

Last updated: 24 October 2018

ARGOGORYTES

Argogorytes Ashmead, 1899d:324. Type species: *Gorytes carbonarius* F. Smith, 1856, by original designation.

Archarmystacepactus Pate, 1937c:10. Type species: *Sphex mystaceus* Linnaeus, 1761, by original designation. Substitute name for *Arpactus* Jurine, 1801, which was suppressed by the International Commission on Zoological Nomenclature, 1939:10 (Opinion 135) and therefore had no nomenclatural status. Not available: not meeting any of the requirements of Article 13.1 of the Code (R. Bohart and Menke, 1976:52).

Malaygorytes Nemkov, 1999a:1. Type species: *Malaygorytes konishii* Nemkov, 1999, by original designation and monotypy. Synonymized with *Argogorytes* by Nemkov and Pulawski, 2009:11.

Key: Nemkov, 1995c (former Soviet Union).

Revision: R. Bohart, 2000 (Neotropical Region).

Review of biology: Kazenas, 2001b:219.

1. *areatus* (Taschenberg)

Gorytes areatus Taschenberg, 1875:365, ♀. Holotype or syntypes: ♀, Brazil: no specific locality (Halle). – Handlirsch, 1888b:374 (revision); Dalla Torre, 1897:536 (in catalog of world Sphecidae, as *aeratus*); Maidl and Klima, 1939:57 (in catalog of world Astatinae and Bembicinae). – **As *Argogorytes areatus***: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); R. Bohart, 2000:157 (in revision of Neotropical Gorytini); Tschuch and Brothers, 2000:324 (stridulatory organs on female sterna III and IV); Amarante, 2002:13 (in catalog of Neotropical Crabronidae); Rasmussen and Asenjo, 2009:6 (in checklist of Crabronidae of Peru).

2. *basalis* (F. Smith)

Gorytes basalis F. Smith, 1860b:125, ♀. Holotype: ♀, Indonesia: Moluccas: Ambon: no specific locality (OXUM). – F. Smith, 1871a:368 (in catalog of Oriental Aculeata); Handlirsch, 1888b:538 (original description translated into German). – Dalla Torre, 1897:537 (in catalog of world Sphecidae); Maidl and Klima, 1939:56 (in catalog of world Astatinae and Bembicinae). – **As *Argogorytes basalis***: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae).

3. *bismarckianus* Tsuneki

Argogorytes bismarckianus Tsuneki, 1982a:47, ♀. Holotype: ♀, Papua New Guinea: New Britain: Yalom (ZMUC).

4. *caerulescens* (R. Turner)

Gorytes caerulescens R. Turner, 1914b:251, ♀. Holotype: ♀, Sri Lanka: Kandy (BMNH). – Maidl and Klima, 1939:55 (in catalog of world Astatinae and Bembicinae). – **As *Argogorytes caerulescens***: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Krombein, 1985a:20 (Sri Lanka; redescription).

5. *carbonarius* (F. Smith)

Gorytes carbonarius F. Smith, 1856:366, ♀, ♂. Syntypes: New Zealand: no specific locality (BMNH). – Hutton, 1881:104 (in catalog of New Zealand Hymenoptera, original description copied); W.F. Kirby, 1881a:40 (in checklist of New Zealand Hymenoptera), 1884b:69 (in checklist of Hymenoptera of New Zealand); Handlirsch, 1888b:539 (original description translated into German), 1895:870 (redescription); Dalla Torre, 1897:539 (in catalog of world Sphecidae); Cameron, 1898a:46 (New Zealand: Greymouth); Hutton, 1904:98 (in list of New Zealand fauna); Gourlay, 1930:7 (preys upon *Philaenus trimaculatus* White, a cercopid); Maidl and Klima, 1939:65 (in catalog of world Astatinae and Bembicinae); Gourlay, 1964:49 (nesting habits, prey: *Carystoterpa trimaculata* (Butler), an aphrophorid). – ***Argogorytes carbonarius***: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Callan, 1979:33 (New Zealand; available information reviewed), 1981:161 (review

of known nesting habits); Valentine and Walker, 1991:40 (in catalog of New Zealand Hymenoptera); Schöne, Harris, Schöne, and Mahalski, 1993:152 (homing after displacement); Harris, 1994:58 (in Fauna of New Zealand, description of mature larva, cocoon, nest, prey); Schöne, Schöne, Kühme, and Kühme, 1994 (homing after displacement); Evans and O'Neil, 2007:45 (summary of information on nesting habits); Nemkov, 2012b:119 (review of known prey).

Gorytes trichiosoma Cameron, 1888b:180, sex not indicated. Syntypes: New Zealand: Greymouth (BMNH?). Synonymized with *Gorytes carbonarius* by Handlirsch, 1895:870. – Hutton, 1904:98 (in list of New Zealand fauna).

6. *clypealis* R. Bohart

Argogorytes clypealis R. Bohart, 2000:158, ♀, ♂. Holotype: ♀, Argentina: Cordoba: Alta García (UCD). – Amarante, 2002:13 (in catalog of Neotropical Crabronidae).

7. *constrictus* (F. Smith)

Gorytes constrictus F. Smith, 1859a:160, ♀, ♂. Syntypes: Indonesia: Maluku: Island of Aru (OXUM). – F. Smith, 1863b:136 (known from Aru), 1871a:368 (in catalog of Oriental Aculeata); Handlirsch, 1888b:540 (original description translated into German); Dalla Torre, 1897:540 (in catalog of world Sphecidae); Maidl and Klima, 1939:56 (in catalog of world Astatinae and Bembicinae). – *As Arpactus constrictus*: R. Turner, 1915a:79 (new combination, discussion of synonymy). – *As Argogorytes constrictus*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae).

8. *cruciger* (Hacker and Cockerell)

Arpactus cruciger Hacker and Cockerell, 1922:289, ♀ (as *crucigera*, incorrect original termination). Holotype or syntypes: ♀, Australia: Queensland: Brisbane (Brisbane Mus.). – *As Gorytes crucigera*: Maidl and Klima, 1939:56 (new combination, in catalog of world Astatinae and Bembicinae). – *As Argogorytes cruciger*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae, as *crucigera*); Cardale, 1985:280 (in catalog of Australian Sphecidae, as *crucigera*).

9. *fairmairei* Handlirsch

Gorytes fairmairei Handlirsch, 1893a:CLVI, ♂ (as *Fairmairei*, incorrect original capitalization). Holotype or syntypes: ♂, Algeria: Tlemcen (depository not indicated). – Handlirsch, 1895:868 (Algeria, in revision of world Bembicinae); Dalla Torre, 1897:541 (in catalog of world Sphecidae); Handlirsch, 1898b:487 (Algeria); W. Schulz, 1905b:43 (Algeria: Alger); Morice, 1911:112 (Algeria: Bône, Constantine); Smits van Burgst, 1913a:319 and 1913b:6 (Tunisia: no specific locality); von Schulthess, 1926b:216 (Tunisia); Nadig, 1933:90 (Morocco: Moulasy-Idris); Maidl and Klima, 1939:49 (in catalog of world Astatinae and Bembicinae). – *As Argogorytes fairmairei*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Nemkov, 1995c:130, 131 (in key to Palearctic *Argogorytes*), 2017a:Table p. 1 (in zoogeographic analysis of Palearctic Bembicinae).

10. *fargeii* (Shuckard)

Gorytes fargeii Shuckard, 1837a:214, ♀, ♂ (as *Fargeii*, incorrect original capitalization). Syntypes: Britain: Highfate and Battersea (depository unknown). – F. Smith, 1851c:38 (Great Britain: no specific locality), 1853:65 (in checklist of British Hymenoptera), 1856:361 (in catalog of Hymenoptera in British Museum), 1858c:104 (in review of British Aculeata, redescription); A. Costa, 1967c:58 (in revision of Italian Sphecidae), 1869a:17 (France), 1869b:74 (in revision of Italian Sphecidae); F. Smith, 1871b:11 (in catalog of British Aculeata); Magretti, 1884b:106 (Italy: Firenze area); Radoszkowski, 1892:581 (male genitalia); Chyzer, 1902:34 (Hungary); Richards, 1937b:107 (in checklist of British aculeates); de Graham, 1941:99 (Great Britain: Lincolnshire); Kloet, 1941:235 (Great Britain: Wales: Cardiff); Schneid, 1941:1039 (Germany: Bayern: Bamberg area); Spooner, 1943:74 (Great Britain); Guichard and Yarrow, 1948:93 (Great Britain: London: Hampstead Heath); Leclercq, 1948:205 (*Gorytes fargei* is the correct name, not *campestris* Müller); Šnoflak in Zavadil and Šnoflak, 1948:68 (in key to Sphecidae of Czechoslovakia); Cavro, 1950:34 (France: Département du Nord); de Beaumont, 1951h:32 (Switzerland: Neu-

châtel area), 1954e:88 (Italy); Aerts, 1955:62 (Germany: Rheinland); Zirngiebl, 1957:181 (Germany: Rheinland-Pfalz: Landau, Speyer); Gauss, 1967:552 (Germany: Baden-Württemberg); Niedl and Deneš, 1967:82 (Czech Republic: Třeboň area); D. Baker, 1998:172 (type origin and depository). – **As *Argogorytes fargeii***: Grandi, 1957:385 (new combination, Italy: Abruzzi); Benno, 1958b:11 (in review of Dutch Sphecidae); de Beaumont, 1959a:19 (Italy); de Beaumont and Bytinski-Salz, 1959:101 (Israel); Wolf, 1959b:30 (Germany: Nassau); Noskiewicz and Puławski, 1960:88 (in key to Polish Sphecidae); de Beaumont, 1962b:24 (Spain); Valkeila, 1962b:67 (southwestern Finland); Wengris, 1962:205 (Lithuania: Vilnius area); Ceballos, 1964:92 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:53 (in Sphecid Fauna of Switzerland); Valkeila, Brander, and Käpylä, 1964:75 (Finland: Southern Finland: Forssa, Näyte); de Beaumont, 1965a:27 (Greece); Benno, 1967:34 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:310 (Turkey); J. Heinrich, 1967:72 (Germany: Bayern: Karlstadt); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Comarova), 1967b:47 (Romania); Scobiola-Palade, 1968c:383 (Romania: Frătești); de Beaumont, 1969:84 (Turkey); Benedek, 1969a:83 (Hungary: hygrophilous meadow); Oehlke, 1970:695 (Democratic Germany); Tumšs, 1970:78 (Latvia); Schmidt, 1971b:30 (Germany: Rheinland-Pfalz: recorded from Mombach by Kirschbaum, 1853, and Jaenicke, 1867, 1868); Balthasar, 1972:330 (in Sphecid Fauna of Czechoslovakia); Haeseler, 1972:155 (Germany: Schleswig-Holstein; anthropogenic habitats); Oehlke, 1972:136 (Germany: Hiddensee Island); Hoop, 1973:47 (Germany: Schleswig-Holstein: Flemhude); Diniz, 1973:44 (Portugal: nine localities); Lefeber, 1973:152 (Belgium); Lefeber and Petit, 1974:163 (Belgium: Plombières); Lomholdt, 1975c:191 (in Sphecid Fauna of Fennoscandia and Denmark); R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae); Benno, 1977:153 (distribution in Netherlands); Kolesnikov, 1977:317 (Russia: Bryansk Oblast'); Leclercq, 1978b:map 1179 (distribution in Belgium); Schmidt, 1977/78:55 (Germany: Rheinland-Pfalz: Mombacher Sand); Marion, 1978:87 (France: Nièvre Department); Pulawski, 1978:198 (in key to Sphecidae of European part of former USSR); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 35 (Netherlands: distribution map); Richards, 1979:401 (British Channel Islands); Schmidt, 1979b:340 (Germany: Baden-Württemberg); Borg-Karlson and Tengö, 1980:828 (pyrazines as marking volatiles); Petit, 1980:44 (Luxemburg: Grevenmacher); Richards, 1980:82 (in key to Sphecidae of British Isles); Westrich, 1980:629 (Germany: Baden-Württemberg: Tübingen area); Callan, 1981:161 (nesting habits); Axelsson, 1982:79 (Sweden); Gayubo, 1982b:37 (Spain: Ávila, Cáceres, and Salamanca provinces); Skibińska, 1982:123 (Poland: Warszawa area); Dollfuss, 1983a:76 (endangered in Niederösterreich, Austria), 78 (endangered in Oberösterreich, Austria), 79 (endangered in Steiermark, Austria), 80 (endangered in Tirol, Austria), 1983b:21 (in catalog of Sphecidae of Austria); Gayubo, 1983e:233 (Spain: Salamanca Province); Ågren and Borg-Karlson, 1984:111 (chemicals involved in luring males to flowers of *Ophrys insectifera*); Ågren, Kullenberg, and Sensenbaugh, 1984:15 (similarity of female pilosity to that of labellum of *Ophrys insectifera*); Haack, Tschardtke, and Vidal, 1984:124 (Germany: Hamburg area); Gayubo, 1985c:171 (Spain: Valladolid: Iscar); Józán, 1985b:61 (Hungary S Lake Balaton), 81 (floral records), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Westrich and Schmidt, 1985b:110 (Germany: endangered in Baden-Württemberg); Gayubo, 1986b:39 (Spain: Andalucía), 1986d:119 (Spain: Zamora Province); Nemkov, 1986:107 (Russia: Siberia: Irkutsk Oblast'); Gayubo, 1886e:992 (teratological specimen); Gayubo and Sanza, 1986:73 (Spain: Burgos); Skibińska, 1986b:157 (Poland: Warszawa area: rural and suburban parks); Vikberg, 1986:78 (Finland); Archer, 1987:111 (Great Britain: Yorkshire); Dollfuss, 1987:23 (Austria); Schmidt and Westrich, 1987:360 (Germany: Mainz area); Kowalczyk, 1988a:45 (Poland: Rogów), 1988b:64 (Poland: environs of Łódź); Nilsson, 1988:98 (Sweden); Wolf, 1988b:141 (Germany: Nordrhein-Westfalen); Archer, 1989b:232 (Great Britain: Suffolk); Ågren, 1989:529 (SEM study of flagellar sensilla); Jacobs, 1989:26 (Germany: Mecklenburg-Vorpommern); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Pádr *in* Šedivy, 1989a:166 (in checklist of Czechoslovakian Sphecidae); Skibińska, 1989b:291 (Poland: moist meadow in Warszawa area); Gayubo, Asís, and Tormos, 1990b:77 (Spain); Jacobs and Oehlke, 1990:123 (population regress in Democratic Germany after 1960), 208 (new records from Democratic Germany); Kowalczyk, 1990:291 (Poland: Góry Świętokrzyskie); Kuznetzova, 1990:18 (Russia:

Voronezh Oblast': Galich'ya Gora Nature Reserve); Pádr, 1990:70 (Czech Republic: Praha area); Pagliano, 1990:70 (in catalog of Italian Sphecidae); Day, 1991:xiii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:190 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:413 (Italy); Kowalczyk, 1991a:97, 100, 101 (Poland: Łódź), 1991b:120 (Poland: Augustów Forest); Sorg and Wolf, 1991:195 (Germany: Koppelstein Reserve SE Koblenz); Budrys, 1992:27 (in list of Sphecidae of Lithuania); Delarze, 1992:67 (Switzerland: Valais: Les Follatères); Pagliano, 1992:36 (in key to Italian Nyssoninae); K. Weber, 1992:86 (Germany: Bayern: Bamberg District); Archer, 1993:46 (Great Britain: Channel Islands); Józán, 1993:414 (Hungary: Bükk National Park); Kuhlmann, 1993:75 (Germany: known from Westfalen); Torregrosa, Gayubo, Tormos, and Asís, 1993:20 (Spain: Alicante Province); Wiśniowski, 1993a:97 (Poland: in checklist of Sphecidae of Białowieża Primeval Forest); Archer, 1994a:73 (Great Britain: Yorkshire), 1994b:104 (British Channel Islands); Blagoveshchenskaya, 1994:91 (Russia: Ul'yanovsk Oblast', as *fragei*); Dollfuss, 1994:100 (endangered in Austria); Gayubo and Borsato, 1994:216 (Italy: Trentino, Veneto); Theunert, 1994c:33 (Germany: summary of records from Niedersachsen and Bremen); Tormos, Asís, and Gayubo, 1994:189, 219 (Spain: Albacete Province); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Nemkov, 1995c:129, 131 (in key to Palearctic *Argogorytes*), 131 (geographic variation, distribution in former Soviet Union); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:459, 460 (in key to Sphecidae of Russian Far East); Schmid-Egger, Risch, and Niehuis, 1995:164 (summary of records from Germany: Rheinland-Pfalz State); Yeo and Corbet, 1995:40 (in field guide to British solitary wasps); Doronin, 1996:18 (Latvia: Sigulda, nest parasitized by *Chrysis iris* Christ, a chrysidid); Fowles, 1996:36 (Great Britain: in checklist of aculeates of Wales); Harvey and Plant, 1996:80 (Great Britain: summary of records from Essex); Jakubzik, 1996:251 (Germany: Köln); Jakubzik and Cölln, 1996b:398 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:376 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Woydak, 1996:92 (Germany: Westfalen: summary of distribution and nesting habits); Archer, 1997b:98 (Great Britain: Watsonian Yorkshire); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:181 (in Sphecid Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:6 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:522 (Austria: summary of collecting records from Burgenland); Gonzáles, Gayubo, and Torres, 1998:74, 75 (Spain: Valladolid Province); Haeseler and Ritzau, 1998:50 (Germany: Bremen: Harriersand Island in Weser River); van der Smissen, 1998:53 (Germany: Schleswig-Holstein); K. Weber, 1998:133 (Germany: Bayern: Bamberg area); Anan'eva and Kochetkov, 1999:6 (Russia: Ryazan Oblast': no specific locality); Herrmann, 1999:7 (Germany: Niedersachsen: Oldenburg area; habitats size); Kuhlmann, Wolf, and Woydak, 1999:568 (extinct or presumably extinct in Nordrhein-Westfalen State of Germany); Pauly, 1999:111 (in catalog of Belgian aculeates); M. Schwarz, 1999:88 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:370 (in Sphecid Fauna of Germany); Esenbekova and Kazenas, 2000:59 (southeast Kazakhstan: near Alma Ata, 5-9 km S Alma Ata, 7-8 km S Talgar); Jacobs, 2000:6, 16 (Germany: Land Mecklenburg-Vorpommern: close to extinction); Józán, 2000:112 (Hungary: Bakony Mountains); Ljubomirov, 2000:12 (Bulgaria, specimens in N. Nedelkov collection); Mokrousov, 2000b:31 (Russia: Nizhniy Novgorod Oblast'); Archer, 2001a:107 (Great Britain: Watsonian Yorkshire), 2001c:15 (Great Britain: Watsonian Yorkshire); Edwards and Telfer, 2001:90 (Great Britain: distribution, status, habitat, flight period, prey, nesting habits, flower visiting, parasites, and distribution map); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:45 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:135 (Kazakhstan: Almatinskiy Nature Reserve); Ohl et al., 2001:137 (distribution in Germany by provinces); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); van der Smissen, 2001:58 (Germany: Schleswig-Holstein: endangered); Zettel, Gross, and Mazzucco, 2001:79 (Austria: Wien); Archer, 2002b:129 (Great Britain: Watsonian Yorkshire: distribution map); Bieri, 2002:72 (Liechtenstein); Kazenas, 2002a:116 (geographic distribution, collecting localities in Kazakhstan); Litt, 2002:166 (Belgium); Shlyakhtenok and Skibinska, 2002:35 (Belarus': no specific locality); Drewes, 2003:133 (Greece: Xanthi); Haeseler, 2003:339, 345 (Germany: Niedersachsen: Harriersand Island near

Bremen); Józán, 2003:228 (Hungary: Látrányi Pusztá Nature Conservation Area); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:63 (in catalog of wasps and bees of Bayern, Germany); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estacion Geológica de El Ventorrillo in Sierra de Guadarrama); 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, 2004:261 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:130 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Litt, 2004:222 (Switzerland: Valais: Vissoie); Shkuratov, 2004a:74 (Russia: Rostov Oblast': Anadol'); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:355 (in catalog of Polish Crabronidae); Stolle et al., 2004:371 (Germany: Sachsen-Anhalt: in red list of Sphecidae); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:51 and 62 (in checklist of Polish Sphecidae); Archer, 2005:30 (Great Britain: Watsonian Yorkshire); Burger, 2005:31 (Germany: Thüringen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:219 (Spain: Salamanca: San Martín del Castañar); Gayubo and Özbek, 2005:16 (Turkey: six localities); Kraatz, 2005:102 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Pagliano and Negrisoló, 2005:137 (in Sphecid Fauna of Italy); Reder, 2005:948 (Germany: Rheinland-Pfalz: six localities); Riemann and Hohmann, 2005:546 (Germany: Niedersachsen: city of Bremen and adjacent area); Saure, 2005:13 (Germany: Berlin); Theunert, 2005a:16 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Ebrahimi, 2006:1 (Iran); Archer, 2006b:84 (Great Britain: Yorkshire: Flamborough Head); Gorobchishin, 2006:137 (Ukraine: Kyiv Oblast': village Kruglyk); Liška, 2006:88 (Slovakia: Váh river valley near Trenčín); Shlyakhtenok, 2006:113 (Belarus: Polesye Radiological Nature Reserve); Evans and O'Neil, 2007:48 (summary of information on *Ophrys* pollination); Jacobs, 2007:168 (in key to Crabronidae of Germany); Saure, 2007:81 (Germany: in checklist of Aculeata of Brandenburg); Vago, 2007:174 (France: départements du Nord and Somme); Vepřek and Straka, 2007:208 (in catalog of Sphecidae of Czech Republic and Slovakia); Winkler, 2007:29 (Germany: Niedersachsen: eastern Friesland); Yildirim and Ljubomirov, 2007:117 (Turkey: many localities); Ebrahimi, 2008:95 (first record from Iran: Ardebil: Khalkal-Asalem road, Azarab); Gayubo, Gonzales, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Livory, Chevin, Lair, Sagot, and Baldock, 2008:32 (France: Département de la Manche); Ljubomirov and Ban-Calefariu, 2008:203 (Romania: recorded from Maramureş District by Szilády, 1914, as *Gorytes campestris*); Ljubomirov and Yildirim, 2008:75 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia); Theunert, 2008:9 (Germany: map of distribution in Niedersachsen and Bremen); Archer, 2009:24 (Great Britain: Yorkshire: Sheffield); Belkheir, 2009:18 (France: Pyrénées-Orientales: commune d'Eyne); U. Frommer, 2009a:26 (Germany: in checklist of Sphecidae of central Hessen); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Nemkov, 2009b:131 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:70 (Norway: locality records); Reder and Burger, 2009:857 (Germany: Rheinland Pfalz: Grünstadter Berg 1 km N Neuleiningen); Bitsch, 2010:112 (in supplement to vol. II of Faune de France, 1997: recent records from Bulgaria and Romania reported); Esser, Fuhrmann, and Venne, 2010:35 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Mokrousov, 2010a:61 (Russia: Nizhniy Novgorod and Yaroslavl' Oblast's, Tatarstan: no specific localities); Rudoiskatel', 2010:150 (Russia: central and southern Ural Mountains); Saure, 2010a:87 (Germany: Berlin-Reinickendorf: Baumberge); Schmid-Egger, 2010a:14 (in red list of Aculeata of Germany: very rare); Shorenko and Konovalov, 2010:14 (Ukraine); Tüzün and Yüksel, 2010:4472 (Turkey: Niğde Province); van der Smissen, 2010a:332 (Germany: Schleswig-Holstein: locality records); Baghirov, 2011b:141 (Russia: recorded from Altay by Nemkov in Nemkov, Kazenas, Budryns, and Antropov, 1995); Gogala, 2011:27 (Slovenia: Lendava); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Theunert, 2011a:18 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:55 (Germany: Hessen: strongly endangered); Archer, 2012:183 (Great Britain: urban York); Boillat, 2012:227 (Switzerland: in checklist

of insects of Canton de Genève); Nemkov, 2012b:119 (review of known prey); Prisniy, 2012:50 (Russia: Belgorod Oblast'); Shlyakhtenok, 2012a:171 (Belarus': collected in private plots); Yildirim, 2012:76 (Turkey: Bayburt, Erzurum, and Erzincan provinces); Kazenas, 2013a:106 (color photograph of adult wasp, short information on geographic distribution and nesting habits); Pankov, 2013:228 (Russia: Ivanovo Oblast'); Shlyakhtenok, 2013:227 (in annotated catalog of aculeate wasps of Belarus'); Ebrahimi, 2014:29 (Iran: Ardebil: Khalkāl: Almās); U. Frommer, 2014:26 (Germany: Hessen: Lorch); Hellqvist, Abenius, and Norén, 2014:90 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Mokrousov and Vafin, 2014:55 (Russia: Republic of Tatarstan); Protsenko, Fateryga, and Ivanov, 2014:27 (Crimea: Druzhnoye in Simferopol' District, "Mys Aiya", and Opuksk Nature Reserve); Yıldırım, Ljubomirov, and Lelej, 2014:6 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:137 (in checklist of Hymenoptera of Turkey); Mokrousov and Egorov, 2015:424 (Russia: Republic of Mordovia: Nature State Reserve Prisuskiy); Else, Bolton, and Broad, 2016:9 (in checklist of Aculeata of Great Britain and Ireland: England, Wales); Stolle and Saure, 2016:921 (Germany: in list of Sphecidae s.l. of Sachsen-Anhalt); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:12 (Turkey: Bayburt, Erzincan, Erzurum, and Tunceli provinces); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:36 (Iran: known from Ardabil Province); Magdalou, 2017:14 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Vallée d'Eyne); Nemkov, 2017a:Table p. 1 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:221 (in catalog of Bembicinae of Russia); Shorengo, 2017:79 (in Crimea collected in February, May, and June).

Gorytes croceipes Eversmann, 1849:394, ♀, ♂. Syntypes: Russia: Orenburg province and lower Volga (ZIN). Synonymized with *Gorytes campestris* [= *Argogorytes fargeii*] by Handlirsch, 1888b:372

Argogorytes mongolensis Tsuneki, 1971k:196, ♂. Holotype: ♂, Mongolia: Chövsgöl Aymag: 84 km W Mörön (TMB). Synonymized with *Argogorytes fargeii* by Nemkov, 1995c:132. – R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae).

Argogorytes przewalskyi Kazenas, 1971:153, ♀. Holotype: ♀, Kazakhstan: Alma-Ata Oblast': Kunghei-Alatau Range (ZIL). Synonymized with *Argogorytes fargeii* by Nemkov, 1995c:132. – Kazenas, 1971:161 (in Kazakhstan found only in southeastern mountains); R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae).

Argogorytes przewalskii Kazenas, 1972b:143, ♀. Objective synonym of *Argogorytes przewalskyi* Kazenas, 1971. Synonymized with *Argogorytes fargeii* by Nemkov, 1995c:132. – Kazenas, 1978b:78 (in key to Sphecidae of Kazakhstan and Central Asia), 2001b:45 (in checklist of Sphecidae of Kazakhstan and Central Asia).

As *Mellinus campestris* (a misinterpretation, *Gorytes campestris* actually is *Argogorytes mystaceus*): Fabricius, 1790:226 (new combination, redescription), 1793:287 (redescription); Billberg, 1829:107 (specimens from Sweden in collection Billberg); Dahlbom, 1845:XXIII (specimens in collection Fabricius are *Gorytes*, now *Argogorytes*). – As *Vespa campestris*: Illiger, 1807b:144 (new combination, synonymy, redescription). – As *Arpactus campestris*: Jurine, 1807:194 (new combination, listed). – As *Gorytes campestris*: Shuckard, 1836:59 (new combination, preying on *Tettigonia spumaria* Linnaeus, now *Aphrophora spumaria*); Wesmael, 1839:75 (interpretation of species), 76 (comparison with *Gorytes mystaceus*); Herrich-Schaeffer, 1840:290 (Germany: Bayern: Regensburg area); Dahlbom, 1843:168 (in revision of Sphecidae and Pompilidae), 1845:484 (in key to European *Gorytes*); Lepelletier de Saint Fargeau, 1845:58 (in revision of world Hymenoptera); Wissmann, 1849:13 (Germany: Kingdom of Hannover: Hannover, Münden, Harz Mts.); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); Wesmael, 1852:98 (Belgium); Kirschbaum, 1853:45 (Germany: Herzogtum Nassau: Mainz-Mombach, Weilburg, and Wiesbaden); Kawall, 1857:24 (Kurland, now Latvia); Ruthe and Stein, 1857:314 (Germany: Berlin area); Schenck, 1857:166 (in revision of fossorial wasps of Nassau Region, Germany); Taschenberg, 1858:90 (in key to Sphecidae of Germany); Assmus, 1859:612 (Russia: Moscow Oblast'); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:148 (Germany: Nassau Region); Brischke, 1862:101 (Germany: Preussen Province, now Poland: Pomorze Region); Taschenberg, 1866:194 (in revision of Hymenoptera of Germany); Jaenicke, 1867:147 (Germany: Hessen: Frankfurt area); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:355 (Germany: Nassau Region); Dietrich, 1868:363 (Switzerland: Zurich Canton); Jaenicke, 1868:9 (Ger-

many: Hessen: Mombach); A. Costa, 1869b:82 (in revision of Italian Nyssoninae); Wierzejski, 1868:117 (Poland: Krakow, Pieniny Mts.; Ukraine: Bukowina Region: Kalinowce); A. Costa, 1869a:17 (France); von Aichinger, 1870: 318 (Austria: Tirol); Siła-Nowicki, 1870:(22) (Poland: Pieniny Mountains); Thomson, 1870:245 (in revision of Swedish wasps); Schlechtendal, 1872:37 (Germany: Sachsen: Zwickau); Dours, 1874:149 (in catalog of Hymenoptera of France); Mocsáry, 1874:120 (Siebenbürgen, now Romania: Transylvania: no specific locality); Thomson, 1874:232 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:259 (Poland: Kraków, Pieniny; Ukraine: Bukowina: Kalinowce); Marquet, 1875:209 (France: Haute-Garonne: Toulouse); Schmiedeknecht, 1876:186 (Germany: Thüringen: Rothensteiner Felsen); Girard, 1879:948 (morphology); Samie, 1879: LCXVI (France: Gironde: Pomerol); Becker, 1880:151 (Russia: Sarepta, now Krasnoarmeysk S Volgograd); Kohl, 1880:170 (Austria: Tirol, and Italy: Trentino–Alto Adige); E. Saunders, 1880:270 (in revision of British Aculeata); Siebke, 1880:65 (Norway); Marquet, 1881:182 (southern France); Schøyen, 1881:11 (correction to Siebke, 1880); Friese, 1883:202 (Germany: Sachsen-Anhalt: Weissenfels); Kohl, 1883e:666 (Switzerland); Harwood, 1884:211 (England: Essex: Colchester area); von Heyden, 1884:117 (Germany: Frankfurt am Main); Wüstnei, 1886:40 (Germany: Schleswig-Holstein: Sonderburg); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region); Handlirsch, 1888b:372 (in revision of world Nyssonini and Bembecini); F. Morawitz, 1891a:218 (Russia: Astrakhan'); Radoszkowski, 1892:581 (male genitalia); Kohl, 1893a:27 (Austria: Niederösterreich); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus), 1893b:420 (China: Sinkiang Uighur: Artuch 20 km N Kashgar); Sickmann, 1893:87 (Germany: Niedersachsen: Iburg); Westerlund, 1893:26 (Russia: Karelian Republic: northern shore of Lake Ladoga); Engel, 1894:53 (Germany: Reinbek near Hamburg); Krieger, 1894:8 (Germany: Kingdom of Saxony); Handlirsch, 1895:867 (additional bibliography, Armenia); W. Fox, 1896a:525 (Handlirsch's records from North America are doubtful); E. Saunders, 1896:107 (in revision of British Aculeata); Acloque, 1897:83 (in Sphecidae Fauna of France and Algeria); Borries, 1897:63 (reference to Shuckard, 1834 and 1837:215); Dalla Torre, 1897:538 (in catalog of world Sphecidae); Lüderwaldt, 1897b:29 (Germany: Gollnow, now Poland: Pomorze Region: Goleniów); Mocsáry, 1897:82 (Kingdom of Hungary, some localities are in today's Romania, and Slovakia); Lange, 1898:70 (Germany: Sachsen: Annaberg-Buchholz); Strand, 1898b:94 (Norway); Ferton, 1901a:104 (preying), 105 (prey); N. Arnold, 1902:89 (Russia: Mohilev Province, now Belarus'); E. Saunders, 1902b:143 (British Channel Islands: Alderney Island); de Cobelli, 1903:112 (Italy: Province of Trentino: Monte Baldo, Pejo); Adlerz, 1904:53 (nesting habits); Aurivillius, 1904:269 (in revision of Swedish Sphecidae); W. Schulz, 1904b:96 (Czechoslovakia, France, Hungary, Italy); Kubes, 1905:84 (Czech Republic: Kolín, Maria Sorg u Jáchimova); von Heyden, 1905:81 (Germany: Hessen: Frankfurt); Adlerz, 1906:30 (Sweden; nesting habits); Mercet, 1906a:126 (in key to Spanish *Gorytes*); Clerc and Clerc, 1907:79 (Russia: Ekaterinburg district); Móczár and Henter, 1907:205 (Hungary: Tiszaalpár); E. Saunders, 1907b:67 (Great Britain: West Suffolk and Eastbourne); Schmiedeknecht, 1907:218 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Cavro, 1910:685 (France: Département du Nord); Dittrich, 1911b:23 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Schirmer, 1912:166 (Germany: Berlin area); Kohl, 1913b:16 (Russia: Voronezh Oblast': Valuyki at 50°14'N 38°08'E); Lundblad, 1913:212 (Sweden); Szilády, 1913:89 (Hungary: Nagyenyed, Radnai havasok); Alfken, 1914:279 (NW Germany); Birula, 1914:385 (Belarus': Ambrosovich and Luskonopol' near Vitebsk); Haines, 1914:129 (Great Britain: Dorset); O. Meyer, 1919:153 (Germany: Posen Province, now Poland: Poznań Region); Noskiewicz, 1920a:154 (Poland: Tatry Mountains: Krokiew); A. Wagner, 1920:32 (Germany: Lower Elbe region); Dubois, 1921c:200, 203 (in key to Belgian Sphecidae); Gennerich, 1922:41 (morphology); Jansson, 1922:24 (Sweden: Öland Island); Leininger, 1924:121 (Germany: Baden-Württemberg: Friedrichstal, Sandhausen near Heidelberg); Lundblad, 1924:22 (Sweden: Lappland: Lycksele); R. Perkins, 1924:227 (Great Britain: Devon); Berland, 1925d:86 (in Sphecidae Fauna of France); Bischoff, 1925:300 (Latvia: Wezkukkul and Wirginalen 20 km N Liepāja; Poland: Białowieża); Coulon, 1925:118 (France); Shestakov, 1925:36 (Russia: Yaroslavl' area); K. Strohm, 1925:211 (Germany: Baden-Württemberg: Oberbergen in Kaiserstuhl); Friese, 1926:159 (in key to Sphecidae of Central Europe, short morphological and biological characteris-

tics); K. Strohm, 1926:74 (reference to Baader *in* Brahm, 1791); Bouwman, 1927:54 (in revision of Sphecidae of Netherlands); Benoist, 1928:409 (France: Alpes-Maritimes: Saint-Dalmas-le-Selvage); Hamm and Richards, 1930:102 (summary of nesting habits); Schmiedeknecht, 1930:680 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:62 (in revision of Sphecidae of Finland); Spooner, 1931:14 (Great Britain: Cambridge-shire); Bondroit, 1932:32 (Belgium: recorded from Bruxelles area by Vander Linden and Wesmael); E. Nielsen, 1933:300 (summary of nesting habits); Grandi, 1934:128 (Italy: Emilia-Romagna: vicinity of Bologna); Jansson, 1934:289 (Sweden); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Minkiewicz, 1935:219 (Poland: Lake Garbaś 20 km W Suwałki); Richards, 1935a:168 (*Gorytes campestris* of authors nec Linnaeus should be called *Gorytes fargeii*); Vergne, 1935:118 (France: Auvergne: common); Zavadil, Šusterka, and Bat'a, 1937:189 (in catalog of Sphecidae of Czechoslovakia); Móczár, 1938c:81 (Hungary: Kőszeg Hills); A. Wagner, 1938a:121 (northwestern Germany); Maidl and Klima, 1939:47 and 57 (in catalog of world Astatinae and Bembicinae); Benno, 1940b:207 (Netherlands); Hoop, 1941b:70 (Germany: Schleswig-Holstein: Süderhastedt); Paul, 1941:43 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Benno, 1943:66 (Netherlands); Giner Marí, 1943a:169 (in Sphecid Fauna of Spain); Giordani Soika, 1944:9 (Italy: Sicilia: Taormina); Guiglia, 1944b:19 (Italy); Móczár, 1947b:90 (Hungary: Siebenbürgen: Székelykeresztúr, now Romania: Transylvania: Cristuru Secuiesc); Caruel, 1951:100 (France: Marne Department); Cleu, 1953:50 (France: Ardèche River basin); Głowacki, 1953:519 (Poland: Podkova Leśna); Móczár, 1953:310 (Hungary); Fahlander, 1954:251 (Sweden: Gästrikland Region); Grandi, 1954:231 (Italy); Vogrin, 1955:34 (Yugoslavia); Ceballos, 1956:381 (in catalog of Hymenoptera of Spain); Kullenberg, 1956:335 (study of chemical sexual attractants); Lundblad, 1958:48 (Sweden: Gotland); Kazenas, 1972b:152 (Kazakhstan); Kullenberg, 1973:9 (male pseudocopulation with flowers of *Ophrys insectifera* L.); Levi, Sysoletina, and Shernin, 1974:270 (Russia: Kirov Oblast: Kirov, Talitsa); Casolari and Casolari Moreno, 1980:116 (specimens in M. Spinola collection); Pouvreau, Coutin, and Descoins, 1988:42 (male pseudocopulation with flowers of *Ophrys insectifera* L.); Pagliano, 2011a:134, 135, 136 (specimens in coll. Spinola, Torino, are *Argogorytes mystaceus* and *Argogorytes* sp.). – **As *Argogorytes campestris***: Bajári, 1957a:99 (new combination, in key to Hungarian Sphecidae); Evans, 1966d:69 (summary of known behavior).

As *Gorytes quinquecinctus*: Stephens, 1829:363 (in catalog of British insects) and 1829b:33 (in checklist of British insects), corrected to *Gorytes fargei* by F. Smith, 1855:99.

As *Gorytes quinquefasciatus*: Stephens, 1829:363 (new combination, in catalog of British insects) and 1829b:33 (in checklist of British insects), corrected to *Gorytes fargeii* by F. Smith, 1855:99.

As *Gorytes pleuripunctatus*: Dittrich, 1911b:23 (Germany: Niederschlesien: Agnetendorf, now Poland: Dolny Śląsk: Jagniątków), corrected to *Gorytes campestris* by Noskiewicz and Chudoba, 1949:409.

As *Argogorytes hispanicus*: Yildirim and Ljubomirov, 2005:1791 (Turkey: Erzurum: Palandöken, Ilca, Oltu), corrected to *Argogorytes fargeii* by Nemkov *in* Yildirim and Ljubomirov, 2007:117.

11. *fuliginosus* Tsuneki

Argogorytes fuliginosus Tsuneki, 1968h:2, ♀, ♂. Holotype: ♀, Taiwan: Nantou Prefecture: Penpuchi (originally K. Tsuneki coll., now USNM). – Tsuneki, 1971i:1 (Taiwan); R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae); Tsuneki, 1977c:3 (Taiwan: Chiaï Prefecture: Chuchi; additional description of ♂), 1982e:36 (Taiwan); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:13 (in checklist of Sphecidae of Taiwan); Hua, 2006:277 (in list of Chinese insects, geographic distribution).

12. *hispanicus* (Mercet)

Gorytes hispanicus Mercet, 1906a:116, ♀, ♂ (as *Hispanicus*, incorrect original capitalization). Syntypes: Spain: Madrid area (IEE). – Mercet, 1906a:127 (in key to Spanish *Gorytes*); Dusmet y Alonso, 1935:49 (Spain: Madrid: Montarco, Vaciamadrid); Maidl and Klima, 1939:50 (in catalog of world Astatinae and Bembicinae); Giner Marí, 1942a:70 (Spain: Valencia Province), 1943a:170 (in Sphecid Fauna of Spain); de Beaumont, 1945:472 (Switzer-

land; France: Provence); Carl and de Beaumont, 1947:68 (Switzerland: Graubünden = Grisons Canton: Swiss National Park); de Beaumont, 1951g:307 (Italy); Grandi, 1954:231 (Italy: Verona: Lago Seco); Steiner, 1955:144 (France: Dordogne); Ceballos, 1956:382 (in catalog of Hymenoptera of Spain), 1959:229 (in supplement to catalog of Spanish Sphecidae); Martin Albaladeo and Izquierdo Moya, 2006:122 (type in Museo Nacional de Ciencias Naturales). – **As *Argogorytes hispanicus***: de Beaumont, 1958c:203 (new combination, Swiss National Park), 1959a:19 (Italy: Sicilia), 1964c:53 (in Sphecid Fauna of Switzerland), 1965a:28 (Greece); Balthasar, 1972:330 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); Janvier, 1974:67-77 (nesting habits); R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae); Guichard, 1978:270 (Greece); Pulawski, 1978:198 (in key to Sphecidae of European part of former USSR); Pagliano, 1980:113 (Italy: Liguria); Callan, 1981:162 (review of known nesting habits); Gayubo, 1986b:39 (Spain: Andalucía); Gayubo and Sanza, 1986:74 (Spain: Segovia); Gayubo and Tormos, 1986a:13 (Spain: Castellón de la Plana); Islamov, 1986:521 (Uzbekistan: Tashkent Oblast'); Gayubo, Asís, and Tormos, 1990b:77 (Spain: Huesca Province); Pagliano, 1990:70 (in catalog of Italian Sphecidae); Dollfuss, 1991:190 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:413 (Italy: Valle d'Aosta, Piemonte, Veneto), 1992:287 (Spain); Pagliano, 1992:36 (in key to Italian Nyssoninae); Ebmer, Gusenleitner, and Gusenleitner, 1994:402 (first record from Austria: Slovenian side of Karawanken); Gayubo and Borsato, 1994:216 (Italy: Veneto: Boscochiesanuova); Kazenas and Esenbekova, 1995:79 (Kazakhstan; bibliographic reference to leafhopper prey); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:4 (in catalog of Italian fauna); Nemkov, 1995c:130, 131 (in key to Palearctic *Argogorytes*), 133 (first records from Kyrgyzstan and Tajikistan); Gusenleitner, 1996b:812 (Austria: Kärnten); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:181 (in Sphecid Fauna of Western Europe); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Neumayer, Schwarz, and Bregant, 1999:223 (Austria: in checklist of Sphecidae of Land Kärnten); Kazenas, 2001b:45 (in checklist of Sphecidae of Kazakhstan and Central Asia), 220 (review of known biology); Ljubomirov, 2001b:53 (Bulgaria: Mount Vitosha near Sofia); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Schmid-Egger, 2003:749 (Italy: Puglia: Matera); Gayubo et al. 2004:130 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Kofler, 2005:183 (Austria: Tirol: Lienz District: Amlacherhof in Amlach Common, Forchach in Lavant Common; Italy: Friuli: Cornino); Pagliano and Negrisolo, 2005:138 (in Sphecid Fauna of Italy); nec Yildirim and Ljubomirov, 2005:1791 (= *Argogorytes fargeii* and *mystaceus*); Standfuss and Standfuss, 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Evans and O'Neil, 2007:48 (summary of information on nesting habits); Bitsch, 2010:112 (in supplement to vol. II of Faune de France, 1997: recent records from Austria and Bulgaria reported); Schmid-Egger, 2011a:36 (France: Parc National du Mercantour); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Nemkov, 2012b:119 (review of known prey), 2017a:Table p. 1 (in zoogeographic analysis of Palearctic Bembicinae).

13. *matangensis* (R. Turner)

Gorytes matangensis R. Turner, 1914b:252, ♀. Holotype or syntypes: ♀, Malaysia (East): Sarawak: Matang (BMNH). – Maidl and Klima, 1939:55 (in catalog of world Astatinae and Bembicinae). – **As *Argogorytes matangensis***: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae).

Malaygorytes konishii Nemkov, 1999a:3 ♀. Holotype: ♀, Malaysia (East): Negeri Sembilan State: Pasoh Forest Reserve (National Institute of Agro-Environmental Sciences, Tsukuba, Japan). Synonymized with *Argogorytes matangensis* by Pulawski, 2011:2. – As *Argogorytes konishii*: Nemkov and Pulawski, 2009:11 (new combination, in cladistic analysis of Gorytini).

14. *mexicalis* R. Bohart

Argogorytes mexicalis R. Bohart, 2000:158, ♀, ♂. Holotype: ♀, Mexico: Nayarit: Pichón (UCD). – Amarante, 2002:13 (in catalog of Neotropical Crabronidae).

15. *mystaceus* (Linnaeus)

Sphex mystaceus Linnaeus, 1761:412, sex not indicated (as *mystacea*, incorrect original termination). Holotype: ♀, Sweden: no specific locality (Linnean Society, London). – de Villers, 1789:231 (redescription); Christ, 1791:270 (redescription); Dwigubsky, 1802:170 (Russia: Moskva area); Day, 1979:68 (study of holotype); Day and Fitton, 1978:193 (recuration of Linnean type material). – As *Apis mystacea*: Thunberg, 1791:126 (new combination, specimens donated to Academia Upsaliensis, in *Crabro* according to Fabricius). – As *Mellinus mystaceus*: Fabricius, 1790:226 (new combination, redescription), 1793:285 (redescription), 1796:98 (in Index to his Entomologia Systematica, 1793); Panzer, 1798, Heft 53:11 (in revision of German insects, illustration of habitus); Roth von Schreckenstein, 1802:31 (Germany: Baden-Württemberg); Billberg, 1829:107 (specimens from Sweden in collection Billberg); Dahlbom, 1845:XXIII (specimens in collection Fabricius are *Gorytes*). – As *Crabro mystaceus*: Fabricius, 1775:375 (new combination, redescription), 1781:471 (redescription), 1787:297 (redescription); Olivier, 1792:516 (redescription). – As *Arpactus mystaceus*: Jurine, 1807:194 (new combination, listed). – As *Gorytes mystaceus*: Stephens, 1829:363 (new combination, in catalog of British insects), 1829b:33 (in checklist of British insects); Vander Linden, 1829:96 (bibliographic references, Belgium: Bruxelles, France: Bordeaux, redescription); Lepelletier, 1832:57 (in revision of Gorytina of France); Guérin-Méneville, 1835:pl. 71, Fig. 4 (illustration of habitus); Shuckard, 1837a:211 (in revision of British Aculeata); von Siebold, 1839:52 (Germany: Danzig, now Poland: Gdańsk); Wesmael, 1839:76 (comparison with *Gorytes campestris*); Dahlbom, 1843:166 (in revision of Sphecidae and Pompilidae); Guérin-Méneville, 1844:442 (bibliographic references); Dahlbom, 1845:483 (in key to European *Gorytes*); Lepelletier de Saint Fargeau, 1845:55 (in revision of world Hymenoptera); Eversmann, 1849:394 (Russia: Orenburg province and southern Ural Mts.); von Kiesenwetter, 1849:89 (Germany: Kingdom of Saxony); Wissmann, 1849:12 (Germany: Kingdom of Hannover: Münden, Harz Mts.); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); F. Smith, 1851c:37 (Great Britain: no specific locality); Wesmael, 1852:98 (Belgium); Kirschbaum, 1853:45 (Germany: Herzogtum Nassau: Weilburg and Wiesbaden); F. Smith, 1853:65 (in checklist of British Hymenoptera); Kirchner, 1854:311 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); F. Smith, 1856:360 (listed); Kawall, 1857:24 (Kurland, now Latvia); Ruthe and Stein, 1857:314 (Germany: Berlin area); Schenck, 1857:165 (in revision of fossorial wasps of Nassau Region, Germany); F. Smith, 1858c:102 (in review of British Aculeata, redescription); Taschenberg, 1858:90 (in key to Sphecidae of Germany); Assmus, 1859:612 (Russia: Moscow Oblast'); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:148 (Germany: Nassau Region); Brischke, 1862:101 (Germany: Preussen Province, now Poland: Pomorze Region); A. Costa, 1864b:98 (specimen from Parma, Italy, in Museo Zoologico di Napoli); Siła-Nowicki, 1864:55 (Ukraine: L'viv), 1865:55 (western Ukraine: Galicia region: no specific locality); A. Costa, 1866:24 (specimen from France in Museo Zoologico di Napoli); Taschenberg, 1866:194 (in revision of Hymenoptera of Germany); A. Costa, 1867c:58 (in revision of Italian Sphecidae); Kirchner, 1867:220 (in catalog of European Hymenoptera); Palma, 1867:40 (Italy: Sicilia settentrionale); Schenck, 1867a:355 (Germany: Nassau Region); Dietrich, 1868:363 (Switzerland: Zurich Canton); Jaennicke, 1868:9 (Germany: Hessen: Büdingen, Mom bach); A. Costa, 1869b:82 (in revision of Italian Sphecidae); Wierzejski, 1868:117 (Poland: Kraków; Ukraine: Drohobycz, Podole Region); A. Costa, 1869b:74 (in revision of Italian Nyssoninae); von Aichinger, 1870:318 (Austria: Tirol); Bold, 1870:147 (Great Britain: Northumberland and Durham); Thomson, 1870:246 (in revision of

Swedish wasps); F. Smith, 1871b:11 (in catalog of British Aculeata); Schlechtendal, 1872:37 (Germany: Sachsen: Zwickau); Beletskiy, 1873:80 (Ukraine: vicinity of Khar'kov); Dours, 1874:149 (in catalog of Hymenoptera of France); Thomson, 1874:230 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:259 Poland: Kraków; Ukraine: Drohobycz, L'viv, Synkiv); Taschenberg, 1875:365 (Germany: Halle); Beuthin, 1876:231 (Germany: Hamburg area); Daly, 1878:45 (Great Britain: Dorset: Glanville's Wootton); Roebuck, 1878:48 (Great Britain: recorded from Yorkshire county: Wakefield, by F. Smith, 1858); Girard, 1879:947 (morphology and habits); Kohl, 1880:171 (Austria: Tirol, and Italy: Trentino–Alto Adige); E. Saunders, 1880:269 (in revision of British Aculeata); Siebke, 1880:65 (Norway); Marquet, 1881:182 (southern France); Yaroshevskiy, 1881:126 (Ukraine: Khar'kiv Oblast': Khar'kiv); Friese, 1883:202 (Germany: Sachsen-Anhalt: Merseburg, Weissenfels); Kohl, 1883e:666 (Switzerland); Sickmann, 1883:82 (Germany: Niedersachsen: Wellingholthausen); Harwood, 1884:211 (England: Essex: Colchester area); von Heyden, 1884:117 (Germany: Frankfurt am Main); Wüstnei, 1886:40 (Germany: Schleswig-Holstein); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region); Handlirsch, 1888b:367 (in revision of world Nyssonini and Bembicini); Brischke, 1889:204 (Germany: Steegen E Danzig, now Poland: Stegna E Gdańsk); V. Perkins, 1892:203 (Great Britain: Gloucestershire: Wotton-under-Edge); Radoszkowski, 1892:581 (male genitalia); Kohl, 1893a:26 (Austria: Niederösterreich); F. Morawitz, 1893a:112 (Russia: Karelian Isthmus); Sickmann, 1893:87 (Germany: Niedersachsen: Iburg); Westerlund, 1893:26 (Russia: Karelian Republic: northern shore of Lake Ladoga); Baldini, 1894:66 (Italy: Modena area); Krieger, 1894:8 (Germany: Kingdom of Saxony); Handlirsch, 1895:867 (additional bibliography); Laboulbène, 1895:180 (preying on *Aphrophora spumaria*); W. Fox, 1896a:525 (Handlirsch's records from North America are doubtful); Freke, 1896:40 (Ireland); Meunier, 1896:272 (Belgium: Bruxelles area); E. Saunders, 1896:106 (in revision of British Aculeata); Acloque, 1897:83 (in Sphecid Fauna of France and Algeria); Borries, 1897:63 (review of nesting habits); Dalla Torre, 1897:546 (in catalog of world Hymenoptera); Meunier, 1897b:353 (Belgium: coastal sand dunes at Blankenberge); Mocsáry, 1897:82 (Kingdom of Hungary, some localities are in today's Romania and Slovakia); Flamary, 1898:45 (France: Saône-et-Loire: Mâcon area); Lange, 1898:70 (Germany: Sachsen: Annaberg-Buchholz); Strand, 1898b:94 (Norway); Ashmead, 1899d:329 (in checklist of North American Crabronidae [*sic*]); Nevinson, 1900:62 (Great Britain: Wales: Criccieth); Gardner, 1901:378 (Great Britain: Cheshire and Lancashire: several localities); Hocking, 1901:68 (Great Britain: Surrey County); Strand, 1901:7 (Norway: Porsgrund); N. Arnold, 1902:89 (Russia: Mohilev Province, now Belarus'); Chyzer, 1902:34 (Hungary); E. Saunders, 1902a:52 (SW Ireland); de Cobelli, 1903:112 (Italy: Province of Trentino: Torcegno); Antiga and Bofill, 1904:15 (Spain: Catalonia); Aurivillius, 1904:269 (in revision of Swedish Sphecidae); Jourdain 1904:221 (Great Britain: Derbyshire: Little Eaton); W. Schulz, 1904b:95 (Czechoslovakia, France, Spain, Switzerland; geographic variation); Kubes, 1905:84 (Czech Republic: Kolín, Maria Sorg u Jáchimova, Sušice, Veltruby); Mosolov, 1905b:19 (Russia: Moscow Government: Mikhailovskoye); von Heyden, 1905:81 (Germany: Hessen: Frankfurt); Vángel, 1905:167 (Hungary); Clerc and Clerc, 1907:79 (Russia: Ekaterinburg district); Schmiedeknecht, 1907:217 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Morley, 1909:305 (Great Britain: Isle of Wight); Orr, 1909a:25 (Ireland: Down County); Cavo, 1910:685 (France: Département du Nord); Dittrich, 1911b:23 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Morley, 1911:24 (Western Ireland: Knappagh); Schirmer, 1912:166 (Germany: Berlin area); Szilády, 1913:89 (Hungary: Oláhlápád); Alfken, 1914:279 (NW Germany); Birula, 1914:384 (Belarus': Ambrosovich near Vit'eb'sk); Strand, 1918:3 (Germany: Bayern: Kulmbach); Dubois, 1919:96 (Belgium: Bruxelles: Uccle); O. Meyer, 1919:153 (Germany: Posen Province, now Poland: Poznań Region); Noskiewicz, 1920a:154 (Poland: Tatry Mountains: Dolina ku Dziurze); A. Wagner, 1920:32 (Germany: Lower Elbe region); Dubois, 1921c:200, 203 (in key to Belgian Sphecidae); Fahringer, 1922:180 (Turkey); Alfken, 1924:231 (N Germany); Leininger, 1924:121 (Germany: Baden-Württemberg: Friedrichstal, Karlsruhe); Lauterborn, 1924:287 (Germany: Baden-Württemberg: Kaiserstuhl); R. Perkins, 1924:227 (Great Britain: Devon); Stelfox, 1924:16 (Ireland: Queen County: Maryborough); Berland, 1925d:86 (in Sphecid Fauna of France); Bischoff, 1925:300 (Latvia: Wirginalen 20 km N Liepāja); Cou-

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tribution map); Archer and Edwards, 2002:103 (Great Britain: West Sussex: Ambersham and Iping commons); Beavis, 2002:111 (Great Britain: Kent: Tunbridge Wells area); Bieri, 2002:72 (Liechtenstein); Deván, 2002a:200 (Slovakia: Kobela Nature Reserve near Nové Mesto); Esser and Cölln, 2002:1136 (SW Germany: Eifel region); Józán, 2002:54 (Hungary: Mecsek Mountains); Kazenas, 2002a:117 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:155 (Poland: Kampinos National Park near Warszawa); Litt, 2002:166 (Belgium); Mokrousov, 2002:150 (Russia: Nizhniy Novgorod Oblast': Kerzhenskiy Nature Reserve); C. Schlüter, 2002:141 (Germany: Niedersachsen: anthropogenic habitats in Ammerland District); Shlyakhtenok and Skibinska, 2002:35 (Belarus': no specific locality); Wiśniowski, 2002:73 (Poland: Ojców National Park); Cölln, Esser, and Jakubzik, 2003:61 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:133 (Germany, Hungary: miscellaneous locality records); Esser and Jakubzik, 2003:290 (Germany: Nordrhein-Westfalen: Niederrheinisches Tiefland); Haeseler, 2003:339 (Germany: Niedersachsen: Harriersand Island near Bremen); 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:202 (Northern Czech Republic: spruce stands in air-pollution region); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:63 (Germany: in catalog of wasps and bees of Bayern); Schmid-Egger, 2003:749 (Italy: Sicilia: Madonie); von der Heide and Metscher, 2003:101 (Germany: Niedersachsen: Emsland area); Wiśniowski *in* Dylewska and Wiśniowski, 2003:176 (Poland: Ojców National Park); Archer, 2004:47 (Great Britain: Worcestershire: Devils Spittleful Nature Reserve); Deván, 2004:146 (western Slovakia); Dorow, 2004a:127 (Germany: Hessen: Schönbuche Nature Reserve); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:261 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Jakubzik, Niehuis, and Cölln, 2004:457 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Litt, 2004:222 (Switzerland: Valais: Zinal); Majzlan and Deván, 2004:30 (Slovakia: Sekule); Salzman-Wandeler and Rezbanyai-Reser, 2004:27 (central Switzerland); Schneider and Carrières, 2004:98 (Luxemburg: Bon-Pays Region); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:355 (in catalog of Polish Crabronidae); van Achterberg and Peeters, 2004:32 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:51 and 62 (in checklist of Polish Sphecidae); Blösch, 2005:5 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Burger, 2005:31 (Germany: Thüringen); Gayubo and Özbek, 2005:16 (Turkey: Erzurum: Tortum, Pehlivanlı; Kars: Sarýkamýþ); Haeseler, 2005:628 (Germany: Niedersachsen: Steller Heide near Bremen); Jacobs, 2005a:438 (Bulgaria); Kofler, 2005:183 (Austria: Tirol: Lienz District: several localities); Kowalczyk and Kurzac, 2005:104 (Poland: Botanical Garden in Łódź); Kraatz, 2005:102 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Pagliano and Negrisolo, 2005:138 (in Sphecidae Fauna of Italy); Quest and Kuhlmann, 2005:32 (Germany: Bayern: Bayerischer Wald National Park); Riemann and Hohmann, 2005:546 (Germany: Niedersachsen: city of Bremen and adjacent area); Robinson, 2005:38 (Great Britain: Cumbria County); Saure, 2005:13 (Germany: Berlin); Schmalz, 2005:57 (references to XIXth century authors); Theunert, 2005a:16 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Venne and Bleidorn, 2005:42 (Germany: Nordrhein-Westfalen: Moosheide Nature Reserve); Yildirim and Ljubomirov, 2005:1791 (Turkey: Bayburt, Erzurum, and Kars provinces); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); Gorobchishin, 2006:137 (Ukraine: Cherkasy Oblast': Kaniv Nature Reserve); Hua, 2006:277 (in list of Chinese insects, geographic distribution); Ljubomirov, 2006:537 (Bulgaria: Rhodope Mountains: village Yurukovo, as *mystaceus mystaceus*); Peters, 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), 2006c:304 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Terayama, 2006:9, 10 (in key to Japanese Bembicinae); Vepřek, 2006:508 (Czech Republic: Kokořínsko area); Baghirov, 2007:93 (Russia: southwestern Siberia); Beavis, 2007:97 (Great Britain: Tunbridge Wells and Central High Weald); Dorow, 2007:263, 264 (Germany: Hessen: Schönbuche Forest Reserve); Evans and O'Neil, 2007:48 (summary of information on nesting habits); Flügel, 2007:39 (Germany: Hessen: Halberg

near Neumorschen); Herrmann, 2007b:93 (Germany: Baden-Württemberg: Fürstenberg in Konstanz); Jacobs, 2007:168 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:22 (Germany: northwestern Sachsen); Józán, 2007:180 (Hungary: Zselic hills); Kowalczyk and Nadolski, 2007:283 (Poland: Łódź: railway areas); Saure, 2007:81 (in checklist of Aculeata of Brandenburg Land, Germany); Shlyakhtenok, 2007a:298 (Belarus: Berezinsky Nature Reserve); Vago, 2007:174 (France: départements d'Aisne, Nord, Pas-de-Calais, and Somme); Venne, Bleidorn, and Lauterbach, 2007:300 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:208 (in catalog of Sphecidae of Czech Republic and Slovakia); Winkler, 2007:29 (Germany: Niedersachsen: eastern Friesland); Kochetkov, Bol'shakova, Butenko, and Priklonskiy, 2008:262 (Russia: Ryazan' Oblast': Oka Nature Reserve); Livory, Chevin, Lair, Sagot, and Baldock, 2008:33 (France: Département de la Manche); Ljubomirov and Yildirim, 2008:76 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia); Theunert, 2008:9 (Germany: map of distribution in Niedersachsen and Bremen); Donie, 2009:9 (Germany: Niedersachsen: Oldenburg); U. Frommer, 2009a:26 (Germany: in checklist of Sphecidae of central Hessen); Fuhrmann, 2009:6 (Germany: Nordrhein-Westfalen: montane beech forest in Rothaargebirge); Hessling, 2009:103 (Germany: Niedersachsen: Hunte River valley south of Oldenburg); Humala and Polevoi, 2009:63 (Russia: Republic of Karelia east of Lake Onega); Józán, 2009:166 (Croatia); Kowalczyk, Kurzac, and Nadolski, 2009:62 (Poland: between Warta and Widawka rivers); Mokrousov, Antropov, Ruchin, and Bugayev, 2009:78 (Russia: Republic of Mordovia); Nemkov, 2009b:132 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:70 (Norway: locality records); Pagliano, 2009:178 (Italy: Molise: Campolieto); Ruchin, Antropov, and Shibayev, 2009:170 (Russia: Republic of Mordovia); Straka, Dvořák, and Bogusch, 2009:257 (Czech Republic: Jizerské Mountains and Frýdlant region); Venne, 2009:110 (Germany: Nordrhein-Westfalen: Holte-Stukenbrock, associated with *Frangula alnus* Miller, Rhamnaceae); Zettel, Wagner, Zimmermann, Wiesbauer, Sorger, Ockermüller, and Seyfert, 2009:10 (Austria: Niederösterreich: Pfaffstätten); Archer, 2010b:99 (Great Britain: Watsonian Staffordshire: Cannock Chase Country Park); Bitsch, 2010:112 (in supplement to vol. II of Faune de France, 1997: recent record from Bulgaria reported; France: first record from Ain: Virieu-le-Grand and Virieu-le-Petit); Esser, Fuhrmann, and Venne, 2010:35 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Falk, 2010:92 (Great Britain: heathland sites in West Midlands region); Hable, Wickl, Krauss, and von der Dunk, 2010:26 (Germany: Bayern: Sulz- and Ottmaringer Tal); Johansson, 2010:121 (Sweden: Småland: upper Emå river valley); Mokrousov, 2010a:61 (Russia: Kostroma, Nizhniy Novgorod, and Yaroslavl' Oblast's, Chuvash Republic, Mordovian Republic, and Tatarstan: no specific localities); J. Neumayer, 2010:334 (Austria: Niederösterreich: Thayatal National Park); Rudoiskatel', 2010:150 (Russia: central and southern Ural Mountains); Schmid-Egger, 2010a:14 (in red list of Aculeata of Germany: relatively common); Schmidt, 2010:132 (Germany: Bayern: collected along Main-Donau canal); Shorenko and Konovalov, 2010:14 (Ukraine); Smetana, Roller, Beneš, Bogusch, Dvořák, Holý, Karas, Macek, Straka, Šima, Tyrner, Vepřek, and Zeman, 2010:101 (Western Slovakia: recorded from Borská Nížina); Treiber, 2010:134 (France: département du Bas-Rhin); van der Smissen, 2010a:332 (Germany: Schleswig-Holstein: locality records), 2010b:383 (France: Ardèche: Font Just, Saint-Thomé); Archer, 2011a:42 (Great Britain: Yorkshire: Strensall Common); Baghirov, 2011b:141 (Russia: Altayskiy Krai: Savvushka); Feoktistov, 2011:85 (Russia: Mordovian Nature Reserve); Gogala, 2011:27 (Slovenia); Józán, 2011:183 (in checklist of Sphecidae s.l. of Hungary); Mokrousov, Berezin, and Egorov, 2011:67 (Russia: Chuvash Republic); Saure, 2011c:197 (Germany: Berlin-Spandau: Fort Hahneberg); Schmid-Egger, 2011a:36 (France: Parc National du Mercantour), 2011c:555 (Austria: Tirol: Tiroler Lech Nature Park); Schreven, 2011:17 (Netherlands: Foerperpot in Groesbeek); Shlyakhtenok, 2011:94 (Belarus: city of Minsk); Theunert, 2011a:18 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:110 (Germany: Hessen: not endangered); Archer, 2012:183 (Great Britain: urban York); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Nemkov, 2012b:119 (review of known prey); Prismaniy, 2012:50 (Russia: Belgorod Oblast'); Shlyakhtenok, 2012a:171 (Belarus' and Russia: Kirov Oblast': Arkhangel'skoye', and Krasnaya Polana near Sochi:

collected in private plots), 2012b:91 (Belarus: Beresina National Reserve: overgrowing dry meadow); Bitsch, Grouet, and Savina, 2013:292 (France: Pyrénées centrales: département d'Ariège: Ascou-Pailhères); Dyuzhaeva, 2013:116 (Russia: Samara Oblast': Zhiguli, as *mystaceus mystaceus*); Flügel, 2013a:119 (Germany: Brandenburg: Pimpinellenberg near Oderberg), 2013b:57 (Germany: Hessen: Knüllköpfchen); Kazenas, 2013a:107 (color photograph of adult wasp, short information on geographic distribution and nesting habits); Mokrousov, Ruchin, and Egorov, 2013:199 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Pankov, 2013:228 (Russia: Ivanovo Oblast'); Saure, 2013:17 (Berlin: Treptow-Köpenick: Gosener Wiesen); Shlyakhtenok, 2013:228 (in annotated catalog of aculeate wasps of Belarus'); Wiśniowski and Szczepko, 2013:23 (Poland: Kampinos National Park near Warszawa); Bitsch, 2014:398 (France: Meurthe-et-Moselle: Laneuveville-aux-Bois); U. Frommer, 2014:26 (Germany: Hessen: Lorch); Hellqvist, Abenius, and Norén, 2014:90 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Mokrousov and Vafin, 2014:55 (Russia: Republic of Tatarstan); Ruchin and Antropov, 2014:37 (Russia: Republic of Mordovia); Yıldırım, Ljubomirov, and Lelej, 2014:6 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:137 (in checklist of Hymenoptera of Turkey); P. Rosa and Pagliano, 2015:97 (Italy: Lombardia and Piemonte: Parco del Ticino); Simon, Lorthiois, and Macé, 2015:53 (France: alluvial terraces in Seine-Maritime Department: Anneville-Ambourville); Else, Bolton, and Broad, 2016:9 (in checklist of Aculeata of Great Britain and Ireland: England, Scotland, Wales, Ireland); Mokrousov and Popov, 2016:567 (Russia: Krasnodarskiy Krai); Stolle and Saure, 2016:921 (Germany: in list of Sphecidae of Sachsen-Anhalt); Wiśniowski, 2016:127 (Poland: Ojców National Park); Yıldırım, Ljubomirov, Özbek, and Yüksel, 2016:13 (Turkey: Bayburt and Erzurum provinces, as *mystaceus mystaceus*); Nemkov, 2017a:Table p. 1 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:221 (in catalog of Bembicinae of Russia, as *mystaceus mystaceus*).

Vespa campestris Linnaeus, 1761:417, sex not indicated. Lectotype: ♀, Sweden: no specific locality (Linnean Society, London), designated by Day, 1979:54. Synonymized with *Gorytes mystaceus* by Panzer, 1806:165 (*campestris* treated as valid name), synonymy confirmed by Vander Linden, 1829:97, Shuckard, 1837:211, Richards, 1935a:168, and Day, 1979:54. – Fabricius, 1775:369 (redescription), 1787:291 (redescription); Christ, 1791:234 (redescription); Richards, 1935a:168 (study of type material); Day and Fitton, 1978:194 (recuration of Linnean type material). – **As *Mellinus campestris***: Fabricius, 1793: 287 (new combination redescription), 1796:98 (in Index to his Entomologia Systematica, 1793), 1804:299 (redescription). – **As *Arpactus campestris***: Panzer, 1806:132 (new combination, in critical review of his previous work). – **As *Gorytes campestris***: Ashmead, 1899d:329 (new combination, in checklist of North American Crabronidae [sic]).

Vespa inimica M. Harris, 1776:.... Synonymized with ...

Sphex longicornis Rossi, 1790:67, sex not indicated. Holotype or syntypes: sex unknown, Italy: Etruria, now Toscana: no specific locality (destroyed). Synonymized with *Gorytes mystaceus* by Lepeletier, 1832:61 (tentatively) and by Wesmael, 1839:75.

Crabro bicinctus Fabricius, 1793:299, sex not indicated. Holotype: ♀, Dania, now Denmark: no specific locality (ZMUC). Synonymized with *Ceropales spinosa* (now *Nysson interruptus*) by Fabricius, 1804:186 and by *Argogorytes mystaceus* by van der Vecht, 1961a:47. Suppressed by ICZN, 1967, Opinion 675.

Mellinus arpactus Fabricius, 1804:300, sex not indicated. Holotype: ♂, Germany: no specific locality (ZMUC). Synonymized with *Gorytes mystaceus* by Handlirsch, 1888:368 (tentatively), synonymy confirmed by van der Vecht, 1961a:48. – Dahlbom, 1845:XXIII (type material not examined). – **As *Gorytes arpactus***: Spinola, 1806:95 (new combination; Italy: Liguria).

Vespa flavicincta Donovan, 1808:73, [♀]. Holotype or syntypes: ♀, Great Britain: no specific locality (lost) Synonymized with *Gorytes mystaceus* by Handlirsch, 1888b:368.

Gorytes tonsus Bondroit, 1933:27, ♀. Holotype: ♀, Belgium: Bruxelles: Solbosch (depository?). Synonymized with *Argogorytes mystaceus* by Bitsch and Barbier in Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:182. – **As**

Gorytes mystaceus var. *tonsus*: Maidl and Klima, 1939:53 (new status, in catalog of world Astatinae and Bembicinae).

As *Argogorytes hispanicus*: Yildirim and Ljubomirov, 2005:1791 (Turkey: Erzurum: Palandöken, İspir), corrected to *Argogorytes mystaceus* by Nemkov in Yildirim and Ljubomirov, 2007:117.

ssp. *grandis* (Gussakovskij)

Gorytes grandis Gussakovskij, 1932:28, ♀. Syntypes: ♀, Russia: Primorskiy Kray: Sedanka, Sutshan, and Tigrovaya (Stockholm). – Maidl and Klima, 1939:50 (in catalog of world Astatinae and Bembicinae); Tsuneki, 1962e:70 (*Gorytes grandis* in Iconographia Insectorum Japonicorum, Ed. II is actually *Argogorytes mystaceus grandis*, new combination). – As *Argogorytes mystaceus grandis*: Tsuneki, 1963a:2 (in key to Gorytini of Japan and Korea), 6 (new status; in revision of Gorytini of Japan and Korea), 20 (description of ♂), 1964f:47 (Japan: Nagano Prefecture: Arashi Valley), 1965c:29 (key), 1965f:41 (nesting habits); T. Iida, 1968:21 (Japan); Itami, 1969:46 (Japan: Niigata Prefecture); Tsuneki, 1969d:14 (nesting habits), 1970b:9 (Central Japan); Nambu, 1972b:14 (Japan: Saitama Prefecture); Suda, 1973:123 (Japan: Yamanashi Prefecture); Nambu, 1975b:71 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae); Tsuneki, 1976d:297 (China: Heilungkiang: Ertsentientze 31 km E Harbin), 1979d:9 (Japan); Kazenas, 1980e:82 (Russia: Far East); Callan, 1981:161 (review of known nesting habits); Tsuneki, 1982b:18 (known from Korea); Paik, 1985:202 (in list of Sphecidae of Korea); Nemkov, 1992b:249 (Russia: Far East: Khingan Nature Reserve), 1995b:129, 131 (in key), 132 (distribution in former Soviet Union); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:459, 460 (in key to Sphecidae of Russian Far East); Miyatake, 1996:103 (specimens in Hiroshi Aoki collection); Ohl and Linde, 2003:150 (number of ovarioles); 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); Nemkov, 2005a:158 (Russia: Island of Sakhalin); Hua, 2006:277 (in list of Chinese insects, geographic distribution); Nemkov, 2006b:169 (Russia: Primorskiy Kray: Kedrovaya Pad' Nature Reserve); Ohkusa, 2006a:25 (Japan: Honshu: Gifu Prefecture); Nemkov, 2007b:75 (Russia: Kuril Islands: Kunashir Island), 2009b:132 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:238 (Russia: Primorskiy Kray: Lazovsky Nature Reserve); Ohkusa and Tajima, 2010:13 (Japan: Honshu Island: Shiga Prefecture); N. Yamamoto, 2011:13 (Japan: Kyūshū: mainland Nagasaki Prefecture); Nemkov, 2012c:446 (in catalog of Crabronidae of Russian Far East); J.-K. Kim, 2014:421 (in catalog of Sphecidae s.l. of Korean Peninsula); Nemkov, 2017b:221 (in catalog of Bembicinae of Russia).

16. *nigrifrons* (F. Smith)

Gorytes nigrifrons F. Smith, 1856:368, ♀. Holotype or syntypes: ♀, Canada: Nova Scotia: no specific locality (BMNH). – Cresson, 1862:235 (in catalog of North American Hymenoptera); Packard, 1867:432 (listed); Cresson, 1887:279 (in catalog of North American Hymenoptera); Handlirsch, 1888b:376 (original description translated into German); W. Fox, 1896a:525 (in revision of North American *Gorytes*); Dalla Torre, 1897:549 (in catalog of world Sphecidae); Ashmead, 1899d:329 (in checklist of North American Crabronidae); Harrington, 1902:223 (Canada: Ontario: Ottawa); J. Smith, 1910:680 (in new list of insects of New Jersey); Rohwer, 1912:468 (correction to Fox's key); Rohwer in Viereck, 1925:655 (in key to Sphecidae of Connecticut, not yet found in the State); Maidl and Klima, 1939:59 (in catalog of world Astatinae and Bembicinae). – As *Arpactus nigrifrons*: J. Ch. Bradley, 1928:1015 (new combination, in catalog of New York Sphecidae); Brimley, 1938:446 (new combination, North Carolina: Raleigh). – As *Argogorytes nigrifrons*: Krombein in Muesebeck et al., 1951:986 (new combination, in catalog of North American Hymenoptera); Krombein, 1963f:276 (Maryland: Plummers Island near Washington, D.C.); R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae); Krombein, 1979b:1691 (in catalog of North American Hymenoptera); Finnermore, 1982:218 (in Sphecidae Fauna of Southern Quebec); Ahlstrom, 1995:112 (in checklist of insects of North Carolina); R. Bohart, 2000:159 (in revision of Neotropical Gorytini);

Buck, 2004:27 (in checklist of Crabronidae of Ontario, Canada), 31 (distribution within Ontario), 66 (first record from Ontario: list of localities).

Gorytes bollii Cresson, 1873:225, ♀ (as *Bollii*, incorrect original capitalization). Holotype: ♀, USA: Texas: Dallas County: no specific locality (MCZ). Synonymized with *Gorytes nigrifrons* by Handlirsch, 1888b:376. – Cresson, 1887:279 (in catalog of North American Hymenoptera), 1916:98 (holotype in MCZ).

Gorytes neglectus Rohwer, 1911b:567, ♀, junior primary homonym of *Gorytes neglectus* Handlirsch, 1895. Holotype: ♀, USA: Texas: no specific locality (USNM). Synonymized with *Argogorytes nigrifrons* by R. Bohart in R. Bohart and Menke, 1976:492.

17. *nipponis* Tsuneki

Argogorytes nipponis Tsuneki, 1963a:7, ♀. Holotype: ♀, Japan: Nikko (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1963a:2 (in key to Gorytini of Japan and Korea), 20 (description of ♂); Tsuneki, Iida, Hirai, and Sabi, 1964:60 (Japan: Aomori Prefecture: Towada, as *nipponicus*); Tsuneki, 1965c:29 (key); Haneda, 1968a:46 (Japan); Tano, 1968:33 (Japan); Nambu, 1972b:14 (Japan: Saitama Prefecture); Suda, 1973:123 (Japan: Yamanashi Prefecture); Tsuneki, 1973:4 (description of ♂); Nambu 1975b:71; R. Bohart and Menke, 1976:492 (in checklist of world Sphecidae); Kazenas, 1980e:82 (Russia: Primorskiy Kray); Tsuneki, 1982c:22 (nesting habits); Nemkov, 1995c:129, 131 (in key to Palearctic *Argogorytes*), 133 (distribution in former Soviet Union: Primorskiy Kray, Island Kunashir); Tano, 1994a:8 (holotype in K. Tsuneki coll.); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:459, 460 (in key to Sphecidae of Russian Far East); Hashimoto and Nakanishi, 1997:23 (holotype transferred to Hyogo Mus.); Haneda and Tano, 2003:12 (Japan: Nagasaki Prefecture: Tsushima); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:54 (Japan: Gifu Prefecture); Kinota, Haneda, and Tano, 2005:31 (Japan: Hokkaido); Terayama, 2006:9, 10 (in key to Japanese Bembicinae); Nemkov, 2007b:75 (Russia: Kuril Islands: Island of Kunashir); Evans and O'Neil, 2007:49 (summary of information on nesting habits); Nemkov, 2008b:24 (in catalog of Crabronidae of Asiatic Russia), 2009b:132 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2012c:446 (in catalog of Crabronidae of Russian Far East), 2017a:Table p. 1 (in zoogeographic analysis of Palearctic Bembicinae), 2017b:221 (in catalog of Bembicinae of Russia).

18. *palawanensis* Tsuneki

Argogorytes palawanensis Tsuneki, 1976b:42, ♀. Holotype: ♀, Philippines: Palawan: Pinigisan (ZMUC).

19. *parkeri* R. Bohart

Argogorytes parkeri R. Bohart, 2000:160, ♀, ♂ (generic name misspelled *Argochrysis*). Holotype: ♀, Costa Rica: Alajuela: 20 km S Upala (USU). – Amarante, 2002:13 (in catalog of Neotropical Crabronidae).

20. *porteri* R. Bohart

Argogorytes porteri R. Bohart, 2000:160, ♀, ♂. Holotype: ♀, Brazil: Santa Catarina: Nova Teutonia (UCD). – Amarante, 2002:13 (in catalog of Neotropical Crabronidae).

21. *quadrangulus* R. Bohart

Argogorytes quadrangulus R. Bohart, 2000:161, ♀, ♂. Holotype: ♂, Costa Rica: Guanacaste: 14 km S Cañas (USU). – Amarante, 2002:13 (in catalog of Neotropical Crabronidae).

22. *rubrosignatus* (R. Turner)

Arpactus rubrosignatus R. Turner, 1915a:77, ♀. Holotype or syntypes: ♀, Australia: Western Australia: between Yallingup and Busselton (BMNH). – R. Turner, 1915a:69 (in key to Australian *Arpactus*). – **As *Gorytes rubrosignatus***: Maidl and Klima, 1939:56 (new combination, in catalog of world Astatinae and Bembicinae). – **As *Argogorytes rubrosignatus***: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Cardale, 1985:280 (in catalog of Australian Sphecidae).

23. rufomixtus (R. Turner)

Gorytes rufomixtus R. Turner, 1914a:620, ♀. Holotype or syntypes: ♀, Australia: New South Wales: Jindabyne at Snowy River (Australian Mus., Sydney). – Maidl and Klima, 1939:56 (in catalog of world Astatinae and Bembicinae) – **As** *Arpactus rufomixtus*: R. Turner, 1915a:69 (new combination, in key to Australian *Arpactus*); Hacker and Cockerell, 1922:290 (new combination, description of ♂). – **As** *Argogorytes rufomixtus*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Cardale, 1985:281 (in catalog of Australian Sphecidae).

24. sapellonis (C. Baker)

Gorytes sapellonis C. Baker, 1907:161, ♀. Holotype or syntypes: ♀, USA: New Mexico: Sapello Canyon (originally Pomona College, now USNM). – Maidl and Klima, 1939:60 (in catalog of world Astatinae and Bembicinae); Krombein in Muesebeck et al., 1951:993 (in catalog of North American Hymenoptera). – **As** *Argogorytes sapellonis*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Krombein, 1979b:1691 (in catalog of North American Hymenoptera); R. Bohart, 2000:161 (in revision of Neotropical Gorytini); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007: 45 and 47 (Mexico: Tamaulipas).

25. secernendus (R. Turner)

Arpactus secernendus R. Turner, 1915a:78, ♀. Holotype or syntypes: ♀, southeastern Australia: no specific locality (BMNH). – R. Turner, 1915a:69 (in key to Australian *Arpactus*). – **As** *Gorytes secernendus*: Maidl and Klima, 1939:56 (new combination, in catalog of world Astatinae and Bembicinae). – **As** *Argogorytes secernendus*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Cardale, 1985:281 (in catalog of Australian Sphecidae).

26. similicolor (Dow)

Gorytes similicolor Dow, 1933:218, ♀. Holotype: ♀, Paraguay: Villarrica (MCZ). – Maidl and Klima, 1939:60 (in catalog of world Astatinae and Bembicinae). – **As** *Argogorytes similicolor*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); R. Bohart, 2000:162 (in revision of Neotropical Gorytini); Amarante, 2002:13 (in catalog of Neotropical Crabronidae).

27. stenopygus (Handlirsch)

Gorytes stenopygus Handlirsch, 1895:869, ♀, ♂. Syntypes: ♀, Indonesia: Sulawesi: no specific locality (TMB), ♂, Philippines: Luzon: no specific locality (ZMHU). – Dalla Torre, 1897:555 (in catalog of world Sphecidae); Maidl and Klima, 1939:55 (in catalog of world Astatinae and Bembicinae); Baltazar, 1966:349 (in catalog of Hymenoptera of Philippines). – **As** *Argogorytes stenopygus*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae).

28. tonkinensis (Yasumatsu)

Gorytes tonkinensis Yasumatsu, 1943:3, ♀. Holotype: ♀, Vietnam: Hoa-Sinh (Heude Mus., Shanghai). – **As** *Argogorytes tonkinensis*: R. Bohart and Menke, 1976:492 (new combination, in checklist of world Sphecidae); Wu and Zhou, 1996a:142 (in revision in Economic Insect Fauna of China); Hua, 2006:277 (in list of Chinese insects, geographic distribution); Pham, Kumar and Danilov, 2015:1590 (in list of Sphecidae s.l. of Vietnam).

29. tristis Tsuneki

Argogorytes tristis Tsuneki, 1982a:49, ♀. Holotype: ♀, Bismarck Archipelago: New Ireland: Lemkamin (ZMUC).

30. umbratilis R. Bohart

Argogorytes umbratilis R. Bohart, 2000:162, ♀, ♂. Holotype: ♀, Brazil: Santa Catarina: Nova Teutonia (UCD). – Amarante, 2002:13 (in catalog of Neotropical Crabronidae); Rasmussen and Asenjo, 2009:6 (in checklist of Crabronidae of Peru); Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:67 (Brazil: Mato

Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco); Trad and Silvestre, 2016:4 (Brazil: Mato Grosso do Sul).

31. *vagus* (F. Smith)

Gorytes vagus F. Smith, 1859a:161, ♀. Holotype or syntypes: ♀, Indonesia: Maluku: Island of Key, now Kai (OXUM). – F. Smith, 1863b:136 (known from Kai), 1871a:368 (in catalog of Oriental Aculeata); Handlirsch, 1888b:540 (as new synonym of *Gorytes constrictus*). – **As *Arpactus vagus***: R. Turner, 1915a:79 (new combination, as questionable synonym of *Arpactus constrictus*). – **As *Argogorytes vagus***: R. Bohart and Menke, 1976:492 (new combination, as good species, in checklist of world Sphecidae).

sp.

Bischoff, 1933:4 (Morocco); Bibby, 1947:78 (Philippines: Samar group of Islands: Calicoan Island); Hanson and Menke, 1995:645 (Costa Rica).