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NYSSON

(including *Synnevrus* of Bohart and Menke, 1976)

Nysson Latreille, 1796:125 (apparently a typographic error for *Nysson*). Rejected by the International Commission on Zoological Nomenclature, 1979:175 (Opinion 1115). No included species.

Nysson Latreille, [1802b:340]. Type species: *Crabro spinosus* Fabricius, 1775 [= *Sphex spinosus* J. Forster, 1771], designated by Shuckard, 1837:99. Validated by the International Commission on Zoological Nomenclature, 1979:175 (Opinion 1115).

Nyssonus Rafinesque, 1815:124. Emendation of *Nysson* Latreille, 1802.

Synnevrus A. Costa, 1859:16. Type species: *Synnevrus procerus* A. Costa, 1859 [= *Nysson epeoliformis* F. Smith, 1856, by monotypy.

Revisions: Schmid-Egger, 1996 (Central European species); Nemkov, 2001 (*Synnevrus*: Russia and neighboring countries); Nemkov, 2008d (*Nysson* of Russia).

Key: Standfuss and Standfuss, 2017 (five European species with short anal cell)

Review of biology: Kazenas, 2001b:217.

1. *aequalis* Patton

Nysson aequalis Patton, 1879b:212, ♂. Holotype or syntypes: ♂, USA: Massachusetts: Easthampton (depository unknown). – Cresson, 1882b:277 (original description copied), 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:350 (in revision of world Bembicinae); W. Fox, 1896c:13 (in revision of North American *Nysson*); Dalla Torre, 1897:567 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); J. Smith, 1900:521 (in list of insects of New Jersey), 1910:680 (in new list of insects of New Jersey); Rohwer, 1916b:655 (in catalog of Hymenoptera of Connecticut); Mickel, 1918b:350 (in catalog of Nebraskan Sphecidae); Rohwer *in* Viereck, 1925:655 (in key to Sphecidae of Connecticut; as *aequalis* Say); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae: W Nyack); Brimley, 1938:447 (North Carolina: Laurinburg, Raleigh, Tarboro); Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera); Krombein, 1953a:296 (visiting foliage of *Quercus marilandica*), 297 (visiting foliage of *Quercus virginiana*), 297 (visiting foliage of *Liquidambar styraciflua*), 333 (North Carolina), 1953b:133 (North Carolina: Kill Devil Hills); Wray, 1967:123 (North Carolina: Kill Devils Hills); L. Davis, 1978:217 (North Carolina: Kill Devil Hills, data from Krombein, 1953a). – As *Synnevrus aequalis*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera); Radović, 1985:65 (sting apparatus analyzed); Ahlstrom, 1995:112 (in checklist of insects of North Carolina); Hook, 1998:251 (first record from Texas: Travis County: Austin); Weislo, 1998:181 (proportions of antennae in relations to parasitic/non-parasitic behavior); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 64 (first record from Canada: Ontario: Point Pelee).

2. *alicantinus* Mercet

Nysson alicantinus Mercet, 1909a:509, ♂, ♀ (as *Alicantinus*, incorrect original capitalization). Syntypes: Spain: Alicante (MNCN). – Mercet, 1909a:621, 628 (in key to Spanish *Nysson*); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:161 (in Sphecid Fauna of Spain); Ceballos, 1956:379 (in catalog of Hymenoptera of Spain); de Beaumont, 1965a:38 (member of *variabilis* species group); R. Bohart and Menke,

1976:469 (in checklist of world Sphecidae); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:150 (in Sphecidae Fauna of Western Europe); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae); Fresno, 2018:233 (Spain: Madrid: Valdaracete).

3. *amurensis* Nemkov

Nysson amurensis Nemkov, 1990c:82, ♀, ♂. Holotype: ♀, Russia: Primorskiy Kray: Kedrovaya Pad' Nature Reserve (ZIN). – Nemkov, 1992b:249 (Russia: Far East: Khingan Nature Reserve); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:457 (in key to Sphecidae of Russian Far East); Nemkov, 2006b:169 (Russia: Primorskiy Kray: Kedrovaya Pad' Nature Reserve), 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:217 (in key to *Nysson* of Russia), 218 (bibliographic references, locality records from Primorskiy Kray, Russia), 2009a:66 (is an endemic of Russian Far East), 2009b:128 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2011:95 (in Russian Far East occurring only in Amur Oblast' and Primorskiy Kray), 2012c:445 (in catalog of Crabronidae of Russian Far East), 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).

4. *argenteofasciatus* Radoszkowski

Nysson argenteofasciatus Radoszkowski, 1877:44, ♂ (as *argenteo-fasciatus*, incorrect original hyphenation). Holotype or syntypes: ♂, Kazakhstan: Kyzil-Kum: no specific locality (ZMMU). – Handlirsch, 1887:399 (original description translated into German); Dalla Torre, 1897:567 (in catalog of world Sphecidae); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia, as *argenteifasciatus*), 2002a:113 (geographic distribution, collecting localities in Kazakhstan, as *argenteifasciatus*); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae).

5. *argenticus* R. Bohart

Nysson argenticus R. Bohart, 1968a:315, ♂, ♀. Holotype: ♂, USA: California: Riverside County: 18 mi west of Blythe (UCD). Paratypes: s. California, Arizona. – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1686 (in catalog of North American Hymenoptera).

6. *aridulus* R. Bohart

Nysson aridulus R. Bohart, 1968a:317, ♂, ♀. Holotype: ♂, USA: California: Borrego Springs (UCD). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1686 (in catalog of North American Hymenoptera).

7. *aurinotus* Say

Nysson aurinotus Say, 1837:368, sex not indicated. Holotype or syntypes: USA: Indiana: no specific locality (lost). – F. Smith, 1856:356 (in catalog of Hymenoptera in British Museum; North America); Le Conte, 1859b:752 (original description copied); Cresson, 1862:234 (in catalog of North American Hymenoptera); Gerstaecker, 1867b:115 (in revision of *Nysson*); nec Packard, 1867:440 (= *Nysson plagiatus*); Cresson, 1873:223 (Texas, as *aurinotatus*), 1876:207 (Colorado: Boulder, as *aurinotatus*), 1882b:277 (original description copied), 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:353 (in revision of world Bembicinae); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado, as *aurinotatus*); W. Fox, 1896c:13 (in revision of North American *Nysson*); Dalla Torre, 1897:567 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae, as *aurinotatus*); Bridwell, 1899:209 (Kansas: no specific locality); Rohwer, 1921b:407 (diagnostic characters, Wisconsin); Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera). – **As *Synnevrus aurinotus***: R. Bohart, 1968c:234 (new combination, as *Synnevrus*); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera).

Nysson freyigessneri Handlirsch, 1887:355, ♂ (as *Freyi-Gessneri*, incorrect original capitalization and hyphenation).

Holotype: ♂, USA: Georgia: no specific locality (MHNG). Synonymized with *Nysson aurinotus* by R. Bohart and Menke, 1976:470. – W. Fox, 1896c:13 (in revision of North American *Nysson*); Dalla Torre, 1897:569 (in catalog of world Sphecidae, as *frey-gessneri*); Ashmead, 1899d:329 (in checklist of North American Crabronidae, as *Frey-Gessneri*); Maidl and Klima, 1939:136 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera).

Nysson angularis H. Smith, 1908:340, ♂. Holotype: ♂, USA: Nebraska: West Point (UNL). Synonymized with *Nysson aurinotus* by Krombein in Muesebeck et al., 1951:982. – Mickel, 1918b:350 (in catalog of Nebraskan Sphecidae); Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae); Muma, 1952:21 (holotype in UNL), 27 (paratype in UNL).

Nysson marlatti Rohwer, 1921b:408, ♀. Holotype: ♀, USA: Texas: Neuecest (USNM). Synonymized with *Synnevrus aurinotus* by R. Bohart in R. Bohart and Menke (1976). – Maidl and Klima, 1939:137 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera).

8. *bakeri* R. Bohart

Nysson bakeri R. Bohart, 1968a:318, ♂, ♀. Holotype: ♂, USA: Riverside County: Hemet (UCD). Paratypes: southern California. – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera).

9. *barrei* Radoszkowski

Nysson barrei Radoszkowski, 1893:71, ♂ (as *Barrei*, incorrect original capitalization). Holotype or syntypes: ♂, Turkmenistan: Serax (Kraków). – Handlirsch, 1895:819 (redescription of type); Dalla Torre, 1897:567 (in catalog of world Sphecidae); Gussakovskij, 1928a:15 (comparison with *Nysson cardinalis*, misspelled *baerii*), 1935:438 (Tajikistan and Turkmenistan); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Atbaei, Fallahzadeh, and Ljubomirov, 2015:17 (first record from Iran: Fars Province); Jahanigh, Rakhshani, Mokhtari, and Ramroodi, 2017:44 (Iran: known from Fars Province); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae). – As *Synnevrus barrei*: Gayubo, 1992a:89 (new combination); Nemkov, 2001:5 (as new combination, in revision of *Synnevrus* of Russia and neighboring countries); Schmid-Egger, 2011b:590 (first record from United Arab Emirates: Dubai/al-Awir, recognition characters), 591 (color photograph of female); Schmid-Egger, 2014:609 (United Arab Emirates: Wadi Wurayah).

Nysson cardinalis Gussakovskij, 1928a:15, ♂. Holotype: ♂, Uzbekistan: Ravat near Khiva (ZIN). Synonymized with *Nysson barrei* by Gussakovskij, 1935:438. – Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae as valid species); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia).

Nysson erubescens Morice, 1911:110, ♀, ♂. Syntypes: Algeria: Biskra (Oxford). Synonymized with *Synnevrus barrei* by Gayubo, 1992a:89. – Maidl and Klima, 1939:120 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

10. *basalis auctorum nec F. Smith, 1856*

Tsuneki, 1968h:1 (characteristic of Taiwanese populations), 1971i:1 (Taiwan).

ssp. taiwanus Tsuneki

Nysson basalis taiwanus Tsuneki, 1968h:2, ♀, ♂. Holotype: ♂, Taiwan: Hengchun (originally K. Tsuneki coll., now Hyogo Mus. or USNM). – Haneda, 1971b:32 (Taiwan); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Tsuneki, 1977j:266 (Taiwan); Porter, Stange, and Wang, 1999:13 (in checklist of Sphecidae of Taiwan).

11. *braunsii* Handlirsch

Nysson braunsii Handlirsch, 1900d:510, ♂, (as *Braunsii*, incorrect original capitalization). Holotype: ♂, South Africa: Orange Free State: Bothaville (TMP). – Brauns, 1911c:136 (description of ♀); Arnold, 1929a:219 (in revision of southern African Sphecidae), 1930:18 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:95 (Zaire); Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Gess, 1981:23 (South Africa: 18 km west-northwest of Grahamstown; nest parasite of Gorytini), 56 (presumed hosts: *Oryttus kraepfeli*, *Dienoplus vicarius karroensis*, *Hoplisoides aglaia* and *thalia*); S. Gess and F. Gess, 2003:112 (Namibia: visiting flowers of *Deverra denudata* (Viv.) Pfisterer and Podl., Apiaceae); Evans and O'Neil, 2007:70 (list of potential hosts after Gess, 1981).

12. *carinifrons* Nemkov

Nysson carinifrons Nemkov, 1995d:2, ♀, ♂. Holotype: ♀, Tajikistan: Kondara Canyon 35 km north of Dushanbe (ZIN). – Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae). – As *Synnevrus carinifrons*: Nemkov, 2001:8 (new combination, in revision of *Synnevrus* of Russia and neighboring countries)

13. *castaneus* Radoszkowski

Nysson castaneus Radoszkowski, 1877:45, ♀. Holotype or syntypes: ♀, Uzbekistan: Zeravshan valley: no specific locality (ZMMU). – Handlirsch, 1887:400 (original description translated into German); Dalla Torre, 1897:568 (in catalog of world Sphecidae); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae).

14. *castellanus* Mercet

Nysson castellanus Mercet, 1909a:504, ♀, ♂ (as *Castellanus*, incorrect original capitalization). Syntypes: Spain, Madrid (MNCN). – Mercet, 1909a:622, 625 (in key to Spanish *Nysson*); Dusmet y Alonso, 1935:44 (Spain: Madrid: Madrid), 46 (Spain: Madrid: Alcalá de Henares); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:162 (in Sphecid Fauna of Spain); de Andrade, 1949:17 (Portugal); de Beaumont, 1953g:116 (Morocco); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Diniz, 1959:29 (Portugal: Lisboa, Monsanto); de Beaumont, 1962b:24 (Spain); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); Diniz, 1973:48 (Portugal: Lisboa); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Gayubo, 1982e:106 (Spain: Cádiz Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:150 (in Sphecid Fauna of Western Europe); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae).

15. *chevrieri* Kohl

Nysson chevrieri Kohl, 1879:399, ♂ (as *Chevrieri*, incorrect original capitalization). Holotype: ♂: Italy: Alto Adige: Gries near Bozen, now Bolzano (NHMW). – Kohl, 1880:169 (Italy: Trentino-Alto Adige); Handlirsch, 1887:396 (in revision of world Bembicinae); Dalla Torre, 1897:568 (in catalog of world Sphecidae); Schmiedeknecht, 1907:229 (in key to Hymenoptera of Central Europe), 1930:691 (in keys to Hymenoptera of North and Central Europe); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); Zavadil in Zavadil and Šnoflák, 1948:161 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Bajári, 1957a:115 (in key to Hungarian Sphecidae), 1957b:141 (first record from Hungary); Valkeila, 1964:204 (in key to European species of *variabilis* group); de Beaumont, 1965a:38 (member of *variabilis* species group); Balthasar, 1972:344 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pulawski, 1978:212 (in key to Sphecidae of European part of former USSR); Dollfuss, 1983b:20 (in catalog of Sphecidae of Austria: Niederösterreich: Guntramsdorf), 1989:11 (type series in NHMW); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Mei, 2008:177 (Italy: first record from Lazio: Tenuta di Castelporziano); Pagliano, 2009:177 (Italy: recorded from Liguria and Trentino-Alto Adige by Bitsch et al., 1997); Bitsch, 2010:109 (in supplement to vol. II of Faune de France, 1997: recent

records from Greece and Italy reported); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Standfuss and Standfuss, 2012:427 (to be removed from list of sphecids of Magnisia Peninsula, Greece); Bitsch, 2014:399 (not occurring in Greece according to Standfuss and Standfuss, 2012); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae).

16. *chiengmaiensis* Tsuneki

Nysson chiengmaiensis Tsuneki, 1963c:20, ♀. Holotype: ♀, Thailand: Chieng Mai (Sasayama Univ.). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

17. *chumash* Pate

Nysson chumash Pate, 1940d:1, ♂. Holotype: ♂, USA: California: Santa Barbara County: Solomon Canyon 12 mi southwest of Santa Maria (ANSP). – Krombein *in* Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); H. Allen, 1995:15 (holotype in ANSP); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Ratzlaff, 2016:24 (first record from Canada: British Columbia: Southern Interior), 32 (British Columbia: Mission City, Osoyoos, Robson).

18. *compactus* Cresson

Nysson compactus Cresson, 1882b:278, ♀, ♂. Lectotype: ♀, Washington Territory: no specific locality (ANSP), designated by Cresson, 1916:98. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:402 (original description translated into German); W. Fox, 1896c:14 (in revision of North American *Nysson*); Dalla Torre, 1897:568 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); Maidl and Klima, 1939:136 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera); Krombein, 1979b:1687 (in catalog of North American Hymenoptera). – *As Synnevrus compactus*: R. Bohart, 1968c:234 (new combination, spelled *Synnevrus*, related to *Synnevrus aurinotus* and *S. maderae*); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

19. *costae* Handlirsch

Nysson costae Handlirsch, 1901d:510, ♂. Holotype or syntypes: ♂, Algeria: Oran (NHMW or Napoli). – Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*). – Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae). – *As Synnevrus costae*: R. Bohart and Menke, 1876:470 (new combination, in checklist of world Sphecidae).

20. *daeckei* Viereck

Nysson daeckei Viereck, 1904c:238, ♂. Holotype: ♂, USA: New Jersey: Lucaston (ANSP). – J. Smith, 1910:680 (in new list of insects of New Jersey); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae: Pennequid Barrens); Cresson, 1928:47 (holotype in ANSP); Maidl and Klima, 1939:136 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera); Evans and Lin, 1956b:42 (description of larva), 1959b:150 (additional larval characters); Krombein, 1958f:192 (in supplement to catalog of North American Hymenoptera: description of larva by Evans and Lin, 1956a, reported); Kurczewski and Kurczewski, 1963:147 (Pennsylvania: Presque Isle State Park); Evans, 1966d:44 (nest parasite of *Hoplisoides nebulosus*), 1966d:86 (host relationships), 1970:494 (Wyoming: Jackson Hole); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Kurczewski, 1998d:250 (pine barrens in upstate New York); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 61 (first record from Ontario: list of localities); Evans and O'Neil, 2007:70 (potential host after Evans, 1970); Nemkov, 2012b:126 (review of known host species).

21. *decemmaculatus* Spinola

Nysson decemmaculatus Spinola, 1807:41, ♂ (as *decem-maculatus*, incorrect original hyphenation). Lectotype: ♂, Italy: Liguria: Genova (Torino), designated by de Beaumont, 1952e:42. – Vander Linden, 1829:35 (bibliographic references, Italy: Genova); Dahlbom, 1843:171 (in revision of Sphecidae and Pompilidae), 1845:485 (in key to European *Nysson*, as *decemguttatus*); F. Smith, 1856:355 (in catalog of Hymenoptera in British Museum); A. Costa, 1867c:56 (in revision of Italian Sphecidae); Chevrier, 1867b:28 (in revision of Swiss *Nysson*); Kirchner, 1867:220 (in catalog of European Hymenoptera); A. Costa, 1869b:72 (in revision of Italian Sphecidae); Kohl, 1883e:666 (Switzerland, as *10-maculatus*); De-Stefani, 1895:227 (in catalog of Sicilian Hymenoptera, as *10-maculatus*); Dalla Torre, 1897:569 (in catalog of world Sphecidae, misspelled *decemnotatus* A. Costa, 1869; misspelling cited as valid name in R. Bohart and Menke, 1976:469, in synonymy of *Nysson dimidiatus*); Grandi, 1934:234 (Italy); de Beaumont, 1951g:316 (Italy); Pulawski, 1958a:170 (Bulgaria: Sandanski); de Beaumont and Bytinski-Salz, 1959:108 (Israel); de Beaumont, 1960a:13 (Greece: Rhodes Island), 1965a:37 (Greece; posterior margin of terga and sterna double-edged), 1967a:321 (Turkey), 1969:89 (Turkey); Kazenas, 1972b:154 (Kazakhstan); Erlandsson, 1974:69 (Yugoslavia); Kazenas, 1978b:92, 94 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection, Torino, as *10-maculatus*); Gayubo and Özbek, 2005:14 (Turkey: Erzincan: Agricultural Research; Erzurum: Ýspir, Maden Köprübaşı); Shorenko, 2005a:167 (Ukraine: Crimea); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:11 (Turkey: Erzurum and Tunceli provinces); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia); Shorenko, 2017:80 (in Crimea collected in June through August). – As *Synnevrus decemmaculatus*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Pulawski, 1982a:365 (synonymy); Pagliano, 1990:69 (in catalog of Italian Sphecidae); Guichard, 1991a:339 (Jordan); Pagliano, 1992a:36 (in key to Italian *Nyssoninae*); Negrisolò *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:172 (in Sphecid Fauna of Western Europe); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Esenbekova and Kazenas, 2000:58 (southeast Kazakhstan: no specific locality); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Nemkov, 2001:8 (in revision of *Synnevrus* of Russia and neighboring countries); Kazenas, 2002a:115 (geographic distribution, collecting localities in Kazakhstan); Schmid-Egger, 2003:758 (Italy: Sicilia: Castelammare); Kazenas, 2004b:109 (Kazakhstan: western Tien Shan); Pagliano and Negrisolò, 2005:31 (in Sphecid Fauna of Italy); Shorenko, 2005b:98 (Ukraine: Crimea: Karadagh Nature Reserve); Yildirim and Ljubomirov, 2005:1794 (Turkey: Konya: Çumra); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Ljubomirov and Yildirim, 2008:73 (in catalog of Crabronidae of Turkey); Pagliano, 2009:177 (Italy: recorded from Sicilia by Schmid-Egger, 2003); Shorenko, 2009:368 (in list of Sphecidae s.l. of Crimea); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent records from Italy, including Sicily, reported); Yildirim, 2012:75 (Turkey: Erzurum and Kars provinces); Pankov, 2013:229 (Russia: Ivanovo Oblast'); Bitsch, 2014:399 (France: Aude: Castelnau-d'Aude); Pagliano, 2014:119, 120 (specimens in M. Spinola collection, Torino, are *Synnevrus decemmaculatus*, *Nysson quadriguttatus*, and *Nysson tridens*); Protsenko, Fateryga, and Ivanov, 2014:33 (Crimea: Opuksk Nature Reserve, Tarkhankut Promontory); Yildirim, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:151 (in checklist of Hymenoptera of Turkey).

Nysson variolatus A. Costa, 1867c:56, ♂. Lectotype: ♂, Italy: Terra d'Otranto: no specific locality (Napoli), designated by de Beaumont, 1953i:3. Synonymized with *Nysson decemmaculatus* by de Beaumont, 1951g:316, 1952e:41 and 1953i:3. – Handlirsch, 1887:399 (original description translated into German), 1895:816 (redescription of syntype); Dalla Torre, 1897:577 (in catalog of world Sphecidae); Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae); de Beaumont, 1947b:389 (Cyprus); Pittioni, 1950:24 (Cyprus); Georghiou, 1977:191 (Cyprus).

Nysson variolatus A. Costa, 1869b:72, ♂. Objective synonym of *Nysson variolatus* A. Costa, 1867c:56.

Nysson curtulus F. Morawitz, 1892:156, ♂. Holotype: ♂: Tajikistan: Yaban area (ZIN). Synonymized with *Synnevrus decemmaculatus* by Pulawski, 1982a:365. – Handlirsch, 1895:817 (original description copied); Dalla Torre, 1897:568 (in catalog of world Sphecidae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

Nysson mopsus Handlirsch, 1898a:484, ♂. Holotype: ♂, Italy: Bolzano, as Bozen (NHMW). Synonymized with *Nysson decemmaculatus* by de Beaumont, 1965a:37. – Schmiedeknecht, 1907:229 (in key to Hymenoptera of Central Europe); Kohl, 1912a:63 (Austria: Südtirol: Bozen, now Italy: Trentino-Alto Adige: Bolzano); Schmiedeknecht, 1930:691 (in keys to Hymenoptera of North and Central Europe); Grandi, 1934:129 (Italy: Lazio: Acilia, determination tentative), corrected to *Nysson decemmaculatus* by de Beaumont, 1951g:316; Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae); Zavadil in Zavadil and Šnoflák, 1948:158 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Balthasar, Hrubant, and Hrubant, 1967:173 (Bulgaria: Slančev Bryag near Nessebar); Balthasar, 1972:340 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); Dollfuss, 1989:11 (type series in NHMW).

22. *dimidiatus* Jurine

Nysson dimidiatus Jurine, 1807:10, ♀. Holotype (or syntypes?): ♀, Europe: ? Switzerland (MHNG). – Jurine, 1807:199 (listed) and pl. 10, Fig. 22 (illustration of habitus); Olivier, 1812a:409 (redescription); Vander Linden, 1829:35 (bibliographic references, Belgium: Bruxelles, France, Italy, description of ♂); Shuckard, 1837a:104 (in revision of British Aculeata); von Siebold, 1839:49 (Germany: Danzig, now Poland: Gdańsk); Herrich-Schaeffer, 1840:291 (Germany: Bayern: Regensburg area); Dahlbom, 1843:171 (in revision of Sphecidae and Pompilidae), 1845:485 (in key to European *Nysson*); Lepeletier de Saint Fargeau, 1845:49 (in revision of world Hymenoptera); F. Smith, 1849a:2373 (Great Britain: Devonshire); F. Smith, 1851c:22 (Great Britain: Hampstead, Weybridge); Tischbein, 1852:141 (Germany); Wesmael, 1852:95 (Belgium, interpretation of species, variation); Kirschbaum, 1853:45 (Germany: Herzogtum Nassau: Mainz-Mombach); F. Smith, 1853:63 (in checklist of British Hymenoptera), 1856:354 (in catalog of Hymenoptera in British Museum: Great Britain, France, Germany, Belgium); Ruthe and Stein, 1857:314 (Germany: Berlin area); Schenck, 1857:158 (Germany: in revision of fossorial wasps of Nassau Region); F. Smith, 1858c:101 (in review of British Aculeata, redescription); Taschenberg, 1858:92 (in key to Sphecidae of Germany); A. Costa, 1859:23 (in revision of Sphecidae of Kingdom of Naples, Italy); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:147 (Germany: Nassau Region), 1861:143 (Germany: Hessen: Weilburg); Brischke, 1862:102 (Germany: Preussen Province, now Poland: Pomorze Region); A. Costa, 1863:66 (Italy: Calabria Ulteriore: Collina di Terreti); Brischke, 1864:209 (Germany: Preussen Province, now Poland: Pomorze Region); F. Smith, 1865b:86 (Great Britain: Dorset County: Bournemouth); Taschenberg, 1866:193 (in revision of Hymenoptera of Germany); A. Costa, 1867c:55 (in revision of Italian Sphecidae); Chevrier, 1867b:26 (in revision of Swiss *Nysson*); Gerstaecker, 1867b:109 (in revision of *Nysson*); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:354 (Germany: Nassau Region); Chevrier, 1868:383 (diagnostic characters); A. Costa, 1869b:71 (in revision of Italian Sphecidae); von Aichinger, 1870:318 (Austria: Tirol); Thomson, 1870:246 (in revision of Swedish wasps); F. Smith, 1871:11 (in catalog of British Aculeata); Schlechtendal, 1872:37 (Germany: Sachsen: Zwickau); Dours, 1874:149 (in catalog of Hymenoptera of France); Thomson, 1874:229 (in revision of Hymenoptera of Scandinavia); Taschenberg, 1875:365 (Germany: Halle); Beuthin, 1876:231 (Germany: Hamburg area); Kohl, 1880:170 (Austria: Tirol, and Italy: Trentino–Alto Adige); E. Saunders, 1880:269 (in revision of British Aculeata); Siebke, 1880:65 (Norway); Marquet, 1881:181 (southern France); Frei-Gessner, Kohl, and Kriechbaumer, 1882:393 (Jurine's name is valid); Friese, 1883:202 (Germany: Sachsen-Anhalt: Kösen); Kohl, 1883e:666 (Switzerland); E. Saunders, 1883b:87 (Great Britain: Hayling Island); Wüstnei, 1886:40 (Germany: Schleswig-Holstein: Husum, Sonderburg); Handlirsch, 1887:388 (in revision of world Bembicinae); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region); Kohl, 1888b:727 (Austria: Tirol, now Italy: Alto Adige), 1893:29 (Austria: Niederösterreich); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus); Sickmann, 1893:87 (Germany: Niedersachsen: Iburg); Krieger, 1894:9 (Germany: Kingdom of Saxony); Handlirsch, 1895:821

(additional bibliography; Armenia, Spain); E. Saunders, 1896:111 (in revision of British Aculeata); Acloque, 1897:83 (in Sphecidae Fauna of France and Algeria); Borries, 1897:63 (Denmark: flying in July and August; reference to Shuckard, 1837:105); Dalla Torre, 1897:568 (in catalog of world Sphecidae); Mocsáry, 1897:81 (Kingdom of Hungary, localities are in today's Croatia, Hungary, Romania and Slovakia); Flamary, 1898:38 (France: Saône-et-Loire: Mâcon area); Strand, 1898b:94 (Norway); Dominique, 1901a:506 (France: Loire-Inférieure, now Loire-Atlantique: Sainte-Marie-de-Pornic); Ferton, 1901a:107 (visiting nest of *Harpactus elegans*); Schletterer, 1901:218 (Croatia: southern Istria Peninsula); Chyzer, 1902:34 (Hungary); Nevinson, 1902:12 (Great Britain: Cornwall: Newquay); E. Saunders, 1902b:143 (British Channel Islands: Jersey Island; France: Bretagne: Saint Briac); de Cobelli, 1903:112 (Italy: Province of Trentino); Aurivillius, 1904:268 (in revision of Swedish Sphecidae); Kubes, 1905:84 (Czech Republic: Kolín); Frisby, 1907:159 (Great Britain: Surrey: Redhill); Luff, 1907:39 (Great Britain: Island of Guernsey); Schmiedeknecht, 1907:228, 230 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Mercet, 1909a:623, 624, 627, 628 (in key to Spanish *Nysson*); Morley, 1909:305 (Great Britain: Isle of Wight); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Schirmer, 1912:167 (Germany: Berlin area); Zilahy Kiss, 1915:80 (Hungary: Debreczen); Noskiewicz, 1918:137 (Galicia, now western Ukraine: Brzuchowice and Hołosko near Lwów, Rudno, Strychowalec); Dubois, 1919:96 (Belgium: Bruxelles: Uccle); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:34 (Germany: Lower Elbe region); Dubois, 1921c:206, 207 (in key to Belgian Sphecidae); Haines, 1922:13 (Great Britain: Dorset: Lulworth, West Knighton Heath); Maidl, 1922:71 (Croatia); Ferton, 1923:152 (visiting nests of *Harpactus elegans*); R. Perkins, 1924:228 (Great Britain: Devon); Berland, 1925d:104 (in Sphecidae Fauna of France); Coulon, 1925:120 (France: Evreux, Oise); R. Perkins, 1925:154 (Great Britain: Gloucestershire: Wotton, and Somersetshire: Minehead); Friese, 1926:159 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Hémon, 1926:199 (France: Finistère: Fouesnant); Bouwman, 1927:92 (in revision of Sphecidae of Netherlands); Jones, 1928b:14 (Great Britain: Hampshire: Milford-on-Sea); van der Vecht, 1928:93 (Netherlands: Meijendel sand dunes); Hamm and Richards, 1930:104 (nest parasite of *Harpactus elegans* and *tumidus*); Schmiedeknecht, 1930:689, 691 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:70 (in revision of Sphecidae of Finland); Bondroit, 1932:33 (Belgium: Solbosch), 1933:27 (Belgium: Bruxelles); Balles, 1934:20 (Germany: Baden-Württemberg: Neudenau, Zwingerberg); Bondroit, 1934:60 (Belgium: Ostende); Jansson, 1934:290 (Sweden); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Harttig, 1935:4 (Germany: Niedersachsen: Oyten); Crèvecoeur and Maréchal, 1936:253 (in catalog of Belgian Hymenoptera); Dulac, 1937:12 (France: Saône-et-Loire: La Coudraye, Saint-Laurent d'Andenay); Goebel, 1937:42 (Poland: Poznań District: Puszczykowo); nec Grandi, 1937:332 (= *Nysson* ? *variabilis*); Richards, 1937b:107 (in checklist of British aculeates); Zavadil, Šustera, and Bat'a, 1937:198 (in catalog of Sphecidae of Czechoslovakia); Móczár, 1938c:81 (Hungary: Kőszeg Hills); A. Wagner, 1938a:122 (northwestern Germany); Guichard, 1939a:43 (Great Britain: southern Cornwall: Polperro); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); Maneval, 1939:66 (ovipositing in nest of *Hoplisoides latifrons*, description of larva); Móczár, 1939:5 (Hungary: Jászberény); Balthasar, 1941b:112 (Czech Republic: eastern Moravia); de Graham, 1941:99 (Great Britain: Lincolnshire); Guiglia, 1941c:162 (Italy: Calabria: Grande Sila); Paul, 1941:46 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Schneid, 1941:1044 (Germany: Bayern: Bamberg area); J. Perkins, 1942:199 (Sweden: Skåne: Degaberga); Spooner, 1942:110 (Great Britain: Bedfordshire: Warren); Balthasar, 1943:42 (Czech Republic: Moravia: Zlin area); Benno, 1943:67 (Netherlands: Montferland); Boyd, 1943:163 (Great Britain: eastern Dorset); Giner Marí, 1943a:159 (in Sphecidae Fauna of Spain); Spooner, 1943:74 (Great Britain: Bristol); Guiglia, 1944b:24 (Italy); T. Fletcher, 1945:54 (Great Britain: Gloucestershire: Wotton); Deleurance, 1946b:67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); van Lith, 1947:106 (Netherlands); Guichard and Yarrow, 1948:93 (Great Britain: London: Hampstead Heath); Zavadil *in* Zavadil and Šnoflák, 1948:160, 162 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:17 (Portugal); Chambers, 1949:231 (Great Britain: Bedfordshire); Cavro, 1950:34 (France: Département du

Nord); Niesiolowski, 1950:225 (Poland: Lubasz 40 km N Tarnów); Szulczewski, 1950:107 (Poland: Wielkopolski National Park 15 km S Poznań); de Beaumont 1951h:33 (Switzerland: Neuchâtel area); Wolf, 1951:79 (host: *Harpactus tumidus*); Blüthgen, 1952b:37 (host in Naumburg, Germany: *Harpactus tumidus*); Richards, 1952:142 (Great Britain: Anglesea); Caruel, 1953:101 (France: Marne Department); Nouvel and Ribaut, 1953:178 (France: Haute-Garonne: Saint-Béat); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg); de Beaumont, 1954e:89 (Italy); Kjellander, 1954b:247 (Sweden); Aerts, 1955:62 (Germany: Rheinland); Hellén, 1955a:127 (Finland: 11 localities); Steiner, 1955:146 (France: Dordogne); Vogrin, 1955:36 (Yugoslavia); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Evans and Lin, 1956b:43 (description of larva by Maneval, 1939); Morel, Nouvel, and Ribaut, 1956:338 (France: Département des Pyrénées-Orientales); Bajári, 1957a:115, 116 (in key to Hungarian Sphecidae); Zirngiebl, 1957:182 (Germany: Rheinland-Pfalz: Landau); Benno, 1958b:10 (in review of Dutch Sphecidae); de Beaumont, 1958c:204 (Swiss National Park); Nouvel and Ribaut, 1958:12 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Diniz, 1959:29 (Portugal: Lisboa: Ajuda and Benfica); Wolf, 1959b:29 (Germany: Nassau Region); Noskiewicz and Puławski, 1960:103, 106 (in key to Polish Sphecidae); Valkeila, 1962b:67 (southwestern Finland); de Beaumont, 1964c:61 (in Sphecidae Fauna of Switzerland); Valkeila, 1964:206 (male genitalia); Valkeila, Brander, and Käpylä, 1964:75 (Finland: Southern Finland: Forssa, Näyte); de Beaumont, 1965a:38 (member of *dimidiatus* species group); Evans, 1966d:57 (discussion of behavioral observations by Maneval, 1939), 86 (host relationships), 87 (synopsis of observations by Maneval, 1939); Balthasar, Hrubant, and Hrubant, 1967:173 (Bulgaria: Slanchev Bryag near Nessebar); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); Gauss, 1967:553 (Germany: Baden-Württemberg); J. Heinrich, 1967:73 (Germany: Niederfranken; as *dimitiatus*); Niedl and Deneš, 1967:83 (Czech Republic: Třeboň area); Leclercq, 1968b:39 (Great Britain: Kent); Wolf, 1968:12 (Germany: Nordrhein-Westfalen: Siegen, inhabitant of forest edge); Romanova, 1969:134 (Russia: North Caucasus); Oehlke, 1970:700 (Democratic Germany); Tumšs, 1970:80 (first record from Latvia); Schmidt, 1971b:32 (Germany: Rheinland-Pfalz: Gonsenheimer Wald, Mainzer Sand); Stritt, 1971a:104 (Germany: Baden-Württemberg: Karlsruhe); Tsuneki, 1971k:184 (Mongolia); Balthasar, 1972:342 (in Sphecidae Fauna of Czechoslovakia); Kazenas, 1972b:153 (Kazakhstan); Niedl and Deneš, 1972:153 (Czech Republic: Třeboň area); Scobiola-Palade, 1972a:150 (Romania: delta of Danube: Caraorman); Diniz, 1973:48 (Portugal: eight localities); Lefeber, 1973:152 (Netherlands: Bokhoven, Ede, Grathem); Lomholdt, 1975c:215 (in Sphecidae Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Haeseler, 1976b:72 (Germany: Friesian Islands: Amrum Island); Guichard, 1977:254 (Great Britain: Surrey); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); van der Zanden, 1977b:39 (Finland: Helsinki, as *Nysson dimidiatus* var. *distinguendus*); Guichard, 1978:271 (first record from Greece: several localities); Kazenas, 1978b:93, 94 (in key to Sphecidae of Kazakhstan and Central Asia); Leclercq, 1978b:map 1171 (distribution in Belgium); Lefeber, 1978:137 (Netherlands: Ginkel, Hulshorst, Nunspeet, Wezep); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:212 (in key to Sphecidae of European part of former USSR); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 48 (Netherlands: distribution map); Richards, 1979:401 (British Channel Islands); Schmidt, 1979b:334 (Germany: Baden-Württemberg); Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection); Jacob-Remacle and Leclercq, 1980:194 (Belgium: gardens in Liège); Pagliano, 1980:113 (Italy: Piemonte); Richards, 1980:79 (in key to Sphecidae of British Isles); Haeseler, 1981:51 (Germany: Friesian Island: Amrum Island); Gayubo, 1982b:34 (Spain: Ávila and Salamanca provinces), 1982e:106 (Spain: Cádiz Province); Leclercq, 1982a:125 (Belgium: Liège); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria); Gayubo, 1983e:232 (Spain: Salamanca Province); Józán, 1983:101 (Hungary); Riemann, 1983:84 (Germany: Bremen-Daverden area); Haack, Tschardtke, and Vidal, 1984:130 (Germany: Hamburg area); Nilsson, 1984:104 (Sweden: Västmanland Province); Haeseler, 1985c:571 (Germany: Friesian Islands); Józán, 1985a:181 (Hungary), 1985b:60 (Hungary south of Lake Balaton), 81 (floral records), 84 (ecological and zoogeographic characteristics); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Józán, 1986:373 (Hungary: Kiskunság National Park); Nemkov, 1986:106 (Russia: Siberia: Irkutsk Oblast'); Vikberg, 1986:78 (Finland); Dollfuss, 1988:18 (Austria: Bisamberg); Schmidt and Westrich, 1987:361 (Germany: Mainz area); Karsai, 1988:101 (Hungary: Kiskunság

National Park), 1989:102 (Hungary: Tihany Natural Reserve); Nilssen, 1989:47, 48 (Sweden); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus: Berezinskiy Nature Reserve); Jacobs and Oehlke, 1990:205 (no new records from Democratic Germany after 1960); Kuznetzova, 1990:20 (Russia: Voronezh Oblast: Galich'ya Gora Nature Reserve); Nemkov, 1990c:83 (Russia: Amurskaya Oblast'); Pádr, 1990:72 (Czech Republic: Praha area); Pagliano, 1990:68 (in catalog of Italian Sphecidae); Riemann and Melber, 1990:119 (northwest Germany: *Calluna*-meadows); Schwammerger and Priesner, 1990:550 (Austria: Kärnten); Day, 1991:xvii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Kuhlmann et al., 1991:91 (Germany: Senne Region); Archer, 1992c:218 (Great Britain: Wales); Budrys, 1992:28 (in list of Sphecidae of Lithuania); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Józán, 1992a:229 (Hungary: Béda-Karapanca Protected Area), 1992b:175 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Nemkov, 1992b:249 (Russia: Far East: Natalino near Khingan Nature Reserve); Nilsson, 1992:54 (Sweden); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); N. Schneider, 1992:178 (Luxembourg); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Kuhlmann, 1993:77 (Germany: known from Westfalen); Archer, 1994a:73 (Great Britain: Yorkshire); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Theunert, 1994c:45 (Germany: summary of records from Niedersachsen and Bremen); Archer, 1995a:21 (Great Britain: Yorkshire: Blaxton); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:457 (in key to Sphecidae of Russian Far East); Scharrer, 1995:29 (Austria: Niederösterreich: Oberweiden; Croatia: Island of Krk; Germany: Bayern: Lohr); Schmid-Egger, 1995:62 (Germany: NW Baden-Württemberg); Schmid-Egger, Risch, and Niehuis, 1995:197 (summary of records from Germany: Rheinland-Pfalz State); Yeo and Corbet, 1995:36 (in field guide to British solitary wasps); Arens, 1996:442 (Germany: Bayern: Bayreuth area); Fowles, 1996:36 (Great Britain: in checklist of aculeates of Wales); Gusenleitner, 1996a:10 and 1996b:812 (Austria: Steiermark); Harvey and Plant, 1996:79 (Great Britain: summary of records from Essex); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Schmid-Egger, 1996b:26 (comparison with *Nysson distinguendus*); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 109 (locality records); Woydak, 1996:90 (Germany: Westfalen: summary of distribution and nesting habits); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:151 (in Sphecid Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Lauterbach, 1997b:69 (Germany: Nordrhein-Westfalen: Bielefeld); Riemann, 1997:50 (Germany: Achim 14 km southeast of Bremen); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:524 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km west-southwest of Hamburg); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); Hae-seler and Ritzau, 1998:51 (Germany: Bremen: Steller Heide); N. Schneider and Wahis, 1998:22 (Luxemburg: sandstone quarries); van der Smissen, 1998:63 (Germany: Mecklenburg-Vorpommern, Niedersachsen, Schleswig-Holstein); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Gonzáles, Gayubo, and Torres, 1999:356 (Spain: Valladolid: Viana de Cega); Herrmann, 1999:7 (Germany: Niedersachsen: Oldenburg area; habitats size); Kuhlmann, Wolf, and Woydak, 1999:569 (Germany strongly endangered in Nordrhein-Westfalen); Ljubomirov, 1999b:56 (Bulgaria: Mount Vitosha near Sofia); Neumayer, Schwarz, and Bregant, 1999:224 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:111 (in catalog of Belgian aculeates); Riemann, 1999:835 (Germany: Niedersachsen: sand pits near Bremen); M. Schwarz, 1999:88 (Austria: Oberösterreich: city of Linz area); Wickl, 1999a:105 (Germany: Bayern: Oberpfalz area); Blösch, 2000:363 (in Sphecid Fauna of Germany); Esenbekova and Kazenas, 2000:57 (southeast Kazakhstan: near Alma Ata. 10 km S and 20 km W Alma Ata, 7-8 km S Talgar); Giachino, Grosso, Marchetti, Pagliano, Scar-

amozzino, and Vailati, 2000:108 (Greece); Gonzáles, Gayubo, and Tormos, 2000:21 (Andorra: Santa Coloma); Jacobs, 2000:8, 17 (Germany: Land Mecklenburg-Vorpommern: data insufficient to evaluate how endangered); Józán, 2000:112 (Hungary: Bakony Mountains); Kuhlmann, 2000:64 (Germany: Hessen: Diemel River valley); Dorow, 2001:136 (Germany: Hessen: Schönbuche Forest Reserve); Haeseler, 2001:266 (Germany: Niedersachsen: Brookdeich near Oldenburg); Józán, 2001:280 (Hungary: Somogy County); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia), 218 (review of known biology); Kazenas and Esenbekova, 2001:135 (Kazakhstan: Almatinskiy Nature Reserve); Ohl et al., 2001:140 (distribution in Germany by provinces); Schmid-Egger, 2001:17 (France: Alsace: Bollenbergs), 19 (species status); Szczepko and Kowalczyk, 2001:189 (Poland: Kampinos National Park near Warszawa); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: not endangered); Zettel, Gross, and Mazzucco, 2001:79 (Austria: Wien); Archer, 2002b:128 (Great Britain: Watsonian Yorkshire: distribution map); Józán, 2002:54 (Hungary: Mecsek Mountains); Kazenas, 2002a:113 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:155 (Poland: Kampinos National Park near Warszawa); C. Schlüter, 2002:141 (Germany: Niedersachsen: anthropogenic habitats in Ammerland District); Shlyakhtenok and Skibinska, 2002:34 (Belarus': no specific locality); Drewes, 2003:139 (Germany: Bayern: Erlangen); Haeseler, 2003:340 (Germany: Niedersachsen: Harriersand Island near Bremen); Józán, 2003:228 (Hungary: Látrányi Puszta Nature Conservation Area); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); Schmid-Egger, 2003:755 (Italy: Sicilia: Armerina, Madonie); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:196 (Germany: Bayern: endangered); Dorow, 2004a:127 (Germany: Hessen: Schönbuche Nature Reserve); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Jakubzik, Niehuis, and Cölln, 2004:458 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Kazenas, 2004b:109 (Kazakhstan: western Tien Shan); Majzlan and Deván, 2004:30 (Slovakia: Sekule); Shkuratov, 2004a:76 (Russia: Rostov Oblast': Rostov on Don); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Szczepko and Kowalczyk, 2004:127 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:50 and 62 (in checklist of Polish Sphecidae); Burger, 2005:34 (Germany: Thüringen); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Jacobs, 2005a:448 (Bulgaria: Michurina); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Mandery, 2005:174 (Germany: Bayern: Hainberg Nature Reserve near Nürnberg); Nemkov, 2005a:158 (Russia: Sakhalin Island); Pagliano and Negrisolo, 2005:125 (in Sphecidae Fauna of Italy); Reder, 2005:951 (Germany: Rheinland-Pfalz: nine localities); Riemann and Hohmann, 2005:561 (Germany: Niedersachsen: city of Bremen and adjacent area); Saure, 2005:17 (Germany: Berlin); Schmalz, 2005:57 (references to XIXth century authors), 60 (Germany: Hessen: Fulda: Eichenzell); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Venne and Bleidorn, 2005:43 (Germany: Nordrhein-Westfalen: Moosheide Nature Reserve); Archer, 2006a:21 (Great Britain: Lincolnshire: Rauceby Warren National Park); Gorobchishin, 2006:136 (Ukraine: Cherkasy Oblast': Kaniv Nature Reserve; Kyiv Oblast': village Khotov, Kyiv); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Liška, 2006:88 (Slovakia: Váh river valley near Trenčín); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); N. Schneider, 2006:143 (Luxemburg: anthropogenic habitats); Shlyakhtenok, 2006:113 (Belarus': Polesye Radiological Nature Reserve); Vepřek, 2006:510 (Czech Republic: Kokořínsko area); Beavis, 2007:97 (Great Britain: Tunbridge Wells and Central High Weald); Dorow, 2007:264 (Germany: Hessen: Niddahänge Forest Reserve); Herrmann, 2007b:95 (Germany: Baden-Württemberg: Fürstenberg in Konstanz); Jacobs, 2007:163, 167 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Józán, 2007:180 (Hungary: Zselic hills); Nemkov, 2007c:997 (in Appendix to Key to identification of Sphecidae of Far East of Russia); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Venne, Bleidorn, and Lauterbach, 2007:302 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:207 (in

catalog of Sphecidae of Czech Republic and Slovakia); Winkler, 2007:30 (Germany: Niedersachsen: eastern Friesland); Haeseler, 2008:308 (Germany: Friesian Islands); Kazenas, 2008b:114 (Kazakhstan: foothills of Zailiskiy Alatau: sometimes found on loess cliffs); Livory, Chevin, Lair, Sagot, and Baldock, 2008:30 (France: Département de la Manche); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:218 (in key to *Nysson* of Russia, also bibliographic references, locality records from Russia, detailed geographic distribution); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen), 37 (Germany: Hessen: locality records); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:262 (Bulgaria: Maleshevska Planina); Józán, 2009:166 (Croatia: Nin); Nemkov, 2009b:128 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Bitsch, 2010:109 (in supplement to vol. II of Faune de France, 1997: recent records from Greece and Italy including Sicily reported, France: first record from Puy-de-Dôme: Orléat); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Falk, 2010:93 (Great Britain: heathland sites in West Midlands region); Hable, Wickl, Krauss, and von der Dunk, 2010:27 (Germany: Bayern: Sulz- and Ottmaringer Tal); Howe, Knight, and Clee, 2010:100 (Great Britain: occurring on coastal sand dunes); Johansson, 2010:121 (Sweden: Småland: upper Emå river valley); Mokrousov, 2010a:61 (Russia: Nizhniy Novgorod Oblast': no specific localities); Rudoiskatel', 2010:152 (Russia: central Ural Mountains); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: rare); Smetana, Roller, Beneš, Bogusch, Dvořák, Holý, Karas, Macek, Straka, Šima, Tyrner, Vepřek, and Zeman, 2010:102 (Western Slovakia: recorded from Borská Nižina); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein and Mecklenburg-Vorpommern: locality records); Wurdack and Gack, 2010:153 (Germany: Baden-Württemberg: Kaiserstuhl); Baghirov, 2011b:143 (Russia: recorded from Altay by Nemkov *in* Nemkov, Kazenas, Budrys, and Antropov, 1995); Gogala, 2011:29 (Slovenia); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Murai and Amr, 2011:111, 119 (first record from Syria: Al Thawrah Nature Reserve at 35°51'N 28°38'E); Saure, 2011d:200 (Germany: Sachsen-Anhalt: conservation area "Heide südlich Burg"); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:82 (Germany: Hessen: threatened to unknown degree); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); R. Burger, 2012:32 (Germany: Rheinland-Pfalz: Sandrennbahn near Altrip); Franzén, Molander, Norén, and Nilsson, 2012:26 (Sweden: Skåne: Kullaberg Peninsula); Gerth, Mayer, Hering, Wolf, Schaffer, and Bleidorn, 2012:9 (Germany: Sachsen: Bienitz in Leipzig); Japoshvili and Ljubomirov, 2012:96: Turkey: Isparta: Gölcük Nature Park 8 km southwest of city of Isparta); Nemkov, 2012b:126 (review of known host species), 2012c:445 (in catalog of Crabronidae of Russian Far East); Akulov and Proshchalykin, 2013:116 (Russia: Siberia: Krasnoyarsk Krai: Minusinsk); Mokrousov, Ruchin, and Egorov, 2013:199 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Saure, 2012b:229 (Germany: Berlin-Spandau: Spandauer Forst); Shlyakhtenok, 2012b:92 (Belarus: Beresina National Reserve: overgrowing dry meadow); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Danilov and Odintseva, 2013:333 (Russia: Western Siberia: 65 km NNE Tobol'sk at 58°45'N 68°74'E); Olszewski, Pawlikowski, and Piekarska-Boniecka, 2013:44 (Poland: several localities); Shlyakhtenok, 2013:223 (in annotated catalog of aculeate wasps of Belarus); Wiśniowski and Szczepko, 2013:40 (Poland: Kampinos National Park near Warszawa); Zettel, Zimmermann, and Wiesbauer, 2013:13 (Austria: Wien: Donaupark), 17 (distribution in Austria); Bitsch, 2014:399 (France: Puy-de-Dôme: Orléat: les Sables des Girauds-Faures); U. Frommer, 2014:27 (Germany: Hessen: Lorch); Hellqvist, Abenius, and Norén, 2014:90 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Pagliano, 2014:120 (specimens in M. Spinola collection, Torino, are *Nysson dimidiatus*); Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Saure, 2015:14 (Germany: Berlin-Lichterfelde); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelle-sur-Seine); Else, Bolton, and Broad, 2016:11 (in checklist of Aculeata of Great Britain and Ireland: England, Wales); Mokrousov and Popov, 2016:570 (Russia:

Krasnodarskiy Kray); Saure, 2016b:48 (Germany: Sachsen-Anhalt: fruit orchards); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Gülmez and Can, 2017:82 (Turkey: Erzincan Province); Le Divelec, Chapelin-Viscardi, Larivière, and Adamski, 2017:63 (France: départements de Loir-et-Cher and Loiret; comparison with *Nysson distinguendus*); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Mas Larrieu, Julols); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia); Říha, 2017:175 (Czech Republic: Brno).

Nysson wesmaeli Lepelletier de Saint Fargeau, 1845:50, ♀, ♂ (as *Wesmaeli*, incorrect original capitalization). Syntypes: France: Paris area (MNHN) and Belgium: Bruxelles area (depository?). Synonymized with *Nysson dimidiatus* by Handlirsch, 1887:389, synonymy confirmed by Valkeila, 1964:202. – Acloque, 1897:83 (in Sphecidae Fauna of France and Algeria).

Nysson dimidiatus ab. *nigrina* Barovskij, 1929:148 (authorship attributed to Gussakovskij). Holotype: ♂, Russia: near Schlüsselburg north of Sankt Petersburg (depository unknown). Not available: infrasubspecific name (Articles 10.2 and 45.6).

Nysson susterai Zavdil in Zavdil and Šnoflák, 1948:161, ♂ (as *Šusterai*, incorrect original capitalization and diacritic mark). Holotype: ♂, Czechoslovakia: Moravia: Mutěnice (NMPC). Synonymized with *Nysson dimidiatus* by Vepřek and Straka, 2007:207 and 232. – de Beaumont, 1965a:38 (member of *dimidiatus* species group); Balthasar, 1972:345 (in Sphecidae Fauna of Czechoslovakia); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Pádr in Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:165 (in Sphecidae Fauna of Western Europe); Jacobs, 2007:165 (in key to Crabronidae of Germany, not yet found in Germany); Straka in Vepřek and Straka, 2007:232 (holotype of *Nysson susterai* is a male of *Nysson dimidiatus* with abnormally developed apical flagellomere); Haris, 2016:27 (in list of species described by V. Zavdil from Carpathian Basin).

Nysson susterai Zavdil, 1951:115 Γ (as *Šusterai*, incorrect original capitalization and diacritic mark). Objective synonym of *Nysson susterai* Zavdil, 1948.

23. *distinguendus* Chevrier

Nysson distinguendus Chevrier, 1867b:22, ♀, ♂. Syntypes: Switzerland: Nyon area (MHNG). Synonymized with *Nysson dimidiatus* by Handlirsch, 1887:389, synonymy confirmed by Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:139. – Chevrier, 1868:383 (diagnostic characters); Kohl, 1883e:666 (Switzerland); de Beaumont, 1945:470 (Switzerland; the named *distinguendus* can be preserved to designate a form with an all-black gaster); Schmid-Egger, Risch, and Niehuis, 1995:197 (summary of records from Germany: Rheinland-Pfalz State; comparison with *dimidiatus*); Schmidt, Schmid-Egger, and Doczkal, 1995:9 (is probably a good species); Schmid-Egger, 1996b:26 (resurrected from synonymy, comparison with *Nysson dimidiatus*); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); Blösch, 1998:168 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); van der Smissen, 1998:63 (Germany: Niedersachsen, Schleswig-Holstein); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Wickl, 1999a:105 (Germany: Bayern: Oberpfalz area); Blösch, 2000:364 (in Sphecidae Fauna of Germany); Jacobs, 2000:8, 17 (Germany: Land Mecklenburg-Vorpommern: data insufficient to evaluate how endangered); Ohl et al., 2001:140 (distribution in Germany by provinces); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: to be treated as endangered); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:197 (Germany: Bayern: probably endangered); Abenius, 2004:40 (Sweden: Norrbottens: Luleå area); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen State); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Burger, 2005:34 (Germany: Thüringen); Hallin, 2005:16 (Sweden: Örebro County: Hällefors); Mandery, 2005:174 (Germany: Bayern: Hainberg Nature Reserve

near Nürnberg); Reder, 2005:951 (Germany: Rheinland-Pfalz: Eisenberg, Worms); Saure, 2005:17 (Germany: Berlin); Jacobs, 2007:163, 167 (in key to Crabronidae of Germany); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Theunert, 2008:57 (Germany: map of distribution in Niedersachsen and Bremen); Bogusch, Dvořák, and Straka, 2009:250 (first record from Czech Republic: Bohemia: Hradec Králové, Praha-Běchovice, Praha-Hloubětín, Praha-Horní Počernice; Moravia: Bzenec); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:28 (known from Norway), 43, 71 (Norway: locality records); Bitsch, 2010:108 (in supplement to vol. II of Faune de France, 1997: references to Schmid-Egger, 1996, and Blösch, 2000), 109 (species status needs confirmation); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Johansson, 2010:121 (Sweden: Småland: upper Emå river valley); Saure, 2010b:175 (Germany: Berlin-Reinickendorf: airport Tempel and Flughafensee Protected Area); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: rare); Smetana, Roller, Beneš, Bogusch, Dvořák, Holý, Karas, Macek, Straka, Šima, Tyrner, Vepřek, and Zeman, 2010:89 (Western Slovakia: Borská nížina), 102 (Western Slovakia: recorded from Borská nížina); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein: locality records); Saure, 2011c:199 (Germany: Berlin-Spandau: Fort Hahneberg); Tischendorf, Frommer, Flügel et al., 2011:83 (Germany: Hessen: threatened to unknown degree); Ziska and Saure, 2011:109 (Germany: Berlin: Tegeler Fließ valley); Franzén, Molander, Norén, and Nilsson, 2012:26 (Sweden: Skåne: Kullaberg Peninsula); Saure, 2012b:229 (Germany: Berlin-Spandau: Spandauer Forst); Olszewski, Pawlikowski, and Piekarska-Boniecka, 2013:44 (first record from Poland: Toruń-Glinki at 52°58'8" N 18°33'17"E); Saure, 2013:20 (Berlin: Treptow-Köpenick: Gosener Wiesen); Hellqvist, Abenius, and Norén, 2014:90 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Le Divelec, Chapelin-Viscardi, Larivière, and Adamski, 2017:61 (first records from France: départements of Loir-et-Cher, Loiret, and Vaucluse; comparison with *Nysson dimidiatus*). – **As *Nysson dimidiatus* var. *distinguendus***: de Beaumont, 1945:470 (new status, Switzerland); Bajári, 1957a:116 (in key to Hungarian Sphecidae); Lefeber, 1971b:222 (Netherlands: Ede, Haelen); van der Zanden, 1977b:39 (Finland: Helsinki); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Saure, 2015:14 (Germany: Berlin-Lichterfelde). – **As *Nysson dimidiatus distinguendus***: de Beaumont, 1954e:89 (new status, Italy: Liguria); Lefeber, 1976:151 (Netherlands: Buitenveldert); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae), 2009:177 (Italy: recorded from Liguria by de Beaumont, 1954e).

24. *doriae* Gribodo

Nysson doriae Gribodo, 1884b:277, ♀ (as *Doriae*, incorrect original capitalization). Holotype: ♀, Borneo: Sarawak: no specific locality (GENOVA). – Handlirsch, 1887:401 (original description translated into German); Cameron, 1890b:241 (listed); Dalla Torre, 1897:569 (in catalog of world Sphecidae); W. Schulz, 1911b:181 (study of type); Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

25. *dubius* Olivier

Nysson dubius Olivier, 1812a:408, sex not indicated. Holotype or syntypes: Arabian Peninsula: no specific locality (lost). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae, as questionable species). – Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae). – **As *Pison dubium***: Handlirsch in Dalla Torre, 1897:711 (tentative new combination, in catalog of world Hymenoptera).

26. *dusmeti* Mercet

Nysson dusmeti Mercet, 1909a:510, ♂ (as *Dusmeti*, incorrect original capitalization). Holotype: ♂, Spain: Montarco (MNCN). – Mercet, 1909a:620, 621 (in key to Spanish *Nysson*); Dusmet y Alonso, 1935:49 (Spain: Madrid: Montarco and Vaciamadrid); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:160 (in Sphecidae Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); de Beaumont, 1965a:38 (member of *variabilis* species group); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae);

Gayubo, 1982b:34 (Spain: Ávila: Santa Lucía de la Sierra; Salamanca: Valdefuentes de Sangusín), 1983e:232 (Spain: Salamanca Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:152 (in Sphecidae Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent records from Spain reported); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:500 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Vieira, Oliveira, Brewster, and Gayubo, 2013:16 (Portugal: Douro International Natural Park); Bitsch, 2014:399 (France: Aude: Montredon-des-Corbières); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae).

27. *dutti* R. Turner

Nysson dutti R. Turner, 1917e:184, ♂. Holotype: ♂, India: Bihar: Chapra (BMNH). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

28. *epeoliformis* F. Smith

Nysson epeoliformis F. Smith, 1856:354, ♀, ♂. Syntypes: Albania: no specific locality (BMNH). – Gerstaecker, 1867b:93 (in revision of *Nysson*); A. Costa, 1867c:51 (in revision of Italian Sphecidae), 1869b:67 (in revision of Italian Sphecidae); Handlirsch, 1887:344 (in revision of world Bembicinae); Dalla Torre, 1897:569 (in catalog of world Sphecidae); Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*); Guiglia, 1941c:161 (Italy: Calabria: Grande Sila), 1944b:24 (Italy: Calabria); Zavadil *in* Zavadil and Šnoflák, 1948:157 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Bytinski-Salz, 1956:226 (Turkey: Akşehir); de Beaumont, 1965a:36 (Greece), 1967a:320 (Turkey), 1969:89 (Turkey); Balthasar, 1972:340 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Pulawski, 1978:210 (in key to Sphecidae of European part of former USSR); Gayubo and Özbek, 2005:14 (Turkey: Erzurum: Hýnýs); Shorenko, 2005a:167 (Ukraine: Crimea); Protsenko, Fateryga, and Ivanov, 2014:33 (Crimea: protected area “Mys Aiya”, Lis'ya Bukhta near Feodosiya); Yildirim, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia, as *epeoliformis epeoliformis*); Shorenko, 2017:80 (in Crimea collected in June and July). – **As *Synnevrus epeoliformis***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Pagliano, 1990:69 (in catalog of Italian Sphecidae); Pagliano, 1992a:36 (in key to Italian *Nyssoninae*); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:172 (in Sphecidae Fauna of Western Europe); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:108 (Greece); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Nemkov, 2001:5 (in revision of *Synnevrus* of Russia and neighboring countries); Kazenas, 2002a:115 (geographic distribution, collecting localities in Kazakhstan); Shorenko, 2005b:98 (Ukraine: Crimea: Karadagh Nature Reserve); Ljubomirov and Yildirim, 2008:73 (in catalog of Crabronidae of Turkey); Shorenko, 2009:368 (in list of Sphecidae s.l. of Crimea); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent record from continental Greece reported); Koçak and Kemal, 2015:151 (in checklist of Hymenoptera of Turkey); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:11 (Turkey: Erzurum: Oltu).

Synnevrus procerus A. Costa, 1859:16, ♂. Lectotype: ♂, Italy: Terra d'Otranto: no specific locality (Napoli), designated by de Beaumont, 1953i:2. Synonymized with *Nysson epeoliformis* by A. Costa, 1869b:68, synonymy confirmed by de Beaumont, 1953i:2. – Kirchner, 1867:220 (in catalog of European Hymenoptera).

Nysson notabilis Handlirsch, 1895:814, ♀. Holotype: ♀, Armenia or Azerbaijan: Arax valley (NHMW). Synonymized with *Synnevrus epeoliformis* by Nemkov, 2001:5. – Dalla Torre, 1897:573 (in catalog of world Sphecidae); Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*). – **As *Synnevrus notabilis***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

ssp. *ditior* Morice

Nysson epeoliformis var. *ditior* Morice, 1911:109, ♂. Syntypes: ♂, Algeria: Biskra (OXUM). – Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*). – **As *Synnevrus decemmaculatus ditior***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

29. *erythropoda* Cameron

Nysson erythropoda Cameron, 1890:242, sex not indicated. Holotype or syntypes: India: Bengal: Barrackpore (OXUM). – Handlirsch, 1895:825 (original description translated into German); Bingham, 1897:269 (redescription); Dalla Torre, 1897:569 (in catalog of world Sphecidae); Rothney, 1903:105 (India: West Bengal: Barrackpore), 113 (collected in shadowed bank of fine earth near Pulta); Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae); Yasumatsu, 1942c:111 (China: Beijing); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

30. *euphorbiae* R. Bohart

Nysson euphorbiae R. Bohart, 1968a:319, ♂, ♀. Holotype: ♂, USA: New Mexico: Hidalgo County: Rodeo (UCD). Paratypes: Arizona, s. California, New Mexico; Mexico: Sinaloa. – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Amarante, 2002:21 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:666 (in checklist of Mexican Sphecidae).

31. *excavatus* R. Turner

Nysson excavatus R. Turner, 1914b:253, ♂. Holotype: ♂, India: Tamil Nadu: Coimbatore (BMNH). – Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae). – **As *Synnevrus excavatus***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

32. *fidelis* Cresson

Nysson fidelis Cresson, 1882b:282, ♀, ♂. Lectotype: ♀, USA: Montana: no specific locality (ANSP), designated by Cresson, 1916:98. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:403 (original description translated into German); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado); W. Fox, 1896c:15 (in revision of North American *Nysson*); Dalla Torre, 1897:569 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); Barth, 1907:144, 147 (visiting nests of *Gorytes canaliculatus*); H. Smith, 1908b:341 (in revision of Nebraskan Sphecidae); Mickel, 1918b:350 (in catalog of Nebraskan Sphecidae); Maidl and Klima, 1939:136 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera); Evans, 1966d:65 (synopsis of behavioral observation by Barth, 1907), 1966d:86 (host relationships); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Nemkov, 2012b:126 (review of known host species); Ratzlaff, 2016:24 (first record from Canada: British Columbia: Southern Interior and Southern Interior Mountains), 32 (British Columbia: locality records).

33. *fraternus* Mercet

Nysson fraternus Mercet, 1909a:503, ♂. Holotype or syntypes: ♂, Spain: Madrid (MNCN). – Mercet, 1909a:618, 621 (in key to Spanish *Nysson*); Maidl and Klima, 1939:120 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:160 (in Sphecid Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae).

34. *fulvipes* A. Costa

Nysson fulvipes A. Costa, 1859:18, ♂. Lectotype: ♂, Italy: Terra d'Otranto: no specific locality (Napoli), designated by de Beaumont, 1953i:3. – Gerstaecker, 1867b:93 (in revision of *Nysson*); Kirchner, 1867:220 (in catalog of European

Hymenoptera); A. Costa, 1867c:52 and 1869b:68 (in revision of Italian Sphecidae); Handlirsch, 1887:334 (in revision of world Bembicinae), 1895:813 (Croatia: Fiume, now Rijeka); Dalla Torre, 1897:569 (in catalog of world Sphecidae); Mocsáry, 1897:81 (Kingdom of Hungary, some localities are in today's Croatia); Handlirsch, 1898b:485 (Algeria); Antiga and Bofill, 1904:14 (Spain: Cataluña Province); Schmiedeknecht, 1907:228 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Mercet, 1909a:501 (Spain; description of ♀), 618, 626 (in key to Spanish *Nysson*); Birula, 1912:541 (Ukraine: Zhytomyr Oblast': Radomyshl'); Maidl, 1922:70 (Albania); Berland, 1925d:105 (in Sphecida Fauna of France); Schmiedeknecht, 1930:690 (in keys to Hymenoptera of North and Central Europe); Maidl and Klima, 1939:121 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:159 (in Sphecida Fauna of Spain); Zavadil *in* Zavadil and Šnoflák, 1948:158 (in key to Sphecidae of Czechoslovakia); Balthasar, 1952:66 (Slovakia); Móczár, 1953:310 (Hungary); Balthasar, 1954b:273 (Palestine: Wadi el Kelt near Jericho); Vogrin, 1955:36 (Yugoslavia); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Bajári, 1957a:114 (in key to Hungarian Sphecidae); de Beaumont and Bytinski-Salz, 1959:108 (Israel); Noskiewicz and Puławski, 1960:102, 104 (in key to Polish Sphecidae, not yet found in Poland); de Beaumont, 1965a:36 (Greece); Balthasar, Hrubant, and Hrubant, 1967:173 (Bulgaria: Slanchev Bryag near Nessebar, Bachkovo near Asenovgrad); de Beaumont, 1967a:322 (Turkey); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Hagieni); Benedek, 1969a:83 (Hungary; marshy meadow); de Beaumont, 1969:89 (Turkey); Balthasar, 1972:339 (in Sphecida Fauna of Czechoslovakia); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Benedek, 1979:231 (Hungary: Bakony Hills); Józán, 1985b:60 (recorded from Simontornya area by Bajári, 1957), 84 (ecological and zoogeographic characteristics); Gayubo, 1982b:35 (Spain: Ávila and Salamanca provinces); Gayubo and Sanza, 1986:72 (Spain: Burgos); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:412 (Italy: Toscana: Alberese in Parco dell'Ucellina); Józán, 1992a:229 (Hungary: Béda-Karapanca Protected Area); Negrisoló and Pagliano, 1993:91 (Italy: Sardegna); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:154 (in Sphecida Fauna of Western Europe); Anan'eva and Kochetkov, 1999:7 (Russia: Ryazan Oblast': no specific locality); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:108 (Greece); Józán, 2000:112 (Hungary: Bakony Mountains: Tihany); Zettel, 2000:31 (Austria: Bisamberg near Wien); Józán, 2001:280 (Hungary: Somogy County); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Ljubomirov, 2001b:52 (Bulgaria: Mount Vitosha near Sofia); Kazenas, 2002a:114 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2004a:76 (Russia: Rostov Oblast': Rostov on Don); Gayubo and Özbek, 2005:14 (Turkey: six localities); Pagliano and Negrisoló, 2005:126 (in Sphecida Fauna of Italy); Gorobchishin, 2006:136 (Ukraine: Kuiv, Pervomais'k in Mykolajivsk Oblast'); Ljubomirov, 2006:541 (Bulgaria: earlier records from Rhodope Mountains summarized); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Slovakia); Ljubomirov and Yildirim, 2008:67 (in catalog of Crabronidae of Turkey); Nemkov, 2008d:217 (in key to *Nysson* of Russia), 218 (bibliographic references, locality records from Bulgaria, Georgia, Kazakhstan, Russia, and Ukraine, detailed geographic distribution); Guéorguiev and Ljubomirov, 2009:262 (Bulgaria: Maleshevska Planina); Józán, 2009:167 (Croatia: Dvigrad, Nin); Pagliano, 2009:177 (Italy: recorded from Campania by Gerstaecker, 1867); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent record from eastern Europe reported, France: first records from Hérault: Lodève, and Landes: Morcenx); Gogala, 2011:29 (Slovenia: Podčetrtek); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Protsenko and Drozdovskaya, 2011:91 (Ukraine: Mikolaiv Oblast': Bugskiy Guard National Park); Yildirim, 2012:75 (Turkey: Erzurum: Oltu); Mokrousov, Ruchin, and Egorov, 2013:199 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Protsenko, Fateryga, and Ivanov, 2014:33 (Crimea: Tarkhankut Promontory, Evpatoriya); Wiesbauer, 2014:162

(Austria: first record from Wien); Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Zettel, Ockermüller, and Wiesbauer, 2014:171 (Austria: Niederösterreich); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Mokrousov and Popov, 2016:570 (Russia: Abkhazia, Krasnodarskiy Krai); Yıldırım, Ljubomirov, Özbek, and Yüksel, 2016:11 (Turkey: Erzincan and Erzurum provinces); Nemkov, 2017a:Table p. 8 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia); Shorenko, 2017:80 (in Crimea collected in June).

35. *fulviventris* Tsuneki

Nysson fulviventris Tsuneki, 1971k:185, ♀. Holotype: ♀, Mongolia: South Gobi aymag: Tahila ul (TMB). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Nemkov, 1990c:83 (record from Russia: Chita Oblast'); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:457 (in key to Sphecidae of Russian Far East); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:218 (in key to *Nysson* of Russia), 2009b:129 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).

36. *gagates* Bradley

Nysson nigripes Provancher, 1887:269, ♂ but actually ♀ (Krombein, 1958f:1993), junior primary homonym of *Nysson nigripes* Spinola, 1808. Lectotype: ♂, Canada: Quebec: Hull (Laval Univ.), designated by Gahan and Rohwer, 1918:104. Synonymized with *Nysson trichrus* by Bohart and Menke, 1976:470, and with *Nysson gagates* Bradley by Buck, 2004:76. – Handlirsch, 1895:826 (original description translated into German); W. Fox, 1896c:14 (in revision of North American *Nysson*); Dalla Torre, 1897:573 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); Harrington, 1902:223 (Canada: Ontario: Ottawa). – **As *Brachystegus nigripes***: Harrington, 1902:223 (new combination, Canada: Ontario: Ottawa).

Nysson gagates Bradley, 1920:123, ♂. Holotype: ♂, Canada: British Columbia: Downie Creek in Selkirk Mountains (Cornell Univ.). – Krombein in Muesebeck et al., 1951:984 (in catalog of North American Hymenoptera); Mairl and Klima, 1939:143 (in catalog of world Astatinae and Bembicinae, in subgenus *Brachystegus*); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 62 (first record from Ontario: list of localities); Ratzlaff, 2016:24 (Canada: British Columbia: from Bradley, 1920 and Krombein, 1979).

Nysson melanopus Pate, 1938c:130. Substitute name for *Nysson nigripes* Provancher, 1887. – Mairl and Klima, 1939:137 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); Krombein, 1958f:192, 193 (in supplement to catalog of North American Hymenoptera: belongs to subgenus *Epinysson*); Kurczewski and Kurczewski, 1963:147 (Pennsylvania: Presque Isle State Park).

As *Nysson rusticus*: Provancher, 1887:269 (Canada: Ontario: Ottawa, redescription), corrected to *Nysson gagates* by Buck, 2004:75.

As *Nysson trichrus*: Finnamore, 1982:211 (in Sphecid Fauna of Southern Quebec), corrected to *Nysson gagates* by Buck, 2004:76

37. *ganglbaueri* Kohl

Nysson ganglbaueri Kohl, 1912a:62, ♀, ♂ (as *Ganglbaueri*, incorrect original capitalization). Syntypes: Austria: Südtirol: Ratzes, now Italy: Trentino–Alto Adige: Razzes (NHMW). – Mairl and Klima, 1939:121 (in catalog of world Astatinae and Bembicinae); de Beaumont, 1945:471 (Switzerland; redescription); Zavadil in Zavadil and Šnoflák, 1948:160, 162 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Blüthgen, 1952b:37 (host: *Harpactus lunatus* according to de Beaumont, 1945:471); de Beaumont, 1958c:204 (Swiss National Park), 1964c:62 (in Sphecid Fauna of Switzerland), 1965a:38 (member of *dimidiatus* species group); Bonelli, 1966c:216 (Italy: Trentino–Alto Adige: Razzes); Wolf, 1971:374 (Italy: Trentino–Alto Adige: Alpi Siusi); Balthasar, 1972:343 (in

Sphecid Fauna of Czechoslovakia: may be expected in the country); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae; as *ganglebaueri*); Pulawski, 1978:212 (in key to Sphecidae of European part of former USSR); Dollfuss and Ressler, 1981:324 (Austria: Niederösterreich: Scheibbs District); Dollfuss, 1983a:77 (endangered in Niederösterreich, Austria), 78 (endangered in Oberösterreich, Austria), 1983b:21 (in catalog of Sphecidae of Austria), 1987:23 (Austria; probable host: *Harpactus tumidus*), 1989:11 (type series in NHMW); Pagliano, 1990:68 (in catalog of Italian Sphecidae); Day, 1991:xvii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Pagliano, 1992a:34 (in key to Italian Nyssoninae, as *ganglebaueri*); Dollfuss, 1994:103 (endangered in Austria); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:155 (in Sphecid Fauna of Western Europe); Gusenleitner, 1999:595 (Austria: Kärnten: Glocknerkehre); Pagliano and Negrisolo, 2005:126 (in Sphecid Fauna of Italy); Ljubomirov and Ban-Calefariu, 2008:203 (first record from Romania: Maramureş District: Poienile de Sub Munte, redescription of ♂); Jacobs, 2007:163, 166 (in key to Crabronidae of Germany, not yet found in Germany); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent record from Romania reported); Schmid-Egger, 2011a:38 (France: Parc National du Mercantour: Le Pra), 2011c:556 (Austria: Tirol: Tiroler Lech Nature Park); Bitsch, 2014:399 (record from France by Schmid-Egger, 2011a noted); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

38. *gerstaeckeri* Handlirsch

Nysson gerstaeckeri Handlirsch, 1887:384, ♂ (as *Gerstäckeri*, incorrect original capitalization and diacritic mark). Holotype: ♂, Greece: Rhodes Island: no specific locality (NHMW). – Dalla Torre, 1897:570 (in catalog of world Sphecidae); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); de Beaumont, 1965a:38 (member of *gerstaeckeri* species group), 39 (Greece, redescription), 1967a:323 (Turkey; as *gertaeckeri*), 1969:89 (Turkey); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type series in NHMW); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:155 (in Sphecid Fauna of Western Europe); Gayubo and Özbek, 2005:14 (Turkey: Erzurum: University campus); Ljubomirov and Yildirim, 2008:67 (in catalog of Crabronidae of Turkey); Standfuss and Standfuss, 2012:427 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Gülmez and Can, 2017:82 (Turkey: Erzincan Province); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

39. *grandissimus* Radoszkowski

Nysson grandissimus Radoszkowski, 1877:44, ♀, ♂. Lectotype: ♀, Kazakhstan: Mount Karak (ZMMU), designated by Nemkov, 2001:6 in violation of Article 74.7.3. – Handlirsch, 1887:346 (in revision of world Bembicinae); Dalla Torre, 1897:570 (in catalog of world Sphecidae); Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*); Kazenas, 1972b:153 (Kazakhstan), 1974b:110 (feeding on flowers of *Nitraria schoberi* L., Zygophyllaceae, in Kazakhstan); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae). – As *Synnevrus grandissimus*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Kazenas, 1978b:92, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Esenbekova and Kazenas, 2000:58 (southeast Kazakhstan: 10 km W and 20 km W Chundzha); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Nemkov, 2001:6 (in revision of *Synnevrus* of Russia and neighboring countries); Kazenas, 2002a:115 (geographic distribution, collecting localities in Kazakhstan).

Nysson grandissimus mongolensis Tsuneki, 1971k:185, ♀. Holotype: ♀, Mongolia: Bayanhongor Aymag: Tsagan Bogdul (TMB). Synonymized with *Synnevrus grandissimus* by Nemkov, 2001:6. – As *Synnevrus grandissimus mongolensis*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

40. *guichardi* de Beaumont

Nysson guichardi de Beaumont, 1967a:322, ♀. Holotype: ♀, Turkey: Ankara: Ankara (BMNH). – Ljubomirov and Yildirim, 2008:67 (in catalog of Crabronidae of Turkey); Nemkov, 2008d:218 (in key to *Nysson* of Russia), 219

(bibliographic references, first record from Russia: Rostov Oblast', first record from Ukraine: Crimea); Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia). – **As *Synnevrus guichardi***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Standfuss and Standfuss, 2006c:304 (first record from Greece: Thessalia: Magnisia Peninsula at 39°N 23°E), 310 (description of ♂); Bitsch, 2010:109 (in supplement to vol. II of Faune de France, 1997: in modified key to European *Nysson*), 110 (discussion of generic placement, recent record from Greece reported); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).

41. *handlirschi* Schmiedeknecht

Nysson handlirschi Schmiedeknecht, 1896:159, sex not indicated, but ♂ according to Handlirsch, 1898b:485 (as *Handlirschi*, incorrect original capitalization). Holotype or syntypes: Algeria: Hammam-Bou-Hadjar (depository?). – Handlirsch, 1898b:485 (Algeria, redescription); W. Schulz, 1906:201 (Handlirsch is the author of the name); Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*); de Beaumont, 1950f:402 (Algeria; as *handlirschi* Handlirsch), 1953g:114 (Morocco; as *handlirschi* Handlirsch); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae). – **As *Synnevrus handlirschi***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

42. *harveyi* de Beaumont

Nysson harveyi de Beaumont, 1967a:320, ♀. Holotype: ♀, Turkey: Kayseri: Sultanhani (BMNH). – Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia). – **As *Synnevrus harveyi***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Nemkov, 2001:6 (in revision of *Synnevrus* of Russia and neighboring countries); Ljubomirov and Yıldırım, 2008:73 (in catalog of Crabronidae of Turkey); Koçak and Kemal, 2015:151 (in checklist of Hymenoptera of Turkey).

43. *hesperus* R. Bohart

Nysson hesperus R. Bohart, 1968a:320, ♂, ♀. Holotype: ♂, USA: California: Yolo County: Davis (UCD). Paratypes: British Columbia, California, Colorado, Idaho, Nevada, Oregon, Wyoming. – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 63 (first records from Ontario: Brantford Railway Prairie, Hilton Beach, Trent River Prairie northeast of Stirling); Ratzlaff, 2016:24 (Canada: British Columbia: Ratzlaff, 2016:24 (Canada: British Columbia: from R. Bohart, 1968a and Krombein, 1979).

44. *hrubanti* Balthasar

As *Nysson quadriguttatus*: Zavadil, 1937a:72 (eastern Slovakia) and 1937b:119 (description), corrected to *Nysson hrubanti* by Balthasar, 1972:346; Harris, 2016:27 (in list of species described by V. Zavadil from Carpathian Basin).

Nysson hrubanti Balthasar, 1972:346, ♀, ♂. Syntypes: Czechoslovakia: Moravia: Velehrad; Slovakia: Štúrovo (originally V. Balthasar coll., now NMPC). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Schmid-Egger, Risch, and Niehuis, 1995:198 (first record from Germany: Rheinland-Pfalz: Ingelheim; parasitoid of *Harpactus lunatus*); Schmid-Egger, 1996b:30, 32 (diagnostic characters, redescription, first records from Germany); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: last collected in 1964); Schnee, 1997:99 (Germany: Sachsen); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:156 (in Sphecid Fauna of Western Europe); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); Ohl

et al., 2001:140 (distribution in Germany by provinces); Kuhlmann, 2004:230 (Germany is responsible for preservation of this species on its territory); Saure, 2005:17 (Germany: Berlin); Reder, 2006a:63 (Germany: first record from Hessen: Gernsheim); Jacobs, 2007:163, 166 (in key to Crabronidae of Germany); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Moravia and Slovakia); Theunert, 2008:57 (Germany: map of distribution in Niedersachsen and Bremen); Theunert and Sprick, 2008:22 (Germany: Niedersachsen: N Hannover); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent records from Germany reported); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: very rare); Theunert, 2010a:41 (Germany: Niedersachsen: Braunschweig); Bogusch, Straka, Macek, Dvořák, Vepřek, and Řiha, 2011:95 (Czech Republic: Chvalčice); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:90 (Germany: Hessen: insufficient data); Ziska and Saure, 2011:109 (Germany: Berlin: Tegeler Fließ valley); Bitsch, 2014:399 (observations by Theunert, 2010a noted); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Wiesbauer, 2016:138 (first record from Austria: Burgenland: Podersdorf); Standfuss and Standfuss, 2017:531, 532 (in key to European *Nysson* with short anal cell); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

45. *humilis* Handlirsch

Nysson humilis Handlirsch, 1895:821, ♂. Holotype: ♂: Armenia or Azerbaijan: Arax Valley: no specific locality (NHMW). – Dalla Torre, 1897:570 (in catalog of world Sphecidae); Maidl and Klima, 1939:121 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

46. *ibericus* Handlirsch

Nysson ibericus Handlirsch, 1895:822, ♀ (as *Ibericus*, incorrect original capitalization). Holotype: ♀, Spain: Madrid (MNCN). – Dalla Torre, 1897:570 (in catalog of world Sphecidae); Mercet, 1909a:627 (in key to Spanish *Nysson*; specimen labeled as type does not correspond to the original description); Maidl and Klima, 1939:121 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:163 (in Sphecid Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

47. *inornatus* de Beaumont

Nysson inornatus de Beaumont, 1967a:323, ♂. Holotype: ♂, Turkey: Antakya (Lausanne). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Ljubomirov and Yildirim, 2008:69 (in catalog of Crabronidae of Turkey); Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces), 19 (is an endemic of Turkey); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

48. *intermedius* Viereck

Nysson intermedius Viereck, 1908:409, ♀. Holotype: ♀, USA: Arizona: Bill William's Fork (Kansas Univ.). – Rohwer, 1921b:407 (California, New Mexico); Maidl and Klima, 1939:136 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Museum). – As *Synnevrus intermedius*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera).

Nysson coyotero Pate, 1940d:3, ♂, ♀. Holotype: ♂, USA: Arizona: Pinal County: Florence (ANSP). Synonymized with *Synnevrus intermedius* by R. Bohart in R. Bohart and Menke, 1976:470. – Krombein in Muesebeck et al., 1951:982 (in catalog of North American Hymenoptera); H. Allen, 1995:15 (holotype in ANSP).

49. *interruptus* (Fabricius)

Mellinus interruptus Fabricius, 1798:266, sex not indicated. Holotype or syntypes: Germany: Sachsen-Anhalt: Halle (lost: van der Vecht, 1961a:46). – Fabricius, 1799:32 (in Index to his Supplementum, 1798); Panzer, 1799, Heft 72:10 (in revision of German insects, illustration of habitus); Roth von Schreckenstein, 1802:31 (Germany: Baden-Württemberg). – **As *Oxybelus interruptus***: Fabricius, 1804:316 (new combination, redescription, as synonym of *Crabro spinosus*). – **As *Nysson interruptus***: Latreille, [1805]:306 (new combination, redescription); Panzer, 1806:189 (in critical review of his earlier work); Jurine, 1807:199 (listed); Olivier, 1812a:408 (redescription); Stephens, 1829:362 (in catalog of British insects), 1829b:33 (in checklist of British insects); Vander Linden, 1829:33 (bibliographic references, France); Shuckard, 1837a:101 (in revision of British Aculeata); von Siebold, 1839:49 (Germany: Danzig, now Poland: Gdańsk); Dahlbom, 1843:170 (in revision of Sphecidae and Pompilidae) and 1845:485 (in key to European *Nysson*), determination corrected to *Nysson shuckardi* by Thomson, 1870:244; Lepeletier de Saint Fargeau, 1845:45 (in revision of world Hymenoptera); Eversmann, 1849:395 (Russia: Kazan' province); von Kiesenwetter, 1849:89 (Germany: Kingdom of Saxony: Oberlausitz area); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); F. Smith, 1851c:21 (Great Britain: no specific locality); Wesmael, 1852:93 (Belgium, character analysis); Kirschbaum, 1853:46 (Germany: Herzogtum Nassau: Mainz-Mombach, Weilburg, and Wiesbaden); F. Smith, 1853:63 (in checklist of British Hymenoptera); Kirchner, 1854:311 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); F. Smith, 1856:353 (in catalog of Hymenoptera in British Museum; Great Britain, France, Germany, Belgium, Scandinavia); Kawall, 1857:24 (Kurland, now Latvia); F. Smith, 1858c:98 (in review of British Aculeata, redescription); Taschenberg, 1858:92 (in key to Sphecidae of Germany); Six, 1959:17 (Netherlands: Utrecht); Wierzejski, 1859:259 (Ukraine: Podole Region: Pieniaki); A. Costa, 1864b:98 (specimen from France in Museo Zoologico di Napoli); Taschenberg, 1866:193 (in revision of Hymenoptera of Germany); Chevrier, 1867b:17 (in revision of Swiss *Nysson*, as *interruptus* Wesmael); A. Costa, 1867c:53 (in revision of Italian Sphecidae); Kirchner, 1867:220 (in catalog of European Hymenoptera); Chevrier, 1868:383 (diagnostic characters); Gerstaecker, 1867b:95 (in revision of *Nysson*); Wierzejski, 1868:117 (Ukraine: Podole Region: Pieniaki); A. Costa, 1869b:69 (in revision of Italian Sphecidae); F. Smith, 1871:11 (in catalog of British Aculeata); Dours, 1874:149 (in catalog of Hymenoptera of France); Wierzejski, 1874:259 (Ukraine: Pieniaki); Marquet, 1875:209 (France: Haute-Garonne: Toulouse); Taschenberg, 1875:365 (Germany: Leipzig); Daly, 1878:45 (Great Britain: Dorset: Glanville's Wootton, as *interruptus* Latreille); Girard, 1879:946 (morphology); Kohl, 1880:169 (Austria: Tirol, and Italy: Trentino–Alto Adige); E. Saunders, 1880:268 (in revision of British Aculeata); Kohl, 1883e:665 (Switzerland); von Heyden, 1884:117 (Germany: Frankfurt am Main); Handlirsch, 1887:340 (in revision of world Bembicinae); Wüstnei, 1891a:26 (Germany: Schleswig-Holstein: Sonderburg); Kohl, 1893a:28 (Austria: Niederösterreich); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus); Baldini, 1894:65 (Italy: Modena area); Krieger, 1894:9 (Germany: Kingdom of Saxony); Handlirsch, 1895:814 (additional bibliography; Armenia); E. Saunders, 1896:110 (in revision of British Aculeata); Acloque, 1897:82 (in Sphecid Fauna of France and Algeria); Dalla Torre, 1897:570 (in catalog of world Sphecidae); Mocsáry, 1897:81 (Kingdom of Hungary, one locality (Mehadia) is in today's Romania); Flamary, 1898:38 (France: Saône-et-Loire: Mâcon area); Handlirsch, 1898b:486 (Algeria); Dominique, 1901a:506 (France: Loire-Inférieure, now Loire-Atlantique: Thouaré); N. Arnold, 1902:89 (Russia: Mohilev Province, now Belarus); Aurivillius, 1904:268 (in revision of Swedish Sphecidae); W. Schulz, 1904b:98 (Spain: Murcia), 1905b:44 (Algeria); von Heyden, 1905:81 (Germany: Hessen: Frankfurt); Mortimer, 1907b:259 (Great Britain: Dorset: Swanage); , 1907:227, 229 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Mercet, 1909a:619, 625 (in key to Spanish *Nysson*); Morley, 1909:305 (Great Britain: Isle of Wight); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Schirmer, 1912:167 (Germany: Berlin area); Zavattari, 1913b:3 (Greece: Island of Rhodes); Haines, 1914:129 (Great Britain: Dorset); Zilahi Kiss, 1915:80 (Hungary: Bethlen, Nagyenyed); R. Perkins, 1916:230 (specimens in F. Smith collection); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); Łoziński, 1920:121 (Poland: Kraków); A. Wagner, 1920:34 (Germany: Lower Elbe region); Dubois,

1921c:206, 207 (in key to Belgian Sphecidae); Leininger, 1924:121 (Germany: Baden-Württemberg: Kaiserstuhl, Riegel); Lauterborn, 1924:287 (Germany: Baden-Württemberg: Kaiserstuhl); R. Perkins, 1924:228 (Great Britain: Devon); Berland, 1925d:103 (in Sphecid Fauna of France); Bischoff, 1925:300 (Latvia: Wezkukkul; Poland: Białowieża and Grajewo area); Lauterborn, 1925:355 (Germany: Nordrhein-Westfalen: Neuhofen); Schütze, 1925:113 (Germany: Lausitz Region); K. Strohm, 1925:211 (Germany: Baden-Württemberg: Kaiserstuhl); Friese, 1926:159 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); K. Strohm, 1926:74 (reference to Lauterborn, 1925); Bouwman, 1927:92 (in revision of Sphecidae of Netherlands); Stelfox, 1927:306 (records from Ireland are erroneous); Hamm and Richards, 1930:104 (nest parasite of *Argogorytes fargei*); Schmiedeknecht, 1930:688, 690 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:69 (in revision of Sphecidae of Finland); Bondroit, 1932:33 (Belgium: recorded from Bruxelles area by Wesmael), 1934:60 (Belgium: Solbosch); Jansson, 1934:290 (Sweden); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Crèvecoeur and Maréchal, 1936:253 (in catalog of Belgian Hymenoptera); Drogoszewski, 1936:130 (Poland: Łowicz); Goebel, 1937:42 (Poland: Poznań District: Splawie); Richards, 1937b:107 (in checklist of British aculeates); Zavadil, Šustera, and Baťa, 1937:197 (in catalog of Sphecidae of Czechoslovakia); A. Wagner, 1938a:122 (northwestern Germany); Maidl and Klima, 1939:121 (in catalog of world Astatinae and Bembicinae); Teunissen, 1939:174 (Netherlands: Overlangel, Wychen); Dovnar-Zapolskiy, 1940:304 (Russia: Kursk Oblast'); Paul, 1941:45 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Schneid, 1941:1043 (Germany: Bayern: Bamberg area); Balthasar, 1942:5 (Czech Republic: Moravia); J. Perkins, 1942:199 (Sweden: Skåne: Degaberga); Benno, 1943:67 (Netherlands); Guiglia, 1943b:71 (Albania: Kopliku); Giner Marí, 1943a:158 (in Sphecid Fauna of Spain); Spooner, 1943:74 (Great Britain); Guiglia, 1944a:148 (Cyprus: Limassol), 1944b:23 (Italy); Guichard and Yarrow, 1948:92 (Great Britain: London: Hampstead Heath); Zavadil *in* Zavadil and Šnoflák, 1948:157 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:17 (Portugal); Cavro, 1950:34 (France: Département du Nord); Pittioni, 1950:24 (Cyprus); Szulczewski, 1950:107 (Poland: Wielkopolski National Park 15 km south of Poznań); Caruel, 1951:100 (France: Marne Department); Wolf, 1951:79 (host: *Gorytes quinquecinctus*); Blüthgen, 1952b:35 (probable host: *Gorytes quinquefasciatus*); Głowacki, 1953:520 (Poland: Podkova Leśna near Warszawa); de Beaumont, 1954e:89 (Italy); Fahlander, 1954:252 (Sweden: Gästrikland Region); Aerts, 1955:62 (Germany: Rheinland); Vogrin, 1955:36 (Yugoslavia); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Bajári, 1957a:112 (in key to Hungarian Sphecidae); Benno, 1958b:10 (in review of Dutch Sphecidae); Nouvel and Ribaut, 1958:12 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont and Bytinski-Salz, 1959:108 (Israel); Diniz, 1959:29 (Portugal: Aldeia Nova de S. Bento, Lisboa); Wolf, 1959b:29 (Germany: Nassau Region); Noskiewicz and Puławski, 1960:100, 104 (in key to Polish Sphecidae); Valkeila, 1962b:67 (southwestern Finland); Babiý, 1964:117 (Austria: Land Salzburg); de Beaumont, 1964c:60 (in Sphecid Fauna of Switzerland); Richards, 1964:2 (in Britain south of River Thames); Evans, 1966d:86 (host relationships); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:320 (Turkey); Gauss, 1967:553 (Germany: Baden-Württemberg: Kaiserstuhl); J. Heinrich, 1967:73 (Germany: Bayern: Unterfranken District); Niedl and Deneš, 1967:83 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:49 (Romania); Schmidt, 1969:162 (Germany: Rhein-Main area); Oehlke, 1970:701 (Democratic Germany); Tumšs, 1970:80 (Latvia); Dathe, 1971:234 (Germany: Berlin Zoological Garden; phenology), 237 (Germany: Berlin); Schmidt, 1971b:31 (Germany: Rheinland Pfalz: recorded from Mombach by Kirschbaum, 1853); Vegter, 1971:229 (Netherlands: Drenthe Province); Balthasar, 1972:347 (in Sphecid Fauna of Czechoslovakia); Haeseler, 1972:155, 200 (Germany: Schleswig-Holstein; anthropogenic habitats); Diniz, 1973:49 (Portugal: Caixas, Lisboa, Monchique, Portimão, Seixal); Lomholdt, 1975c:210 (in Sphecid Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Benno, 1977:153 (distribution in Netherlands); Georghiou, 1977:191 (Cyprus); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Kazenas, 1978b:92, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Leclercq, 1978b:map 1172 (distribution in Belgium); Marion, 1978:87 (France: Nièvre Department); Pulawski, 1978:210 (in key to Sphecidae of European part of former USSR); Schwammberger, 1978:417 (Germany: Württemberg);

Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 49 (Netherlands: distribution map); Richards, 1979:401 (British Channel Islands); Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection); Dathe, 1980:208 (Russia: northern Caucasus: Teberda); Richards, 1980:80 (in key to Sphecidae of British Isles); Gayubo, 1982b:35 (Spain: Ávila, Cáceres, and Salamanca provinces); Skibińska, 1982:123 (Poland: Warszawa area); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria); Gayubo, 1983e:232 (Spain: Salamanca Province), 1985c:171 (Spain: Valladolid: Iscar); Józán, 1985b:60 (Hungary S Lake Balaton), 81 (floral records), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Westrich and Schmidt, 1985b:111 (Germany: endangered in Baden-Württemberg); Gayubo and Sanza, 1986:72 (Spain: Burgos); Vikberg, 1986:78 (Finland); Schmidt and Westrich, 1987:362 (Germany: Mainz area); Kowalczyk, 1988b:65 (Poland: environs of Łódź); Jacobs, 1989:25 (Germany: Mecklenburg-Vorpommern); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Pádr *in* Šedivy, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus: Berezinskiy Nature Reserve); Skibińska, 1989b:291 (Poland: moist meadow in Warszawa area); Jacobs and Oehlke, 1990:123 (population regress in Democratic Germany after 1960), 205 (new records from Democratic Germany); Kuznetzova, 1990:19 (Russia: Voronezh Oblast: Galich'ya Gora Nature Reserve); Pagliano, 1990:68 (in catalog of Italian Sphecidae); Day, 1991:xvii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Kowalczyk, 1991a:100, 101 (Poland: Łódź); Budrys, 1992:28 (in list of Sphecidae of Lithuania); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Józán, 1992c:289 (Hungary: Zselic Hills); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); van der Smissen, 1993:129 (nw. Germany); Blagoveshchenskaya, 1994:91 (Russia: Ulyanovsk Oblast); Wiśniowski, 1993a:97 (Poland: in checklist of Sphecidae of Białowieża Primeval Forest); Dollfuss, 1994:99 (endangered in Austria); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Scharrer, 1995:29 (Austria: Niederösterreich: Donauauen, Korneuburg); Schmid-Egger, Risch, and Niehuis, 1995:197 (summary of records from Germany: Rheinland-Pfalz State); Yeo and Corbet, 1995:40 (in field guide to British solitary wasps); Archer, 1996a:59 (Great Britain: Channel Islands); Harvey and Plant, 1996:79 (Great Britain: summary of records from Essex); Jakubzik, 1996:253 (Germany: Köln); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Celary, 1997:60 (in checklist of Animals of Poland); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:156 (in Sphecid Fauna of Western Europe); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:524 (Austria: summary of collecting records from Burgenland); van der Smissen, 1998:63 (Germany: Schleswig-Holstein: Am Stau, Siems); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Mandery, 1999:105 (Germany: Bayern: Coburg area); Pauly, 1999:111 (in catalog of Belgian aculeates); M. Schwarz, 1999:88 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:365 (in Sphecid Fauna of Germany); Esenbekova and Kazenas, 2000:57 (southeast Kazakhstan: near Alma Ata. 3-9 km S and 6 km SW Alma Ata, 2 km S Talgar); Gusenleitner, 2000:955 (Austria: additional locality record from Burgenland Province); Jacobs, 2000:8, 16 (Germany: Land Mecklenburg-Vorpommern: extinct); Józán, 2000:112 (Hungary: Bakony Mountains: Nagyvázsony); Mokrousov, 2000b:31 (Russia: Nizhniy Novgorod Oblast); Józán, 2001:280 (Hungary: Somogy County); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia), 218 (review of known biology); Kazenas and Esenbekova, 2001:135 (Kazakhstan: Almatinskiy Nature Reserve); Ohl et al., 2001:140 (distribution in Germany by provinces); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: threatened with extinction); Zettel, Gross, and Mazzucco, 2001:79 (Austria: Wien); Kazenas, 2002a:114 (geographic distribution, collecting localities in Kazakhstan); Shlyakhtenok and Skibinska, 2002:34 (Belarus: no specific locality); Feitz, Schneider, and Pauly, 2003:81 (first record from Luxemburg: Erpeldange); Józán, 2003:228 (Hungary: Látrányi Puszta Nature Conservation Area); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); Nieves-Aldrey, Fontal-Cazalla,

Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Ohl and Linde, 2003:150 (number of ovarioles); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: extinct or no longer collected); Esser, Jakubzik, and Sonnenburg, 2004:18 (Germany: Nordrhein-Westfalen); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Gayubo et al. 2004:130 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: in red list of Sphecidae); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:50 and 62 (in checklist of Polish Sphecidae); Burger, 2005:34 (Germany: Thüringen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:219 (Spain: Salamanca: San Martín del Castañar); Gayubo and Özbek, 2005:14 (Turkey: many localities); Pagliano and Negrisolo, 2005:126 (in Sphecidae Fauna of Italy); Robinson, 2005:38 (recorded from Great Britain: Cumbria County in error); Saure, 2005:17 (Germany: Berlin); Yildirim and Ljubomirov, 2005:1793 (Turkey: Erzurum: İspir Pass); Gorobchishin, 2006:136 (Ukraine: Cherkasy Oblast': Kaniv Nature Reserve; Kyiv Oblast': Kyiv and villages Khotov and Kruglyk); Evans and O'Neil, 2007:70 (list of hosts after Benno, 1966); Jacobs, 2007:161, 164 (in key to Crabronidae of Germany); Józán, 2007:180 (Hungary: Zselic hills); Kowalczyk and Nadolski, 2007:284 (Poland: Łódź: railway areas); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Vago, 2007:174 (France: départements du Nord and Somme); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia); Winkler, 2007:30 (Germany: Niedersachsen: eastern Friesland); Yildirim and Ljubomirov, 2007:117 (Turkey: Erzincan); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008b:114 (Kazakhstan: foothills of Zailiskiy Alatau: sometimes found on loess cliffs); Livory, Chevin, Lair, Sagot, and Baldock, 2008:31 (France: Département de la Manche); Ljubomirov and Yildirim, 2008:69 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:217 (in key to *Nysson* of Russia), 219 (bibliographic references, locality records from Armenia, Belarus', Kazakhstan, and Russia including Novosibirsk Oblast', detailed geographic distribution); Theunert, 2008:58 (Germany: map of distribution in Niedersachsen and Bremen); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Humala and Polevoi, 2009:63 (Russia: Republic of Karelia east of Lake Onega); Nemkov, 2009b:129 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Reder and Burger, 2009:857 (Germany: Rheinland-Pfalz: Grünstadter Berg 1 km north of Neuleiningen); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997:recent records from Italy, Luxemburg, and Spain reported); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Mokrousov, 2010a:61 (Russia: Nizhniy Novgorod and Yaroslavl' Oblast's: no specific localities); Rudoiskatel', 2010:151 (Russia: central and southern Ural Mountains); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: extremely rare); Shorenko and Kononov, 2010:15 (Ukraine); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein: locality records); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Tischendorf, Frommer, Flügel et al., 2011:62 (Germany: Hessen: strongly endangered); Ziska and Saure, 2011:109 (Germany: Berlin: Tegeler Fließ valley); Boilat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Nemkov, 2012b:126 (review of known host species); Reder, 2012a:38 (Germany: new records from Rheinland-Pfalz after several decades of absence); Shlyakhtenok, 2012a:171 (Belarus': collected in private plots); Yildirim, 2012:75 (Turkey: Erzurum Province); Pankov, 2013:229 (Russia: Ivanovo Oblast'); Shlyakhtenok, 2013:224 (in annotated catalog of aculeate wasps of Belarus'); Wiśniowski and Szczepko, 2013:40 (Poland: Kampinos National Park near Warszawa); Hellqvist, Abenius, and Norén, 2014:90 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Mokrousov and Vafin, 2014:56 (Russia: Republic of Tatarstan); Pagliano, 2014:119 (specimens in M. Spinola collection, Torino, are *Brachystegus scalaris*, *Nysson interruptus* and *Nysson maculosus*); Protsenko, Fateryga, and Ivanov, 2014:33 (Crimea: Tarkhankut Promontory); Yildirim, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Else, Bolton,

and Broad, 2016:11 (in checklist of Aculeata of Great Britain and Ireland: England); Samin and Bagriacik, 2016:496 (Iran: West Azarbaijan Province: Khoy); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:11 (Turkey: Bayburt and Erzurum provinces); Jahantigh, Rakhshani; Mokhtari, and Ramroodi, 2017:45 (Iran: known from West Azerbaijan Province); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Julols); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia); Shorenko, 2017:80 (in Crimea collected in May and June).

Ceropales spinosus Fabricius, 1804:186, sex not indicated, junior secondary homonym of *Nysson spinosus* (J. Forster, 1771). Lectotype: ♂, Denmark: no specific locality (ZMUC), designated by van der Vecht, 1961a:47. Synonymized with *Nysson interruptus* by van der Vecht, 1961a:46. – Eversmann, 1849:395 (Russia: Orenburg province); F. Smith, 1856:353 (in catalog of Hymenoptera in British Museum).

Nysson panzeri Lepeletier de Saint Fargeau, 1845:52, ♀, ♂. Syntypes: France: Paris area (depository?). Synonymized with *Nysson interruptus* by Handlirsch, 1887:340. – Acloque, 1897:82 (in Sphecidae Fauna of France and Algeria).

Nysson shukardi [sic] Wesmael, 1852:88, ♀, ♂ (as *Shukardi*, incorrect original capitalization). Syntypes: Belgium: Bruxelles area (Bruxelles). Synonymized with *Nysson interruptus* by Handlirsch, 1887:340. – Schenck, 1857:155 (Germany: in revision of fossorial wasps of Nassau Region); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:147 (Germany: Nassau Region); Brischke, 1862:101 (Germany: Preussen Province, now: Poland: Pomorze Region); Chevrier, 1867b:13 (in revision of Swiss *Nysson*); Schenck, 1867a:354 (Germany: Nassau Region); Jaenicke, 1868:9 (Germany: Hessen: Bieberer Höhe); Samie, 1879: LCXVI (France: Gironde: Pomerol, as *Schuckardi*); Thomson, 1870:244 (in revision of Swedish wasps), 1874:227 (in revision of Hymenoptera of Scandinavia); Beuthin, 1876:231 (Germany: Hamburg area, as *shuckardi*); Marquet, 1881:182 (France: Haute-Garonne: Toulouse, as *shuckardi*); Friese, 1883:202 (Germany: Sachsen-Anhalt: Weissenfels, as *Schuckardi*); Wüstnei, 1886:40 (Germany: Schleswig Holstein: Sonderburg, as *Shuckardi*); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region; as *Shuckardi*), 1889:204 (Germany: Steegen E Danzig, now Poland: Stegna east of Gdańsk; as *Schuckardi*); Handlirsch, 1895:814 (type examined); Borries, 1897:62 (reference to Shuckard, 1837:102); Kozhevnikov, 1897:15 (Russia: Moscow Government); Antiga and Bofill, 1904:14 (Spain: Cataluña Province; as *Shuckardi*); Coulon, 1925:120 (France: Manche, Pont-de-l'Arche).

50. *kazenasi* Nemkov and Gayubo

Nysson kazenasi Nemkov and Gayubo, 2003:2, ♀, ♂. Holotype: ♀, Turkmenistan: near Repetek (ZIN). – Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae)

51. *kolazyi* Handlirsch

Nysson kolazyi Handlirsch, 1887:342, ♀ (as *Kolazyi*, incorrect original capitalization). Holotype: origin unknown, ex coll. Ullrich (NHMW). – Dalla Torre, 1897:571 (in catalog of world Sphecidae); Schmiedeknecht, 1907:227 (in keys to Hymenoptera of Central Europe), 1930:689 (in keys to Hymenoptera of North and Central Europe); Maidl and Klima, 1939:123 (in catalog of world Astatinae and Bembicinae); Zavadil in Zavadil and Šnoflák, 1948:158 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Balthasar, 1972:340 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Dollfuss, 1983b:21 (occurrence in Austria questionable); Dollfuss, 1989:11 (type series in NHMW); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

52. *konowi* Mercet

Nysson konowi Mercet, 1909a:502, ♂, ♀ (as *Konowi*, incorrect original capitalization). Syntypes: Spain: Madrid, Aranjuez, Escorial (MNCN). – Mercet, 1909a:618, 621, 626 (in key to Spanish *Nysson*); Dusmet y Alonso, 1935:54 (Spain: Madrid: Torreldones); Maidl and Klima, 1939:123 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:160 (in Sphecidae Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); de Beau-

mont, 1962b:24 (Spain); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); Diniz, 1973:49 (Portugal: Carcavelos, Estoril); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Gayubo, 1982b:35 (Spain: Ávila: Becedas; Cáceres: Gargantilla; Salamanca: Horcajo de Montemayor, Santibáñez, Sorihuela); Gayubo and Sanza, 1986:72 (Spain: Burgos); Tormos, Asís, and Gayubo, 1994:189, 218 (Spain: Albacete Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:157 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent records from Spain reported); Vieira, Oliveira, Brewster, and Gayubo, 2013:16 (Portugal: Douro International Natural Park); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

53. *laevis* Pulawski

Nysson laevis Pulawski, 1964:78, ♀, ♂. Holotype: ♂, Egypt: Maadi near Cairo (originally W. J. Pulawski coll., now CAS). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Roche, 2007a:106 and 2007b:7 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

54. *lapillus* de Beaumont

As *Nysson variabilis*: Handlirsch, 1887:386 and Kohl, 1893a:29 (Austrian male only), corrected to *Nysson lapillus* by de Beaumont, 1965a:40.

Nysson lapillus de Beaumont, 1965a:40, ♂. Syntypes: Greece: Xylocastron; Lebanon: Brumana, and "Austria" of Handlirsch, 1887 (Lausanne, NHMW). – de Beaumont, 1965a:38 (member of *gerstaeckeri* species group); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:158 (in Sphecid Fauna of Western Europe); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:12 (first record from Turkey: Iğdır); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

55. *lateralis* Packard

Nysson lateralis Packard, 1867:440, ♂ (as *laterale*, incorrect original termination). Lectotype: ♂, USA: Virginia: no specific locality (ANSP), designated by Cresson, 1928:47. – Cresson, 1862:234 (in catalog of North American Hymenoptera, as *laterale* Harris); Patton, 1879b:213 (description of ♀); Cresson, 1882b:282 (description of ♀, in revision of North American *Nysson*); Provancher, 1883b:635 (in revision of Canadian Hymenoptera); Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:404 (original description translated into German), 1895:825 (additional bibliography); W. Fox, 1896c:14 (in revision of North American *Nysson*); Dalla Torre, 1897:571 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); J. Smith, 1900:521 (in list of insects of New Jersey); Harrington, 1902:223 (Canada: Ontario: Ottawa); J. Smith, 1910:680 (in new list of insects of New Jersey); Rohwer, 1916b:655 (in catalog of Hymenoptera of Connecticut); Stevens, 1917:421 (North Dakota); Rohwer in Viereck, 1925:655 (in key to Sphecidae of Connecticut); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae: Poughkeepsie); Maidl and Klima, 1939:137 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); Ristich, 1953:380 (nest parasite of *Sphex ichneumoneus*); Krombein, 1958a:52 (USA: West Virginia: Lost River State Park), 1963f:276 (Maryland: Plummers Island near Washington, D.C.); Evans, 1966d:86 (host relationships); Steiner, 1973:27 (Canada: Northwest Territories); Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Finnamore, 1982:210

(in Sphecid Fauna of Southern Quebec); Radović, 1985:65 (sting apparatus analyzed); Fimmamore, 1997:894 (expected to occur in Yukon); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada); Nemkov, 2012b:126 (review of known host species).

56. *laufferi* Mercet

Nysson laufferi Mercet, 1904b:392, ♀, ♂ (as *Laufferi*, incorrect original capitalization). Syntypes: Spain: Madrid Province: San Fernando (MNCN). – Mercet, 1909a:623, 627 (in key to Spanish *Nysson*); Dusmet y Alonso, 1935:53 (Spain: Madrid: Río Alberche); Maidl and Klima, 1939:123 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:162 (in Sphecid Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain, as *laufferi*); de Beaumont, 1965a:38 (member of *laufferi* species group); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Gayubo, 1982b:36 (Spain: Salamanca : Horcajo de Montemayor); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:158 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent record from Spain reported); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

57. *maculosus* (Gmelin)

Sphex maculatus Fabricius, 1787:277, sex not indicated (as *maculata*, incorrect original termination), junior primary homonym of *Sphex maculatus* Drury, 1775. Lectotype: ♀, Germany: Kiel (ZMUC), designated by van der Vecht, 1961a:47. – de Villers, 1789:241 (redescription); Rossi, 1792:127 (Italy: Toscana); Fabricius, 1793:215 (redescription), 1796:155 (in Index to his Entomologia Systematica, 1793); Schrank, 1802:324 (in revision of insects of Bayern (= Bavaria), Germany). – As *Pompilus maculatus*: Fabricius, 1798:251 (new combination, redescription); Dahlbom, 1845:XIX (specimens in collection Fabricius are *Nysson*). – As *Nysson maculatus*: Latreille, [1805]:306 (new combination, redescription), 1906:pl. XIV, fig. 2 (illustration); Jurine, 1807:199 (listed); Spinola, 1808:45 (bibliographic references); Olivier, 1812a:409 (redescription); Stephens, 1829:362 (in catalog of British insects), 1829b:33 (in checklist of British insects); Vander Linden, 1829:33 (bibliographic references, Belgium: Bruxelles, France, Germany, Italy, redescription); Herrich-Schaeffer, 1840:291 (Germany: Bayern: Regensburg area, as *maculatus* Latreille); Dahlbom, 1843:170 (in revision of Sphecidae and Pompilidae), 1845:485 (in key to European *Nysson*); Lepeletier de Saint Fargeau, 1845:48 (in revision of world Hymenoptera); Eversmann, 1849:396 (Russia: Kazan' and Orenburg provinces, southern Ural Mts.); Wissmann, 1849:13 (Germany: Kingdom of Hannover: Hannover); Wesmael, 1852:91 (Belgium, character analysis); Kirschbaum, 1853:45 (Germany: Herzogtum Nassau: Mainz-Mombach and Weilburg); F. Smith, 1856:353 (in catalog of Hymenoptera in British Museum; Germany, Belgium, France?); Kawall, 1857:24 (Kurland, now Latvia); Ruthe and Stein, 1857:314 (Germany: Berlin area); Schenck, 1857:156 (Germany: in revision of fossorial wasps of Nassau Region); A. Costa, 1858:20 (Italy: Campania: Monti Partenii in Benevento Region); Taschenberg, 1858:92 (in key to Sphecidae of Germany); Assmus, 1859:612 (Russia: Moscow Oblast'); A. Costa, 1859:22 (in revision of Sphecidae of Kingdom of Naples); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:148 (Germany: Nassau Region); Brischke, 1862:101 (Germany: Preussen Province, now Poland: Pomorze Region); Giraud, 1863a:14 (France: Hautes-Alpes: Vallouise near Briançon); Siła-Nowicki, 1864:55 (Poland: Tatra Mountains), 1865:55 (western Ukraine: Galicia region: no specific locality); Taschenberg, 1866:193 (in revision of Hymenoptera of Germany); A. Costa, 1867c:48 (in revision of Italian Sphecidae); Chevrier, 1867b:20 (in revision of Swiss *Nysson*, as *maculatus* Wesmael); Gerstaecker, 1867b:104 (in revision of *Nysson*); Jaenicke, 1867:147 (Germany: Hessen: Frankfurt area, as *maculatus* v. d. L.); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:354 (Germany: Nassau Region); Chevrier, 1868:383 (diagnostic characters); Dietrich, 1868:363 (Switzerland: Zurich Canton); Jaenicke, 1868:9 (Germany: Hessen: Mombach, as *maculatus* v.d.L.); Wierzejski, 1868:117 (Ukraine: Podole Region: Janów); A. Costa, 1869b:71 (in revision of Italian Sphecidae); von Aichinger, 1870:318 (Austria: Tirol); Thomson, 1870:244 (in revision of Swedish wasps); Dours, 1874:149 (in catalog of Hymenoptera of France); Thomson, 1874:228 (in revision

of Hymenoptera of Scandinavia); Wierzejski, 1874:260 (Ukraine: Yanov); Taschenberg, 1875:365 (Germany: Halle); Beuthin, 1876:231 (Germany: Hamburg area); Schmiedeknecht, 1876:186 (Germany: Thüringen: Rothensteiner Felsen); Kohl, 1880:170 (Austria: Tirol, and Italy: Trentino–Alto Adige); A. Costa, 1883:57 (Italy: Sardegna: Tissi); Friese, 1883:202 (Germany: Sachsen-Anhalt: Kösen, Weissenfels, as *maculatus* Vander Linden); Kohl, 1883e:666 (Switzerland); Sickmann, 1883:82 (Germany: Niedersachsen: Wellingholthausen); Wüstnei, 1886:40 (Germany: Schleswig-Holstein: Sonderburg); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region); Handlirsch, 1887:376 (in revision of world Bembicinae); Radoszkowski, 1892:589 (male genitalia); Kohl, 1893a:28 (Austria: Niederösterreich); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus); Sickmann, 1893:87 (Germany: Niedersachsen: Iburg); De Stefani Perez, 1894:216 (Italy: Sicilia); Krieger, 1894:9 (Germany: Kingdom of Saxony); De Stefani Perez, 1895:227 (in catalog of Sicilian Hymenoptera, as *maculatus* Vander Linden); Handlirsch, 1895:816 (additional bibliography; Armenia); Meunier, 1896:272 (Belgium: Bruxelles area, as *maculatus* Vander Linden); Borries, 1897:62 (Denmark: flying in July and August); Dalla Torre, 1897:571 (in catalog of world Sphecidae); Lüderwaldt, 1897b:28 (Germany: Gollnow, now Poland: Pomorze Region: Goleniów); Mocsáry, 1897:81 (Hungary: Budapest and Varannó); Handlirsch, 1898b:486 (Algeria); N. Arnold, 1902:89 (Russia: Mohilev Province, now Belarus); de Cobelli, 1903:112 (Italy: Province of Trentino); Antiga and Boffill, 1904:14 (Spain: Cataluña Province); Aurivillius, 1904:268 (in revision of Swedish Sphecidae); W. Schulz, 1904b:98 (Austria, Hungary, Switzerland); Schmiedeknecht, 1907:227, 230 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Mercet, 1909a:622, 626 (in key to Spanish *Nysson*); Adlerz, 1910:33 (Sweden; nesting habits: nest parasite of *Harpactus tumidus*); Cavro, 1910:685 (France: Département du Nord: Roubaix); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:47 (Italy: Trieste area); Schirmer, 1912:167 (Germany: Berlin area); Birula, 1913:451 (Ukraine: Zhytomyr Oblast': Radomyshl'); Torka, 1913:35 (Germany: Provinz Posen, now Poland: Poznań Region); Zilahi Kiss, 1915:80 (Hungary: Boksánbánya); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:34 (Germany: Lower Elbe region); Dubois, 1921c:206, 207 (in key to Belgian Sphecidae); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Maidl, 1922:71 (Albania, Croatia); Berland, 1925d:104 (in Sphecidae Fauna of France); Bischoff, 1925:300 (Latvia: Wezkukkul; Poland: Grajewo area); Coulon, 1925:120 (France); Strohm, 1925:211 (Germany: Baden-Württemberg: Hecklingen); Friese, 1926:159 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Bouwman, 1927:92 (in revision of Sphecidae of Netherlands); Wnukowskij, 1927:32 (Russia: Western Siberia: village Kornilovo at 53°57'N 81°10'E); Benoist, 1928:409 (France: Basses-Alpes: Barcelonnette); Hamm and Richards, 1930:104 (nest parasite of *Harpactus tumidus* after Adlerz, 1910); Schmiedeknecht, 1930:689, 691 (in keys to Hymenoptera of North and Central Europe); Bischoff, 1931:9 (Spain); Grandi, 1931:57 (Italy: Toscana: Vallata delle Pozze near Le Mandriole); Pulkkinen, 1931:70 (in revision of Sphecidae of Finland); Bondroit, 1932:33 (Belgium: Jette-Saint-Pierre); Bernard, 1933:62 (France: Drôme: Dieulefit); Balles, 1934:20 (Germany: Baden-Württemberg: Achern, Gamshurst, Hopfengarten, Ortenberg); Bondroit, 1934:60 (Belgium: Solbosch); Grandi, 1934:129 (Italy: Lazio: Acilia); Jansson, 1934:290 (Sweden); Forsius in Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Harttig, 1935:4 (Germany: Niedersachsen: no specific locality); Crèvecoeur and Maréchal, 1936:253 (in catalog of Belgian Hymenoptera); Drogoszewski, 1936:130 (Poland: Łowicz); Wnukowskij, 1936:128 (Russia: Western Siberia: Tomsk); Dulac, 1937:12 (France: Saône-et-Loire: La Coudraye); Goebel, 1937:42 (Poland: Poznań District: Spławie, Strzeszynek, Środa District: Tulce); Zavadil, Šusterka, and Baťa, 1937:197 (in catalog of Sphecidae of Czechoslovakia); Redikortsev, 1938:144 (Russia: Mordovian State Nature Reserve); A. Wagner, 1938a:122 (north-western Germany); Yasumatsu, 1938d:195 (Korea, in revision of Japanese and Korean *Nysson*); Maidl and Klima, 1939:123 (in catalog of world Astatinae and Bembicinae); Maréchal, 1939:341 (Belgium: Lanaye and Loën); Guiglia, 1941c:162 (Italy: Calabria: Grande Sila); Paul, 1941:45 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Schneid, 1941:1043 (Germany: Bayern: Bamberg area); Guiglia, 1942a:57 (Greece: Rhodes Island: Villanova); Yasumatsu, 1942c:111 (China: Beijing); Balthasar, 1943:42 (Czech

Republic: Moravia: Zlin area); Benno, 1943:67 (Netherlands); Giner Marí, 1943a:159 (in Sphecid Fauna of Spain); Guiglia, 1944b:23 (Italy); Balthasar, 1948:142 (Slovakia: Kovačov, Parkan); Zavadil *in* Zavadil and Šnoflák, 1948:158, 159 (in key to Sphecidae of Czechoslovakia); Cavro, 1950:34 (France: Département du Nord); Szulczewski, 1950:107 (Poland: Wielkopolski National Park 15 km S Poznań); Caruel, 1951:100 (France: Marne Department); de Beaumont, 1951g:316 (Italy), 1951h:33 (Switzerland: Neuchâtel area); Blüthgen, 1952b:36 (probable host: *Gorytes quadrifasciatus*); Nouvel and Ribaut, 1953:178 (France: Haute-Garonne: Saint-Béat); de Beaumont, 1954e:89 (Italy); Fahlander, 1954:252 (Sweden: Gästrikland Region); Grandi, 1954:234 (Italy); Aerts, 1955:62 (Germany: Rheinland); Hellén, 1955a:125 (Finland: Hiitola, Kirjavalhti, Parikkala, Ruokolahti, Taipalsaari); Vergne, 1955:4 (France: Auvergne); Vogrin, 1955:36 (Yugoslavia); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Bajári, 1957a:113 (in key to Hungarian Sphecidae), 1957b:141 (var. *l* of Wesmael first recorded from Hungary); Grandi, 1957:385 (Italy: Abruzzi); Zirngiebl, 1957:182 (Germany: Rheinland-Pfalz: Birkenheide, Landau); Benno, 1958b:10 (in review of Dutch Sphecidae); Wolf, 1959b:29 (Germany: Nassau Region); Noskiewicz and Puławski, 1960:102, 104 (in key to Polish Sphecidae); de Beaumont, 1962b:24 (Spain); Lehrer and Scutaru, 1963:286 (Romania: Moldova: Bosanci in Suceava District, Mircești in Iași District); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:61 (in Sphecid Fauna of Switzerland); Plavil'shchikov, 1964:122 (Russia: Mordovian State Nature Reserve); de Beaumont, 1965a:37 (Greece); Fæster, 1965:193 (Denmark: Hansted Nature Reserve); Tsuneki, 1965c:25 (in key to Bembicinae of Japan and Korea); Evans, 1966d:86 (host relationships); Balthasar, Hrubant, and Hrubant, 1967:173 (Bulgaria: Slanchev Bryag near Nessebar); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:322 (Turkey); Gauss, 1967:553 (Germany: Baden-Württemberg); J. Heinrich, 1967:73 (Germany: Bayern: Unterfranken District); Niedl and Deneš, 1967:83 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:49 (Romania); Benedek, 1968:72 (Hungary, floral records); Scobiola-Palade, 1968c:384 (Romania: Nanov); Wolf, 1968:12 (Germany: Nordrhein-Westfalen: Siegen, inhabitant of forest edge); Benedek, 1969a:83 (Hungary; marshy meadow); Lefeber, 1969c:233 (Netherlands: St. Pietersberg = Montagne Saint Pierre); Romanova, 1969:134 (Russia: North Caucasus); Benedek, 1970:98 (Hungary: Tapolca); Gauss and Perraudin, 1970:360 (Germany: Baden-Württemberg: Bodensee area); Lefeber and Petit, 1970:130 (Belgium: Plombières); Oehlke, 1970:701 (Democratic Germany); Tumšs, 1970:80 (Latvia); Schmidt, 1971b:31 (Germany: Rheinland-Pfalz: Mainzer Sand); Stritt, 1971a:104 (Germany: Baden-Württemberg: Karlsruhe); Tsuneki, 1971m:11 (China: Beijing: Tiendang); Balthasar, 1972:338 (in Sphecid Fauna of Czechoslovakia); Kazenas, 1972b:153 (Kazakhstan); Kofler, 1972:106 (Austria: eastern Tirol); Lomholdt, 1972:122 (Denmark: Læsø Island); Hoop, 1973:48 (Germany: Schleswig-Holstein: Flemhude); Erlandsson, 1974:69 (Italy); Lefeber and Petit, 1974:163 (Belgium: Plombières); Levi, Sysoletina, and Shernin, 1974:270 (Russia: Kirov Oblast': Kirov); Lefeber, 1975a:37 (Netherlands: Helenaveen); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Kazenas, 1978b:92, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:87 (France: Nièvre Department); Puławski, 1978:211 (in key to Sphecidae of European part of former USSR); Schwammberger, 1978:417 (Germany: Württemberg); Benedek, 1979:231 (Hungary: Bakony Hills); Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection); Józán, 1981:305 (Hungary: Hortobágy National Park); Donath, 1982:213 (Germany: Cottbus Bezirk); Skibińska, 1982:123 (Poland: Warszawa area); Holtappels, 1987:26 (Germany: Nordrhein Westfalen: Effelder Waldsee; as *maculatus* (Rossi)); Kowalczyk, 1988a:45 (Poland: Rogów), 1988b:65 (Poland: environs of Łódź); Pádr *in* Šedivy, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus': Berezinskiy Nature Reserve); Pádr, 1990:72 (Czech Republic: Praha area); Kowalczyk, 1991a:90, 93, 100, 101 (Poland: Łódź), 1991b:120 (Poland: Augustów Forest); Wu and Zhou, 1991:366 (China); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Szczepko and Kowalczyk, 2004:127 (Poland: Kampinos National Park near Warszawa) Schmid-Egger, 2011a:38 (France: Parc National du Mercantour: Tende; Italy: Parco delle Alpi Marittime: San Lorenzo); Pankov, 2013:229 (Russia: Ivanovo Oblast'); M. Pagliano, 2014:120 (specimens in M. Spinola collection, Torino, are *Nysson maculosus*).

Sphex maculosus Gmelin, 1790:2731 (as *maculosa*, incorrect original termination). Substitute name for *Sphex maculatus* Fabricius, 1787. – **As Nysson maculosus**: Lomholdt, 1975c:213 (new combination, in Sphecidae Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Leclercq, 1978b:map 1173 (distribution in Belgium); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 50 (Netherlands: distribution map); Schmidt, 1979b:336 (Germany: Baden-Württemberg); Pagliano, 1980:113 (Italy: Piemonte); Dollfuss and Ressler, 1981:317, 324 (Austria: Niederösterreich: Scheibbs District); Haeseler, 1981:51 (Germany: Friesian Island: Amrum Island); Woydak, 1981:40 (Germany: Westfalen: Hamm); Gayubo, 1982b:36 (Spain: Salamanca : Cerro, San Medel, Valdefuentes de Sangusín); Tsuneki, 1982b:18 (known from Korea); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria); Gayubo, 1983e:232 (Spain: Salamanca Province); Riemann, 1983:84 (Germany: Bremen-Daverden area); Józán, 1985b:60 (Hungary S Lake Balaton), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Paik, 1985:203 (in list of Sphecidae of Korea); Riemann, 1985:21 (Germany: Niedersachsen); Gayubo and Sanza, 1986:73 (Spain: Burgos, Segovia); Islamov, 1986:521 (Uzbekistan: Tashkent Oblast'); Józán, 1986:373 (Hungary: Kiskunság National Park); Nemkov, 1986:107 (Russia: Siberia: Irkutsk Oblast'); Skibińska, 1986b:157 (Poland: Warszawa area: rural and suburban parks); Vikberg, 1986:78 (Finland); Schmidt and Westrich, 1987:362 (Germany: Mainz area); Dollfuss, 1988:18, 29 (Austria: Bismberg near Vienna; Niederösterreich: Oberweiden); Karsai, 1988:101 (Hungary: Kiskunság National Park); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Jacobs, 1989:25 (Germany: Mecklenburg-Vorpommern); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Jacobs and Oehlke, 1990:206 (new records from Democratic Germany); Nemkov, 1990c:83 (Russia: Eastern Siberia, Maritime Province); Pagliano, 1990:68 (in catalog of Italian Sphecidae); Schwammerberger and Priesner, 1990:551 (Austria: Kärnten); Day, 1991:xvii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Jakubzik, 1991:75 (Germany: Köln); Budrys, 1992:29 (in list of Sphecidae of Lithuania); Józán, 1992b:175 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Nemkov, 1992b:249 (Russia: Far East: Khingan Nature Reserve); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Kuhlmann, 1993:77 (Germany: known from Westfalen); Felton and Schneider, 1994:290 (Luxembourg); Theunert, 1994c:45 (Germany: summary of records from Niedersachsen and Bremen), 1994d:278 (Germany: Niedersachsen: S Wense in Peine District); Tormos, Asís, and Gayubo, 1994:189, 218 (Spain: Albacete Province); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Negrísolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:459 (in key to Sphecidae of Russian Far East); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:29 (Germany: Bayern: Aschaffenburg, Kahl, Obernau); Schmid-Egger, 1995:62 (Germany: NW Baden-Württemberg); Schmid-Egger, Risch, and Niehuis, 1995:198 (summary of records from Germany: Rheinland-Pfalz State); Blösch, 1996:5 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Jakubzik, 1996:253 (Germany: Köln); Saure, 1996:503 (Germany: Berlin-Pankow: sewage irrigation field); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 110 (locality records); Woydak, 1996:90 (Germany: Westfalen: summary of distribution and nesting habits); Wu and Zhu, 1996:139 (in revision in Economic Insect Fauna of China); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:158 (in Sphecidae Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Lauterbach, 1997b:70 (Germany: Nordrhein-Westfalen: Bielefeld); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); Shlyakhtenok, Blinov, and Belyavskaya, 1997:151 (Belarus': Pripyatskiy National Park); Dollfuss, Gusenleitner, and Bregant, 1998:524 (Austria: summary of collecting records from Burgenland); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); N. Schneider and Wahis, 1998:22 (Luxemburg: sandstone quarries); van der Smissen, 1998:63 (Germany: Niedersachsen, Schleswig-Holstein: Wulfsdorfer Heide); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Kuhlmann,

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- Mellinus dissectus* Panzer, 1800, Heft 77:18, [♀]. Holotype or syntypes: ♀, Germany: no specific locality (depository?). Synonymized with *Nysson maculatus* by Panzer, 1806:189, and with *Nysson interruptus* by Lepeletier de Saint Fargeau, 1845:45. – **As *Nysson dissectus***: Panzer, 1806:189 (in critical review of his earlier work, as synonym of *Nysson maculatus*); Jurine, 1807:199 (new combination, listed); Olivier, 1812a:409 (redescription); Spinola, 1808:46 (bibliographic references).
- Nysson guttatus* Olivier, 1812a:409, sex not indicated. Holotype or syntypes: southern France: no specific locality (lost). Synonymized with *Nysson maculatus* by F. Smith, 1856:354. – Shuckard, 1837a:103 (in revision of British Aculeata); F. Smith, 1851c:21 (Great Britain: Devon), 1853:63 (in checklist of British Hymenoptera), 1856:354 (in catalog of Hymenoptera in British Museum; Great Britain, France, Albania, probably a highly colored variety of *Nysson maculatus*), 1858c:100 (in review of British Aculeata, redescription); Dours, 1874:149 (in catalog of Hymenoptera of France).
- Nysson omisus* Dahlbom, 1845:485, ♂. Holotype: ♂, Germany: Glogau, now Poland: Głogów (LUND). Synonymized with *Nysson maculatus* by Thomson, 1870:244, synonymy confirmed by de Beaumont, 1953h:197. – Ruthe and Stein, 1857:314 (Germany: Berlin area); Taschenberg, 1858:92 (in key to Sphecidae of Germany: Glogau; now Poland: Głogów); Schenck, 1861:160 (redescription, Germany: Glogau and Halle; Glogau: now Poland: Głogów); Funk, 1864:156 (Germany: Bayern: Bamberg); Taschenberg, 1866:193 (in revision of Hymenoptera of Germany); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:354 (known from Germany: Halle); von Aichinger, 1870:318 (Austria: Tirol); Marquet, 1881:182 (France: Haute-Garonne: Toulouse); De-Stefani, 1895:227 (in catalog of Sicilian Hymenoptera).
- Nysson lineolatus* Schenck, 1857:161, ♀. Holotype: ♀, Germany: Hessen: Wiesbaden (Landesmuseum Wiesbaden). Synonymized with *Nysson maculatus* by Gerstaecker, 1867:105, synonymy confirmed by Schmidt, 1971a:62. – Schenck, 1860:148 (Germany: Nassau Region), 1867a:354 (Germany: Nassau Region); von Aichinger, 1870:318 (Austria: Tirol); Schmidt, 1971a:62 (study of holotype); Andert, 2010:9 (type material in Landesmuseum Wiesbaden). – **As *Nysson maculatus* var. *lineolatus***: Kohl, 1880:170 (new status, Austria: Tirol, and Italy: Trentino-Alto Adige);
- Nysson dubius* A. Costa, 1859:19, ♂, junior primary homonym of *Nysson dubius* Olivier, 1812. Holotype or syntypes: ♂, Italy: Napoli (NAPOLI). Synonymized with *Nysson maculatus* by Handlirsch, 1887:377. – Kirchner, 1867:220 (in catalog of European Hymenoptera).

58. *maderae* (R. Bohart), new combination

Synneurus maderae R. Bohart, 1968c:233, ♂. Holotype: ♂, USA: Arizona: Santa Cruz County: Madera Canyon in Santa Rita Mountains UCD). – R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera).

59. *miegi* Mercet

Nysson miegi Mercet, 1909a:505, ♀ (as *Miegi*, incorrect original capitalization). Syntypes: ♀, Spain: no specific locality (MNCN). – Mercet, 1909a:625 (in key to Spanish *Nysson*); Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:164 (in Sphecida Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

60. *militaris* Gerstaecker

Nysson militaris Gerstaecker, 1867b:103, ♀. Syntypes: Greece: Rhodes and Naxos Islands: no specific locality (ZMHU). – A. Costa, 1867c:54 and 1869b:70 (in revision of Italian Sphecidae: Terra d'Otranto); Handlirsch, 1887:371 (in revision of world Bembicinae, Italy, Greece, Yugoslavia); Gasperini, 1889:70 (Dalmatia, now Croatia); Handlirsch, 1895:815 (type examined); Dalla Torre, 1897:572 (in catalog of world Sphecidae); Mantero, 1905:70 (Italy: Toscana: Isola del Giglio); Mercet, 1909a:621, 626 (in key to Spanish *Nysson*); nec Nadig, 1933:95 (= *Nysson varelai*); Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae); Guiglia, 1941c:161 (Italy: Calabria: Grande Sila), 1942a:57 (Greece: Rhodes Island: Villanova); Giner Marí, 1943a:161 (in Sphecida Fauna of Spain); Guiglia, 1944b:24 (Italy: Calabria); Zavadil *in* Zavadil and Šnoflák, 1948:157 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Balthasar, 1954b:273 (Palestine: Wadi el Kelt near Jericho); de Beaumont, 1954e:89 (Italy: Toscana); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); de Beaumont and Bytinski-Salz, 1959:108 (Israel); de Beaumont, 1960a:13 (Greece: Rhodes Island: Kremasti, diagnostic characters), 1965a:38 (Greece); Balthasar, Hrubant, and Hrubant, 1967:173 (Bulgaria: Slanchev Bryag near Nessebar); de Beaumont, 1967a:321 (Turkey), 1969:89 (Turkey); Balthasar, 1972:340 (in Sphecida Fauna of Czechoslovakia: may be expected in the country); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Gayubo and Özbek, 2005:15 (Turkey: Artvin: Ardanuç, Erzurum: Pazaryolu); Bitsch, 2014:399 (observations from Greece by Standfuss and Standfuss, 2012 reported); Mokrousov and Popov, 2016:571 (Russia: Krasnodarskiy Krai); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:12 (Turkey: Erzurum Province); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia). – **As *Synneurus militaris***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Tormos and Jiménez, 1987b:316 (Spain: Provincia Valencia: Dehesa de El Saler); Pagliano, 1990:69 (in catalog of Italian Sphecidae); Pagliano, 1992a:36 (in key to Italian *Nyssoninae*); Negrisolò *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:173 (in Sphecida Fauna of Western Europe); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:109 (Greece); Nemkov, 2001:9 (in revision of *Synneurus* of Russia and neighboring countries); Generani, Pagliano, Scaramozzino, and Strumia, 2003:64 (Italy: Arcipelago Toscano); Pagliano and Negrisolò, 2005:131 (in Sphecida Fauna of Italy); Ljubomirov and Yildirim, 2008:73 (in catalog of Crabronidae of Turkey); Shorenko, 2009:368 (in list of Sphecidae s.l. of Crimea); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent records from Italy and Greece reported); Tüzün and Yüksel, 2010:4473 (Turkey: Niğde Province); Standfuss and Standfuss, 2012:427 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Yildirim, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:151 (in checklist of Hymenoptera of Turkey).

61. *mimulus* Valkeila

Nysson handlirschi Westerlund, 1896: 28 (Finland: no specific locality). Nomen nudum.

As *Nysson friesei*: Hellén, 1955a:125 (redescription of specimens discussed by Westerlund, 1896:28).

Nysson handlirschi Hellén, 1955a:125, ♀, ♂ (validation of Westerlund's 1896 nomen nudum, as synonym of *Nysson friesei*), junior primary homonym of *Nysson handlirschi* Schmiedeknecht, 1896. Syntypes: Finland: twelve localities including Rantasalmi (Univ. Helsinki). Synonymized with *Nysson mimulus* by Valkeila, 1964:197.

As *Nysson* sp. pr. *pratensis* Mercet: Valkeila, 1962b:67 (southwestern Finland).

Nysson mimulus Valkeila, 1964:197, ♀, ♂. Holotype: ♀, Finland: Mikkeli Province: Rantasalmi at 62°06'N 28°20'E (Univ. Helsinki). – Hellén, 1966:83 (recently recorded from Finland, misspelled *minutus*); Oehlke, 1970:702 (not recorded from Democratic Germany); Balthasar, 1972:341 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Lomholdt, 1975c:215 (in Sphecidae Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pulawski, 1978:212 (in key to Sphecidae of European part of former USSR); Dathe, 1980:208 (Russia: northern Caucasus: Teberda); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria: Niederösterreich: Guntramsdorf); Vikberg, 1986:78 (Finland); Jacobs and Oehlke, 1990:206 (unknown from Democratic Germany); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Kuhlmann, 1993:77 (Germany: known from Westfalen); Woydak, 1996:91 (Germany: Westfalen: Siegen), 104 (not recorded after 1950); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:159 (in Sphecidae Fauna of Western Europe); Ljubomirov, 1999b:56 (Bulgaria: Mount Vitosha near Sofia); Blösch, 2000:366 (in Sphecidae Fauna of Germany); Ohl et al., 2001:140 (distribution in Germany by provinces); Lukáš, 2002:191 (Slovakia: Hájníca hill near Trenčianske Bohuslavice); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Hellqvist, 2004:42 (Sweden: Svedjebo); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Liška, 2006:88 (Slovakia: Váh river valley near Trenčín); Jacobs, 2007:163, 167 (in key to Crabronidae of Germany, not yet found in Germany); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Slovakia), 233 (first recorded from Slovakia by Lukaš, 2002, and Liška, 2006); Nemkov, 2008d:218 (in key to *Nysson* of Russia), 219 (bibliographic references, Bulgaria: Mount Vitosha near Sofia, Russia: Leningrad Oblast': Sivierskiy, geographic distribution); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: presence in Germany questionable, recent records from Bulgaria and Sweden reported); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Hellqvist, Abenius, and Norén, 2014:90 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).

62. *minutus* Arnold

Nysson minutus Arnold, 1929a:227, ♂. Holotype: ♂, Zimbabwe: Sawmills (SAM). – Arnold, 1930:18 (in checklist of Afrotropical Sphecidae). – Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:227 (in checklist of world Sphecidae).

63. *monachus* Mercet

Nysson monachus Mercet, 1909a:508, ♂, ♀. Syntypes: Spain: Madrid: Escorial (MNCN). – Mercet, 1909a:623, 627 (in key to Spanish *Nysson*); Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:162 (in Sphecidae Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Nouvel and Ribaut, 1958:12 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1962b:35 (Spain, Italy), 1965a:38 (member of *monachus* species group); Nouvel, 1969:337 (France); Diniz, 1973:49 (Portugal: Lagoa de Albufeira, Lisboa, Rezende, Serra da Boa Viagem); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pagliano, 1980:113 (Italy: Lazio), 1990:68 (in catalog of Italian Sphecidae); Gayubo, 1982b:36 (Spain: Salamanca: Nava de Béjar, Santibáñez de Béjar); Martín Albaladeo and Izquierdo Moya, 2006:125 (type in Museo Nacional de Ciencias Naturales); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent records from

France, Greece, and Spain reported); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:500 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire), 501 (exclusive species of burned areas); Bitsch, 2014:400 (France: Aude: Montredon-des-Corbières); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae). – **As *Synnevrus monachus***: Gayubo, 1992b:89 (new combination); Negrisola *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:173 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer), 2017:16 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Mas Larrieu).

64. *nanus* Handlirsch

Nysson nanus Handlirsch, 1898b:486, ♀. Holotype: ♀, Algeria: Oran Province (NHMW). – Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

65. *neorusticus* R. Bohart

Nysson neorusticus R. Bohart, 1968a:331, ♂, ♀. Holotype: ♂, USA: California: Yolo County: Davis (UCD). Paratypes: California, Nevada, Oregon, Utah, Wyoming. – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Ratzlaff, 2016:24 (first record from: British Columbia: Georgia Depression and Southern Interior Mountains), 32 (British Columbia: locality records).

66. *niger* Chevrier

Nysson niger Chevrier, 1868:383, footnote, ♀, ♂. Substitute name for *Nysson interruptus* of Wesmael, 1832:93 (Bruxelles). – Kohl, 1880:170 (Austria: Italy: Trentino–Alto Adige), 1883e:666 (Switzerland); Handlirsch, 1887:273 (in revision of world Bembicinae); Kohl, 1893a:28 (Austria: Niederösterreich: Piesting and Arnsdorf); Handlirsch, 1895:815 (additional bibliography); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus); Dalla Torre, 1897:573 (in catalog of world Sphecidae); Schmiedeknecht, 1907:227, 229 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Birula, 1912:541 (Ukraine: Zhytomyr Oblast': Radomyshl'); Haupt, 1913:50 (Germany: Sachsen-Anhalt: Bitterfeld in Halle area); Noskiewicz, 1918:137 (Galicia, now western Ukraine: Brzuchowice near Lwów); Stöckert, 1919:40 (Germany: Franken); Dubois, 1921c:206, 207 (in key to Belgian Sphecidae); Berland, 1925d:104 (in Sphecid Fauna of France); Strohm, 1925:211 (Germany: Baden-Württemberg: Ithringen); Schmiedeknecht, 1930:689, 691 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:70 (in revision of Sphecidae of Finland); Bondroit, 1932:33 (Belgium: recorded from Bruxelles area by Wesmael); Giordani Soika, 1932a:22 (Italy: Lido di Venezia; determination tentative); Forsius *in* Forsius and Helén, 1935:11 (in checklist of Hymenoptera of Finland); Vergne, 1935:118 (France: Auvergne: Clermont-Ferrand); Crèvecoeur and Maréchal, 1936:253 (in catalog of Belgian Hymenoptera); Zavadil, Šustera, and Baťa, 1937:198 (in catalog of Sphecidae of Czechoslovakia); Kuntze and Noskiewicz, 1938:407 (Poland: Podole region, now Ukraine, also known from more northern parts of Poland); Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae); Paul, 1941:45 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Schneid, 1941:1044 (Germany: Bayern: Bamberg area); Balthasar, 1943:42 (Czech Republic: Moravia: Zlin area); Yasumatsu, 1943:21 (China: Inner Mongolia); Zavadil *in* Zavadil and Šnoflák, 1948:158, 159 (in key to Sphecidae of Czechoslovakia); Wolf, 1951:79 (host: *Hoplisoides punctatus*); Blüthgen, 1952b:35 (probable host: *Hoplisoides punctuosus*); Steiner, 1955:146 (France: Dordogne); Vogrin, 1955:36 (Yugoslavia); Bajári, 1957a:113, 116 (in key to Hungarian Sphecidae), 1957b:141 (first record from Hungary); Wolf, 1959b:29 (Germany: Nassau Region); Noskiewicz and Puławski, 1960:102, 105 (in key to Polish Sphecidae); Scobiola, 1960a:172 (Romania: Prahova Region: Sinaia); Valkeila, 1962b:67 (southwestern Finland); de Beaumont, 1964c:61 (in Sphecid Fauna of Switzerland), 1965a:37 (Greece); B. Klug, 1965:136 (Germany: Baden-Württemberg: Freiburg im Breisgau area); Evans, 1966d:86 (host relationships); Lefeber, 1966:209 (first record from Netherlands: St. Pietersberg); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); Gauss, 1967:553 (Germany: Baden-Württemberg:

Kaiserstuhl, Vorbergzone); J. Heinrich, 1967:73 (Germany: Aschaffenburg, Kahl; host: *Hoplisoides punctatus*); Lefeber, 1967b:182 (Netherlands: St. Pietersberg, probable host: *Gorytes laticinctus*); Niedl and Deneš 1967:83 (Czech Republic: Třeboň area); Lefeber, 1968a:5 (Netherlands: St. Pietersberg); Dathe, 1969:439 (Germany: Berlin Zoological Garden); Lefeber, 1969c:233 (Netherlands: St. Pietersberg = Montagne Saint Pierre); Lefeber and Petit, 1970:130 (Belgium: Plombières); Oehlke, 1970:702 (Democratic Germany); Tumšs, 1970:80 (first record from Latvia); Lefeber, 1971a:17 (Belgium: Bassenge, Plombières), 1971b:222 (Belgium: Eben); Balthasar, 1972:339 (in Sphecidae Fauna of Czechoslovakia); Kazenas, 1972b:153 (Kazakhstan); Scobiola-Palade, 1972b:253 (Romania); Kazenas, 1974b:110 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, in Kazakhstan); Lomholdt, 1974:201 (map of distribution in Fennoscandia and Denmark), 1975c:212 (in Sphecidae Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kolesnikov, 1977:318 (Russia: Bryansk Oblast); Kazenas, 1978b:92, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Leclercq, 1978b:map 1174 (distribution in Belgium); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Schwammler, 1978:417 (Germany: Württemberg); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 51 (Netherlands: distribution map); Schmidt, 1979b:336 (Germany: Baden-Württemberg); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria); Józán, 1983:101 (Hungary), 1985b:60 (Hungary: Darány: Barcsi borókás), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Vikberg, 1986:78 (Finland); Karsai, 1988:101 (Hungary: Kiskunság National Park); Kowalczyk, 1988b:65 (Poland: environs of Łódź); Nilsson, 1988:98 (Sweden), 1989:47, 48 (Sweden); Jacobs, 1989:25 (Germany: Mecklenburg-Vorpommern); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Jacobs and Oehlke, 1990:206 (new records from Democratic Germany); Kowalczyk, 1990:291 (Poland: Góry Świętokrzyskie); Pagliano, 1990:68 (in catalog of Italian Sphecidae, as *neiger*); Schwammler and Priesner, 1990:551 (Austria: Kärnten); Day, 1991:xvii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Kowalczyk, 1991a:105 (Poland: Łódź), 1991b:120 (Poland: Augustów Forest); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Józán, 1992b:175 (Hungary: Boronka-melléki Protected Area); Pagliano, 1992a:33, 35 (in key to Italian Nyssoninae); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Dollfuss, 1994:102 (endangered in Austria); Kowalczyk, 1994:74 (Poland: Łagiewniki forest in Łódź); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:30 (Germany: Bayern: Kahl, Klingenberg, Mainfranken, Obernau; Nordrhein-Westfalen: Siegen); Schmid-Egger, Risch, and Niehuis, 1995:198 (Germany: summary of records from Rheinland-Pfalz); Skibińska, 1995:424, 425 (Poland: pine forest in Białowieża Primeval Forest); Arens, 1996:442 (Germany: Bayern: Bayreuth area); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996b:400 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Witt, 1996:106 (Germany: Brandenburg), 110 (locality records); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:161 (in Sphecidae Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); Blösch, 1998:168 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); Gusenleitner, 1998:499 (Austria: Oberösterreich: Adamshaufen); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Gusenleitner, 1999:594 (Austria: Oberösterreich: Eibenstein near Summerau); Neumayer, Schwarz, and Bregant, 1999:224 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:111 (in catalog of Belgian aculeates); Blösch, 2000:366 (in Sphecidae Fauna of Germany); Dressler, 2000:33 (Germany: Hessen: Darmstadt area); Jacobs, 2000:8 (Germany: Land Mecklenburg-Vorpommern: vulnerable); Mokrousov, 2000b:31 (Russia: Nizhniy Novgorod Oblast); Schmid-Egger, 2000b:275 (Germany: Baden-Württemberg: shores of Rhine River); Ivanov and Ljubomirov, 2001:212 (Bulgaria: Kresna

Gorge at 41°48'N 23°10'E); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Ljubomirov, 2001b:52 (Bulgaria: Mount Vitosha near Sofia); Ohl et al., 2001:140 (distribution in Germany by provinces); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Szczepko and Kowalczyk, 2001:189 (Poland: Kampinos National Park near Warszawa); Herrmann and Zinnert, 2002:26 (Germany: Baden-Württemberg: Bettenberg near Konstanz); Kazenas, 2002a:114 (geographic distribution, collecting localities in Kazakhstan); Mokrousov, 2002:150 (Russia: Nizhniy Novgorod Oblast': Kerzhenskiy Nature Reserve); Shlyakhtenok and Skibinska, 2002:35 (Belarus': no specific locality); Wiśniowski, 2002:73 (Poland: Ojców National Park); Cölln, Esser, and Jakubzik, 2003:62 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); Wiśniowski *in* Dylewska and Wiśniowski, 2003:175 (Poland: Ojców National Park); Abenius, 2004:40 (Sweden: Norrbottens: Luleå area); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Szczepko and Kowalczyk, 2004:127 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:50 and 62 (in checklist of Polish Sphecidae); Burger, 2005:34 (Germany: Thüringen); Kofler, 2005:183 (Austria: Tirol: Lienz District: Aguntum in Dölsach Common, Lavant, Nikolsdorf); Pagliano and Negrisolò, 2005:127 (in Sphecid Fauna of Italy); Reder, 2005:951 (Germany: Rheinland-Pfalz: Eisenberg); Saure, 2005:17 (Germany: Berlin); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Budrys, 2006:80 (Lithuania: Šalčininkai District at 54°10'27"N 25°42'08"E); Gorobchishin, 2006:136 (Ukraine: village Kruglyk near Kyiv); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Liška, 2006:88 (Slovakia: Váh river valley near Trenčín); Shlyakhtenok, 2006:113 (Belarus': Polesye Radiological Nature Reserve); Dvořák, Straka, Smetana, Halada, Vepřek, and Karas, 2007:169 (Czech Republic: Vyšenské Kopce National Nature Reserve); Jacobs, 2007:162, 165 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Theunert, 2007c:97 (Germany: Niedersachsen: Isernhagen); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Bohemia and Moravia); Dvořák, Bogusch, Malenovský, Bezděčka, Bezděčková, Holý, Liška, Macek, Roller, Říha, Smetana, Straka, and Šima, 2008:66 (Czech Republic: Hády Hill near Brno); Nemkov, 2008d:218 (in key to *Nysson* of Russia), 219 (bibliographic references, locality records from Kazakhstan, Russia, and Tajikistan, detailed geographic distribution); Shcherbakov, 2008:211 (Russia: Moscow Oblast': Nikol'skoye near Zelenograd); Theunert, 2008:59 (Germany: map of distribution in Niedersachsen and Bremen); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen); Józán, 2009:167 (Croatia: Salakovci); Pagliano, 2009:177 (Italy: recorded from Trentino-Alto Adige by Kohl, 1880); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent records from Bulgaria and Lithuania reported; France: first records from Aisne: Rocourt-Saint-Martin, and Haut-Rhin: Munster); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Hable, Wickl, Krauss, and von der Dunk, 2010:27 (Germany: Bayern: Sulz- and Ottmaringer Tal); Jakubzik and Cölln, 2010:1187 (Germany: Rheinland-Pfalz: Bruchertseifen near Altenkirchen); Mokrousov, 2010a:61 (Russia: Nizhniy Novgorod and Vladimir Oblast's, Chuvash Republic: no specific localities); Rudoiskatel', 2010:151 (Russia: central and southern Ural Mountains); Saure, 2010a:88 (Germany: Berlin-Reinickendorf: Baumberge); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: relatively common); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein: locality records); Gogala, 2011:29 (Slovenia: Moraž, Podčetrtek); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Mokrousov, Berezin, and Egorov, 2011:68 (Russia: Chuvash Republic); Saure, 2011c:199 (Germany: Berlin-Spandau: Fort Hahneberg); Schmid-Egger, 2011c:556 (Austria: Tirol: Tiroler Lech Nature Park); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:149 (Germany: Hessen: not endangered); Piguët and Dodelin, 2012:285 (France: Seine-Maritime: côteaux de Saint-Adrien); Shlyakhtenok, 2012a:171 (Belarus': collected in private plots);

Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Danilov and Odintseva, 2013:333 (Russia: Western Siberia: 65 km NNE Tobol'sk at 58°45'N 68°74'E); Pankov, 2013:229 (Russia: Ivanovo Oblast'); Saure, 2013:20 (Berlin: Treptow-Köpenick: Gosener Wiesen); Shlyakhtenok, 2013:225 (in annotated catalog of aculeate wasps of Belarus'); Wiśniowski and Szczepko, 2013:41 (Poland: Kampinos National Park near Warszawa); Bitsch, 2014:400 (records from France by Buirguet, 2010 and by Piguët and Dodelin noted; France: Lozère: Saint-Étienne-Vallée-Française); Hellqvist, Abenius, and Norén, 2014:91 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia, as *niger niger*).

***niger pekingensis* Tsuneki**

Nysson niger pekingensis Tsuneki, 1971m:12, ♀. Holotype: ♀, Beijing: Tiendang (Ent. Lab. Kyushu Univ.). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Hua, 2006:281 (in list of Chinese insects, geographic distribution).

67. *ohli* (Schmid-Egger)

Synnevrus ohli Schmid-Egger, 2011b:592, ♂. Holotype: ♂, United Arab Emirates: Dubai/al-Awir (ZMHU). – Schmid-Egger, 2011a:591 (color photograph of male head and thorax), 594 (color photograph of male). – As *Nysson ohli*: Nemkov, 2017a:Table p. 9 (new combination, in zoogeographic analysis of Palearctic Bembicinae).

68. *paralias* Standfuss

Nysson paralias Standfuss, 2010:113, ♀, ♂. Holotype: ♂, Greece: southeastern Thessalia: Liri at approximately 39°N 23°E (K. Standfuss personal collection, Dortmund, Germany). – Standfuss and Standfuss, 2012:427 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Bitsch, 2014:400 (description of this species noted); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

69. *parietalis* Mercet

Nysson parietalis Mercet, 1909a:507, ♂. Holotype or syntypes: ♂, Spain: Madrid: Alberche (MNCN). – Mercet, 1909a:622 (in key to Spanish *Nysson*); Maidl and Klima, 1939:127 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:162 (in Sphecid Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); de Beaumont, 1965a:38 (probable member of *quadriguttatus* species group); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Gayubo, 1982e:106 (Spain: Cádiz Province); Tormos, Asís, and Gayubo, 1994:189, 218 (Spain: Albacete Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:161 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Gonzáles, Gayubo, and Tormos, 2000:21 (Andorra: Santa Coloma); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent records from Andorra and Spain reported); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:500 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Standfuss and Standfuss, 2012:427 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E), 2017:532, 533 (in key to European *Nysson* with short anal cell), 533 (description of Greek population); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

70. *plagiatus* Cresson

As *Nysson aurinotus*: Packard, 1867:440 (in revision of North American Crabronidae), corrected to *Nysson plagiatus* by Cresson, 1882b:276.

Nysson plagiatus Cresson, 1882b:276, ♀, ♂. Lectotype: ♀, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1916:98. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:348 (in revision of world Bembicinae); W. Fox, 1896c:13 (in revision of North American *Nysson*); Dalla Torre, 1897:573 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); J. Smith, 1900:521 (in list of insects of New Jersey); H. Smith, 1908b:3340 (in revision of Nebraskan Sphecidae); J. Smith, 1910:680 (in new list of insects of New Jersey); Mickel, 1918b:350 (in catalog of Nebraskan Sphecidae); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); Hendrickson, 1930:158 (Iowa); Maidl and Klima, 1939:127 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); Ristich, 1953:380 (nest parasite of *Sphex ichneumoneus*); Evans, 1975a:(263 (host: *Sphex ichneumoneus*); Ratzlaff, 2016:24 (Canada: first record from British Columbia: Southern Interior), 33 (British Columbia: Keremeos). – *As Synnevrus plagiatus*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera); Finnamore, 1982:212 (in Sphecid Fauna of Southern Quebec); Radović, 1985:65 (sting apparatus analyzed); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 64 (first record from Ontario: list of localities).

71. *pratensis* Mercet

Nysson pratensis Mercet, 1909a:511, ♀, ♂. Syntypes: Spain: Escorial (MNCN). – Mercet, 1909a:620, 628 (in key to Spanish *Nysson*); Maidl and Klima, 1939:127 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:161 (in Sphecid Fauna of Spain); Ceballos, 1956:380 (in catalog of Hymenoptera of Spain); Valkeila, 1964:202 (redescription); de Beaumont, 1965a:38 (member of *variabilis* species group); Diniz, 1973:49 (Portugal: Cascais, Rezende); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Gayubo, 1982b:36 (Spain: Salamanca: Cabeza de Béjar, Fresnedoso, Valdefuentes de Sangusín); Torregrosa, Gayubo, Tormos, and Asís, 1993:20 (Spain: Alicante Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:162 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Gayubo, González, and Torres, 2000:187 (Spain: Salamanca Province); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo et al. 2004:130 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Gayubo and Özbek, 2005:15 (first record from Turkey: Erzurum: University campus); Standfuss and Standfuss, 2006c:304 (first record from Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:70 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Bitsch, 1910:110 (in supplement to vol. II of Faune de France, 1997: recent records from Greece and Spain reported); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:500 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Standfuss and Standfuss, 2012:428 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E: addition to flight period); Vieira, Oliveira, Brewster, and Gayubo, 2013:16 (Portugal: Douro International Natural Park); Yildirim, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae); Fresno, 2018:233 (Spain: Ávila: Arévalo, Bohoyo; Cáceres: Grimaldo; León: Sena de Luna; Madrid: Tres Cantos; Murcia: El Sabinar; Segovia: Maderuelo; Zamora: Barcial del Barco).

72. *pumilus* Cresson

Nysson pumilus Cresson, 1882b:283, ♂. Holotype: ♂: USA: Nevada: no specific locality (ANSP). – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:405 (original description translated into German); W. Fox, 1896c:16 (in revision of North American *Nysson*); Dalla Torre, 1897:573 (in catalog of world Sphecidae);

Cresson, 1916:98 (holotype in ANSP); Bradley, 1920:125 (California, description of female; as *pumilis*); Maidl and Klima, 1939:144 (in catalog of world Astatinae and Bembicinae, in subgenus *Brachystegus*); Krombein in Muesebeck et al., 1951:984 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Rust, Menke, and Miller, 1985:47 (California: Channel Islands). – **As *Brachystegus pumilus***: Ashmead, 1899d:329 (new combination, in checklist of North American Crabronidae).

73. *pusillus* de Beaumont

Nysson pusillus de Beaumont, 1953g:116, ♀, ♂. Holotype: ♀, Morocco: Agadir (Lausanne). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:162 (in Sphecid Fauna of Western Europe); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

74. *quadricolor* Arnold

Nysson quadricolor Arnold, 1951:122, ♀. Holotype: ♀, Mali: Tillembeya, now Diafarabé, approximately 14°N 4°W (BMNH). – **As *Synnevrus quadricolor***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

75. *quadriguttatus* Spinola

Nysson quadriguttatus Spinola, 1807:43, ♀. Lectotype: ♀, Italy: Liguria (Torino), designated by de Beaumont, 1952e:41. – Vander Linden, 1829:36 (bibliographic references, Belgium: Bruxelles, southern France, Italy); Dahlbom, 1843:172 (in revision of Sphecidae and Pompilidae); Spinola, 1844:... (as variety of *Nysson dimidiatus*); nec Schenck, 1857:160 (= *Nysson tridens*); Schenck, 1860:148 (Germany: Nassau Region); A. Costa, 1867c:57 (in revision of Italian Sphecidae); Chevrier, 1867b:23 (in revision of Swiss *Nysson*, Switzerland: Genève area); Gerstaecker, 1867b:108 (in revision of *Nysson*); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:354 (Germany: Nassau Region); A. Costa, 1869b:73 (in revision of Italian Sphecidae); Wierzejski, 1874:260 (Ukraine: Bucyki; determination tentative); Friese, 1883:202 (Germany: Sachsen-Anhalt: Kösen; Thüringen: Gumperda); Kohl, 1883e:666 (Switzerland, as *4-guttatus*); Handlirsch, 1887:382 (in revision of world Bembicinae, as *quadriguttatus* Gerstaecker); Baldini, 1894:65 (Italy: Modena area; determination tentative); Engel, 1894:53 (Germany: Hagen near Hamburg); Handlirsch, 1895:821 (Gerstaecker's specimen examined); Dalla Torre, 1897:573 (in catalog of world Sphecidae, as *quadriguttatus* Handlirsch); Schmiedeknecht, 1907:228 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera, as *4-guttatus*); W. Schulz, 1911a:68 (Schenck's material of 1857 not found in Zool. Inst. Marburg Univ.), 1911b:179 (discussion of the name's validity, type missing in M. Spinola collection), 1912:95 (Dahlbom's specimen missing in Lund); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Schmiedeknecht, 1930:689 (in keys to Hymenoptera of North and Central Europe, as *quadriguttatus* Gerstaecker); nec Zavadil, 1937a:72 and 1937b:119 (= *Nysson hrubanti*); Zavadil, Šustera, and Bat'a, 1937:198 (in catalog of Sphecidae of Czechoslovakia); Maidl and Klima, 1939:127 (in catalog of world Astatinae and Bembicinae); Ribaut, 1946:271 (first record from France: Haute-Garonne: Saint-Béat); Zavadil in Zavadil and Šnoflák, 1948:159, 160 (in key to Sphecidae of Czechoslovakia); Sanders, 1949:98 (first record from Netherlands: Lerop and Spar-Haelen), 99 (species characteristics); de Beaumont, 1952e:41 (lectotype of *quadriguttatus* is identical with *quadriguttatus* of Gerstaecker); Nouvel and Ribaut, 1953:178 (France: Haute-Garonne: Saint-Béat); Balthasar, 1958:337 (Slovakia: Gbelce); Benno, 1958b:10 (in review of Dutch Sphecidae); Wolf, 1959b:29 (known from Germany, but not from Nassau Region; as *quadriguttatus* Gerstaecker); Noskiewicz and Puławski, 1960:102, 105 (in key to Polish Sphecidae, not yet found in Poland); de Beaumont, 1965a:38 (member of *quadriguttatus* species group); Benno, 1967:34 (in checklist of Sphecidae of Netherlands, as *quadriguttatus* Gerstaecker); Oehlke, 1970:702 (Democratic Germany; as *quadriguttatus* Gerstaecker); Balthasar, 1972:345 (in Sphecid Fauna of Czechoslovakia); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kolesnikov, 1977:318 (Russia: Bryansk Oblast); Kazenas, 1978b:90, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Lefeber, 1979:11 (in

checklist of Sphecidae of Netherlands), 52 (Netherlands: distribution map); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Jacobs and Oehlke, 1990:122 and 206 (not collected in Democratic Germany after 1960); Pádr, 1990:72 (Czech Republic: Praha area); Pagliano, 1990:68 (in catalog of Italian Sphecidae); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Schmidt, Schmid-Egger, and Doczkal, 1995:9 (*Nysson quadriguttatus* in Dollfuss, 1991, must be either *bohemicus* or *hrubanti*); Schmid-Egger, 1996b:30, 32 (redescription, new records from Germany, Hungary, and Macedonia); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:163 (in Sphecid Fauna of Western Europe); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Blösch, 2000:367 (in Sphecid Fauna of Germany); Esenbekova and Kazenas, 2000:57 (southeastern Kazakhstan: near Alma Ata, 20 km W, 5-8 km S, and 10 km SW Alma Ata); Ohl et al., 2001:140 (distribution in Germany by provinces); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:135 (Kazakhstan: Almatinskiy Nature Reserve); Kazenas, 2002a:114 (geographic distribution, collecting localities in Kazakhstan); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:68 (Germany in catalog of wasps and bees of Bayern); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: extinct or no longer collected); Kazenas, 2004b:109 (Kazakhstan: western Tien Shan); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Burger, 2005:34 (Germany: Thüringen); Pagliano and Negrisolo, 2005:128 (in Sphecid Fauna of Italy); Gorobchishin, 2006:136 (Ukraine: Kyiv Oblast': villages Khotov and Kruglyk); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Jacobs, 2007:162, 166 (in key to Crabronidae of Germany); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Bohemia and Slovakia); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:217 (in key to *Nysson* of Russia), 219 (bibliographic references, locality records from Kazakhstan, Russia, Uzbekistan, detailed geographic distribution); Nemkov, 2009b:130 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Bitsch, 2010:110 (in supplement to vol. II of Faune de France, 1997: recent records from Greece reported); Rudoiskatel', 2010:152 (Russia: southern Ural Mountains, , as *quadriguttatus* Gerstaecker); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: relatively common, as *quadriguttatus* Gerstäcker); Tischendorf, Frommer, Flügel et al., 2011:91 (Germany: Hessen: insufficient data); Standfuss and Standfuss, 2012:427 (to be removed from list of sphecids of Magnisia Peninsula, Greece); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Bitsch, 2014:400 (not occurring in Greece: Thessalia according to Standfuss and Standfuss, 2012); Reder and Niehuis, 2014:7 (Germany: Baden-Württemberg: Merdingen); Standfuss and Standfuss, 2017:531, 532 (in key to European *Nysson* with short anal cell); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).

? *Nysson quadriguttatus* Olivier, 1812a:409, sex not indicated, junior primary homonym of *Nysson quadriguttatus* Spinola, 1808. Syntypes: southern France and Italy: no specific locality (lost). Tentatively synonymized with *Nysson quadriguttatus* Spinola by Handlirsch, 1887:382.

76. *recticornis* Bradley

Nysson recticornis Bradley, 1920:127, ♂. Holotype: ♂, USA: California: Santa Cruz County: Felton (Cornell Univ.). – Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Ratzlaff, 2016:24 (first record from Canada: British Columbia: Southern Interior), 33 (British Columbia: Osoyoos, Penticon).

77. *roubali* Zavadil

Nysson roubali Zavadil, 1937b:118, ♂. Holotype: ♂, Czechoslovakia: Slovakia: Seleška (NMPC). – Zavadil, 1937a:73 (eastern Slovakia); Maidl and Klima, 1939:127 (in catalog of world Astatinae and Bembicinae); Zavadil *in* Zavadil

and Šnoflák, 1948:161 (in key to Sphecidae of Czechoslovakia); Bajári, 1957a:115 (in key to Hungarian Sphecidae); Valkeila, 1964:204 (in key to European species of *variabilis* group); de Beaumont, 1965a:38 (member of *variabilis* species group); Balthasar, Hrubant, and Hrubant, 1967:173 (Bulgaria: Slanchev Bryag near Nessebar, description of ♀); Balthasar, 1972:344 (in Sphecid Fauna of Czechoslovakia); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pulawski, 1978:212 (in key to Sphecidae of European part of former USSR); Józán, 1985b:60 (recorded from Simontornya by Bajári, 1957), 84 (ecological and zoogeographic characteristics); Karsai, 1988:101 (Hungary: Kiskunság National Park); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Schmid-Egger, 1996b:31, 32 (in key to Central European *Nysson*); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:163 (in Sphecid Fauna of Western Europe); Józán, 2000:112 (Hungary: Bakony Mountains: Balatonfüred, Balatonfűzfő); Ljubomirov, 2001b:52 (Bulgaria: Mount Vitoshka near Sofia); Józán, 2002:54 (Hungary: Mecsek Mountains); Standfuss and Standfuss, 2006c:304 (first record from Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Vepřek and Straka, 2007:208 (in catalog of Sphecidae of Czech Republic and Slovakia, known from Slovakia only); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent record from Greece reported); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Standfuss and Standfuss, 2012:428 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E: addition to flight period); Haris, 2016:27 (in list of species described by V. Zavadil from Carpathian Basin); Mokrousov, Shlyakhtenok, and Grebennikov, 2016:21 (first record from Russia: Astrakhan' Oblast': Zelenyi Sad at 48.06°N 46.902°E and Volgograd Oblast': Kotluban'); Standfuss and Standfuss, 2017:532 (in key to European *Nysson* with short anal cell); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).

Nysson roubali Zavadil *in* Zavadil, Šustera, and Bat'a, 1937:183. Objective synonym of *Nysson roubali* Zavadil, 1937b:118,

78. *rufiventris* Cresson

Nysson rufiventris Cresson, 1882b:283, ♀. Lectotype: ♀, USA: Montana: no specific locality (ANSP), designated by Cresson, 1916:98. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:406 (original description translated into German); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado); W. Fox, 1896c:15 (in revision of North American *Nysson*); Dalla Torre, 1897:574 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); H. Smith, 1908b:17 (in revision of Nebraskan Sphecidae); Mickel, 1918b:349 (in catalog of Nebraskan Sphecidae); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Krombein *in* Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera).

Plenoculus punctatus Ashmead, 1899c:338, ♀. Holotype: ♀, USA: Colorado: no specific locality (USNM). Synonymized with *Nysson rufiventris* by R. Bohart *in* R. Bohart and Menke, 1976:469. – Ashmead, 1899d:251 (in checklist of North American Crabronidae). – **As *Nysson punctatus***: Krombein *in* Muesebeck et al., 1951:983 (new combination, in catalog of North American Hymenoptera).

79. *rufoflavus* R. Bohart

Nysson rufoflavus R. Bohart, 1968a:322, ♂. Holotype: ♂, USA: Contra Costa County: Mount Diablo (UCD). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera).

80. *rufoniger* R. Turner

Nysson rufoniger R. Turner, 1912c:418, ♂. Holotype or syntypes: ♂, Zambia: Upper Luangwa River (BMNH). – Arnold, 1929a:226 (in revision of southern African Sphecidae s.l.), 1930:18 (in checklist of Afrotropical Sphecidae); Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae). – **As *Synnevrus rufoniger***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

81. *rufopictus* F. Smith

Nysson rufopictus F. Smith, 1856:356, ♀ (as *rufo-pictus*, incorrect original hyphenation). Holotype or syntypes: ♀, origin unknown (BMNH). – Gerstaecker, 1867b:122 (comments based on original description); Handlirsch, 1887:409 (original description translated into German); Dalla Torre, 1897:574 (in catalog of world Sphecidae); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae). – As *Synnevrus rufopictus*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae, Asian species?).

82. *rufus* Handlirsch

Nysson rufus Handlirsch, 1895:811, ♀. Holotype: ♀, Egypt: no specific locality (coll. Marquet, Lausanne). – Dalla Torre, 1897:574 (in catalog of world Sphecidae); Morice, 1921:823 (Iraq: Amara); Maidl and Klima, 1939:128 (in catalog of world Astatinae and Bembicinae); de Beaumont, 1952b:91 (type depository); Pulawski, 1964:76 (Egypt: Kom Osheim; description of ♂); Derwesh, 1965:70 (Iraq: no specific locality); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Roche, 2007a:106 and 2007b:7 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

83. *rugosus* Cameron

Nysson rugosus Cameron, 1890:242, ♀. Lectotype: ♀, India: Barrackpore (OXUM), designated by Krombein, 1985a:16. – Handlirsch, 1895:823 (original description translated into German); Bingham, 1897:269 (redescription); Dalla Torre, 1897:574 (in catalog of world Sphecidae); Rothney, 1903:105 (India: West Bengal: Barrackpore), 113 (collected in shadowed bank of fine earth near Pulta); Schulz, 1911:118 (erroneous synonymy with *Nysson doriae*); Pate, 1938:160 (tentatively assigned to *Brachystegus*); Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1985a:15 (Sri Lanka; redescription); van Vondel, 1995:30 (specimens from India in Natuurmuseum Rotterdam); Evans and O'Neil, 2007:70 (host is *Bembecinus* after Krombein, 1984b, 1985a).

Nysson horni Strand, 1913:11, ♀ (as *Horni*, incorrect original capitalization). Holotype: ♀, Sri Lanka: Matale (DEI). Synonymized with *Nysson rugosus* by Krombein, 1985a:15. – Ramakrishna Aiyar, 1916:556 (in catalog of Indian aculeates described after Bingham, 1897); Strand, 1927:254 (in list of species described by the author); Maidl and Klima, 1939:135 (in catalog of world Astatinae and Bembicinae); Oehlke and Wudowenz, 1974:423 (holotype and one paratype in DEI); R. Bohart and Menke, 1956:469 (in checklist of world Sphecidae); Krombein, 1984:11 (supposed synonymy of *horni* and *rugosus*; possible cleptoparasite of *Bembecinus*).

84. *ruspolii* von Schulthess

Nysson ruspolii von Schulthess, 1893:18, ♀ (as *Ruspolii*, incorrect original capitalization). Holotype: ♀, Ethiopia: (as Somaliland): Ogaden: no specific locality (originally von Schulthess collection, now Zurich). – Handlirsch, 1895:820 (original description copied, type studied); Dalla Torre, 1897:574 (in catalog of world Sphecidae); Arnold, 1930:18 (in checklist of Afrotropical Sphecidae); Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

85. *rusticus* Cresson

Nysson rusticus Cresson, 1882b:283, ♀, ♂. Lectotype: ♀, USA: Washington Territory: no specific locality (ANSP), designated by Cresson, 1916:98. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:406 (original description translated into German); nec Provancher, 1887:269 (= *Nysson gagates*); W. Fox, 1896c:14 (in revision of North American *Nysson*); Dalla Torre, 1897:574 (in catalog of world Sphecidae); Provancher, 1889:269 (...); Handlirsch, 1895:826 (Provancher's description translated into German); Ashmead, 1899d:329 (in checklist of North American Crabronidae); Rohwer, 1917a:248 (California: Tahoe); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Strickland, 1947:127 (Canada: Alberta); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); Evans, 1966d:86 (host relationships), 1970:494 (Wyoming: Jackson Hole, association with *Hoplisoides spilographus*); R. Bohart and Menke,

1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Evans and O'Neil, 2007:70 (host is *Hoplisoides spiloferus* after Evans, 1970).

ssp. *sphecodoides* Bradley

Nysson sphecodoides Bradley, 1920:126, ♂. Holotype: ♂, USA: California: Los Angeles County: Claremont (Cornell Univ.). – Rohwer, 1921b:408 (California); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera). – **As *Nysson rusticus sphecodoides***: R. Bohart in R. Bohart and Menke, 1976:469 (new status, in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera).

86. *ruthenicus* Birula

Nysson ruthenicus Birula, 1912:542, ♀, ♂. Syntypes: Ukraine: Zhytomyr Oblast': Radomyshl' (ZIN; lost?). – Maidl and Klima, 1939:128 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type series in NHMW); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

87. *schlingeri* R. Bohart

Nysson schlingeri R. Bohart, 1968a:323, ♂, ♀. Holotype: ♂, USA: Napa County: Samuel Springs, now bottom of Lake Beryessa (UCD). Paratypes: California. – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera).

88. *schmiedeknechtii* Handlirsch

Nysson schmiedeknechtii Handlirsch, 1900c:509, ♂ (as *Schmiedeknechtii*, incorrect original capitalization). Holotype: ♂, Tunisia: no specific locality (NHMW). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae).

89. *semenovi* (Nemkov)

Synevrus semenovi Nemkov, 2001:9, ♀. Holotype: ♀, Tajikistan: Khodja-Obigarm (ZIN). – **As *Nysson semenovi***: Nemkov, 2017a:Table p. 9 (new combination, in zoogeographic analysis of Palearctic Bembicinae)

90. *sexguttatus* Gussakovskij

Nysson sexguttatus Gussakovskij, 1952:268, ♀. Holotype: ♀, foothills of Hissar Mountains near Stalinabad, now Dushanbe (ZIN). – R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Nemkov, 2017a:Table p. 9 (in zoogeographic analysis of Palearctic Bembicinae).

91. *simplicicornis* W. Fox

Nysson simplicicornis W. Fox, 1896e:15, ♂. Lectotype: ♂, USA: Michigan: Ingham County: no specific locality (ANSP), designated by Cresson, 1928:48. – Ashmead, 1899d:329 (in checklist of North American Crabronidae); H. Smith, 1908b:340 (in revision of Nebraskan Sphecidae); Mickel, 1918b:349 (in catalog of Nebraskan Sphecidae); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); Krombein, 1954a:6 (West Virginia: Lost River State Park, 1958f:192 (in supplement to catalog of North American Hymenoptera: West Virginia); Kurczewski and Kurczewski, 1963:147 (Pennsylvania: Presque Isle State Park); Evans, 1970:494 (Wyoming: Jackson Hole); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Krombein, 1979b:1687 (in catalog of North American Hymenoptera); Wcislo, 1998:181 (proportions of antennae in relations to parasitic/non-parasitic behavior); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 63 (first record from Canada: Ontario: Brantford Railway Prairie, Windsor).

Brachystegus maculipes Mickel, 1916a:400, ♀. Holotype: ♀, USA: Nebraska: Omaha (UNL). Synonymized with *Nysson simplicicornis* by Krombein in Muesebeck et al., 1951:983. – Mickel, 1918b:351 (in catalog of Nebraskan

Sphecidae); Bradley, 1920:124 (comparison with *Nysson moestus*); Muma, 1952:17 (holotype in UNL), 24 (paratypes in UCL). – **As *Nysson maculipes***: Maidl and Klima, 1939:143 (new combination, in catalog of world Astatinae and Bembicinae, in subgenus *Brachystegus*).

Nysson minimus Rohwer, 1921b:408, ♀, junior primary homonym of *Nysson minimus* R. Turner, 1915. Holotype: ♀, USA: Missouri: St. Louis (USNM). Synonymized with *Nysson simplicicornis* by Krombein in Muesebeck et al., 1951:983.

Nysson kaskaskia Pate, 1938c:130. Substitute name for *Nysson minimus* Rohwer. – Maidl and Klima, 1939:137 (in catalog of world Astatinae and Bembicinae).

92. *spinosus* (J. Forster)

? *Vespa bidens* Linnaeus, 1767:951, sex not indicate. Holotype or syntypes: Sweden: no specific locality (lost, see Day, 1979:52). Tentatively synonymized with *Nysson spinosus* J. Forster by Dalla Torre, 1897:575. – Day, 1979:52 (type material presumably lost, possibly a *Nysson*). – Day and Fitton, 1978:194 (curation of Linnean type material: no specimens) – **As *Nysson bidens***: Aurivillius, 1904:268 (new combination, in revision of Swedish Sphecidae, with *spinosus* as synonym); Adlerz, 1910:38 (Sweden; nesting habits: nest parasite of *Argogorytes fargeii* and *mystaceus*); Jansson, 1934:290 (Sweden).

Sphex spinosus J. Forster, 1770:14. Nomen nudum.

Sphex spinosus J. Forster, 1771a:87, sex not indicated (as *spinosa*, incorrect original termination). Holotype: ♂, England: no specific locality (Linnean Soc. London). – Gmelin, 1790:2734 (redescription); Turton, 1801:496 (redescription); van der Vecht, 1959a:67 (valid name for the species); Day and Fitton, 1977:38 (study of holotype); Day and Fitton, 1978:197 (recuration of type material). – **As *Nysson spinosus***: Stephens, 1829:362 (new combination, in catalog of British insects), 1829b:33 (in checklist of British insects); F. Smith, 1851c:21 (Great Britain: no specific locality); Wesmael, 1852:87 (Belgium, redescription, as *spinosus* Panzer); F. Smith, 1853:63 (in checklist of British Hymenoptera), 1856:353 (in catalog of Hymenoptera in British Museum), 1858c:97 (in review of British Aculeata, redescription); Funk, 1859:59 (Germany: Bayern: Bamberg); A. Costa, 1864b:95 (specimen from Toscana, Italy, in Museo Zoologico di Napoli), 98 (specimen from Parma, Italy, in Museo Zoologico di Napoli), 1866:24 (specimen from France in Museo Zoologico di Napoli); Gerstaecker, 1867b:96 (in revision of *Nysson*); Kirchner, 1867:220 (in catalog of European Hymenoptera); Kohl, 1880:169 (Austria: Tirol, and Italy: Trentino-Alto Adige); Friese, 1883:202 (Germany: Sachsen-Anhalt: Merseburg); Kohl, 1883e:665 (Switzerland); Sickmann, 1883:82 (Germany: Niedersachsen: Wellingholthausen); Magretti, 1884b:106 (Italy: Firenze area; as *spinosus* Olivier); Handlirsch, 1887:337 (in revision of world Bembicinae); Kohl, 1888b:727 (Austria: Tirol, now Italy: Alto Adige); Radoszkowski, 1892:589 (male genitalia); Kohl, 1893a:28 (Austria: Niederösterreich); Sickmann, 1893:87 (Germany: Niedersachsen: Iburg); Krieger, 1894:9 (Germany: Kingdom of Saxony); De Stefani Perez, 1895:227 (in catalog of Sicilian Hymenoptera, as *spinosus* Latr.); Freke, 1895:281 (first record from Ireland: Dublin County: Glencullen); Handlirsch, 1895:813 (additional bibliography); W. Fox, 1896c:13 (in revision of North American *Nysson*); Meunier, 1896:272 (Belgium: Bruxelles area, as *spinosus* Panzer); Borries, 1897:672 (nesting habits unknown); Dalla Torre, 1897:575 (in catalog of world Sphecidae); Lüderitz, 1897:28 (Germany: Gollnow, now Poland: Pomorzanie Region: Goleniów); Mocsáry, 1897:81 (Kingdom of Hungary, one locality (Zagreb) is in today's Croatia); Flamar, 1898:38 (France: Saône-et-Loire: Mâcon area); Lange, 1898:70 (Germany: Sachsen: Annaberg-Buchholz); Ashmead, 1899d:329 (in checklist of North American Crabronidae [*sic*]); W. Evans, 1900:266 (Great Britain: Scotland: Aviemore); W. Schulz, 1904b:97 (Czech Republic: Moravy: no specific locality); Kubes, 1905:84 (Czech Republic: Kolín); Luff, 1907:39 (Great Britain: Island of Guernsey); Schmiedeknecht, 1907:226, 229 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Mercet, 1909a:620, 625 (in key to Spanish *Nysson*); Cavro, 1910:685 (France: Département du Nord); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:47 (Italy: Trieste area); Schirmer, 1912:167 (Germany: Berlin area); Kohl, 1913b:16 (Russia: Voronezh Oblast': Valuyki at 50°14'N 38°08'E); Szilády, 1913:89

(Hungary: Marosgombás); Alfken, 1914:280 (NW Germany); Zilahi Kiss, 1915:80 (Hungary: Bethlen, Hadad, Ferenczfalva); Dubois, 1919:96 (Belgium: Bruxelles: Uccle); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:34 (Germany: Lower Elbe region); Dubois, 1921c:206, 207 (in key to Belgian Sphecidae); Fahringer, 1922:181 (Turkey); Haines, 1922:13 (Great Britain: Dorset: parasite of *Argogorytes mystaceus*); Strand, 1922:197 (Germany: Bayern: Kulmbach); Alfken, 1924:231 (N Germany); Leininger, 1924:121 (Germany: Baden-Württemberg: Friedrichstal, Karlsruhe); Berland, 1925d:103 (in Sphecid Fauna of France); Coulon, 1925:120 (France); R. Perkins, 1925:154 (Great Britain: Somersetshire: Burnham and Kewstoke Woods); Schütze, 1925:113 (Germany: Lausitz Region); Shestakov, 1925:36 (Russia: Yaroslavl' area); K. Strohm, 1925:211 (Germany: Baden-Württemberg: Freiburg, Kaiserstuhl, Rheinvorland); Friese, 1926:158 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); K. Strohm, 1926:74 (reference to Roth von Schreckenstein, 1802); Bouwman, 1927:92 (in revision of Sphecidae of Netherlands); Crèvecoeur and Maréchal, 1929:167 (Belgium: Loën); Hamm and Richards, 1930:104 (nest parasite of *Argogorytes mystaceus*); Schmiedeknecht, 1930:688, 690 (in keys to Hymenoptera of North and Central Europe); Butterfield and Fordham, 1931:155 (Great Britain: Yorkshire); Pulkkinen, 1931:68 (in revision of Sphecidae of Finland); Spooner, 1931:14 (Great Britain: Cambridgeshire); Bondroit, 1932:33 (Belgium: Solbosch); Crèvecoeur and Maréchal, 1932:70 (in catalog of Belgian Hymenoptera); Bondroit, 1933:27 (Belgium: Bruxelles); Gussakovskij, 1933b:288 (Iran: Astrabad); Routledge, 1933:88 (England: Cumberland); Balles, 1934:20 (Germany: Baden-Württemberg: Achern, Hopfengarten, Oberachern, Sasbach); Grandi, 1934:129 (Italy: Emilia-Romagna: vicinity of Bologna, and Trentino-AltoAdige: Pinzolo); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Crèvecoeur and Maréchal, 1936:253, 254 (in catalog of Belgian Hymenoptera); Drogoszewski, 1936:130 (Poland: Łowicz); Dulac, 1937:11 (France: Saône-et-Loire: Bois des Gauthérons); Richards, 1937b:107 (in checklist of British aculeates); Zavadil, Šustera, and Bat'a, 1937:196 (in catalog of Sphecidae of Czechoslovakia); Guichard, 1938:72 (Great Britain: Norfolk coast); A. Wagner, 1938a:122 (northwestern Germany); Guichard, 1939b:78 (Great Britain: Surrey: Limpsfield Common); Maidl and Klima, 1939:128 (in catalog of world Astatinae and Bembicinae); Benno, 1940b:206 (Netherlands: Zevenaar); Dovnar-Zapolskiy, 1940:304 (Russia: Kursk Oblast'); Balthasar, 1941b:112 (Czech Republic: eastern Moravia); Kloet, 1941:235 (Great Britain: Wales: Fairbourne); Paul, 1941:45 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Schneid, 1941:1043 (Germany: Bayern: Bamberg area); Alfken, 1942:231 (Germany: Niedersachsen: Lüneburger Heide); Balthasar, 1942:5 (Czech Republic: Moravia); J. Perkins, 1942:199 (Sweden: southern Skåne); Benno, 1943:67 (Netherlands); Giner Marí, 1943a:158 (in Sphecid Fauna of Spain); Spooner, 1943:74 (Great Britain); Guiglia, 1944b:23 (Italy; variation in color and wing venation); Šnoflák, 1944a:144 (Czech Republic: serpentine steppe near Mohelno); T. Fletcher, 1945:54 (Great Britain: Gloucestershire: Bailey Lane End, Rodborough); Hallett: 1945:129 (Great Britain: Herefordshire: Hope Mansell, The Lea, and Ross-on-Wyne); R. Perkins, 1945:147 (Great Britain: Devon: moorland near Lydford); Spooner, 1946:27 (Britain: Leicestershire: Charnwood Forest); van Rossem, 1946b:61 (Netherlands: Wageningen, flying on 27 April); Carl and de Beaumont, 1947:68 (Switzerland: Graubünden = Grisons Canton: Swiss National Park); Móczár, 1947b:90 (Hungary: Siebenbürgen: Székelykeresztúr, now Romania: Transylvania: Cristuru Secuiese); de Hennin and Anciaux, 1948:76 (Belgium: between Sambre and Meuse rivers); Guichard and Yarrow, 1948:92 (Great Britain: London: Hampstead Heath); Zavadil *in* Zavadil and Šnoflák, 1948:157 (in key to Sphecidae of Czechoslovakia); Chambers, 1949:231 (Great Britain: Bedfordshire); Cavro, 1950:34 (France: Département du Nord); Szulczewski, 1950:107 (Poland: Wielkopolski National Park 15 km S Poznań); de Beaumont, 1951g:315 (Italy), 1951h:33 (Switzerland: Neuchâtel area); Wolf, 1951:79 (host: *Gorytes quadrifasciatus*); Blüthgen, 1952b:34 (probable host: *Argogorytes mystaceus*); Caruel, 1952a:62 (France: Marne Department); Głowacki, 1953:520 (Poland: Podkowa Leśna near Warszawa); de Beaumont, 1954e:89 (Italy); Grandi, 1954:234 (Italy); Yarrow, 1954b:169 (Great Britain: Hampstead Heath, now part of London); Aerts, 1955:62 (Germany: Rheinland); Steiner, 1955:146 (France: not found at Eyzies); Vergne, 1955:4 (France: Auvergne); Vogrin, 1955:36 (Yugoslavia);

Ceballos, 1956:381 (in catalog of Hymenoptera of Spain); Bajári, 1957a:111 (in key to Hungarian Sphecidae); Zirnigibl, 1957:182 (Germany: Rheinland-Pfalz: Landau, Marktredwitz); Benno, 1958b:10 (in review of Dutch Sphecidae); de Beaumont, 1958c:204 (Swiss National Park); Nelson, 1958:154 (Great Britain: Isle of Man); Grandi, 1959b:286 (Italy: Trento: Brusago); Wolf, 1959b:29 (Germany: Nassau Region); Hamann, 1960:199 (Austria: Oberösterreich: Mönchgraben at 48°13'N 14°21'E); Noskiewicz and Puławski, 1960:100, 104 (in key to Polish Sphecidae); Hoop, 1961:65 (Germany: Schleswig-Holstein: Felm, Kiel-Eichhof, Steinfurth, Westensee); Grandi, 1962:97 (Italy); Valkeila, 1962b:67 (southwestern Finland); Felton, 1963:179 (Great Britain: Kent County); Valkeila, Brander, and Käpylä, 1963:41 (Finland: historical region Lounais-Hämeen = southwest Häme); Babiý, 1964:117 (Austria: Land Salzburg); de Beaumont, 1964c:60 (in Sphecid Fauna of Switzerland), 1965a:36 (Greece); B. Klug, 1965:136 (Germany: Baden-Württemberg: Freiburg im Breisgau area); Roberti, Frilli, and Pizzaghi, 1965:110 (Italy: Emilia-Romagna: Biana in Piacenza Province); Evans, 1966d:86 (host relationships); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:320 (Turkey); Gauss, 1967:553 (Germany: Baden-Württemberg); J. Heinrich, 1967:73 (Germany: Bayern: Unterfranken District); Niedl and Deneš, 1967:83 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:49 (Romania); Lefeber, 1969c:233 (Netherlands: St. Pietersberg = Montagne Saint Pierre); Petit, 1969:72 (Belgium); Hoop, 1970:60 (Germany: Schleswig-Holstein: Suren-dorf); Lefeber and Petit, 1970:130 (Belgium: Plombières); Oehlke, 1970:703 (Democratic Germany); Tumšs, 1970:79 (Latvia); Schmidt, 1971b:31 (Germany: Mainz area); Vegter, 1971:229 (Netherlands: Drenthe Province); Balthasar, 1972:346 (in Sphecid Fauna of Czechoslovakia); Haeseler, 1972:155, 200 (Germany: Schleswig-Holstein; anthropogenic habitats); Kofler, 1972:106 (Austria: eastern Tirol); Diniz, 1973:49 (Portugal: Coimbra); Erlandsson, 1974:69 (Italy); Lefeber, 1975b:120 (Netherlands: Schiepersberg); Lomholdt, 1975c:209 (in Sphecid Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Leclercq, Gaspar, Lajoinie, and Thirion, 1976:178 (Belgium: Chaumont-Gistoux); Benno, 1977:153 (distribution in Netherlands; host: *Argogorytes mystaceus*); Guichard, 1977:254 (Great Britain: Surrey); Schmidt, 1977:96 (Germany: Baden-Württemberg: Enzklösterle in Schwarzwald); Kazenas, 1978b:92, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Leclercq, 1978b:map 1175 (distribution in Belgium); Marion, 1978:87 (France: Nièvre Department); Pulawski, 1978:210 (in key to Sphecidae of European part of former USSR); Schwammberger, 1978:417 (Germany: Württemberg); Benedek, 1979:231 (Hungary: Bakony Hills); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 53 (Netherlands: distribution map); Marchal and Leclercq, 1979:11 (Belgium: Gembloux); Richards, 1979:401 (British Channel Islands); Schmidt, 1979a:54 (Germany: Ost-Holstein), 1979b:337 (Germany: Baden-Württemberg); Schwammberger, 1979:114 (Germany: Nordrhein-Westfalen: Gildehauser Venn Nature Reserve); Borg-Karlson and Tengö, 1980:828 (pyrazines as marking volatiles); Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection); Dathe, 1980:208 (Russia: northern Caucasus: Teberda); Pagliano, 1980:113 (Italy: Piemonte); Richards, 1980:80 (in key to Sphecidae of British Isles); Westrich, 1980:629 (Germany: Baden-Württemberg: Tübingen area); Dollfuss and Ressler, 1981:324 (Austria: Niederösterreich: Scheibbs District); Józán, 1981:305 (Hungary: Hortobágy National Park, as *spinus* Latreille); Woydak, 1981:40 (Germany: Westfalen: Hamm); Axelsson, 1982:79 (Sweden); Gayubo, 1982b:36 (Spain: Cáceres and Salamanca provinces); Skibińska, 1982:123 (Poland: Warszawa area); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria); Gayubo, 1983e:233 (Spain: Salamanca Province); Riemann, 1983:84 (Germany: Bremen-Daverden area); Chevin and Silvestre de Sacy, 1984:9 (France: Yvelines Department); Haack, Tschartke, and Vidal, 1984:130 (Germany: Hamburg area); Lefeber, 1984:29 (Netherlands: Maastricht); Schmidt and Westrich, 1984:240 (Germany: Rheinland-Pfalz: Bad Münster); Archer, 1985d:50 (Great Britain: Yorkshire: Pom-pocali near Leeds); Józán, 1985b:60 (Hungary south of Lake Balaton), 81 (floral records), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Nilsson, 1985:43 (Sweden); Haeseler, 1985a:350 (Germany: Schleswig Holstein); Radović, 1985:65 (sting apparatus analyzed); Nemkov, 1986:107 (Russia: Irkutsk Oblast'); Vikberg, 1986:78 (Finland); Riemann, 1987a:340 (Germany: Niedersachsen: Bremen area); Schmidt and Westrich, 1987:362 (Germany: Mainz area); Archer, 1988a:33 (Great Britain: Bernwood Forest near Oxford); Chevin, 1988:16 (France: La Manche

Department); Dollfuss, 1988:18, 29 (Austria: Bisamberg near Vienna; Niederösterreich: Oberweiden); Haeseler, 1988:211 (Germany: Friesian Islands); Kowalczyk, 1988a:45 (Poland: Rogów) Kowalczyk, 1988b:65 (Poland: environs of Łódź); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Archer, 1989a:131, 133 (Great Britain: York: found before and after coniferization); Jacobs, 1989:25 (Germany: Mecklenburg-Vorpommern); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Pádr *in* Šedivy, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus': Berezinskiy Nature Reserve); Weiffenbach, 1989:107 (Germany: Hessen: Gießen area); Archer, 1990c:18 (Great Britain: Leicestershire); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Jacobs and Oehlke, 1990:207 (new records from Democratic Germany); Kowalczyk, 1990:291 (Poland: Góry Świętokrzyskie); Kuznetzova, 1990:19 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Pádr, 1990:72 (Czech Republic: Praha area); Pagliano, 1990:69 (in catalog of Italian Sphecidae); Schwammbberger and Priesner, 1990:551 (Austria: Kärnten); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:412 (Italy); Jakubzik, 1991:75 (Germany: Köln); Józán, 1991:604 (Hungary: Bátorliget Nature Reserve); Kowalczyk, 1991a:90, 93, 105 (Poland: Łódź), 1991b:120 (Poland: Augustów Forest); Negrisolo, 1991:322 (Italy: Udine Province); Nilsson, 1991:83 (Sweden: Lake Mälaren); Archer, 1992a:56 (Great Britain: Leicestershire), 1992b:21 (Great Britain: Yorkshire: Skipwith Common); Budrys, 1992:29 (in list of Sphecidae of Lithuania); Józán, 1992a:229 (Hungary: Béda-Karapancsa Protected Area), 1992b:175 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Nemkov, 1992b:249 (Russia: Far East: Khingan Nature Reserve); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); N. Schneider and Jacob-Remacle, 1992:43 (Luxembourg); Sorg and Cölln, 1992:132 (Germany: Rheinland-Pfalz: Gönnersdorf); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Wolf, 1992c:22 (Germany: Nordrhein-Westfalen: Plettenberg: castle Schwarzenberg ruin); Gorobchishin, 1993:47 (Ukraine: Kanev Nature Reserve); Józán, 1993:414 (Hungary: Bükk National Park); Junck, Schoos, and Schoos, 1994:96 (Luxembourg: Bettendorf); Kowalczyk, 1994:74 (Poland: Łagiewniki forest in Łódź); Kuhlmann, 1993:77 (Germany: known from Westfalen); Theunert, 1994c:45 (Germany: summary of records from Niedersachsen and Bremen); Archer, 1995a:21 (Great Britain: Yorkshire: Blaxton); Archer and Burn, 1995:59 (Great Britain: Yorkshire: Crow Wood near Finningley); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Kowalczyk and Krzeptowski, 1995:189 (Poland: Zakopane and Kościeliska Valley in Tatry Mountains); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:457 (in key to Sphecidae of Russian Far East); Riemann, 1995:52 (Germany: Bremen); Schmid-Egger, 1995:62 (Germany: NW Baden-Württemberg); Schmid-Egger, Risch, and Niehuis, 1995:198 (summary of records from Germany: Rheinland-Pfalz State); Shlyakhtenok, 1995:193 (Belarus': Berezinskiy Nature Reserve); Skibińska, 1995:424, 425, 426, 427 (Poland: pine forest in Białowieża Primeval Forest); Yeo and Corbet, 1995:40 (in field guide to British solitary wasps); Archer, 1996b:37 (Great Britain: Nottinghamshire: Sherwood Forest); Arens, 1996:442 (Germany: Bayern: Bayreuth area); Fowles, 1996:36 (Great Britain: in checklist of aculeates of Wales); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Harvey and Plant, 1996:79 (Great Britain: summary of records from Essex); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996b:400 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: not endangered); Shlyakhtenok, 1996:304 (Belarus': Berezinskiy Nature Reserve); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 110 (locality records); Woydak, 1996:91 (Germany: Westfalen: summary of distribution and nesting habits); Archer, 1997a:49 (Great Britain: Yorkshire: Cave Wold); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:164 (in Sphecida Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Lauterbach, 1997b:73 (Germany: Nordrhein-Westfalen: Bielefeld); Riemann, 1997:50 (Germany: Achim 14 km southeast of Bremen); Schmidt and Schmid-Egger, 1997:21 (in checklist of German Sphecidae); Shlyakhtenok, Blinov, and Belyavskaya, 1997:151 (Belarus': Pripyatskiy National Park); Celary, 1998b:212 (Poland: Babia Góra National Park); Dollfuss, Gusenleitner, and

Bregant, 1998:524 (Austria: summary of collecting records from Burgenland); Haeseler and Ritzau, 1998:51 (Germany: Bremen: Steller Heide); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); Józán, 1998:312 (Hungary: Duna-Dráva National Park); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); van der Smissen, 1998:63 (Germany: Schleswig-Holstein); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Archer, 1999b:82 (Great Britain: Yorkshire); Cölln and Jakubzik, 1999:29 (Germany: Rheinland-Pfalz: Keuper-Scharren SW Hungerburg); Dorow, 1999:531, 574 (Germany: Hessen: Niddahänge E Rudingshain Forest Reserve); Erhardt, 1999:75 (Germany: Niedersachsen: Ammerland area); Kuhlmann, Wolf, and Woydak, 1999:569 (Germany strongly endangered in Nordrhein-Westfalen); Ljubomirov, 1999b:56 (Bulgaria: Mount Vitosha near Sofia); Majzlan, Rychlík, and Deván, 1999:146 (Slovakia: Čenkovská Step Nature Reserve); Mandery, 1999:105 (Germany: Bayern: Coburg area); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:111 (in catalog of Belgian aculeates); Salzmänn-Wandeler and Rezbanyai-Reser, 1999:101 (Switzerland: Tessin: Monte Generoso); M. Schwarz, 1999:88 (Austria: Oberösterreich: city of Linz area); Theunert, 1999:138 (Germany: Niedersachsen); Blösch, 2000:367 (in Sphecidae Fauna of Germany); Jacobs, 2000:8 (Germany: Land Mecklenburg-Vorpommern: not endangered); Józán, 2000:112 (Hungary: Bakony Mountains); Kuhlmann, 2000:64 (Germany: Hessen: Diemel River valley); M. Mader and Chalwatzis, 2000:60 (Germany: Hessen: Oderwald Mts.); Mokrousov, 2000b:31 (Russia: Nizhniy Novgorod Oblast'); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); Archer, 2001a:107 (Great Britain: Watsonian Yorkshire), 2001b:14 (Great Britain: Watsonian Yorkshire); Haeseler, 2001:266 (Germany: Niedersachsen: Brookdeich near Oldenburg); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia), 218 (review of known biology); Ohl et al., 2001:140 (distribution in Germany by provinces); Salzmänn-Wandeler and Rezbanyai-Reser, 2001:157 (Switzerland: Tessin Canton: Meride area); Shlyakhtenok and Agunovich, 2001:144 (Belarus': Berezinskiy Nature Reserve); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Szczepko and Kowalczyk, 2001:189 (Poland: Kampinos National Park near Warszawa); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: not endangered); Wolf, 2001a:171 (Germany: Bayern: Lech valley from Augsburg to Donau); Zettel, Gross, and Mazzucco, 2001:79 (Austria: Wien); Archer, 2002b:128 (Great Britain: Watsonian Yorkshire: distribution map); Archer and Edwards, 2002:103 (Great Britain: West Sussex: Ambersham and Iping commons); Beavis, 2002:111 (Great Britain: Kent: Tunbridge Wells area); Bieri, 2002:77 (Liechtenstein); Deván, 2002b:204 (Slovakia: Pekelná dolina and Prepadlisko); Esser and Cölln, 2002:1136 (SW Germany: Eifel region); Józán, 2002:54 (Hungary: Mecsek Mountains); Kazenas, 2002a:114 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:155 (Poland: Kampinos National Park near Warszawa); Litt, 2002:166 (Belgium); Martínez de Murguía, Vázquez, and Nieves Aldrey, 2002:202 (Spain: Navarra: Artikutza Forest Reserve at 43°09'28"–43°14'52"N 0°14'53'35"–01°49'30"E); Shlyakhtenok and Skibińska, 2002:35 (Belarus': no specific locality); Wiśniowski, 2002:73 (Poland: Ojców National Park); Cölln, Esser, and Jakubzik, 2003:62 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:139 (Germany, Hungary: miscellaneous locality records); Józán, 2003:228 (Hungary: Látványi Pusztá Nature Conservation Area); Kuhlmann and Quest, 2003:50 (Germany: Bayern: Bayerischer Wald National Park); Kula and Tyrner, 2003a:150 (Czech Republic: Děčín Sandstone Uplands: forest district Snežník: birch stands in air-polluted area), 2003b:203 (Northern Czech Republic: spruce stands in air-pollution region); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:68 (Germany: in catalog of wasps and bees of Bayern.); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wiśniowski *in* Dylewska and Wiśniowski, 2003:175 (Poland: Ojców National Park); Deván, 2004:147 (western Slovakia); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Gorobchishin and Protsenko, 2004:40 (Ukraine: Kherson Oblast': Chernomorskiy Nature Reserve); Salzmänn-Wandeler and Rezbanyai-Reser, 2004:27 (central Switzerland); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Szczepko and Kowalczyk, 2004:127 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands);

Wiśniowski, 2004:50 and 62 (in checklist of Polish Sphecidae); Burger, 2005:34 (Germany: Thüringen); Dubitzky, Blank, and Schönitzer, 2005:275 (Germany: Bayern: area north of Dachau); Fuhrmann, 2005:89 (Germany: Nordrhein-Westfalen: Grubengelände Littfeld Nature Reserve); Gayubo and Özbek, 2005:15 (Turkey: Erzurum: Oltu); Gregory and Wright, 2005:140 (Great Britain: Shotover Hill 5 km E Oxford); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Hallin, 2005:16 (Sweden: Örebro County: Hällefors); Jakubzik and Cölln, 2005:63 (Germany: Rheinland-Pfalz: Bausenberg near Niederzissen); Kofler, 2005:183 (Austria: Tirol: Lienz District: Thal Weidenbrünnl in Assling Common, Lavant, Nikolsdorf, Plattenbrunn in Nikolsdorf Common, Bobojach in Prätgraten Common, Kreithof in Tristach Common); Nemkov, 2005a:158 (Russia: Sakhalin Island); Pagliano and Negrisola, 2005:128 (in Sphecid Fauna of Italy); Quest and Kuhlmann, 2005:33 (Germany: Bayern: Bayerischer Wald National Park); Riemann and Hohmann, 2005:561 (Germany: Niedersachsen: city of Bremen and adjacent area); Robinson, 2005:38 (Great Britain: Cumbria County); Saure, 2005:17 (Germany: Berlin); Schmalz, 2005:57 (references to XIXth century authors); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); Gorobchishin, 2006:137 (Ukraine: Cherkasy Oblast': Kaniv Nature Reserve; village Kruglyk near Kyiv); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Liška, 2006:88 (Slovakia: Váh river valley near Trenčín); Ljubomirov, 2006:541 (Bulgaria: Rhodope Mountains: Yurukovo Village); Peeters, Krekels, and Megens, 2006:22 (Netherlands: Reichswald forest near Nijmegen); Shlyakhtenok, 2006:113 (Belarus': Polesye Radiological Nature Reserve); Standfuss and Standfuss, 2006a:86 (Germany: Nordrhein-Westfalen: Dortmund); Terayama, 2006:2, 5 (in key to Japanese Bembicinae); Vepřek, 2006:510 (Czech Republic: Kokořínsko area); Baghirov, 2007:93 (Russia: southwestern Siberia); Dorow, 2007:264 (Germany: Hessen: Schönbuche Forest Reserve); Evans and O'Neil, 2007:71 (list of hosts); Jacobs, 2007:161, 164 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Józán, 2007:180 (Hungary: Zselic hills); Nemkov, 2007b:74 (Russia: Kuril Islands: Kunashir Island); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Shlyakhtenok, 2007a:299 (Belarus': Berezinsky Nature Reserve); Shorenko, 2007b:258 (Ukraine: Crimea: Otuzy Valley, Échki-Dag Mountain); Vago, 2007:174 (France: départements du Nord, Pas-de-Calais, and Somme); Venne, Bleidorn, and Lauterbach, 2007:302 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:208 (in catalog of Sphecidae of Czech Republic and Slovakia); Haeseler, 2008:308 (Germany: Friesian Islands); Kochetkov, Bol'shakova, Butenko, and Priklonskiy, 2008:262 (Russia: Ryazan' Oblast': Oka Nature Reserve); Livory, Chevin, Lair, Sagot, and Baldock, 2008:31 (France: Département de la Manche); Ljubomirov and Yildirim, 2008:70 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:217 (in key to *Nysson* of Russia), 220 (bibliographic references, locality records from Azerbaijan, Kazakhstan, and Russia, detailed geographic distribution); Theunert, 2008:59 (Germany: map of distribution in Niedersachsen and Bremen); Archer, 2009:24 (Great Britain: Yorkshire: Sheffield); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen); Hessling, 2009:104 (Germany: Niedersachsen: Hunte River valley south of Oldenburg); Humala and Polevoi, 2009:63 (Russia: Republic of Karelia east of Lake Onega); Józán, 2009:167 (Croatia: Vela Učka); Mokrousov, Antropov, Ruchin, and Bugayev, 2009:78 (Russia: Republic of Mordovia); Nemkov, 2009b:130 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:238 (Russia: Primorskiy Krai: Lazovsky Nature Reserve); Ruchin, Antropov, and Shibayev, 2009:170 (Russia: Republic of Mordovia); Shorenko, 2009:368 (in list of Sphecidae s.l. of Crimea); Straka, Dvořák, and Bogusch, 2009:262 (Czech Republic: Jizerské Mountains and Frýdlant region); Archer, 2010a:52 (Great Britain: Watsonian Nottinghamshire: Spalford Warren), 2010b:99 (Great Britain: Watsonian Staffordshire: Cannock Chase Country Park); Bitsch, 2010:111 (in supplement to vol. II of *Faune de France*, 1997: France: first record from Savoie: Aillon-le-Jeune); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Falk, 2010:94 (Great Britain: heathland sites in West Midlands region); Hable, Wickl, Krauss, and von der Dunk, 2010:27 (Germany: Bayern: Sulz- and Ottmaringer Tal); Jakubzik, Kinkler, and Cölln, 2010:155 (Germany: Rheinland-Pfalz: Leverkusen-Steinbüchel); Johansson,

2010:121 (Sweden: Småland: upper Emå river valley); Mokrousov, 2010a:61 (Russia: Kostroma, Nizhniy Novgorod, Vladimir, and Yaroslavl' Oblast's, Republic of Mordovia, Tatarstan: no specific localities); Rudoiskatel', 2010:151 (Russia: central and southern Ural Mountains); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: relatively common); Schmidt, 2010:137 (Germany: Bayern: collected along Main-Donau canal); Shorenko and Konovalov, 2010:16 (Ukraine); Treiber, 2010:136 (France: département du Bas-Rhin); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein: locality records), 2010c:397 (Sweden: Södermanland: Jordbro, Rassa); Archer, 2011a:42 (Great Britain: Yorkshire: Strensall Common); Baghirov, 2011b:143 (Russia: Altay Republic: Artybash); Feoktistov, 2011:85 (Russia: Mordovian Nature Reserve); Gogala, 2011:29 (Slovenia); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Mokrousov, Berezin, and Egorov, 2011:68 (Russia: Chuvash Republic); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:150 (Germany: Hessen: not endangered); Archer, 2012:183 (Great Britain: urban York); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Cölln, Jakubzik, and Kinkler, 2012:25 (Germany: Nordrhein-Westfalen: Leverkusen); Franzén, Molander, Norén, and Nilsson, 2012:26 (Sweden: Skåne: Kullaberg Peninsula); Nemkov, 2012b:126 (review of known host species), 2012c:446 (in catalog of Crabronidae of Russian Far East); Prisniy, 2012:50 (Russia: Belgorod Oblast'); Shlyakhtenok, 2012a:171 (Belarus, and Russia: Kirov Oblast': Arkhangelskoye': collected in private plots), 2012b:92 (Belarus': Beresina National Reserve: overgrowing dry meadow); Standfuss and Standfuss, 2012:427 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Akulov and Proshchalykin, 2013:117 (Russia: Siberia: Krasnoyarsk Krai: 60 km SE Krasnoyarsk and 10 km W Achinsk); Danilov and Odintseva, 2013:333 (Russia: Western Siberia: 65 km NNE Tobol'sk at 58°45'N 68°74'E); Flügel, 2013a:120 (Germany: Brandenburg: Pimpinellenberg near Oderberg), 2013b:57 (Germany: Hessen: Knüllköpfchen); Mokrousov, Ruchin, and Egorov, 2013:199 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Pankov, 2013:229 (Russia: Ivanovo Oblast'); Saure, 2013:20 (Berlin: Treptow-Köpenick: Gosener Wiesen); Shlyakhtenok, 2013:225 (in annotated catalog of aculeate wasps of Belarus'); Wiśniowski and Szczepko, 2013:41 (Poland: Kampinos National Park near Warszawa); Bitsch, 2014:400 (France: Meurthe-et-Moselle: Vitrimont); Hellqvist, Abenius, and Norén, 2014:91 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Mokrousov and Vafin, 2014:56 (Russia: Republic of Tatarstan); Pagliano, 2014:119 (specimens in M. Spinola collection, Torino, are *Nysson interruptus* and *Nysson spinosus*); Ruchin and Antropov, 2014:38 (Russia: Republic of Mordovia); Yıldırım, Ljubomirov, and Lelej, 2014:5 (distribution in Turkey by biogeographic provinces); J.-K. Kim, 2015:223 (diagnostic characters, locality records from South Korea); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Mokrousov and Egorov, 2015:424 (Russia: Republic of Mordovia: Nature State Reserve Priskuskiy); P. Rosa and Pagliano, 2015:103 (Italy: Lombardia and Piemonte: Parco del Ticino); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelle-sur-Seine and Seine-Maritime Department: Anneville-Ambourville); Else, Bolton, and Broad, 2016:12 (in checklist of Aculeata of Great Britain and Ireland: England, Scotland, Wales, Ireland); Mokrousov and Popov, 2016:571 (Russia: Krasnodarskiy Krai); Saure, 2016b:48 (Germany: Sachsen-Anhalt: fruit orchards); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Flügel, 2017:5 (Germany: Rheinland-Pfalz: Doline near Rockensüß); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:45 (Iran: known from Golestan Province); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Julols); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia); Shorenko, 2017:80 (in Crimea collected in June and July).

Crabro spinosus Fabricius, 1775:373, sex not indicated, junior secondary homonym of *Nysson spinosus* (J. Forster, 1771). Lectotype: ♂, southern Europe: no specific locality (ZMUC), designated by van der Vecht, 1961a:47. Synonymized with ... by ... – Fabricius, 1781:469 (redescription), 1787:294 (redescription); Olivier, 1792:512 (redescription); Rossi, 1792:139 (Italy: Toscana: Pisa area); Fabricius, 1793:293 (redescription), 1796:51 (in Index to his Entomologia Systematica, 1793); Panzer, 1799, Heft 62:15 (in revision of German insects, illustration of habitus); Fabricius, 1804:307 (redescription); Roth von Schreckenstein, 1802:32 (Germany: Baden-Württemberg); Panzer,

- 1806:189 (in critical review of his earlier work); Olivier, 1812a:408 (redescription); Dahlbom, 1845:XXIV (type specimens are *Nysson*). – **As *Sphex spinosus***: de Villers, 1789:246 (new combination, redescription). – **As *Sphex cribraria spinosa***: Christ, 1791:286 (new status, redescription). – **As *Nysson spinosus***: Latreille, [1805]:305 (new combination, redescription); Jurine, 1807:199 (listed); Vander Linden, 1829:32 (bibliographic references, Belgium: Bruxelles, Europe); Shuckard, 1837a:100 (in revision of British Aculeata); Herrich-Schaeffer, 1840:291 (Germany: Bayern: Regensburg area, as *spinosus* Latreille); Dahlbom, 1843:169 (in revision of Sphecidae and Pompilidae), 1845:XVIII (*Ceropales spinosus* in collection Fabricius is a *Nysson*), 484 (in key to European *Nysson*); von Kiesenwetter, 1849:89 (Germany: Kingdom of Saxony: Dresden); Wissmann, 1849:13 (Germany: Kingdom of Hannover: Hannover, Münden, Harz Mts.); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); Kirschbaum, 1853:45 (Germany: Herzogtum Nassau: Weilburg); Kirchner, 1854:311 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice; as *spinosus* Dahlbom); F. Smith, 1856:353 (in catalog of Hymenoptera in British Museum; Great Britain, France, Italy, Germany, Belgium, Norway); Kawall, 1857:24 (Kurland, now Latvia); Schenck, 1857:153 (Germany: in revision of fossorial wasps of Nassau Region); Taschenberg, 1858:92 (in key to Sphecidae of Germany); Schenck, 1860:147 (Germany: Nassau Region); Brischke, 1862:101 (Germany: Preussen Province, now Poland: Pomorze Region); Taschenberg, 1866:193 (in revision of Hymenoptera of Germany); A. Costa, 1867c:53 (in revision of Italian Sphecidae); Schenck, 1867a:354 (Germany: Nassau Region); Jaenicke, 1868:9 (Germany: Hessen: Büdingen, Frankfurter Wald); Wierzejski, 1868:117 (Poland: Kraków); A. Costa, 1869b:82 (in revision of Italian Sphecidae); Chevrier, 1867b:12 (in revision of Swiss *Nysson*, as *spinosus* Panzer); A. Costa, 1869b:69 (in revision of Italian Nyssoninae); von Aichinger, 1870:317 (Austria: Tirol); Bold, 1870:147 (Great Britain: Northumberland and Durham); Thomson, 1870:246 (in revision of Swedish wasps); F. Smith, 1871:11 (in catalog of British Aculeata); Schlechtendal, 1872:37 (Germany: Sachsen: Zwickau); Dours, 1874:148 (in catalog of Hymenoptera of France); Thomson, 1874:225 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:259 (Poland: Kraków); Marquet, 1875:209 (France: Haute-Garonne: Toulouse); Daly, 1878:45 (Great Britain: Dorset: Glanville's Wootton); Roebuck, 1878:47 (Great Britain: recorded from Yorkshire county: Wakefield, by F. Smith, 1858); Girard, 1879:946 (morphology); E. Saunders, 1880:267 (in revision of British Aculeata); Siebke, 1880:64 (Norway); Marquet, 1881:183 (southern France, as *spinosus* Latreille); Yaroshevskiy, 1881:124 (Ukraine: Khar'kiv Oblast': Khar'kiv, Kupyansk); Wüstnei, 1886:40 (Germany: Schleswig-Holstein: Sonderburg); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus); Engel, 1894:53 (Germany: Falkenberg, Landwehr, and Othmarschen near Hamburg); Freke, 1896:40 (Ireland); E. Saunders, 1896:110 (in revision of British Aculeata); Lüderwaldt, 1897b:28 (Poland: Pomorze); Strand, 1898b:94 (Norway); Gardner, 1901:378 (Great Britain: common in Cheshire and Lancashire); Hocking, 1901:68 (Great Britain: Surrey county); N. Arnold, 1902:89 (Russia: Mohilev Province, now Belarus); E. Saunders, 1902a:52 (SW Ireland), 1903b:17 (Great Britain: North Wales: Barmouth); Morley, 1908b:276 (Ireland: Loo Bridge); Hallett, 1912:94 (Great Britain: Glamorgan County); R. Perkins, 1916:230 (specimens in F. Smith collection); Strand, 1921:33 (Germany: Bayern: Kulmbach); R. Perkins, 1924:228 (Great Britain: Devon); Stelfox, 1927:306 (Ireland: list of localities); de Graham, 1941:99 (Great Britain: Lincolnshire).
- Mellinus tricinctus* Fabricius, 1793:287, sex not indicated. Lectotype: ♂, Italy: no specific locality (ZMUC), designated by van der Vecht, 1961a:47. Synonymized with *Nysson spinosus* by Dahlbom, 1845:XXIII. – Fabricius, 1796:98 (in Index to his Entomologia Systematica, 1793), 1804:299 (redescription); Stephens, 1829:362 (in catalog of British insects), 1829b:33 (in checklist of British insects); Dahlbom, 1845:XXIII (study of type material).
- Vespa trilineata* Turton, 1802:527. Substitute name for *Vespa tricincta* (Fabricius, 1793) Turton, 1802, nec *Vespa tricincta* Fabricius, 1775, which is *Sphecius speciosus* (Drury, 1773).
- Nysson geniculatus* Lepeletier de Saint Fargeau, 1845:47, ♂, junior primary homonym of *Nysson geniculatus* Olivier, 1812. Holotype or syntypes: ♂, France: Paris area (depository?). Synonymized with *Nysson spinosus* by F. Smith, 1856:353.

Nysson malaisei Gussakovskij, 1932:31, ♀, ♂. Syntypes: Russia: Primorskiy Kray: Sedanka, Sutshan (now Partizansk), Tigrovaya, now Tigrovoye (Stockholm). Synonymized with *Nysson spinosus* by Nemkov in Nemkov, Kazenas, Budrys, and Antropov, 1995:457. – Yasumatsu, 1938d:195 (in revision of Japanese *Nysson*); Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae). – **As *Nysson spinosus malaisei***: Tsuneki, 1964b:1 (new status, Japan), 1965c:25 (in key to Bembicinae of Japan and Korea); T. Iida, 1968:21 (Japan); Itami, 1968b:17 (Japan); Tsuneki, 1970b:9 (central Japan), 1972b:1 (variation); Suda, 1973:123 (Japan: Yamanashi Prefecture); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Kazenas, 1980e:84 (Russia: Far East); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:37 (Japan: Gifu Prefecture); Suda, 2004:46 (Japan: Yamanashi Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:54 (Japan: Gifu Prefecture); Kinota, Haneda, and Tano, 2005:31 (Japan: Hokkaido); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2006a:29 (Japan: Toyama Prefecture); N. Yamamoto, 2011:13 (Japan: Kyūshū: mainland Nagasaki Prefecture).

93. *subtilis* W. Fox

Nysson subtilis W. Fox, 1896e:14, ♂. Lectotype: ♂, USA: Illinois: Algonquin (ANSP), designated by Cresson, 1928:48. – Ashmead, 1899d:329 (in checklist of North American Crabronidae); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); Krombein, 1952b:181 (USA: West Virginia: Lost River State Park), 1954a:6 (West Virginia: Lost River State Park), 1958f:192 (in supplement to catalog of North American Hymenoptera: West Virginia); Steiner, 1973:27 (Canada: Northwest Territories); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera); Finnamore, 1997:894 (expected to occur in Yukon); Hook, 1998:251 (first record from Texas: Travis County: Austin); Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 63 (first record from Canada: Ontario: list of localities).

94. *timberlakei* R. Bohart

Nysson timberlakei R. Bohart, 1968a:324, ♂, ♀. Holotype: ♂, USA: New Mexico: Doña Ana County: Las Cruces (UCD). Paratypes: California, Nevada. – R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera).

95. *trichopygus* de Beaumont

Nysson trichopygus de Beaumont, 1967a:323, ♂. Holotype: ♂, Turkey: Mersin: Mut (Lausanne). – de Beaumont, 1969:89 (Turkey; diagnostic characters); Yildirim, Ljubomirov, and Lelej, 2014:6 (distribution in Turkey by biogeographic provinces), 19 (is an endemic of Turkey); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae). – **As *Synnevrus trichopygus***: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae). – **As *Brachystegus trichopygus*** (in error): Ljubomirov and Yildirim, 2008:66 (in catalog of Crabronidae of Turkey); Koçak and Kemal, 2015:139 (in checklist of Hymenoptera of Turkey).

96. *trichrus* (Mickel)

Brachystegus trichrus Mickel, 1916a:400, ♀. Holotype: ♀, USA: Nebraska: Omaha (UNL). – Mickel, 1918b:351 (in catalog of Nebraskan Sphecidae); Muma, 1952:17 (holotype in UNL). – **As *Nysson trichrus***: Maidl and Klima, 1939:144 (new combination, in catalog of world Astatinae and Bembicinae, in subgenus *Brachystegus*); Krombein in Muesebeck et al., 1951:984 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera); nec Finnamore, 1982:211 (= *Nysson gagates*); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County).

97. *tridens* Gerstaecker

Nysson tridens Gerstaecker, 1867b:106, ♀, ♂. Syntypes: Germany: Brandenburg: Freienwalde (ZMHU). – Handlirsch, 1887:379 (in revision of world Bembicinae); Wüstnei, 1891a:27 (Germany: Schleswig-Holstein: Sonderburg); Kohl, 1893a:29 (Austria: Niederösterreich: Wien: Türkenschanze); Handlirsch, 1895:821 (Gerstaecker's type examined); Dalla Torre, 1897:575 (in catalog of world Sphecidae); Mocsáry, 1897:81 (Kingdom of Hungary: Trencsén, now

Trenčín, Slovakia); W. Schulz, 1904b:98 (Slovakia: Trenčín); Kubes, 1905:84 (Czech Republic: Babice); Schmiedeknecht, 1907:227, 229 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:47 (Italy: Trieste area); Kohl, 1912a:63 (Austria: Südtirol: Saint Pauls, now Italy: Trentino-Alto Adige Region: Santo Paolo); Schirmer, 1912:167 (Germany: Berlin area); Birula, 1913:543 (Ukraine: Zhytomyr Oblast': Radomyshl'); Schütze, 1916:42 (Germany: Sachsen: Rachlau, visiting flowers of parsley, *Petroselinum crispum*); Noskiewicz, 1918:137 (Galicia, now western Ukraine: Brzuchowice and Hołosko near Lwów); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:34 (Germany: Lower Elbe region); Dubois, 1921c:205, 207 (in key to Belgian Sphecidae); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Enslin, 1922c:246 (Germany: Bayern: Fürth area); Berland, 1925d:104 (in Sphecidae Fauna of France); Bischoff, 1925:300 (Poland: Grajewo area); Blüthgen, 1925:166 (Germany: Saale River valley: Naumburg); Schütze, 1925:112 (Germany: Lausitz Region); Schmiedeknecht, 1930:689, 690 (in keys to Hymenoptera of North and Central Europe); Crèvecoeur and Maréchal, 1932:70 (in catalog of Belgian Hymenoptera: Cherscamp); Bernard, 1933:62 (France: Drôme: Dieulefit); Balles, 1934:20 (Germany: Baden-Württemberg: Hopfengarten, Katzental); Crèvecoeur and Maréchal, 1936:253 (in catalog of Belgian Hymenoptera); Zavdil, Šustera, and Baťa, 1937:197 (in catalog of Sphecidae of Czechoslovakia); nec Grandi, 1937:332 (= *Nysson* ? *variabilis*); A. Wagner, 1938a:122 (northwestern Germany); Maidl and Klima, 1939:131 (in catalog of world Astatinae and Bembicinae); A. Wagner, 1939b:74 (an eastern species in northwestern Germany); Paul, 1941:45 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Schneid, 1941:1043 (Germany: Bayern: Bamberg area); Balthasar, 1943:42 (Czech Republic: Moravia: Zlin area, as *trindens*); Šnoflák, 1944a:144 (Czech Republic: serpentine steppe near Mohelno); de Beaumont, 1945:470 (Switzerland: diagnostic characters); Zavdil in Zavdil and Šnoflák, 1948:158, 159 (in key to Sphecidae of Czechoslovakia); Szulczewski, 1950:107 (Poland: Wielkopolski National Park 15 km S Poznań); Wolf, 1951:79 (host: *Harpactus laevis* and *lunatus*); Blüthgen, 1952b:37 (host in Naumburg, Germany: *Harpactus tumidus*); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg); Vogrin, 1955:36 (Yugoslavia); Bajári, 1957a:113, 114 (in key to Hungarian Sphecidae); Wolf, 1959b:29 (Germany: Nassau Region); Hamann, 1960:199 (Austria: Oberösterreich: Mönchgraben at 48°13'N 14°21'E); Noskiewicz and Puławski, 1960:102, 104 (in key to Polish Sphecidae); Scobiola, 1960a:168 (first record from Romania: Sibiu); Wengris, 1962:205 (Lithuania: Vilnius area); de Beaumont, 1964c:61 (in Sphecidae Fauna of Switzerland), 1965a:38 (member of *variabilis* species group); Evans, 1966d:86 (host relationships); J. Heinrich, 1967:73 (Germany: Bayern: Unterfranken District); Scobiola-Palade, 1967a:161 (Romania: Bănăsea), 1967b:49 (Romania); Stritt, 1968:110 (Germany: Baden-Württemberg); Benedek, 1969a:83 (Hungary: marshy meadow); Oehlke, 1970:703 (Democratic Germany); Schmidt, 1971b:32 (Germany: Rheinland-Pfalz: Gonsenheimer Wald); Tsuneki, 1971k:185 (Mongolia); Balthasar, 1972:338 (in Sphecidae Fauna of Czechoslovakia); Kazenas, 1972b:153 (Kazakhstan); Haeseler, 1972:155, 200 (Germany: Schleswig-Holstein; anthropogenic habitats); Lomholdt, 1975c:214 (in Sphecidae Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Kazenas, 1978b:92, 93 (in key to Sphecidae of Kazakhstan and Central Asia); Leclercq, 1978b:map 1176 (distribution in Belgium); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Schmidt, 1979b:338 (Germany: Baden-Württemberg); Dollfuss and Ressler, 1981:317, 324 (Austria: Niederösterreich: Scheibbs District); Dollfuss, 1983b:21 (in catalog of Sphecidae of Austria); Gayubo, 1983e:233 (Spain: Salamanca Province); Józán, 1985b:60 (Hungary south of Lake Balaton), 71 (map of distribution in Hungary), 81 (floral records), 84 (ecological and zoogeographic characteristics); Westrich and Schmidt, 1985a:117 (Germany: Baden-Württemberg), 1985b:111 (Germany: endangered in Baden-Württemberg); Brechtel, 1986:59 (Germany: Südpfalz); Józán, 1986:373 (Hungary: Kiskunság National Park); Schmidt and Westrich, 1987:362 (Germany: Mainz area); Dollfuss, 1988:18 (Austria: Bisamberg); Karsai, 1988:101 (Hungary: Kiskunság National Park); Jacobs, 1989:26 (Germany: Mecklenburg-Vorpommern); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Pádr in Šedivy, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Pankevich,

Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus: Berezinskiy Nature Reserve); Jacobs and Oehlke, 1990:207 (new records from Democratic Germany); Kowalczyk, 1990:291 (Poland: Góry Świętokrzyskie); Nemkov, 1990c:83 (Russia: Maritime Province); Pádr, 1990:73 (Czech Republic: Praha area); Pagliano, 1990:69 (in catalog of Italian Sphecidae); Day, 1991:xvii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Kowalczyk, 1991a:97, 100, 101, 105 (Poland: Łódź); Budrys, 1992:29 (in list of Sphecidae of Lithuania); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Nemkov, 1992b:249 (Russia: Far East: 40 km NNW Svobodnyi near Khingan Nature Reserve); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); van der Smissen, 1993:129 (nw. Germany); Dollfuss, 1994:102 (endangered in Austria); Kowalczyk, 1994:73 (Poland: Łagiewniki forest in Łódź); Theunert, 1994c:45 (Germany: summary of records from Niedersachsen and Bremen); Wickl and Wickl, 1994:194 (Germany: Bayern: Oberpfalz: Hütten); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park, as *tridens*); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:457 (in key to Sphecidae of Russian Far East); Scharrer, 1995:30 (Germany: Bayern: Lohr); Schmid-Egger, Risch, and Niehuis, 1995:198 (summary of records from Germany: Rheinland-Pfalz State); Gusenleitner, 1996a:10 (Austria: Steiermark); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Witt, 1996:106 (Germany: Brandenburg), 110 (locality records); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:165 (in Sphecidae Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:21 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:524 (Austria: summary of collecting records from Burgenland); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); van der Smissen, 1998:64 (Germany: Schleswig-Holstein: Wulfsdorfer Heide); K. Weber, 1998:144 (Germany: Bayern: Bamberg area); Pauly, 1999:111 (in catalog of Belgian aculeates); M. Schwarz, 1999:88 (Austria: Oberösterreich: city of Linz area); Wickl, 1999a:107 (Germany: Bayern: Oberpfalz area); Blösch, 2000:368 (in Sphecidae Fauna of Germany); Dressler, 2000:33 (Germany: Hessen: Darmstadt area); Jacobs, 2000:8, 17 (Germany: Land Mecklenburg-Vorpommern: rare); Józán, 2000:112 (Hungary: Bakony Mountains: Tihany, as *tidens*); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); Feitz, Schneider, and Pauly, 2001:132 (first record from Luxemburg: Remerschen); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia), 218 (review of known biology); Ohl et al., 2001:140 (distribution in Germany by provinces); Sörensson, 2001:98 (locality records from Sweden); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: threatened with extinction); Zettel, Gross, and Mazzucco, 2001:79 (Austria: Wien); Kazenas, 2002a:115 (geographic distribution, collecting localities in Kazakhstan); Nemkov, 2002b:36 (miscellaneous locality records from Russia, Poland, Kazakhstan, Tajikistan, and Uzbekistan); Shlyakhtenok and Skibińska, 2002:35 (Belarus: no specific locality); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Wiśniowski, 2002:73 (Poland: Ojców National Park); Lukáš, 2003:73 (Slovakia: Bratislava: old fruit orchard); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:68 (Germany: in catalog of wasps and bees of Bayern); Ohl and Linde, 2003:150 (number of ovarioles); Tischendorf and Treiber, 2003:121, 125 (Germany: Hessen: 15 km SW Frankfurt am Main: nesting under high power lines); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: no longer endangered); Wiśniowski in Dylewska and Wiśniowski, 2003:176 (Poland: Ojców National Park); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Majzlan and Deván, 2004:33 (Slovakia: Malacky-Široké); Shkuratov, 2004a:76 (Russia: Rostov Oblast'); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Wiśniowski, 2004:50 and 62 (in checklist of Polish Sphecidae); Burger, 2005:34 (Germany: Thüringen); Gayubo and Özbek, 2005:15 (first record from Turkey: Erzurum: University campus); Kowalczyk and Kurzac, 2005:106 (Poland: Botanical Garden in Łódź); Pagliano and Negrisolo, 2005:129 (in Sphecidae Fauna of Italy); Saure, 2005:17 (Germany: Berlin); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); Gorobchishin, 2006:137

- (Ukraine: Kyiv); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Nemkov, 2006b:169 (Russia: Primorskiy Krai: Kedrovaya Pad' Nature Reserve); N. Schneider, 2006:135 (Luxemburg: anthropogenic habitats); Baghirov, 2007:93 (Russia: southwestern Siberia); Jacobs, 2007:162, 165 (in key to Crabronidae of Germany); Kowalczyk and Nadolski, 2007:284 (Poland: Łódź: railway areas); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Vepřek and Straka, 2007:208 (in catalog of Sphecidae of Czech Republic and Slovakia); Ljubomirov and Yildirim, 2008:71 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2008d:218 (in key to *Nysson* of Russia), 220 (bibliographic references, locality records from Kazakhstan, Russia, Uzbekistan, and Tajikistan, detailed geographic distribution); Nemkov, 2009b:131 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Bitsch, 2010:109 (in supplement to vol. II of Faune de France, 1997: in modified key to European *Nysson*), 111 (*Nysson fraterculus* is a synonym, recent records from Italy reported; France: first records from Ain: Sermoyer, and Vaucluse: Bonnieux); Mokrousov, 2010a:61 (Russia: Nizhniy Novgorod Oblast: 'no specific localities); Rudoiskatel', 2010:151 (Russia: central and southern Ural Mountains); Saure, 2010a:88 (Germany: Berlin-Reinickendorf: Baumberge), 2010b:175 (Germany: Berlin-Reinickendorf: airport Tempel and Flughafensee Protected Area); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: rare); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein: locality records); Wurdack and Gack, 2010:153 (Germany: Baden-Württemberg: Kaiserstuhl); Baghirov, 2011b:143 (Russia: Altayskiy Krai: Savvushka); Gogala, 2011:30 (Slovenia: Podčetrtek); Józán, 2011:184 (in checklist of Sphecidae s.l. of Hungary); Sakenin, Samin, Bagriacik, and Rastegar, 2011:3 (Iran: Ardabil: Meshkinshahr); Saure, 2011c:199 (Germany: Berlin-Spandau: Fort Hahneberg); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen), 2011b:29 (the species author's name should be spelled Gerstäcker, as in the original publication); Tischendorf, Frommer, Flügel et al., 2011:63 (Germany: Hessen: strongly endangered); Ziska and Saure, 2011:109 (Germany: Berlin: Tegeler Fließ valley); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Nemkov, 2012b:126 (review of known host species), 2012c:446 (in catalog of Crabronidae of Russian Far East); Prisiy, 2012:50 (Russia: Belgorod Oblast'); Saure, 2012b:229 (Germany: Berlin-Spandau: Spandauer Forst); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Yildirim, 2012:75 (Turkey: Erzurum: University field); Danilov and Odintseva, 2013:334 (Russia: Western Siberia: 65 km NNE Tobol'sk at 58°45'N 68°74'E); Shlyakhtenok, 2013:226 (in annotated catalog of aculeate wasps of Belarus); Hellqvist, Abenius, and Norén, 2014:91 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Yildirim, Ljubomirov, and Lelej, 2014:6 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Saure, 2015:14 (Germany: Berlin-Lichterfelde); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine, as *tripunctatus*); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:45 (Iran: known from Ardabil Province); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).
- Nysson tridens* var. *melas* Müller, 1918:130, ♂. Syntypes: Germany: Berlin: Spandau (ZMHU?). – Maidl and Klima, 1939:131 (in catalog of world Astatinae and Bembicinae); de Beaumont, 1945:470 (Switzerland); Bajári, 1957b:141 (first record from Hungary). – **As *Nysson tridens melas***: R. Bohart and Menke, 1976:470 (new status, in checklist of world Sphecidae).
- Nysson fraterculus* Gussakovskij, 1932:33, ♂. Holotype: ♂, Russia: Primorskiy Krai: Suchan, now Partizansk (Stockholm). Synonymized with *Nysson tridens* by Nemkov, 2002a:36. – Maidl and Klima, 1939:120 (in catalog of world Astatinae and Bembicinae); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:154 (in Sphecidae Fauna of Western Europe); Bitsch, 2010:108 (in supplement to vol. II of Faune de France, 1997: synonymy by Nemkov, 2002, reported). – **As *Brachystegus fraterculus***: R. Bohart and Menke, 1976:473 (new combination, in checklist of world Sphecidae; incorrect, arbitrary generic placement).
- Nysson bohemicus* Zavadil in Zavadil and Šnoflák, 1948:159, ♂. Holotype: ♂, Czechoslovakia: Hradec Kralové (EONM). Synonymized with *Nysson tridens* by Straka in Vepřek and Straka, 2007:208, 233. – Balthasar, 1972:341

(in Sphecid Fauna of Czechoslovakia); R. Bohart and Menke, 1976:469 (in checklist of world Sphecidae); Pulawski, 1978:211 (in key to Sphecidae of European part of former USSR); Pádr *in* Šedivy, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Dollfuss, 1991:186 (in key to Sphecidae of North and Central Europe); Schmid-Egger, 1996b:31, 32 (in key to Central European *Nysson*); Jacobs, 2007:165 (in key to Crabronidae of Germany, not yet found in Germany); Standfuss and Standfuss, 2017:530 (in key to European *Nysson* with short anal cell).

Nysson bohemicus Zavadil, 1951:114. Objective synonym of *Nysson bohemicus* Zavadil, 1948.

As *Nysson quadriguttatus*: Schenck, 1857:160 (Germany: Hessen: Wiesbaden), corrected to *Nysson tridens* by Schmidt, 1971a:62.

98. *trimaculatus* (Rossi)

Crabro trimaculatus Rossi, 1790:95, sex not indicated. Holotype or syntypes: Italy: Etruria, now Toscana: no specific locality (destroyed). – Panzer, 1798, Heft 51:13 (in revision of German insects, illustration of habitus), 1800, Heft 78:17 (in revision of German insects, illustration of habitus, as synonym of *Nysson maculatus*); Illiger, 1807b:156 (synonymy, redescription). – As *Nysson trimaculatus*: Latreille, [1805]:306 (new combination, redescription); Spinola, 1806:91 (Italy: Liguria: Genova); Olivier, 1812a:409 (as synonym of *Nysson maculatus*); Vander Linden, 1829:32 (bibliographic references, Belgium: Bruxelles, France, Italy, description of female); Shuckard, 1837a:102 (in revision of British Aculeata), 252 (variation in color and wing venation); von Siebold, 1839:49 (Germany: Danzig, now Poland: Gdańsk); Herrich-Schaeffer, 1840:291 (Germany: Bayern: Regensburg area); Dahlbom, 1843:169 (in revision of Sphecidae and Pompilidae), 1845:485 (in key to European *Nysson*); Eversmann, 1849:396 (Russia: Simbirsk Province); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); F. Smith, 1851c:21 (Great Britain: Battersea, Highgate); Wesmael, 1852:90 (Belgium, coloration); Kirschbaum, 1853:45 (Germany: Herzogtum Nassau: Weilburg); F. Smith, 1853:63 (in checklist of British Hymenoptera), 1856:354 (in catalog of Hymenoptera in British Museum; Italy to Finland); Ruthe and Stein, 1857:314 (Germany: Berlin area); Schenck, 1857:159 (Germany: in revision of fossorial wasps of Nassau Region); A. Costa, 1858:20 (Italy: Campania: Monti Partenii in Benevento Region); F. Smith, 1858c:99 (in review of British Aculeata, redescription); Taschenberg, 1858:92 (in key to Sphecidae of Germany); Assmus, 1859:612 (Russia: Moscow Oblast'); A. Costa, 1859:20 (in revision of Sphecidae of Kingdom of Naples); Schenck, 1860:148 (Germany: Nassau Region); Taschenberg, 1866:193 (in revision of Hymenoptera of Germany); A. Costa, 1867c:54 (in revision of Italian Sphecidae); Chevrier, 1867b:16 (in revision of Swiss *Nysson*, as *trimaculatus* Vander Linden); Gerstaecker, 1867b:98 (in revision of *Nysson*); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:354 (Germany: Nassau Region); A. Costa, 1869b:70 (in revision of Italian Sphecidae); F. Smith, 1871:11 (in catalog of British Aculeata); Dours, 1874:149 (in catalog of Hymenoptera of France); Thomson, 1874:228 (in revision of Hymenoptera of Scandinavia); Taschenberg, 1875:365 (Germany: Leipzig); Beuthin, 1879:240 (Germany: Hamburg area); Girard, 1879:946 (morphology); Kohl, 1880:169 (Austria: Tirol, and Italy: Trentino–Alto Adige); E. Saunders, 1880:268 (in revision of British Aculeata); Yaroshevskiy, 1881:124 (Ukraine: Khar'kiv Oblast': Kupyansk); Kohl, 1883e:665 (Switzerland); Sickmann, 1885:179 (Germany: Niedersachsen: Wellingholthausen); A. Costa, 1886b:22 (Italy: Sardegna); Wüstnei, 1886:40 (Germany: Schleswig-Holstein: Elmshorn); Handlirsch, 1887:366 (in revision of world Bembicinae); Wüstnei, 1891a:26 (Germany: Schleswig-Holstein: Husum); Bezzi, 1892:123 (Italy: Lombardia: Provincia di Pavia, as *tripunctatus*); Kohl, 1893a:28 (Austria: Niederösterreich); Sickmann, 1893:87 (Germany: Niedersachsen: Iburg); Krieger, 1894:9 (Germany: Kingdom of Saxony); Handlirsch, 1895:815 (additional bibliography); E. Saunders, 1896:111 (in revision of British Aculeata); Acloque, 1897:83 (in Sphecid Fauna of France and Algeria); Borries, 1897:63 (Denmark: flying in July; reference to Shuckard, 1837:103); Dalla Torre, 1897:575 (in catalog of world Sphecidae); Mocsáry, 1897:81 (Kingdom of Hungary, some localities are in today's Romania); Strand, 1898b:94 (Norway); N. Arnold, 1902:89 (Russia: Mohilev Province, now Belarus'); E. Saunders, 1902b:143 (Great Britain: Channel Islands: Alderney Island); de Cobelli, 1903:112 (Italy: Province of Trentino: Pejo); Antiga and Bofill, 1904:14 (Spain: Cataluña Province); Aurivillius, 1904:268 (in revision of Swedish Sphecidae);

Schmiedeknecht, 1907:226, 229 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera, as *3-maculatus*); Mercet, 1909a:619, 624 (in key to Spanish *Nysson*); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:47 (Italy: Trieste area); Schirmer, 1912:167 (Germany: Berlin area); Birula, 1913:532 (*Nysson geniculatus* of Belke, 1866 = *Nysson trimaculatus*), 541 (Ukraine: Zhytomyr Oblast: Radomyshl'); Zilahi Kiss, 1915:80 (Hungary: Bethlen); Dubois, 1919:96, footnote (Belgium: Bruxelles: Uccle); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:33 (Germany: Lower Elbe region); Dubois, 1921c:206, 207 (in key to Belgian Sphecidae); Fahringer, 1922:181 (Turkey); Noskiewicz, 1924b:181 (Poland: Chomic near Lwów, now Ukraine: Lviv); R. Perkins, 1924:228 (Great Britain: Devon); Berland, 1925d:103 (in Sphecid Fauna of France); R. Perkins, 1925:154 (Great Britain: Somersetshire: Minehead); Schütze, 1925:113 (Germany: Lausitz Region: Rachlau); Strohm, 1925:211 (Germany: Baden-Württemberg: Achkarren); Coulon, 1925:120 (France: Evreux); Friese, 1926:158 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Bouwman, 1927:92 (in revision of Sphecidae of Netherlands); Grandi, 1929:288 (Italy: Toscana: valle della Limentra); Hamm and Richards, 1930:104 (nest parasite of *Gorytes quadrifasciatus*); Schmiedeknecht, 1930:688 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:69 (in revision of Sphecidae of Finland, not yet found in Finland); Bondroit, 1932:33 (Belgium: recorded from Bruxelles area by Vander Linden and Wesmael); Crèvecoeur and Maréchal, 1932:70 (in catalog of Belgian Hymenoptera); Zavadil, 1932:96 (Czechoslovakia); Jansson, 1934:290 (Sweden); Bernard, 1935:64 (France: Var: Fréjus area); Harttig, 1935:4 (Germany: Niedersachsen: Oyten); Marchand and Dulac, 1935:61 (France: Saône-et-Loire: Saint Laurent d'Andenay); Crèvecoeur and Maréchal, 1936:253 (in catalog of Belgian Hymenoptera); Dulac, 1937:12 (France: Saône-et-Loire: Bois des Gauthérons, Saint-Laurent d'Andenay); Goebel, 1937:42 (Poland: Poznań District: Splawie); Richards, 1937b:107 (in checklist of British aculeates); Zavadil, Šusterka, and Bat'a, 1937:196 (in catalog of Sphecidae of Czechoslovakia); A. Wagner, 1938a:122 (northwestern Germany); nec Yasumatsu, 1938d:196 (= *trimaculatus japonicus*); Maidl and Klima, 1939:131 (in catalog of world Astatinae and Bembicinae); Maréchal, 1939:341 (Belgium: Loën); Teunissen, 1939:174 (Netherlands: Herpen); Paul, 1941:45 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Benno, 1943:67 (Netherlands: Babberich); Giner Marí, 1943a:158 (in Sphecid Fauna of Spain); Spooner, 1943:74 (Great Britain); Deleurance, 1946a:124 (parasite of *Oryttus concinnus*); Guichard and Yarrow, 1948:92 (Great Britain: London: Hampstead Heath); Zavadil in Zavadil and Šnoflák, 1948:157 (in key to Sphecidae of Czechoslovakia); Chambers, 1949:231 (Great Britain: Bedfordshire); Szulczewski, 1950:107 (Poland: Wielkopolski National Park 15 km S Poznań); de Beaumont, 1951g:315 (Italy), 1951h:33 (Switzerland: Neuchâtel area); Scobiola, 1951:272 (first record from Romania: Dumbrăveni and Vânători in Sibiu Region, Olănești in Vâlcea Region); Wolf, 1951:79 (host: *Gorytes laticinctus*); Bat'a, 1952:166 (Czech Republic); Blüthgen, 1952b:35 (host: *Gorytes laticinctus*); Caruel, 1952a:62 (France: Marne Department); Nouvel and Ribaut, 1953:178 (France: Haute-Garonne: Saint-Béat, Hautes-Pyrénées: Cauterets); de Beaumont, 1954e:89 (Italy); Fahlander, 1954:252 (Sweden: Gästrikland Region); Grandi, 1954:234 (Italy); Aerts, 1955:62 (Germany: Rheinland); Steiner, 1955:146 (France: Dordogne); Vergne, 1955:4 (France: Auvergne); Vogrin, 1955:36 (Yugoslavia); Ceballos, 1956:381 (in catalog of Hymenoptera of Spain); Bajári, 1957a:112 (in key to Hungarian Sphecidae); Yeo, 1957:20 (Great Britain: Middlesex, now in London); Zirngiebl, 1957:182 (Germany: Rheinland-Pfalz: Frauenalb in Schwarzwald, Landau); Benno, 1958b:10 (in review of Dutch Sphecidae); Wolf, 1959b:29 (Germany: Nassau Region); Noskiewicz and Puławski, 1960:101, 103 (in key to Polish Sphecidae); Hoop, 1961:65 (Germany: Schleswig Holstein: Kiel-Eichhof); Grandi, 1962:97 (Italy); Benno, 1963:104 (Netherlands: Babberich); Lehrer and Scutaru, 1963:286 (Romania: Moldova: Baia in Suceava District, Iași and Surănești in Iași District); Babiş, 1964:117 (Austria: Land Salzburg); de Beaumont, 1964c:60 (in Sphecid Fauna of Switzerland), 1965a:36 (Greece); Benno, 1966:7 (host: *Lestiphorus bicinctus*) Evans, 1966d:86 (host relationships); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); Gauss, 1967:553 (Germany: Baden-Württemberg); J. Heinrich, 1967:73 (Germany: Niederfranken); Niedl and Deneš, 1967:83 (Czech Republic: Třeboň area); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Canaraua Feii),

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Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); P. Rosa and Pagliano, 2015:103 (Italy: Lombardia and Piemonte: Parco del Ticino); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine); Else, Bolton, and Broad, 2016:12 (in checklist of Aculeata of Great Britain and Ireland: England, Wales); Mokrousov and Popov, 2016:571 (Russia: Abkhazia); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:12 (Turkey: Erzurum and Kars provinces, as *trimaculatus trimaculatus*); Di Giovanni, Mei, and Cerretti, 2017:73 (Italy: Lombardia: Riserva Naturale Bosco della Fontana 5 km from Mantova at 45°12'N 10°44'E, found in understory); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane, Mas Larrieu); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia, as *trimaculatus trimaculatus*).

Nysson nigripes Spinola, 1807:45, ♂. Lectotype: ♂, Italy: Liguria (Torino), designated by de Beaumont, 1952e:42. Synonymized with *Nysson trimaculatus* by Handlirsch, 1887:366, synonymy confirmed by de Beaumont, 1952e:42. – Lepeletier de Saint Fargeau, 1845:46 (in revision of world Hymenoptera); Kirchner, 1867:220 (in catalog of European Hymenoptera); P. Ivanov, 1872:152 (Ukraine: Khar'kiv Oblast': Kupyansk area); Yaroshevskiy, 1881:124 (Ukraine: Khar'kiv Oblast': Kupyansk, as *nigripes* Lepeletier); Acloque, 1897:83 (in Sphecid Fauna of France and Algeria); Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection); Pagliano, 2014:119, 120 (specimens in M. Spinola collection, Torino, including lectotype, are *Nysson trimaculatus*, and *Nysson maculosus*).
Nysson geniculatus Olivier, 1812a:408, sex not indicated. Holotype or syntypes: Greece: Rhodes Island: no specific locality (lost). Synonymized with *Nysson trimaculatus* by Handlirsch, 1887:366 – Belke, 1866:512 (Ukraine: Zhytomyr Oblast': Radomyshl'); Acloque, 1897:83 (in Sphecid Fauna of France and Algeria).

ssp. japonicus Tsuneki

Nysson trimaculatus japonicus Tsuneki, 1964b:1, ♀, ♂. Holotype: ♂, Japan: Ishikawa Prefecture: Mount Haku (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, Iida, Hirai, and Sabi, 1964:60 (Japan: Aomori Prefecture: Towada); Tsuneki, 1965c:25 (in key), 1967g:44 (W Japan: Mount Hyonosen); Haneda, 1968a:46 (Japan); Itami, 1969:46 (Japan: Niigata Prefecture); Nambu, 1973a:152 (Japan: Saitama Prefecture); Suda, 1973:123 (Japan: Yamanashi Prefecture); Nambu, 1975b:71 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Hashimoto and Nakanishi, 1997:24 (holotype and paratype transferred to Hyogo Mus.); Tano, Kurokawa, Murota, and Nozaka, 2003:33 (Japan: Nagasaki Prefecture: Tsushima); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:37 (Japan: Gifu Prefecture); Suda, 2004:46 (Japan: Yamanashi Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:54 (Japan: Gifu Prefecture), 2006a:29 (Japan: Toyama Prefecture); Ohkusa, 2006a:25 (Japan: Honshu: Gifu Prefecture); S. Tanaka, 2008:39 (Japan: Yamaguchi Prefecture); N. Yamamoto, 2011:13 (Japan: Kyūshyū: mainland Nagasaki Prefecture).

As *Nysson trimaculatus*: Yasumatsu, 1938d:196 (Japan: Honshu), corrected to *trimaculatus japonicus* by Tsuneki, 1964b:1.

99. tristis Cresson

Nysson tristis Cresson, 1882b:281, ♂. Lectotype: ♂, USA: Washington Territory: no specific locality (ANSP), designated by Cresson, 1916:99. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Handlirsch, 1887:407 (original description translated into German); W. Fox, 1896c:14 (in revision of North American *Nysson*); Dalla Torre, 1897:575 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); Bradley, 1920:127 (California); Maidl and Klima, 1939:138 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:983 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Krombein, 1979b:1688 (in catalog of North American Hymenoptera); Ratzlaff, 2016:24 (Canada: British Columbia: from Krombein, 1979).

100. *uniformis* Pérez

Nysson uniformis Pérez, 1895d:177, ♂. Syntypes: ♂, Algeria: Nazereg (MNHN). – Maidl and Klima, 1939:146 (in catalog of world Astatinae and Bembicinae, in subgenus *Synnevrus*); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae). – As *Synnevrus uniformis*: R. Bohart and Menke, 1976:470 (new combination, in checklist of world Sphecidae).

101. *varelai* Mercet

Nysson varelai Mercet, 1909a:506, ♂, ♀ (*Varelai*, incorrect original capitalization). Syntypes: Spain: Aranjuez (MNCN). – Mercet, 1909a:622, 626 (in key to Spanish *Nysson*); Dusmet y Alonso, 1935:51 (Spain: Madrid: Aranjuez); Maidl and Klima, 1939:132 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1943a:161 (in Sphecid Fauna of Spain); de Beaumont, 1950f:403 (Algeria; discussion), 1953g:115 (Morocco); Ceballos, 1956:381 (in catalog of Hymenoptera of Spain), 1959:229 (in supplement to catalog of Spanish Sphecidae), 1964:91 (in supplement to catalog of Spanish Sphecidae); Diniz, 1973:49 (Portugal: Lisboa); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Gayubo, 1982b:37 (Spain: Salamanca: Aldeacipreste), 1983e:233 (Spain: Salamanca Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:168 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Martin Albaladeo and Izquierdo Moya, 2006:129 (type in Museo Nacional de Ciencias Naturales); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent record from Spain reported); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae).

As *Nysson militaris*: Nadig, 1933:95 (Morocco: Tanger), corrected to *Nysson varelai* by de Beaumont, 1953g:115.

102. *variabilis* Chevrier

Nysson variabilis Chevrier, 1867b:27, ♀, ♂. Syntypes: Switzerland: Nyon area (MHNG). – Kohl, 1883e:666 (Switzerland); Handlirsch, 1887:386 (in revision of world Bembicinae; nec Austrian male which = *Nysson lapillus*); Kohl, 1893a:29 (Austria: Niederösterreich = *Nysson lapillus*); Dalla Torre, 1897:577 (in catalog of world Sphecidae); Schmiedeknecht, 1907:228, 230 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Berland, 1925d:104 (in Sphecid Fauna of France); Schmiedeknecht, 1930:690, 691 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:71 (in revision of Sphecidae of Finland, not yet found in Finland); Crèvecoeur and Maréchal, 1932:70 (in catalog of Belgian Hymenoptera), 1936:253 (in catalog of Belgian Hymenoptera); Maidl and Klima, 1939:133 (in catalog of world Astatinae and Bembicinae); de Beaumont, 1945:472 (Switzerland; study of type, recognition characters); de Zavadil in Zavadil and Šnoflák, 1948:160, 161 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Beaumont, 1951g:316 (Italy; determination tentative); Scobiola-Palade, 1951:273 (first record from Romania: Prahova Region: Voinești); de Beaumont, 1953g:116 (Morocco; determination tentative); Grandi, 1954:234 (Italy; determination tentative); Balthasar, 1958:337 (Slovakia: Seleška); Nouvel and Ribaut, 1958:12 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Puławski, 1958a:169 (Bulgaria: Kniazhevo near Sofia); Noskiewicz and Puławski, 1960:102, 106 (in key to Polish Sphecidae); de Beaumont, 1964c:61 (in Sphecid Fauna of Switzerland); Valkeila, 1964:204 (in key to European species of *variabilis* group), 206 (male genitalia); de Beaumont, 1965a:40 (Greece); Oehlke, 1970:704 (not recorded from Democratic Germany); Balthasar, 1972:343 (in Sphecid Fauna of Czechoslovakia); Scobiola-Palade, 1972b:253 (Romania); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae); Dollfuss, 1983b:21 (occurrence in Austria questionable); Leclercq, 1978b:map 1178 (distribution in Belgium); Józán, 1985b:60 (Hungary: Pécs: Tettey), 84 (ecological and zoogeographic characteristics); Dollfuss, 1989:11 (type series in NHMW); Pádr in Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Jacobs and Oehlke, 1990:208 (the only record from Democratic Germany is Weissenfels in Handlirsch, 1887, as *Nysson friesei*); Pagliano, 1990:69 (in catalog of Italian Sphecidae); Dollfuss, 1991:187 (in key to Sphecidae of North and Central Europe); Pagliano, 1992a:33, 34 (in key to Italian Nyssoninae); Negrisoló in Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:168 (in Sphecid Fauna of Western Europe); Celary, 1997:60 (in

- checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:21 (in checklist of German Sphecidae); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Pauly, 1999:111 (in catalog of Belgian aculeates); Canovai et al., 2000:77 (first record from Corsica); Ivanov and Ljubomirov, 2001:212 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001b:44 (in checklist of Sphecidae of Kazakhstan and Central Asia); Ljubomirov, 2001b:53 (Bulgaria: Mount Vitoshka near Sofia); Ohl et al., 2001:140 (distribution in Germany by provinces); Józán, 2002:54 (Hungary: Mecsek Mountains); Kazenas, 2002a:115 (geographic distribution, collecting localities in Kazakhstan); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:68 (Germany: in catalog of wasps and bees of Bayern); Schmid-Egger, 2003:755 (Italy: Sicilia: Armerina, Madonie); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: extinct or no longer collected); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: last collected in 1882); Wiśniowski, 2004:50 and 62 (in checklist of Polish Sphecidae); Gayubo and Özbek, 2005:15 (first record from Turkey: Erzurum: University campus; Erzincan); Kofler, 2005:183 (Austria: Kärnten: Kohldorf E Klagenfurt); Pagliano and Negrisola, 2005:129 (in Sphecidae Fauna of Italy); Jacobs, 2007:163, 167 (in key to Crabronidae of Germany); Vepřek and Straka, 2007:208 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Slovakia); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:72 (in catalog of Crabronidae of Turkey); Nemkov, 2008d:218 (in key to *Nysson* of Russia), 220 (bibliographic references, Kazakhstan: Ural'sk, now Oral, and Russia: Volgograd Oblast': Sarepta, now Krasnoarmeysk, detailed geographic distribution); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castroño – Vega del Duero); Pagliano, 2009:177 (France: Corse: L'Asco); Bitsch, 2010:111 (in supplement to vol. II of Faune de France, 1997: recent records from Spain and Corsica reported: France: first record from Vaucluse: Bonnieux); Rudoiskatel', 2010:152 (Russia: southern Ural Mountains); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: extinct, last collected in 1954); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:500 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Józán, 2011:184 (in checklist of Sphecidae s.l. of Hungary); Sakenin, Samin, Bagriacik, and Rastegar, 2011:3 (Iran: Kordestan: Bijar); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Yildirim, Ljubomirov, and Lelej, 2014:6 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:148 (in checklist of Hymenoptera of Turkey); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:12 (Turkey: Erzurum, Kars, and Tunceli provinces); Nemkov, 2017a:Table p. 10 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:220 (in catalog of Bembicinae of Russia).
- Nysson friesei* Handlirsch, 1887:393, ♀ (as *Friesei*, incorrect original capitalization). Syntypes: Germany: Weissenfels an der Saale and origin unknown (NHMW). Tentatively synonymized with *Nysson variabilis* by de Beaumont, 1945:472. – Dalla Torre, 1897:569 (in catalog of world Sphecidae); Schmiedeknecht, 1907:228 (in key to Hymenoptera of Central Europe); Noskiewicz, 1924b:181 (Poland: Podole Region: Sinków, now Ukraine); Blüthgen, 1925:166 (Germany: Saale River valley: Weissenfels); Noskiewicz, 1930:94 (Poland: Podole Region: Dobrowlany, Sinków, now Ukraine), 95 (description of ♂), corrected to *Nysson variabilis* by de Beaumont, 1945:472; Schmiedeknecht, 1930:689 (in keys to Hymenoptera of North and Central Europe); Kuntze and Noskiewicz, 1938:378 (in Poland known only from Podole region, now Ukraine); Maidl and Klima, 1939:118 (in catalog of world Astatinae and Bembicinae); Blüthgen, 1942:10 (Germany: Sachsen: known from Saal Valley but not from Kyffhäuser); Balthasar, 1948:140 (Slovakia: Kovačov, Parkan); Zavadil in Zavadil and Šnoflák, 1948:160, 162 (in key to Sphecidae of Czechoslovakia); Ceballos, 1949:101 (Spain, as *friesei*), 1956:380 (in catalog of Hymenoptera of Spain); Hellén, 1956:45 (recorded from Finland); Bajári, 1957a:115, 116 (in key to Hungarian Sphecidae), 1957b:141 (first record from Hungary); Wolf, 1959b:29 (known from Germany, but not from Nassau Region); Dollfuss, 1989:11 (type series in NHMW).
- As *Nysson dimidiatus*: Grandi, 1937:332 (Italy: Lazio: Pontecorvo), corrected to *Nysson ? variabilis* by de Beaumont, 1951g:316.

As *Nysson tridens*: Grandi, 1937:332 (Italy: Lazio: Pontecorvo), corrected to *Nysson ? variabilis* by de Beaumont, 1951g:316.

103. *willowmorensis* Brauns

Nysson willowmorensis Brauns, 1911c:137, ♀ (as *Willowmorensis*, incorrect original capitalization). Holotype: ♀, South Africa: Eastern Cape Province: Willowmore (TMP). – Arnold, 1929a:227 (in revision of southern African Sphecidae), 1930:18 (in checklist of Afrotropical Sphecidae); Maidl and Klima, 1939:134 (in catalog of world Astatinae and Bembicinae); R. Bohart and Menke, 1976:470 (in checklist of world Sphecidae).

sp.

Ducke, 1907b:91 (Brazil: Maranhão State: Codo); Froggatt, 1917:669 (New South Wales); Morice, 1911:110 (Algeria); Bischoff and von Schulthess, 1937:169 (Argentina); Iwata and Yoshikawa, 1961:397 (Thailand); de Beaumont, 1967a:325 (Turkey), 1969:89 (Turkey); Guichard, 1978:271 (Greece), 1990:228 (Oman); Schmidt and Westrich, 1983:124 (Greece); Parks, 1986:35 (California: Torrey Pines State Reserve); Al-Houty, 1989:160 (Kuwait: Al-Wafra); G. Scudder, 1994:76 (in checklist of rare and endangered invertebrates of British Columbia, as *Synnevrus*); van Vondel, 1995:30 (specimens from India in Natuurmuseum Rotterdam); Finnermore, 1997:892 (Canada: Yukon); Kazenas and Esenbekova, 2001:135 (Kazakhstan: Almatinskiy Nature Reserve); Schmid-Egger, 2003:758 (Italy: Sicilia: Castelammare, as *Synnevrus* sp.); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E, sp. aff. *mimulus*); Belkheir, 2009:18 (France: Pyrénées-Orientales: commune d'Eyne); Ratzlaff, 2016:24 (first record from Canada: British Columbia: Southern Interior Mountains), 33 (British Columbia: Robson); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Vallée d'Eyne).

UNIDENTIFIED SPECIES

Nysson quadrimaculatus (Rossi): Thomson, 1870:244 (in revision of Swedish wasps, as *4-maculatus*)

NOMINA NUDA IN NYSSON

Nysson cabrerai Mercet: Dollfuss, 1989:11 (type series in NHMW).

Nysson chilensis P.H.: Gazulla and Ruiz Pereira, 1929:299 (Chile: Hacienda de "Las Mercedes").

Nysson conformis Pérez: Antiga and Bofill, 1904:14 (Spain: Cataluña Province).

Nysson minutus Schummel, 1834:78 (Germany: Niederschlesien, now Poland: Dolny Śląsk Region). – Dalla Torre, 1897:572 (in catalog of world Hymenoptera); Maidl and Klima, 1939:126 (in catalog of world Astatinae and Bembicinae).

Nysson mocsaryi Mercet: Dollfuss, 1989:11 (type series in NHMW).

Nysson praxedis (Schrottky): Schrottky, 1913a:226 (Argentina: San Juan).

Nysson servillii: Casolari and Casolari Moreno, 1980:125 (specimens in M. Spinola collection); M. Pagliano, 2014:120 (specimens in M. Spinola collection, Torino, are *Zanysson* sp.).

SPECIES DESCRIBED IN NYSSON AND TRANSFERRED TO OTHER GENERA

abdominalis Guérin-Méneville, 1844 = *Paranysson*

albomarginatus Cresson, 1882 = *Epinysson*

alfkeni Ducke, 1904 = *Metanysson*

argentinus Brèthes, 1913 = *Zanysson*

armatus Cresson, 1865 = *Zanysson*

auratus Schummel, 1834 = *Brachystegus scalaris* (Illiger, 1807)

aureobalteatus Cameron, 1901 = *Zanysson texanus fuscipes* (Cresson)

aztecus Cresson, 1882 = *Epinysson*

basalis F. Smith, 1856 = *Brachystegus*
basalis F. Smith, 1869 = *Acanthostethus mysticus* (Gerstaecker, 1867)
basilaris Cresson, 1882 = *Epinysson*
basirufus Brèthes, 1913 = *Perisson*
basirufus Rohwer, 1915 nec Brèthes, 1913 = *Epinysson borinquenensis* (Pate, 1937)
bellus Cresson, 1882 = *Epinysson*
bifasciatus Brèthes, 1913 = *Epinysson*
braueri Handlirsch, 1887 = *Brachystegus*
capensis Handlirsch, 1887 = *Brachystegus*
chrysozonus Gerstaecker, 1866 = *Idionysson*
clarconis Viereck, 1906 = *Epinysson bellus* (Cresson, 1882)
cressoni Cameron, 1904 = *Bembecinus quinquespinosus* (Say, 1823)
croesus Handlirsch, 1895 = *Zanysson*
dakotensis Rohwer, 1921 = *Epinysson basilaris* (Cresson, 1882)
decipiens Arnold, 1929 = *Brachystegus*
decoratus R. Turner, 1914 = *Brachystegus*
divergens Ducke, 1903 = *Foxia*
dives Handlirsch, 1887 = *Zanysson*
dubitatus R. Turner, 1914 = *Brachystegus*
dufourii Dahlbom, 1845 = *Brachystegus scalaris* (Illiger, 1807)
dufourii Lepelletier de Saint Fargeau, 1845 = *Brachystegus scalaris* (Illiger, 1807)
dufourii Dufour, 1841 = *Brachystegus scalaris* (Illiger, 1807)
fasciatus Olivier, 1812 = *Zanysson*
foveiscutis Gerstaecker, 1866 = *Zanysson*
foxii Rohwer, 1921 = *Epinysson opulentus* (Gerstaecker, 1867)
gayi Spinola, 1851 = *Zanysson*
gregoryi R. Turner, 1912 = *Brachystegus*
guatemalensis Rohwer, 1914 = *Epinysson*
helioryctoides R. Turner, 1912 = *Paranysson*
hoplisivora Rohwer, 1923 = *Epinysson tuberculatus* (Handlirsch, 1887)
inconspicuus Ducke, 1910 = *Epinysson*
interruptus Latreille, 1803 = *Brachystegus scalaris* (Illiger, 1807)
incertus Radoszkowski, 1877 = *Brachystegus*
inermis Cresson, 1872 = *Solierella*
longispinis Cameron, 1905 = *Zanysson*
ludovici R. Turner, 1920 = *Brachystegus*
luteipennis Gerstaecker, 1866 = *Zanysson*
magretti Mantero, 1917 = *Brachystegus*
maiae Pate, 1938 = *Epinysson*
marginatus Spinola, 1841 = *Zanysson*
mellipes Cresson, 1882 = *Epinysson*
moestus Cresson, 1882 = *Epinysson*
mutilloides Ducke 1903 = *Losada*
mysticus Gerstaecker, 1866 = *Acanthostethus*
nasutus Cameron, 1908 = *Brachystegus*
opulentus Gerstaecker, 1866 = *Epinysson*

orientalis Alayo Dalmau, 1969 = *Epinysson*
partamona Pate, 1938 = *Epinysson*
parvispinosus Reed, 1894 = *Cresson*
pacificus Rohwer, 1917 = *Epinysson*
pilosus F. Smith, 1873 = *Zanysson*
plesius Rohwer, 1921 = *Zanysson*
porteri Ruiz, 1936 = *Neonysson*
punctatissimus R. Turner, 1908 = *Acanthostethus*
quinquespinosus Say, 1823 = *Bembecinus*
rhodesiae Arnold, 1929 = *Brachystegus*
raui Rohwer, 1917 = *Hyponysson*
rottensis Meunier, 1915 (fossil) = a eumenine (Evans, 1966d:396)
rufipes Olivier, 1812 = *Brachystegus scalaris* (Illiger, 1807)
ruspolii von Schulthess, 1893 = *Brachystegus*
saussurei Handlirsch, 1887 = *Acanthostethus*
scalaris Illiger, 1807 = *Brachystegus*
seminole Bradley, 1920 = *Epinysson*
solani Cockerell, 1895 = *Metanysson*
spiniger R. Turner, 1908 = *Acanthostethus*
submellipes Viereck, 1904 = *Epinysson mellipes* (Cresson, 1882)
texanus Cresson, 1872 = *Zanysson*
tomentosus Handlirsch, 1887 = *Epinysson*
tramosericus Viereck, 1904 = *Epinysson*
tuberculatus Handlirsch, 1887 = *Epinysson*
varipilosellus Cameron, 1912 = *Zanysson*
violaceipennis Cameron, 1904 = *Brachystegus*