus agrorum (Fabricius): Kruseman 1959:49
Syn. ref.: Løken 1973a:154.
Bombus agrorum: F. Nilsson 1959:12
Bombus agrorum Fabricius: Umaerus & Åkerberg 1959:157
Bombus agrorum: Bingefors & al. 1960:12
Syn. ref.: Løken 1973a:154.
Bombus agrorum (Fabricius): Fridén 1960:145
Bombus agrorum (Fabricius): Hasselrot 1960:10
Bombus agrorum (Fabricius): Fridén 1961:153
Bombus agrorum Fabricius: Hedström & al. 1961:24
Bombus agrorum: Bingefors & Eskilsson 1962:209
Bombus agrorum (Fabricius): Fridén & al. 1962:18
Syn. ref.: Løken 1973a:154.
Bombus agrorum (Fabricius): Hasselrot 1962:10
Bombus agrorum Fabricius: Hedström & al. 1962:10
Bombus agrorum Fabricius: Ander 1963:190
Syn. ref.: Løken 1973a:154.
Bombus agrorum Fabricius: Hedström & al. 1963:8
Bombus agrorum: Erlandsson 1964:208
Bombus agrorum Fabricius: Ander 1965:136
Syn. ref.: Løken 1973a:154.
Bombus agrorum (Fabricius): Fridén 1966:151
Bombus agrorum (Fabricius): Fridén 1967a:70
Syn. ref.: Løken 1973a:154.
Bombus agrorum (Fabricius): Fridén 1967b:84
Bombus agrorum (Fabricius): Fridén 1967c:98
Bombus agrorum Fabricius: Umaerus & Åkerberg 1967:9
Bombus agrorum: Mandahl-Barth & Coulianos 1968:64/166
Bombus agrorum Fabricius: Bringer 1973:17
Bombus agrorum: Sandhall & Hedqvist 1977:75
Bombus agrorum: Lagerlöf & al. 1992:120
Bombus agrorum Fabricius var. *tricuspis* Kriechbaumer: Muchardt 1904:204
Bombus agrorum f. *barcai* Vogt 1909:76
Syn. ref.: Løken 1973a:159, 1973b:248.
Bombus agrorum Fabricius *barcai* Vogt: Krüger 1928:336
Bombus agrorum Fabricius *barcai* Vogt: Krüger 1932:163
Bombus agrorum (Fabricius) *barcai* Vogt 1909: Kruseman 1958:76
Syn. ref.: Løken 1973a:155.
Bombus agrorum (Fabricius) *barcai* Vogt 1909: Kruseman 1959:49
Bombus agrorum Fabricius ssp. *barcai* Vogt: Erlandsson 1960b:129
Bombus agrorum Fabricius *barcai* Vogt 1909: Ander 1963:193
Bombus pascuorum Scopoli 1763 *barcai* Vogt 1909: Reinig 1973:15
Bombus agrorum romani: Vogt 1911:55
Syn. ref.: Ander 1963:193, Løken 1973b:249.
Bombus agrorum Fabricius *romani* Vogt: Krüger 1928:366
Bombus agrorum Fabricius var. *romani* Vogt: Krüger 1932:170
Bombus agrorum Fabricius ssp. *romani* Vogt: Barendrecht 1941:332
Bombus agrorum f. *romani* Vogt: Brinck 1951:61
Bombus agrorum f. *romani* Vogt: Ander 1963:193
Bombus agrorum f. *romani* Vogt: Ander 1965:139
Bombus pascuorum (Scopoli 1763) *romani* Vogt 1911: Reinig 1973:15
Bombus agrorum pallidofacies Vogt: Krüger 1928:368
Bombus agrorum Fabricius var. *francillonellus* Kirby: Lundblad 1924:19
Bombus curtisellus Illiger 1806:164: Dahlbom 1832:49 ♂
Syn. ref.: Løken 1973a:154.
Bombus senilis Fabricius: Billberg 1820:111
Bombus senilis Fabricius, Billberg: Zetterstedt 1838:476
Bombus senilis Fabricius 1793:382: [*muscorum* Dahlbom 1832:47, Nylander 1848:227] Smith 1854:386
Bombus muscorum (Linné 1761:425): [Linné 1767:960 ♀, *agrorum* Dahlbom 1832:48, Nylander 1848:228] Smith 1851:99
Bombus muscorum (Linné 1761:425): [Linné 1767:960 ♀, *agrorum* Dahlbom 1832:48, Nylander 1848:228] Smith 1854:386
Bombus muscorum (Linné 1761:425): [Linné 1767:960 ♀, *agrorum* Dahlbom 1832:48, Nylander 1848:228] Smith 1855:212

***Bombus pascuorum* (Scopoli 1793:306 (*Apis*)) *smithianus* White 1851:158**

Bombus arcticus: Boheman 1844:96

Syn. ref.: Løken 1973a:155.
Bombus arcticus Zetterstedt: Nylander 1852b:260
Bombus agrorum Fabricius *arcticus* Acerbi: Dalla Torre & Friese 1895:77
Bombus agrorum (Fabricius 1793:321) var. *g*: [*curtisellus* Dahlbom 1832:49 ♂, *apricus* Zetterstedt 1838:475 ♂, *arcticus* Nylander 1852b:260] Thomson 1872:28
Syn. ref.: Løken 1973a:154.
Bombus agrorum (Fabricius 1793:321) var. 5: [*curtisellus* Dahlbom 1832:49 ♂, *apricus* Zetterstedt 1838:475 ♂, *arcticus* Nylander 1852b:260] Schmiedeknecht 1882-1884:343
Bombus agrorum (Fabricius 1787:301) var. *arcticus* (Acerbi 1802:253): [*curtisellus* Dahlbom 1832:49, *apricus* Zetterstedt 1838:475] Dalla Torre 1896:507
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Aurivillius 1903a:153
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Aurivillius 1903b:25
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Bengtsson 1904:123
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Bengtsson 1908:242
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Ringdahl 1915:9
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Lundblad 1924:19
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius var. *arcticus* Dahlbom: Bengtsson 1931:1
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius ssp. *arcticus* Dahlbom: Barendrecht 1941:332
Syn. ref.: Løken 1973a:155.
Bombus agrorum arcticus Dahlbom: Brinck 1951:61
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius ssp. *arcticus* Dahlbom: [*erlandssoni* Kruseman] Ander 1963:192
Syn. ref.: Løken 1973a:155.
Bombus agrorum (Fabricius 1787:301): [*arctica* Acerbi 1802:253] Friese & Wagner 1910:35
Bombus agrorum: Brinck & Wingstrand 1949:24
Syn. ref.: Løken 1973a:154.
Bombus agrorum (Fabricius) *erlandsoni* Kruseman 1950:46
Syn. ref.: Løken 1973a:165, 1973b:248.
Bombus agrorum Fabricius *erlandssoni* Kruseman 1950: [*arcticus* Dahlbom] Erlandsson 1953a:76
Bombus agrorum (Fabricius) *erlandssoni* Kruseman 1950: Kruseman 1958:76
Syn. ref.: Løken 1973a:155.
Bombus agrorum (Fabricius) *erlandsoni* Kruseman: Kruseman 1959:49
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius ssp. *erlandssoni* Kruseman: [ssp. *arcticus* Dahlbom] Bergwall 1970:15 ♀
Bombus smithianus White 1851:158: [*agrorum* Thomson 1872:28] Smith 1876:202

***Bombus pascuorum* (Scopoli 1793:306 (*Apis*)) *sparreanus* Løken 1973a:166**

Bombus agrorum (Fabricius 1793:321) var. *d - f* Thomson 1872:28
Syn. ref.: Løken 1973a:154.
Bombus agrorum Fabricius var. 3 Handlirsch 1888:218
Syn. ref.: Sparre Schneider 1909:130.
Bombus agrorum Fabricius var. (ab.) *bicolor* Sparre Schneider 1909:130
Bombus agrorum f. *bicolor* Sparre Schneider: Brinck 1951:61
Syn. ref.: Løken 1973a:155.
Bombus agrorum (Fabricius) *bicolor* Sparre Schneider: Kruseman 1958:76
Syn. ref.: Løken 1973a:166.
Bombus agrorum (Fabricius) *bicolor* Sparre Schneider: Kruseman 1959:49
Syn. ref.: Løken 1973a:155.
Bombus agrorum f. *bicolor* Sparre Schneider: Ander 1965:139
Syn. ref.: Løken 1973a:155.
Bombus agrorum Fabricius ssp. *bicolor* Sparre Schneider: Bergwall 1970:15 ♀

Bombus ruderarius* (Müller 1776:165 (*Apis*)) *ruderarius

Bombus derhamellus Illiger 1806:169: Dahlbom 1832:44 *partim*
Syn. ref.: Løken 1973a:169.
Bombus derhamellus (Kirby): Boheman 1844:105
Syn. ref.: Løken 1973a:169.
Bombus derhamellus (Kirby 1802:363): [Dahlbom 1832:44, *raiellus* Dahlbom 1832:33, Nylander 1848:238] Smith 1851:105
Bombus derhamellus (Kirby 1802:363): [Dahlbom 1832:44, *raiellus* Dahlbom 1832:33, Nylander 1848:238] Smith 1854:395
Bombus derhamellus (Kirby 1802:363): [Dahlbom 1832:44 ♂, *raiellus* Dahlbom 1832:33, Nylander 1848:238] Smith 1855:219
Bombus derhamellus (Kirby 1802:363): [Dahlbom 1832:44, *raiellus* Dahlbom 1832:33, Nylander 1848:238, Thomson 1872:32] Smith 1876:205
Bombus derhamellus (Kirby 1802:363): [Dahlbom 1832:44, *raiellus* Dahlbom 1832:33, Nylander 1848:238, Thomson 1870:257, 1872:32] Dalla Torre 1896:516
Bombus derhamellus Kirby: Aurivillius 1903a:154

Syn. ref.: Løken 1973a:169.
Bombus derhamellus Kirby: Aurivillius 1903b:26
Bombus derhamellus Kirby: Klefbeck 1913:388
Bombus derhamellus Kirby: Wahlgren 1915:23
Syn. ref.: Løken 1973a:169.
Bombus derhamellus: Nordenström 1916:60
Bombus derhamellus: Wahlgren 1917:17
Bombus derhamellus: Lundblad 1924:25
Bombus derhamellus: D. Gaunitz 1946:159
Bombus derhamellus Kirby: Erlandsson 1949a:179
Bombus derhamellus Kirby: Erlandsson 1951:38
Bombus derhamellus Kirby: Kullenberg 1954:2
Bombus rajellus Illiger 1806:169: Dahlbom 1832:33
Syn. ref.: Løken 1973a:169.
Bombus raiellus (Kirby 1802:367): [Dahlbom 1832:33 ♀, *derhamellus* Dahlbom 1832:44] Nylander 1848:238
Bombus raiellus (Kirby 1802:367): [Dahlbom 1832:33 ♀, *derhamellus* Dahlbom 1832:44] Nylander 1852b:283
Bombus rajellus (Kirby): Thomson 1870:257
Syn. ref.: Løken 1973a:169.
Bombus rajellus (Kirby 1802:367): [Dahlbom 1832:33, Nylander 1848:238, Thomson 1870:257] Thomson 1872:32
Syn. ref.: Løken 1973a:169.
Bombus rajellus (Kirby 1802:367): [Dahlbom 1832:33, Nylander 1848:238, Thomson 1870:257, 1872:32, *derhamellus* Dahlbom 1832:44] Schmiedeknecht 1878:409
Bombus rajellus (Kirby 1802:367): [Dahlbom 1832:33, Nylander 1848:238, Thomson 1872:32, *derhamellus* Dahlbom 1832:44] Schmiedeknecht 1882-1884:330
Bombus silvarum var. *nigrescens* Pérez: Thomson Coll. ♂
Syn. ref.: D. Gaunitz 1931:222.

Bombus sylvarum* (Linné 1761:425 ♀ (*Apis*)) *sylvarum

LT: Up

Bombus derhamellus Illiger 1806:169: Dahlbom 1832:44 *partim*
Syn. ref.: Løken 1973a:172.
Bombus sylvarum (Linné 1761:425) var. *b* Thomson 1872:30
Syn. ref.: Løken 1973a:172.
Bombus silvarum var. *nigrescens* Pérez: D. Gaunitz 1931:221
Syn. ref.: Løken 1973a:172.
Bombus silvarum var. *nigrescens* Pérez: Reinig 1939:184
Bombus silvarum var. *nigrescens* Pérez: D. Gaunitz 1946:159
Bombus sylvarum Linné var. *nigrescens* Schmiedeknecht: Erlandsson 1951:38
Bombus sylvarum Linné var. *nigrescens* Pérez: Erlandsson 1960b:130
Syn. ref.: Løken 1973a:172.
Bombus silvarum Linné f. *nigrescens* Pérez: Ander 1963:190
Syn. ref.: Løken 1973a:172.
Bombus cullumanus Kirby: Thomson Coll. ♀
Syn. ref.: D. Gaunitz 1931:222.

***Bombus veteranus* (Fabricius 1793:324 (*Apis*))**

Bombus equestris: Quenzel 1802:252
Bombus equestris Fabricius: Billberg 1820:111
Bombus equestris Fabricius, Billberg: Zetterstedt 1838:475
Bombus equestris (Fabricius): Thomson 1870:257
Syn. ref.: Løken 1973a:179.
Bombus equestris Drewsen & Schiödte 1837: [*arenicola* Thomson 1872] Dalla Torre 1882:24
Bombus equestris Fabricius: Vogt 1911:53
Bombus equestris Fabricius: [*arenicola* Thomson] Forsius & Nordström 1921:75
Bombus equestris Fabricius: [*arenicola* Thomson] Schmiedeknecht 1930:856
Bombus equestris Fabricius: [*arenicola* Thomson] D. Gaunitz 1931:221
Bombus equestris Fabricius: [*arenicola* Thomson] Forsius 1935:15
Bombus equestris: Åkerberg & Schwan 1947:77
Bombus equestris: Wahlin 1951:23
Bombus equestris (Fabricius): Kruseman 1959:50
Syn. ref.: Løken 1973a:179.
Bombus equestris (Fabricius): [*arenicola* Thomson] Elfving 1960:24
Bombus equestris Fabricius: Erlandsson 1960b:130
Syn. ref.: Løken 1973a:179.
Bombus equestris Fabricius: Hasselrot 1962:11
Syn. ref.: Løken 1973a:179.
Bombus equestris Fabricius: [*arenicola* Thomson] Ander 1963:189
Syn. ref.: Løken 1973a:179.
Bombus equestris Fabricius: [*arenicola* Thomson] Ander 1965:137
Syn. ref.: Løken 1973a:179.
Bombus equestris (Fabricius): [*arenicola* Thomson] Elfving 1968:57

Bombus autumnalis (Fabricius 1793:324): Dahlbom 1832:45
Syn. ref.: Løken 1973a:179.
Bombus arenicola Thomson 1872:31: [*autumnalis* Dahlbom 1832:45, *equestris* Thomson 1870:257]
Syn. ref.: Schenck 1875:328, Løken 1966a:201, 1973a:179, Ander 1967:186, Vikberg 1986b:84, Janzon & al. 1991:96, Schwarz & al. 1996:189, Söderman & Vikberg 2002:59.
Bombus arenicola Thomson 1872:31: [*autumnalis* Dahlbom 1832:45, *equestris* Thomson 1870:251(sic.=257)]
 Schmiedeknecht 1878:415
Bombus arenicola Thomson 1872:31: [*autumnalis* Dahlbom 1832:45, *equestris* Thomson 1870:257] Dalla Torre 1896:511
Bombus arenicola Thomson: Aurivillius 1903a:154
Syn. ref.: Løken 1973a:179.
Bombus arenicola Thomson: Aurivillius 1903b:26
Bombus arenicola Thomson: Muchardt 1904:204
Syn. ref.: Løken 1973a:179.
Bombus pomorum Panzer: [*equestris* Thomson] Dalla Torre 1882:24
Bombus pomorum Panzer 1805:18: [*equestris* Thomson 1872:31] Schmiedeknecht 1882-1884:357
Bombus pomorum Panzer: [*equestris* Thomson] Friese 1895b:210
Bombus pomorum Panzer: [*equestris* Thomson] Dalla Torre & Friese 1895:79
Bombus silvarum Linné ssp. *equestris* Fabricius: [*arenicola* Thomson] Alfken 1912a:78
Bombus silvarum Linné ssp. *equestris* Fabricius: [*arenicola* Thomson] Alfken 1913:129

Subg. **Megabombus** Dalla Torre 1880:40

Bombus consobrinus Dahlbom 1832:49 ***consobrinus***

LT: Lu Lpm

Bombus hortorum var. *consobrinus* Dahlbom 1832:49: [Thomson 1872:23] Schmiedeknecht 1882-1884:278
Syn. ref.: Dalla Torre 1896:515.
Bombus hortorum Linné var. *consobrinus* Dahlbom: Dalla Torre & Friese 1895:78
Bombus hortorum (Linné 1761:424): [*consobrinus* Dahlbom 1832:49 ♀] Friese & Wagner 1910:43
Bombus gerstaeckeri Morawitz: Bengtsson 1904:125
Bombus gerstaeckeri Morawitz: Bengtsson 1907:99
Bombus consobrinus Dahlbom 1832:49 *sahlbergi* Skorikov f. typ. : Brinck 1951:60
Syn. ref.: Løken 1966b:203, 1973:119.
Bombus consobrinus Dahlbom 1832:49 *sahlbergi* Skorikov *norvegica* Skorikov: Brinck 1951:60
Syn. ref.: Løken 1973a:120.

Bombus hortorum (Linné 1761:424 ♀ (*Apis*)) ***hortorum***

LT: Up

Bombus ruderatus Fabricius: Billberg 1820:111
Syn. ref.: Dahlbom 1832:38.
Bombus hortorum (Linné 1761:424) var. c Thomson 1872:24
Syn. ref.: Løken 1973a:125.
Bombus hortorum (Linné 1761:424) var. *nigricans* Schmiedeknecht 1878:369 [*hortorum* var. *i* Thomson 1872:24]
Syn. ref.: Schwarz & al. 1996:176.
Bombus hortorum Linné var. *nigricans*: Aurivillius 1903a:150
Bombus hortorum Linné var. *nigricans*: Aurivillius 1903b:22
Bombus hortorum Linné var. *nigrescens* Schmiedeknecht: Erlandsson 1960b:129

Bombus ruderatus (Fabricius 1775:380 (*Apis*)) ***eurynotus*** Vogt 1909:60/74

Bombus hortorum (Linné 1767:960): Dahlbom 1832:38 *partim*
Syn. ref.: Schmiedeknecht 1878:362, Løken 1973a:135.
Bombus hortorum: Dahlbom 1837:284 *partim*
Syn. ref.: Løken 1973a:135.
Bombus hortorum (Linné 1767:960): [*ruderatus* Thomson 1872:25] Schmiedeknecht 1882-1884:293
Bombus hortorum Linné f. *ruderatus* Fabricius: Muchardt 1904:204

Subg. **Rhodobombus** Dalla Torre 1880:40

Bombus pomorum (Panzer 1805:18 (*Bremus*))

NOTE. -Species addition- Løken (1973a:189) reported this species (det. S. Bengtsson, and G. Kruseman) from Sweden (1 worker: Östergötland, Åtvidaberg, vid sjöstranden 12 VII 1911, leg. H. Nordenström). No further Swedish records are known. The species was not listed in Gärdenfors (2000).

Subg. **Kallobombus** Dalla Torre 1880:40

Bombus soroensis (Fabricius 1776:246 (*Apis*)) ***soroensis***

Bombus virginalis Illiger 1806:167: Dahlbom 1832:35
Syn. ref.: Løken 1973a:31.
Bombus virginalis (Kirby 1802:349): [Dahlbom 1832:35] Nylander 1848:233
Bombus lucorum (Linné 1761:425): [*virginalis* Dahlbom 1832:35, Nylander 1848:233] Smith 1851:101
Bombus lucorum (Linné 1761:425): [*virginalis* Dahlbom 1832:35, Nylander 1848:233] Smith 1854:390

Bombus lucorum (Linné 1761:425): [*virginialis* Dahlbom 1832:35, Nylander 1848:233] Schmiedeknecht 1882-1884:379
Bombus subterranea (Linné 1761:425): [*soroensis* Zetterstedt 1838:473 ♀, Dahlbom 1832:38, Nylander 1848:239 ♀] Smith 1851:102
Bombus terrestris: Fallén Coll. ♀
Syn. ref.: Dahlbom 1832:35.
Bombus terrestris (Linné 1767:960 ♀): [*virginialis* Dahlbom 1832:35, Nylander 1848:233] Schmiedeknecht 1878:356
Bombus terrestris (Linné 1758:578) var. *audax* (Harris 1776:130): [*virginialis* Dahlbom 1832:35, Nylander 1848:233] Dalla Torre 1896:556
Bombus burellanus Illiger 1806:167: Dahlbom 1832:43
Syn. ref.: Nylander 1848:240, Smith 1855:227.
Bombus soroensis (Fabricius) var. *collinus* Smith: Thomson 1870:254 ♂
Bombus soroensis Fabricius var. *b*: Billberg 1820:111
Bombus soroensis Fabricius var. *proteus* Gerstaecker: Muchardt 1904:204
Bombus soröensis Fabricius var. *proteus* Gerstaecker: Sparre Schneider 1918:13
Bombus soröensis Fabricius var. *proteus*: D. Gaunitz 1931:224
Bombus soroënsis Fabricius ssp. *proteus* Gerstaecker: Erlandsson 1950:22
Syn. ref.: Løken 1973a:32.
Bombus soroënsis Fabricius var. *tricolor* Friese 1909:674 ♀
Bombus soroënsis Fabricius var. *tricolor* Friese: Friese & Wagner 1910:50
Bombus soroënsis Fabricius var. *bipunctatus* Friese & Wagner 1910:49
Syn. ref.: Løken 1973a:32.
Bombus soroënsis Fabricius ssp. *soroënsis* var. *bipunctatus* Friese & Wagner: Erlandsson 1950:24
Syn. ref.: Løken 1973a:32.
Bombus soröensis Fabricius var. *laetus* Schmiedeknecht: Sparre Schneider 1918:13
Syn. ref.: Løken 1973a:32.
Bombus soroënsis Fabricius ssp. *soroënsis* var. *laetus* Schmiedeknecht: Erlandsson 1950:24
Syn. ref.: Løken 1973a:32.
Bombus soroënsis Fabricius ssp. *soroënsis* var. *rarus* Friese & Wagner: Erlandsson 1950:24
Syn. ref.: Løken 1973a:32.

Subg. *Alpinobombus* Skorikov 1914a:122

Bombus alpinus (Linné 1758:579 ♀ (*Apis*))

LT: Lu Lpm

Apis n. 12 Linné 1742:124
Syn. ref.: Linné 1761:425, Dalla Torre 1896:509.
Apis n. 1016 Linné 1746:304
Syn. ref.: Linné 1758:579, 1761:425, Dalla Torre 1896:509.
Bombus alpina Linné var. *b* Billberg 1820:111

Bombus balteatus Dahlbom 1832:36 *balteatus*

Bombus nivalis Dahlbom 1832:40 ♀
Syn. ref.: Aurivillius 1890:28, Richards 1931:14, Pittioni 1942:179, Elfving 1960:32, 1968:62, Ander 1967:184, Løken 1973:105, Vikberg 1986b:84, Janzon & al. 1991:96, Söderman & Vikberg 2002:59.
Bombus nivalis: Dahlbom 1837:281
Syn. ref.: Løken 1973a:105.
Bombus nivalis: Zetterstedt 1838:474 ♀
Syn. ref.: Pittioni 1942:179, Ander 1967:185, Løken 1973:105.
Bombus nivalis: Boheman 1844:102
Syn. ref.: Løken 1973a:105.
Bombus nivalis Zetterstedt 1838:474: [Dahlbom 1832:40 ♀, ?*balteatus* Dahlbom 1832:36] Nylander 1848:234 ♀
Syn. ref.: Løken 1973a:105.
Bombus nivalis Zetterstedt: [*balteatus* Dahlbom, *tricolor* Zetterstedt, Dahlbom] Nylander 1852b:262
Bombus nivalis Dahlbom 1832:40 ♀: [Zetterstedt 1838:474, Nylander 1848:234] Smith 1854:393
Bombus nivalis Dahlbom 1832:40 ♀: [Zetterstedt 1838:474, Nylander 1848:234, *balteatus* Dahlbom 1832:36, *tricolor* Dahlbom 1832:40, Zetterstedt 1838:474] Smith 1855:222
Bombus nivalis Zetterstedt, Dahlbom: [*balteatus* Dahlbom ♀, *tricolor* Zetterstedt, Dahlbom] Wahlberg 1855a:201
Syn. ref.: Løken 1973a:105.
Bombus nivalis Dahlbom: Wahlberg 1855b:230
Syn. ref.: Løken 1973a:105.
Bombus nivalis Dahlbom: Boheman 1857:22
Bombus nivalis Dahlbom: Wahlberg 1857:133
Bombus nivalis (Dahlbom): Thomson 1870:258
Syn. ref.: Richards 1931:14, Pittioni 1942:179, Løken 1973a:105.
Bombus nivalis (Dahlbom 1832:40): [Dahlbom 1832:40, Zetterstedt 1838:474, Nylander 1848:234, Thomson 1870:258, *tricolor* Dahlbom 1832:40 ♂, *balteatus* Dahlbom 1832:36] Thomson 1872:35
Syn. ref.: Pittioni 1942:179, Løken 1973a:105.
Bombus nivalis Dahlbom 1832:40 ♀: [Zetterstedt 1838:474, Nylander 1848:234 ♀, Thomson 1872:35, *balteatus* Dahlbom 1832:36 ♀] Smith 1876:210
Bombus nivalis Dahlbom 1832:40: [Zetterstedt 1838:474, Nylander 1848:234, Thomson 1872:35, *tricolor* Dahlbom 1832:40 ♂, *balteatus* Dahlbom 1832:36] Schmiedeknecht 1882-1884:309

Bombus nivalis Dahlbom: Handlirsch 1888:215
Bombus nivalis Dahlbom: [*tricolor* Dahlbom, *balteatus* Dahlbom] Dalla Torre & Friese 1895:79
Bombus nivalis Dahlbom: Bengtsson 1908:242
Syn. ref.: Løken 1973a:105.
Bombus tricolor Dahlbom 1832:41 ♂
Syn. ref.: Pittioni 1942:179, Ander 1967:185, Løken 1973:105.
Bombus tricolor: Zetterstedt 1838:474 ♂
Syn. ref.: Richards 1931:14, Pittioni 1942:179, Ander 1967:185, Løken 1973:105 .
Bombus tricolor Dahlbom 1832:40 (?var. *nivalis*): [Zetterstedt 1838:474] Smith 1854:394
Syn. ref.: Pittioni 1942:179.
Bombus tricolor Zetterstedt 1838:474 ♀: Dalla Torre 1896:559
Bombus kirbyellus Curtis 1831:lxii: [*balteatus*, *tricolor* Dahlbom 1832:41 *nivalis* Dahlbom 1832:40, Zetterstedt 1838:474, Nylander 1848:234, Thomson 1870:258, 1872:35] Dalla Torre 1896:527
Syn. ref.: Richards 1931:14, Pittioni 1942:179.
Bombus kirbyellus Curtis: [*nivalis* Zetterstedt 1838:474] Friese 1902:485 *partim*
Syn. ref.: Richards 1931:14 *partim*, Pittioni 1942:179.
Bombus kirbyellus Curtis: Aurivillius 1903a:154
Syn. ref.: Richards 1931:14, Pittioni 1942:179, Løken 1973a:105.
Bombus kirbyellus Curtis: Aurivillius 1903b:26
Bombus kirbyellus Curtis: Bengtsson 1904:123
Syn. ref.: Løken 1973a:105.
Bombus kirbyellus Curtis: [*nivalis*, *tricolor* Zetterstedt 1838:474] Sparre Schneider 1909:143
Syn. ref.: Løken 1973a:105.
Bombus kirbyellus Curtis 1831:62: [*balteatus* Dahlbom 1832:36 ♀, *tricolor* Dahlbom 1832:41 ♂, *nivalis* Zetterstedt 1838:474 ♀]
 Friese & Wagner 1912:163
Syn. ref.: Richards 1931:14, Pittioni 1942:179, Løken 1973a:105.
Bombus kirbyellus Curtis: Ringdahl 1915:9
Syn. ref.: Løken 1973a:105.
Bombus kirbyellus Kirby: [*nivalis* Dahlbom] Forsius & Nordström 1921:75
Syn. ref.: Richards 1931:14, Pittioni 1942:179.
Bombus kirbyellus: Forsslund 1929:98
Syn. ref.: Løken 1973a:105.
Bombus kirbyellus Curtis: D. Gaunitz 1929:198
Syn. ref.: Løken 1973a:105.
Bombus kirbyellus Curtis: Bengtsson 1931:2
Syn. ref.: Løken 1973a:105.
Bombus kirbyellus: Hasselrot 1960:18
Bombus balteatus ssp. *balteatus* m. *nivalis* (Dahlbom): Pittioni 1942: 180
Bombus balteatus ssp. *balteatus* m. *nivalis* (Dahlbom): Pittioni 1943:4
Bombus balteatus ssp. *balteatus* m. *nivalis* f. *pleurparvoanalis* Pittioni 1943:4
Bombus balteatus ssp. *balteatus* m. *nivalis* f. *pleuronivalis* Pittioni 1943:4
Bombus balteatus ssp. *balteatus* m. *nivalis* f. *nivalis* (Dahlbom): Pittioni 1943:4
Bombus balteatus Dahlbom f. *nivalis* Dahlbom: Brinck 1951:63
Syn. ref.: Løken 1973a:105.
Bombus balteatus ssp. *balteatus* m. *balteatus* Dahlbom: Pittioni 1943:5
Bombus balteatus ssp. *balteatus* m. *balteatus* f. *tricolor* Dahlbom: Pittioni 1942:181
Bombus balteatus ssp. *balteatus* m. *balteatus* f. *tricolor* Dahlbom: Pittioni 1943:3
Bombus balteatus ssp. *balteatus* m. *balteatus* f. *balteatus* Dahlbom: Pittioni 1943:3

***Bombus hyperboreus* Schönherr 1809:57**

Apis arctica Quenzel 1802:253
Syn. ref.: Dahlbom 1832:42, Dalla Torre & Friese 1895:78, Løken 1973a:114, Williams 1998:110.

***Bombus polaris* Curtis 1835:lxiii**

Bombus alpinus Fabricius: Dahlbom 1832:32 *partim*
Bombus alpinus (Linné 1761:425): Zetterstedt 1838:472 *partim*
Bombus alpinus (Linné 1761:425) var. Thomson 1872:36 ♂
Bombus alpinus var. *diabolicus* Friese 1911:571
Bombus balteatus var. *kirbiellus* Curtis: Aurivillius 1890:28
Bombus alpiniformis (Richards 1927 ♂): Pittioni 1938:254
Bombus alpiniformis (Richards): Pittioni 1942:175
Bombus alpiniformis Richards: Erlandsson 1949a:178
Bombus polaris alpiniformis Richards: Kruseman 1959:50
Bombus polaris alpiniformis Richards: Ander 1965:138
Bombus arcticus Kirby ssp. *alpiniformis* Richards: Bergwall 1970:15
Bombus arcticus diabolicus Friese 1911: [soroensis Fabricius 1804:345 ♀] Løken 1966a:200
Bombus arcticus Kirby 1821:ccxvi *diabolicus* Friese 1911:571: Løken 1973a:101

Subg. ***Subterraneobombus* Vogt 1911:62**

Bombus distinguendus Morawitz 1869:32

Bombus pratorum Fabricius: Billberg 1820:111

Syn. ref.: Dahlbom 1832:46.

Bombus pratorum Fabricius: Zetterstedt 1838:475

Syn. ref.: Løken 1973a:182.

Bombus fragrans Illiger 1806:165: Dahlbom 1832:46 ♀

Syn. ref.: Thomson 1872:26, Schmiedeknecht 1882-1884:301, Dalla Torre 1896:517, Løken 1973a:182.

Bombus fragrans Illiger: Dahlbom 1837:285

Bombus fragrans (Kirby 1802:329): [Dahlbom 1832:46]: Nylander 1848:229

Syn. ref.: Thomson 1872:26, Schmiedeknecht 1882-1884:301, Dalla Torre 1896:517.

Bombus fragrans (Pallas 1771:474): [Dahlbom 1832:46, Nylander 1848:229] Smith 1851:100

Bombus fragrans (Kirby): Nylander 1852b:283

Bombus fragrans (Pallas 1771:474): [Dahlbom 1832:46, Nylander 1848:229] Smith 1854:388

Bombus fragrans (Pallas 1771:474): [Dahlbom 1832:46, Nylander 1848:229] Smith 1855:216

Syn. ref.: Schmiedeknecht 1882-1884:301.

Bombus fragrans (Kirby): Wahlberg 1855a:207

Syn. ref.: Løken 1973a:182.

Bombus fragrans (Kirby): Wahlberg 1855b:231

Bombus fragrans (Kirby): Wahlberg 1857:133

Bombus fragrans (Kirby): Thomson 1870:251

Syn. ref.: Thomson 1872:26, Dalla Torre 1896:517, Løken 1973a:182.

Bombus elegans Seidl 1873:335: [*fragrans* Dahlbom 1832:46 ♀, Nylander 1848:229, Thomson 1870:251, *distinguendus* Thomson 1872:26] Smith 1876:202

Syn. ref.: Saunders 1884:234.

Bombus elegans Seidl 1838:67: [*fragrans* Dahlbom 1832:46 ♀, Nylander 1848:229, Thomson 1870:251, *distinguendus* Thomson 1872:26] Schmiedeknecht 1878:376

Bombus subterraneus (Linné 1758:579 ♀ (*Apis*)) *subterraneus*

LT: Up

Apis n. 14 Linné 1742:124

Syn. ref.: Linné 1761:425, Dalla Torre 1896:551.

Apis n. 15 Linné 1742:124

Syn. ref.: Dalla Torre 1896:253.

Apis n. 1013 Linné 1746:304

Syn. ref.: Dalla Torre 1896:253.

Apis n. 1014 Linné 1746:304

Syn. ref.: Linné 1758:579, 1761:425, Dalla Torre 1896:551.

Apis acervorum Linné 1758:579 ♀: [n. 1013 Linné 1746:304]

Syn. ref.: Dahlbom 1832:33, Thomson 1870:252, Løken 1973a:186, Day 1979:48, Vikberg 1986b:84, Söderman & Vikberg 2002:59.

Apis acervorum: [n. 15 Linné 1742:124, n. 1013 Linné 1746:304] Linné 1761:425

Syn. ref.: Thomson 1872:26.

Apis acervorum: [Linné 1761:425] Linné 1767:961

Apis acervorum: Linné 1771:13

Apis acervorum Linné 1761:425: Villers 1789:325

Apis acervorum Linné 1761:425: Gmelin 1790:2783

Podalirius acervorum (Linné 1758:579): [Linné 1742:124, 1746:304, 1761:425, 1767:961, Villers 1789:325, Gmelin 1790:2783] Dalla Torre 1896:253

Podalirius acervorum (Linné 1758:579): [Linné 1761:425, 1767:961] Friese 1897c:264

Podalirius acervorum Linné: [Linné] Aurivillius 1903a:160

Podalirius acervorum Linné: [Linné] Aurivillius 1903b:32

Podalirius acervorum Linné 1767: [Linné] Jackson 1913:36

Bombus latreillellus (Kirby 1802:330): Dahlbom 1832:39 ♂

Syn. ref.: Thomson 1872:26, Smith 1876:216, Dalla Torre 1896:551, Løken 1973a:186.

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39] Nylander 1848:234 ♂

Syn. ref.: Thomson 1872:26, Smith 1876:216, Dalla Torre 1896:551.

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39 ♂, Nylander 1848:234] Smith 1851:103

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39, Nylander 1848:234] Smith 1854:389

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39 ♂, Nylander 1848:234 ♂, 1852b:261] Smith 1855:231

Bombus latreillellus (Kirby): Wahlberg 1855a:201

Syn. ref.: Løken 1973a:186.

Bombus latreillellus (Kirby): Wahlberg 1855b:231

Bombus latreillellus (Kirby): Wahlberg 1857:133

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39 ♂, Nylander 1848:234 ♂] Smith 1876:216

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39 ♂, Nylander 1848:234 ♂, 1852b:261 ♂, *?acervorum* Linné 1761:425, *?subterraneus* Linné 1761:425, *subterraneus* Dahlbom 1832:32 *partim*, Thomson 1872:26, *soroënsis* Dahlbom 1832:38] Schmiedeknecht 1878:370

Bombus latreillellus (Kirby 1802:330): [Dahlbom 1832:39 ♂, Nylander 1848:234 ♂, *subterraneus* Dahlbom 1832:32 *partim*, Thomson 1872:26, *soroënsis* Dahlbom 1832:38] Schmiedeknecht 1882-1884:297

Bombus latreillellus Kirby 1802:330: [*subterraneus* Thomson] Saunders 1884:235

Bombus subterraneus Linné var. *latreillellus*: Aurivillius 1903a:153

Bombus subterraneus Linné var. *latreillellus*: Aurivillius 1903b:25
Bombus subterraneus Linné var. *latreillellus*: Kirby: Tjeder 1954:206
Bombus rupestris: Fallén Coll. ♂♀
Syn. ref.: Dahlbom 1832:33.
Bombus soroensis (Fabricius 1793:318): Dahlbom 1832:38 ♀
Syn. ref.: Nylander 1848:239, Thomson 1872:26, Schmiedeknecht 1878:394.
Bombus soroensis (Fabricius 1804:345) var. Zetterstedt 1838: 473 ♀
Syn. ref.: Nylander 1848:239, Smith 1851:102, 1876:217.
Bombus subterraneus var. *borealis* Schmiedeknecht: Sparre Schneider 1918:29
Bombus subterreanus f. *borealis* Schmiedeknecht: Reinig 1973:16

Subg. *Alpigenobombus* (Skorikov 1914a:128)

Bombus wurflenii Radoszkowski 1859:482 ***brevigena*** Thomson (1870:255)

Bombus brevigena Thomson 1870:255

Syn. ref.: Friese & Wagner 1910:25, 1912:180, Ander 1963:194, 1967:186, Løken 1973a:25, Vikberg 1986b:84, Janzon & al. 1991:96, Schwarz & al. 1996:189.

Bombus brevigena Thomson 1870:255: [*mastrucatus* Gerstaecker 1869:326] Thomson 1872:42

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker 1869:326: [*brevigena* Thomson 1870:255, 1872:42] Schmiedeknecht 1878:400

Bombus mastrucatus Gerstaecker: [*brevigena* Thomson] Dalla Torre 1880:41

Bombus mastrucatus Gerstaecker 1869:326: [*brevigena* Thomson 1872:42] Schmiedeknecht 1882-1884:372

Bombus mastrucatus Gerstaecker: [*brevigena* Thomson] Dalla Torre & Friese 1895:78

Bombus mastrucatus Gerstaecker: [*brevigena* Thomson] Friese 1895b:210

Bombus mastrucatus Gerstaecker 1869:326: [*brevigena* Thomson 1870:255, 1872:42] Dalla Torre 1896:532

Bombus mastrucatus Gerstaecker: Aurivillius 1903a:155

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: Aurivillius 1903b:27

Bombus mastrucatus Gerstaecker: Bengtsson 1904:123

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: Bengtsson 1908:242

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: Sparre Schneider 1909:142

Bombus mastrucatus Gerstaecker: Ringdahl 1915:9

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: D. Gaunitz 1929:198

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: [*brevigena* Thomson] Schmiedeknecht 1930:852

Bombus mastrucatus Gerstaecker: Åkerberg & Schwan 1947:77

Bombus mastrucatus Gerstaecker: Brinck 1951:61

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: Kruseman 1959:50

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: Elfving 1960:28

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Lefebvre: Ander 1963:191

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker: Ander 1965:137

Syn. ref.: Løken 1973a:25.

Bombus mastrucatus Gerstaecker f. *kriechbaumeri* Pittioni: Brinck 1951:61 ♀

Bombus mastrucatus Gerstaecker f. *subtypicus* Pittioni: Brinck 1951:61 ♀

Bombus lefebvrei Lepeletier 1836: [*brevigena* Thomson 1870] Dalla Torre 1882:16

Bombus lefebvrei: Brinck & Wingstrand 1949:24

Syn. ref.: Brinck 1951:61, Løken 1973a:25.

NOTE. -Subspecies reclassification- This Scandinavian bumblebee was first described as the new species *Bombus brevigena* by Thomson (1870:255). His taxon was soon considered a junior synonym of *B. mastrucatus* (Dalla Torre 1880:41). Løken (1973a:25) treated it as a subspecies, viz. *B. wurflenii* ssp. *mastrucatus*. However, Reinig & Rasmont (1988:37) expressed the opinion that the Scandinavian population was best treated as a race disjunct from populations in the Alps. According to P. Rasmont (pers. comm. 2002), the name *brevigena* should be conserved for the Scandinavian population due to distinct coat traits.

Subg. *Pyrobombus* Dalla Torre 1880:40

Bombus cingulatus Wahlberg 1855a:208

LT: Nb

Bombus hypnorum (Linné 1761:425) var. *c* Thomson 1872:40 ♀

Syn. ref.: Thomson 1872:40, Løken 1973a:61.

Bombus hypnorum (Linné 1767:960) var. *cingulatus* Wahlberg 1857:134: Schmiedeknecht 1882-1884:275/329

Syn. ref.: Reinig 1937a:131.

Bombus hypnorum Linné var. *cingulatus* Wahlberg: Dalla Torre & Friese 1895:78

Bombus hypnorum (Linné 1758:579) var. *cingulatus* Wahlberg 1854:210(sic,=208): Dalla Torre 1896:526
Syn. ref.: Reining 1937a:131.
Bombus hypnorum Linné var. *cingulatus* Wahlberg 1855:210(sic,=208): Friese 1902:485
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus*: Aurivillius 1903a:155
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus*: Aurivillius 1903b:27
Bombus hypnorum Linné var. *cingulatus* Wahlberg: Bengtsson 1903:205
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus* Wahlberg: Bengtsson 1904:124
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné ab. *cingulatus* Wahlberg: Sparre Schneider 1909:137
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus* Wahlberg: Friese & Wagner 1910:37
Syn. ref.: Reining 1937a:131.
Bombus hypnorum Linné var. *cingulatus* Wahlberg: Friese & Wagner 1912:191
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus*: Ringdahl 1915:9
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus*: Krüger 1920:370
Bombus hypnorum Linné var. *cingulatus*: Wahlberg: Forsius & Nordström 1921:75
Bombus hypnorum Linné var. *cingulatus* Wahlberg: Lundblad 1924:19
Syn. ref.: Løken 1973a:61.
Bombus hypnorum Linné var. *cingulatus* Wahlberg: Forsius 1935:15

Bombus hypnorum* (Linné 1758:579 ♀ (*Apis*)) *hypnorum

LT: Up

Apis n. 17 Linné 1742:124
Syn. ref.: Linné 1761:425, Dalla Torre 1896:524.
Apis n. 1018 Linné 1746:305
Syn. ref.: Linné 1758:579, 1761:425, Dalla Torre 1896:524.
Apis rupestris Fabricius 1794:460 ♀
Syn. ref.: Warncke 1986:110, Schwarz & al. 1996:177.
Apis aprica Fabricius 1798:273
Syn. ref.: Dahlbom 1832:50, Dalla Torre 1880:41, Schmiedeknecht 1878:78, 1882-1884:328, Dalla Torre & Friese 1895:78, Friese 1895b:210, Dalla Torre 1896:524-5, Friese & Wagner 1910:37, Løken 1966a, 1973:64, Warncke 1986:90, Schwarz & al. 1996:177, Söderman & Vikberg 2002:59.
Bombus apricus (Fabricius 1798:273): Fabricius 1804:348
Syn. ref.: Dahlbom 1832:50, Nylander 1848:228, Smith 1854:388, Thomson 1872:40, Schmiedeknecht 1878:384, 1882-1884:328, Dalla Torre 1880:41, Dalla Torre & Friese 1895:78, Friese 1895b:210.
Bombus apricus Fabricius: Billberg 1820:111
Syn. ref.: Dahlbom 1832:50.
Bombus apricus Fabricius 1804:348: Zetterstedt 1838:475
Syn. ref.: Nylander 1848:228, Smith 1854:388, Thomson 1872:40, Schmiedeknecht 1878:384, 1882-1884:328, Dalla Torre 1896:525, Friese 1902:485, Sparre Schneider 1909:135, Løken 1973a:64.
Bombus hypnorum Linné var. *a* Bengtsson 1903:205 ♀
Bombus hypnorum Linné var. *b* Bengtsson 1903:206
Bombus hypnorum Linné var. *c* Bengtsson 1903:206
Bombus hypnorum Linné var. *d* = *calidus* Erichson 1851:65: Bengtsson 1903:206 ♂
Bombus hypnorum Linné f. *calidus* Erichson: Ander 1963:194
Bombus hypnorum Linné var. *frigidus* Friese 1905:520
Syn. ref.: Løken 1973a:64.
Bombus hypnorum (Linné) var. *frigidus* Friese: Friese & Wagner 1910:57
Bombus hypnorum var. *hiemalis* Friese 1911:684 [var. *frigidus* Friese 1905]
Syn. ref.: Løken 1973a:64.

***Bombus jonellus* (Kirby 1802:338 (*Apis*)) *subborealis* Richards 1933:64**

LT: Nb

Bombus scrimshiranus Illiger 1806:166: Dahlbom 1832:39 ♀
Syn. ref.: Smith 1876:209, Schmiedeknecht 1882-1884:323, Dalla Torre 1896:526, Forsius & Nordström 1921:75, Løken 1973a:69.
Bombus scrimshiranus: Boheman 1844:96
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus (Kirby 1802:342): [Dahlbom 1832:39, *lucorum* Dahlbom 1832:42 ♂] Nylander 1848:232
Syn. ref.: Smith 1876:209, Dalla Torre 1896:526.
Bombus scrimshiranus (Kirby 1802:342): [Dahlbom 1832:39, Nylander 1848:232, *?jonellus* Dahlbom 1832:43 ♂] Smith 1851:102
Bombus scrimshiranus (Kirby): Nylander 1852b:283
Bombus scrimshiranus: Wahlberg 1853:185
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus (Kirby 1802:342): [Dahlbom 1832:39 ♂ ♀, Nylander 1848:232 ♂ ♀, *?jonellus* Dahlbom 1832:43 ♂] Smith 1854:392
Syn. ref.: Løken 1973a:69.

Bombus scrimshiranus (Kirby 1802:342): [Dahlbom 1832:39, Nylander 1848:232] Smith 1855:222
Bombus scrimshiranus (Kirby): Wahlberg 1855a:207
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus: Wahlberg 1855b:232
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus (Kirby): Wahlberg 1857:135
Bombus scrimshiranus (Kirby): Thomson 1870:254
Syn. ref.: Løken 1973a:69, Dalla Torre 1896:527.
Bombus scrimshiranus (Kirby): [Dahlbom 1832:39, Nylander 1848:232, Thomson 1870:254, *jonellus* Dahlbom 1832:43 ♂] Thomson 1872:41
Syn. ref.: Dalla Torre 1896:527, Løken 1973a:69, Thomson 1872:41.
Bombus scrimshiranus (Kirby 1802:342): [Dahlbom 1832:39, Thomson 1872:41] Schmiedeknecht 1882-1884:323
Bombus schrimshiranus Dahlbom: Aurivillius 1887a:89
Bombus schrimshiranus Dahlbom: Aurivillius 1887b:127
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus Dahlbom: Nerén 1892:99
Syn. ref.: Ander 1963:194, Løken 1973a:69
Bombus scrimshiranus Dahlbom: Skottsberg 1901:5
Bombus scrimshiranus Kirby: Bengtsson 1904:123
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus Kirby: Bengtsson 1908:238
Syn. ref.: Løken 1973a:69.
Bombus scrimshiranus Kirby: Ringdahl 1921:26
Bombus autumnalis Fabricius 1804:352: Zetterstedt 1838:474
Syn. ref.: Sparre Schneider 1909:140, Løken 1973a:69.
Bombus autumnalis (Fabricius 1793:324): [Zetterstedt 1838:474] Smith 1854:387
Bombus pratorum Linné var. *flavicolor* Friese 1909:675 ♂
Syn. ref.: Løken 1973a:69, Vikberg 1986a:63, 1986b:84, Söderman & Vikberg 2002:59.
Bombus pratorum Linné var. *flavicolor* Friese & Wagner 1912: Smiedeknecht 1930:867 ♂
Bombus pratorum-jonellus var. *suecicus* Friese 1911a:572 ♀
Syn. ref.: Løken 1973a:69, Vikberg 1986a:63, Söderman & Vikberg 2002:59.
Bombus pratorum var. *suecicus* Friese: [*pratorum-jonellus* var. *suecicus* Friese 1911a:572] Friese & Wagner 1912:206
Bombus jonellus Kirby 1802 *suecicus* Friese 1911: Vikberg 1986a:63
Bombus jonellus jonellus (Kirby 1802) var. *flavicolor* Friese 1909: Richards 1933:61
Bombus jonellus Kirby subsp. *subborealis* Richards f. *viriharensis* Niemelä: Brinck 1951:63
Bombus jonellus Kirby subsp. *subborealis* Richards f. typ.: Brinck 1951:63
Bombus jonellus Kirby subsp. *subborealis* Richards f. *submartes* Niemelä: Brinck 1951:63
Bombus jonellus Kirby f. typ.: Brinck 1951:63
Bombus jonellus Kirby f. *flavolunulatus* Krüger: Brinck 1951:63 ♀
Bombus jonellus Kirby f. *martesioides* Niemelä: Brinck 1951:63 wo.

Bombus lapponicus* (Fabricius 1793:318 ♀ (*Apis*)) *lapponicus

LT: Lpl

Apis arctica Quenzel 1802:253 ♀
Syn. ref.: Warncke 1986:90.
Bombus alpinus Fabricius 1804:343: Dahlbom 1832:32 *partim*
Syn. ref.: Løken 1973a:75.
Bombus lapponum: Boheman 1844:102
Bombus lapponicus var. *ornatulus* Friese 1911a:571 ♀
Bombus lapponicus Fabricius var. *ornatulus* Friese: Barendrecht 1941:333 ♂
Bombus lapponicus Fabricius var. *helveticus* Friese: Barendrecht 1941:333 ♂
Bombus lapponicus Fabricius var. *?noicus* Skorikov: Barendrecht 1941:334 wo.
Bombus lapponicus ssp. *lapponicus* m. *lapponicus* Fabricius: Pittioni 1943:29
Bombus lapponicus Fabricius f. *murmanicus* Skorikov: Brinck 1951:63 ♂

***Bombus monticola* Smith 1849:lx**

Bombus lapponicus var. *scandinavicus* Friese 1911b:684
Syn. ref.: Løken 1978:169, Svensson 1979:275, Schwarz & al. 1996:180.
Bombus lapponicus Fabricius var. *scandinavicus*: Körner & Zarápkin 1938:752
Bombus lapponicus (Fabricius) *scandinavicus* Friese: Kruseman 1959:50
Bombus lapponicus scandinavicus Friese & Wagner: Reinig 1965:118
Bombus lapponicus Fabricius ssp. *scandinavicus* Friese: Bergwall 1970:15
Bombus lapponicus (Fabricius 1793:318) *scandinavicus* Friese 1902:495: [Pittioni 1943, Brinck 1951, Kruseman 1959, Reinig 1965] Løken 1973a:82
Syn. ref.: Svensson 1979:277.
Bombus lapponicus scandinavicus Friese: Imby & al. 1978:228
Bombus lapponicus Fabricius ssp. *scandinavicus* m. *scandinavicus* (Friese & Wagner): Pittioni 1943:17
Bombus lapponicus Fabricius subsp. *scandinavicus* Friese & Wagner f. *montelli* Niemelä: Brinck 1951:63 ♀
Bombus lapponicus Fabricius subsp. *scandinavicus* Friese & Wagner f. *noricus* Skorikov: Brinck 1951:63
Bombus lapponicus Fabricius subsp. *scandinavicus* Friese & Wagner f. *helveticiformis* Pittioni: Brinck 1951:63
Bombus lapponicus Fabricius subsp. *scandinavicus* Friese & Wagner f. *formosulus* Skorikov: Brinck 1951:64 ♂

Bombus lapponicus Fabricius subsp. *scandinavicus* Friese & Wagner f. *ornatulus* Friese: Brinck 1951:64 ♂
Bombus lapponicus Fabricius subsp. *scandinavicus* Friese & Wagner f. *rubro-ornatulus* Pittioni: Brinck 1951:64 ♂

Bombus pratorum* (Linné 1761:424 † (*Apis*)) *pratorum

LT: Up

Bombus subinterruptus Illiger 1806:35: Dahlbom 1832:35 ♀

Syn. ref.: Nylander 1848:237, Smith 1851:103, 1854:394, 1855:220, 1876:207, Wahlberg 1855a:207, Thomson 1872:39, Schmiedeknecht 1882-1884:319, Løken 1973a:83.

Bombus ephippium Dahlbom 1832:37 ♀

Syn. ref.: Nylander 1848:237, Smith 1851:103, 1854:394, 1855:220, 1876:207, Wahlberg 1855a:207, Thomson 1872:39, Schmiedeknecht 1882-1884:319, Friese 1895b:210, Dalla Torre 1896:541, Friese & Wagner 1910:29, Løken 1967:184, 1973:83, Ander 1967:184, Schwarz & al. 1996:183, Söderman & Vikberg 2002:59.

Bombus ephippium Zetterstedt 1838:473 ♀

Syn. ref.: Nylander 1848:237, Smith 1851:103, 1854:394, 1855:220, Wahlberg 1855a:207, Schmiedeknecht 1882-1884:319, Dalla Torre 1896:541, Friese 1902:487, Løken 1967, Ander 1967:184, Sparre Schneider 1909:138.

Bombus burrellanus Illiger 1806:167: Dahlbom 1832:43 ♂

Syn. ref.: Smith 1851:103, 1854:394, 1855:220, 1876:207, Schmiedeknecht 1882-1884:319, Løken 1973a:83.

Bombus burrellanus Illiger: Thomson 1870:255

Syn. ref.: Smith 1876:207.

Bombus burellanus Illiger: Dalman Coll. ♂

Bombus arbustorum (Fabricius 1804:347): [*pratorum* Linné 1761:424, *burrellanus* Dalman Coll. ♂]: Zetterstedt 1838:473 *partim*

Syn. ref.: Smith 1851:103, 1854:394, Løken 1973a:83.

Bombus pratorum (Linné 1761:424) var. *b* Thomson 1872:39

Syn. ref.: Løken 1973a:84.

Bombus pratorum (Linné 1761:424) var. *formido* (Harris 1876:136): [*burrellanus* Dahlbom 1832:43, Thomson 1870:255] Dalla Torre 1896:543

Bombus pratorum (Linné 1761:424) var. *subinterruptus* (Kirby 1802:356): [*subinterruptus* Dahlbom 1832:35] Dalla Torre 1896:543

Bombus pratorum Linné var. *flavicolor* Friese 1909:675 ♂

Bombus pratorum Linné var. *flavicolor* Friese: Friese & Wagner 1910:51 ♂

Bombus pratorum Linné var. *flavicolor* Friese & Wagner: Schmiedeknecht 1930:867

Bombus pratorum (Linné) var. *ephippium* Dahlbom: Dalla Torre 1882:19

Bombus pratorum (Linné) *ephippium* Zetterstedt: Kruseman 1959:49

Syn. ref.: Løken 1973a:83.

Bombus pratorum Linné f. *bimaculatus* Skorikov: Brinck 1951:63

Syn. ref.: Løken 1973a:84.

Bombus pratorum (Linné 1761:424) ssp. *pratorum* f. *burrellanus*: Løken 1973a:84

Bombus pratorum (Linné 1761:424) ssp. *pratorum* f. *subinterruptus*: Løken 1973a:84

Subg. ***Bombus*** (Latreille 1802:437) s. str.

Bombus cryptarum* (Fabricius 1775:379 (*Apis*)) *cryptarum

Bombus acervorum: Fallén Coll.

Syn. ref.: Dahlbom 1832:34.

Bombus terrestris (Linné 1767:960) var. *c* (= *cryptarum* Fabricius 1793:317) Dahlbom 1832:34 ♀

Bombus terrestris (Linné 1761:424) var. *b* (= *cryptarum* Fabricius 1793:317): Thomson 1872:32

Bombus terrestris (Linné 1758:578) var. *cryptarum* (Fabricius 1775:379): [Thomson 1872:33(sic,=32)] Dalla Torre 1896:556

Bombus terrestris Linné var. *cryptarum*: Aurivillius 1903a:154

Bombus terrestris Linné var. *cryptarum*: Aurivillius 1903b:26

Bombus terrestris cryptarum Fabricius: Grimås & al. 1960:5

Bombus lucorum cryptarum (Fabricius 1775): Janzon & al. 1991:97

Bombus lucorum* (Linné 1761:425 ♂ (*Apis*)) *lucorum

LT: Up

Apis n. 16 Linné 1742:124

Apis n. 1012 Linné 1746:304

Apis terrestris Linné 1758:578 ♀: [n. 1012 Linné 1746:304]

Syn. ref.: Løken 1973a:53, Day 1979:74.

Apis terrestris: [n. 6 Linné 1742:124, n. 1012 Linné 1746:304] Linné 1761:424

Apis terrestris: [Linné 1761:424] Linné 1767:960 ♀

Syn. ref.: Smith 1876:212.

Apis terrestris: Linné 1771:13

Apis terrestris: Bjerkander 1778:168

Apis terrestris Linné 1761:424: Villers 1789:321

Apis terrestris Linné 1761:424: Gmelin 1790:2781

Bombus terrestris Linné: Billberg 1820:111

Bombus terrestris (Linné 1767:960 ♀) var. *a* Dahlbom 1832:34 ♀ *partim*

Syn. ref.: Smith 1855:225, 1876:212, Løken 1973a:40.

Bombus terrestris Illiger: Dahlbom 1837:284 *partim*

Syn. ref.: Løken 1973a:40.

Bombus terrestris (Linné 1761:424): Zetterstedt 1838:473

Syn. ref.: Smith 1855:225, 1876:212, Løken 1973a:40.
Bombus terrestris: Boheman 1844:95
Syn. ref.: Løken 1973a:40.
Bombus terrestris (Linné 1761:424): [Zetterstedt 1838:473, Dahlbom 1832:34] Nylander 1848:232
Syn. ref.: Smith 1855:225, 1876:212.
Bombus terrestris (Linné 1761:424): [Dahlbom 1832:34 ♂, ?Nylander 1848:232] Smith 1851:103
Bombus terrestris (Linné): Nylander 1852b:262
Bombus terrestris (Linné 1761:424): [?Dahlbom 1832:34, ?Nylander 1848:232] Smith 1854:390
Bombus terrestris (Linné): Wahlberg 1855a:201 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris (Linné): Wahlberg 1855b:230 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris: Thomson 1862:305
Bombus terrestris (Linné): Thomson 1870:254 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris (Linné 1761:424): [Dahlbom 1832:34, Nylander 1848:232, Thomson 1870:254] Thomson 1872:32 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris (Linné 1767:960 ♀): [*Iucorum* Linné 1761:425 ♂, 1767:961, Dahlbom 1832:42 ♂, Nylander 1848:233] Schmiedeknecht 1878:356
Bombus terrestris Linné: [*Iucorum* Linné] Dalla Torre 1880:41
Bombus terrestris (Linné 1767:960 ♀): [*Iucorum* Linné 1761:425 ♂, 1767:961, Dahlbom 1832:42 ♂, Nylander 1848:233] Schmiedeknecht 1882-1884:379
Bombus terrestris Linné: Aurivillius 1887a:89
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Aurivillius 1887b:126
Syn. ref.: Løken 1973a:40.
Bombus terrestris (Linné 1758:578): [Linné 1761:424, 1767:960, Dahlbom 1832:34, Zetterstedt 1838:473, Nylander:1848:232, 1852b:262, Thomson 1870:254, 1872:32] Dalla Torre 1896:553
Bombus terrestris Linné: [Zetterstedt 1838:473] Friese 1902:487
Bombus terrestris Linné: Aurivillius 1903a:154 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Aurivillius 1903b:26 *partim*
Bombus terrestris Linné: Bengtsson 1904:123
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Bengtsson 1908:240
Syn. ref.: Løken 1973a:40.
Bombus terrestris (Linné 1758:578): [*Iucorum* Linné 1761:425] Friese & Wagner 1910:26
Apis terrestris Linné 1767: Jackson 1913:35
Bombus terrestris Linné: Ringdahl 1915:9
Syn. ref.: Løken 1973a:40.
Bombus terrester Linné: Wahlgren 1915:23 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrester: Wahlgren 1917:10 *partim*
Bombus terrestris Linné: Ringdahl 1921:23 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Jansson 1922:19 *partim*
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Lundblad 1924:19
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Jansson 1925:143
Syn. ref.: Jansson 1935:83.
Bombus terrestris Linné: D. Gaunitz 1929:197
Syn. ref.: D. Gaunitz 1946:159, Løken 1973a:40.
Bombus terrestris Linné: Bengtsson 1931:2
Syn. ref.: Løken 1973a:40.
Bombus terrestris Linné: Lundblad 1955:112
Bombus terrestris Linné: Lundblad 1958:49
Bombus terrestris (Linné 1758): [*Iucorum* Linné 1761] Vikberg 1986b:84
Bombus terrester Linné var. *Iucorum* Linné: Dalla Torre & Friese 1895:79
Bombus terrestris (Linné 1758:578) var. *Iucorum* (Linné 1761:425): Dalla Torre 1896:557
Bombus terrestris Linné var. *Iucorum* Linné: Schmiedeknecht 1907:45
Bombus terrestris Linné f. *Iucorum* Linné: Krausse 1908:163
Bombus terrestris Linné var. *Iucorum* Linné: Alfken 1912a:75
Bombus terrestris Linné var. *Iucorum* Linné: Alfken 1912b:153
Bombus terrestris Linné var. *Iucorum* Linné: Alfken 1913:120
Bombus terrestris Linné var. *Iucorum* Linné: Jansson 1935:83
Bombus terrestris var. *Iucorum* Linné: Kullenberg 1953d:2
Bombus terrestris (Linné 1758:578) var. *autumnalis* (Fabricius 1793:324): [Thomson 1872:33] Dalla Torre 1896:556
Bombus Iucorum Linné f. *fulvocorbiculosus*: Krüger 1950:179
Bombus Iucorum Linné f. *semipostcollaris*: Krüger 1950:180
Bombus Iucorum Linné f. *latocollaris*: Krüger 1950:180

Bombus lucorum Linné f. *luteopraestriatus*: Krüger 1950:180
Bombus lucorum Linné f. *disectus*: Krüger 1950:180
Bombus lucorum Linné var. *lehmanni*: Krüger 1950:180
Bombus lucorum Linné f. *cryptarum*: Krüger 1950:180
Bombus lucorum Linné f. *cryptaroides*: Krüger 1950:180
Bombus lucorum Linné f. *soroeeensicoloratus*: Krüger 1950:180
Bombus lucorum Linné f. *propedulvocorbiculosus*: Krüger 1950:180
Bombus lucorum Linné f. *griseoepisternalis*: Krüger 1950:180
Bombus lucorum Linné f. *terrestrioides*: Krüger 1950:180
Bombus lucorum Linné f. *luteomaculatus*: Krüger 1950:181

***Bombus magnus* Vogt 1911:56 *flavoscutellaris* G. & W. Trautmann 1915:96**

Bombus magnus Vogt 1911 *latocinctus* Krüger 1939:93
Syn. ref.: Løken 1973a:46, Reinig 1976:269, Schwarz & al. 1996:179.

Bombus sporadicus* Nylander 1848:233 *sporadicus

Bombus lucorum Linné: [*sporadicus* Nylander 1848:233] Smith 1854:390
Bombus lucorum Linné: [*sporadicus* Nylander 1848:233] Smith 1876:212
Bombus lucorum Linné var. *sporadicus* Nylander: Bengtsson 1931:2
Syn. ref.: Løken 1973a:50.
Bombus lucorum Linné var. *sporadicus* Nylander: Forsius 1935:15
Bombus terrestris Fabricius: Wahlberg 1855a:203 *partim*
Bombus terrestris (Linné 1758:578): [*sporadicus* Nylander 1848:233]: Friese & Wagner 1910:26
Bombus terrestris (Linné 1761:424) var. *d* (= *sporadicus* Nylander 1848:233) Thomson 1872:33
Syn. ref.: Ander 1963:194, Løken 1973a:50.
Bombus terrestris (Linné 1767:960 ♀): [*sporadicus* Nylander 1848:233]: Schmiedeknecht 1878:356
Bombus terrestris (Linné 1767:960 ♀): [*sporadicus* Nylander 1848:233 ♂]: Schmiedeknecht 1882-1884:381
Bombus terrestris Linné var. *sporadicus* Nylander: Handlirsch 1888:224
Bombus terrester Linné var. *sporadicus* Nylander: Dalla Torre & Friese 1895:79
Bombus terrestris (Linné 1758:578) var. *sporadicus* Nylander 1848:233: [Thomson 1872:33]: Dalla Torre 1896:558
Bombus terrestris Linné var. *sporadicus*: Aurivillius 1903a:154
Syn. ref.: Løken 1973a:50.
Bombus terrestris Linné var. *sporadicus*: Aurivillius 1903b:26
Bombus terrestris Linné f. *sporadicus* Nylander 1848:233: Krausse 1908:163
Bombus terrestris var. *sporadicus* Nylander: Lundblad 1924:19
Syn. ref.: Løken 1973a:50.

Bombus terrestris* auct. (nec Linné 1758:578 ♀ (*Apis*)) *terrestris

LT: Up

Apis lucorum Linné 1761:425 ♂
Syn. ref.: Warncke 1986:104.
Bombus terrestris (Linné 1767:960) var. *b* (= *dissectus* Gyllenhal et Boheman in litt.) Dahlbom 1832:34 ♀
Bombus terrestris Linné var. *dissectus* [Gyllenhal et Boheman in litt.] Schmiedeknecht 1878:357
Bombus terrestris Linné var. *dissectus* [Gyllenhal et Boheman in litt.] Schmiedeknecht 1882-1884:381 ♂
Bombus terrestris (Linné 1758:578) var. *dissectus* Schmiedeknecht 1878:359: Dalla Torre 1896:557
Bombus virginalis (Kirby 1802:350): [*terrestris* var. 1 Nylander 1852b:262] Smith 1876:214
Bombus audax (Harris 1780): [*terrestris* Linné auct.] Day 1979:74

Subg. ***Cullumanobombus* Vogt 1911:57**

Bombus cullumanus* (Kirby 1802:359 (*Apis*)) *cullumanus

Bombus burrellanus Illiger 1806:167: Dahlbom 1832:43 ♂
Syn. ref.: Thomson 1872:38, Smith 1876:208.
Bombus burellanus (Kirby): Thomson 1870:255
Syn. ref.: Thomson 1872:38, Smith 1876:208, Løken 1973a:56, Schwarz & al. 1996:175.

Subg. ***Melanobombus* Dalla Torre 1880:40**

Bombus lapidarius* (Linné 1758:579 ♀ (*Apis*)) *lapidarius

LT: Up

Apis n. 13 Linné 1742:124
Syn. ref.: Linné 1761:424, Dalla Torre 1896:528.
Apis n. 1015 Linné 1746:304
Syn. ref.: Linné 1758:579, 1761:424, Dalla Torre 1896:528.
Bombus arbustorum Fabricius 1804:347: [*pratorum* Linné 1761:424] Zetterstedt 1838:473 *partim*
Syn. ref.: Dalla Torre 1896:529, Friese 1902:486, Løken 1973a:90.

Apini

Apis Linné 1758:574

Apis mellifera Linné 1758:576 *mellifera*

Apis gregaria n. 1003 Linné 1746:301

Apis mellifera Linné 1761:421: [gregaria n. 1003 Linné 1746:301]

Syn. ref.: Richards 1935:176, 1978:140, Elfving 1968:65, Day 1979:67, Vikberg 1986b:85, Janzon & al. 1991:97, Schwarz & al. 1996:189.

Apis mellifera Linné: Modeer 1762:20

Apis mellifera Linné: Boethius 1763:32

Apis mellifera Linné: Blom 1764:12

Apis mellifera: [Linné 1761:421] Linné 1767:955

Apis mellifera Linné: Bergman 1779:300

Apis mellifera: Villers 1789:291

Apis mellifera Linné 1761:421: Gmelin 1790:2774

Apis mellifera Linné: Fallén 1813:35

Apis mellifera Linné: Billberg 1820:112

Apis mellifera: Dahlbom 1837:290

Apis mellifera Linné 1767:955: Zetterstedt 1838:476

Apis mellifera Linné: Nylander 1848:226

Apis mellifera Linné 1761:421: [Nylander 1848:226] Smith 1851:106

Apis mellifera Linné: Nylander 1852b:283

Apis mellifera Linné 1761:421: [Nylander 1848:226] Smith 1855:241

Apis mellifera Linné: Thomson 1862:303

Apis mellifera Linné: Holmgren 1867:239

Apis mellifera Linné 1761:421: Thomson 1872:16

Apis mellifera Linné 1767:955: [Nylander 1848:226, Thomson 1872:14(sic,=16)] Smith 1876:226

Apis mellifera Linné: Jackson 1913:35

Apis mellifera Linné: Jansson 1922:19

Apis mellifera Linné: Sjögren 1935:113

Apis mellifera Linné: Thorsell 1944:229

Apis mellifera Linné: Palm 1949a:29

Apis mellifera Linné: Palm 1949b:13

Apis mellifera Linné: Kullenberg 1950b:3

Apis mellifera Linné: Lešinš 1950:452

Apis mellifera Linné: Kullenberg 1951b:2

Apis mellifera Linné: Kullenberg 1952:5

Apis mellifera Linné: Kullenberg & Nyholm 1952:5

Apis mellifera Linné: Åkerberg 1952:830

Apis mellifera Linné: Kullenberg 1953d:25

Apis mellifera Linné: Kullenberg 1954:13

Apis mellifera: Schwan & Martinovs 1954:1

Apis mellifera Linné: Kullenberg 1955:1

Apis mellifera Linné: Kullenberg 1956b:2

Apis mellifera Linné: Kullenberg 1958a:1

Apis mellifera Linné: Hanson 1962:42/Tavla 38

Apis mellifera Linné: Hasselrot 1962:11

Apis mellifera: Tunblad 1968:393

Apis mellifera Linné: Brinck & al. 1973:553

Apis mellifera: Lundgren 1974:11

Apis mellifera: Eriksson 1975:13

Apis mellifera: Sandhall & Hedqvist 1977:64

Apis mellifera: Anthon 1978:102

Apis mellifera: Fries & Stark 1982:9:1

Apis mellifera Linné 1761:421: [*mellifera* Linné 1758:576] Warncke 1986:52

Apis domestica Latreille: Dahlbom 1837:290

Apis domestica: Lönnberg 1913:263

Apis mellifera Linné 1758:576 *ligustica* Spinola 1806:35

Apis mellifera Linné 1758:576 *carnica* Pollmann 1879:45

Apis mellifera Linné 1758:576 *caucasica* Gorbatshev 1916:39

Unplaced

- Andrena flavipes* Panzer: Fallén 1813:34
Chelostoma rybyensis Linné: Billberg 1820:110
Halictus minutissimus Kirby: Lundblad 1911:209 (Up, Uppsala, maj 1910)
Halictus quadrinotatus Kirby: Lundblad & Olsson 1954: 67 (Hallands Väderö juni 1951 1 ♀)
Megachile lagopoda: Boheman 1844:100 (Kvikkjokk 1844)
Nomada erythrocephala Morawitz: Aurivillius 1903a:184 ♀
Nomada erythrocephala Morawitz: Aurivillius 1903b:56 ♀
Specodes puncticeps Thomson: Lundblad 1924:21 (Sorsole by, Pansborg 1 ♀)

Miscellaneous citation errors

- Andrena clarkella* (Kirby 1802:130): [*tricolor* Imhoff 1832:1202] Dylewska 1987:633
Comment: Imhoff did not mention *A. tricolor* to occur in Sweden.
Andrena gravida Imhoff 1832:1205: Dylewska 1987:493
Comment: No known Swedish records before 2001.
Andrena wilkella Thomson: Forsius & Nordström 1923:114
Comment: Thomson did not use *wilkella*.
Andrena wilkella Thomson: Niemelä 1949:102
Comment: Thomson did not use *wilkella*.
Cilissa tricineta Thomson 1872:66: Smith 1876:77
Comment: Thomson (1872) did not use *tricineta*.
Evodia calendarum Panzer: [Nylander 1848:206] Smith 1853:2
Comment: Nylander (1848) did not mention *calendarum*.
Halictus obovatus Thomson 1872:141: Smith 1876:89
Comment: Thomson (1872) did not use *obovatus*.
Osmia notata Latreille 1811:582: Smith 1853:138
Comment: No known Swedish records.
Prosopis annularis (Kirby 1802:38): [*armillatus* Nylander 1852b:233] Smith 1853:19
Comment: Nylander (1852b) did not use *armillatus*.

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