

## **FORMICOXENUS**

**chamberlini.** *Symmyrmica chamberlini* Wheeler, W.M. 1904a: 5, pl. 1, figs. 1-7 (w.q.m.) U.S.A. (Utah).

Combination in *Formicoxenus*: Francoeur, Loiselle & Buschinger, 1985: 379.

**Status as species:** Wheeler, W.M. 1910g: 567; Emery, 1924d: 264; Essig, 1926: 862; Creighton, 1950a: 281; Smith, M.R. 1951a: 822; Smith, D.R. 1979: 1398; Allred, 1982: 478; Buschinger & Francoeur, 1983: 297; Francoeur, Loiselle & Buschinger, 1985: 379 (redescription); Bolton. 1995b: 206.

*corsicus* Emery, 1895; see under **TEMNOTHORAX**.

**diversipilosus.** *Leptothorax (Mycothorax) diversipilosus* Smith, M.R. 1939c: 179 (w. ergatoid q.) U.S.A. (Washington).

Smith, M.R. 1956c: 274 (ergatoid m., q.); Wheeler, G.C. & Wheeler, J. 1989a: 321 (l.).

Combination in *Formicoxenus*: Buschinger, 1979a: 61.

**Status as species:** Creighton, 1950a: 278; Smith, M.R. 1951a: 821; Smith, M.R. 1956c: 271; Smith, M.R. 1958c: 133; Yensen, *et al.* 1977: 183; Smith, D.R. 1979: 1396; Buschinger, 1981: 213; Francoeur, Loiselle & Buschinger, 1985: 381 (redescription); Wheeler, G.C. & Wheeler, J. 1986g: 51 (in key); Bolton. 1995b: 207; Ward, 2005: 32.

*emersoni.* *Leptothorax emersoni* Wheeler, W.M. 1901a: 433, figs. 2, 3 (w.q.m.) U.S.A. (Connecticut).

[Also described as new by Wheeler, W.M. 1901b: 539.]

Combination in *L. (Mycothorax)*: Emery, 1924d: 261.

Status as species: Wheeler, W.M. 1903c: 230; Wheeler, W.M. 1906b: 8; Wheeler, W.M. 1908f: 621; Wheeler, W.M. 1910g: 566; Wheeler, W.M. 1916m: 588; Wheeler, W.M. 1917a: 514; Emery, 1924d: 261; Essig, 1926: 862; Wing, 1939: 162; Smith, M.R. 1951a: 821.

Junior synonym of *provancheri*: Creighton, 1950a: 279; Smith, M.R. 1958c: 134; Smith, D.R. 1979: 1398; Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207; Coover, 2005: 80.

*formidolosus.* *Leptothorax (Mycothorax) hirticornis* var. *formidolosus* Wheeler, W.M. 1915b: 415 (w.q.) U.S.A. (Colorado).

Subspecies of *hirticornis*: Wheeler, W.M. 1917a: 515; Emery, 1924d: 262; Cole, 1936a: 36; Wheeler, G.C. & Wheeler, E.W. 1944: 248.

Junior synonym of *hirticornis*: Smith, M.R. 1939c: 177; Creighton, 1950a: 278; Smith, D.R. 1979: 1397; Francoeur, Loiselle & Buschinger, 1985: 382; Bolton, 1995b: 207.

*glacialis.* *Leptothorax emersoni* subsp. *glacialis* Wheeler, W.M. 1907b: 71 (w.q.m.) U.S.A. (Colorado).

Combination in *L. (Mycothorax)*: Wheeler, W.M. 1917a: 514.

Subspecies of *emersoni*: Wheeler, W.M. 1910g: 566; Wheeler, W.M. 1917a: 514; Emery, 1924d: 261; Essig, 1926: 862; Smith, M.R. 1951a: 821.

Subspecies of *provancheri*: Creighton, 1950a: 280.

Junior synonym of *provancheri*: Cole, 1954d: 241 (in text); Smith, M.R. 1958c: 134; Smith, D.R. 1979: 1398; Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207.

**hirticornis.** *Leptothorax (Leptothorax) hirticornis* Emery, 1895c: 319 (w.) U.S.A. (District of Columbia).

[Note: Emery, 1895c: 319, gives the type-locality as "Washington D.C."; Smith, M.R. 1939c: 179, incorrectly cites "Hill City, S. Dak.(ota)".]

Smith, M.R. 1939c: 176 (q. ergatoid); Snelling, R.R. 1965a: 18 (q. ergatoid m.). Combination in *L. (Mychothorax)*: Ruzsky, 1905b: 622; Emery, 1924d: 262; combination in *Mychothorax*: Ruzsky, 1936: 96; combination in *Formicoxenus*: Buschinger, 1979a: 61.

**Status as species:** Wheeler, W.M. 1903c: 224; Ruzsky, 1905b: 622; Wheeler, W.M. 1910g: 566; Wheeler, W.M. 1917a: 515; Emery, 1924d: 262; Kiseleva, 1925: 74; Ruzsky, 1936: 96; Smith, M.R. 1939c: 177 (redescription); Wheeler, G.C. & Wheeler, E.W. 1944: 248; Creighton, 1950a: 278; Smith, M.R. 1951a: 822; Smith, M.R. 1958c: 134; Snelling, R.R. 1965a: 16; Smith, M.R. 1967: 360; Yensen, *et al.* 1977: 183; Buschinger, 1979a: 61; Smith, D.R. 1979: 1397; Buschinger, 1981: 213; Allred, 1982: 484; Francoeur, Loiselle & Buschinger, 1985: 382 (redescription); Wheeler, G.C. & Wheeler, J. 1986g: 51 (in key); Wheeler, G.C., *et al.* 1994: 302; Bolton, 1995b: 207; Mackay & Mackay, 2002: 103; Coovert, 2005: 80.

**Senior synonym of *formidolosus*:** Smith, M.R. 1939c: 177; Creighton, 1950a: 278; Smith, D.R. 1979: 1397; Francoeur, Loiselle & Buschinger, 1985: 382; Bolton, 1995b: 207.

*hirtipilis*. *Leptocephalus (Mychothorax) emersoni* subsp. *hirtipilis* Wheeler, W.M. 1917a: 515 (w.) CANADA (Alberta).

Subspecies of *emersoni*: Emery, 1924d: 261; Smith, M.R. 1951a: 822.

Junior synonym of *provancheri*: Creighton, 1950a: 279; Smith, M.R. 1958c: 134; Smith, D.R. 1979: 1398; Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207.

*laeviuscula*. *Myrmica laeviuscula* Foerster, 1850a: 54 (q.) GERMANY.

[Misspelled as *laeviuscala* by Francoeur, Loiselle & Buschinger, 1985: 380.]

Status as species: Schenck, 1852: 132.

Junior synonym of *Stenamma westwoodii*: André, 1874: 203 (in list); Forel, 1874: 102 (in list); Emery & Forel, 1879: 456.

Junior synonym of *nitidulus*: Mayr, 1855: 418; Nylander, 1856b: 95; Smith, F. 1858b: 121; Dalla Torre, 1893: 63; Ruzsky, 1905b: 551; Donisthorpe, 1915d: 83; Emery, 1924d: 264; Donisthorpe, 1927b: 89; Karavaiev, 1934: 147; Francoeur, Loiselle & Buschinger, 1985: 380; Bolton, 1995b: 207; Radchenko, 2016: 200.

***nitidulus***. *Myrmica nitidula* Nylander, 1846b: 1058 (w.) FINLAND.

Nylander, 1849: 34 (q.); Mayr, 1855: 419 (m.).

Combination in *Formicoxenus*: Mayr, 1855: 418.

Junior synonym of *Stenamma westwoodii*: Smith, F. 1871b: 4; André, 1874: 203 (in list); Forel, 1874: 102 (in list); Emery & Forel, 1879: 456.

**Status as species:** Nylander, 1849: 34; Foerster, 1850a: 55; Mayr, 1855: 418 (redescription); Nylander, 1856b: 94; Smith, F. 1857b: 40; Smith, F. 1858b: 121; Meinert, 1861: 328; André, 1882c: 273 (in key); André, 1885: 844; Forel, 1886f: 131; Nasonov, 1889: 28; Lameere, 1892: 66; Dalla Torre, 1893: 62; Wasmann, 1894: 162; Emery, 1895c: 271; Ruzsky, 1896: 71; Saunders, E. 1896: 31; Wheeler, W.M. 1900c: 48; Wheeler, W.M. 1901b: 536; Ruzsky, 1902d: 20; Ruzsky, 1902e: 16; Ruzsky, 1905b: 551; Viehmeyer, 1906: 56; Wasmann, 1906: 120; Emery, 1908f: 551; Bondroit, 1910: 499; Stitz, 1914: 66; Forel, 1915d: 18 (in key); Donisthorpe, 1915d: 83; Emery, 1916b: 190; Ruzsky, 1916: 6; Escherich, 1917: 325; Bondroit, 1918: 141; Müller, 1921: 48; Soudek, 1922: 31; Müller, 1923b: 99; Emery, 1924d: 265; Ruzsky, 1925a: 289; Ruzsky, 1925b: 45; Betrem, 1926: 218; Stärcke, 1926: 84 (in key); Donisthorpe, 1927b: 89; Karavaiev,

1927a: 293; Karavaiev, 1927c: 268 (in key); Lomnicki, 1928: 5; Kuznetsov-Ugamsky, 1929a: 30; Kuznetsov-Ugamsky, 1929b: 43; Gösswald, 1932: 96; Arnol'di, 1933b: 598 (in key); Karavaiev, 1934: 147 (redescription); Grandi, 1935: 101; Ruzsky, 1936: 93; Holgersen, 1940: 183; Novák & Sadil, 1941: 84 (in key); Holgersen, 1942: 7; Holgersen, 1944: 168; Ruzsky, 1946: 70; van Boven, 1947: 172 (in key); Dlussky, 1963: 191 (in key); Bernard, 1967: 225 (redescription); Kutter, 1968a: 60; Collingwood & Yarrow, 1969: 73; Baroni Urbani, 1971c: 132; Collingwood, 1971: 160; Bolton & Collingwood, 1975: 3 (in key); Pisarski, 1975: 24; van Boven, 1977: 85; Kutter, 1977c: 144; Arnol'di & Dlussky, 1978: 544 (in key); Collingwood, 1978: 76 (in key); Collingwood, 1979: 78; Francoeur, Loiselle & Buschinger, 1985: 380 (redescription); Agosti & Collingwood, 1987a: 55; Agosti & Collingwood, 1987b: 266 (in key); Nilsson & Douwes, 1987: 58; Radchenko, 1994b: 111 (in key); Bolton, 1995b: 207; Douwes, 1995: 90; Poldi, *et al.* 1995: 5; Espadaler, 1997b: 29; Gallé, *et al.* 1998: 215; Czechowski, *et al.* 2002: 39; Markó & Csösz, 2002: 115; Schulz & Sanetra, 2002: 159; Csösz, & Markó, 2005: 239; Bračko, 2006: 136; Markó, Sipos, *et al.* 2006: 69; Petrov, 2006: 85 (in key); Bračko, 2007: 17; Seifert, 2007: 230; Radchenko, 2007: 32; Werner & Wiezik, 2007: 140; Zryanin & Zryanina, 2007: 231; Casevitz-Weulersse & Galkowski, 2009: 488; Lapeva-Gjonova, *et al.* 2010: 19; Boer, 2010: 47; Csösz, *et al.* 2011: 57; Legakis, 2011: 16; Borowiec, L. & Salata, 2012: 497; Czechowski, *et al.* 2012: 125; Kiran & Karaman, 2012: 19; Borowiec, L. 2014: 80; Lebas, *et al.* 2016: 278; Radchenko, 2016: 200; Salata & Borowiec, 2018c: 45; Seifert, 2018: 198.

**Senior synonym of laeviuscula:** Mayr, 1855: 418; Nylander, 1856b: 95; Smith, F. 1858b: 121; Dalla Torre, 1893: 63; Ruzsky, 1905b: 551; Donisthorpe, 1915d: 83; Emery, 1924d: 264; Donisthorpe, 1927b: 89; Karavaiev, 1934: 147; Francoeur, Loiselle & Buschinger, 1985: 380; Bolton, 1995b: 207; Radchenko, 2016: 200.

**Senior synonym of picea:** Francoeur, Loiselle & Buschinger, 1985: 380; Bolton, 1995b: 207; Radchenko, 2016: 200.

Material of the *nomen nudum* *Myrmica lucidula* Smith, F. 1857b: 39 referred here by Donisthorpe, 1915d: 83; Emery, 1924d: 265; Donisthorpe, 1927b: 89; Francoeur, Loiselle & Buschinger, 1985: 380; Bolton, 1995b: 207.

*orientalis. Formicoxenus orientalis* Dlussky, 1963: 193, figs. 6, 8 (w.) RUSSIA.

Status as species: Kupyanskaya, 1990: 149.

Junior synonym of *sibiricus*: Francoeur, Loiselle & Buschinger, 1985: 382; Radchenko, 1994b: 111; Bolton, 1995b: 207.

*picea. Leptothorax nitidulus* var. *picea* Wasmann, 1906: 120 (w.) LUXEMBOURG.

Subspecies of *nitidulus*: Emery, 1908f: 552; Bondroit, 1918: 141; Emery, 1924d: 265; Stärcke, 1926: 85 (in key); Ruzsky, 1946: 70.

Junior synonym of *nitidulus*: Francoeur, Loiselle & Buschinger, 1985: 380; Bolton, 1995b: 207; Radchenko, 2016: 200.

**provancheri.** *Leptothorax (Leptothorax) provancheri* Emery, 1895c: 320 (w.) CANADA (no state data).

Francoeur, Loiselle & Buschinger, 1985: 377 (q.m.); Wheeler, G.C. & Wheeler, J. 1973b: 73 (l.); Buschinger, Francoeur & Fischer, 1981: 8 (k.).

Combination in *L. (Mycothorax)*: Emery, 1924d: 262;

combination in *Leptothorax*: Mackay, Lowrie, *et al.* 1988: 90; Wheeler, G.C. & Wheeler, J. 1989a: 323;

combination in *Formicoxenus*: Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207.

**Status as species:** Wheeler, W.M. 1903c: 229; Wheeler, W.M. 1910g: 566; Donisthorpe, 1915d: 83 (referred to *Formicoxenus nitidulus*); Emery, 1924d: 262; Creighton, 1950a: 279; Smith, M.R. 1951a: 822; Cole, 1954d: 241; Smith, M.R. 1958c: 134; Smith, M.R. 1967: 360; Francoeur, 1977b: 207; Smith, D.R. 1979: 1398; Buschinger, 1981: 213; Buschinger, Francoeur & Fischer, 1981: 1; Francoeur, Loiselle & Buschinger, 1985: 377 (redescription); Wheeler, G.C. & Wheeler, J. 1986g: 51 (in key); Mackay, Lowrie, *et al.* 1988: 90; Wheeler, G.C., *et al.* 1994: 302; Bolton, 1995b: 207; Mackay & Mackay, 2002: 104; Coovert, 2005: 80; Ellison, *et al.* 2012: 241.

**Senior synonym of *emersoni*:** Creighton, 1950a: 279; Smith, M.R. 1958c: 134; Smith, D.R. 1979: 1398; Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207; Coovert, 2005: 80.

**Senior synonym of *glacialis*:** Cole, 1954d: 241 (in text); Smith, M.R. 1958c: 134; Smith, D.R. 1979: 1398; Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207.

**Senior synonym of *hirtipilis*:** Creighton, 1950a: 279; Smith, M.R. 1958c: 134; Smith, D.R. 1979: 1398; Francoeur, Loiselle & Buschinger, 1985: 377; Bolton, 1995b: 207.

***quebecensis*.** *Formicoxenus quebecensis* Francoeur, in Francoeur, Loiselle & Buschinger, 1985: 378, figs. (q.m.) CANADA (Québec).

Wheeler, G.C. & Wheeler, J. 1989a: 323 (l.).

**Status as species:** Bolton, 1995b: 207.

***ravouxi*** André, 1896; see under **TEMNOTHORAX**.

***sibiricus*.** *Leptocephalum sibiricum* Forel, 1899b: 306 (w.) RUSSIA.

Combination in *L. (Mychocephalum)*: Ruzsky, 1904a: 288; Emery, 1924d: 262;

combination in *Formicoxenus*: Francoeur, Loiselle & Buschinger, 1985: 382.

Junior synonym of *hirticornis*: Ruzsky, 1905b: 622.

**Subspecies of *hirticornis*:** Emery, 1924d: 262; Ruzsky, 1925b: 45.

**Status as species:** Francoeur, Loiselle & Buschinger, 1985: 382 (redescription); Radchenko, 1994b: 111 (in key); Bolton, 1995b: 207.

**Senior synonym of *orientalis*:** Francoeur, Loiselle & Buschinger, 1985: 382; Bolton, 1995b: 207; Radchenko, 1994b: 111.