

## **FORMICA**

**abdominalis.** *Formica abdominalis* Latreille, 1802c: 175, pl. 3, fig. 13 (q.) (no state data, "Grandes-Indes").

Status as species: Smith, F. 1858b: 15; Mayr, 1863: 410; Smith, F. 1871a: 303; Dalla Torre, 1893: 192.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 190.

*abdominalis* Fabricius, 1804; see under **CAMPONOTUS**.

*aberrans* Mayr, 1877; see under **ALLOFORMICA**.

*abrupta* Smith, F. 1858; see under **DOLICHODERUS**.

**accreta.** *Formica accreta* Francoeur, 1973: 182, figs. 308-323 (w.q.m.) CANADA (British Columbia), U.S.A. (California, Idaho, Montana, Washington).

Junior synonym of *fusca*: Wheeler, G.C. & Wheeler, J. 1986g: 16.

**Status as species:** Francoeur, 1975: 262; Yensen, *et al.* 1977: 184; Francoeur & Snelling, 1979: 6; Smith, D.R. 1979: 1452; Allred, 1982: 461; Blacker, 1992: 11; Bolton, 1995b: 190; Mackay & Mackay, 2002: 331; Ward, 2005: 63.

*acervorum* Fabricius, 1793; see under **LEPTOTHORAX**.

**aculeata.** *Formica rubra aculeata* Retzius, 1783: 76 (w.) (no state data); unavailable name.

[Unavailable name (published as junior synonym): Bolton, 1995b: 190.]

**aculeata.** *Formica fusca aculeata* Retzius, 1783: 76 (w.) (no state data); unavailable name.

[Unavailable name (published as junior synonym): Bolton, 1995b: 190.]

*aculeata* Olivier, 1792; see under **PARAPONERA**.

**\*acuminata.** *\*Formica acuminata* Heer, 1849: 142, pl. 11, figs. 13, 14 (m.) CROATIA (Miocene).

[Also described as new by Heer, 1850: 142.]

Status as species: Giebel, 1856: 172; Heer, 1867: 17; Mayr, 1867b: 56; Scudder, 1891: 698; Dalla Torre, 1893: 192; Bolton, 1995b: 190.

*Incertae sedis* in *Formica*: Handlirsch, 1907: 864.

Junior synonym of *\*ungeri*: Dlussky & Putyatina, 2014: 256.

*acuta* Fabricius, 1804; see under **CREMATOGASTER**.

**adamsi.** *Formica adamsi* Wheeler, W.M. 1909e: 84 (w.) U.S.A. (Michigan).

[*Formica adamsi* Wheeler, W.M. 1908g: 408. *Nomen nudum*.]

**Subspecies of *whymperi*:** Wheeler, W.M. 1917a: 544; Creighton, 1950a: 509; Smith, M.R. 1951a: 873; Smith, M.R. 1958c: 160; Smith, D.R. 1979: 1463; Wheeler, G.C., *et al.* 1994: 307.

[Note: Wheeler, W.M. 1917a: 544, Creighton, 1950a: 509, Smith, M.R. 1958c: 160, and Smith, D.R. 1979: 1463, all give *whymperi* as senior synonym, but *adamsi* has priority (Bolton, 1995b: 191).]

**Status as species:** Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 473 (redescription); Emery, 1925b: 256; Bolton, 1995b: 191; Mackay & Mackay, 2002: 331.

Current subspecies: nominal plus *alpina*, *whymperi*.

**adelungi.** *Formica adelungi* Forel, 1904b: 385 (m.) MONGOLIA.

**Status as species:** Ruzsky, 1905b: 420; Emery, 1909b: 189; Wheeler, W.M. 1913f: 450; Emery, 1925b: 252; Bolton, 1995b: 191.

*advena* Smith, F. 1862; see under **PROLASIUS**.

*aedificator* Schilling, 1839; see under **MESSOR**.

**aegyptiaca.** *Formica aegyptiaca* Fabricius, 1775: 393 (w.) EGYPT.

[Misspelled as *egyptiaca* by Olivier, 1792: 495.]

- Status as species: Fabricius, 1782: 491; Fabricius, 1787: 309; Gmelin, 1790: 2798; Christ, 1791: 509; Olivier, 1792: 495; Fabricius, 1793: 357; Latreille, 1802c: 284; Fabricius, 1804: 404; Dalla Torre, 1893: 192.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 191.
- \*aemula*. *\*Formica aemula* Heer, 1867: 18, pl. 1, fig. 19 (m.) CROATIA (Miocene).  
Status as species: Mayr, 1867b: 56; Scudder, 1891: 699; Dalla Torre, 1893: 192; Bolton, 1995b: 191.  
*Incertae sedis* in *Formica*: Handlirsch, 1907: 864.  
Junior synonym of *\*ungeri*: Dlussky & Putyatina, 2014: 256.
- aeneovirens* Lowne, 1865; see under **MELOPHORUS**.
- aenescens* Nylander, 1849; see under **CATAGLYPHIS**.
- aequalis*. *Formica aequalis* Walker, 1871: 9 (q.) “ARABIA (Wady Nash)”.  
Status as species: Dalla Torre, 1893: 192.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 191.
- aerata*. *Formica aerata* Francoeur, 1973: 116, figs. 183-189 (w.q.) U.S.A. (California, Nevada, Oregon).  
**Status as species**: Francoeur, 1975: 261; Wheeler, G.C. & Wheeler, J. 1977b: 15 (in key); Yensen, *et al.* 1977: 184; Francoeur & Snelling, 1979: 4; Smith, D.R. 1979: 1452; Allred, 1982: 462; Wheeler, G.C. & Wheeler, J. 1986g: 89; Bolton, 1995b: 191; Ward, 2005: 63.
- aerea* Roger, 1859; see under **PROFORMICA**.
- aethiops* Latreille, 1798; see under **CAMPONOTUS**.
- affinis*. *Formica affinis* Leach, 1825: 290 (w.q.) FRANCE.  
Status as species: Dalla Torre, 1893: 192.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 191.
- affinis* Le Guillou, 1842; see under **POLYRHACHIS**.
- affinis* Schenck, 1852; see under **LASIUS**.
- aggerans*. *Formica rufa* subsp. *aggerans* Wheeler, W.M. 1912c: 90 (w.) U.S.A. (Nebraska, Colorado, Dakota).  
Wheeler, W.M. 1913f: 430 (q.m.).  
As unavailable (infrasubspecific) name: Wheeler, W.M. 1917a: 540.  
Subspecies of *rufa*: Wheeler, W.M. 1913f: 430 (redescription); Cole, 1936a: 37.  
Junior synonym of *obscuripes*: Forel, 1914c: 619; Emery, 1925b: 254; Creighton, 1940a: 1; Buren, 1944a: 301; Creighton, 1950a: 492; Smith, D.R. 1979: 1460; Bolton, 1995b: 191; Coover, 2005: 150.
- agilis* Smith, F. 1858; see under **CAMPONOTUS**.
- agra* Smith, F. 1858; see under **CAMPONOTUS**.
- alba* Christ, 1791, see *siamica alba*.
- albicans* Roger, 1859; see under **CATAGLYPHIS**.
- albipennis*. *Formica albipennis* Fabricius, 1793: 354 (m.) VIRGIN IS (St. Croix I., “Habitat in Insula St. Crucis”).  
Combination in *Lasius*: Fabricius, 1804: 417;  
combination in *Ponera*: Latreille, 1818c: 570; Dalla Torre, 1893: 37;  
combination in *Formica*: Smith, F. 1858b: 50.  
Status as species: Latreille, 1802c: 278; Fabricius, 1804: 417; Smith, F. 1858b: 50; Mayr, 1863: 447; Dalla Torre, 1893: 37; Emery, 1911d: 116.

- Incertae sedis* in Ponerinae: Kempf, 1972a: 260.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 191.
- albipes* Smith, F. 1861; see under **TECHNOMYRMEX**.
- albofasciata* Smith, F. 1862; see under **CAMPONOTUS**.
- algida*. *Formica fusca* var. *algida* Wheeler, W.M. 1915f: 205 (w.q.) U.S.A. (Maine, New Hampshire, Massachusetts, New York, Michigan), CANADA (Ontario, Quebec, Nova Scotia, Newfoundland).  
Combination in *F. (Serviformica)*: Emery, 1925b: 248.  
As unavailable (infrasubspecific) name: Emery, 1925b: 248.  
Subspecies of *fusca*: Wing, 1939: 165; Smith, M.R. 1951a: 864.  
Subspecies of *neorufibarbis*: Creighton, 1950a: 537; Smith, M.R. 1958c: 157.  
Junior synonym of *neorufibarbis*: Francoeur, 1973: 215; Smith, D.R. 1979: 1454; Bolton, 1995b: 191.
- aliena* Foerster, 1850; see under **LASIUS**.
- alpicola**. *Formica fusca* var. *alpicola* Gredler, 1858: 10 (w.) AUSTRIA.  
**Subspecies of fusca**: Bolton, 1995b: 191.
- alpina**. *Formica adamsi* var. *alpina* Wheeler, W.M. 1909e: 85 (w.) U.S.A. (Colorado).  
**Subspecies of whymperi**: Wheeler, W.M. 1917a: 544; Cole, 1936a: 37; Creighton, 1950a: 509; Smith, M.R. 1951a: 873; Cole, 1954a: 89 (in text); Cole, 1954c: 165; Smith, M.R. 1958c: 160; Smith, M.R. 1967: 373; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1463.  
**Subspecies of adamsi**: Wheeler, W.M. 1913f: 475 (redescription); Emery, 1925b: 256; Cole, 1936a: 38; Bolton, 1995b: 191; Mackay & Mackay, 2002: 332.
- alpina*. *Formica rufa* var. *alpina* Santschi, 1911j: 349, fig. 1 (w.) ITALY.  
[**Junior primary homonym** of *Formica adamsi* var. *alpina* Wheeler, W.M. 1909e: 85.]  
[*Formica rufa* var. *alpina* Forel, 1911h: 458. *Nomen nudum* (attributed to Santschi).]  
As unavailable (infrasubspecific) name: Emery, 1916b: 256; Stärcke, 1926: 149 (in key).  
Subspecies of *rufa*: Donisthorpe, 1914: 40; Donisthorpe, 1915d: 265; Donisthorpe, 1927b: 307; Stärcke, 1947: 145.  
Status as species: Bondroit, 1918: 59.  
**Replacement name**: *Formica rufa* var. *santschii* Wheeler, 1913f: 428.  
Junior synonym of *lugubris*: Casevitz-Weulersse & Galkowsky, 2009: 482.
- \*alsatica**. \**Formica alsatica* Théobald, 1937b: 215, pl. 15, figs. 9-13; pl. 4, fig. 3 (q.) FRANCE (Oligocene).  
**Status as species**: Burnham, 1979: 115; Bolton, 1995b: 191.
- altayensis**. *Formica altayensis* Xia & Zheng, 1997b: 391, figs. 1-3 (w.) CHINA (Xinjiang).  
[*Formica altayensis* Xia & Zheng, 1997a: 65. *Nomen nudum*.]  
**Status as species**: Guénard & Dunn, 2012: 30.
- alticola*. *Formica munda* var. *alticola* Wheeler, W.M. 1917a: 534 (w.) U.S.A. (Colorado).  
Combination in *F. (Raptiformica)*: Creighton, 1950a: 466.  
Subspecies of *obtusopilosa*: Emery, 1925b: 259; Creighton, 1950a: 466; Smith, M.R. 1951a: 867; Smith, M.R. 1958c: 158 (error).  
Junior synonym of *obtusopilosa*: Wilson & Brown, 1955: 128; Smith, D.R. 1979: 1450; Bolton, 1995b: 191.
- altipetens**. *Formica cinerea* var. *altipetens* Wheeler, W.M. 1913f: 399 (in key), 564.

- [*Formica cinerea* subsp. *cinerea* var. *altipetens* Wheeler, W.M. 1913f: 523 (w.q.m.) U.S.A. (Colorado); unavailable (infrasubspecific) name.]  
Wheeler, G.C. & Wheeler, J. 1953c: 160 (l.).  
As unavailable (infrasubspecific) name: Cole, 1936a: 38.
- Subspecies of *cinerea*:** Wheeler, W.M. 1914b: 56; Wheeler, W.M. 1917a: 550; Emery, 1925b: 246; Cole, 1942: 383; Wheeler, G.C. & Wheeler, E.W. 1944: 259; Smith, M.R. 1951a: 861.
- Status as species:** Creighton, 1950a: 531; Gregg, R.E. 1953a: 326; Cole, 1954c: 166; Smith, M.R. 1958c: 154; Smith, M.R. 1967: 370; Francoeur, 1973: 52 (redescription); Hunt & Snelling, 1975: 23; Wheeler, G.C. & Wheeler, J. 1977b: 13 (in key); Yensen, *et al.* 1977: 184; Smith, D.R. 1979: 1452; Snelling, R.R. & George, 1979: 246; Allred, 1982: 462; Wheeler, G.C. & Wheeler, J. 1986g: 88 (in key); Mackay, Lowrie, *et al.* 1988: 113; Bolton, 1995b: 191; Mackay & Mackay, 2002: 333; Ward, 2005: 63.
- americana* Buckley, 1866; see under **CAMPONOTUS**.
- ammon* Fabricius, 1775; see under **POLYRHACHIS**.
- amyoti.** *Formica amyoti* Le Guillou, 1842: 315 (w.) AUSTRALIA (no state data, "Australie septentrionale").  
Status as species: Mayr, 1863: 411; Dalla Torre, 1893: 193.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 191.
- analis* Latreille, 1802; see under **MEGAPONERA**.
- anatolica.** *Formica anatolica* Seifert & Schultz, 2009: 267, fig. 8 (w.) TURKEY.  
**Status as species:** Kiran & Karaman, 2012: 10; Borowiec, L. 2014: 72.
- anceps* Roger, 1863; see under **IRIDOMYRMEX**.
- angulata* Smith, F. 1859; see under **COLOBOPSIS**.
- angustata* Latreille, 1798; see under **CAMPONOTUS**.
- angusticeps.** *Formica rufa* var. *angusticeps* Stårcke, 1947: 146 (w.) NETHERLANDS.  
**Subspecies of *rufa*:** Bolton, 1995b: 191.
- angusticollis* Jerdon, 1851; see under **CAMPONOTUS**.
- animosa.** *Formica animosa* Forskål, 1775: 85 (w.) EGYPT ?  
Status as species: Dalla Torre, 1893: 193.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Emery, 1892b: 160; Bolton, 1995b: 191.
- \*annosa.** \**Formica annosa* LaPolla & Greenwalt, 2015: 168, figs. 7, 15d (m.) U.S.A. (Montana, Eocene).
- antiguensis* Fabricius, 1793; see under **MONOMORIUM**.
- \*antiqua.** \**Formica (Serviformica) antiqua* Dlussky, 1967b: 82, fig. 1 (w.) BALTIC AMBER (Eocene).  
Status as species: Bolton, 1995b: 191.  
Junior synonym of \**flori*: Dlussky, 2002a: 292; Dlussky & Perkovsky, 2002: 11; Dlussky, 2008a: 50.
- aphidicola* Walsh, 1863; see under **LASIUS**.
- apicalis* Latreille, 1802; see under **NEOPONERA**.
- apicalis.** *Formica apicalis* Smith, F. 1858b: 49 "South America". *Nomen nudum*.  
Material referred to *rufa* by Roger, 1862c: 287; Mayr, 1863: 420; Roger, 1863b: 12; Forel, 1874: 98 (in list); Emery & Forel, 1879: 450; Dalla Torre, 1893: 208; Wheeler,

W.M. 1913f: 425; Emery, 1925b: 253; Donisthorpe, 1927b: 286; Karavaiev, 1936: 240; Gösswald, 1941: 73; Bolton, 1995b: 202.

**approximans.** *Formica truncorum* var. *approximans* Wheeler, W.M. 1933c: 65 (w.) CHINA (Beijing).

**Subspecies of *truncorum*:** Chapman & Capco, 1951: 201.

**Status as species:** Wu, J. 1990: 4, 5 (in key); Bolton, 1995b: 191; Wu, J. & Wang, 1995: 145; Guénard & Dunn, 2012: 30.

**aquilonia.** *Formica aquilonia* Yarrow, 1955a: 31 (diagnosis in key), figs. 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61, 65 (w.q.m.) GREAT BRITAIN (Scotland).

**Replacement name for *Formica rufa* subsp. *schmidti*** Ruzsky, 1926: 109. [Junior primary homonym of \**Formica schmidti* Heer, 1849: 138.]

[Note: *aquilonia* junior synonym of *schmidti* Ruzsky (synonymy by Dlussky, 1967a: 90); hence *aquilonia* first available replacement name (Bolton, 1995b: 191).]

**Status as species:** Betrem, 1960b: 79 (in key); Dlussky, 1965a: 42 (in key); Dlussky, 1967a: 90; Bernard, 1967: 316 (redescription); Kutter, 1968a: 61; Kutter, 1968b: 206; Pisarski, 1969a: 234; Baroni Urbani, 1971c: 217; Collingwood, 1971: 168; Dlussky & Pisarski, 1971: 182 (redescription); Banert & Pisarski, 1972: 355; Bolton & Collingwood, 1975: 7 (in key); Pisarski, 1975: 48; Kutter, 1977c: 271; Arnol'di & Dlussky, 1978: 554 (in key); Collingwood, 1979: 144; Douwes, 1979: 187; Kupyanskaya, 1980: 105; Douwes, 1981: 217; Kupyanskaya, 1986b: 98; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 287 (in key); Nilsson & Douwes, 1987: 86; Gösswald, 1989: 19; Wu, J. 1990: 6 (in key); Kupyanskaya, 1990: 197; Atanassov & Dlussky, 1992: 276; Radchenko, 1994b: 114 (in key); Douwes, 1995: 98; Bolton, 1995b: 191; Poldi, *et al.* 1995: 8; Wu, J. & Wang, 1995: 145; Espadaler, 1997b: 27; Gallé, *et al.* 1998: 218; Czechowski, *et al.* 2002: 75; Radchenko, 2005b: 161; Petrov, 2006: 113 (in key); Bračko, 2007: 19; Seifert, 2007: 315; Werner & Wieszik, 2007: 143; Zryanin & Zryanina, 2007: 233; Gratiashvili & Barjadze, 2008: 132; Casevitz-Weulersse & Galkowsky, 2009: 481; Lapeva-Gjonova, *et al.* 2010: 47; Boer, 2010: 25; Czechowski, *et al.* 2012: 198; Guénard & Dunn, 2012: 31; Borowiec, L. 2014: 72; Lebas, *et al.* 2016: 172; Radchenko, 2016: 288; Seifert, 2018: 325.

[Note: Seifert, 2018: 325 reports on *aquilonia* × *polycтена* hybrids.]

*arborea* Smith, F. 1858; see under **CAMPONOTUS**.

**\*arcana.** \**Formica arcana* Scudder, 1877b: 266 (wing) CANADA (British Columbia, Eocene).

Status as species: Scudder, 1891: 699; Dalla Torre, 1893: 193; Handlirsch, 1907: 863; Bolton, 1995b: 191.

*Incertae sedis* in Formicidae: Carpenter, 1930: 21.

**archboldi.** *Formica pallidefulva* subsp. *archboldi* Smith, M.R. 1944d: 16 (w.) U.S.A. (Florida, Georgia).

Trager, MacGown & Trager, 2007: 615 (q.m.).

Combination in *F. (Neoformica)*: Creighton, 1950a: 549.

**Subspecies of *pallidefulva*:** Smith, M.R. 1951a: 859.

**Status as species:** Creighton, 1950a: 549; Smith, M.R. 1958c: 153; Smith, D.R. 1979: 1451; Deyrup, *et al.* 1989: 99; Bolton, 1995b: 191; Deyrup, 2003: 45; MacGown & Forster, 2005: 66; Trager, MacGown & Trager, 2007: 614 (redescription); Deyrup, 2017: 202.

*arcuata* Le Guillou, 1842; see under **POLYRHACHIS**.

*ardens* Smith, F. 1858; see under **CAMPONOTUS**.

*arenaria* Fabricius, 1787; see under **MESSOR**.

**arenicola**. *Formica arenicola* Buckley, 1866: 160 (w.) U.S.A. (District of Columbia).

Status as species: Cresson, 1887: 255; Dalla Torre, 1893: 193.

Unidentifiable taxon: Wheeler, W.M. 1902f: 21;

[Note: Wheeler, W.M. 1902f: 21, considers but discounts identity with *Prenolepis imparis*.]

unidentifiable taxon; *incertae sedis* in Formicinae: Smith, M.R. 1951a: 875; Smith, D.R. 1979: 1467;

unidentifiable taxon; *incertae sedis* in *Formica*: Bolton, 1995b: 191.

*arenicola*. *Formica sanguinea* subsp. *arenicola* Kuznetsov-Ugamsky, 1928b: 15 (w.) RUSSIA.

[Unresolved junior primary homonym of *Formica arenicola* Buckley, 1866: 160 (Bolton, 1995b: 191).]

Subspecies of *sanguinea*: Kuznetsov-Ugamsky, 1929a: 23.

Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Tarbinsky, 1976: 186; Bolton, 1995b: 191; Imai, *et al.* 2003: 59; Radchenko, 2016: 292.

*argentata* Fabricius, 1804; see under **POLYRHACHIS**.

*argentata*. *Formica fusca* var. *argentata* Wheeler, W.M. 1902e: 952 (footnote) (w.) U.S.A. (Illinois).

[**Junior primary homonym** of *Formica argentata* Fabricius, 1804: 413.]

Subspecies of *fusca*: Wheeler, W.M. 1906b: 20; Wheeler, W.M. 1906d: 344; Wheeler, W.M. 1908f: 625; Wheeler, W.M. 1910g: 570; Essig, 1926: 866.

**Replacement name**: *Formica fusca* var. *argentea* Wheeler, W.M. 1912c: 90.

**argentea**. *Formica fusca* var. *argentea* Wheeler, W.M. 1912c: 90.

**Replacement name for** *Formica fusca* var. *argentata* Wheeler, W.M. 1902e: 952.

[Junior primary homonym of *Formica argentata* Fabricius, 1804: 413.]

Wheeler, W.M. 1913f: 502 (q.m.).

Combination in *F. (Serviformica)*: Emery, 1925b: 248.

As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 499; Emery, 1925b: 248.

**Subspecies of** *fusca*: Wheeler, W.M. 1913f: 398 (in key); Wheeler, W.M. 1917a: 545; Cole, 1936a: 38; Cole, 1937b: 138; Wing, 1939: 165; Cole, 1942: 383; Buren, 1944a: 301; Wheeler, G.C. & Wheeler, E.W. 1944: 260; Smith, M.R. 1951a: 864.

Junior synonym of *fusca*: Creighton, 1950a: 532; Smith, M.R. 1958c: 155.

**Status as species**: Francoeur, 1973: 141 (redescription); Francoeur, 1975: 261; Hunt & Snelling, 1975: 23; Francoeur, 1977b: 208; Wheeler, G.C. & Wheeler, J. 1977b: 15 (in key); Yensen, *et al.* 1977: 184; Wheeler, G.C. & Wheeler, J. 1978: 394; Francoeur & Snelling, 1979: 4; Smith, D.R. 1979: 1452; Allred, 1982: 462; Wheeler, G.C. & Wheeler, J. 1986g: 89; Mackay, Lowrie, *et al.* 1988: 113; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 191; Mackay & Mackay, 2002: 334; Coover, 2005: 140; Ward, 2005: 63; Ellison, *et al.* 2012: 147.

**Senior synonym of** *blanda*: Francoeur, 1973: 141; Smith, D.R. 1979: 1452; Bolton, 1995b: 191.

*armata* Le Guillou, 1842; see under **POLYRHACHIS**.

*armenica*. *Formica cinerea* var. *armenica* Ruzsky, 1905b: 406 (w.q.) ARMENIA, TURKEY.

[Misspelled as *armeniaca* by Emery, 1909b: 199, Wheeler, W.M. 1913f: 398 (in key), and others.]

Combination in *F. (Serviformica)*: Emery, 1925b: 246.

As unavailable (infrasubspecific) name: Emery, 1909b: 199; Wheeler, W.M. 1913f: 523.

Subspecies of *cinerea*: Wheeler, W.M. 1913f: 398 (in key); Bondroit, 1918: 54; Emery, 1925b: 246; Finzi, 1928a: 74; Dlussky, 1965a: 43 (in key); Dlussky, 1967a: 66; Aktaş, 1977: 127; Arakelian, 1994: 92; Bolton, 1995b: 191.  
Junior synonym of *cinerea*: Seifert, 2002b: 251; Gratiashvili & Barjadze, 2008: 132; Kiran & Karaman, 2012: 10; Radchenko, 2016: 300.

*armigera* Latreille, 1802; see under **DACETON**.

*arrogans* Smith, F. 1858; see under **CAMPONOTUS**.

*aruncicola*, misspelling, see under *truncicola*.

**aserva**. *Formica sanguinea* r. *aserva* Forel, 1901g: 395 (w.q.) CANADA (Ontario).  
Wheeler, W.M. 1913f: 405 (m.).  
Combination in *F. (Formica)*: Wheeler, W.M. 1913f: 404;  
combination in *F. (Raptiformica)*: Emery, 1925b: 260.  
**Subspecies of *sanguinea***: Wheeler, W.M. 1906b: 15; Wheeler, W.M. 1908f: 631; Wheeler, W.M. 1910g: 570; Santschi, 1911d: 7; Wheeler, W.M. 1913f: 404 (redescription); Wheeler, W.M. 1916m: 596; Emery, 1925b: 260; Wing, 1939: 165; Wheeler, G.C. & Wheeler, E.W. 1944: 266; Buren, 1944a: 307; Smith, M.R. 1951a: 871.  
Synonym of *subnuda*: Creighton, 1950a: 469; Wilson & Brown, 1955: 118; Buren, 1968a: 33.  
[Note: Creighton, Wilson & Brown, and Buren all give *subnuda* as senior synonym, but *aserva* has priority (Bolton, 1995b: 191).]  
**Status as species**: Bolton, 1995b: 191; Mackay & Mackay, 2002: 335; Coover, 2005: 156; Ward, 2005: 63; Ellison, *et al.* 2012: 148.

**aseta**. *Formica aseta* Chang & He, 2002a: 55, figs. 20, 21, 62 (w.) CHINA (Ningxia, Gansu).  
**Status as species**: Guénard & Dunn, 2012: 31.

*assimilis* Jerdon, 1851; see under **NYLANDERIA**.

\**atavina* Heer, 1849; see under \***PONERITES**.

**aterrima**. *Formica aterrima* Cresson, 1865: 426 (m.) U.S.A. (Colorado).  
**Status as species**: Mayr, 1886d: 429 (footnote); Cresson, 1887: 255; Dalla Torre, 1893: 193; Brown, 1947: 8 (redescription); Smith, M.R. 1951a: 860; Smith, M.R. 1967: 370; Smith, D.R. 1979: 1457; Bolton, 1995b: 191.

*atomus* Latreille, 1798; see under **TAPINOMA**.

*atra* Zetterstedt, 1838; see under **CAMPONOTUS**.

**atra**. *Formica atra* Schilling, 1839: 54 (w.) POLAND.  
[Unresolved junior primary homonym of *Formica atra* Zetterstedt, 1838: 450 (Bolton, 1995b: 191).]  
**Status as species**: Dalla Torre, 1893: 193.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 191.

*atra* Buckley, 1866; see under **CAMPONOTUS**.

*atrata* Linnaeus, 1758; see under **CEPHALOTES**.

*atriceps* Smith, F. 1858; see under **CAMPONOTUS**.

*atricolor* Nylander, 1849; see under **CAMPONOTUS**.

*atriventris* Smith, F. 1858; see under **LASIOPHANES**.

*attelaboides* Fabricius, 1775; see under **DOLICHODERUS**.

**attenuata**. *Formica attenuata* Schilling, 1830: 55. *Nomen nudum*.

*aurocincta* Smith, F. 1858; see under **CAMPONOTUS**.

*aurulenta* Latreille, 1802; see under **CAMPONOTUS**.

*australis* Fabricius, 1775; see under **DIACAMMA**.

*austriaca* Mayr, 1853; see under **LIOMETOPUM**.

\***auxillacensis**. \**Formica auxillacensis* Piton, in Piton & Théobald, 1935: 91, pl. 3, fig. 8 (wing) FRANCE (Miocene).

**Status as species:** Burnham, 1979: 115; Bolton, 1995b: 191.

*axillaris* Spinola, 1808; see under **CAMPONOTUS**.

*bacchus* Smith, F. 1858; see under **CAMPONOTUS**.

*badia* Latreille, 1802; see under **POGONOMYRMEX**.

*badia* Smith, F. 1857; see under **COLOBOPSIS**.

*balcanina*. *Formica balcanina* Petrov & Collingwood, 1993: 349, figs. 1-5 (w.q.m.) SERBIA, BULGARIA, MONTENEGRO, BOSNIA, MACEDONIA, GREECE, TURKEY.

[Misspelled as *balcanica* by Bolton, 1995b: 191.]

**Status as species:** Bolton, 1995b: 191; Karaman, M.G. & Karaman, 2003: 48 (error); Karaman, G.S. & Karaman, 2005: 59 (error); Petrov, 2006: 54, 113 (in key) (error); Karaman, M.G. 2011b: 76 (error).

Junior synonym of *cinerea*: Seifert, 2002b: 251; Legakis, 2011: 35; Kiran & Karaman, 2012: 10; Radchenko, 2016: 300.

\***baltica**. \**Formica (Serviformica) baltica* Dlussky, 1967b: 81, fig. 1 (w.) BALTIC AMBER (Eocene).

**Status as species:** Bolton, 1995b: 191.

Junior synonym of \**flori*: Dlussky, 2002a: 292; Dlussky & Perkovsky, 2002: 11; Dlussky, 2008a: 50.

*barbara* Linnaeus, 1767; see under **MESSOR**.

*barbara* Forel, 1891; see under **CAMPONOTUS**.

*barbata*. *Formica barbata* Razoumowski, 1789: 225, fig. 12 (w.) SWITZERLAND.

**Status as species:** Dalla Torre, 1893: 193.

Junior synonym of *fusca*: Emery & Forel, 1879: 451; Dalla Torre, 1893: 193 (footnote), 196; Emery, 1925b: 247; Karavaiev, 1936: 228; Bolton, 1995b: 192; Radchenko, 2016: 294.

\***bauckhorni**. \**Formica bauckhorni* Meunier, 1915: 214, pl. 23, fig. 3 (m.) GERMANY (Oligocene).

**Status as species:** Meunier, 1917: 8; Burnham, 1979: 115; Bolton, 1995b: 192.

**beijingensis**. *Formica beijingensis* Wu, J. 1990: 2, 5 (in key), figs. 1, 15 (w.) CHINA (Beijing).

**Status as species:** Bolton, 1995b: 192; Wu, J. & Wang, 1995: 142; Chang & He, 2002a: 51 (in key); Guénard & Dunn, 2012: 31.

*belgarum* Bondroit, 1918 [*Formicina*]; see under **LASIUS**.

*berthoudi* Forel, 1876; see under **ANOPOLEPIS**.

\***biamoensis**. \**Formica biamoensis* Dlussky, Rasnitsyn & Perfilieva, 2015: 137, fig. 10 (w.) RUSSIA (Sikhote-Alin, Bol'shaya Svetlovodnaya, Eocene).

*bicolor* Fabricius, 1793; see under **CATAGLYPHIS**.

*bicolor* Latreille, 1798; see under **CAMPONOTUS**.

**bicolor**. *Formica bicolor* Leach, 1825: 289 (q.m.) FRANCE.

[Unresolved junior primary homonym of *Formica bicolor* Fabricius, 1793: 351 (Emery, 1921a: 26; Bolton, 1995b: 192).]

**Status as species:** Dalla Torre, 1893: 193.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 192.

**bicolor**. *Formica bicolor* Schilling, 1830: 55. *Nomen nudum*.

*bicornis* Foerster, 1850; see under **LASIUS**.

*bidens* Linnaeus, 1758; see under **DOLICHODERUS**.

*bihamata* Drury, 1773, Fabricius, 1775; see under **POLYRHACHIS**.

*bimaculata* Smith, F. 1858; see under **CAMPONOTUS**.

*binodis* Linnaeus, 1763; see under **TETRAMORIUM**.

*binodis* Fabricius, 1775; see under **MESSOR**.

**binodis**. *Formica binodis* Forskål, 1775: xxiii (no sex/caste indicated, no locality indicated).

[Unresolved junior primary homonym of *Formica binodis* Linnaeus, 1763: 413.]

Unidentifiable to genus; *incertae sedis* in *Formica*.

[Note (i): this material may be the same as *Formica binodis* Fabricius, 1775: 393; Fabricius refers to Forskål as the collector, here and in Fabricius, 1782: 491.]

[Note (ii): Emery, 1892b: 160, suggested it may be, “una forma dell’*Aphaenogaster barbara*”.]

**biophilica**. *Formica biophilica* Trager, J.C., in Trager, MacGown & Trager, 2007: 617, figs. 4b, 5b, 6b (w.q.m.) U.S.A. (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Illinois, Louisiana, Mississippi, Missouri, New York, South Carolina, Tennessee, Texas).

**Status as species**: Deyrup, 2017: 203.

*bipartita* Smith, F. 1861; see under **LEPISIOTA**.

*bipilosa*. *Formica (Serviformica) cinerea* var. *bipilosa* Karavaiev, 1926e: 199 (w.) RUSSIA (Dagestan), AZERBAIJAN.

Collingwood, 1961a: 70 (m.).

Subspecies of *cinerea*: Finzi, 1928a: 70; Kuznetsov-Ugamsky, 1929b: 39.

Status as species: Collingwood, 1961a: 70; Collingwood, 1961b: 289.

Junior synonym of *subpilosa*: Dlussky, 1965a: 28; Dlussky, 1967a: 70; Arakelian, 1994: 101; Bolton, 1995b: 192; Seifert & Schultz, 2008: 79.

*biscutata* Fabricius, 1775; see under **ACROMYRMEX**.

*bispinosa* Olivier, 1792; see under **DOLICHODERUS**.

*bituberculata* Fabricius, 1798; see under **MEGALOMYRMEX**.

*blanda* Smith, F. 1858; see under **CAMPONOTUS**.

*blanda*. *Formica fusca* var. *blanda* Wheeler, W.M. 1913f: 398 (in key).

[*F. fusca* subsp. *fusca* var. *blanda* Wheeler, W.M. 1913f: 510 (w.) U.S.A. (Washington, California); unavailable (infrasubspecific) name.]

[Unresolved junior primary homonym of *Formica blanda* Smith, F. 1858b: 43 (Bolton, 1995b: 192).]

As unavailable (infrasubspecific) name: Emery, 1925b: 248.

Subspecies of *fusca*: Wheeler, W.M. 1917a: 548; Creighton, 1950a: 532; Smith, M.R. 1951a: 864.

Junior synonym of *argentea*: Francoeur, 1973: 141; Smith, D.R. 1979: 1452; Bolton, 1995b: 192.

*bombycina* Roger, 1859; see under **CATAGLYPHIS**.

**bondroiti**. *Formica rufa* subsp. *polycтена* ab. *bondroiti* Stärcke, 1942b: 43 (w.) SPAIN; unavailable (infrasubspecific) name.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 192.

Material referred to *rufa* by Yarrow, 1955a: 4.

*borea*. *Formica (Raptiformica) sanguinea* var. *borea* Santschi, 1925g: 351 (w.m.) FINLAND.

Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Bolton, 1995b: 192; Imai, *et al.* 2003: 59; Radchenko, 2016: 292.

- borealis*. *Formica fusca* subsp. *borealis* Vashkevich, 1924b: 147 (w.) RUSSIA.  
Junior synonym of *lemani*: Dlussky, 1965a: 35; Dlussky & Pisarski, 1971: 150; Bolton, 1995b: 192; Imai, *et al.* 2003: 57; Radchenko, 2016: 296.
- bradleyi**. *Formica (Formica) bradleyi* Wheeler, W.M. 1913f: 423 (w.m.) U.S.A. (Colorado), CANADA (Alberta).  
Wheeler, W.M. 1917a: 535 (q.); Wheeler, G.C. & Wheeler, J. 1953c: 168 (l.).  
Combination in *F. (Raptiformica)*: Emery, 1925b: 259;  
Combination in *F. (Proformica)*: Smith, M.R. 1958c: 152.  
**Status as species**: Wheeler, W.M. 1917a: 535; Emery, 1925b: 259; Wheeler, G.C. & Wheeler, E.W. 1944: 258; Creighton, 1950a: 464; Smith, M.R. 1951a: 860; Wilson & Brown, 1955: 126; Smith, M.R. 1958c: 152; Smith, M.R. 1967: 369; Yensen, *et al.* 1977: 184; Smith, D.R. 1979: 1449; Wheeler, G.C. & Wheeler, J. 1986g: 77 (in key); Mackay, Lowrie, *et al.* 1988: 109 (in key); Bolton, 1995b: 192; Mackay & Mackay, 2002: 336.  
**Senior synonym of morbida**: Wilson & Brown, 1955: 126; Smith, M.R. 1958c: 152; Smith, D.R. 1979: 1449; Bolton, 1995b: 192.
- breviscapa**. *Formica breviscapa* Chang & He, 2002a: 54, figs. 23, 24, 63 (w.) CHINA (Ningxia).  
**Status as species**: Guénard & Dunn, 2012: 31.
- brevisetosa**. *Formica rufa* subsp. *brevisetosa* Ruzsky, 1926: 110 (w.) RUSSIA.  
**Subspecies of rufa**: Ruzsky, 1936: 91; Ruzsky, 1946: 69; Bolton, 1995b: 192.
- brevisetosa*. *Formica (Serviformica) cinerea* var. *brevisetosa* Karavaiev, 1927a: 302 (w.) RUSSIA (Crimea).  
[Unresolved junior primary homonym of *Formica rufa* subsp. *brevisetosa* Ruzsky, 1926: 110 (Bolton, 1995b: 192).]  
*Incertae sedis* in *cinerea* group: Seifert, 2002b: 267.  
Junior synonym of *cinerea*: Finzi, 1928a: 68; Bolton, 1995b: 192; Radchenko, 2016: 300.
- browni**. *Formica browni* Francoeur, 1973: 229, figs. 398-404 (w.q.) MEXICO (Puebla, Mexico, Veracruz).  
**Status as species**: Bolton, 1995b: 192.
- brullei* Smith, F. 1858; see under **CAMPONOTUS**.
- bruni**. *Formica (Coptoformica) bruni* Kutter, 1967a: 229, figs. 1-14 (w.q.m.) SWITZERLAND, AUSTRIA.  
**Status as species**: Kutter, 1968a: 61; Kutter, 1977c: 284; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 285 (in key); Bolton, 1995b: 192; Seifert, 2000a: 538 (redescription); Petrov, 2006: 111 (in key); Seifert, 2007: 329; Casevitz-Weulersse & Galkowsky, 2009: 481; Karaman, M.G. 2011: 83; Borowiec, L. & Salata, 2012: 492; Borowiec, L. 2014: 72; Lebas, *et al.* 2016: 170; Radchenko, 2016: 313; Salata & Borowiec, 2018c: 44; Seifert, 2018: 340.
- brunnea* Latreille, 1798; see under **LASIUS**.
- brunneonitida*. *Formica (Coptoformica) brunneonitida* Dlussky, 1964: 1034, figs. 2(2), 3(2) (w.q.) MONGOLIA, CHINA (Tibet).  
**Status as species**: Dlussky, 1965a: 23; Dlussky, 1967a: 106; Pisarski, 1969a: 234; Pisarski, 1969b: 313; Dlussky & Pisarski, 1970: 89; Pisarski & Krzysztofiak, 1981: 164; Radchenko, 1994b: 112 (in key); Bolton, 1995b: 192.  
Junior synonym of *forsslundi*: Seifert, 2000a: 552; Czechowski, *et al.* 2012: 233.
- bucephala* Roger, 1859; see under **CAMPONOTUS**.
- buddhaensis* Ruzsky, 1915; see under **PROFORMICA**.

**\*buphthalma.** \**Formica buphthalma* Novák, O. 1878: 91, pl. 3, fig. 2 (m.?) GERMANY (Oligocene).

**Status as species:** Scudder, 1891: 699; Dalla Torre, 1893: 193; Handlirsch, 1907: 863; Bolton, 1995b: 192.

*caduca* Victor, 1839; see under **MESSOR**.

*caerulescens* Losana, 1834; see under **TAPINOMA**.

*caespitum* Linnaeus, 1758; see under **TETRAMORIUM**.

*californica*. *Formica microgyna* subsp. *californica* Wheeler, W.M. 1917a: 543 (w.) U.S.A. (California).

Subspecies of *microgyna*: Emery, 1925b: 256; Smith, M.R. 1951a: 866.

Subspecies of *whymperi*: Creighton, 1950a: 510; Smith, M.R. 1958c: 160; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1464.

Junior synonym of *whymperi*: Wheeler, G.C. & Wheeler, J. 1986g: 15; Bolton, 1995b: 192.

Material of the unavailable name *hybrida* referred here by Creighton, 1950a: 510; Smith, M.R. 1958c: 160; Smith, D.R. 1979: 1464; Bolton, 1995b: 192.

**californica.** *Myrmecocystus melliger* subsp. *californicus* Creighton, 1950a: 445.

[First available use of *Myrmecocystus melliger* subsp. *mimicus* var. *californicus* Cole, 1936b: 118 (w.) U.S.A. (California); unavailable (infrasubspecific) name.]

Combination in *Formica*: Snelling, R.R. 1969a: 2.

[Unresolved junior secondary homonym of *Formica microgyna californica* Wheeler, W.M. 1917a: 543 (Bolton, 1995b: 192).]

As unavailable (infrasubspecific) name: Smith, M.R. 1951a: 855.

**Subspecies of *Myrmecocystus melliger*:** Smith, M.R. 1958c: 151.

**Status as species:** Bolton, 1995b: 192.

[Note: identity and status of this taxon have not been ascertained. It is therefore included in *Formica* as a taxon at species-rank, to dissociate it from its original combination in *Myrmecocystus*, and to separate it from its original rank as a subspecies of *melliger*. The name *californicus* is not mentioned in Snelling, R.R. 1976: 1-163, the revision of *Myrmecocystus*.]

*callida* Smith, F. 1858; see under **CAMPONOTUS**.

**calviceps.** *Formica calviceps* Cole, 1954c: 164 (w.) U.S.A. (New Mexico).

**Status as species:** Smith, M.R. 1958c: 154; Smith, D.R. 1979: 1457; Allred, 1982: 462; Wheeler, G.C. & Wheeler, J. 1986g: 80 (in key); Mackay, Lowrie, *et al.* 1988: 112 (in key); Bolton, 1995b: 192; Mackay & Mackay, 2002: 337.

*camelina* Smith, F. 1857; see under **CAMPONOTUS**.

*camponoticeps*. *Formica subpolita* var. *camponoticeps* Wheeler, W.M. 1913f: 535 (w.) U.S.A. (Washington).

Subspecies of *subpolita*: Wheeler, W.M. 1917a: 553; Emery, 1925b: 251; Cole, 1936a: 38; Cole, 1942: 384; Creighton, 1950a: 542; Smith, M.R. 1951a: 872; Smith, M.R. 1958c: 160; Cole, 1966: 23 (in key).

Junior synonym of *subpolita*: Francoeur, 1973: 107; Smith, D.R. 1979: 1455; Bolton, 1995b: 192.

**canadensis.** *Formica cinerea* var. *canadensis* Santschi, 1914a: 435 (w.q.) CANADA (Saskatchewan).

Wheeler, W.M. 1917a: 550 (q.); Francoeur, 1973: 63 (m.).

Combination in *F.* (*Serviformica*): Emery, 1925b: 246.

As unavailable (infrasubspecific) name: Cole, 1936a: 38.

- Subspecies of *cinerea*:** Wheeler, W.M. 1917a: 550; Emery, 1925b: 246; Creighton, 1950a: 531; Smith, M.R. 1951a: 861.  
 Junior synonym of *lepida*: Smith, M.R. 1961a: 252; Smith, M.R. 1967: 370.
- Status as species:** Francoeur, 1973: 60 (redescription); Francoeur, 1975: 259; Hunt & Snelling, 1975: 23; Yensen, *et al.* 1977: 184; Francoeur & Snelling, 1979: 4; Smith, D.R. 1979: 1452; Allred, 1982: 463; Mackay, Lowrie, *et al.* 1988: 108 (in key); Bolton, 1995b: 192; Mackay & Mackay, 2002: 337; Ward, 2005: 63.
- candida*.** *Formica candida* Smith, F. 1878b: 11 (q.) (no state data, “On the road across the Pámir, from Sarikol to Panja”).  
 [Note: Smith's description is repeated by Bingham, 1903: 335 (footnote).]  
 Junior synonym of *gagates*: Forel, 1894c: 403.  
 Junior synonym of *picea* Nylander: Emery, 1925b: 249; Karavaiev, 1936: 231; Dlussky, 1967a: 61; Bolton, 1995b: 201.  
 [Note: *candida* junior synonym of *picea* Nylander (synonymy by Dlussky, 1967a: 61); hence *candida* treated as first available replacement name for *Formica picea* Nylander, 1846a: 917 (Bolton, 1995b: 192).]  
**Status as species:** Dalla Torre, 1893: 193; Bolton, 1995b: 192; Espadaler, 1997b: 27; Chang & He, 2002a: 51 (in key); Czechowski, *et al.* 2002: 81; Imai, *et al.* 2003: 57; Seifert, 2004: 35 (redescription); Radchenko, 2005b: 161; Schultz, R. *et al.* 2006: 203; Gratiashvili & Barjadze, 2008: 132; Guénard & Dunn, 2012: 31; Bharti, Guénard, *et al.* 2016: 27.
- \**cantolica*.** \**Formica cantolica* Piton, in Piton & Théobald, 1935: 68, pl. 1, fig. 10 (m.?) FRANCE (Mio-Pliocene).  
**Status as species:** Bolton, 1995b: 223; Bolton, 1995b: 192.
- capitata* Latreille, 1798; see under **MESSOR**.
- capiterubro* Comes, 1925; see under **CREMATOGASTER**.
- \**capito* Heer, 1867; see under **LASIUS**.
- capsincola*. *Formica capsincola* Schilling, 1839: 54 (w.q.) POLAND.  
 Junior synonym of *gagates*: Mayr, 1855: 348; Nylander, 1856b: 65; Roger, 1857: 17; Smith, F. 1858b: 6; Forel, 1874: 98 (in list); Bolton, 1995b: 192; Radchenko, 2016: 299.
- carbonaria* Latreille, 1802; see under **CAMPONOTUS**.
- carinata* Fabricius, 1804; see under **POLYRHACHIS**.
- carinata* Brullé, 1840; see under **CAMPONOTUS**.
- caryae* Fitch, 1855; see under **CAMPONOTUS**.
- castanea* Latreille, 1802; see under **CAMPONOTUS**.
- castanea* Lepeletier, 1835; see under **CAMPONOTUS**.
- castanipes* Leach, 1825; see under **CAMPONOTUS**.
- caucasica*. *Formica rufibarbis* var. *caucasica* Wheeler, W.M. 1913f: 517.  
 [First available use of *Formica rufibarbis* subsp. *clara* var. *caucasica* Ruzsky, 1905b: 401 (w.) RUSSIA (Daghestan), ARMENIA; unavailable (infrasubspecific) name.]  
 As unavailable (infrasubspecific) name: Emery, 1909b: 198; Gratiashvili & Barjadze, 2008: 133.  
 Subspecies of *rufibarbis*: Emery, 1925b: 250; Stitz, 1930: 238.  
 Junior synonym of *glauca*: Dlussky, 1967a: 74; Tarbinsky, 1976: 184; Bolton, 1995b: 192.  
 Junior synonym of *cunicularia*: Atanassov & Dlussky, 1992: 267; Arakelian, 1994: 94.  
 Junior synonym of *clara*: Seifert & Schultz, 2009: 263.
- caustica* Kollar, in Pohl & Kollar, 1832; see under **CEPHALOTES**.

\***cephalica**. \**Formica cephalica* Scudder, 1891: 699, no sex/caste mentioned, BALTIC AMBER. *Nomen nudum* (attributed to Burmeister).

[Note: name may be based on a misinterpretation. Burmeister, 1831: 1100, does not name a species but mentions that he has a number of ants' heads (*formicae cephalicae*) in amber.]

*cephalotes* Linnaeus, 1758; see under **ATTA**.

\***ceps**. \**Formica ceps* Zhang, J. 1989: 288, fig. 289 (m.) CHINA (Shandong, Miocene).

*chartifex* Smith, F. 1860; see under **CAMPONOTUS**.

*chelifera* Latreille, 1802; see under **ODONTOMACHUS**.

**chevrolatii** Romand, 1846; see under **FORMILA**.

*chilensis* Spinola, 1851; see under **CAMPONOTUS**.

**chufeijif**. *Formica chufeijif* Forskål, 1775: xxiii (w.) YEMEN.

Unidentifiable to genus; *incertae sedis* in *Formica*: Emery, 1892b: 160; Bolton, 1995b: 192.

**ciliata**. *Formica ciliata* Mayr, 1886d: 428 (q.) U.S.A. (Colorado).

Wheeler, W.M. 1903e: 641 (w.m.).

**Status as species**: Cresson, 1887: 255; Dalla Torre, 1893: 193; Wheeler, W.M. 1903e: 640 (redescription); Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 452 (redescription); Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Cole, 1942: 379; Creighton, 1950a: 483; Smith, M.R. 1951a: 861; Smith, M.R. 1967: 370; Yensen, *et al.* 1977: 184; Smith, D.R. 1979: 1457; Allred, 1982: 463; Wheeler, G.C. & Wheeler, J. 1986g: 80; Mackay, Lowrie, *et al.* 1988: 113; Bolton, 1995b: 192; Mackay & Mackay, 2002: 338.

*ciliata*. *Formica pratensis* var. *ciliata* Ruzsky, 1926: 110.

[First available use of *Formica rufa* subsp. *pratensis* var. *ciliata* Ruzsky, 1915b: 7 (w.q.) RUSSIA; unavailable (infrasubspecific) name.]

[Unresolved junior primary homonym of *Formica ciliata* Mayr, 1886d: 428 (Bolton, 1995b: 192).]

As unavailable (infrasubspecific) name: Ruzsky, 1936: 91.

Subspecies of *pratensis*: Ruzsky, 1946: 69.

Junior synonym of *nigricans*: Collingwood, 1971: 169.

Junior synonym of *pratensis*: Dlussky, 1967a: 84; Dlussky & Pisarski, 1971: 177; Tarbinsky, 1976: 194; Seifert, 1992a: 225; Bolton, 1995b: 192; Radchenko, 2016: 291.

*cinctella* Gerstäcker, 1859; see under **CAMPONOTUS**.

*cinerascens* Fabricius, 1787; see under **CAMPONOTUS**.

**cinerea**. *Formica cinerea* Mayr, 1853c: 281 (w.q.) AUSTRIA, SLOVENIA, ITALY.

Mayr, 1855: 345 (m.).

Combination in *F. (Serviformica)*: Forel, 1915d: 64; Ruzsky, 1915b: 14.

**Subspecies of fusca**: Forel, 1874: 54; Emery & Forel, 1879: 451; Mayr, 1886d: 427; Cresson, 1887: 255; Mayr, 1889: 279; Forel, 1892i: 307; Lameere, 1892: 63; Emery, in Dalla Torre, 1893: 196 (footnote); Ruzsky, 1896: 70; Emery, 1909b: 199; Bondroit, 1910: 483; Forel, 1911d: 352; Stitz, 1914: 93; Emery, 1914d: 159; Escherich, 1917: 336 (in key).

**Status as species**: Mayr, 1855: 344 (redescription); Nylander, 1856b: 64; Gredler, 1858: 9; Smith, F. 1858b: 5; Mayr, 1861: 47 (in key); Meinert, 1861: 315; Mayr, 1863: 413; Roger, 1863b: 13; Emery, 1869b: 10; Dours, 1873: 165; André, 1874: 184 (in key); Mayr, 1877: 7; Emery, 1878a: ix (in list); Emery, 1878b: 49; Mayr, 1880: 26; André, 1882b: 181 (in key); Mayr, 1886d: 427; Nasonov, 1889: 20; Dalla Torre, 1893: 193;

Emery, 1898c: 126; Ruzsky, 1902d: 12; Ruzsky, 1902e: 16; Wheeler, W.M. 1902e: 947; Ruzsky, 1903b: 303; Ruzsky, 1903c: 206; Forel, 1904b: 385; Ruzsky, 1905b: 402; Wasmann, 1906: 112 (in key); Wheeler, W.M. 1913f: 521 (redescription); Ruzsky, 1915b: 14; Forel, 1915d: 64 (in key); Emery, 1916b: 255; Wheeler, W.M. 1917a: 550; Menozzi, 1918: 88; Bondroit, 1918: 53; Santschi, 1919e: 247; Kulmatycki, 1922: 85; Soudek, 1922: 84; Müller, 1923b: 141; Lomnicki, 1925a: 17 (in key); Emery, 1925b: 246; Ruzsky, 1925a: 287; Ruzsky, 1925b: 44; Santschi, 1925g: 353; Karavaiev, 1926e: 198; Santschi, 1926f: 289; Stärcke, 1926: 147 (in key); Karavaiev, 1927a: 302; Karavaiev, 1927c: 286 (in key); Finzi, 1928a: 68; Lomnicki, 1928: 9; Karavaiev, 1929b: 214; Karavaiev, 1931a: 315; Karavaiev, 1931e: 215; Arnol'di, 1933b: 604 (in key); Grandi, 1935: 103; Cole, 1936a: 38; Karavaiev, 1936: 224 (redescription); Ruzsky, 1936: 95; Novák & Sadil, 1941: 106 (in key); Ruzsky, 1946: 69; Rösler, 1950: 218; Creighton, 1950a: 531; Consani & Zangheri, 1952: 45; Ceballos, 1956: 318; Baroni Urbani, 1964c: 168; Dlussky, 1965a: 35 (in key); Dlussky, 1967a: 65; Bernard, 1967: 300 (redescription); Kutter, 1968a: 61; Collingwood & Yarrow, 1969: 87; Baroni Urbani, 1971c: 229; Collingwood, 1971: 170; Dlussky & Pisarski, 1971: 157 (redescription); Francoeur, 1975: 259; Pisarski, 1975: 42; Kutter, 1977c: 252; Arnol'di & Dlussky, 1978: 553 (in key); Collingwood, 1978: 93 (in key); Collingwood, 1979: 124; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 287 (in key); Le Moli & Rosi, 1991: 37; Atanassov & Dlussky, 1992: 264; Douwes, 1995: 98; Bolton, 1995b: 192; Poldi, *et al.* 1995: 8; Espadaler, 1997b: 27; Gallé, *et al.* 1998: 217; Chang & He, 2002a: 57; Czechowski, *et al.* 2002: 82; Seifert, 2002b: 251 (redescription); Csösz, & Markó, 2005: 233; Bračko, 2006: 146; Markó, Sipos, *et al.* 2006: 67; Bračko, 2007: 19; Seifert, 2007: 302; Werner & Wiezik, 2007: 143; Zryanin & Zryanina, 2007: 233; Gratiashvili & Barjadze, 2008: 132; Casevitz-Weulersse & Galkowsky, 2009: 481; Lapeva-Gjonova, *et al.* 2010: 47; Boer, 2010: 30; Csösz, *et al.* 2011: 59; Legakis, 2011: 35; Borowiec, L. & Salata, 2012: 492; Czechowski, *et al.* 2012: 212; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 10; Borowiec, L. 2014: 72; Bračko, *et al.* 2014: 19; Lebas, *et al.* 2016: 184; Radchenko, 2016: 300; Salata & Borowiec, 2018c: 45; Seifert, 2018: 310.

**Senior synonym of *armenica*:** Seifert, 2002b: 251; Gratiashvili & Barjadze, 2008: 132; Kiran & Karaman, 2012: 10; Radchenko, 2016: 300.

**Senior synonym of *balcanina*:** Seifert, 2002b: 251; Legakis, 2011: 35; Kiran & Karaman, 2012: 10; Radchenko, 2016: 300.

**Senior synonym of *brevisetosa*:** Karavaiev: Finzi, 1928a: 68; Bolton, 1995b: 192; Radchenko, 2016: 300.

**Senior synonym of *iberica*:** Seifert, 2002b: 251; Radchenko, 2016: 300.

**Senior synonym of *imitans*:** Seifert, 2002b: 251; Gratiashvili & Barjadze, 2008: 132; Kiran & Karaman, 2012: 10; Radchenko, 2016: 300.

**Senior synonym of *italica*:** Seifert, 2002b: 251; Radchenko, 2016: 300.

**Senior synonym of *novaki*:** Seifert, 2002b: 251; Radchenko, 2016: 300.

**Senior synonym of *ochracea*:** Radchenko, 2016: 300.

**Senior synonym of *sabulosa*:** Radchenko, 2016: 300.

**Senior synonym of *subrufoides*:** Agosti & Collingwood, 1987a: 59; Bolton, 1995b: 192; Seifert, 2002b: 251; Radchenko, 2016: 300.

Material of the *nomen nudum* *cinereoglebaria* referred here by Dlussky & Pisarski, 1971: 157; Bolton, 1995b: 192; Seifert, 2002b: 251.

- Current subspecies: nominal plus *cinereoimitans*.
- cinereofusca*. *Formica cinerea* var. *cinereofusca* Kulmatycki, 1922: 85. *Nomen nudum* (attributed to Forel).
- cinereofusca*. *Formica (Serviformica) cinerea* var. *cinereofusca* Karavaiev, 1929b: 214 (w.) GEORGIA, ARMENIA.  
**Status as species:** Dlussky, 1965a: 35 (in key); Dlussky, 1967a: 60; Aktaş, 1977: 127; Arnol'di & Dlussky, 1978: 553 (in key); Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 287 (in key); Arakelian, 1994: 93; Bolton, 1995b: 193; Petrov, 2006: 114 (in key); Gratiashvili & Barjadze, 2008: 133; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 10; Borowiec, L. 2014: 72; Radchenko, 2016: 297.
- cinereofuscoides*. *Formica fusca* r. *gagates* var. *cinereofuscoides* Forel, 1892i: 307.  
Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 193.
- cinereoglebaria*. *Formica cinerea* var. *cinereoglebaria* Kulmatycki, 1922: 85. *Nomen nudum*.  
Material referred to *cinerea* by Dlussky & Pisarski, 1971: 157.
- cinereoides*. *Formica fusca* subsp. *rufibarbis* var. *cinereoides* Forel, 1874: 312, no sex/caste given, SWITZERLAND; unavailable (infrasubspecific) name.  
Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 193.
- cinereoimitans*. *Formica cinerea* var. *cinereoimitans* Ruzsky, 1905b: 405 (w.) no locality given.  
**Subspecies of *cinerea*:** Bolton, 1995b: 193.  
*Incertae sedis* in *cinerea* group: Seifert, 2002b: 267.
- cinereorufibarbis*. *Formica fusca* var. *cinereorufibarbis* Forel, 1874: 55 (w.q.m.) SWITZERLAND.  
Combination in *F. (Serviformica)*: Forel, 1915d: 64.  
[Misspelled as *cinerea rufibarbis* by Finzi, 1928a: 72.]  
As unavailable (infrasubspecific) name: Emery & Forel, 1879: 451; Lameere, 1892: 63; Baroni Urbani, 1971c: 232.  
Subspecies of *fusca*: André, 1882b: 183; Mayr, 1889: 279.  
Subspecies of *rufibarbis*: Dalla Torre, 1893: 210; Forel, 1915d: 64 (in key).  
Subspecies of *cinerea*: Ruzsky, 1896: 70; Forel, 1915d: 64; Emery, 1916b: 255; Bondroit, 1918: 54; Emery, 1925b: 246; Stärcke, 1926: 147 (in key); Finzi, 1928a: 72; Novák & Sadil, 1941: 106 (in key); Consani & Zangheri, 1952: 45; Ceballos, 1956: 318.  
Status as species: Mayr, 1877: 20 (in list); Collingwood, 1971: 170; Kutter, 1977c: 253; Poldi, *et al.* 1995: 8.  
Junior synonym of *fuscocinerea*: Dlussky & Pisarski, 1971: 161; Pisarski, 1975: 43.  
Junior synonym of *rufibarbis*: Bernard, 1967: 297; Collingwood, 1978: 73; Bolton, 1995b: 193; Seifert, 2002b: 266 (in text); Seifert & Schultz, 2009: 260; Karaman, M.G. 2011: 80; Radchenko, 2016: 306.
- circumspecta* Smith, F. 1861; see under **CAMPONOTUS**.
- clara*. *Formica rufibarbis* var. *clara* Forel, 1886f: 206 (w.) SYRIA.  
Ruzsky, 1902b: 471 (q.m.).  
Combination in *F. (Serviformica)*: Ruzsky, 1915b: 14; Emery, 1925b: 250.  
As unavailable (infrasubspecific) name: Forel, 1894c: 404; Emery, 1909b: 198.  
**Subspecies of *rufibarbis*:** Dalla Torre, 1893: 210; Forel, 1901h: 65; Ruzsky, 1902b: 471; Ruzsky, 1903c: 206; Bingham, 1903: 335; Forel, 1904b: 384; Ruzsky, 1905b: 399; Wheeler, W.M. 1913f: 516 (redescription); Ruzsky, 1915b: 14; Kuznetsov-Ugamsky, 1923: 246; Emery, 1925b: 250; Ruzsky, 1925b: 44; Karavaiev, 1926e: 198; Kuznetsov-

Ugamsky, 1926b: 98; Karavaiev, 1927b: 111; Kuznetsov-Ugamsky, 1929b: 39; Stitz, 1934: 9; Santschi, 1934d: 281; Stärcke, 1935: 268; Ruzsky, 1936: 92; Ruzsky, 1946: 69; Chapman & Capco, 1951: 198.

**Status as species:** Collingwood, 1961a: 68; Dlussky, 1965a: 37 (in key); Dlussky, 1967a: 77; Pisarski, 1967: 416; Pisarski, 1969b: 312; Dlussky & Pisarski, 1970: 88; Dlussky, 1981a: 17; Dlussky, Soyunov & Zabelin, 1990: 139; Bolton, 1995b: 193; Schultz, R. *et al.* 2006: 205; Gratiashvili & Barjadze, 2008: 133; Casevitz-Weulersse & Galkowsky, 2009: 481; Seifert & Schultz, 2009: 263 (redescription); Vonshak, *et al.* 2009: 40; Lapeva-Gjonova, *et al.* 2010: 48; Boer, 2010: 32; Csösz, *et al.* 2011: 59; Legakis, 2011: 35; Borowiec, L. & Salata, 2012: 492; Czechowski, *et al.* 2012: 220; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 10; Borowiec, L. 2014: 73; Bharti, Guénard, *et al.* 2016: 27; Lebas, *et al.* 2016: 198; Salata & Borowiec, 2018c: 45; Seifert, 2018: 308; Khalili-Moghadam, *et al.* 2019: 169.

**Senior synonym of *caucasica*:** Seifert & Schultz, 2009: 263.

**Senior synonym of *lusatica*:** Seifert & Schultz, 2009: 263; Casevitz-Weulersse & Galkowsky, 2009: 481; Legakis, 2011: 35; Czechowski, *et al.* 2012: 220; Seifert, 2018: 308.

**Senior synonym of *rizadaghi*:** Dlussky, Soyunov & Zabelin, 1990: 139; Bolton, 1995b: 193.

Material of the unavailable names *clara*, *transversa* referred here by Dlussky, 1967a: 77; Bolton, 1995b: 193.

Current subspecies: nominal plus *sinae*.

*clara*. *Formica rufibarbis* subsp. *montana* var. *clara* Kuznetsov-Ugamsky, 1926b: 98 (w.) KAZAKHSTAN; unavailable (infrasubspecific) name.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 193.

Material referred to *clara* Forel by Dlussky, 1967a: 77.

*clara*. *Formica rufibarbis* subsp. *subpilosa* var. *clara* Kuznetsov-Ugamsky, 1926b: 98 (w.) UZBEKISTAN, TADJIKISTAN, KAZAKHSTAN; unavailable (infrasubspecific) name.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 193.

Material referred to *subpilosa* by Dlussky, 1965a: 28; Dlussky, 1967a: 70.

*clara*. *Formica (Raptiformica) sanguinea* var. *clara* Karavaiev, 1927d: 345 (w.) UKRAINE. [Junior primary homonym of *Formica rufibarbis* var. *clara* Forel, 1886f: 206.]

**Replacement name:** *Formica (Raptiformica) sanguinea* var. *leninei* Santschi, 1928b: 46.

*clarior*. *Formica (Raptiformica) sanguinea* var. *clarior* Ruzsky, 1905b: 420 (w.) RUSSIA, GEORGIA.

As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 404.

Subspecies of *sanguinea*: Emery, 1909b: 184; Wheeler, W.M. 1913f: 389 (in key); Emery, 1925b: 259; Ruzsky, 1925b: 43; Karavaiev, 1926e: 195; Kuznetsov-Ugamsky, 1928b: 14; Kuznetsov-Ugamsky, 1929a: 22; Kuznetsov-Ugamsky, 1929b: 40; Arnol'di, 1948: 212 (in list).

Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Dlussky & Pisarski, 1971: 189; Tarbinskiy, 1976: 186; Arakelian, 1994: 100; Bolton, 1995b: 193; Imai, *et al.* 2003: 59; Gratiashvili & Barjadze, 2008: 134; Radchenko, 2016: 292.

*clarior*. *Formica (Serviformica) rufibarbis* subsp. *clarior* Ruzsky, 1936: 95.

[First available use of *Formica (Serviformica) rufibarbis* subsp. *subpilosa* var. *clarior* Ruzsky, 1915a: 421 (w.) CHINA (Tibet); unavailable (infrasubspecific) name (Bolton, 1995b: 193).]

[**Junior primary homonym of** *Formica (Raptiformica) sanguinea* var. *clarior* Ruzsky, 1905b: 420.]

As unavailable (infrasubspecific) name: Ruzsky, 1925b: 44.

**Replacement name:** *Formica (Serviformica) rufibarbis* var. *clarissima* Emery, 1925b: 250.

**clarissima.** *Formica (Serviformica) rufibarbis* var. *clarissima* Emery, 1925b: 250.

**Replacement name for** *Formica (Serviformica) rufibarbis* subsp. *clarior* Ruzsky, 1936: 95. [Junior primary homonym of *Formica (Raptiformica) sanguinea* var. *clarior* Ruzsky, 1905b: 420.]

**Subspecies of** *subpilosa*: Dlussky, 1965a: 30 (under the name *ruzskyi*); Bolton, 1995b: 193.

**Status as species:** Seifert & Schultz, 2008: 79 (redescription); Guénard & Dunn, 2012: 31.

**Senior synonym of** *ruzskyi* (unnecessary replacement name): Bolton, 1995b: 193; Seifert & Schultz, 2008: 79.

**clarorufibarbis.** *Formica rufibarbis* var. *clarorufibarbis* Wheeler, W.M. & Mann, 1916: 173.

[First available use of *Formica rufibarbis* subsp. *clara* var. *clarorufibarbis* Ruzsky, 1905b: 400 (w.) RUSSIA, CAUCASUS; unavailable (infrasubspecific) name.]

As unavailable (infrasubspecific) name: Emery, 1909b: 198.

Status as species: Tohmé, G. & Tohmé, 2014: 139 (error).

**Subspecies of** *rufibarbis*: Bolton, 1995b: 193.

**clarosubpilosa.** *Formica fusca* subsp. *rufibarbis* var. *clarosubpilosa* Emery, 1909b: 198. *Nomen nudum* (attributed to Ruzsky).

*clavata* Fabricius, 1775; see under **PARAPONERA**.

*clavigera* Roger, 1862; see under **LASIUS**.

*clivia.* *Formica rufa* subsp. *clivia* Creighton, 1940a: 8, 8 (in key), fig. 1 (w.q.m.) U.S.A. (Montana, Colorado, Wyoming), CANADA (British Columbia, Manitoba).

Subspecies of *rufa*: Cole, 1942: 380; Buren, 1944a: 302; Smith, M.R. 1951a: 868.

Subspecies of *obscuriventris*: Creighton, 1950a: 494; Cole, 1954c: 165; Smith, M.R. 1958c: 158; Smith, M.R. 1967: 372; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1460; Mackay, Lowrie, *et al.* 1988: 115; Bolton, 1995b: 193; Mackay & Mackay, 2002: 358.

Junior synonym of *obscuriventris*: Shattuck & Cover, 2016: 16.

**\*clymene.** *\*Formica clymene* Wheeler, W.M. 1915h: 127 (w.) BALTIC AMBER (Eocene).

[*\*Formica clymene* Wheeler, W.M. 1913f: 383. *Nomen nudum.*]

Status as species: Dlussky, 1967b: 80; Burnham, 1979: 115; Keilbach, 1982: 281; Bolton, 1995b: 193.

Junior synonym of *\*phaethusa*: Dlussky, 2008a: 52.

*coarctata* Latreille, 1802; see under **PONERA**.

**\*cockerelli.** *\*Formica cockerelli* Carpenter, 1930: 57, pl. 4, fig. 3 (q.m.) U.S.A. (Colorado, Florissant, Eocene).

**Status as species:** Burnham, 1979: 115; Bolton, 1995b: 193.

*coeca* Latreille, 1802; see under **LABIDUS**.

**cognata.** *Formica cognata* Stephens, 1829: 357. *Nomen nudum.*

*cognata* Smith, F. 1858; see under **CAMPONOTUS**.

**coloradensis**. *Formica rufa* subsp. *coloradensis* Creighton, 1940a: 1, 7 (in key).

[First available use of *Formica truncicola* subsp. *integroides* var. *coloradensis* Wheeler, W.M. 1913f: 440 (w.q.) U.S.A. (Colorado, New Mexico, Idaho); unavailable (infrasubspecific) name.]

[*Formica rufa* subsp. *integra* var. *coloradensis* Wheeler, W.M. 1910g: 570. *Nomen nudum*.]

As unavailable (infrasubspecific) name: Wheeler, W.M. 1917a: 539; Emery, 1925b: 254; Cole, 1936a: 38; Weber, 1943c: 343 (in list).

**Subspecies of *rufa***: Cole, 1942: 381; Smith, M.R. 1951a: 868.

**Subspecies of *integroides***: Creighton, 1950a: 489; Cole, 1954c: 165; Smith, M.R. 1958c: 156; Smith, M.R. 1967: 371; Smith, D.R. 1979: 1458; Allred, 1982: 467 (in key).

**Status as species**: Brown, 1965d: 185 (in text); Yensen, *et al.* 1977: 184; Wheeler, G.C. & Wheeler, J. 1986g: 81; Mackay, Lowrie, *et al.* 1988: 111 (in key); Bolton, 1995b: 193; Mackay & Mackay, 2002: 339.

**comata**. *Formica comata* Wheeler, W.M. 1909e: 85 (w.q.m.) U.S.A. (Colorado).

**Status as species**: Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 454 (redescription); Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Cole, 1937b: 138; Cole, 1942: 379; Creighton, 1950a: 483; Smith, M.R. 1951a: 861; Smith, M.R. 1967: 370; Smith, D.R. 1979: 1457; Allred, 1982: 463; Bolton, 1995b: 193; Mackay & Mackay, 2002: 340.

*compressa* Fabricius, 1787; see under **CAMPONOTUS**.

*comptula*. *Formica oreas* var. *comptula* Wheeler, W.M. 1913f: 460 (w.q.) U.S.A. (Washington, Montana).

Subspecies of *oreas*: Wheeler, W.M. 1913f: 391 (in key); Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Cole, 1936a: 37; Cole, 1942: 380; Creighton, 1950a: 494; Smith, M.R. 1951a: 867; Smith, M.R. 1958c: 158; Smith, M.R. 1967: 372; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1461; Bolton, 1995b: 193; Mackay & Mackay, 2002: 363.

Junior synonym of *oreas*: Shattuck & Cover, 2016: 17.

*congerens*. *Formica congerens* Nylander, 1846a: 906 (w.) FINLAND.

[Misspelled as *congernes* by Bernard, 1967: 314.]

Nylander, 1849: 30 (m.); Foerster, 1850a: 17 (q.).

Status as species: Nylander, 1849: 29 Foerster, 1850a: 17; Schenck, 1852: 30; Mayr, 1855: 332 (redescription); Nylander, 1856b: 61; Smith, F. 1857b: 39; Gredler, 1858: 7; Smith, F. 1858a: 278; Smith, F. 1858b: 3; Mayr, 1861: 46 (in key); Mayr, 1863: 413; Smith, F. 1871b: 1; Dours, 1873: 165; Saunders, E. 1880: 205; White, W.F. 1884: 250; Betrem, 1953: 323 (in key).

Junior synonym of *pratensis*: Roger, 1863b: 13; André, 1874: 202 (in list); Forel, 1874: 98 (in list); Mayr, 1877: 6; Emery & Forel, 1879: 450; Mayr, 1880: 26; Saunders, E. 1896: 20; Nasonov, 1889: 17; Lameere, 1892: 63; Dalla Torre, 1893: 204; Ruzsky, 1905b: 337; Wheeler, W.M. 1913f: 428; Forel, 1915d: 57 (in key); Donisthorpe, 1915d: 267; Emery, 1916b: 256; Soudek, 1922: 80; Müller, 1923b: 142; Emery, 1925b: 255; Lomnicki, 1925a: 16 (in key); Betrem, 1926: 214; Donisthorpe, 1927b: 309; Lomnicki, 1928: 8; Karavaiev, 1936: 246; Gösswald, 1941: 82; Pisarski, 1975: 46.

Synonym of *nigricans*: Bernard, 1967: 314.

[Note: Bernard, 1967: 314, gives *nigricans* as senior synonym, but *congerens* has priority.]

Junior synonym of *lugubris*: Yarrow, 1955a: 5; Dlussky, 1967a: 91; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 193; Radchenko, 2007: 36; Casevitz-Weulersse & Galkowsky, 2009: 482; Radchenko, 2016: 287.

**conica.** *Formica conica* Fabricius, 1798: 279 (m.) INDIA (Tamil Nadu, “Habitat in Tranquebariae”).

Combination in *Lasius*: Fabricius, 1804: 418.

Status as species: Latreille, 1802c: 283; Fabricius, 1804: 418; Smith, F. 1858b: 15; Mayr, 1863: 413; Smith, F. 1871a: 303; Chapman & Capco, 1951: 199.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 193.

[Note: Dalla Torre, 1893: 183, retains *conica* in *Lasius*, which is certainly incorrect. Forel, 1905b: 161, suggests that it may be the male of *Camponotus compressus*, but there is little in the original description to confirm this.]

**connecticutensis.** *Formica connecticutensis* Buckley, 1866: 154 (w.q.) U.S.A. (Connecticut).

Status as species: Cresson, 1887: 256; Dalla Torre, 1893: 194.

Unidentifiable taxon; *incertae sedis* in Formicinae: Smith, M.R. 1958c: 161; Smith, D.R. 1979: 1467;

unidentifiable taxon; *incertae sedis* in *Formica*: Wheeler, W.M. 1902f: 19; Smith, M.R. 1951a: 873; Bolton, 1995b: 193.

*consanguinea* Smith, F. 1861; see under **CAMPONOTUS**.

*consectator* Smith, F. 1858; see under **CAMPONOTUS**.

*consobrina* Erichson, 1842; see under **CAMPONOTUS**.

*consocians.* *Formica difficilis* var. *consocians* Wheeler, W.M. 1904f: 371 (w.q.m.) U.S.A. (Connecticut).

Subspecies of *difficilis*: Wheeler, W.M. 1906b: 16; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 479 (redescription); Wheeler, W.M. 1916m: 597; Emery, 1925b: 256.

Junior synonym of *difficilis*: Cole, 1943a: 389; Creighton, 1950a: 500; Smith, M.R. 1951a: 862; Kutter, 1968b: 207; Smith, D.R. 1979: 1462; Bolton, 1995b: 193; Coovert, 2005: 152.

*conspicua* Smith, F. 1858; see under **CAMPONOTUS**.

**constricta.** *Formica constricta* Roger, 1859: 248. *Nomen nudum* (attributed to “Bon. in lit.”)

**constricta.** *Formica (Formica) rufa* var. *constricta* Karavaiev, 1929b: 215, fig. 6 (w.) KAZAKHSTAN.

**Subspecies of *rufa***: Bolton, 1995b: 193.

*consultans* Walker, 1859; see under **ANOCHEBUS**.

*contracta* Latreille, 1802; see under **PONERA**.

\**cordata* Holl, 1829; see under **PHEIDOLE**.

*cordata* Smith, F. 1859; see under **PHILIDRIS**.

*cordieri.* *Formica pratensis* var. *cordieri* Bondroit, 1917a: 174 (diagnosis in key) (q.) FRANCE.

As unavailable (infrasubspecific) name: Emery, 1925b: 255.

Subspecies of *pratensis*: Bondroit, 1918: 58.

Status as species: Betrem, 1960b: 77; Collingwood & Yarrow, 1969: 93 (error).

Junior synonym of *nigricans*: Betrem, 1962: 38 (in text); Baroni Urbani, 1964c: 169; Kutter, 1965: 140; Bernard, 1967: 314; Baroni Urbani, 1971c: 220; Collingwood, 1971: 169; Collingwood, 1979: 153.

Junior synonym of *pratensis*: Dlussky, 1967a: 84; Dlussky & Pisarski, 1971: 177; Paraschivescu, 1972: 527; Pisarski, 1975: 46; Kutter, 1977c: 272; Seifert, 1992a: 225;

- Bolton, 1995b: 201; Casevitz-Weulersse & Galkowsky, 2009: 482; Radchenko, 2016: 291.
- coronata* Fabricius, 1804; see under **ACROMYRMEX**.
- corsica**. *Formica corsica* Seifert, 2002b: 264, fig. 3 (w.) FRANCE (Corsica).  
**Status as species:** Casevitz-Weulersse & Galkowsky, 2009: 481; Borowiec, L. 2014: 73; Lebas, *et al.* 2016: 184.
- corusca* Smith, F. 1862; see under **CAMPONOTUS**.
- cosmica* Smith, F. 1858; see under **CAMPONOTUS**.
- coxalis* Smith, F. 1859; see under **CAMPONOTUS**.
- crassinoda* Latreille, 1802; see under **PACHYCONDYLA**.
- creightoni**. *Formica (Raptiformica) creightoni* Buren, 1968a: 35, fig. 3 (w.) U.S.A. (Iowa, Illinois, Michigan).  
**Status as species:** Smith, D.R. 1979: 1464; Snelling, R.R. & Buren, 1985: 72 (in key); Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 193; Coover, 2005: 157; Ellison, *et al.* 2012: 149.
- crepusculascens* Roger, 1859; see under **PRENOLEPIS**.
- crinita* Smith, F. 1858; see under **LASIUS**.
- crinita*. *Formica crinita* Wheeler, W.M. 1909e: 87 (w.q.) U.S.A. (Colorado).  
[*Formica crinita* Wheeler, W.M. 1908g: 408. *Nomen nudum*.]  
[**Junior primary homonym** of *Formica crinita* Smith, F. 1858b: 13.]  
**Status as species:** Wheeler, W.M. 1910g: 570.  
**Replacement name:** *Formica criniventris* Wheeler, W.M. 1912c: 90.
- criniventris**. *Formica criniventris* Wheeler, W.M. 1912c: 90.  
**Replacement name for** *Formica crinita* Wheeler, W.M. 1909e: 87. [Junior primary homonym of *Formica crinita* Smith, F. 1858b: 13.]  
**Status as species:** Wheeler, W.M. 1913f: 457 (redescription); Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Cole, 1942: 379; Wheeler, G.C. & Wheeler, E.W. 1944: 260; Creighton, 1950a: 483; Smith, M.R. 1951a: 862; Beck, *et al.* 1967: 69; Smith, M.R. 1967: 370; Yensen, *et al.* 1977: 184; Smith, D.R. 1979: 1457; Allred, 1982: 463; Bolton, 1995b: 193; Mackay & Mackay, 2002: 340.
- cruda* Smith, F. 1860; see under **PHILIDRIS**.
- cruentata* Latreille, 1802; see under **CAMPONOTUS**.
- cuneata* Perty, 1833; see under **CAMPONOTUS**.
- cunicularia**. *Formica cunicularia* Latreille, 1798: 40 (w.q.m.) FRANCE.  
Combination in *F. (Serviformica)*: Forel, 1915d: 64.  
Junior synonym of *rufibarbis*: Walckenaer, 1802: 161; Fabricius, 1804: 402; Roger, 1863b: 13; André, 1874: 202 (in list); Forel, 1874: 98 (in list); Mayr, 1877: 7; Mayr, 1880: 26; Lameere, 1892: 63; Dalla Torre, 1893: 209; Forel, 1894c: 403; Saunders, E. 1896: 22; Ruzsky, 1905b: 385; Wheeler, W.M. 1913f: 514; Donisthorpe, 1915d: 320; Forel, 1915d: 64 (in key); Emery, 1916b: 255; Soudek, 1922: 84; Emery, 1925b: 250; Betrem, 1926: 214; Karavaiev, 1936: 234.  
**Status as species:** Latreille, 1802c: 151; Walckenaer, 1802: 161; Latreille, 1817d: 98; Stephens, 1829: 357; Brullé, 1833: 327; Losana, 1834: 316; Lepeletier de Saint-Fargeau, 1835: 203; Nylander, 1846a: 913; Foerster, 1850a: 25; Smith, F. 1851: 2; Schenck, 1852: 40; Mayr, 1855: 342 (redescription); Smith, F. 1855a: 103; Nylander, 1856b: 64; Gredler, 1858: 8; Smith, F. 1858b: 5; Roger, 1859: 235; Mayr, 1861: 47 (in key); Meinert, 1861:

314; Mayr, 1863: 413; Smith, F. 1871b: 1; Dours, 1873: 165; Saunders, E. 1880: 206; White, W.F. 1884: 252; Yarrow, 1954a: 231; Baroni Urbani, 1964b: 63; Baroni Urbani, 1964c: 167; Cagniant, 1964: 92; Dlussky, 1965a: 37 (in key); Dlussky, 1967a: 73; Pisarski, 1967: 416; Bernard, 1967: 296 (redescription); Kutter, 1968a: 61; Collingwood & Yarrow, 1969: 89; Cagniant, 1970c: 38; Pisarski, 1970: 323; Dlussky & Pisarski, 1970: 88; Baroni Urbani, 1971c: 234; Collingwood, 1971: 170; Dlussky & Pisarski, 1971: 166 (redescription); Banert & Pisarski, 1972: 355; Bolton & Collingwood, 1975: 6 (in key); Pisarski, 1975: 44; Tarbinsky, 1976: 184; Aktaç, 1977: 127; van Boven, 1977: 164; Collingwood, 1978: 94 (in key); Arnol'di & Dlussky, 1978: 553 (in key); Collingwood, 1979: 127; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 286 (in key); Wu, J. 1990: 4, 6 (in key); Le Moli & Rosi, 1991: 37; Wu, J. & Wang, 1992: 1311; Atanassov & Dlussky, 1992: 267; Radchenko, 1994b: 114 (in key); Arakelian, 1994: 93; Douwes, 1995: 98; Bolton, 1995b: 193; Poldi, *et al.* 1995: 8; Wu, J. & Wang, 1995: 146; Tang, J., Li, *et al.* 1995: 103; Espadaler, 1997b: 27; Collingwood & Prince, 1998: 26 (in key); Gallé, *et al.* 1998: 217; Collingwood & Heatwole, 2000: 13; Chang & He, 2002a: 52 (in key); Zhang, W. & Zheng, 2002: 218; Czechowski, *et al.* 2002: 85; Karaman, M.G. & Karaman, 2003: 48; Csösz, & Markó, 2005: 233; Karaman, G.S. & Karaman, 2005: 59; Bračko, 2006: 147; Markó, Sipos, *et al.* 2006: 67; Petrov, 2006: 70, 112 (in key); Schultz, R. *et al.* 2006: 205; Bračko, 2007: 19; Seifert, 2007: 301; Werner & Wiezik, 2007: 143; Zryanin & Zryanina, 2007: 233; Gratiashvili & Barjadze, 2008: 133; Paknia, *et al.* 2008: 154; Casevitz-Weulersse & Galkowsky, 2009: 481; Seifert & Schultz, 2009: 261 (redescription); Lapeva-Gjonova, *et al.* 2010: 48; Boer, 2010: 31; Csösz, *et al.* 2011: 59; Karaman, M.G. 2011b: 77; Legakis, 2011: 35; Borowiec, L. & Salata, 2012: 493; Czechowski, *et al.* 2012: 217; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 10; Borowiec, L. 2014: 73; Bračko, *et al.* 2014: 19; Bharti, Guénard, *et al.* 2016: 27; Lebas, *et al.* 2016: 186; Salata & Borowiec, 2018c: 45; Seifert, 2018: 307.

**Senior synonym of *fuscoides*:** Arakelian, 1994: 94; Bolton, 1995b: 193; Gratiashvili & Barjadze, 2008: 133; Seifert & Schultz, 2009: 261.

**Senior synonym of *fuscoringibarbis*:** Dlussky, 1967a: 73; Dlussky & Pisarski, 1971: 166; Pisarski, 1975: 44; Arakelian, 1994: 94; Bolton, 1995b: 193; Czechowski, *et al.* 2002: 85; Karaman, M.G. 2011b: 77; Legakis, 2011: 35; Czechowski, *et al.* 2012: 217; Kiran & Karaman, 2012: 10.

[Note: concerning *fuscoringibarbis*, Seifert, 2002b: 266 (in text) says this taxon is “most probably a synonym of either *F. fuscocinerea* or *F. cinerea*”, but type-material could not be found.]

**Senior synonym of *rubescens*** Forel: Yarrow, 1954a: 231; Dlussky, 1967a: 73; Bernard, 1967: 296; Baroni Urbani, 1971c: 235; Collingwood, 1971: 170; Dlussky & Pisarski, 1971: 166; Pisarski, 1975: 44; van Boven, 1977: 164; Bolton, 1995b: 193; Czechowski, *et al.* 2002: 85; Seifert & Schultz, 2009: 261; Casevitz-Weulersse & Galkowsky, 2009: 481; Legakis, 2011: 35; Czechowski, *et al.* 2012: 217.

***curiosa*.** *Formica curiosa* Creighton, 1935: 5, fig. 2 (w.q.) U.S.A. (Montana).

Combination in *F. (Raptiformica)*: Creighton, 1950a: 464.

**Status as species:** Creighton, 1950a: 464; Smith, M.R. 1951a: 862; Wilson & Brown, 1955: 123; Smith, M.R. 1967: 370; Buren, 1968a: 32 (redescription); Kutter, 1968b: 207; Snelling, R.R. 1969b: 194; Yensen, *et al.* 1977: 184; Smith, D.R. 1979: 1464; Snelling, R.R. & Buren, 1985: 72 (in key); Wheeler, G.C. & Wheeler, J. 1986g: 93; Bolton, 1995b: 193.

- Senior synonym of *parcipappa*:** Snelling, R.R. 1969b: 194; Smith, D.R. 1979: 1464; Bolton, 1995b: 193.
- cursor* Fonscolombe, 1846; see under **CATAGLYPHIS**.
- curvidentata* Latreille, 1802; see under **ECITON**.
- custodiens* Smith, F. 1858; see under **ANOPLOLEPIS**.
- cylindrica* Fabricius, 1798; see under **COLOBOPSIS**.
- dachaidanensis*.** *Formica dachaidanensis* Chang & He, 2002a: 53, figs. 22, 60 (w.) CHINA (Qinghai).  
**Status as species:** Guénard & Dunn, 2012: 31.
- dakotensis*.** *Formica dakotensis* Emery, 1893i: 652, pl. 22, fig. 5 (w.) U.S.A. (South Dakota).  
[Misspelled as *dacotensis* by Forel, 1904a: 153, Kutter, 1968b: 207.]  
Wasmann, 1902a: 4 (q.m.); Wheeler, W.M. 1913f: 462 (q.).  
**Status as species:** Wheeler, W.M. 1908f: 642; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 462 (redescription); Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Creighton, 1950a: 484; Smith, M.R. 1951a: 862; Brown, 1957f: 167; Smith, M.R. 1958c: 154; Smith, M.R. 1967: 371; Kutter, 1968b: 207; Francoeur, 1975: 263; Francoeur, 1977b: 208; Yensen, *et al.* 1977: 184; Wheeler, G.C. & Wheeler, J. 1978: 394; Smith, D.R. 1979: 1457; Wheeler, G.C. & Wheeler, J. 1986g: 81; Mackay, Lowrie, *et al.* 1988: 110 (in key); Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 193; Mackay & Mackay, 2002: 341; Covert, 2005: 151; Ward, 2005: 63; Ellison, *et al.* 2012: 150.  
**Senior synonym of *montigena*:** Wheeler, W.M. 1908f: 642 (in text); Brown, 1957f: 167 (in text); Smith, M.R. 1967: 371; Smith, D.R. 1979: 1457; Bolton, 1995b: 193; Covert, 2005: 151.  
**Senior synonym of *saturata*:** Creighton, 1950a: 484; Smith, M.R. 1958c: 154; Smith, D.R. 1979: 1457; Bolton, 1995b: 193.  
**Senior synonym of *specularis*:** Creighton, 1950a: 484; Smith, M.R. 1958c: 154; Smith, D.R. 1979: 1457; Bolton, 1995b: 193.  
**Senior synonym of *wasmanni*:** Creighton, 1950a: 484; Smith, D.R. 1979: 1457; Bolton, 1995b: 193.
- dalailamae*. *Formica (Neofornica) dalailamae* Ruzsky, 1915a: 431, fig. 9 (w.) CHINA (Tibet).  
[Misspelled as *delailammae* by Chapman & Capco, 1951: 198.]  
Combination in *F. (Serviformica)*: Emery, 1925b: 246.  
Status as species: Emery, 1925b: 246; Menozzi, 1939a: 322 (in key); Chapman & Capco, 1951: 198.  
Junior synonym of *sentschuensis*: Dlussky, 1965a: 17; Bolton, 1995b: 193.
- dalcqi*. *Formica dalcqi* Bondroit, 1918: 63 (w.) FRANCE.  
Subspecies of *exsecta*: Emery, 1925b: 257.  
Junior synonym of *exsecta*: Bernard, 1967: 323; Dlussky & Pisarski, 1971: 194; Bolton, 1995b: 193; Seifert, 2000a: 526; Casevitz-Weulersse & Galkowsky, 2009: 481; Radchenko, 2016: 309.
- dalmatica* Nylander, 1849; see under **CAMPONOTUS**.
- davisi*. *Formica exsectoides* var. *davisi* Wheeler, W.M. 1913f: 396 (in key).  
[*Formica exsectoides* subsp. *exsectoides* var. *davisi* Wheeler, W.M. 1913f: 484 (w.q.) U.S.A. (New Jersey, Massachusetts); unavailable (infrasubspecific) name.]  
Subspecies of *exsectoides*: Emery, 1925b: 258; Smith, M.R. 1951a: 863.

- Junior synonym of *exsectoides*: Creighton, 1950a: 513; Smith, M.R. 1958c: 155; Smith, D.R. 1979: 1456; Bolton, 1995b: 193; Coovert, 2005: 145.
- decipiens**. *Formica decipiens* Bondroit, 1918: 52 (w.q.) FRANCE.  
Espadaler, 1986b: 46 (m.).  
Combination in *F. (Serviformica)*: Emery, 1925b: 247.  
As unavailable (infrasubspecific) name: Emery, 1925b: 247; Santschi, 1932c: 73.  
**Subspecies of fusca**: Menozzi, 1922b: 331.  
**Status as species**: Bernard, 1967: 298 (redescription); Collingwood & Yarrow, 1969: 87; Kutter, 1977c: 255; Collingwood, 1978: 94 (in key); Espadaler, 1986b: 46; Bolton, 1995b: 194; Espadaler, 1997b: 28; Collingwood & Prince, 1998: 26 (in key); Casevitz-Weulersse & Galkowsky, 2009: 481; Borowiec, L. 2014: 73; Lebas, *et al.* 2016: 188.
- decora* Smith, F. 1858; see under **CAMPONOTUS**.
- defensor*. *Formica defensor* Smith, F. 1878b: 11 (w.) (no state data, “On the road across the Pámir, from Sarikol to Panja”).  
Status as species: Dalla Torre, 1893: 194.  
Junior synonym of *rufibarbis*: Forel, 1894c: 403; Bingham, 1903: 335; Bolton, 1995b: 194.
- delicata*. *Formica pallidefulva* subsp. *delicata* Cole, 1938c: 369 (w.q.) U.S.A. (Wyoming).  
Subspecies of *pallidefulva*: Smith, M.R. 1951a: 859.  
Junior synonym of *nitidiventris*: Creighton, 1950a: 551; Smith, M.R. 1958c: 153; Smith, D.R. 1979: 1451.  
Junior synonym of *pallidefulva*: Trager, MacGown & Trager, 2007: 624.
- delinghaensis**. *Formica delinghaensis* Chang & He, 2002a: 56, figs. 31, 32, 55 (w.) CHINA (Qinghai).  
**Status as species**: Guénard & Dunn, 2012: 31.
- \*demersa**. *\*Formica demersa* Heer, 1849: 140, pl.11, fig. 7 (m.) GERMANY (Miocene).  
[Also described as new by Heer, 1850: 140.]  
*Incertae sedis* in *Formica*: Handlirsch, 1907: 865.  
Status as species: Giebel, 1856: 171; Heer, 1867: 16; Scudder, 1891: 700; Dalla Torre, 1893: 194.
- densiventris**. *Formica fusca* var. *densiventris* Viereck, 1903: 74 (w.) U.S.A. (New Mexico).  
Cole, 1954a: 90 (m.).  
Junior synonym of *subaenescens*: Wheeler, W.M. 1913f: 504.  
**Subspecies of fusca**: Wheeler, W.M. 1910g: 570; Essig, 1926: 866; Brown, 1947: 7 (redescription); Smith, M.R. 1951a: 863.  
**Status as species**: Creighton, 1950a: 499; Cole, 1954a: 89; Cole, 1954c: 165; Cole, 1955b: 50; Smith, M.R. 1958c: 155; Smith, M.R. 1967: 371; Hunt & Snelling, 1975: 23; Francoeur, 1977b: 208; Yensen, *et al.* 1977: 184; Wheeler, G.C. & Wheeler, J. 1978: 394; Smith, D.R. 1979: 1462; Allred, 1982: 464; Wheeler, G.C. & Wheeler, J. 1986g: 81; Mackay, Lowrie, *et al.* 1988: 114; Bolton, 1995b: 194; Mackay & Mackay, 2002: 342; Ward, 2005: 63.  
**Senior synonym of rasilis**: Mackay, Lowrie, *et al.* 1988: 114; Bolton, 1995b: 194.  
**Senior synonym of spicata**: Cole, 1954a: 89; Cole, 1955b: 50; Smith, M.R. 1958c: 155; Smith, D.R. 1979: 1462; Bolton, 1995b: 194.  
Material of the unavailable name *pinetorum* referred here by Smith, D.R. 1979: 1462.
- depilis* Santschi, 1925; see under **PROFORMICA**.

*depressa* Latreille, 1802; see under **CREMATOGASTER**.

*desecta* Smith, F. 1860; see under **COLOBOPSIS**.

*destructor* Fabricius, 1804; see under **GIGANTIOPS**.

*detecta* Smith, F. 1858; see under **IRIDOMYRMEX**.

*detorquens* Walker, 1859; see under **TECHNOMYRMEX**.

*devastator*. *Formica devastator* Christ, 1791: 517 (w.) INDIA (“Ostindien”). *Nomen nudum*.

[*Formica devastatrix* Christ: Schulz, W.A. 1906: 156 (unnecessary emendation). *Nomen nudum*.]

*didyma*. *Formica didyma* Fabricius, 1782: 489 (w.) ITALY.

Status as species: Fabricius, 1787: 308; Gmelin, 1790: 2798; Olivier, 1792: 492; Fabricius, 1793: 351; Latreille, 1802c: 278; Fabricius, 1804: 398; Mayr, 1855: 370 (footnote); Dalla Torre, 1893: 194.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 194.

[Note: Olivier, 1792: 492, says that *F. didyma*, “ressemble à la Fourmi fauve” (*F. rufa*).]

*difficilis*. *Formica rufa* subsp. *difficilis* Emery, 1893i: 651, pl. 22, figs. 9, 14 (w.q.m.) U.S.A. (Virginia, New Jersey).

[Note: type-locality New Jersey by designation of Creighton, 1950a: 500.]

Wheeler, G.C. & Wheeler, J. 1953c: 164 (l.).

**Status as species:** Wheeler, W.M. 1904e: 305; Wheeler, W.M. 1904f: 348; Wheeler, W.M. 1905f: 399; Wheeler, W.M. 1906b: 16; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913c: 116; Wheeler, W.M. 1913f: 477 (redescription); Emery, 1925b: 256; Wesson, L.G. & Wesson, R.G. 1940: 101; Cole, 1943a: 389; Buren, 1944a: 306; Creighton, 1950a: 500; Smith, M.R. 1951a: 862; Smith, M.R. 1958c: 155; Carter, 1962a: 8 (in list); Kutter, 1968b: 207; Smith, D.R. 1979: 1462; Bolton, 1995b: 194; Covert, 2005: 152; Ellison, *et al.* 2012: 151.

**Senior synonym of consocians:** Cole, 1943a: 389; Creighton, 1950a: 500; Smith, M.R. 1951a: 862; Kutter, 1968b: 207; Smith, D.R. 1979: 1462; Bolton, 1995b: 194; Covert, 2005: 152.

**Senior synonym of habrogyna:** Cole, 1943a: 389; Creighton, 1950a: 500; Smith, M.R. 1951a: 862; Smith, D.R. 1979: 1462; Bolton, 1995b: 194; Covert, 2005: 152.

*diffidens* Walker, 1859; see under **PHEIDOLE**.

*diligens* Smith, F. 1857; see under **CAMPONOTUS**.

*dirksi*. *Formica dirksi* Wing, 1949: 13 (q.) U.S.A. (Maine).

**Status as species:** Smith, M.R. 1951a: 862; Kutter, 1968b: 207; Smith, D.R. 1979: 1462; Bolton, 1995b: 194; Ellison, *et al.* 2012: 152.

*discolor* Buckley, 1866; see under **CAMPONOTUS**.

*dislocata*. *Formica dislocata* Say, 1836: 288 (q.m.) U.S.A. (Indiana).

Status as species: Smith, F. 1858b: 52; Mayr, 1863: 414; Cresson, 1887: 256; Dalla Torre, 1893: 194.

Unidentifiable taxon; *incertae sedis* in Formicidae: Smith, M.R. 1951a: 875; Smith, D.R. 1979: 1467;

unidentifiable taxon; *incertae sedis* in *Formica*: Bolton, 1995b: 194.

*distinguenda* Spinola, 1851; see under **CAMPONOTUS**.

*distinguenda* Smith, F. 1871; see under **CAMPONOTUS**.

*distinguenda* Emery, 1916 [*Formicina*]; see under **LASIUS**.

*dlusskyi*. *Formica dlusskyi* Bolton, 1995b: 194.

Replacement name for *Formica (Coptoformica) longiceps* Dlussky, 1964: 1036. [Junior primary homonym of *Formica longiceps* Smith, F. 1863: 13.]

Junior synonym of *manchu*: Seifert, 2000a: 534.

**dolosa.** *Formica (Neoformica) pallidefulva* subsp. *dolosa* Buren, 1944a: 309.

[First available use of *Formica pallidefulva* subsp. *schaufussi* var. *dolosa* Wheeler, W.M. 1912c: 90 (w.) U.S.A. (Texas); unavailable (infrasubspecific) name.]

Unnecessary replacement name for *meridionalis* Wheeler, W.M. 1904f: 370; unavailable (infrasubspecific) name.

Wheeler, W.M. 1913f: 554 (q.).

As unavailable (infrasubspecific) name: Wheeler, W.M. 1913c: 117; Wheeler, W.M. 1913f: 401 (in key), 554; Emery, 1925b: 245; Wheeler, W.M. 1932a: 17; Dennis, 1938: 299; Smith, M.R. 1951a: 859.

**Subspecies of *schaufussi*:** Creighton, 1950a: 551; Smith, M.R. 1958c: 153; Smith, M.R. 1967: 370; Smith, D.R. 1979: 1451; Deyrup, *et al.* 1989: 99; Bolton, 1995b: 194; Deyrup, 2003: 45; Coovert, 2005: 138; MacGown & Forster, 2005: 66.

**Status as species:** Trager, MacGown & Trager, 2007: 619 (redescription); Ellison, *et al.* 2012: 153; Deyrup, 2017: 204.

*domestica* Smith, F. 1871; see under **TAPINOMA**.

*dominula.* *Formica dominula* Nylander, 1846a: 905, pl. 18, fig. 15 (w.q.m.) FINLAND.

Status as species: Nylander, 1846b: 1047.

Junior synonym of *sanguinea*: Smith, F. 1851: 115; Schenck, 1852: 36; Smith, F. 1855a: 102; Mayr, 1855: 337; Nylander, 1856b: 62; Smith, F. 1858b: 4; Mayr, 1863: 420; Roger, 1863b: 13; Smith, F. 1871b: 1; Dours, 1873: 165; André, 1874: 202 (in list); Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 211; Forel, 1894c: 403; Ruzsky, 1905b: 411; Wheeler, W.M. 1913f: 401; Donisthorpe, 1915d: 280; Emery, 1925b: 259; Donisthorpe, 1927b: 323; Karavaiev, 1936: 258; Bolton, 1995b: 194; Imai, *et al.* 2003: 59; Radchenko, 2007: 37; Radchenko, 2016: 292.

*dorsata.* *Formica dorsata* Panzer, 1798: no. 1651 (q.) AUSTRIA.

Junior synonym of *rufa*: Latreille, 1802c: 146; Gravenhorst, 1807: 286; Stephens, 1829: 357; Nylander, 1846a: 902; Foerster, 1850a: 13; Smith, F. 1851: 1; Smith, F. 1855a: 100; Smith, F. 1858b: 3; Mayr, 1863: 420; Roger, 1863b: 12; Smith, F. 1871b: 1; Forel, 1874: 98 (in list); Emery & Forel, 1879: 450; Dalla Torre, 1893: 207; Wheeler, W.M. 1913f: 425; Forel, 1915d: 57 (in key); Donisthorpe, 1915d: 245; Emery, 1925b: 253; Donisthorpe, 1927b: 286; Karavaiev, 1936: 240; Gösswald, 1941: 73; Bolton, 1995b: 194; Radchenko, 2016: 284.

*dorycus* Smith, F. 1860; see under **CAMPONOTUS**.

*dryas.* *Formica dryas* Wheeler, W.M. 1905c: 268 (w.q.) U.S.A. (Wisconsin, Illinois).

Status as species; Wheeler, W.M. 1906b: 17.

Junior synonym of *obscuriventris*: Wheeler, W.M. 1913f: 446; Emery, 1925b: 254; Creighton, 1950a: 493; Smith, M.R. 1951a: 870; Smith, D.R. 1979: 1460; Bolton, 1995b: 194.

**dusmeti.** *Formica rufa* subsp. *dusmeti* Emery, 1909b: 188 (w.) SPAIN.

Bondroit, 1920a: 145 (q.); Santschi, 1932g: 5 (q.m.); Espadaler & Gómez, 2002: 39 (m.). As unavailable (infrasubspecific) name: Krausse, 1926b: 115; Stärcke, 1926: 150 (in key).

**Subspecies of *truncicola*:** Wheeler, W.M. 1913f: 438 (redescription); Stitz, 1939: 346.

**Subspecies of *truncorum*:** Santschi, 1932g: 5; Schmitz, 1950: 14.

**Subspecies of *rufa*:** Forel, 1911h: 457; Forel, 1915d: 58 (in key); Escherich, 1917: 335 (in key); Emery, 1925b: 254; Lomnicki, 1925a: 22 (in key); Santschi, 1932c: 72; Teranishi, 1940: 23; Holgersen, 1943b: 176 (in key); Holgersen, 1944: 188; Ceballos, 1956: 319.

Junior synonym of *nigricans*: Bernard, 1967: 314.

**Status as species:** Bondroit, 1918: 60; Bondroit, 1920a: 145; Santschi, 1931a: 13; Collingwood & Yarrow, 1969: 94; Collingwood, 1978: 93 (in key); Bolton, 1995b: 194; Espadaler, 1997b: 28; Collingwood & Prince, 1998: 26 (in key); Tinaut & Martínez-Ibáñez, 1998: 40; Espadaler & Gómez, 2002: 39; Borowiec, L. 2014: 73; Lebas, *et al.* 2016: 178.

*edax* Forskål, 1775; see under **PHEIDOLE**.

*\*egecomerta*. *\*Formica egecomerta* Özdikmen, 2010c: 988.

Replacement name for *\*Formica parvula* Dlussky, 1967b: 83. [Junior primary homonym of *\*Formica parvula* Presl, 1822: 196.]

[Note: *\*egecomerta* was proposed subsequent to the synonymy, by Dlussky, 2002a: 292, of *\*parvula* Dlussky under *\*flori*; hence *\*egecomerta* is an automatic junior synonym of *\*flori*; new synonymy (unpublished).]

*egregia* Smith, F. 1858; see under **CAMPONOTUS**.

*elata*. *Formica elata* Lund, 1831a: 130 (w.) BRAZIL (Minas Gerais). *Nomen nudum*.

[Also as new in Lund, 1831b: 103. *Nomen nudum*.]

*elevata*. *Formica elevata* Fabricius, 1782: 492 (w.) India (“Habitat in India orientali”).

[Note: type-locality French Guiana (“Cajennae”), after Fabricius, 1787: 309.]

Status as species: Fabricius, 1787: 309; Gmelin, 1790: 2802; Olivier, 1792: 498.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 194.

*elongata*. *Formica elongata* Fabricius, 1787: 308 (w.) INDIA (Tamil Nadu, “Habitat Tranquebariae”).

Status as species: Gmelin, 1790: 2799; Olivier, 1792: 494; Fabricius, 1793: 354; Latreille, 1802c: 281; Fabricius, 1804: 401; Smith, F. 1858b: 15; Smith, F. 1871a: 303; Dalla Torre, 1893: 195.

[Note: Emery, in Dalla Torre, 1893: 195 (footnote), suggests synonymy with *Oecophylla smaragdina*.]

*Incertae sedis* in Formicinae: Kempf, 1972a: 261.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 194.

*\*elongatula*. *\*Ponera elongatula* Heer, 1849: 150, pl. 12, fig. 7 (q.) CROATIA (Miocene).

[Also described as new by Heer, 1850: 150.]

Combination in *\*Poneropsis*: Heer, 1867: 22;

*incertae sedis* in Formicidae: Taylor, 1964: 138.

Status as species: Giebel, 1856: 175; Heer, 1867: 22; Mayr, 1867b: 57; Scudder, 1891: 725, 727; Handlirsch, 1907: 880; Bolton, 1995b: 363.

Junior synonym of *\*ungeri*: Dlussky & Putyatina, 2014: 256.

*emarginata* Olivier, 1792; see under **LASIUS**.

*emeryi*. *Formica (Formica) emeryi* Wheeler, W.M. 1913f: 419 (w.q.) U.S.A. (Colorado).

Combination in *F. (Raptiformica)*: Emery, 1925b: 259.

Junior synonym of *subnuda*: Wilson & Brown, 1955: 118; Smith, M.R. 1958c: 160.

**Status as species:** Wheeler, W.M. 1917a: 534; Emery, 1925b: 259; Creighton, 1950a: 464; Smith, M.R. 1951a: 862; Buren, 1968a: 34 (redescription); Kutter, 1968b: 207; Smith, D.R. 1979: 1464; Allred, 1982: 464; Snelling, R.R. & Buren, 1985: 72 (in key);

- Wheeler, G.C. & Wheeler, J. 1986g: 93 (in key); Mackay, Lowrie, *et al.* 1988: 113 (in key); Bolton, 1995b: 194.
- emeryi*. *Formica rufa* subsp. *rufa* ab. *emeryi* Krausse, 1926a: 108 (w.) GERMANY; unavailable (infrasubspecific) name.  
As unavailable (infrasubspecific) name: Krausse, 1926b: 115.  
Declared as unavailable (infrasubspecific) name: here (not previously recorded).  
Material referred to *rufa* by Yarrow, 1955a: 4.
- emmae* Forel, 1909; see under **CATAGLYPHIS**.
- \**eoptera*. \**Formica eoptera* Cockerell, 1923b: 399, fig. 1 (wing) U.S.A. (Texas, Eocene).  
*Incertae sedis* in Formicidae: Carpenter, 1930: 20.  
[Note: wing has Formicinae venation.]  
Status as species: Burnham, 1979: 108.
- ephippium* Smith, F. 1858; see under **CAMPONOTUS**.
- erratica* Latreille, 1798; see under **TAPINOMA**.
- erythrocephala* Fabricius, 1775; see under **LEPTOMYRMEX**.
- esuriens* Smith, F. 1858; see under **CAMPONOTUS**.
- etrusca*. *Formica exsecta* var. *etrusca* Wheeler, W.M. 1913f: 397 (in key).  
[First available use of *Formica exsecta* subsp. *exsecta* var. *etrusca* Emery, 1909b: 191, fig. 5 (w.) ITALY; unavailable (infrasubspecific) name.]  
Combination in *F. (Adformica)*: Karavaiev, 1926e: 196.  
As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 490; Emery, 1916b: 256.  
Status as species: Bondroit, 1918: 64.  
Subspecies of *exsecta*: Wolf, 1915: 48 (footnote); Emery, 1925b: 257; Menozzi, 1925d: 35; Karavaiev, 1926e: 196; Grandi, 1935: 103; Baroni Urbani, 1964c: 169; Baroni Urbani, 1971c: 227; Poldi, *et al.* 1995: 8.  
Junior synonym of *exsecta*: Dlussky, 1967a: 100; Bernard, 1967: 323; Dlussky & Pisarski, 1971: 194; Bolton, 1995b: 194; Seifert, 2000a: 525; Radchenko, 2016: 309.
- europaea* Christ, 1791; see under **CATAGLYPHIS**.
- exasperata* Smith, F. 1857; see under **CAMPONOTUS**.
- exercita* Walker, 1859; see under **POLYRHACHIS**.
- exsecta*. *Formica exsecta* Nylander, 1846a: 909, pl. 18, fig. 20 (w.q.m.) FINLAND.  
Combination in *F. (Adformica)*: Lomnicki, 1925a: 14 (in key);  
combination in *F. (Coptoformica)*: Müller, 1923b: 146;  
combination in *Coptoformica*: Rösler, 1950: 211.  
**Status as species**: Foerster, 1850a: 23; Schenck, 1852: 38; Mayr, 1855: 340 (redescription); Nylander, 1856b: 63; Gredler, 1858: 8; Smith, F. 1858b: 4; Mayr, 1861: 46 (in key); Meinert, 1861: 317; Mayr, 1863: 414; Roger, 1863b: 13; Smith, F. 1871b: 1; Dours, 1873: 165; Forel, 1874: 51 (in key); André, 1874: 183 (in key); Emery, 1878b: 48; Emery & Forel, 1879: 450; Saunders, E. 1880: 206; André, 1882b: 178 (in key); White, W.F. 1884: 251; Nasonov, 1889: 15; Lameere, 1892: 62; Forel, 1892i: 307; Dalla Torre, 1893: 195; Ruzsky, 1896: 68; Saunders, E. 1896: 21; Ruzsky, 1902d: 10; Ruzsky, 1903c: 206; Ruzsky, 1905b: 353; Wasmann, 1906: 111 (in key); Emery, 1909b: 189; Bondroit, 1910: 483; Yano, 1910: 422; Wheeler, W.M. 1913f: 489 (redescription); Stitz, 1914: 91; Ruzsky, 1914b: 103; Emery, 1914d: 159; Ruzsky, 1915b: 9; Forel, 1915d: 56 (in key); Donisthorpe, 1915d: 273; Wolf, 1915: 46; Emery, 1916b: 256; Ruzsky, 1916: 5; Escherich, 1917: 335 (in key); Bondroit, 1918: 61; Nadig, 1918: 341; Kulmatycki, 1922: 83; Soudek, 1922: 81; Müller, 1923b: 146; Vashkevich, 1924b: 147; Emery, 1925b: 257;

Lomnicki, 1925a: 14 (in key); Ruzsky, 1925a: 287; Ruzsky, 1925b: 43; Karavaiev, 1926e: 195; Kuznetsov-Ugamsky, 1926b: 96; Stärcke, 1926: 146 (in key); Donisthorpe, 1927b: 316; Karavaiev, 1927c: 283 (in key); Kuznetsov-Ugamsky, 1928b: 15; Donisthorpe, 1929a: 447; Kuznetsov-Ugamsky, 1929a: 23; Kuznetsov-Ugamsky, 1929b: 38; Wheeler, W.M. 1929f: 10; Karavaiev, 1930b: 149; Karavaiev, 1931e: 217; Arnol'di, 1933b: 603 (in key); Grandi, 1935: 103; Karavaiev, 1936: 252 (redescription); Ruzsky, 1936: 91; Menozzi, 1939a: 321 (in key); Novák & Sadil, 1941: 104 (in key); Holgersen, 1942: 11; Holgersen, 1943b: 176 (in key); Holgersen, 1944: 184; Ruzsky, 1946: 69; Rösler, 1950: 211; Betrem, 1954: 224; Ceballos, 1956: 318; Kutter, 1957: 11 (in key); Dlussky, 1962: 182; Dlussky, 1964: 1027 (redescription); Baroni Urbani, 1964c: 169; Dlussky, 1965a: 26; Dlussky, 1967a: 100; Bernard, 1967: 323 (redescription); Kutter, 1968a: 61; Kutter, 1968b: 206; Collingwood & Yarrow, 1969: 90; Baroni Urbani, 1971c: 225; Collingwood, 1971: 166; Dlussky & Pisarski, 1971: 194 (redescription); Banert & Pisarski, 1972: 356; Parapura, 1972: 763; Bolton & Collingwood, 1975: 6 (in key); Pisarski, 1975: 51; Azuma, 1977: 117; van Boven, 1977: 157; Kutter, 1977c: 283; Arnol'di & Dlussky, 1978: 552 (in key); Collingwood, 1978: 93 (in key); Collingwood, 1979: 129; Kupyanskaya, 1980: 102; Kupyanskaya, 1986b: 98; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 285 (in key); Nilsson & Douwes, 1987: 77; Agosti & Hauschteck-Jungen, 1988: 280; Kupyanskaya, 1990: 200; Atanassov & Dlussky, 1992: 282; Arakelian, 1994: 95; Radchenko, 1994b: 112 (in key); Douwes, 1995: 97; Bolton, 1995b: 194; Poldi, *et al.* 1995: 8; Tang, J., Li, *et al.* 1995: 104; Espadaler, 1997b: 28; Gallé, *et al.* 1998: 218; Tinaut & Martínez-Ibáñez, 1998: 36 (in key); Seifert, 2000a: 525 (redescription); Czechowski, *et al.* 2002: 89; Karaman, M.G. & Karaman, 2003: 49; Karaman, G.S. & Karaman, 2005: 59; Markó, Sipos, *et al.* 2006: 67; Petrov, 2006: 111 (in key); Schultz, R. *et al.* 2006: 203; Bračko, 2007: 19; Radchenko, 2007: 36; Seifert, 2007: 322; Werner & Wiezik, 2007: 143; Zryanin & Zryanina, 2007: 234; Casevitz-Weulersse & Galkowsky, 2009: 481; Lapeva-Gjonova, *et al.* 2010: 48; Boer, 2010: 21; Csösz, *et al.* 2011: 59; Karaman, M.G. 2011: 83; Legakis, 2011: 35; Borowiec, L. & Salata, 2012: 493; Czechowski, *et al.* 2012: 228; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 11; Borowiec, L. 2014: 74; Bračko, *et al.* 2014: 19; Lebas, *et al.* 2016: 170; Radchenko, 2016: 309; Salata & Borowiec, 2018c: 44; Seifert, 2018: 335; Seifert, 2019c: 56.

**Senior synonym of *dalcqi*:** Bernard, 1967: 323; Dlussky & Pisarski, 1971: 194; Bolton, 1995b: 194; Seifert, 2000a: 526; Casevitz-Weulersse & Galkowsky, 2009: 481; Radchenko, 2016: 309.

**Senior synonym of *etrusca*:** Dlussky, 1967a: 100; Bernard, 1967: 323; Dlussky & Pisarski, 1971: 194; Bolton, 1995b: 194; Seifert, 2000a: 525; Radchenko, 2016: 309.

**Senior synonym of *exsectopressilabris*:** Bernard, 1967: 323; Dlussky & Pisarski, 1971: 194; van Boven, 1977: 157; Bolton, 1995b: 194; Seifert, 2000a: 525; Czechowski, *et al.* 2002: 89; Casevitz-Weulersse & Galkowsky, 2009: 481; Czechowski, *et al.* 2012: 228; Radchenko, 2016: 309.

**Senior synonym of *kontunemii*:** Dlussky, 1967a: 100; Dlussky & Pisarski, 1971: 194; Pisarski, 1975: 51; Bolton, 1995b: 194; Seifert, 2000a: 526; Czechowski, *et al.* 2002: 89; Czechowski, *et al.* 2012: 228; Radchenko, 2016: 309.

**Senior synonym of *nemoralis*:** Seifert, 2000a: 526; Radchenko, 2016: 309.

**Senior synonym of *rubens*:** Dlussky, 1964: 1027; Dlussky, 1967a: 100; Bernard, 1967: 323; Bolton, 1995b: 194; Seifert, 2000a: 525; Czechowski, *et al.* 2002: 89; Casevitz-Weulersse & Galkowsky, 2009: 481; Czechowski, *et al.* 2012: 228; Radchenko, 2016: 309; Seifert, 2019c: 58.

**Senior synonym of *sudetica*:** Dlussky, 1967a: 100; Dlussky & Pisarski, 1971: 194; Pisarski, 1975: 51; Bolton, 1995b: 194; Seifert, 2000a: 526; Czechowski, *et al.* 2002: 89; Czechowski, *et al.* 2012: 228; Radchenko, 2016: 309.

**Senior synonym of *wheeleri*** Stitz: Dlussky, 1967a: 100; Dlussky & Pisarski, 1971: 194; Bolton, 1995b: 194; Radchenko, 2016: 309.

***exsectoides*.** *Formica exsectoides* Forel, 1886b: xxxviii (w.q.) U.S.A. (New Hampshire, Connecticut).

Emery, 1893i: 653 (m.).

**Status as species:** Mayr, 1886d: 425; Cresson, 1887: 256; Dalla Torre, 1893: 195; Emery, 1893i: 653; Wheeler, W.M. 1905f: 400; Wheeler, W.M. 1906b: 17; Wheeler, W.M. 1908f: 623; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 481 (redescription); Wheeler, W.M. 1916m: 596; Wheeler, W.M. 1917a: 544; Emery, 1925b: 257; Wing, 1939: 165; Wesson, L.G. & Wesson, R.G. 1940: 101; Buren, 1944a: 307; Creighton, 1950a: 513; Smith, M.R. 1951a: 862; Cole, 1954c: 166; Smith, M.R. 1958c: 155; Smith, M.R. 1967: 371; Kutter, 1968b: 207; Francoeur, 1977b: 208; Smith, D.R. 1979: 1456; DuBois & LaBerge, 1988: 147; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 194; Mackay & Mackay, 2002: 343; Coovert, 2005: 145; Ellison, *et al.* 2012: 154.

**Senior synonym of *davisi*:** Creighton, 1950a: 513; Smith, M.R. 1958c: 155; Smith, D.R. 1979: 1456; Bolton, 1995b: 194; Coovert, 2005: 145.

**Senior synonym of *hesperia*:** Creighton, 1950a: 513; Smith, M.R. 1958c: 155; Smith, D.R. 1979: 1456; Bolton, 1995b: 194.

***exsectopressilabris*.** *Formica exsecta* var. *exsectopressilabris* Forel, 1874: 52 (w.q.m.) SWITZERLAND.

As unavailable (infrasubspecific) name: Emery & Forel, 1879: 450; Emery, 1909b: 192; Wheeler, W.M. 1913f: 397 (in key), 492; Ruzsky, 1915b: 11; Wolf, 1915: 48 (footnote); Emery, 1916b: 257; Soudek, 1922: 82; Emery, 1925b: 257; Krausse, 1926d: 264.

Status as species: Bondroit, 1912: 352; Bondroit, 1918: 63.

Subspecies of *pressilabris*: Dalla Torre, 1893: 205.

Subspecies of *exsecta*: Ruzsky, 1896: 69; Ruzsky, 1902d: 10; Ruzsky, 1904b: 5; Forel, 1915d: 58 (in key); Stärcke, 1926: 146 (in key); Karavaiev, 1927c: 284 (in key); Karavaiev, 1927d: 347; Karavaiev, 1936: 255 (redescription); Novák & Sadil, 1941: 104 (in key); van Boven, 1947: 189.

Junior synonym of *exsecta*: Bernard, 1967: 323; Dlussky & Pisarski, 1971: 194; van Boven, 1977: 157; Bolton, 1995b: 194; Seifert, 2000a: 525; Czechowski, *et al.* 2002: 89; Casevitz-Weulersse & Galkowsky, 2009: 481; Czechowski, *et al.* 2012: 228; Radchenko, 2016: 309.

***exsectorubens*.** *Formica exsecta* var. *exsectorubens* Ruzsky, 1905b: 359 (in text) (w.) RUSSIA.

Unidentifiable taxon; *incertae sedis* in *Formica*: Seifert, 2000a: 562.

***exundans*** Walker, 1859; see under **LEPTOGENYS**.

***fabricator*** Smith, F. 1858; see under **CAMPONOTUS**.

***fairchildi*.** *Formica fusca* var. *fairchildi* Wheeler, W.M. 1927a: 40 (w.) Indonesia (Sumatra).

[Note: type-locality in error, probably U.S.A.]

Junior synonym of *glacialis*: Francoeur, 1977a: 11; Bolton, 1995b: 194.

*fallax* Nylander, 1856; see under **CAMPONOTUS**.

*fallax*. *Formica (Serviformica) rufibarbis* st. *subpilosa* var. *fallax* Santschi, 1928b: 45; unavailable (infrasubspecific) name.

[Unavailable (infrasubspecific) replacement name for *clara* Kuznetsov-Ugamsky; unavailable (infrasubspecific) name.]

Material referred to *subpilosa* by Dlussky, 1967a: 70.

*familiaris* Smith, F. 1860: 68; see under **PSEUDOLASIUS**.

*familiaris* Smith, F. 1860: 96; see under **TAPINOMA**.

*fatale*. *Formica fatale* Christ, 1791: 515 (w.) INDIA (no state data, "Ostindien"), SRI LANKA, JAPAN.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 194.

[Note: Emery, 1892b: 162, suspected that *fatale* may be a termite.]

*femorata* Fabricius, 1804; see under **CAMPONOTUS**.

*fennica*. *Formica fennica* Seifert, 2000a: 535, figs. 1F, 2-5, 12 (w.q.m.) FINLAND, CAUCASUS.

[Note: Seifert, 2000a: 535, does not nominate any state in the Caucasus region, but Seifert, 2019c: 57, names Azerbaijan and Georgia.]

Junior synonym of *exsecta*: Hakala, *et al.* 2018 (not paginated).

**Status as species**: Gratiashvili & Barjadze, 2008: 133; Borowiec, L. 2014: 74; Lebas, *et al.* 2016: 170; Seifert, 2018: 341; Seifert, 2019c: 57.

*ferocula*. *Formica ferocula* Wheeler, W.M. 1913f: 461 (w.) U.S.A. (Illinois).

**Status as species**: Emery, 1925b: 252; Creighton, 1950a: 486; Smith, M.R. 1951a: 863; Smith, D.R. 1979: 1458; Bolton, 1995b: 194; Covert, 2005: 148.

*ferruginea*. *Formica ferruginea* Christ, 1791: 512, pl. 60, fig. 10 (w.) (no state data).

Junior synonym of *rufa*: Emery, 1892b: 161; Dalla Torre, 1893: 207; Emery, 1925b: 253; Karavaiev, 1936: 240; Gösswald, 1941: 73; Bolton, 1995b: 194; Radchenko, 2016: 284.

*ferruginea* Fabricius, 1798; see under **CAMPONOTUS**.

*fervens* Drury, 1782; see under **ATTA**.

*fervens* Smith, F. 1857; see under **CAMPONOTUS**.

*festina* Smith, F. 1857; see under **CAMPONOTUS**.

*festinata* Buckley, 1866; see under **CAMPONOTUS**.

*ficticia*. *Formica subpolita* var. *ficticia* Wheeler, W.M. 1913f: 561 (w.q.m.) U.S.A. (Montana).

Subspecies of *subpolita*: Wheeler, W.M. 1917a: 553; Emery, 1925b: 251; Creighton, 1950a: 542; Smith, M.R. 1951a: 872; Smith, M.R. 1958c: 160; Smith, M.R. 1967: 373.

Junior synonym of *subpolita*: Francoeur, 1973: 107; Smith, D.R. 1979: 1451; Bolton, 1995b: 194.

*filchneri*. *Formica fusca* subsp. *gagates* var. *filchneri* Forel, 1907b: 208 (w.) CHINA; unavailable (infrasubspecific) name.

[Also described as new by Forel, 1908d: 105.]

As unavailable (infrasubspecific) name: Donisthorpe, 1927b: 375.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 194.

Material referred to *picea* Nylander by Emery, 1909b: 159; Wheeler, W.M. 1913f: 512; Donisthorpe, 1915d: 325; Forel, 1915d: 62 (in key); Emery, 1925b: 249; Karavaiev, 1936: 231.

*filiformis* Fabricius, 1804; see under **PSEUDOMYRMEX**.

*finzii*. *Formica truncorum* var. *finzii* Stitz, 1939: 347.

[First available use of *Formica rufa* subsp. *truncicola* var. *finzii* Krausse, 1926b: 114 (w.q.) GERMANY; unavailable (infrasubspecific) name.]

**Subspecies of *truncorum***: Bolton, 1995b: 194.

*flammiventris*. *Formica flammiventris* Wheeler, W.M. 1912c: 90.

Replacement name for *Formica rufiventris* Emery, 1893i: 665. [Junior primary homonym of *Formica rufiventris* Fabricius, 1804: 409.]

Junior synonym of *subpolita*: Wheeler, W.M. 1913f: 532; Emery, 1925b: 251; Creighton, 1950a: 541; Smith, M.R. 1951a: 872; Francoeur, 1973: 107; Smith, D.R. 1979: 1455; Bolton, 1995b: 194.

*flava* Fabricius, 1782; see under **LASIUS**.

*flavescens* Fabricius, 1793; see under **CAMPONOTUS**.

*flavicornis* Fabricius, 1789; see under **ATTA**.

**\*flavifemoralis**. *\*Formica flavifemoralis* Zhang, J., Sun & Zhang, 1994: 168, fig. 148 (w.) CHINA (Shandong, Miocene).

*flavipes*. *Formica flavipes* Geoffroy, in Fourcroy, 1785: 452 (m.) FRANCE.

Status as species: Olivier, 1792: 493.

Junior synonym of *fusca*: Latreille, 1802c: 161; Stephens, 1829: 357; Smith, F. 1851: 3; Roger, 1863b: 13; Mayr, 1863: 415; Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 196; Forel, 1915d: 63 (in key); Donisthorpe, 1915d: 304; Emery, 1925b: 247; Donisthorpe, 1927b: 349; Karavaiev, 1936: 228; Bolton, 1995b: 195; Casevitz-Weulersse & Galkowsky, 2009: 481; Radchenko, 2016: 294.

*flavitarsus* Smith, F. 1859; see under **LEPTOMYRMEX**.

*flavorubra*. *Formica sanguinea* var. *flavorubra* Forel, 1909c: 105 (w.) SPAIN.

As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 404.

Subspecies of *sanguinea*: Wheeler, W.M. 1913f: 389 (in key); Emery, 1925b: 259; Santschi, 1932c: 72; Ceballos, 1956: 320.

Junior synonym of *sanguinea*: Dlussky, 1967a: 97; Collingwood, 1978: 74; Bolton, 1995b: 195; Imai, *et al.* 2003: 59; Radchenko, 2016: 292.

*flavosetosa* Viehmeyer, 1922; see under **PROFORMICA**.

**\*flori**. *\*Formica flori* Mayr, 1868b: 48, pl. 2, figs. 35-37 (w.q.m.) BALTIC AMBER (Eocene).

**Status as species**: Scudder, 1891: 700; Dalla Torre, 1893: 196; André, 1895b: 82 (in list); Handlirsch, 1907: 863; Wheeler, W.M. 1915h: 124; Théobald, 1937b: 213; Dlussky, 1967b: 81; Burnham, 1979: 115; Keilbach, 1982: 281; Baroni Urbani & Graeser, 1987: 3; Bolton, 1995b: 195; Dlussky, 2002a: 292 (redescription); Dlussky & Perkovsky, 2002: 11; Dlussky, 2008a: 50; Dlussky & Rasnitsyn, 2009: 1030; Perkovsky, 2016: 114.

**Senior synonym of \*antiqua**: Dlussky, 2002a: 292; Dlussky & Perkovsky, 2002: 11; Dlussky, 2008a: 50.

**Senior synonym of \*baltica**: Dlussky, 2002a: 292; Dlussky & Perkovsky, 2002: 11; Dlussky, 2008a: 50.

**Senior synonym of \*egecomerta** new synonymy (unpublished).

[Note: *\*egecomerta* Özdikmen, 2010c: 988, was proposed as a replacement name for *\*parvula* Dlussky [Junior primary homonym of *\*Formica parvula* Presl, 1822: 196], but subsequent to Dlussky's 2002a: 292 synonymy; hence *\*egecomerta* is automatically a junior synonym of *\*flori*.]

**Senior synonym of \*parvula** Dlussky: Dlussky, 2002a: 292; Dlussky & Perkovsky, 2002: 11; Dlussky, 2008a: 50.

*floridana* Buckley, 1866; see under **CAMPONOTUS**.

*foetens*. *Formica foetens* Olivier, 1792: 503.

**Replacement name for *Formica foetida*** De Geer, 1773: 611. [Junior primary homonym of *Formica foetida* Linnaeus, 1758: 582.]

Status as species: Latreille, 1802c: 264; Smith, F. 1858b: 95.

*Incertae sedis* in Myrmicinae: Kempf, 1972a: 260.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 195.

[Note: it is apparent from the description that this taxon is properly referable to subfamily Myrmicinae.]

*foetens* Fabricius, 1793; see under **MEGAPONERA**.

*foetida* Linnaeus, 1758; see under **NEOPONERA**.

*foetida*. *Formica foetida* De Geer, 1773: 611, pl. 31, figs. 21, 22 (q.) SURINAME.

[**Junior primary homonym** of *Formica foetida* Linnaeus, 1758: 582 (Emery, 1921a: 25).]

Status as species: Retzius, 1783: 76.

**Replacement name:** *Formica foetens* Olivier, 1792: 503.

*foetida* Buckley, 1866; see under **FORELIUS**.

**foreli.** *Formica foreli* Bondroit, 1918: 65.

[First available use of *Formica exsecta* subsp. *pressilabris* var. *foreli* Emery, 1909b: 192 (w.q.m.) SWITZERLAND; unavailable (infrasubspecific) name.]

Combination in *F. (Coptoformica)*: Müller, 1923b: 146.

As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 491; Forel, 1915d: 59 (in key); Wolf, 1915: 48 (footnote); Emery, 1916b: 257; Emery, 1925b: 257.

**Subspecies of *pressilabris*:** Müller, 1923b: 146; Lomnicki, 1925a: 14 (in key); Stärke, 1926: 146 (in key).

Junior synonym of *pressilabris*: Arakelian, 1994: 97; Seifert, 1994: 41; Bolton, 1995b: 195.

**Status as species:** Kutter, 1957: 11 (in key); Dlussky, 1964: 1033 (redescription); Dlussky, 1965a: 27 (in key); Bernard, 1967: 324 (redescription); Dlussky, 1967a: 104; Kutter, 1968a: 61; Baroni Urbani, 1971c: 227; Dlussky & Pisarski, 1971: 204 (redescription); Pisarski, 1975: 53; van Boven, 1977: 157; Kutter, 1977c: 284; Arnol'di & Dlussky, 1978: 552 (in key); Collingwood, 1979: 130; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 285 (in key); Poldi, *et al.* 1995: 8; Espadaler, 1997b: 28; Seifert, 2000a: 543 (redescription); Czechowski, *et al.* 2002: 92; Bračko, 2006: 147; Petrov, 2006: 111 (in key); Seifert, 2007: 326; Werner & Wiezik, 2007: 157; Gratiashvili & Barjadze, 2008: 133; Casevitz-Weulersse & Galkowsky, 2009: 481; Boer, 2010: 21; Czechowski, *et al.* 2012: 234; Kiran & Karaman, 2012: 11; Borowiec, L. 2014: 74; Lebas, *et al.* 2016: 170; Radchenko, 2016: 312; Seifert, 2018: 338.

**Senior synonym of *goesswaldi*:** Seifert, 2000a: 544; Radchenko, 2016: 312.

**Senior synonym of *naefi*:** Seifert, 2000a: 543; Radchenko, 2016: 312.

**Senior synonym of *tamarae*:** Seifert, 2000a: 543; Gratiashvili & Barjadze, 2008: 133; Radchenko, 2016: 312.

**foreli.** *Formica rufa* subsp. *pratensis* var. *foreli* Krausse, 1926a: 108 (w.) GERMANY; unavailable (infrasubspecific) name.

As unavailable (infrasubspecific) name: Krausse, 1926b: 115.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 195.

Material referred to *nigropratensis* by Betrem, 1962: 38.

**foreliana.** *Formica (Formica) foreliana* Wheeler, W.M. 1913f: 451 (w.) U.S.A. (Arizona).

Francoeur, 1973: 235 (q.m.).

Junior synonym of *gnava*: Creighton, 1950a: 539; Smith, M.R. 1958c: 159.

**Status as species:** Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Cole, 1937b: 137; Cole, 1942: 380; Smith, M.R. 1951a: 863; Francoeur, 1973: 235 (redescription); Hunt & Snelling, 1975: 23; Francoeur & Snelling, 1979: 6; Smith, D.R. 1979: 1452; Bolton, 1995b: 195; Mackay & Mackay, 2002: 344.

*forficata* Fabricius, 1787; see under **MYRMECIA**.

**formosae.** *Formica (Serviformica) picea* var. *formosae* Emery, 1925b: 249.

[First available use of *Formica fusca* r. *picea* var. *formosae* Forel, 1913f: 200 (w.) TAIWAN; unavailable (infrasubspecific) name.]

**Subspecies of candida:** Bolton, 1995b: 195; Terayama, 2009: 221 (error).

**Subspecies of picea:** Wheeler, W.M. 1929g: 64; Chapman & Capco, 1951: 198; Lin & Wu, 2003: 61; Terayama, 2009: 221.

**forsslundi.** *Formica (Coptoformica) forsslundi* Lohmander, 1949: 163 (w.q.m.) SWEDEN.

**Status as species:** Kutter, 1963: 130; Dlussky, 1967a: 105; Kutter, 1968a: 61; Collingwood, 1971: 167; Dlussky & Pisarski, 1971: 199 (redescription); Pisarski, 1975: 52; Kutter, 1977c: 285; Arnol'di & Dlussky, 1978: 552 (in key); Collingwood, 1979: 131; Agosti & Collingwood, 1987b: 285 (in key); Nilsson & Douwes, 1987: 77; Douwes, 1995: 97; Bolton, 1995b: 195; Seifert, 2000a: 552 (redescription); Czechowski, *et al.* 2002: 92; Petrov, 2006: 111 (in key); Seifert, 2007: 330; Zryanin & Zryanina, 2007: 234; Boer, 2010: 22; Czechowski, *et al.* 2012: 233; Guénard & Dunn, 2012: 31; Borowiec, L. 2014: 74; Lebas, *et al.* 2016: 170; Seifert, 2018: 342.

**Senior synonym of brunneonitida:** Seifert, 2000a: 552; Czechowski, *et al.* 2012: 233.

**Senior synonym of fossilabris:** Seifert, 2000a: 552; Czechowski, *et al.* 2012: 233.

**Senior synonym of strawinskii:** Collingwood, 1971: 168; Dlussky & Pisarski, 1971: 199; Pisarski, 1975: 52; Bolton, 1995b: 195; Seifert, 2000a: 552; Czechowski, *et al.* 2012: 233.

**fossiceps.** *Formica fossiceps* Buren, 1942: 402 (w.q.m.) U.S.A. (Iowa).

**Status as species:** Buren, 1944a: 302; Creighton, 1950a: 487; Smith, M.R. 1951a: 863; Smith, M.R. 1967: 371; Smith, D.R. 1979: 1458; Allred, 1982: 464; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 195.

*fossilabris.* *Formica (Coptoformica) fossilabris* Dlussky, 1965a: 25, fig. 16 (w.) CHINA (Tibet).

Junior synonym of *forsslundi*: Seifert, 2000a: 552; Czechowski, *et al.* 2012: 233.

*foveolata* Mayr, 1853; see under **CAMPONOTUS**.

*fragilis* Smith, F. 1859; see under **LEPTOMYRMEX**.

**\*fragilis.** \**Formica fragilis* Heer, 1867: 8, pl. 1, figs. 4, 5 (q.m.) CROATIA (Miocene).

[Unresolved junior primary homonym of *Formica fragilis* Smith, F. 1859a: 136 (Bolton, 1995b: 195).]

Combination in *Lasius* (part) and *Plagiolepis* (part): Mayr, 1867b: 56;

combination in *Lasius*: Scudder, 1891: 713;

combination in *Plagiolepis*: Handlirsch, 1907: 859.

Status as species: Mayr, 1867b: 56; Scudder, 1891: 700, 713; Dalla Torre, 1893: 172; Handlirsch, 1907: 859.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 195;

unidentifiable taxon; *incertae sedis* in Formicidae: Dlussky & Putyatina, 2014: 275.

**francoeuri.** *Formica francoeuri* Bolton, 1995b: 195.

**Replacement name for Formica pilicornis** Emery, 1893i: 664.

[Junior primary homonym of *Formica pilicornis* Roger, 1859: 228.]

**Status as species:** Ward, 2005: 63.

*fraterna*. *Formica fraterna* Smith, F. 1878b: 11 (w.) (no state data, “No precise locality indicated”).

Status as species: Dalla Torre, 1893: 196.

Junior synonym of *rufibarbis*: Forel, 1894c: 403; Bingham, 1903: 335; Emery, 1925b: 250; Karavaiev, 1936: 234; Bolton, 1995b: 195.

\**freyeri* Heer, 1867; see under \***LONCHOMYRMEX**.

**frontalis**. *Formica truncorum* var. *frontalis* Santschi, 1919e: 246 (w.) SPAIN.

Tinaut & Martínez-Ibáñez, 1998: 33 (q.m.).

As unavailable (infrasubspecific) name: Santschi, 1925g: 351; Schmitz, 1950: 14.

**Subspecies of *truncorum*:** Bolton, 1995b: 195.

**Status as species:** Espadaler, 1997b: 28; Tinaut & Martínez-Ibáñez, 1998: 33; Borowiec, L. 2014: 74; Lebas, *et al.* 2016: 178.

*fugax* Latreille, 1798; see under **SOLENOPSIS**.

**fukaii**. *Formica exsecta* var. *fukaii* Wheeler, W.M. 1914a: 26 (w.) JAPAN.

[Misspelled as *fukali* by Emery, 1925b: 257; misspelled as *fuscali* by Stitz, 1934: 9; misspelled as *fukii* by Chapman & Capco, 1951: 197; misspelled as *fukalii* by Wu, J. 1990: 5; misspelled as *fuakii* by Chang & He, 2002a: 51 (in key).]

Kupyanskaya, 1990: 201 (q.m.).

**Subspecies of *exsecta*:** Emery, 1925b: 257; Stitz, 1934: 9; Teranishi, 1934: 38; Kono & Sugihara, 1939: 9; Morisita, 1945: 22; Chapman & Capco, 1951: 197; Azuma, 1951: 88; Azuma, 1953: 5.

**Status as species:** Sonobe & Dlussky, 1977: 23; Onoyama, 1980: 200; Wu, J. 1990: 5 (in key); Morisita, *et al.* 1991: 34; Bolton, 1995b: 195; Wu, J. & Wang, 1995: 140; Seifert, 2000a: 533 (redescription); Chang & He, 2002a: 51 (in key); Imai, *et al.* 2003: 58; Guénard & Dunn, 2012: 31.

*fuliginosa* Latreille, 1798; see under **LASIUS**.

**fuliginothorax**. *Formica* sp. “*fuliginothorax*” Blacker, 1992: 11 (w.) CANADA (British Columbia); unavailable name.

[Unavailable name (published without designation of type-material).]

*fulvacea* Norton, 1868; see under **CAMPONOTUS**.

*fulvopilosa* De Geer, 1778; see under **CAMPONOTUS**.

*fungosa* Fabricius, 1798; see under **DOLICHODERUS**.

**furcata**, misspelling, see under *fuscata*.

**fusca**. *Formica fusca* Linnaeus, 1758: 580 (w.) (no state data, “Habitat in Europae”).

[Note: type-locality Sweden, after Linnaeus, 1761: 426, Yarrow, 1954a: 232.]

Latreille, 1798: 42 (q.m.); Latreille, 1802c: 160 (q.m.); Wheeler, G.C. & Wheeler, J. 1953c: 164 (l.).

Combination in *F. (Serviformica)*: Forel, 1913i: 361.

**Status as species:** Linnaeus, 1761: 426; Linnaeus, 1767: 962; Fabricius, 1782: 490; Retzius, 1783: 75; Geoffroy, in Fourcroy, 1785: 453; Fabricius, 1787: 308; Razoumowsky, 1789: 224; Gmelin, 1790: 2799; Christ, 1791: 512; Olivier, 1792: 493; Fabricius, 1793: 352; Latreille, 1798: 42; Latreille, 1802c: 159; Walckenaer, 1802: 162; Fabricius, 1804: 399; Jurine, 1807: 272; Latreille, 1809: 126; Latreille, 1817d: 99; Lamarck, 1817: 96; Billberg, 1820: 104; Stephens, 1829: 357; Losana, 1834: 317; Lepeletier de Saint-Fargeau, 1835: 205; Kirby, W. 1837: 262; Zetterstedt, 1838: 448; Schilling, 1839: 53; Brullé, 1840: 84; Nylander, 1846a: 919; Nylander, 1849: 30;

Foerster, 1850a: 33; Smith, F. 1851: 3; Schenck, 1852: 43; Mayr, 1855: 346 (redescription); Smith, F. 1855a: 104; Nylander, 1856b: 65; Gredler, 1858: 9; Smith, F. 1858b: 5, 52; Mayr, 1861: 47 (in key); Meinert, 1861: 316; Mayr, 1863: 415; Roger, 1863b: 13; Emery, 1869b: 10; Smith, F. 1871b: 1; Dours, 1873: 165; Forel, 1874: 53 (in key); André, 1874: 185 (in key); Mayr, 1877: 7; Emery, 1878a: ix (in list); Emery, 1878b: 49; Emery & Forel, 1879: 451; Mayr, 1880: 27; Saunders, E. 1880: 207; Provancher, 1881b: 356; André, 1882b: 182 (in key); Provancher, 1883: 599; White, W.F. 1884: 253; Mayr, 1886d: 426; Provancher, 1887: 232 (in key); Cresson, 1887: 256; Nasonov, 1889: 19; Mayr, 1889: 278; Forel, 1890a: lxvii; Saunders, E. 1890: 203; Emery, 1891b: 16; Lameere, 1892: 63; Dalla Torre, 1893: 196; Emery, 1893i: 657; Medina, 1893: 104; Forel, 1895d: 227; Ruzsky, 1896: 70; Saunders, E. 1896: 22; Forel, 1899c: 128; Ruzsky, 1902d: 11; Ruzsky, 1903c: 206; Bingham, 1903: 336; Ruzsky, 1904a: 288; Forel, 1904b: 384; Ruzsky, 1905b: 372; Forel, 1906b: 85; Forel, 1906c: 189; Wasmann, 1906: 112 (in key); Forel, 1907e: 19; Emery, 1909b: 193; Forel, 1909c: 105; Bondroit, 1910: 482; Karavaiev, 1912b: 590; Krausse, 1912b: 165; Wheeler, W.M. 1913f: 494 (redescription); Ruzsky, 1914b: 104; Stitz, 1914: 92; Ruzsky, 1915a: 422; Ruzsky, 1915b: 11; Forel, 1915d: 63 (in key); Donisthorpe, 1915d: 304; Morice & Durrant, 1915: 430; Emery, 1916b: 254; Ruzsky, 1916: 5; Wheeler, W.M. 1917a: 545; Wheeler, W.M. 1917e: 19; Escherich, 1917: 336 (in key); Menozzi, 1918: 88; Bondroit, 1918: 48; Nadig, 1918: 340; Santschi, 1919e: 247; Ruzsky, 1920: 79; Kulmatycki, 1922: 84; Soudek, 1922: 83; Kuznetsov-Ugamsky, 1923: 245; Müller, 1923b: 138; Finzi, 1923: 4; Vashkevich, 1924b: 147; Comes, 1925: 1 (footnote); Emery, 1925b: 247; Lomnicki, 1925a: 18 (in key); Soudek, 1925b: 15; Kiseleva, 1925: 74; Ruzsky, 1925a: 287; Santschi, 1925g: 352; Schkaff, 1925: 276; Donisthorpe, 1926b: 18; Betrem, 1926: 214; Essig, 1926: 866; Kuznetsov-Ugamsky, 1926b: 96; Karavaiev, 1926e: 197; Stärcke, 1926: 147 (in key); Donisthorpe, 1927b: 349; Karavaiev, 1927a: 301; Karavaiev, 1927c: 285 (in key); Menozzi, 1927b: 92; Lomnicki, 1928: 9; Kuznetsov-Ugamsky, 1929b: 38; Finzi, 1930d: 317; Karavaiev, 1930b: 148; Wheeler, W.M. 1930h: 80; Santschi, 1931a: 13; Karavaiev, 1931b: 32; Karavaiev, 1931c: 110; Karavaiev, 1931e: 215; Soudek, 1931: 16; Gösswald, 1932: 44; Menozzi, 1932b: 312; Santschi, 1932c: 73; Santschi, 1932g: 5; Teranishi, 1932: 52; Arnol'di, 1933b: 604 (in key); Santschi, 1934d: 281; Grandi, 1935: 103; Zimmermann, 1935: 53; Cole, 1936a: 37; Karavaiev, 1936: 227 (redescription); Ruzsky, 1936: 92; Cole, 1937b: 137; Stitz, 1939: 348; Menozzi, 1939a: 319; Wing, 1939: 164; Teranishi, 1940: 24; Novák & Sadil, 1941: 107 (in key); Eidmann, 1941: 26; Holgersen, 1942: 15; Holgersen, 1943b: 177 (in key); Holgersen, 1944: 189; Wheeler, G.C. & Wheeler, E.W. 1944: 260; Ruzsky, 1946: 69; van Boven, 1947: 187 (in key); Rösler, 1950: 217; Donisthorpe, 1950e: 1065; Creighton, 1950a: 532; Smith, M.R. 1951a: 863; Chapman & Capco, 1951: 198; Consani & Zangheri, 1952: 45; Cole, 1954c: 166; Yarrow, 1954a: 230; Azuma, 1955: 80; Ceballos, 1956: 318; Smith, M.R. 1958c: 155; Carter, 1962a: 8 (in list); Baroni Urbani, 1964c: 166; Dlussky, 1965a: 36 (in key); Cole, 1966: 23 (in key); Beck, *et al.* 1967: 69; Bernard, 1967: 293 (redescription); Dlussky, 1967a: 58; Pisarski, 1967: 416; Smith, M.R. 1967: 371; Arnol'di, 1968: 1821; Cagniant, 1968a: 145; Kutter, 1968a: 61; Collingwood & Yarrow, 1969: 88; Collingwood, 1970: 378; Cagniant, 1970c: 38; Baroni Urbani, 1971c: 236; Collingwood, 1971: 169; Dlussky & Pisarski, 1971: 148 (redescription); Banert & Pisarski, 1972: 354; Francoeur, 1973: 189 (redescription); Bolton & Collingwood, 1975: 6 (in key);

Francoeur, 1975: 262; Hunt & Snelling, 1975: 23; Pisarski, 1975: 40; Tarbinsky, 1976: 180 (redescription); Aktaç, 1977: 127; van Boven, 1977: 163; Wheeler, G.C. & Wheeler, J. 1977b: 15 (in key); Collingwood, 1978: 94 (in key); Arnol'di & Dlussky, 1978: 553 (in key); Wheeler, G.C. & Wheeler, J. 1978: 395; Collingwood, 1979: 120; Francoeur & Snelling, 1979: 6; Smith, D.R. 1979: 1452; Kupyanskaya, 1980: 101; Allred, 1982: 464; Kupyanskaya, 1986b: 97; Wheeler, G.C. & Wheeler, J. 1986g: 89; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 287 (in key); Nilsson & Douwes, 1987: 80; DuBois & LaBerge, 1988: 147; Mackay, Lowrie, *et al.* 1988: 114; Wu, J. 1990: 5 (in key); Kupyanskaya, 1990: 183; Le Moli & Rosi, 1991: 37; Atanassov & Dlussky, 1992: 260; Wang, M., 1992: 680; Arakelian, 1994: 96; Radchenko, 1994b: 113 (in key); Wheeler, G.C., *et al.* 1994: 306; Douwes, 1995: 98; Bolton, 1995b: 195; Poldi, *et al.* 1995: 8; Wu, J. & Wang, 1995: 144; Tang, J., Li, *et al.* 1995: 105; Espadaler, 1997b: 28; Collingwood & Prince, 1998: 26 (in key); Gallé, *et al.* 1998: 217; Collingwood & Heatwole, 2000: 13; Chang & He, 2002a: 51 (in key); Czechowski, *et al.* 2002: 79; Mackay & Mackay, 2002: 344; Karaman, M.G. & Karaman, 2003: 49; Coover, 2005: 141; Csösz, & Markó, 2005: 232; Karaman, G.S. & Karaman, 2005: 59; Ward, 2005: 63; Bračko, 2006: 147; Markó, Sipos, *et al.* 2006: 67; Petrov, 2006: 72, 114 (in key); Bračko, 2007: 19; Radchenko, 2007: 35; Seifert, 2007: 295; Zryanin & Zryanina, 2007: 233; Gratiashvili & Barjadze, 2008: 133; Casevitz-Weulersse & Galkowsky, 2009: 481; Lapeva-Gjonova, *et al.* 2010: 49; Boer, 2010: 30; Csösz, *et al.* 2011: 59; Karaman, M.G. 2011b: 77; Legakis, 2011: 35; Seppä, *et al.* 2011: 31; Borowiec, L. & Salata, 2012: 494; Czechowski, *et al.* 2012: 205; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 11; Borowiec, L. 2014: 74 (see note in bibliography); Bračko, *et al.* 2014: 19; Bharti, Guénard, *et al.* 2016: 27; Lebas, *et al.* 2016: 190; Radchenko, 2016: 294; Salata & Borowiec, 2018c: 45; Schär, Talavera, *et al.* 2018: 6; Seifert, 2018: 299.

**Senior synonym of *barbata*:** Emery & Forel, 1879: 451; Dalla Torre, 1893: 196; Emery, 1925b: 247; Karavaiev, 1936: 228; Bolton, 1995b: 195; Radchenko, 2016: 294.

**Senior synonym of *flavipes*:** Latreille, 1802c: 161; Stephens, 1829: 357; Smith, F. 1851: 3; Roger, 1863b: 13; Mayr, 1863: 415; Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 196; Forel, 1915d: 63 (in key); Donisthorpe, 1915d: 304; Emery, 1925b: 247; Donisthorpe, 1927b: 349; Karavaiev, 1936: 228; Bolton, 1995b: 195; Casevitz-Weulersse & Galkowsky, 2009: 481; Radchenko, 2016: 294.

**Senior synonym of *glebaria*:** Schenck, 1852: 43; Mayr, 1855: 346; Nylander, 1856b: 65; Smith, F. 1858b: 6; Mayr, 1863: 415; Roger, 1863b: 13; Dours, 1873: 165; André, 1874: 202 (in list); Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 197; Forel, 1894c: 403; Lomnicki, 1925a: 18 (in key); Yarrow, 1954a: 230; Dlussky, 1967a: 58; Pisarski, 1975: 40; Tarbinsky, 1976: 180; Radchenko, 2007: 35; Czechowski, *et al.* 2012: 205; Radchenko, 2016: 294.

**Senior synonym of *libera*:** Latreille, 1802c: 159; Stephens, 1829: 357; Smith, F. 1851: 3; Roger, 1863b: 13; Mayr, 1863: 415; Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 200 (footnote); Emery, 1925b: 247; Karavaiev, 1936: 227; Bolton, 1995b: 195; Radchenko, 2016: 294.

**Senior synonym of *pallipes*:** Dlussky, 1967a: 58; Tarbinsky, 1976: 180; Bolton, 1995b: 195; Radchenko, 2007: 35; Radchenko, 2016: 294.

**Senior synonym of *rufipes*:** Dlussky, 1967a: 58; Bolton, 1995b: 195; Radchenko, 2007: 35; Radchenko, 2016: 294.

**Senior synonym of *tristis*** Christ: Emery, 1892b: 162; Dalla Torre, 1893: 196; Forel, 1915d: 63 (in key); Donisthorpe, 1915d: 304; Emery, 1925b: 247; Donisthorpe, 1927b: 349; Karavaiev, 1936: 228; Bolton, 1995b: 195; Radchenko, 2016: 294.

Material of the unavailable name *major* Retzius referred here by Donisthorpe, 1915d: 304.

Current subspecies: nominal plus *alpicola*, *fuscolemani*, *hyrcana*, *tombeuri*.

*fusca* Leach, 1825; see under **TETRAMORIUM**.

*fuscali*, misspelling, see under *fukaii*.

*fuscata*. *Formica pallidefulva* subsp. *fuscata* Emery, 1893i: 656 (w.q.) U.S.A. (South Dakota).

[Misspelled as *furcata* by Menozzi, 1932b: 312.]

Combination in *F. (Neoformica)*: Wheeler, W.M. 1913f: 557.

As unavailable (infrasubspecific) name: Wheeler, W.M. 1904e: 306; Wheeler, W.M. 1905f: 400; Wheeler, W.M. 1906b: 19; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913c: 117; Wheeler, W.M. 1913f: 401 (in key), 557; Wheeler, W.M. 1916m: 598; Wheeler, W.M. 1917a: 555; Emery, 1925b: 245; Menozzi, 1932b: 312; Dennis, 1938: 299; Wesson, L.G. & Wesson, R.G. 1940: 102; Smith, M.R. 1951a: 859.

Subspecies of *pallidefulva*: Wheeler, G.C. & Wheeler, E.W. 1944: 269; Buren, 1944a: 310.

Junior synonym of *nitidiventris*: Creighton, 1950a: 551; Smith, M.R. 1958c: 153; Smith, D.R. 1979: 1451; Bolton, 1995b: 195; Covert, 2005: 136.

Junior synonym of *pallidefulva*: Trager, MacGown & Trager, 2007: 624.

*fuscescens*. *Formica fuscescens* Gmelin, 1790: 2804 (w.) Europe (no state data, "Habitat in Europa").

Status as species: Olivier, 1792: 504; Dalla Torre, 1893: 198.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 195.

*fuscicauda*. *Formica fuscicauda* Motschoulsky, 1863: 12 (w.) SRI LANKA.

[Misspelled as *fuscicanda* by Chapman & Capco, 1951: 199.]

Status as species: Smith, F. 1871a: 309; Dalla Torre, 1893: 198; Chapman & Capco, 1951: 199.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 195.

*fusciceps*. *Formica sanguinea* var. *fusciceps* Wheeler, W.M. 1906c: 322.

[First available use of *Formica sanguinea* subsp. *rubicunda* var. *fusciceps* Emery, 1895c: 335 (footnote) (w.) JAPAN; unavailable (infrasubspecific) name.]

[Misspelled as *fuscipes* by Dlussky, 1967a: 97.]

As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 404.

Subspecies of *sanguinea*: Emery, 1909b: 184; Yano, 1910: 421; Wheeler, W.M. 1913f: 389 (in key); Emery, 1925b: 259; Teranishi, 1932: 54; Teranishi, 1934: 38; Kono & Sugihara, 1939: 8; Chapman & Capco, 1951: 198; Azuma, 1955: 80.

Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Onoyama, 1980: 200; Bolton, 1995b: 195; Imai, *et al.* 2003: 59; Radchenko, 2016: 292.

*fuscipes* Mayr, 1853; see under **COLOBOPSIS**.

*fuscipes*, misspelling, see under *fusciceps*.

*fuscocinerea*. *Formica fusca* var. *fuscocinerea* Forel, 1874: 55 (w.q.m.) SWITZERLAND.

As unavailable (infrasubspecific) name: Emery & Forel, 1879: 451; Lameere, 1892: 63; Forel, 1911d: 352; Wheeler, W.M. 1913f: 522.

**Subspecies of *fusca*:** André, 1882b: 183.

**Subspecies of *cinerea*:** Dalla Torre, 1893: 194; Ruzsky, 1896: 70; Emery, 1925b: 246; Finzi, 1928a: 69; Novák & Sadil, 1941: 107 (in key); Dlussky, 1967a: 65; Dlussky & Pisarski, 1971: 161 (redescription); Baroni Urbani, 1971c: 234; Pisarski, 1975: 43; Bolton, 1995b: 195; Poldi, *et al.* 1995: 8.

**Status as species:** Mayr, 1877: 20 (in list); Seifert, 2002b: 256 (redescription); Bračko, 2007: 19; Seifert, 2007: 303; Werner & Wiezik, 2007: 157; Casevitz-Weulersse & Galkowsky, 2009: 481; Csösz, *et al.* 2011: 59; Borowiec, L. 2014: 75; Lebas, *et al.* 2016: 184; Seifert, 2018: 312.

**Senior synonym of *lefrancoisi*:** Seifert, 2002b: 256.

*fuscogagates*. *Formica fusca* var. *fuscogagates* Forel, 1874: 54 (w.q.) SWITZERLAND.

Combination in *F. (Serviformica)*: Forel, 1915d: 63.

As unavailable (infrasubspecific) name: Emery & Forel, 1879: 451; Lameere, 1892: 63; Ruzsky, 1905b: 379; Emery, 1909b: 195.

Subspecies of *fusca*: André, 1882b: 183.

Status as species: Bondroit, 1918: 47.

Subspecies of *gagates*: Dalla Torre, 1893: 199; Ruzsky, 1896: 70; Forel, 1904b: 384; Wheeler, W.M. 1913f: 514; Forel, 1915d: 63 (in key); Emery, 1916b: 254; Emery, 1925b: 249.

Junior synonym of *transcaucasica*: Bernard, 1967: 299.

Junior synonym of *gagates*: Kutter, 1977c: 254; Bolton, 1995b: 195; Radchenko, 2016: 299.

*fuscooides*. *Formica (Serviformica) cunicularia* subsp. *fuscooides* Dlussky, 1967a: 74 (w.q.m.) ARMENIA.

Junior synonym of *cunicularia*: Arakelian, 1994: 94; Bolton, 1995b: 195; Gratiashvili & Barjadze, 2008: 133; Seifert & Schultz, 2009: 261.

*fuscolemani*. *Formica fusca* form. *fuscolemani* Samšičák, 1951: 126 (m.) CZECHOSLOVAKIA.

**Subspecies of *fusca*:** Bolton, 1995b: 195.

*fuscoptera* Geoffroy, in Fourcroy, 1785; see under **CAMPONOTUS**.

*fuscoringularis*. *Formica fusca* var. *fuscoringularis* Forel, 1874: 54 (w.q.) SWITZERLAND.

Combination in *F. (Serviformica)*: Forel, 1915d: 63.

As unavailable (infrasubspecific) name: Emery & Forel, 1879: 451; Lameere, 1892: 63; Forel, 1894c: 404; Forel, 1915d: 63 (in key); Emery, 1916b: 255; Emery, 1925b: 247.

Subspecies of *fusca*: André, 1882b: 183; Forel, 1904b: 384; Forel, 1906b: 85; Forel, 1911d: 352; Donisthorpe, 1914: 41; Gösswald, 1932: 45.

Status as species: Forel, 1895d: 227; Forel, 1902d: 290; Forel, 1903a: 712; Forel, 1906c: 189.

Subspecies of *glebaria*: Bondroit, 1918: 50; Betrem, 1926: 214; Stärcke, 1926: 148 (in key).

Subspecies of *rufingularis*: Dalla Torre, 1893: 210; Ruzsky, 1896: 70; Ruzsky, 1902d: 12; Viehmeyer, 1906: 56; Stitz, 1939: 357; Novák & Sadil, 1941: 107 (in key); Rösler, 1950: 216.

Junior synonym of *glebaria*: Karavaiev, 1936: 238.

Junior synonym of *rufibarbis*: Ceballos, 1956: 320; Bernard, 1967: 297.

Junior synonym of *cunicularia*: Dlussky, 1967a: 73; Dlussky & Pisarski, 1971: 166; Pisarski, 1975: 44; Arakelian, 1994: 94; Bolton, 1995b: 195; Czechowski, *et al.* 2002: 85; Karaman, M.G. 2011b: 77; Legakis, 2011: 35; Czechowski, *et al.* 2012: 217.

*Incertae sedis* in *cinerea* group: Seifert, 2002b: 266.

[Note: Seifert, 2002b: 266 (in text) says this taxon is “most probably a synonym of either *F. fuscocinerea* or *F. cinerea*”, but type-material could not be found.]

***gagates***. *Formica gagates* Latreille, 1798: 36 (w.q.) FRANCE.

Mayr, 1855: 349 (m.).

Combination in *F. (Serviformica)*: Forel, 1915d: 63.

**Subspecies of *fusca***: Forel, 1874: 53; Emery & Forel, 1879: 451; Mayr, 1886d: 426; Cresson, 1887: 256; Mayr, 1889: 278; Forel, 1892i: 307; Lameere, 1892: 63; Emery, in Dalla Torre, 1893: 196 (footnote); Forel, 1894c: 403; Ruzsky, 1896: 70; Saunders, E. 1896: 22; Ruzsky, 1905b: 378; Forel, 1906b: 85; Forel, 1907b: 208; Emery, 1909b: 194; Bondroit, 1910: 483; Stitz, 1914: 93; Emery, 1914d: 159; Escherich, 1917: 336 (in key); Gösswald, 1932: 48.

**Status as species**: Latreille, 1802c: 138; Losana, 1834: 315; Lepeletier de Saint-Fargeau, 1835: 200; Schenck, 1852: 125; Mayr, 1855: 347 (redescription); Nylander, 1856b: 65; Gredler, 1858: 10; Smith, F. 1858b: 6; Mayr, 1861: 46 (in key); Meinert, 1861: 316; Mayr, 1863: 415; Roger, 1863b: 13; Emery, 1869b: 10; Dours, 1873: 166; André, 1874: 184 (in key); Emery, 1878b: 49; Saunders, E. 1880: 207; André, 1882b: 182 (in key); Nasonov, 1889: 19; Dalla Torre, 1893: 198; Ruzsky, 1902d: 13; Ruzsky, 1903c: 206; Bingham, 1903: 336; Forel, 1904b: 384; Wasmann, 1906: 112 (in key); Wheeler, W.M. 1913f: 513 (redescription); Forel, 1915d: 63 (in key); Emery, 1916b: 254; Bondroit, 1918: 46; Menozzi, 1918: 87; Nadig, 1918: 340; Soudek, 1922: 82; Finzi, 1923: 4; Müller, 1923b: 137; Emery, 1925b: 248; Lomnicki, 1925a: 16 (in key); Soudek, 1925b: 15; Karavaiev, 1926e: 197; Santschi, 1926f: 289; Karavaiev, 1927a: 301; Karavaiev, 1927c: 285 (in key); Soudek, 1931: 16; Arnol'di, 1933b: 604 (in key); Grandi, 1935: 103; Zimmermann, 1935: 53; Karavaiev, 1936: 229 (redescription); Stitz, 1939: 362; Menozzi, 1939a: 322 (in key); Novák & Sadil, 1941: 106 (in key); Eidmann, 1941: 27; Eidmann, 1942: 253; Rösler, 1942a: 51; Rösler, 1951: 89; Consani & Zangheri, 1952: 44; Ceballos, 1956: 319; Baroni Urbani, 1964c: 168; Bernard, 1967: 298 (redescription); Dlussky, 1967a: 79; Kutter, 1968a: 61; Collingwood & Yarrow, 1969: 90; Baroni Urbani, 1971c: 237; Dlussky & Pisarski, 1971: 169 (redescription); Kutter, 1977c: 250; Arnol'di & Dlussky, 1978: 553 (in key); Collingwood, 1978: 94 (in key); Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 287 (in key); Le Moli & Rosi, 1991: 37; Atanassov & Dlussky, 1992: 269; Bolton, 1995b: 195; Poldi, *et al.* 1995: 8; Espadaler, 1997b: 28; Gallé, *et al.* 1998: 217; Chang & He, 2002a: 56; Karaman, M.G. & Karaman, 2003: 50; Csösz, & Markó, 2005: 233; Bračko, 2006: 147; Markó, Sipos, *et al.* 2006: 67; Petrov, 2006: 114 (in key); Bračko, 2007: 19; Seifert, 2007: 299; Werner & Wiezik, 2007: 143; Casevitz-Weulersse & Galkowsky, 2009: 481; Lapeva-Gjonova, *et al.* 2010: 49; Csösz, *et al.* 2011: 59; Karaman, M.G. 2011: 78; Legakis, 2011: 35; Borowiec, L. & Salata, 2012: 494; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 11; Borowiec, L. & Salata, 2013: 352; Borowiec, L. 2014: 75; Bračko, *et al.* 2014: 19; Bharti, Guénard, *et al.* 2016: 27; Lebas, *et al.* 2016: 192; Radchenko, 2016: 299; Salata & Borowiec, 2018c: 45; Seifert, 2018: 306.

**Senior synonym of *capsincola*:** Mayr, 1855: 348; Nylander, 1856b: 65; Roger, 1857: 17; Smith, F. 1858b: 6; Forel, 1874: 98 (in list); Bolton, 1995b: 195; Radchenko, 2016: 299.

**Senior synonym of *fuscogagates*:** Kutter, 1977c: 254; Bolton, 1995b: 195; Radchenko, 2016: 299.

**Senior synonym of *morio*:** Emery, 1916b: 254 (footnote); Emery, 1925b: 248; Karavaiev, 1936: 230; Dlussky & Pisarski, 1971: 169; Bolton, 1995b: 195; Casevitz-Weulersse & Galkowsky, 2009: 481; Radchenko, 2016: 299.

Material of the unavailable name *muralewiczi* referred here by Emery, 1909b: 194; Wheeler, W.M. 1913f: 513; Emery, 1925b: 248; Karavaiev, 1927a: 301; Karavaiev, 1936: 230; Dlussky, 1967a: 79; Dlussky & Pisarski, 1971: 169; Bolton, 1995b: 195.

Current subspecies: nominal plus *piceogagates*.

***gagatoides*.** *Formica fusca* var. *gagatoides* Ruzsky, 1904a: 289 (w.q.) RUSSIA.

[Misspelled as *gagotoides* by Dlussky, 1967a: 63.]

Ruzsky, 1915a: 423 (m.); Stärcke, 1935: 267 (footnote) (m.).

Combination in *F. (Serviformica)*: Emery, 1925b: 249.

As unavailable (infrasubspecific) name: Emery, 1909b: 195; Wheeler, W.M. 1913f: 398 (in key), 512.

**Subspecies of *fusca*:** Ruzsky, 1905b: 377; Ruzsky, 1915a: 423; Vashkevich, 1924b: 148; Stärcke, 1935: 267 (footnote).

**Subspecies of *picea*** Nylander: Emery, 1925b: 249; Karavaiev, 1931c: 111; Stitz, 1939: 368; Menozzi, 1939a: 322 (in key).

Junior synonym of *picea* Nylander: Bernard, 1967: 299.

**Status as species:** Holgersen, 1942: 14; Holgersen, 1943a: 3; Holgersen, 1943b: 176 (in key); Holgersen, 1944: 190; Forsslund, 1947: 75; Dlussky, 1965a: 36 (in key); Dlussky, 1967a: 63; Collingwood, 1971: 170; Kutter, 1977c: 255; Sonobe & Dlussky, 1977: 23; Arnol'di & Dlussky, 1978: 553 (in key); Collingwood, 1979: 121; Kupyanskaya, 1980: 102; Onoyama, 1980: 200; Kupyanskaya, 1986b: 97; Agosti & Collingwood, 1987b: 287 (in key); Nilsson & Douwes, 1987: 80; Wu, J. 1990: 5 (in key); Kupyanskaya, 1990: 188; Morisita, *et al.* 1991: 34; Wu, J. & Wang, 1995: 143; Douwes, 1995: 98; Bolton, 1995b: 195; Chang & He, 2002a: 51 (in key); Zhang, W. & Zheng, 2002: 219; Imai, *et al.* 2003: 57; Petrov, 2006: 114 (in key); Karaman, M.G. 2011: 79; Guénard & Dunn, 2012: 31; Borowiec, L. 2014: 75; Bharti, Guénard, *et al.* 2016: 27; Lebas, *et al.* 2016: 196; Seifert, 2018: 302.

***gaullei*.** *Formica gaullei* Bondroit, 1917a: 176, fig. 1 (w.) FRANCE.

Status as species: Bondroit, 1918: 60; Finzi, 1924b: 122.

Subspecies of *rufa*: Emery, 1925b: 253; Stitz, 1939: 339; Rösler, 1950: 213.

Junior synonym of *rufa*: Yarrow, 1955a: 4; Bernard, 1967: 308; Bolton, 1995b: 195; Casevitz-Weulersse & Galkowsky, 2009: 482; Radchenko, 2016: 284.

***gelida*.** *Formica fusca* var. *gelida* Wheeler, W.M. 1913f: 399 (in key).

[*Formica fusca* subsp. *fusca* var. *gelida* Wheeler, W.M. 1913f: 505 (w.q.m.) U.S.A. (Colorado, New Mexico, Arizona, California, Oregon, Washington, Michigan, New Hampshire, Alaska), CANADA (British Columbia, Alberta, Saskatchewan, Ontario, Quebec, Newfoundland, Nova Scotia); unavailable (infrasubspecific) name.]

As unavailable (infrasubspecific) name: Emery, 1925b: 248; Menozzi, 1932b: 312.

Subspecies of *fusca*: Wheeler, W.M. 1917a: 546; Wheeler, W.M. 1917e: 20; Essig, 1926: 866; Cole, 1936a: 38; Cole, 1937b: 138; Cole, 1942: 382; Smith, M.R. 1951a: 864.

Subspecies of *neorufibarbis*: Creighton, 1950a: 537; Cole, 1954c: 167; Smith, M.R. 1958c: 157; Beck, *et al.* 1967: 70; Smith, M.R. 1967: 372.

Junior synonym of *neorufibarbis*: Francoeur, 1973: 215; Smith, D.R. 1979: 1454; Bolton, 1995b: 195.

**georgica.** *Formica georgica* Seifert, 2002b: 262, fig. 4 (w.) GEORGIA.

**Status as species:** Gratiashvili & Barjadze, 2008: 133; Kiran & Karaman, 2012: 11; Borowiec, L. 2014: 75.

**gerardi.** *Formica gerardi* Bondroit, 1917b: 186 (w.) FRANCE.

Gómez, Lorite, García, *et al.* 2018: 465 (q.m.); Lorite, Chica & Palomeque, 1998: 26 (k.). Combination in *F. (Iberoformica)*: Czechowski, Radchenko, *et al.* 2012: 39; combination in *F. (Serviformica)*: Gómez, Lorite, García, *et al.* 2018: 465.

As unavailable (infrasubspecific) name: Emery, 1925b: 247.

Junior synonym of *subrufa*: Bernard, 1967: 301.

**Status as species:** Bondroit, 1918: 53; Stäärke, 1926: 148 (in key); Schmitz, 1950: 14; Collingwood & Yarrow, 1969: 89; Collingwood, 1978: 94 (in key); Bolton, 1995b: 195; Espadaler, 1997b: 28; Collingwood & Prince, 1998: 26 (in key); Casevitz-Weulersse & Galkowsky, 2009: 482; Borowiec, L. 2014: 75; Lebas, *et al.* 2016: 188; Gómez, Lorite, García, *et al.* 2018: 465 (redescription).

*gibba* Smith, F. 1861; see under **DOLICHODERUS**.

*gibbosa* Latreille, 1798; see under **APHAENOGASTER**.

**\*gibbosa.** *Formica gibbosa* Presl, 1822: 197 (no sex/caste indicated) BALTIC AMBER (Eocene).

[Unresolved junior primary homonym of *Formica gibbosa* Latreille, 1798: 50 (Bolton, 1995b: 196).]

Status as species: Scudder, 1891: 700; Dalla Torre, 1893: 199.

Unidentifiable to genus; *incertae sedis* in Formicidae: Handlirsch, 1907: 882.

*gibbosa* Smith, F. 1858; see under **DOLICHODERUS**.

*gigas* Latreille, 1802; see under **DINOMYRMEX**.

*gigas* Leach, 1825; see under **CAMPONOTUS**.

**gilvescens.** *Formica sanguinea* subsp. *subintegra* var. *gilvescens* Wheeler, W.M. 1913f: 412 (w.) U.S.A. (New York, Wisconsin); unavailable (infrasubspecific) name.

As unavailable (infrasubspecific) name: Emery, 1925b: 260; Wesson, L.G. & Wesson, R.G. 1940: 101; Creighton, 1950a: 470; Smith, M.R. 1951a: 872.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 196.

Material referred to *subintegra* by Creighton, 1950a: 470; Smith, M.R. 1958c: 159.

**glabra.** *Formica glabra* Gmelin, 1790: 2804 (w.) Europe (no state data, "Habitat in Europa").

Status as species: Olivier, 1792: 504; Dalla Torre, 1893: 199.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 196.

*glabra.* *Formica glabra* White, W.F. 1884: 253 (w.) GREAT BRITAIN.

[Unresolved junior primary homonym of *Formica glabra* Gmelin, in Linnaeus, 1790: 2804 (Bolton, 1995b: 196).]

Junior synonym of *gagates*: Dalla Torre, 1893: 188; Forel, 1894c: 403.

Junior synonym of *transcaucasica*: Yarrow, 1954a: 232.

Junior synonym of *picea* Nylander: Wheeler, W.M. 1913f: 512; Donisthorpe, 1915d: 325; Donisthorpe, 1918a: 9; Emery, 1925b: 249; Donisthorpe, 1927b: 374; Karavaiev, 1936: 231; Dlussky, 1967a: 61; Bolton, 1995b: 196; Radchenko, 2016: 297.

*glabrella* Nylander, 1849; see under **TAPINOMA**.

**glabridorsis**. *Formica (Serviformica) rufibarbis* var. *glabridorsis* Santschi, 1925f: 95 (w.) CHINA (Beijing).

**Subspecies of *rufibarbis***: Wheeler, W.M. 1927d: 12; Wheeler, W.M. 1927e: 3; Wheeler, W.M. 1929f: 10; Wheeler, W.M. 1930h: 81; Chapman & Capco, 1951: 199.

Junior synonym of *glauca*: Dlussky, 1967a: 74.

Junior synonym of *cunicularia*: Wu, J. 1990: 4; Bolton, 1995b: 196.

**Status as species**: Seifert & Schultz, 2009: 269 (redescription); Guénard & Dunn, 2012: 31.

**glacialis**. *Formica fusca* var. *glacialis* Wheeler, W.M. 1908f: 624 (w.q.m.) U.S.A. (Maine, New York, New Hampshire), CANADA (Nova Scotia, Newfoundland).

Combination in *F. (Serviformica)*: Emery, 1925b: 247.

**Subspecies of *fusca***: Wheeler, W.M. 1910g: 570; Emery, 1925b: 247; Wing, 1939: 165.

Junior synonym of *fusca*: Wheeler, W.M. 1913f: 494; Creighton, 1950a: 532; Smith, M.R. 1951a: 863.

Junior synonym of *subsericea*: Wheeler, G.C. & Wheeler, J. 1986g: 92.

**Status as species**: Francoeur, 1973: 152 (redescription); Francoeur, 1975: 261; Francoeur, 1977a: 11; Francoeur, 1977b: 208; Smith, D.R. 1979: 1453; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 196; Coovert, 2005: 141; Ellison, *et al.* 2012: 155.

**Senior synonym of *fairchildi***: Francoeur, 1977a: 11; Bolton, 1995b: 196.

**glauca**. *Formica rufibarbis* var. *glauca* Ruzsky, 1896: 70.

[First available use of *Formica fusca* subsp. *rufibarbis* var. *glauca* Ruzsky, 1895: 20 (w.) RUSSIA; unavailable (infrasubspecific) name.]

Emery, 1909b: 198 (q.m.).

Combination in *F. (Serviformica)*: Ruzsky, 1915b: 13; Emery, 1925b: 250.

As unavailable (infrasubspecific) name: Emery, 1909b: 198.

**Subspecies of *rufibarbis***: Forel, 1904b: 385; Ruzsky, 1905b: 396; Wheeler, W.M. 1913f: 516 (redescription); Ruzsky, 1915b: 13; Ruzsky, 1916: 10; Emery, 1925b: 250; Ruzsky, 1925a: 287; Ruzsky, 1946: 69.

**Subspecies of *cunicularia***: Dlussky, 1965a: 37 (in key); Pisarski, 1967: 416; Dlussky, 1967a: 74; Pisarski, 1969b: 311; Pisarski, 1970: 323; Dlussky & Pisarski, 1970: 88; Tarbinsky, 1976: 184 (redescription); Dlussky, 1981a: 17; Pisarski & Krzysztofiak, 1981: 164.

Junior synonym of *cunicularia*: Atanassov & Dlussky, 1992: 267; Arakelian, 1994: 94; Bolton, 1995b: 196; Gratiashvili & Barjadze, 2008: 133; Karaman, M.G. 2011b: 77; Kiran & Karaman, 2012: 10.

**Status as species**: Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 286 (in key); Wu, J. 1990: 6 (in key); Wu, J. & Wang, 1995: 146; Collingwood & Heatwole, 2000: 13; Chang & He, 2002a: 52 (in key); Czechowski, *et al.* 2002: 86; Petrov, 2006: 112 (in key); Werner & Wiezik, 2007: 158; Zryanin & Zryanina, 2007: 233; Lapeva-Gjonova, *et al.* 2010: 50; Radchenko, 2016: 304.

**Senior synonym of *katuniensis***: Dlussky, 1967a: 74; Tarbinsky, 1976: 184; Radchenko, 2016: 304.

Material of the unavailable name *minor* referred here by Dlussky, 1967a: 74.

Unidentifiable taxon, *incertae sedis* in *Formica*: Seifert, 2007: 301; *nomen dubium*: Seifert & Schultz, 2009: 271.

[Note: the decisions by Seifert (2007), and Seifert & Schultz (2009), rendered all earlier taxonomy untenable, and left the previous junior synonyms of *glauca* in taxonomic limbo. The inclusion of *glauca* as a species-rank taxon in the Bulgaria catalogue of Lapeva-Gjonova, *et al.* (2010) is not considered to be a statement of change in taxonomic rank, but the resurrection by Radchenko, 2016: 304-306, achieves this purpose.]

*glebaria*. *Formica glebaria* Nylander, 1846a: 917, pl. 18, fig. 23 (w.q.) FINLAND.

[Misspelled as *glabaria* by Santschi, 1925g: 353.]

Foerster, 1850a: 31 (m.).

Combination in *F. (Serviformica)*: Forel, 1915d: 63.

As unavailable (infrasubspecific) name: Emery, 1909b: 196 Wheeler, W.M. 1913f: 497; Soudek, 1922: 84; Azuma, 1955: 80.

Subspecies of *fusca*: Emery & Forel, 1879: 451; Wheeler, W.M. 1908g: 408; Emery, 1909b: 196; Forel, 1909c: 105; Karavaiev, 1910a: 268; Karavaiev, 1912b: 589; Krausse, 1912b: 165; Wheeler, W.M. 1913f: 397 (in key); Ruzsky, 1914b: 104; Stitz, 1914: 93; Ruzsky, 1915b: 12; Forel, 1915d: 63 (in key); Donisthorpe, 1915d: 314; Emery, 1916b: 254; Ruzsky, 1916: 10; Menozzi, 1918: 88; Nadig, 1918: 341; Menozzi, 1921: 32; Kulmatycki, 1922: 84; Menozzi, 1922b: 331; Emery, 1925b: 247; Santschi, 1925g: 353; Schkaff, 1925: 276; Santschi, 1926f: 289; Donisthorpe, 1927a: 8; Donisthorpe, 1927b: 361; Karavaiev, 1927a: 301; Karavaiev, 1927c: 286 (in key); Karavaiev, 1927d: 345; Santschi, 1931a: 13; Soudek, 1931: 17; Santschi, 1932c: 73; Santschi, 1932g: 5; Grandi, 1935: 103; Zimmermann, 1935: 54; Santschi, 1936c: 209; Stitz, 1939: 353; Menozzi, 1939a: 320; Novák & Sadil, 1941: 108 (in key); Ruzsky, 1946: 69; Consani & Zangheri, 1952: 45; Ceballos, 1956: 319.

Subspecies of *rufibarbis*: Karavaiev, 1930b: 148; Karavaiev, 1931e: 216; Karavaiev, 1936: 237 (redescription); Karavaiev, 1937: 177.

Status as species: Foerster, 1850a: 31; Bondroit, 1918: 49; Müller, 1923b: 139; Betrem, 1926: 214; Stärcke, 1926: 147 (in key); Menozzi, 1927b: 92; Finzi, 1928c: 791; van Boven, 1947: 188 (in key).

Junior synonym of *cunicularia*: Bernard, 1967: 296; Kutter, 1968a: 61; Baroni Urbani, 1971c: 235; van Boven, 1977: 164; Agosti & Collingwood, 1987a: 59; Bolton, 1995b: 196; Czechowski, *et al.* 2002: 85; Casevitz-Weulersse & Galkowsky, 2009: 481; Csösz, *et al.* 2011: 59; Legakis, 2011: 35.

Junior synonym of *fusca*: Schenck, 1852: 43; Mayr, 1855: 346; Nylander, 1856b: 65; Smith, F. 1858b: 6; Mayr, 1863: 415; Roger, 1863b: 13; Dours, 1873: 165; André, 1874: 202 (in list); Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 197; Forel, 1894c: 403; Lomnicki, 1925a: 18 (in key); Yarrow, 1954a: 230; Dlussky, 1967a: 58; Pisarski, 1975: 40; Tarbinsky, 1976: 180; Radchenko, 2007: 35; Czechowski, *et al.* 2012: 205; Radchenko, 2016: 294.

\**globiventris*. \**Formica globiventris* Heer, 1849: 131, pl. 9, fig. 13 (q.) GERMANY (Miocene).

[Also described as new by Heer, 1850: 131.]

*Incertae sedis* in *Formica*: Handlirsch, 1907: 865; Bolton, 1995b: 196.

Status as species: Giebel, 1856: 169; Scudder, 1891: 700; Dalla Torre, 1893: 199.

\**globularis* Heer, 1849; see under *LASIUS*.

*gnava*. *Formica gnava* Buckley, 1866: 156 (w.q.m.) U.S.A. (Connecticut, District of Columbia, New York, Texas).

Combination in *F. (Serviformica)*: Emery, 1925b: 250.

**Subspecies of *fusca*:** Wheeler, W.M. 1902f: 20; Wheeler, W.M. 1906d: 344; Wheeler, W.M. 1910g: 570.

**Subspecies of *rufibarbis*:** Wheeler, W.M. 1913f: 518 (redescription); Wheeler, W.M. 1914b: 56; Wheeler, W.M. 1917a: 550; Emery, 1925b: 250; Cole, 1937b: 138; Cole, 1942: 383; Creighton, 1950a: 539; Smith, M.R. 1951a: 870; Smith, M.R. 1958c: 159; Smith, M.R. 1967: 373.

**Status as species:** Cresson, 1887: 256; Dalla Torre, 1893: 199; Francoeur, 1973: 238 (redescription); Francoeur, 1975: 263; Hunt & Snelling, 1975: 23; Wheeler, G.C. & Wheeler, J. 1977b: 16 (in key); Smith, D.R. 1979: 1453; Snelling, R.R. & George, 1979: 247; Allred, 1982: 465; Wheeler, G.C. & Wheeler, J. 1986g: 89 (in key); Mackay, Lowrie, *et al.* 1988: 109 (in key); Bolton, 1995b: 196; Mackay & Mackay, 2002: 345; Ward, 2005: 63.

Material of the *nomen nudum* *subsericeoneorufibarbis* (misspelled as *subsericeorufibarbis* by Emery, 1925b: 250) referred here by Wheeler, W.M. 1913f: 518.

*goesswaldi*. *Formica (Coptoformica) goesswaldi* Kutter, 1967a: 234, figs. 15-22 (w.q.m.) SWITZERLAND.

Status as species: Kutter, 1968a: 61; Kutter, 1977c: 284; Agosti & Collingwood, 1987b: 285 (in key); Bolton, 1995b: 196.

Junior synonym of *foreli*: Seifert, 2000a: 544; Radchenko, 2016: 312.

*gracilescens* Nylander, 1856; see under **PARATRECHINA**.

*gracilipes* Smith, F. 1857; see under **ANOPOLEPIS**.

*gracilis* Fabricius, 1804; see under **PSEUDOMYRMEX**.

*gracilis* Lowne, 1865; see under **IRIDOMYRMEX**.

*gracilis* Buckley, 1866; see under **TAPINOMA**.

\**gracilis* Heer, 1867; see under **\*PONERITES**.

*graminicola* Latreille, 1802; see under **MYRMECINA**.

\***grandis**. \**Formica grandis* Carpenter, 1930: 57, pl. 6, fig. 3 (q.) U.S.A. (Colorado, Florissant, Eocene).

**Status as species:** Burnham, 1979: 115; Bolton, 1995b: 196.

*granulata* Latreille, 1802; see under **CATAULACUS**.

**gravelyi**. *Formica gravelyi* Mukerjee, 1930: 162, fig. 6 (w.) INDIA (West Bengal).

**Status as species:** Bolton, 1995b: 196.

\***gravida**. \**Formica gravida* Heer, 1849: 114, pl. 9, fig. 1 (q.) GERMANY (Miocene).  
[Also described as new by Heer, 1850: 114.]

*Incertae sedis* in *Formica*: Handlirsch, 1907: 865; Bolton, 1995b: 196.

Status as species: Giebel, 1856: 163; Scudder, 1891: 701; Dalla Torre, 1893: 199.

*grisea* Le Guillou, 1842; see under **POLYRHACHIS**.

*griseopubescens*. *Formica sanguinea* var. *griseopubescens* Kuznetsov-Ugamsky, 1926b: 93 (in key) (w.) KAZAKHSTAN.  
[*Formica sanguinea* subsp. *sanguinea* var. *griseopubescens* Kuznetsov-Ugamsky, 1926b: 95; unavailable (infrasubspecific) name (Bolton, 1995b: 196).]

Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Tarbinsky, 1976: 186; Bolton, 1995b: 196.

*grossa* Fabricius, 1787; see under **ATTA**.

*grouvellei*. *Formica rufa* var. *grouvellei* Bondroit, 1918: 56 (q.) FRANCE.  
As unavailable (infrasubspecific) name: Stärcke, 1947: 145.

- Subspecies of *rufa*: Emery, 1925b: 253; Bolton, 1995b: 196.  
 Junior synonym of *pratensis*: Seifert, 1996a: 200; Casevitz-Weulersse & Galkowsky, 2009: 482; Radchenko, 2016: 291.
- grundmanni*. *Formica moki* subsp. *grundmanni* Cole, 1943b: 184 (w.) U.S.A. (Utah).  
 Subspecies of *moki*: Creighton, 1950a: 550; Smith, M.R. 1951a: 858.  
 Junior synonym of *xerophila*: Francoeur, 1973: 259; Smith, D.R. 1979: 1455; Snelling, R.R. & George, 1979: 250; Bolton, 1995b: 196.
- guineensis* Fabricius, 1793; see under **PHEIDOLE**.
- gulosa* Fabricius, 1775; see under **MYRMECIA**.
- \*gustawi**. *\*Formica gustawi* Dlussky, 2002a: 295, figs. 10-17 (w.m.) BALTIC AMBER (Eocene).  
**Status as species**: Dlussky & Perkovsky, 2002: 12; Dlussky, 2008a: 51; Dlussky & Rasnitsyn, 2009: 1030; Perkovsky, 2016: 114.
- gynomma*. *Formica dryas* var. *gynomma* Wheeler, W.M. 1905c: 269 (w.) U.S.A. (New York, Illinois).  
 As unavailable (infrasubspecific) name: Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 392 (in key), 448; Emery, 1925b: 254.  
 Subspecies of *dryas*: Wheeler, W.M. 1906b: 17.  
 Subspecies of *rufa*: Creighton, 1940a: 3, 8 (in key); Smith, M.R. 1951a: 868.  
 Junior synonym of *obscuriventris*: Creighton, 1950a: 493; Smith, M.R. 1958c: 158; Smith, D.R. 1979: 1460; Bolton, 1995b: 196.
- gynocrates**. *Formica gynocrates* Snelling, R.R. & Buren, 1985: 72, figs. 7-15 (w.q.m.) U.S.A. (Michigan, North Dakota, Wyoming, Colorado).  
**Status as species**: Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 196; Covert, 2005: 157.
- habrogyna*. *Formica habrogyna* Cole, 1939: 413, figs. A-D (w.q.) U.S.A. (Tennessee).  
 Junior synonym of *difficilis*: Cole, 1943a: 389; Creighton, 1950a: 500; Smith, M.R. 1951a: 862; Smith, D.R. 1979: 1462; Bolton, 1995b: 196; Covert, 2005: 152.
- haematocephala* Leach, 1825; see under **CREMATOGASTER**.
- haematoda* Linnaeus, 1758; see under **ODONTOMACHUS**.
- haemorrhoidalis* Latreille, 1802; see under **CEPHALOTES**.
- haemorrhoidalis*. *Formica rufa* subsp. *haemorrhoidalis* Creighton, 1940a: 1, 7 (in key).  
 [First available use of *Formica rufa* subsp. *integra* var. *haemorrhoidalis* Emery, 1893i: 652 (w.) U.S.A. (Dakota, Colorado); unavailable (infrasubspecific) name.]  
 [Junior primary homonym of *Formica haemorrhoidalis* Latreille, 1802c: 276.]  
 [Note: type-locality Colorado by designation of Wheeler, W.M. 1913f: 441.]  
 Wheeler, W.M. 1913f: 441 (q.m.).  
 As unavailable (infrasubspecific) name: Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 392 (in key), 441 (redescription); Wheeler, W.M. 1917a: 539; Emery, 1925b: 254; Cole, 1936a: 38.  
 Subspecies of *rufa*: Cole, 1942: 381; Wheeler, G.C. & Wheeler, E.W. 1944: 263; Smith, M.R. 1951a: 869.  
 Subspecies of *integra*: Creighton, 1950a: 488; Smith, M.R. 1958c: 156; Beck, *et al.* 1967: 70; Smith, M.R. 1967: 371.  
 Status as species: Brown, 1965d: 181; Wheeler, G.C. & Wheeler, J. 1977b: 2, 10; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1458; Allred, 1982: 466; Wheeler, G.C. & Wheeler, J. 1986g: 81; Mackay, Lowrie, *et al.* 1988: 112 (in key).

**Replacement name:** *Formica rufa* subsp. *ravida* Creighton, 1940a: 1.

[Note: *ravida* junior synonym of *haemorrhoidalis* Creighton (synonymy by Brown, 1965d: 181); hence *ravida* designated first available replacement name (Bolton, 1995b: 202).]

*hamata* Fabricius, 1782; see under **ECITON**.

*harpax* Fabricius, 1804; see under **PACHYCONDYLA**.

*hastata* Latreille, 1802; see under **POLYRHACHIS**.

**hayashi**. *Formica hayashi* Terayama & Hashimoto, 1996: 4, figs. 8-12 (w.) JAPAN.

**Status as species:** Imai, *et al.* 2003: 40.

*hebescens*. *Formica ulkei* var. *hebescens* Wheeler, W.M. 1913f: 487 (w.) U.S.A. (Indiana), CANADA (Nova Scotia).

Subspecies of *ulkei*: Wheeler, W.M. 1917i: 464; Emery, 1925b: 258; Smith, M.R. 1951a: 873.

Junior synonym of *ulkei*: Creighton, 1950a: 515; Smith, D.R. 1979: 1456; Bolton, 1995b: 196; Coover, 2005: 146.

*hemipsila* Foerster, 1850; see under **CAMPONOTUS**.

**\*heraclea** Heer, 1849; see under **CAMPONOTUS**.

*herculeana* Linnaeus, 1758; see under **CAMPONOTUS**.

*herrichi* Mayr, 1853; see under **CAMPONOTUS**.

*hesperia*. *Formica exsectoides* var. *hesperia* Wheeler, W.M. 1913f: 396 (in key).

[*Formica exsectoides* subsp. *exsectoides* var. *hesperia* Wheeler, W.M. 1913f: 484 (w.) U.S.A. (Colorado); unavailable (infrasubspecific) name.]

Subspecies of *exsectoides*: Wheeler, W.M. 1917a: 544; Emery, 1925b: 258; Smith, M.R. 1951a: 863.

Junior synonym of *exsectoides*: Creighton, 1950a: 513; Smith, M.R. 1958c: 155; Smith, D.R. 1979: 1456; Bolton, 1995b: 196.

**\*heteroptera**. **\*Formica heteroptera** Cockerell, 1920: 278, pl. 16, fig. 11 (wing) GREAT BRITAIN (England, Eocene).

**Status as species:** Burnham, 1979: 108; Bolton, 1995b: 196.

**hewitti**. *Formica hewitti* Wheeler, W.M. 1917a: 552 (w.q.m.) CANADA (British Columbia, Alberta), U.S.A. (Montana).

[Misspelled as *hewiti* by Emery, 1925b: 249.]

Combination in *F. (Serviformica)*: Emery, 1925b: 249.

**Status as species:** Emery, 1925b: 249; Creighton, 1950a: 533; Smith, M.R. 1951a: 865; Smith, M.R. 1958c: 156; Smith, M.R. 1967: 371; Francoeur, 1973: 208 (redescription); Francoeur, 1975: 262; Francoeur, 1977b: 208; Wheeler, G.C. & Wheeler, J. 1977b: 14 (in key); Yensen, *et al.* 1977: 185; Wheeler, G.C. & Wheeler, J. 1978: 395; Smith, D.R. 1979: 1453; Allred, 1982: 466; Wheeler, G.C. & Wheeler, J. 1986g: 89; Mackay, Lowrie, *et al.* 1988: 114; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 196; Mackay & Mackay, 2002: 346; Ward, 2005: 63; Ellison, *et al.* 2012: 156.

*hexacantha* Erichson, 1842; see under **POLYRHACHIS**.

**hirta**. *Formica hirta* Gravenhorst, 1807: 286 (w.) no locality given.

Status as species: Dalla Torre, 1893: 199.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 196.

**\*horrida**. **\*Formica horrida** Wheeler, W.M. 1915h: 125, fig. 59 (w.) BALTIC AMBER (Eocene).

**Status as species:** Dlussky, 1967b: 80; Burnham, 1979: 115; Keilbach, 1982: 281; Bolton, 1995b: 196; Dlussky, 2008a: 52; Dlussky & Rasnitsyn, 2009: 1030; Perkovsky, 2016: 114.

*huberiana* Leach, 1825; see under **MESSOR**.

*hybrida*. *Formica microgyna* subsp. *californica* var. *hybrida* Wheeler, W.M. 1917a: 543 (w.) U.S.A. (California); unavailable (infrasubspecific) name.

As unavailable (infrasubspecific) name: Emery, 1925b: 256; Creighton, 1950a: 510; Smith, M.R. 1951a: 866.

Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 196.

Material referred to *californica* by Creighton, 1950a: 510.

*hybrida* Emery, 1916 [*Formicina*]; see under **LASIUS**.

*hyrcana*. *Formica (Serviformica) fusca* subsp. *hyrcana* Arnol'di, 1968: 1821 (w.q.) AZERBAIJAN.

[*Formica fusca* subsp. *hyrcana* Arnol'di, 1948: 212 (in list). *Nomen nudum*.]

**Subspecies of fusca:** Bolton, 1995b: 196.

*hystrix* Latreille, 1802; see under **ACROMYRMEX**.

*iberica*. *Formica cinerea* var. *iberica* Finzi, 1928a: 71 (w.) SPAIN.

Subspecies of *cinerea*: Bolton, 1995b: 196.

Junior synonym of *cinerea*: Seifert, 2002b: 251; Radchenko, 2016: 300.

*ignivora*. *Formica ignivora* Rafin, 1885: 403. *Nomen nudum*.

\**imhoffii* Heer, 1849; see under **LIOMETOPUM**.

*imitans*. *Formica cinerea* var. *imitans* Ruzsky, 1902b: 472 (w.q.) RUSSIA, KAZAKHSTAN, GEORGIA .

[Also described as new by Ruzsky, 1902c: 10 (footnote).]

Karavaiev, 1936: 226 (m.).

As unavailable (infrasubspecific) name: Emery, 1909b: 199; Wheeler, W.M. 1913f: 523.

Junior synonym of *rufibarbis*: Kuznetsov-Ugamsky, 1926b: 97.

Subspecies of *cinerea*: Ruzsky, 1902d: 12; Ruzsky, 1903b: 303; Ruzsky, 1903c: 206; Ruzsky, 1905b: 405; Wheeler, W.M. 1913f: 398 (in key); Ruzsky, 1916: 10; Bondroit, 1918: 54; Soudek, 1922: 85; Emery, 1925b: 246; Lomnicki, 1925a: 23 (in key); Karavaiev, 1926e: 198; Karavaiev, 1927a: 302; Karavaiev, 1927c: 286 (in key); Finzi, 1928a: 73; Kuznetsov-Ugamsky, 1929b: 39; Soudek, 1931: 17; Karavaiev, 1936: 226 (redescription); Karavaiev, 1937: 177; Ruzsky, 1946: 69; Dlussky, 1965a: 43 (in key); Dlussky, 1967a: 65.

Status as species: Arnol'di & Dlussky, 1978: 553 (in key); Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 286 (in key); Bolton, 1995b: 196; Chang & He, 2002a: 57; Petrov, 2006: 112 (in key) (error); Zryanin & Zryanina, 2007: 233 (error); Borowiec, L. 2014: 76 (error).

Junior synonym of *cinerea*: Seifert, 2002b: 251; Gratiashvili & Barjadze, 2008: 132; Kiran & Karaman, 2012: 10; Radchenko, 2016: 300.

\**immersa*. \**Formica immersa* Heer, 1849: 122, pl. 9, fig. 5 (q.) GERMANY (Miocene).

[Also described as new by Heer, 1850: 122.]

*Incertae sedis* in *Formica*: Handlirsch, 1907: 865; Bolton, 1995b: 196.

Status as species: Giebel, 1856: 166; Scudder, 1891: 701; Dalla Torre, 1893: 199.

\**impacta* Cockerell, 1927; see under \***MIOMYRMEX**.

*imparis* Say, 1836; see under **PRENOLEPIS**.

*impetuosa* Smith, F. 1858; see under **CAMPONOTUS**.

**impexa**. *Formica impexa* Wheeler, W.M. 1905c: 273 (w.) U.S.A. (Michigan).

Wheeler, W.M. 1906a: 40 (q.).

**Status as species:** Wheeler, W.M. 1906a: 40; Wheeler, W.M. 1906b: 17; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 472 (redescription); Emery, 1925b: 256; Creighton, 1950a: 501; Smith, M.R. 1951a: 865; Smith, M.R. 1958c: 156; Kutter, 1968b: 207; Francoeur, 1977b: 208; Smith, D.R. 1979: 1462; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 196; Ellison, *et al.* 2012: 157.

*implana*. *Formica (Serviformica) picea* var. *implana* Emery, 1925b: 249.

[First available use of *Formica (Serviformica) fusca* subsp. *picea* var. *implana* Ruzsky, 1915a: 426, fig. 2 (w.) CHINA (Tibet); unavailable (infrasubspecific) name.]

[Misspelled as *inplanata* by Tarbinsky, 1976: 183.]

As unavailable (infrasubspecific) name: Ruzsky, 1920: 79; Ruzsky, 1925b: 44; Kuznetsov-Ugamsky, 1928b: 9; Kuznetsov-Ugamsky, 1929a: 20.

Subspecies of *fusca*: Ruzsky, 1936: 92; Ruzsky, 1946: 69.

Subspecies of *picea*: Menozzi, 1939a: 321 (in key).

Junior synonym of *picea* Nylander: Dlussky, 1965a: 31; Dlussky, 1967a: 61; Dlussky & Pisarski, 1971: 153; Tarbinsky, 1976: 183; Bolton, 1995b: 197.

**incerta**. *Formica (Neoformica) pallidefulva* subsp. *incerta* Buren, 1944a: 309.

[First available use of *Formica pallidefulva* subsp. *schaufussi* var. *incerta* Emery, 1893i: 655 (w.q.m.) U.S.A. (District of Columbia, Virginia); unavailable (infrasubspecific) name.]

As unavailable (infrasubspecific) name: Wheeler, W.M. 1904f: 370 (in key); Wheeler, W.M. 1905f: 400; Wheeler, W.M. 1906b: 18; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 401 (in key), 554; Wheeler, W.M. 1916m: 598; Wheeler, W.M. 1917a: 554; Emery, 1925b: 245; Cole, 1936a: 38; Dennis, 1938: 298; Wesson, L.G. & Wesson, R.G. 1940: 102; Smith, M.R. 1951a: 860.

Junior synonym of *nitidiventris*: Creighton, 1950a: 551; Smith, M.R. 1958c: 153; Smith, D.R. 1979: 1451; Bolton, 1995b: 197; Covert, 2005: 136.

**Status as species:** Trager, MacGown & Trager, 2007: 621 (redescription); Ellison, *et al.* 2012: 158.

*incisa* Schenck, 1852; see under **LASIUS**.

**incisa**. *Formica incisa* Smith, F. 1858b: 52 (q.) MEXICO (no state data).

[Unresolved junior primary homonym of *Formica incisa* Schenck, 1852: 63 (Emery, 1921a: 26; Bolton, 1995b: 197).]

Status as species; Mayr, 1863: 416; Dalla Torre, 1893: 199.

Unidentifiable taxon: Forel, 1899c: 128;

*incertae sedis* in Formicinae: Kempf, 1972a: 261;

unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 197.

*incisa*. *Formica pratensis* var. *incisa* Gösswald, 1932: 148.

[First available use of *Formica rufa* subsp. *pratensis* var. *incisa* Krausse, 1922: 155 (w.) GERMANY; unavailable (infrasubspecific) name.]

As unavailable (infrasubspecific) name: Krausse, 1926a: 108; Krausse, 1926b: 115.

Junior synonym of *nigropratensis*: Betrem, 1962: 38; Bolton, 1995b: 197.

*incursor* Smith, F. 1860; see under **COLOBOPSIS**.

*indefessa* Sykes, 1835; see under **CAMPONOTUS**.

*indeflexa* Walker, 1859; see under **CAMPONOTUS**.

**indianensis**. *Formica indianensis* Cole, 1940: 224 (w.m.) U.S.A. (Indiana).

**Status as species:** Buren, 1944a: 306; Creighton, 1950a: 501; Smith, M.R. 1951a: 865; Smith, D.R. 1979: 1462; Bolton, 1995b: 197; Coover, 2005: 153.

*indificans* Jerdon, 1851; see under **POLYRHACHIS**.

\**indurata* Heer, 1849; see under **CAMPONOTUS**.

**inequalis**. *Formica inequalis* Lowne, 1865b: 331 (q.m.) AUSTRALIA.

**Status as species:** Dalla Torre, 1893: 199.

Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 197.

*ingruens* Walker, 1859; see under **DOLICHODERUS**.

*insana* Buckley, 1866; see under **DORYMYRMEX**.

**insultans**. *Formica insultans* Forskål, 1775: 85 (w.) EGYPT ?.

**Status as species:** Dalla Torre, 1893: 200.

Unidentifiable to genus; *incertae sedis* in *Formica*: Emery, 1892b: 160; Bolton, 1995b: 197.

**integra**. *Formica integra* Nylander, 1856b: 62 (footnote) (w.) U.S.A. (no state data, "Amérique du Nord").

Mayr, 1886d: 425 (q.m.).

**Subspecies of *rufa*:** Emery, in Dalla Torre, 1893: 200, 206 (footnote); Emery, 1893i: 652; Viereck, 1903: 72; Wheeler, W.M. 1904e: 305; Wheeler, W.M. 1905f: 399; Wheeler, W.M. 1906b: 16; Wheeler, W.M. 1908f: 623; Wheeler, W.M. 1908g: 406; Wheeler, W.M. 1910g: 570; Emery, 1925b: 254; Creighton, 1940a: 1, 7 (in key); Smith, M.R. 1951a: 869.

**Subspecies of *truncicola*:** Wheeler, W.M. 1913c: 116; Wheeler, W.M. 1913f: 444 (redescription); Wheeler, W.M. 1916m: 597; Wheeler, W.M. 1917a: 540; Wheeler, W.M. 1917i: 464; Smith, M.R. 1931a: 22; Wing, 1939: 165; Wesson, L.G. & Wesson, R.G. 1940: 101; Wheeler, G.C. & Wheeler, E.W. 1944: 267.

**Status as species:** Smith, F. 1858b: 54 (redescription); Mayr, 1862: 701; Mayr, 1863: 416; Roger, 1863b: 13; Mayr, 1886d: 425; Cresson, 1887: 256; Dalla Torre, 1893: 200; Forel, 1902i: 699; Creighton, 1950a: 487; Smith, M.R. 1958c: 156; Brown, 1965d: 182; Francoeur, 1977b: 208; Smith, D.R. 1979: 1458; DuBois & LaBerge, 1988: 147; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 197; Coover, 2005: 149; MacGown & Forster, 2005: 66; Ellison, *et al.* 2012: 159.

**Senior synonym of *similis*:** Emery, 1893i: 652; Wheeler, W.M. 1906b: 16; Wheeler, W.M. 1913f: 444; Emery, 1925b: 254; Creighton, 1950a: 487; Smith, M.R. 1951a: 869; ; Smith, D.R. 1979: 1458; Bolton, 1995b: 197.

**integroides**. *Formica truncicola* subsp. *integroides* Wheeler, W.M. 1913f: 438.

[First available use of *Formica rufa* subsp. *obscuriventris* var. *integroides* Emery, 1893i: 649 (w.q.) U.S.A. (California, Nebraska); unavailable (infrasubspecific) name.]

As unavailable (infrasubspecific) name: Wheeler, W.M. 1910g: 570.

**Subspecies of *truncicola*:** Wheeler, W.M. 1917a: 537; Cole, 1936a: 38.

**Subspecies of *rufa*:** Emery, 1925b: 254; Creighton, 1940a: 3, 7 (in key); Smith, M.R. 1951a: 869.

**Status as species:** Creighton, 1950a: 488; Miller, 1957: 254; Smith, M.R. 1958c: 156; Brown, 1965d: 185; Wheeler, G.C. & Wheeler, J. 1978: 394; Smith, D.R. 1979: 1459;

Allred, 1982: 466; Wheeler, G.C. & Wheeler, J. 1986g: 82; Bolton, 1995b: 197; Ward, 2005: 63.

**Senior synonym of *subcaviceps*:** Creighton, 1950a: 489; Smith, D.R. 1979: 1459; Bolton, 1995b: 197.

**Senior synonym of *subfasciata*:** Brown, 1965d: 185 (in text) ; Bolton, 1995b: 197.

*intermedia* Zetterstedt, 1838; see under **CAMPONOTUS**.

*intrepida* Kirby, W. 1819; see under **CAMPONOTUS**.

*irritabilis* Smith, F. 1857; see under **CAMPONOTUS**.

*irritans* Smith, F. 1857; see under **CAMPONOTUS**.

*italica*. *Formica cinerea* var. *italica* Finzi, 1928a: 70 (w.) ITALY.

As unavailable (infrasubspecific) name: Baroni Urbani, 1971c: 232.

Subspecies of *cinerea*: Bolton, 1995b: 197; Poldi, *et al.* 1995: 8.

Junior synonym of *cinerea*: Seifert, 2002b: 251; Radchenko, 2016: 300.

*itinerans* Lowne, 1865; see under **ANONYCHOMYRMA**.

*jacoti* Wheeler, W.M. 1923; see under **PROFORMICA**.

**japonica**. *Formica japonica* Motschoulsky, 1866: 183 (w.) JAPAN.

Imai, 1966: 119 (k.).

Combination in *F. (Serviformica)*: Emery, 1925b: 247.

As unavailable (infrasubspecific) name: Emery, 1909b: 197; Yano, 1911: 111; Wheeler, W.M. 1913f: 499; Teranishi, 1940: 24; Azuma, 1951: 88; Azuma, 1953: 5; Azuma, 1955: 80.

**Subspecies of *fusca*:** Emery, 1909b: 197; Wheeler, W.M. 1913f: 397 (in key); Wheeler, W.M. 1921c: 543; Emery, 1923: 62; Emery, 1925b: 247; Santschi, 1925f: 88; Karavaiev, 1926f: 69; Karavaiev, 1927b: 111; Karavaiev, 1927d: 347; Kuznetsov-Ugamsky, 1928b: 6; Wheeler, W.M. 1928d: 123; Wheeler, W.M. 1929f: 10; Wheeler, W.M. 1929g: 64; Kuznetsov-Ugamsky, 1929a: 19; Wheeler, W.M. 1930a: 106; Wheeler, W.M. 1930h: 81; Stitz, 1934: 9; Ruzsky, 1936: 92; Santschi, 1937h: 387; Kono & Sugihara, 1939: 9; Eidmann, 1941: 27; Santschi, 1941: 279; Morisita, 1945: 22; Chapman & Capco, 1951: 198; Collingwood, 1962: 219; Tang, J., Li, *et al.* 1995: 105.

**Status as species:** Dalla Torre, 1893: 199; Dlussky, 1965a: 36 (in key); Dlussky, 1967a: 78; Collingwood, 1976: 305; Azuma, 1977: 117; Kupyanskaya, 1980: 100; Onoyama, 1980: 200; Collingwood, 1981: 27; Wu, J. 1990: 5 (in key); Kupyanskaya, 1990: 185; Morisita, *et al.* 1991: 35; Wu, J. & Wang, 1992: 1311; Bolton, 1995b: 197; Wu, J. & Wang, 1995: 143; Zhou, 2001b: 175; Chang & He, 2002a: 51 (in key); Zhang, W. & Zheng, 2002: 218; Imai, *et al.* 2003: 57; Lin & Wu, 2003: 61; Radchenko, 2005b: 162; Zhou, 2006: 586; Terayama, 2009: 221; Guénard & Dunn, 2012: 31.

**Senior synonym of *nipponensis*:** Emery, 1909b: 197; Yano, 1910: 422; Yano, 1911: 111 (in text); Wheeler, W.M. 1913f: 499; Emery, 1925b: 248; Karavaiev, 1927b: 111; Kuznetsov-Ugamsky, 1928b: 6; Kuznetsov-Ugamsky, 1929a: 19; Ruzsky, 1936: 92; Chapman & Capco, 1951: 199; Dlussky, 1967a: 78; Onoyama, 1980: 200; Bolton, 1995b: 197; Zhou, 2001b: 175; Imai, *et al.* 2003: 57.

*juvenilis* Fabricius, 1804; see under **MESSOR**.

**kashmirica**. *Formica (Serviformica) rufibarbis* var. *kashmirica* Stärcke, 1935: 268 (w.q.m.) INDIA (Jammu & Kashmir).

**Subspecies of *rufibarbis*:** Bolton, 1995b: 197.

- Status as species:** Seifert & Schultz, 2008: 81 (redescription); Bharti, Guénard, *et al.* 2016: 27.
- katuniensis*. *Formica (Serviformica) rufibarbis* var. *katuniensis* Ruzsky, 1915b: 13 (w.) RUSSIA.  
Junior synonym of *cunicularia*: Atanassov & Dlussky, 1992: 267.  
Junior synonym of *glauca*: Dlussky, 1967a: 74; Tarbinsky, 1976: 184; Bolton, 1995b: 197; Radchenko, 2016: 304.
- kiesenwetteri* Roger, 1859; see under **CAMPONOTUS**.
- knightsi**. *Formica (Formica) knightsi* Buren, 1944a: 303 (w.) U.S.A. (Iowa).  
**Status as species:** Creighton, 1950a: 502; Smith, M.R. 1951a: 865; Smith, D.R. 1979: 1462; Bolton, 1995b: 197; Ellison, *et al.* 2012: 160.
- \**kollari*. \**Formica kollari* Heer, 1867: 15, pl. 1, fig. 14 (q.) CROATIA (Miocene).  
Status as species: Scudder, 1891: 701; Dalla Torre, 1893: 200; Handlirsch, 1907: 864; Bolton, 1995b: 197.  
Junior synonym of \**ungeri*: Dlussky & Putyatina, 2014: 256.
- kontuniemii*. *Formica kontuniemii* Betrem, 1954: 230 (w.) FINLAND.  
Junior synonym of *exsecta*: Dlussky, 1967a: 100; Dlussky & Pisarski, 1971: 194; Pisarski, 1975: 51; Bolton, 1995b: 197; Seifert, 2000a: 526; Czechowski, *et al.* 2002: 89; Czechowski, *et al.* 2012: 228; Radchenko, 2016: 309.
- korbi* Emery, 1909; see under **PROFORMICA**.
- kozłowi**. *Formica (Serviformica) kozłowi* Dlussky, 1965a: 32, fig. 22 (w.q.) CHINA (“Nan-Shan”), MONGOLIA.  
[Misspelled as *kozłowi* by Pisarski, 1969a: 232.]  
**Status as species:** Dlussky, 1967a: 64; Pisarski, 1969a: 232; Pisarski, 1969b: 311; Pisarski & Krzysztofiak, 1981: 163; Radchenko, 1994b: 113 (in key); Bolton, 1995b: 197.
- kraussei* Forel, 1895; see under **BAJCARIDRIS**.
- kupyanskayae**. *Formica kupyanskayae* Bolton, 1995b: 197.  
**Replacement name for** *Formica opacus* Kupyanskaya, 1980: 106. [Junior primary homonym of *Formica opaca* Nylander, 1856b: 55.]  
**Status as species:** Radchenko, 2005b: 162.
- kusnezowi* Santschi, 1928; see under **PROFORMICA**.
- \***kutscheri**. \**Formica kutscheri* Dlussky, 2008a: 52, figs. 4a-b (w.) BITTERFELD AMBER (Germany, Eocene).  
**Status as species:** Dlussky & Rasnitsyn, 2009: 1030; Perkovsky, 2016: 114.
- laboriosa* Smith, F. 1858; see under **CAMPONOTUS**.
- lactaria* Smith, F. 1860; see under **DOLICHODERUS**.
- lacteipennis* Smith, F. 1858; see under **CAMPONOTUS**.
- laeviceps**. *Formica rufa* subsp. *laeviceps* Creighton, 1940a: 9, 7 (in key), fig. 1 (w.q.) U.S.A. (Utah).  
**Subspecies of** *rufa*: Cole, 1942: 380; Smith, M.R. 1951a: 869.  
**Status as species:** Creighton, 1950a: 491; Smith, M.R. 1958c: 156; Smith, M.R. 1967: 371; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1459; Allred, 1982: 467; Wheeler, G.C. & Wheeler, J. 1986g: 82; Mackay, Lowrie, *et al.* 1988: 111 (in key); Bolton, 1995b: 197; Mackay & Mackay, 2002: 347.
- laevigata* Smith, F. 1858; see under **CAMPONOTUS**.

*laevissima* Smith, F. 1859; see under **CALOMYRMEX**.

*lapidum* Fabricius, 1804; see under **MESSOR**.

**lasioides**. *Formica lasioides* Emery, 1893i: 664 (w.) U.S.A. (South Dakota).

Combination in *Proformica*: Emery, 1912f: 100;

combination in *Formica (Proformica)*: Wheeler, W.M. 1913f: 539;

combination in *Formica*: Francoeur, 1973: 114.

**Subspecies of fusca**: Wheeler, W.M. 1908g: 409.

**Subspecies of neogagates**: Wheeler, W.M. 1913f: 539 (redescription); Wheeler, W.M. 1917a: 554; Emery, 1925b: 243; Essig, 1926: 867; Cole, 1936a: 38; Cole, 1942: 384; Wheeler, G.C. & Wheeler, E.W. 1944: 268; Smith, M.R. 1951a: 857.

**Status as species**: Emery, 1895c: 335; Wheeler, W.M. 1910g: 571; Creighton, 1950a: 457; Cole, 1954c: 163; Smith, M.R. 1958c: 152; Cole, 1966: 22 (in key); Smith, M.R. 1967: 369; Francoeur, 1975: 258; Francoeur, 1977b: 208; Yensen, *et al.* 1977: 185; Wheeler, G.C. & Wheeler, J. 1978: 393; Francoeur & Snelling, 1979: 3; Smith, D.R. 1979: 1449; Allred, 1982: 468; Wheeler, G.C. & Wheeler, J. 1986g: 78; Mackay, Lowrie, *et al.* 1988: 114; Blacker, 1992: 11; Wheeler, G.C., *et al.* 1994: 306; Bolton, 1995b: 197; Mackay & Mackay, 2002: 347; Covert, 2005: 134; Ward, 2005: 63; Ellison, *et al.* 2012: 161.

**Senior synonym of vetula**: Creighton, 1950a: 457; Smith, M.R. 1958c: 152; Francoeur & Snelling, 1979: 3; Smith, D.R. 1979: 1449; Bolton, 1995b: 197.

*latebrosa* Walker, 1859; see under **CAMPONOTUS**.

*lateralis* Olivier, 1792; see under **CAMPONOTUS**.

**\*latinodosa**. *\*Formica latinodosa* Théobald, 1937b: 318, pl. 25, fig. 13 (m.) FRANCE (Oligocene).

**Status as species**: Burnham, 1979: 115; Bolton, 1995b: 197.

*latipes* Walsh, 1863; see under **LASIUS**.

*latreillii* Guérin-Méneville, 1838; see under **POLYRHACHIS**.

*lauta* Say, 1836; see under **CAMPONOTUS**.

**\*lavateri**. *\*Formica lavateri* Heer, 1849: 127, pl. 9, fig. 11 (q.) GERMANY (Miocene).

[Also described as new by Heer, 1850: 127.]

*Incertae sedis* in *Formica*: Handlirsch, 1907: 865.

Status as species: Giebel, 1856: 167; Heer, 1867: 11; Mayr, 1867b: 53; Scudder, 1891: 701; Dalla Torre, 1893: 200; Bolton, 1995b: 197.

Current subspecies: nominal plus **\*major** (unresolved junior homonym).

*lecontei*. *Formica lecontei* Kennedy & Dennis, 1937: 542 (w.q.m.) U.S.A. (Ohio).

Status as species: Smith, M.R. 1951a: 865.

Junior synonym of *fusca*: Creighton, 1950a: 532; Smith, M.R. 1958c: 155.

Junior synonym of *subsericea*: Francoeur, 1973: 172; Smith, D.R. 1979: 1455; Bolton, 1995b: 197; Covert, 2005: 144.

*lefevrei* Wheeler, W.M. 1929; see under **PROFORMICA**.

*lefrancoisi*. *Formica lefrancoisi* Bondroit, 1918: 54 (w.m.) FRANCE.

Combination in *F. (Serviformica)*: Emery, 1925b: 246.

As unavailable (infrasubspecific) name: Baroni Urbani, 1971c: 232.

Subspecies of *cinerea*: Emery, 1925b: 246; Finzi, 1928a: 71; Santschi, 1934d: 281.

Status as species: Kutter, 1977c: 253; Agosti & Collingwood, 1987b: 287 (in key); Bolton, 1995b: 197 (error); Poldi, *et al.* 1995: 8 (error); Petrov, 2006: 113 (in key) (error).

Junior synonym of *cinerea*: Seifert, 1994: 38; Casevitz-Weulersse & Galkowsky, 2009: 481 (error); Radchenko, 2016: 300 (error).

Junior synonym of *fuscocinerea*: Seifert, 2002b: 256.

**lemani.** *Formica lemani* Bondroit, 1917b: 186 (w.q.) FRANCE, SWITZERLAND, BELGIUM, NORWAY.

Bondroit, 1920a: 145 (m.).

Combination in *F. (Serviformica)*: Emery, 1925b: 247.

**Subspecies of *fusca***: Müller, 1923b: 139; Emery, 1925b: 247; Santschi, 1925g: 352; Zimmermann, 1935: 54; Novák & Sadil, 1941: 107 (in key); Stärcke, 1942a: 22; Holgersen, 1943b: 177 (in key); Holgersen, 1944: 189; Samšiňák, 1951: 122; Ceballos, 1956: 319.

**Status as species**: Bondroit, 1918: 48; Bondroit, 1920a: 145; Bondroit, 1920b: 299; Stärcke, 1926: 148 (in key); Yarrow, 1954a: 231; Collingwood, 1962: 219; Baroni Urbani, 1964c: 167; Dlussky, 1965a: 35; Bernard, 1967: 295 (redescription); Dlussky, 1967a: 60; Kutter, 1968a: 61; Collingwood & Yarrow, 1969: 88; Pisarski, 1969a: 232; Pisarski, 1969b: 308; Dlussky & Pisarski, 1970: 87; Baroni Urbani, 1971c: 238; Collingwood, 1971: 169; Dlussky & Pisarski, 1971: 150 (redescription); Banert & Pisarski, 1972: 354; Bolton & Collingwood, 1975: 6 (in key); Pisarski, 1975: 41; Collingwood, 1976: 305; van Boven, 1977: 163; Kutter, 1977c: 251; Arnol'di & Dlussky, 1978: 553 (in key); Collingwood, 1978: 94 (in key); Collingwood, 1979: 123; Kupyanskaya, 1980: 101; Onoyama, 1980: 200; Pisarski & Krzysztofiak, 1981: 161; Collingwood, 1981: 27; Kupyanskaya, 1986b: 97; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 287 (in key); Nilsson & Douwes, 1987: 80; Wu, J. 1990: 5 (in key); Kupyanskaya, 1990: 184; Morisita, *et al.* 1991: 35; Atanassov & Dlussky, 1992: 261; Radchenko, 1994b: 113 (in key); Douwes, 1995: 98; Bolton, 1995b: 197; Poldi, *et al.* 1995: 8; Wu, J. & Wang, 1995: 144; Tang, J., Li, *et al.* 1995: 105; Espadaler, 1997b: 28; Czechowski, *et al.* 2002: 80; Imai, *et al.* 2003: 57; Radchenko, 2005b: 163; Csösz, & Markó, 2005: 232; Karaman, G.S. & Karaman, 2005: 60; Bračko, 2006: 147; Markó, Sipos, *et al.* 2006: 67; Petrov, 2006: 114 (in key); Bračko, 2007: 19; Seifert, 2007: 298; Werner & Wiezik, 2007: 143; Gratiashvili & Barjadze, 2008: 133; Casevitz-Weulersse & Galkowsky, 2009: 482; Lapeva-Gjonova, *et al.* 2010: 50; Boer, 2010: 30; Karaman, M.G. 2011: 79; Legakis, 2011: 35; Seppä, *et al.* 2011: 31; Borowiec, L. & Salata, 2012: 495; Czechowski, *et al.* 2012: 208; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 11; Borowiec, L. 2014: 76; Lebas, *et al.* 2016: 194; Radchenko, 2016: 296; Salata & Borowiec, 2018c: 45; Seifert, 2018: 301.

**Senior synonym of *borealis***: Dlussky, 1965a: 35; Dlussky & Pisarski, 1971: 150; Bolton, 1995b: 197; Imai, *et al.* 2003: 57; Radchenko, 2016: 296.

**leninei.** *Formica (Raptiformica) sanguinea* var. *leninei* Santschi, 1928b: 46.

Replacement name for *Formica (Raptiformica) sanguinea* var. *clara* Karavaiev, 1927d: 345. [Junior primary homonym of *Formica rufibarbis* var. *clara* Forel, 1886f: 206.]

Subspecies of *sanguinea*: Karavaiev, 1936: 262 (redescription).

Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Dlussky & Pisarski, 1971: 189; Bolton, 1995b: 197; Radchenko, 2016: 292.

- lepida.** *Formica cinerea* var. *lepida* Wheeler, W.M. 1913f: 399 (in key).  
[*Formica cinerea* subsp. *cinerea* var. *lepida* Wheeler, W.M. 1913f: 526 (w.) U.S.A. (California); unavailable (infrasubspecific) name.]  
Wheeler, W.M. 1917a: 551 (q.).  
**Subspecies of *cinerea*:** Wheeler, W.M. 1917a: 551; Emery, 1925b: 246; Creighton, 1950a: 531; Gregg, R.E. 1953a: 326; Cole, 1954c: 166; Smith, M.R. 1951a: 861; Smith, M.R. 1958c: 154; Beck, *et al.* 1967: 69; Smith, M.R. 1967: 370.  
**Status as species:** Francoeur, 1973: 122 (redescription); Wheeler, G.C. & Wheeler, J. 1977b: 15 (in key); Yensen, *et al.* 1977: 185; Francoeur & Snelling, 1979: 4; Smith, D.R. 1979: 1453; Wheeler, G.C. & Wheeler, J. 1986g: 88 (in key); Bolton, 1995b: 197; Mackay & Mackay, 2002: 349; Ward, 2005: 63.
- leucophaea* Smith, F. 1861; see under **CAMPONOTUS**.
- libera.* *Formica libera* Scopoli, 1763: 313 (w.) AUSTRIA.  
Junior synonym of *obsoleta*: Olivier, 1792: 494.  
Junior synonym of *fusca*: Latreille, 1802c: 159; Stephens, 1829: 357; Smith, F. 1851: 3; Roger, 1863b: 13; Mayr, 1863: 415; Forel, 1874: 98 (in list); Emery & Forel, 1879: 451; Dalla Torre, 1893: 200 (footnote); Emery, 1925b: 247; Karavaiev, 1936: 227; Bolton, 1995b: 197; Radchenko, 2016: 294.
- ligniperda* Latreille, 1802; see under **CAMPONOTUS**.
- \**lignitum* Germar, 1837; see under **CAMPONOTUS**.
- limata.** *Formica (Proformica) limata* Wheeler, W.M. 1913f: 541 (w.) U.S.A. (Colorado, New Mexico).  
Combination in *Proformica*: Kuznetsov-Ugamsky, 1928a: 8.  
As unavailable (infrasubspecific) name: Wheeler, W.M. 1917a: 554; Smith, M.R. 1951a: 857.  
**Status as species:** Emery, 1925b: 243; Kuznetsov-Ugamsky, 1928a: 8; Cole, 1936a: 38; Wheeler, G.C. & Wheeler, E.W. 1944: 268; Creighton, 1950a: 458; Smith, M.R. 1958c: 153; Cole, 1966: 22 (in key); Beck, *et al.* 1967: 70; Smith, M.R. 1967: 369; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1450; Allred, 1982: 468; Wheeler, G.C. & Wheeler, J. 1986g: 78; Mackay, Lowrie, *et al.* 1988: 115; Bolton, 1995b: 197; Mackay & Mackay, 2002: 349.
- lincecumii.** *Formica lincecumii* Buckley, 1866: 163 (w.q.m.) U.S.A. (Texas).  
Combination in *Pseudomyrma*?: Emery, 1895c: 338.  
Status as species: Cresson, 1887: 256; Dalla Torre, 1893: 200.  
Unidentifiable taxon: Wheeler, W.M. 1902f: 22;  
unidentifiable taxon; *incertae sedis* in Formicidae: Smith, M.R. 1951a: 875; Smith, D.R. 1979: 1467;  
unidentifiable taxon; *incertae sedis* in *Formica*: Bolton, 1995b: 197.
- \***linquensis.** \**Formica linquensis* Zhang, J. 1989: 287, figs. 287, 288 (m.) CHINA (Shandong, Miocene).
- liogaster.** *Formica liogaster* Chang & He, 2002a: 54, figs. 11, 12, 59 (w.) CHINA (Ningxia).  
**Status as species:** Guénard & Dunn, 2012: 31.
- liophthalma.** *Formica liophthalma* Chang & He, 2002a: 52, figs. 13, 14, 51 (w.) CHINA (Gansu).
- litoralis.** *Formica rufibarbis* subsp. *litoralis* Kuznetsov-Ugamsky, 1926b: 100, figs. 13, 14 (w.) KYRGIZSTAN.  
Dlussky, 1965a: 29 (q.m.).

- Subspecies of *subpilosa*:** Dlussky, 1965a: 29; Dlussky, 1967a: 70; Pisarski, 1969a: 233; Pisarski, 1969b: 311; Dlussky & Pisarski, 1970: 88; Tarbinsky, 1976: 190 (redescription); Pisarski & Krzysztofiak, 1981: 164; Bolton, 1995b: 197.
- Status as species:** Schultz, R. *et al.* 2006: 205; Seifert & Schultz, 2008: 80 (redescription); Guénard & Dunn, 2012: 31.
- lobata* De Geer, 1773; see under **NEOPONERA**.
- lochmatteri*. *Formica (Serviformica) picea* var. *lochmatteri* Stärcke, 1935: 265, fig. 4 (w.q.) INDIA (Jammu & Kashmir).  
Junior synonym of *candida*: Imai, *et al.* 2003: 57 (error).  
Junior synonym of *picea* Nylander: Dlussky, 1965a: 31; Dlussky, 1967a: 61; Dlussky & Pisarski, 1971: 153; Bolton, 1995b: 197.
- \**longaeva* Heer, 1849; see under **LASIUS**.
- longiceps* Smith, F. 1863; see under **CAMPONOTUS**.
- longiceps*. *Formica (Coptoformica) longiceps* Dlussky, 1964: 1036, figs. 1(3), 2(3) (w.q.) RUSSIA, MONGOLIA.  
[Misspelled as *longipes* by Radchenko, 1994b: 112, 113 (in key).]  
[**Junior primary homonym** of *Formica longiceps* Smith, F. 1863: 13.]  
Status as species: Dlussky, 1965a: 19; Dlussky, 1967a: 107; Pisarski, 1969a: 235; Pisarski, 1969b: 314; Dlussky & Pisarski, 1970: 89; Kupyanskaya, 1980: 103; Pisarski & Krzysztofiak, 1981: 165; Kupyanskaya, 1990: 202; Radchenko, 1994b: 112 (in key); Wu, J. & Wang, 1995: 140; Chang & He, 2002a: 51 (in key).  
**Replacement name:** *Formica dluskyi* Bolton, 1995b: 194.
- \**longicollis*. \**Formica longicollis* Heer, 1849: 115, pl. 11, fig. 1 (m.) GERMANY (Miocene).  
[Also described as new by Heer, 1850: 115.]  
*Incertae sedis* in *Formica*: Handlirsch, 1907: 865.  
Status as species: Giebel, 1856: 164; Scudder, 1891: 702; Dalla Torre, 1893: 200; Bolton, 1995b: 197.
- longicornis* Latreille, 1802; see under **PARATRECHINA**.
- longinoda* Latreille, 1802; see under **OECOPHYLLA**.
- longipedem* Eichwald, 1841; see under **CATAGLYPHIS**.
- \**longipennis* Heer, 1849; see under **LASIUS**.
- longipes* Latreille, 1802; see under **PHEIDOLE**.
- longipes* Jerdon, 1851; see under **ANOPLOLEPIS**.
- longipes* Gerstäcker, 1859; see under **CAMPONOTUS**.
- longipes*, Radchenko, 1994b: 112, misspelling, see under *longiceps*.
- longipilosa*. *Formica longipilosa* Francoeur, 1973: 125, figs. 208-214 (w.) U.S.A. (California).  
Francoeur & Snelling, 1979: 4 (m.).  
**Status as species:** Wheeler, G.C. & Wheeler, J. 1977b: 15 (in key); Smith, D.R. 1979: 1453; Francoeur & Snelling, 1979: 4; Wheeler, G.C. & Wheeler, J. 1986g: 88 (in key); Bolton, 1995b: 197; Ward, 2005: 63.
- \**longiventris* Heer, 1849; see under \***CASALEIA**.
- \**lucida*. \**Formica lucida* Giebel, 1856: 163 (q.) BALTIC AMBER (Eocene).  
Status as species: Scudder, 1891: 703; Dalla Torre, 1893: 200.  
*Incertae sedis* in Formicidae: Handlirsch, 1907: 882.  
[Note: Mayr, 1868b: 19, suggests that this taxon should be transferred to family **Braconidae**.]
- lucidula*. *Formica sanguinea* subsp. *rubicunda* var. *lucidula* Wheeler, W.M. 1913f: 390 (in key) (w.) U.S.A.; unavailable (infrasubspecific) name.

Declared as unavailable (infrasubspecific) name: Bolton, 1995: 198.

*luctuosa* Smith, F. 1858; see under **CAMPONOTUS**.

**lugubris**. *Formica lugubris* Zetterstedt, 1838: 449 (m.) NORWAY, SWEDEN.

Junior synonym of *rufa*: Nylander, 1846a: 902; Foerster, 1850a: 13; Smith, F. 1855a: 100; Nylander, 1856b: 60; Smith, F. 1858b: 3; Mayr, 1863: 420; Roger, 1863b: 12; Forel, 1874: 98 (in list); Emery & Forel, 1879: 450; Dalla Torre, 1893: 208; Wheeler, W.M. 1913f: 425; Donisthorpe, 1915d: 245; Emery, 1925b: 253; Donisthorpe, 1927b: 286; Karavaiev, 1936: 240; Stitz, 1939: 328; Gösswald, 1941: 73.

**Status as species**: Yarrow, 1955a: 10; Betrem, 1960b: 77 (in key); Collingwood, 1962: 219; Samšiňák, 1964: 157; Dlussky, 1967a: 91; Bernard, 1967: 318 (redescription); Kutter, 1968a: 61; Kutter, 1968b: 206; Collingwood & Yarrow, 1969: 94; Pisarski, 1969b: 313; Baroni Urbani, 1971c: 218; Collingwood, 1971: 169; Dlussky & Pisarski, 1971: 180 (redescription); Banert & Pisarski, 1972: 355; Bolton & Collingwood, 1975: 7 (in key); Pisarski, 1975: 47; Collingwood, 1976: 304; Francoeur, 1977b: 208; Kutter, 1977c: 271; Arnol'di & Dlussky, 1978: 554 (in key); Collingwood, 1978: 93 (in key); Collingwood, 1979: 148; Douwes, 1979: 187; Smith, D.R. 1979: 1459; Kupyanskaya, 1980: 104; Douwes, 1981: 217; Kupyanskaya, 1986b: 98; Agosti & Collingwood, 1987a: 59; Agosti & Collingwood, 1987b: 286 (in key); Nilsson & Douwes, 1987: 85; Gösswald, 1989: 19; Kupyanskaya, 1990: 198; Atanassov & Dlussky, 1992: 274; Radchenko, 1994b: 114 (in key); Douwes, 1995: 97; Bolton, 1995b: 198; Poldi, *et al.* 1995: 8; Espadaler, 1997b: 28; Gallé, *et al.* 1998: 218; Tinaut & Martínez-Ibáñez, 1998: 37 (in key); Czechowski, *et al.* 2002: 74; Radchenko, 2005b: 163; Bračko, 2006: 147; Petrov, 2006: 113 (in key); Bračko, 2007: 19; Seifert, 2007: 317; Werner & Wiezik, 2007: 144; Zryanin & Zryanina, 2007: 233; Casevitz-Weulersse & Galkowsky, 2009: 482; Lapeva-Gjonova, *et al.* 2010: 50; Boer, 2010: 25; Legakis, 2011: 36; Borowiec, L. & Salata, 2012: 495; Czechowski, *et al.* 2012: 196; Guénard & Dunn, 2012: 31; Kiran & Karaman, 2012: 11; Borowiec, L. 2014: 76; Bračko, *et al.* 2014: 19; Lebas, *et al.* 2016: 172; Seifert, 2016a: 14; Radchenko, 2016: 287; Salata & Borowiec, 2018c: 44; Seifert, 2018: 329.

**Senior synonym of congerens**: Yarrow, 1955a: 5; Dlussky, 1967a: 91; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 198; Radchenko, 2007: 36; Casevitz-Weulersse & Galkowsky, 2009: 482; Radchenko, 2016: 287.

**Senior synonym of montana** Sadil: Samšiňák, 1964: 157; Dlussky, 1967a: 91; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 198; Radchenko, 2016: 287.

**Senior synonym of nylanderi**: Yarrow, 1955a: 5; Dlussky, 1967a: 91; Bernard, 1967: 318; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 198; Seifert, 1996: 200; Casevitz-Weulersse & Galkowsky, 2009: 482; Radchenko, 2016: 287.

**Senior synonym of santschii**: Yarrow, 1955a: 5; Dlussky, 1967a: 91; Bernard, 1967: 318; Baroni Urbani, 1971c: 219; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 198; Radchenko, 2016: 287.

**Senior synonym of unicolor**: Dlussky, 1967a: 91; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 198; Radchenko, 2016: 287.

Material of the unavailable name *tir* referred here by Yarrow, 1955a: 5; Bolton, 1995b: 198.

*lusatica*. *Formica lusatica* Seifert, 1997b: 13, figs. 2, 6 (w.) GERMANY.

Czechowski & Radchenko, 2006: 260 (m.).

- Status as species: Karaman, G.S. & Karaman, 2005: 60; Bračko, 2006: 147; Czechowski & Radchenko, 2006: 260; Markó, Sipos, *et al.* 2006: 67; Schultz, R. *et al.* 2006: 203; Bračko, 2007: 20; Seifert, 2007: 301; Werner & Wiezik, 2007: 158; Paknia, *et al.* 2008: 154; Karaman, M.G. 2011: 80 (error).  
 Junior synonym of *clara*: Seifert & Schultz, 2009: 263; Casevitz-Weulersse & Galkowsky, 2009: 481; Legakis, 2011: 35; Czechowski, *et al.* 2012: 220; Seifert, 2018: 308.
- lusitanica*. *Formica fusca* subsp. *pyrenaica* var. *lusitanica* Schmitz, 1950: 13 (w.) PORTUGAL; unavailable (infrasubspecific) name.  
 Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 198.
- lutaria*. *Formica lutaria* Stephens, 1829: 357. *Nomen nudum*.
- lutea* Smith, F. 1858; see under **CAMPONOTUS**.
- lutea*. *Formica lutea* Duméril, 1860: 930 (w.q.m.) FRANCE.  
 [Unresolved junior primary homonym of *Formica lutea* Smith, F. 1858b: 19 (Bolton, 1995b: 198).]  
 Status as species: Dalla Torre, 1893: 200.  
 Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.
- \**luteola*. \**Formica luteola* Presl, 1822: 197 (no sex/caste indicated) BALTIC AMBER (Eocene).  
 Status as species: Scudder, 1891: 703; Dalla Torre, 1893: 200; Bolton, 1995b: 198.  
*Incertae sedis* in Formicidae: Handlirsch, 1907: 882.  
 Unidentifiable to genus; *incertae sedis* in *Formica*.
- lutescens*. *Formica fusca* subsp. *pruinosa* var. *lutescens* Wheeler, W.M. 1917a: 549 (w.) U.S.A. (Washington); unavailable (infrasubspecific) name.  
 As unavailable (infrasubspecific) name: Emery, 1925b: 248; Creighton, 1950a: 535; Smith, M.R. 1951a: 863.  
 Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 198.  
 Material referred to *neoclara* by Creighton, 1950a: 535; Smith, M.R. 1958c: 157; Francoeur, 1973: 84; Smith, D.R. 1979: 1454.
- lutosa* Smith, F. 1858; see under **DOLICHODERUS**.
- macra* Guérin-Ménéville, 1831; see under **OECOPHYLLA**.
- macrocephala* Erichson, 1842; see under **COLOBOPSIS**.
- \**macrocephala* Heer, 1849; see under **LASIUS**.
- \**macrognatha*. \**Formica macrognatha* Presl, 1822: 198 (no sex/caste indicated) BALTIC AMBER (Eocene).  
 Status as species: Scudder, 1891: 703; Dalla Torre, 1893: 201; Bolton, 1995b: 198.  
*Incertae sedis* in Formicidae: Handlirsch, 1907: 882.  
 Unidentifiable to genus; *incertae sedis* in *Formica*.
- \**macrophthalma*. \**Formica macrophthalma* Heer, 1849: 124, pl. 9, fig. 8 (q.) GERMANY (Miocene).  
 [Also described as new by Heer, 1850: 124].  
*Incertae sedis* in *Formica*: Handlirsch, 1907: 866.  
 Status as species: Giebel, 1856: 166; Scudder, 1891: 703; Dalla Torre, 1893: 201; Bolton, 1995b: 198.
- maculata* Fabricius, 1782; see under **CAMPONOTUS**.
- maculata*. *Formica maculata* Geoffroy, in Fourcroy, 1785: 452 (w.?) FRANCE.

- [Unresolved junior primary homonym of *Formica maculata* Fabricius, 1782: 491 (Bolton, 1995b: 198).]  
Status as species: Dalla Torre, 1893: 201.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.
- \*maculipennis.** \**Formica maculipennis* Théobald, in Piton & Théobald, 1935: 91, pl. 5, fig. 1 (wing) FRANCE (Miocene).  
[Misspelled as *masculipennis* by Burnham, 1979: 115.]  
**Status as species:** Burnham, 1979: 115; Bolton, 1995b: 198.
- magna.** *Formica magna* Olivier, 1792: 491. *Nomen nudum*.
- maior,** misspelling, see under *major* Nylander.
- major.** *Formica nigra major* Retzius, 1783: 75 (w.) (no state data); unavailable name.  
Material referred to *fusca* by Donisthorpe, 1915d: 304.  
[Unavailable name (published as junior synonym): Bolton, 1995b: 198.]
- major.** *Formica major* Nylander, 1849: 29 (w.) FINLAND.  
[Misspelled as *maior* by Betrem, 1953: 324 (in key).]  
Status as species: Betrem, 1926: 213; Betrem, 1953: 324 (in key).  
Junior synonym of *rufa*: Mayr, 1863: 420; Forel, 1874: 98 (in list); Emery & Forel, 1879: 450; Donisthorpe, 1915d: 245; Donisthorpe, 1927b: 286; Gösswald, 1941: 73; Yarrow, 1955a: 3; Betrem, 1960b: 76; Dlussky, 1967a: 93; Dlussky & Pisarski, 1971: 184; Pisarski, 1975: 48; Kutter, 1977c: 273; Bolton, 1995b: 198.  
Junior synonym of *polycтена*: Radchenko, 2007: 37.  
[Note: Radchenko, 2007: 37, argues that *major* is best regarded as a *nomen oblitum*, therefore *polycтена* takes priority].
- \*major.** \**Formica lavateri* var. *major* Heer, 1867: 11, pl. 1, fig. 10 (q.) CROATIA (Miocene).  
[Unresolved junior primary homonym of *Formica major* Nylander, 1849: 29 (Bolton, 1995b: 198).]  
**Subspecies of *lavateri*:** Scudder, 1891: 702; Dalla Torre, 1893: 200; Bolton, 1995b: 198.
- major.** *Formica fusca* var. *major* Comes, 1925: 1 (footnote). *Nomen nudum*.
- major.** *Formica rufa* subsp. *rufopraticensis* var. *major* Gösswald, 1941: 78 (w.q.m.) GERMANY; unavailable (infrasubspecific) name.  
Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 198.  
Material referred to *rufa* by Dlussky, 1967a: 93; Bernard, 1967: 308.
- malabarica.** *Formica malabarica* Schrank, 1837: 16 (w.) INDIA (no state data, "Habitat in India orientali").  
Status as species: Dalla Torre, 1893: 201; Chapman & Capco, 1951: 200.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.
- maligna.** *Formica maligna* Forskål, 1775: 84 (w.) EGYPT ?  
Status as species: Dalla Torre, 1893: 201.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.  
[Note: Emery, 1892b: 160, suggests possible identity with *Brachyponera sennaarensis*.]
- manchu.** *Formica (Coptoformica) exsecta* subsp. *manchu* Wheeler, W.M. 1929f: 10 (w.) CHINA (Inner Mongolia).  
**Subspecies of *exsecta*:** Chapman & Capco, 1951: 197; Bolton, 1995b: 198.  
**Status as species:** Seifert, 2000a: 534 (redescription); Guénard & Dunn, 2012: 31.  
**Senior synonym of *dlusskyi*:** Seifert, 2000a: 534.
- manni.** *Formica (Formica) manni* Wheeler, W.M. 1913f: 420 (w.q.) U.S.A. (Washington, California).

Combination in *F. (Raptiformica)*: Emery, 1925b: 259.

**Status as species**: Wheeler, W.M. 1917a: 534; Emery, 1925b: 259; Cole, 1936a: 37; Cole, 1942: 378; Creighton, 1950a: 465; Smith, M.R. 1951a: 865; Wilson & Brown, 1955: 127; Smith, M.R. 1958c: 156; Smith, M.R. 1967: 369; Yensen, *et al.* 1977: 185; Smith, D.R. 1979: 1450; Allred, 1982: 468; Wheeler, G.C. & Wheeler, J. 1986g: 78; Mackay, Lowrie, *et al.* 1988: 110 (in key); Bolton, 1995b: 198; Ward, 2005: 63.

*marcida*. *Formica fusca* var. *marcida* Wheeler, W.M. 1913f: 398 (in key).  
 [*Formica fusca* subsp. *fusca* var. *marcida* Wheeler, W.M. 1913f: 503 (w.q.) CANADA (British Columbia, Alberta, Manitoba), U.S.A. (Washington); unavailable (infrasubspecific) name.]  
 As unavailable (infrasubspecific) name: Emery, 1925b: 248.  
 Subspecies of *fusca*: Wheeler, W.M. 1917a: 546; Wheeler, W.M. 1917e: 19; Smith, M.R. 1951a: 864.  
 Status as species: Creighton, 1950a: 534; Cole, 1954c: 166; Smith, M.R. 1958c: 156; Smith, M.R. 1967: 371.  
 Junior synonym of *fusca*: Francoeur, 1973: 189; Smith, D.R. 1979: 1452; Bolton, 1995b: 198; Radchenko, 2016: 294.  
 Junior synonym of *subaenescens*: Schär, Talavera, *et al.* 2018: 6.

*marginata* Latreille, 1798; see under **CAMPONOTUS**.

**\*martynovi**. *\*Lasius martynovi* Popov, 1933: 19, figs. 2, 3 (q.) GEORGIA (Miocene).  
 Combination in *Formica (Serviformica)*: Dlussky, 1981b: 75.  
**Status as species**: Burnham, 1979: 116; Dlussky, 1981b: 75; Bolton, 1995b: 198.

*masonia* Buckley, 1866; see under **LIOMETOPUM**.

**maura**. *Formica glebaria* var. *maura* Santschi, 1929e: 164 (w.q.) MOROCCO.  
**Subspecies of fusca**: Santschi, 1931a: 13; Santschi, 1939c: 5; Bolton, 1995b: 198.  
**Subspecies of cunicularia**: Cagniant, 1970c: 38.  
**Status as species**: Cagniant, 2006a: 195.

*maxillosa* De Geer, 1773; see under **ODONTOMACHUS**.

**maxillosa**. *Formica maxillosa* Fabricius, 1775: 396 (w.) INDIA (no state data, "Habitat in India").  
 [Unresolved junior primary homonym of *Formica maxillosa* De Geer, 1773: 601 (Bolton, 1995b: 198).]  
 Combination in *Myrmecia*: Fabricius, 1804: 426; Dalla Torre, 1893: 20.  
 Status as species: Fabricius, 1782: 494; Fabricius, 1787: 311; Gmelin, 1790: 2804; Christ, 1791: 511; Olivier, 1792: 502; Fabricius, 1793: 364; Latreille, 1802c: 290; Fabricius, 1804: 426; Dalla Torre, 1893: 20; Chapman & Capco, 1951: 200.  
 Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.  
 [Note: Emery, 1911d: 18 (footnote), suggested that this taxon may be *Daceton armigerum*, "malgré l'indication de l'Inde pour patrie".]

*maxima* Moore, 1842; see under **MYRMECIA**.

*megacephala* Fabricius, 1793; see under **PHEIDOLE**.

*megacephala* Leach, 1825; see under **MESSOR**.

*megalocola* Foerster, 1850; see under **CATAGLYPHIS**.

*melanocephala* Fabricius, 1793; see under **TAPINOMA**.

*melanogastes* Latreille, 1802; see under **CAMPONOTUS**.

**melanophthalma**. *Formica melanophthalma* Reich, 1793: 132 (no sex/caste indicated) FRENCH GUIANA.

- Status as species: Dalla Torre, 1893: 201.  
*Incertae sedis* in Formicinae: Kempf, 1972a: 261.  
 Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.
- melanopis**. *Formica melanopis* Gmelin, 1790: 2804 (w.) Europe (no state data, “Habitat in Europa”).  
 [Misspelled as *melanopa* by Olivier, 1792: 504.]  
 Status as species: Olivier, 1792; 504; Dalla Torre, 1893: 201.  
 Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.
- melanotica*. *Formica rufa* subsp. *melanotica* Creighton, 1940a: 1, 7 (in key), fig. 1.  
 [First available use of *Formica rufa* subsp. *obscuriventris* var. *melanotica* Emery, 1893i: 650 (w.q.m.) U.S.A. (Wisconsin); unavailable (infrasubspecific) name.]  
 As unavailable (infrasubspecific) name: Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 392 (in key), 432; Wheeler, W.M. 1917a: 537; Emery, 1925b: 254; Smith, M.R. 1928c: 279; Cole, 1936a: 37.  
 Subspecies of *rufa*: Cole, 1942: 380; Buren, 1944a: 302; Smith, M.R. 1951a: 869.  
 Junior synonym of *obscuripes*: Creighton, 1950a: 492; Smith, M.R. 1958c: 157; Smith, D.R. 1979: 1460; Bolton, 1995b: 198; Coovert, 2005: 150.
- mellea* Say, 1836; see under **CAMPONOTUS**.
- mellea* Provancher, 1881; see under **LASIIUS**.
- melligera* Llave, 1832; see under **MYRMECOCYSTUS**.
- mellina* Provancher, 1887; see under **LASIIUS**.
- menozzii*. *Formica truncorum* var. *menozzii* Stitz, 1939: 347.  
 [First available use of *Formica rufa* subsp. *aruncicola* var. *menozzii* Krausse, 1926c: 336 (w.) GERMANY; unavailable (infrasubspecific) name.]  
 [*Formica rufa* subsp. *truncicola* var. *menozzii* Krausse, 1926b: 114. *Nomen nudum*.]  
 Junior synonym of *truncorum*: Dlussky, 1967a: 81; Dlussky & Pisarski, 1971: 174; Bolton, 1995b: 198; Imai, *et al.* 2003: 58; Radchenko, 2016: 290.
- merdicola* Lund, 1831; see under **CAMPONOTUS**.
- meridionalis*. *Formica rufa* var. *meridionalis* Nasonov, 1889: 17 (w.) UKRAINE.  
 As unavailable (infrasubspecific) name: Emery, 1909b: 186; Wheeler, W.M. 1913f: 427; Karavaiev, 1936: 244.  
 Subspecies of *rufa*: Ruzsky, 1905b: 330; Wheeler, W.M. 1913f: 391 (in key); Emery, 1925b: 253; Lomnicki, 1925a: 23 (in key); Ruzsky, 1926: 110.  
 Junior synonym of *rufa*: Yarrow, 1955a: 4; Dlussky, 1967a: 93; Dlussky & Pisarski, 1971: 184; Bolton, 1995b: 198; Radchenko, 2016: 284.
- meridionalis**. *Formica pallidefulva* subsp. *schaufussi* var. *meridionalis* Wheeler, W.M. 1904f: 370 (diagnosis in key) (w.) U.S.A. (no state data); unavailable (infrasubspecific) name.  
 As unavailable (infrasubspecific) name: Wheeler, W.M. 1910g: 570.  
 Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 198.
- meridionalis* Bondroit, 1920 [*Formicina*]; see under **LASIIUS**.
- meritans* Walker, 1859; see under **LEPTOGENYS**.
- merula* Losana, 1834; see under **CAMPONOTUS**.
- mesasiatica**. *Formica (Coptoformica) mesasiatica* Dlussky, 1964: 1030, figs. 1(2), 2(6) (w.q.m.) KYRGYZSTAN, KAZAKHSTAN.  
 Junior synonym of *fukaii*: Sonobe & Dlussky, 1977: 23; Bolton, 1995b: 198; Imai, *et al.* 2003: 58 (error).

- Status as species:** Dlussky, 1965a: 27 (in key); Dlussky, 1967a: 102; Tarbinsky, 1976: 179 (redescription); Seifert, 2000a: 532 (redescription); Guénard & Dunn, 2012: 31.
- micans* Nylander, 1856; see under **CAMPONOTUS**.
- microcephala* Panzer, 1798; see under **LIOMETOPUM**.
- microgyna.** *Formica microgyna* Wheeler, W.M. 1903e: 645, fig. 3 (w.q.m.) U.S.A. (Colorado).  
**Status as species:** Wheeler, W.M. 1903f: 656; Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 465 (redescription); Wheeler, W.M. 1917a: 542; Emery, 1925b: 256; Creighton, 1950a: 502; Smith, M.R. 1951a: 866; Smith, M.R. 1958c: 156; Cole, 1966: 22 (in key); Smith, M.R. 1967: 371; Kutter, 1968b: 207; Letendre & Huot, 1972: 117; Francoeur, 1977b: 208; Smith, D.R. 1979: 1462; Allred, 1982: 469; Wheeler, G.C. & Wheeler, J. 1986g: 82; Mackay, Lowrie, *et al.* 1988: 115; Bolton, 1995b: 198; Mackay & Mackay, 2002: 350.  
**Senior synonym of *recidiva*:** Creighton, 1950a: 504; Smith, M.R. 1958c: 156; Smith, D.R. 1979: 1462; Bolton, 1995b: 198.
- microgyna* Bondroit, 1918 [*Formicina*]; see under **LASIUS**.
- microphthalma.** *Formica microphthalma* Francoeur, 1973: 201, figs. 344-359 (w.m.) U.S.A. (California).  
**Status as species:** Wheeler, G.C. & Wheeler, J. 1977b: 15 (in key); Wheeler, G.C. & Wheeler, J. 1978: 395; Francoeur & Snelling, 1979: 6; Smith, D.R. 1979: 1453; Wheeler, G.C. & Wheeler, J. 1986g: 90; Bolton, 1995b: 198; Ward, 2005: 63.
- migratoria* De Geer, 1773; see under **ATTA**.
- militaris* Fabricius, 1782; see under **POLYRHACHIS**.
- miniocca.** *Formica minoeca* Chang & He, 2002a: 52, figs. 2, 3, 47 (w.) CHINA (Ningxia).  
 [Note: name spelled as *minoeca* pp. 49 (in abstract), 51 (in key), 59 (in figure captions), but *minoeca* in text, p. 52. The predominant spelling, *miniocca*, is adopted here.]  
**Status as species:** Guénard & Dunn, 2012: 32.
- minor.** *Formica nigra minor* Retzius, 1783: 75 (w.) (no state data); unavailable name.  
 [Unavailable name (published as junior synonym): Bolton, 1995b: 198.]
- minor** Roger, 1862; see under **SOLENOPSIS**.
- minor.** *Formica fusca* var. *minor* Comes, 1925: 1 (footnote). *Nomen nudum*.
- minor.** *Formica rufibarbis* subsp. *montana* var. *minor* Kuznetsov-Ugamsky, 1926b: 100, fig. 12 (w.) KYRGYZSTAN; unavailable (infrasubspecific) name.  
 Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 198.  
 Material referred to *glauca* by Dlussky, 1967a: 74; Tarbinsky, 1976: 184.
- minor.** *Formica minor* Gösswald, 1951: 436.  
 [First available use of *Formica rufa* subsp. *rufoprattensis* var. *minor* Gösswald, 1941: 78 (w.q.) GERMANY; unavailable (infrasubspecific) name.]  
 Junior synonym of *rufa*: Bernard, 1967: 308.  
 Junior synonym of *polycytena*: Betrem, 1960b: 64; Dlussky, 1967a: 93; Dlussky & Pisarski, 1971: 187; Pisarski, 1975: 49; Bolton, 1995b: 198; Czechowski, *et al.* 2002: 73; Karaman, M.G. 2011: 81; Czechowski, *et al.* 2012: 193; Radchenko, 2016: 286.
- minuta.** *Formica minuta* Lowne, 1865b: 331 (w.) AUSTRALIA.  
**Status as species:** Dalla Torre, 1893: 201.  
 Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 198.
- minuta.** *Formica sanguinea* subsp. *monticola* var. *minuta* Kuznetsov-Ugamsky, 1926b: 95, figs. 5, 6 (w.) KAZAKHSTAN; unavailable (infrasubspecific) name.  
 Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 198.

- Material referred to *sanguinea* by Dlussky, 1965a: 16.
- \*minutula* Heer, 1849; see under **LASIUS**.
- mistura* Smith, F. 1857; see under **CAMPONOTUS**.
- mitis* Smith, F. 1858; see under **CAMPONOTUS**.
- mixta* Nylander, 1846; see under **LASIUS**.
- moki**. *Formica moki* Wheeler, W.M. 1906d: 343 (w.) U.S.A. (Arizona).  
Cole, 1966: 25 (m.).  
Combination in *F. (Neoformica)*: Wheeler, W.M. 1913f: 558.  
**Status as species**: Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 558 (redescription); Wheeler, W.M. 1917a: 555; Emery, 1925b: 244; Cole, 1937b: 138; Smith, M.R. 1939f: 582 (redescription); Cole, 1942: 385; Creighton, 1950a: 549; Smith, M.R. 1951a: 858; Cole, 1966: 22 (in key); Smith, D.R. 1979: 1453; Wheeler, G.C. & Wheeler, J. 1986g: 90; Bolton, 1995b: 198; Ward, 2005: 63.  
Synonym of *occidua*: Francoeur, 1973: 254.  
[Note: Francoeur gives *occidua* as senior synonym, but *moki* has priority (Smith, D.R. 1979: 1453).]  
**Senior synonym of occidua**: Smith, D.R. 1979: 1453; Bolton, 1995b: 199.
- molestans**. *Formica molestans* Latreille, 1802c: 241 (w.) FRENCH GUIANA.  
Combination in *Pheidole*: Roger, 1863b: 31.  
Status as species: Dalla Torre, 1893: 93.  
*Incertae sedis* in Myrmicinae: Kempf, 1972a: 260.  
Unidentifiable to genus; *incertae sedis* in *Formica*: Bolton, 1995b: 199.
- mollesonae*. *Formica sanguinea* var. *mollesonae* Ruzsky, 1903c: 206 (w.) RUSSIA.  
[Misspelled as *mallesonae* by Tarbinsky, 1976: 186.]  
As unavailable (infrasubspecific) name: Wheeler, W.M. 1913f: 403.  
Subspecies of *sanguinea*: Ruzsky, 1905b: 420; Emery, 1909b: 184; Wheeler, W.M. 1913f: 389 (in key); Ruzsky, 1916: 8; Emery, 1925b: 260; Ruzsky, 1925b: 43; Ruzsky, 1936: 93.  
Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Tarbinsky, 1976: 186; Bolton, 1995b: 199; Radchenko, 2016: 292.
- mongolica* Emery, 1901; see under **PROFORMICA**.
- montana**. *Formica subpolita* var. *montana* Wheeler, W.M. 1910g: 571.  
[First available use of *Formica fusca* subsp. *subpolita* var. *montana* Emery, 1893i: 663 (w.) U.S.A. (Nebraska); unavailable (infrasubspecific) name.]  
Francoeur, 1973: 70 (q.m.); Hung, 1969: 455 (k.).  
Combination in *F. (Serviformica)*: Emery, 1925b: 249.  
**Subspecies of cinerea**: Smith, M.R. 1951a: 861; Gregg, R.E. 1953a: 326; Smith, M.R. 1958c: 154; Smith, M.R. 1967: 370.  
**Status as species**: Wheeler, W.M. 1913f: 529 (redescription); Emery, 1925b: 249; Creighton, 1950a: 534; Cole, 1954c: 167; Francoeur, 1973: 67 (redescription); Francoeur, 1975: 259; Wheeler, G.C. & Wheeler, J. 1977b: 13 (in key); Smith, D.R. 1979: 1454; Wheeler, G.C. & Wheeler, J. 1986g: 88 (in key); DuBois & LaBerge, 1988: 147; Mackay, Lowrie, *et al.* 1988: 108 (in key); Bolton, 1995b: 199; Mackay & Mackay, 2002: 351; Covert, 2005: 142.  
**Senior synonym of neocinerea**: Creighton, 1950a: 534; Smith, M.R. 1958c: 154; Francoeur, 1973: 67; Smith, D.R. 1979: 1454; Bolton, 1995b: 199; Covert, 2005: 142.  
**Senior synonym of rutilans**: Creighton, 1950a: 534; Smith, M.R. 1958c: 154; Francoeur, 1973: 67; Smith, D.R. 1979: 1454; Bolton, 1995b: 199; Covert, 2005: 142.

- montana*. *Formica rufibarbis* natio *montana* Kuznetsov-Ugamsky, 1923: 245 (w.) KAZAKHSTAN, KYRGYZSTAN.  
[**Junior primary homonym** of *Formica subpolita* var. *montana* Wheeler, W.M. 1910g: 571.]  
Subspecies of *rufibarbis*: Kuznetsov-Ugamsky, 1926b: 98.  
**Replacement name**: *Formica (Serviformica) rufibarbis* st. *montivaga* Santschi, 1928b: 45.
- montana*. *Formica rufa* var. *montana* Sadil, 1953b: 198, fig. 1d (q.) CZECH REPUBLIC.  
[Unresolved junior primary homonym of *Formica subpolita* var. *montana* Wheeler, W.M. 1910g: 571 (Bolton, 1995b: 199).]  
Junior synonym of *lugubris*: Samšičák, 1964: 157; Dlussky, 1967a: 91; Dlussky & Pisarski, 1971: 180; Bolton, 1995b: 199; Radchenko, 2016: 287.
- montaniformis*. *Formica rufibarbis* var. *montaniformis* Kuznetsov-Ugamsky, 1929b: 39 (w.) RUSSIA (Dagestan).  
[Misspelled as *montanoides* by Dlussky, 1967a: 74, Tarbinsky, 1976: 184.]  
Junior synonym of *glauca*: Dlussky, 1967a: 74; Tarbinsky, 1976: 184; Bolton, 1995b: 199.  
Junior synonym of *cunicularia*: Atanassov & Dlussky, 1992: 267.  
Unidentifiable taxon; *incertae sedis* in *Formica*: Seifert & Schultz, 2009: 272.
- montanoides*, misspelling, see under *montaniformis*.
- monticola* Buckley, 1866; see under **LASIUS**.
- monticola*. *Formica sanguinea* subsp. *monticola* Kuznetsov-Ugamsky, 1926b: 95, figs. 3, 4 (w.) KYRGYZSTAN.  
[Unresolved junior primary homonym of *Formica monticola* Buckley, 1866: 157 (Bolton, 1995b: 199).]  
Junior synonym of *sanguinea*: Dlussky, 1965a: 16; Dlussky, 1967a: 97; Tarbinsky, 1976: 186; Bolton, 1995b: 199; Radchenko, 2016: 292.
- montigena*. *Formica montigena* Wheeler, W.M. 1904f: 374 (w.q.m.) U.S.A. (New Mexico).  
Subspecies of *dakotensis*: Wheeler, W.M. 1913f: 463; Wheeler, W.M. 1917a: 541; Emery, 1925b: 252; Cole, 1936a: 37; Wheeler, G.C. & Wheeler, E.W. 1944: 260; Buren, 1944a: 303; Creighton, 1950a: 486; Smith, M.R. 1951a: 862; Smith, M.R. 1958c: 154 (error); Kutter, 1968b: 207 (error).  
Junior synonym of *dakotensis*: Wheeler, W.M. 1908f: 642 (in text); Brown, 1957f: 167 (in text); Smith, M.R. 1967: 371; Smith, D.R. 1979: 1457; Bolton, 1995b: 199; Coover, 2005: 151.
- montivaga*. *Formica (Serviformica) rufibarbis* st. *montivaga* Santschi, 1928b: 45.  
**Replacement name for** *Formica rufibarbis* natio *montana* Kuznetsov-Ugamsky, 1923: 245. [Junior primary homonym of *Formica subpolita* var. *montana* Wheeler, W.M. 1910g: 571.]  
Subspecies of *rufibarbis*: Stärcke, 1935: 268 (footnote); Dlussky, 1962: 182.  
Junior synonym of *glauca*: Dlussky, 1967a: 74; Bolton, 1995b: 199.  
Junior synonym of *cunicularia*: Atanassov & Dlussky, 1992: 267.  
Unidentifiable taxon; *incertae sedis* in *Formica*: Seifert & Schultz, 2009: 271.
- morbida*. *Formica (Proformica) neogagates* var. *morbida* Wheeler, W.M. 1913f: 400 (in key).  
[*Formica (Proformica) neogagates* subsp. *neogagates* var. *morbida* Wheeler, W.M. 1913f: 538 (w.q.) U.S.A. (Iowa); unavailable (infrasubspecific) name.]

- As unavailable (infrasubspecific) name: Smith, M.R. 1951a: 858.  
 Subspecies of *neogagates*: Emery, 1925b: 243; Buren, 1944a: 309.  
 Junior synonym of *neogagates*: Creighton, 1950a: 459.  
 Junior synonym of *bradleyi*: Wilson & Brown, 1955: 126; Smith, M.R. 1958c: 152;  
 Smith, D.R. 1979: 1449; Bolton, 1995b: 199.
- morbosa* Bondroit, 1918 [*Formicina*]; see under **LASIUS**.
- morio*. *Formica morio* Latreille, 1798: 36 (w.) FRANCE.  
 Subspecies of *gagates*: Dalla Torre, 1893: 199.  
 Junior synonym of *gagates*: Emery, 1916b: 254 (footnote); Emery, 1925b: 248;  
 Karavaiev, 1936: 230; Dlussky & Pisarski, 1971: 169; Bolton, 1995b: 199; Casevitz-  
 Weulersse & Galkowsky, 2009: 481; Radchenko, 2016: 299.
- morosa* Smith, F. 1858; see under **CAMPONOTUS**.
- morsei**. *Formica morsei* Wheeler, W.M. 1906a: 39, pl. 4, fig. 1 (w.) U.S.A. (Massachusetts).  
**Status as species**: Wheeler, W.M. 1906b: 19; Wheeler, W.M. 1910g: 570; Wheeler,  
 W.M. 1913f: 480 (redescription); Emery, 1925b: 256; Creighton, 1950a: 504; Smith,  
 M.R. 1951a: 866; Smith, D.R. 1979: 1462; Bolton, 1995b: 199; Ellison, *et al.* 2012: 162.
- mucescens**. *Formica truncicola* subsp. *mucescens* Wheeler, W.M. 1913f: 442 (w.q.m.) U.S.A.  
 (Colorado).  
 [Misspelled as *muscescens* by Cole, 1942: 380.]  
**Subspecies of truncicola**: Wheeler, W.M. 1917a: 540.  
**Subspecies of rufa**: Emery, 1925b: 254; Creighton, 1940a: 3, 7 (in key); Cole, 1942: 380;  
 Smith, M.R. 1951a: 869.  
**Status as species**: Creighton, 1950a: 491; Smith, M.R. 1958c: 157; Smith, M.R. 1967:  
 371; Smith, D.R. 1979: 1460; Allred, 1982: 469; Wheeler, G.C. & Wheeler, J. 1986g: 80  
 (in key); Mackay, Lowrie, *et al.* 1988: 111 (in key); Bolton, 1995b: 199; Mackay &  
 Mackay, 2002: 352.
- munda*. *Formica munda* Wheeler, W.M. 1905c: 267 (w.q.) U.S.A. (Colorado, New Mexico).  
 Combination in *F. (Formica)*: Wheeler, W.M. 1913f: 416.  
 Status as species: Wheeler, W.M. 1910g: 570; Wheeler, W.M. 1913f: 416  
 (redescription); Wheeler, W.M. 1917a: 534; Cole, 1936a: 38.  
 Junior synonym of *obtusopilosa*: Emery, 1925b: 259; Creighton, 1950a: 465; Smith,  
 M.R. 1951a: 867; Smith, D.R. 1979: 1450; Bolton, 1995b: 199.
- muralewiczii**. *Formica fusca* subsp. *gagates* var. *muralewiczii* Ruzsky, 1905b: 384 (w.)  
 UKRAINE; unavailable (infrasubspecific) name.  
 Declared as unavailable (infrasubspecific) name: Bolton, 1995b: 199.  
 Material referred to *gagates* by Emery, 1909b: 194; Wheeler, W.M. 1913f: 513; Emery,  
 1925b: 248; Karavaiev, 1927a: 301; Karavaiev, 1936: 230; Dlussky, 1967a: 79; Dlussky  
 & Pisarski, 1971: 169; Bolton, 1995b: 199.
- mutilata* Smith, F. 1859; see under **COLOBOPSIS**.
- mutinensis**. *Formicina mutinensis* Canestrini, 1873: 52. This is an archnid, not an ant.