

Last updated: 30 May 2025

ENTOMOGNATHUS

Entomognathus Dahlbom, 1844:295. Type species: *Crabro brevis* Vander Linden, 1829, by monotypy.

Koxinga Pate, 1944b:341, as subgenus of *Entomognathus*. Type species: *Entomognathus siraiyai* Pate, 1944, by original designation and monotypy.

Mashona Pate, 1944b:341, as subgenus of *Entomognathus*. Type species: *Thyreopus apiformis* Arnold, 1926, by original designation and monotypy.

Toncahua Pate, 1944b:341, as subgenus of *Entomognathus*. Type species: *Entomognathus texanus* Cresson, 1887, by original designation and monotypy.

Florkinus Leclercq, 1956b:2, as subgenus of *Encopognathus*, transferred *Entomognathus* by R. Bohart and Menke, 1976:46. Type species: *Florkinus evolutionis* Leclercq, 1956, by original designation and monotypy.

Reviews: R. Bohart, 1995 (New World species), Leclercq, 1997b (African and Asian species), 2012b (North and Central America).

Keys: Q. Li and He, 2000a (China).

Review of biology: Kazenas, 2001b:182.

1. *alaris* R. Bohart

Entomognathus alaris R. Bohart, 1995:503, ♀, ♂. Holotype: ♀, USA: Arizona: Cochise County: Willcox (UCD). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Amarante, 2002:29 (in catalog of Neotropical Crabronidae); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 122 (locality records).

2. *aneurytibialis* Q. Li and He

Entomognathus aneurytibialis Q. Li and He, 2000a:55, ♂. Holotype: ♂, China: Yunnan Province: Xishuangbanna: Menga (Inst. Zool., Acad. Sinica).

3. *apache* R. Bohart

Entomognathus apache R. Bohart, 1995:503, ♀, ♂. Holotype: ♀, USA: Arizona: Cochise County: 13 mi. southwest of Apache (AMNH). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Amarante, 2002:29 (in catalog of Neotropical Crabronidae); Leclercq, 2012b:122 (in key to *Entomognathus* of North and Central America, locality records, color variation).

4. *apiformis* (Arnold)

Thyreopus apiformis Arnold, 1926:343, ♀. Holotype: ♀, Zimbabwe: Vumbu Mountains near Umtali (SAM). – Arnold, 1927:125 (description of ♂), 1930:13 (in checklist of Afrotropical Sphecidae). – **As *Entomognathus apiformis*:** Leclercq, 1954c:201 (new combination, in catalog of world Crabronini), 1961b:68 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:118 (in key to African and Asian *Entomognathus*), 120 (bibliographic references, faunal records, tentatively assigned to subgenus *Mashona*).

5. *arenivagus* Krombein

? *Entomognathus* sp.: Brimley, 1938:450 (North Carolina: Bryson City), corrected to *Entomognathus arenivagus* by Krombein, 1963e:249.

Entomognathus n. sp.: Krombein and Evans, 1954:235 (Florida: Arcadia), corrected to *Entomognathus arenivagus* by Krombein, 1963e:249.

Entomognathus arenivagus Krombein, 1963e:249, ♀, ♂. Holotype: ♂, USA: Florida: DeSoto County: Arcadia (USNM). – Wray, 1967:124 (North Carolina: Bryson City); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Krombein, 1979b:1659 (in catalog of North American Hymenoptera); Ahlstrom, 1995:110 (in checklist of insects of

North Carolina); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Leclercq, 2012b:122 (in key to *Entomognathus* of North and Central America), 123 (distribution: North Carolina, Florida).

6. *arizonae* R. Bohart

Entomognathus arizonae R. Bohart, 1995:504, ♀, ♂. Holotype: ♀, USA: Arizona: Cochise County: 28 mi. north of Douglas (UCD). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Leclercq, 2012b:120 (in key to *Entomognathus* of North and Central America), 123 (known only from Arizona).

7. *arnoldi* Bohart and Menke

Crabro tridens Arnold, 1945:165, ♀, junior primary homonym of *Crabro tridens* Fabricius, 1798, which is a junior synonym of *Oxybelus uniglumis* (Linnaeus, 1758). Syntypes: Madagascar: Bekily (MNHN). – **As *Entomognathus tridens***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:72 (Madagascar; description of ♂).

Entomognathus arnoldi Bohart and Menke, 1976:382. Substitute name for *Crabro tridens* Arnold. – Leclercq, 1997b:115 (in key to African and Asian *Entomognathus*), 120 (bibliographic references, faunal records, tentatively assigned to subgenus *Mashona*); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:955 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

8. *bidentatus* (Arnold)

Thyreopus bidentatus Arnold, 1927:122, ♀. Holotype: ♀, South Africa: Cape Province: Aliwal North (BMNH). – Arnold, 1930:13 (in checklist of Afrotropical Sphecidae). – **As *Entomognathus bidentatus***: Leclercq, 1954c:201 (new combination, in catalog of world Crabronini), 1961b:66 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:117, 118 (in key to African and Asian *Entomognathus*), 120 (bibliographic references, faunal records, additional description); Dollfuss, 2006:519 (South Africa: Eastern Cape Province: 7 km south of Cradock; Western Cape Province: Ashton).

9. *birmanus* Leclercq

Entomognathus birmanus Leclercq, 1997b:121, ♂. Holotype: ♂, Burma: Shuegu (ZMHU). – Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*).

10. *brevis* (Vander Linden)

Crabro brevis Vander Linden, 1829:72, ♀, ♂. Syntypes: Belgium: Bruxelles and Italy: Bologna (Inst. Roy. Sci. Nat. Belgique, Bruxelles). – Shuckard, 1837a:175 (in revision of British Aculeata); von Siebold, 1839:51 (Germany: Danzig, now Poland: Gdańsk); Dahlbom, 1842a:13 (in review of Scandinavian aculeates); F. Smith, 1849b:2551 (preying on Alticinae), 1851c:32 (Great Britain: sand banks, no specific locality); 1853:64 (in checklist of British Hymenoptera), 1856:404 (in catalog of Hymenoptera in British Museum), 1858c:160 (in review of British Aculeata, redescription); A. Morawitz, 1866a:270 and 1866b:346 (specimens in E. Eversmann collection); F. Smith, 1869d:78 (Great Britain: Norfolk: Cromer), 1871b:16 (in catalog of British Aculeata); Taschenberg, 1875:382 (Germany: Halle); Kohl, 1880:134 (Austria: Tirol, and Italy: Trentino–Alto Adige), 1883e:656 (Switzerland); Sickmann, 1883:75 (Germany: Niedersachsen: Wellingholthausen); Harwood, 1884:212 (England: Essex: Colchester area); von Heyden, 1884:124 (Germany: Frankfurt am Main area); Kohl, 1888b:722 (Austria: Tirol, now Italy: Alto Adige); Gasperini, 1889:68 (Dalmatia: Spalato, now Croatia: Split); F. Morawitz, 1889a:160 (China: Gansu: Djon Monastery); V. Perkins, 1892:206 (Great Britain: Gloucestershire: Wotton-under-Edge); Kohl, 1893a:21 (Austria: Niederösterreich); F. Morawitz, 1893a:113 (Russia: Karelian Isthmus); Sickmann, 1893:75 (Germany: Niedersachsen: Iburg); Krieger, 1894:3 (Germany: Kingdom of Saxony); Schletterer, 1894:34 (Istria Peninsula, now part of Croatia, Slovenia, and Italy); Meunier, 1896:270 (Belgium: Bruxelles area); Dalla Torre, 1897:585 (in catalog of world Sphecidae); Mocsáry, 1897:83 (Kingdom of Hungary, some localities are in today's Croatia, Romania and Slovakia); de Cobelli, 1903:118 (Italy: Province of Trentino); Antiga and Bofill, 1904:22 (Spain: Cataluña Province); W. Schulz, 1904b:98 (Czechoslovakia, Hungary, Syria, Turkey); Kubes, 1905:84 (Czech Republic: Babice, Maria Sorg u Jáchymova);

Mosolov, 1905b:19 (Russia: Moscow Governorate: Mikhailovskoye); von Heyden, 1905:83 (Germany: Hessen: Frankfurt); Móczár and Henter, 1907:206 (Hungary: Tiszaalpár); Schmiedeknecht, 1907:201 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Ditttrich, 1911b:20 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Birula, 1912:536 (Ukraine: Zhytomyr Oblast': Radomyshl'); Alfken, 1914:275 (northwestern Germany); Szilády, 1914:89 (Hungary: Budaörs, Gyulafehérvár, Gyilkos-tó, Nagyenyed); Benoist, 1915:241 (nesting habits, prey); Kohl, 1915:316 (in revision of Palearctic Crabronini); O. Meyer, 1919:149 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:46 (Germany: Lower Elbe region); Dubois, 1921b:164 (in key to Belgian Sphecidae), 166 (phenology, nesting habits); Hedicke, 1922:270 (Germany: Brandenburg: Gross Machnower Weinberg); Berland, 1925d:176 (in Sphecidae Fauna of France); Bischoff, 1925:299 (Poland: Grajewo area); Grandi, 1925b:69 (nesting habits); Shestakov, 1925:36 (Russia: Yaroslavl' area); Bouwman, 1926:279 (in list of Sphecidae of Netherlands); Friese, 1926:150 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Schütze, 1925:111 (Germany: Lausitz Region); Zavadil, 1926:36 (Czechoslovakia); Benoist, 1928:410 (France: Basses-Alpes: Barcelonnette; Berland, 1928b:179 (papers on biology to be added to Berland, 1925d); Bouwman, 1930:105 (in revision of Sphecidae of Netherlands); Schmiedeknecht, 1930:660 (in keys to Hymenoptera of North and Central Europe); Bischoff, 1931:9 (Spain); Grandi, 1931:51 (nesting habits), 57 (Italy: Toscana: Vallata delle Pozze near Le Mandriole); Pulkkinen, 1931:153 (in revision of Sphecidae of Finland); Bondroit, 1932:42 (Belgium: common in Bruxelles area); Giordani Soika, 1932a:22 (Italy: lido di Venezia); Nadig, 1933:77 (Morocco: Meknes); E. Nielsen, 1933:273 (summary of nesting habits); Balles, 1934:17 (Germany: Baden-Württemberg: 12 localities); Jansson, 1934:289 (Sweden); Forsius in Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Grandi, 1935a:109 (Italy); Steck, 1935:326 (Switzerland); Vergne, 1935:119 (France: Auvergne: Billom); Crèvecoeur and Maréchal, 1936:257 (in catalog of Belgian Hymenoptera); Drogoszewski, 1936:129 (Poland: Łowicz, Opatów); Dulac, 1937:19 (France: Saône-et-Loire: Saint-Laurent d'Andenay); Goebel, 1937:39 (Poland: Poznań District: Poznań-Dębina, Spławie, Strzeszyn, Strzeszynek); Zavadil, Šustera, and Bat'a, 1937:168 (in catalog of Sphecidae of Czechoslovakia); Móczár, 1938c:81 (Hungary: Kőszeg Hills), 1939:5 (Hungary: Jászberény); Yasumatsu, 1939e:14 (China: Jilin Province: Changchun); Dovnar-Zapolskiy, 1940:303 (Russia: Kursk Oblast'); Guiglia, 1941c:167 (Italy: Calabria: Grande Sila); Leclercq, 1941b:16 (Belgium: Liège area); Paul, 1941:38 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Benno, 1943:68 (Netherlands); Giner Marí, 1943a:249 (in Sphecidae Fauna of Spain); Guiglia, 1943b:72 (Albania: Kopliku), 1944b:33 (Italy); Šnoflák, 1944a:143 (Czech Republic: serpentine steppe near Mohelno); Carl and de Beaumont, 1947:69 (Switzerland: Graubünden = Grisons Canton: Swiss National Park); Móczár, 1947b:90 (Hungary: Siebenbürgen: Székelykeresztúr, now Romania: Transylvania: Cristuru Secuiese); Tsuneki, 1947e:428 (Japan: Hokkaido); Balthasar, 1948:140 (Slovakia: Kovačovské Kopce, Parkan); Tsuneki, 1948c:8 (Japan: Hokkaido); Zavadil in Zavadil and Šnoflák, 1948:137 (in key to Sphecidae of Czechoslovakia); Ceballos, 1949:100 (Spain); de Andrade, 1949:22 (Portugal); Franz, 1949:13 (Austria: Hohe Tauern); Aerts, 1950a:50 (Germany: Nordrhein-Westfalen: Rheidter Wertchens near Köln), 1950b:23 (Germany: Rheinland-Pfalz: Lorelei); Cavro, 1950:37 (France: Département du Nord); de Beaumont, 1950f:412 (Algeria); Georgel, 1950:64 (France: Seine-et-Oise: Sucy-en-Brie); de Beaumont, 1951h:35 (Switzerland: Neuchâtel area); Fæster, 1951:458 (distribution in Scandinavia); Caruel, 1952b:101 (France: Marne Department); Móczár, 1953:311 (Hungary); Nouvel and Ribaut, 1953:181 (France: Hautes-Pyrénées: Cauterets, Orédon); de Beaumont, 1954e:98 (Italy); Steiner, 1955:140 (France: Dordogne); Teschner, 1955:57 (Germany: Nordrhein-Westfalen: Hohe Ward near Münster); Vergne, 1955:5 (France: Auvergne); Vogrin, 1955:41 (Yugoslavia); Bytinski-Salz, 1956:227 (Turkey: İzmit); Ceballos, 1956:392 (in catalog of Hymenoptera of Spain); Preuss, 1956:15 (Germany: Schleswig Holstein: Mölln in Lauenburg); Zirngiebl, 1957:177 (Germany: Rheinland-Pfalz: Pfalz region); Benno, 1958b:20 (in review of Dutch Sphecidae); Pulawski, 1958a:188 (Bulgaria: Kniazhevo near Sofia, Kurilo); Diniz, 1959:31 (Portugal: Évora, Lisboa, Singeverga); Noskiewicz and Puławski, 1960:157 (in key to Polish Sphecidae); Lehrer and Scutaru, 1963:285 (Romania: Moldova: Baia in Suceava District, Mircești and Surănești in Iași District); Ceballos, 1964:94 (in supplement to catalog of Spanish Sphecidae, as *bevis*); Bonelli, 1966c:220 (Italy:

Trentino–Alto Adige: Vigo di Fassa); Miczulski, 1967:189 (Poland: Czechów, Felin, and Sławin near Lublin); Niedl and Deneš, 1967:75 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:54 (Romania); Tumšs and Maršakovs, 1970:31 (Latvia); Balthasar, 1972:131 (in Sphecidae Fauna of Czechoslovakia); Niedl and Deneš, 1972:151 (Czech Republic: Třeboň area); Józán, 1981:306 (Hungary: Hortobágy National Park); Skibińska, 1981:358 (Poland: Warszawa-Białoleka), 1982:124 (Poland: Warszawa area); Piek and Spanjer, 1986:183 (in list of Sphecidae with known prey); Blagoveshchenskaya, 1994:90 (Russia: Ul'yanovsk Oblast'). – **As *Lindenius brevis***: Lepeletier de Saint Fargeau and Brullé, 1835:800 (new combination, in revision of Crabronini); Lepeletier de Saint Fargeau, 1845:202 (in revision of world Hymenoptera); A. Morawitz, 1864:458 (Russia: Sankt-Petersburg); Radoszkowski, 1876b:137 (Egypt, record not confirmed by subsequent authors); Acloque, 1897:90 (in Sphecidae Fauna of France and Algeria); Bradley, 1957:45 (Lepeletier's specimens in M. Spinola, Turin); Casolari and Casolari Moreno, 1980:117 (specimens in M. Spinola collection, Torino); Pagliano, 2011a:139 (specimens in M. Spinola collection, Torino, are *Entomognathus brevis*). – **As *Entomognathus brevis***: Dahlbom, 1844:295 (new combination, in revision of Sphecidae and Pompilidae), 1845:515 (in key to *Entomognathus*); Wissmann, 1849:15 (Germany: Kingdom of Hannover: common); Tischbein, 1852:141 (Germany); Wesmael, 1852:590 (Belgium); Kirchner, 1854:313 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); Kawall, 1857:25 (Kurland, now Latvia); Ruthe and Stein, 1857:315 (Germany: Berlin area); Schenck, 1857:108 (in revision of fossorial wasps of Nassau Region, Germany); Taschenberg, 1858:100 in key to Sphecidae of Germany); Assmuss, 1859:617 (Russia: Moscow Oblast'); Funk, 1859:58 (Germany: Bayern: Bamberg); Schenck, 1860:146 (Germany: Nassau Region); Brischke, 1862:105 (Germany: Preussen Province, now Poland: Pomorze Region); Taschenberg, 1866:182 (in revision of Hymenoptera of Germany); A. Costa, 1867c:121 (in revision of Italian Sphecidae); Kirchner, 1867:224 (in catalog of European Hymenoptera); Schenck, 1867a:352 (Germany: Nassau Region); Dietrich, 1868:362 (Switzerland: Zurich Canton); Wierzejski, 1868:118 (Poland: Kraków area; Ukraine: Podole Region); von Aichinger, 1870:315 (Austria: Tirol); Thomson, 1870:159 (in revision of Swedish Crabroninae); A. Costa, 1871b:50 (in revision of Italian Sphecidae); Dours, 1874:154 (in catalog of Hymenoptera of France); Thomson, 1874:260 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:261 (Ukraine: Podole Region: Bucyki, Kalinowce, Skala, Warwaryńce); Beuthin, 1876:230 (Germany: Hamburg area); E. Saunders, 1880:279 (in revision of British Aculeata); Siebke, 1880:68 (Norway); Marquet, 1881:185 (France: Haute-Garonne: Toulouse); A. Costa, 1883:58 (Italy: Sardegna: Tissi); Friese, 1883:201 (Germany: Sachsen-Anhalt: Kösen, Weissenfels); Wüstnei, 1886:37 (Germany: Schleswig-Holstein: Husum, Sonderburg); Brischke, 1888b:100 (Germany: Preussen Province, now Poland: Pomorze Region); Assmuss, 1892:53 (Russia: earlier record from Moscow Governorate repeated); E. Saunders, 1896:147 (in revision of British Aculeata); Borries, 1897:48 (nesting habits); Strand, 1898b:95 (Norway); N. Arnold, 1902:88 (Russia: Mohilev Province, now Belorussia); Nevinson, 1902:12 (Great Britain: Cornwall: Newquay); E. Saunders, 1902b:144 (British Channel Islands: Island of Jersey; France: Bretagne: Saint Briac); Aurivillius, 1904:279 (in revision of Swedish Sphecidae); E. Saunders, 1904c:639 (Spain); Cavo, 1910:685 (France: Département du Nord: Roubaix); Graeffe, 1911:44 (Italy: Trieste area); Adlerz, 1912:58 (nesting habits); Schirmer, 1912:164 (Germany: Berlin area); R. Perkins, 1913b:396 (in key to British Crabronini); Dubois, 1919:96 (Belgium: Bruxelles: Uccle); Łoziński, 1920:121 (Poland: Dąbrowa near Tarnów and Maków Podhalański); R. Perkins, 1924:226 (Great Britain: Devon); Coulon, 1925:123 (France: Biel, Elbeuf, Oise; Morocco: Tanger); R. Perkins, 1925:153 (Great Britain: Gloucestershire and Somersetshire); Hamm and Richards, 1926:320 (summary of nesting habits), 329 (list of prey); Hémon, 1926:199 (France: Finistère: Fouesnant); Maneval, 1928:30 (nest and prey); Baudot, 1931:255 (characteristics of cocoon); Minkiewicz, 1935:215 (Poland: Lake Garbaś 20 km west of Suwałki); Spooner, 1931:15 (Great Britain: Cambridgeshire), 1933:203 (Great Britain: Bedfordshire: Sandy); Bernard, 1935:66 (France: Var: Fréjus area); Marchand and Dulac, 1935:60 (France: Saône-et-Loire: Saint Laurent d'Andenay); Maneval, 1937:166 (nest structure, list of prey); Richards, 1937b:107 (in checklist of British aculeates); A. Wagner, 1938a:118 (northwestern Germany); de Graham, 1941:99 (Great Britain: Lincolnshire); Schneid, 1941:1032 (Germany: Bayern: Bamberg area); J. Perkins, 1942:199 (Sweden: Skåne: Degaberga and Kivik); Richards, 1944b:134 (nest, halticine prey); T. Fletcher, 1945:54 (Great Britain: Gloucestershire:

Cooper's Hill, Wotton); Chambers, 1949:231 (Great Britain: Bedfordshire); de Graham, 1950:349 (eggs of unknown insect deposited on thorax); Leclercq, 1950a:7 (miscellaneous collecting localities); Szulczewski, 1950:105 (Poland: Wielkopolski National Park 15 km south of Poznań); Leclercq, 1951e:2 (bibliography of Belgian records); Abrahamson, 1952:119, 129 (nesting habits, preying on halticine *Chaetocnema*); Bischoff and Stadler, 1954:127 (Germany: Bayern: Romberg); Grandi, 1954:244 (Italy); Leclercq, 1954c:200 (in catalog of world Crabronini), 303 (nest and prey records); Aerts, 1955:57 (Germany: Rheinland); Leclercq, 1956i:132 (Luxemburg); Evans, 1957b:103 (discussion of larval characters); Grandi, 1957:391 (Italy: Abruzzi); Yeo, 1957:20 (Great Britain: Middlesex, now in London); de Beaumont, 1958c:213 (Swiss National Park); Móczár, 1958b:193 (Hungary: list of collecting localities); Nouvel and Ribaut, 1958:16 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1959a:44 (Italy); Grandi, 1959b:288 (Italy: Modena: Zocca); Wolf, 1959b:32 (Germany: Nassau); Hamann, 1960:196 (Austria: Oberösterreich: Mönchgraben at 48°13'N 14°21'E); Leclercq, 1960c:423 (locality records from Spain); Tsuneki, 1960g:50 (nesting behavior not observed in Japan); Grandi, 1961:240 (nesting behavior), 528 (description of larva); Hoop, 1961:64 (Germany: Schleswig-Holstein: Kronshagen); Valkeila, 1962b:68 (southwestern Finland); Felton, 1963:179 (Great Britain: Kent County); Valkeila, Brander, and Kämpylä, 1963:41 (Finland: historical region Lounais-Hämeen = southwest Häme); Babi, 1964:117 (Austria: Land Salzburg); de Beaumont, 1964c:153 (in Sphecidae Fauna of Switzerland); Isensee, Lesemann, and Röseler, 1965:612 (Spain: Girona: no specific locality); B. Klug, 1965:144 (Germany: Baden-Württemberg: Freiburg im Breisgau area); Gauss, 1966c:240 (specimen bearing dipteran egg); Benno, 1967:39 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:362 (Turkey); Gauss, 1967:559 (Germany: Baden-Württemberg); J. Heinrich, 1967:82 (Germany: Bayern: Unterfranken District); Leclercq, 1967a:34 (Great Britain: locality records); Tsuneki, 1967e:2 (China: Manchuria), 17 (China: Harbin); Benedek, 1968:77 (Hungary, floral records); Haneda, 1968b:57 (Japan: Nagano Prefecture: Ina District); Leclercq, 1968b:39 (Great Britain: Kent); Okuno, 1968:31 (Japan); Parré, 1968:124 (Germany: Sachsen-Anhalt: Staßfurt); Scobiola-Palade, 1968c:387 (Romania: Bucureşti, Budeşti, Periş, Pipera); Wolf, 1968:11 (Germany: Nordrhein-Westfalen: Siegen, inhabitant of forest edge); Benedek, 1969a:85 (Hungary: marshy meadow), 1969b:421 (Hungary: Csopak, collected in vicinity of aphid *Hyalopteritena pruni* (Geoffroy)); de Beaumont, 1969:94 (Turkey); Lefeber, 1969a:79 (Netherlands: t'Rooth), 1969c:234 (Netherlands: Sint-Pietersberg = Montagne Saint Pierre); Romanova, 1969:135 (Russia: North Caucasus); Tsuneki and Tano, 1969:31 (distribution in Japan); Zangheri, 1969:1707 (Italy: in catalog of flora and fauna of Romagna Region); Benedek, 1970:104 (Hungary: Tapolca); Oehlke, 1970:789 (Democratic Germany); Petit, 1971:22 (Belgium: Luxemburg: Lipperscheid); Leclercq, 1971:222 (Spain); Schmidt, 1971b:52 (Germany: Rheinland-Pfalz: Gonsenheimer Wald; common at Kirschbaum, 1853 time, now very rare), 1971c:76 (Germany: Schleswig-Holstein); Stritt, 1971a:105 (Germany: Baden-Württemberg: Karlsruhe); Vegter, 1971:230 (Netherlands: Drenthe Province); Haeseler, 1972:157, 200 (Germany: anthropogenic habitats in Schleswig-Holstein); Kazenas, 1972b:167 (Kazakhstan); Kofler, 1972:116 (Austria: eastern Tirol); R. Miller and Kurczewski, 1972:61 (in review of nesting habits of *Entomognathus*); Scobiola-Palade, 1972a:151 (Romania: delta of Danube: Caraorman); de Beaumont, Bytinski-Salz and Pulawski, 1973:22 (Israel); Tano, 1973a:50 (nesting habits); Kazenas, 1974b:110 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, and *Silaum besseri* L., Apiaceae, in Kazakhstan); Kofler, 1974:320 (Austria: Kärnten); Erlandsson, 1974:86 (Italy, Spain, Yugoslavia); Kämpylä, 1974:64 (Finland: diurnal activity); Simon Thomas and Veenendaal, 1974b:4 (France: Landes: Escourse); Burn, 1975:144 (Great Britain: Yorkshire: Doncaster district); Leclercq, 1975b:2 (France); Lefeber, 1975b:120 (Netherlands: Schiepersberg); Lomholdt, 1975b:32 (Denmark: Island of Anholt); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Lomholdt, 1976:344 (in Sphecidae Fauna of Fennoscandia and Denmark); Marshakov, 1976b:616 (in revision of *Entomognathus* of USSR); Tsuneki, 1976d:307 (China: Heilungkiang: Cheng 31 km east of Harbin); Guichard, 1977:254 (Great Britain: Surrey); Koleznikov, 1977:321 (Russia: Bryansk Oblast); Schmidt, 1977:99 (Germany: Baden-Württemberg: Enzklösterle in Schwarzwald); Schmidt, 1977-1978:58 (Germany: Rheinland-Pfalz: Gonsenheimer Wald); Guichard, 1978:272 (first record from Greece: Mount Parnassus, Timfristos); Pulawski, 1978:254 (in key to Sphecidae of European part of USSR); Schwammberger, 1978:421 (Germany: Württemberg); Benedek, 1979:236 (Hungary: Bakony Hills);

Leclercq, Gaspar, and Verstraeten, 1979:carte 1432 (Belgium); Richards, 1979:399 (British Channel Islands); Schmidt, 1979a:56 (Germany: Ost-Holstein); Dathe, 1980:209 (Russia: northern Caucasus: Teberda); Jacob-Remacle and Leclercq, 1980:192 (Belgium: gardens in Liège); Mityaev, Matesova, Kulenova, Kazenas, and Zhdanko, 1980:117 (Russia: Siberia: Altayskiy Kray: basin of Aley River); Pagliano, 1980:120 (Italy: Piemonte); Petit, 1980:43 (Belgium: Ahrhütte, Gönnersdorf, Saeftinge; Luxemburg: Pintsch); Richards, 1980:59 (in key to Sphecidae of British Isles); Schmidt, 1980:329 (Germany: Baden-Württemberg); Westrich, 1980:635 (Germany: Baden-Württemberg: Tübingen area); Cooter, 1981:46 (Great Britain: Herefordshire); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Gayubo, 1982b:17 (Spain: Ávila, Cáceres, and Salamanca provinces), 1882e:103 (Spain: Cádiz Province); Leclercq, 1982a:125 (Belgium: Liège), 1982b:155 (China: Harbin); Silvestre de Sacy, 1982:4 (France: Côtes-du-Nord: Paimpol area); Dollfuss, 1983b:14 (in catalog of Sphecidae of Austria); Riemann, 1983:87 (Germany: Bremen-Daverden area); Schmidt and Westrich, 1983:124 (Greece); Chevin and Silvestre de Sacy, 1984:7 (France: Yvelines Department); Gayubo, 1984b:92 (Spain: Salamanca Province), 1984c:376 (Portugal: El Algarve Province); Jacob-Remacle, 1984:260 (Belgium: urban center of Liège); Lefeber, 1984:29 (Netherlands: Maastricht); Nilsson, 1984:104 (Sweden: Västmanland Province); Schmidt and Westrich, 1984:241 (Germany: Rheinland-Pfalz: Bad Münster); Tsuneki, 1984e:59 (Ukraine: Borisovka; Mongolia: Urga, now Ulan Baator); Haeseler, 1985a:350 (Germany: Schleswig-Holstein); Józán, 1985b:58 (Hungary south of Lake Balaton), 79 (floral records), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Radović, 1985:65 (sting apparatus analyzed); Scobiola-Palade, 1985:98 (Romania: delta of Danube); Brechtel, 1986:72 (Germany: Südpfalz); Gayubo, 1986a:62 (Spain: Ciudad Real Province), 1986d:116 (Spain: Zamora Province), 1986f:1001 (prey: Halticinae); Gayubo and Heras, 1986:53 (Spain: Segovia Province); Gayubo and Sanza, 1986:63 (Spain: Burgos, Segovia); Islamov, 1986:532 (Uzbekistan: Tashkent Oblast'); Jozán, 1986:371 (Hungary: Kiskunság National Park); Nemkov, 1986:100 (Russia: Irkutsk Oblast'); Skibińska, 1986b:151, 154 (Poland: suburbs of Warszawa), 165 (streetside green), 187 (green areas of housing estates), 174 (various green urban habitats); Steiner, 1986:106 (references to publications on nesting habits); Vikberg, 1986:77 (Finland); Schmidt and Westrich, 1987:375 (Germany: Mainz area); Dollfuss, 1988:14, 26 (Austria: Bisamberg near Vienna; Niederösterreich: Oberweiden); Düweke, 1988:688 (Germany: Baden-Württemberg: Kaiserstuhl); Karsai, 1988:100 (Hungary: Kiskunság National Park); Riemann, 1988:223 (Germany: Bremen area); Wolf, 1988b:140 (Germany: Rheinland-Westfalen); Jacobs, 1989:17 (Germany: Mecklenburg-Vorpommern); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivý, 1989a:169 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:97 (Belorussia: Berezinskiy Nature Reserve); Skibińska, 1989a:204 (Poland: Warszawa area), 1989b:291 (Poland: moist meadow in Warszawa area); Weiffenbach, 1989:110 (Germany: Hessen: Gießen area); Archer, 1990c:17 (Great Britain: Leicestershire); Gayubo, Asís, and Tormos, 1990b:76 (Spain: Cáceres Province); Jacobs and Oehlke, 1990:179 (new records from Democratic Germany); Kowalczyk, 1990:292 (Poland: Góry Świętokrzyskie); Kuznetzova, 1990:22 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Pádr, 1990:83 (Czech Republic: Praha area); Pagliano, 1990:91 (in catalog of Italian Sphecidae); Schwammberger and Priesner, 1990:543 (Austria: Kärnten); Gayubo, Borsato, and Osella, 1991:405 (Italy); Dollfuss, 1991:135 (in key to Sphecidae of North and Central Europe); Negrisolo, 1991:319 (Italy: Treviso and Udine Provinces); Nilsson, 1991:83 (Sweden: Lake Mälaren); Pagliano, 1991b:355 (in key to Italian Crabroninae); Sorg and Wolf, 1991:195 (Germany: Koppelsein Reserve southeast of Koblenz); Archer, 1992a:56 (Great Britain: Leicestershire); Budrys, 1992:37 (in list of Sphecidae of Lithuania); Delarze, 1992:67 (Switzerland: Valais: Les Follatères); Józán, 1992a:229 (Hungary: Béda-Karapanca Protected Area), 1992b:174 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Nemkov, 1992b:246 (Russia: Far East: Khingan Nature Reserve); Sorg and Cölln, 1992:132 (Germany: Rheinland-Pfalz: Gönnersdorf); K. Weber, 1992:87 (Germany: Bayern: Bamberg District); Wolf, 1992b:92 (Germany: Nordrhein-Westfalen: Olpe); Archer, 1993d:129 (Great Britain: Lincolnshire: Risby Warren 3 km northeast of Scunthorpe); Bitsch and Leclercq, 1993:188 (in revision of western European Crabroninae); Leclercq, 1993c:33 (collecting localities from Europe, Turkey, Iran, Kazakhstan,

and Morocco); Kuhlmann, 1993:75 (Germany: known from Westfalen); Leclercq and Barbier, 1993:71 (map of distribution in France); Torregrosa, Gayubo, Tormos, and Asís, 1993:19 (Spain: Alicante Province); Kowalczyk, 1994:75 (Poland: Łagiewniki forest in Łódź); Pádr and Lukáš, 1994:893 (Slovakia: High Tatra Mountains); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Theunert, 1994c:41 (Germany: summary of records from Niedersachsen and Bremen); Archer, 1995a:23 (Great Britain: Yorkshire: frequency); 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); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:7 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:425 (in key to Sphecidae of Russian Far East); Scharrer, 1995:27 (Germany: Bayern: Karlstadt, Lohr, Mainfranken, Miltenberg); Schmid-Egger, 1995:61 (Germany: northwestern Baden-Württemberg); Schmid-Egger, Risch, and Niehuis, 1995:184 (Germany: summary of records from Rheinland-Pfalz); Skibińska, 1995:423, 425, 426, 427 (Poland: pine forest in Białowieża Primeval Forest); Wolf, 1995:16 (Germany: Rheinland-Pfalz: near Lorelei Rock on Rhein River); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Fowles, 1996:35 (Great Britain: in checklist of aculeates of Wales); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Harvey and Plant, 1996:73 (Great Britain: summary of records from Essex); Jakubzik, 1996:252 (Germany: Köln); Jakubzik and Cölln, 1996b:399 (Germany: Rheinland-Pfalz); Minoranskiy and Shkuratov, 1996:82 (Russia: Rostov Oblast'); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Tischendorf, 1996:46 (Germany: Hessen: near Bensheim); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Woydak, 1996:50 (Germany: Westfalen: summary of distribution and nesting behavior); Wu and Zhou, 1996a:110 (in revision in Economic Insect Fauna of China); Archer, 1997a:49 (Great Britain: Yorkshire: Cave Wold); Gauss, 1997:27 (egg of miltogrammatid flies deposited on adult specimens); Leclercq, 1996d:261 (bibliographic references); Celary, 1997:59 (in checklist of Animals of Poland); Petit, 1997:351 (Belgium: Liège Province: Lanaye: colonization of new habitat); Schmidt and Schmid-Egger, 1997:14 (in checklist of German Sphecidae); Shlyakhtenok, Blinov, and Belyavskaya, 1997:154 (Belorussia: Pripyatskiy National Park); F. Burger, Saure, and Oehlke, 1998:27 (Germany: in list of Sphecidae of Brandenburg), 35 (endangered); Dollfuss, Gusenleitner, and Bregant, 1998:520 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km west-southwest of Hamburg); Elligsen, 1998:70 (Ukraine: Sambir area); Gorobchishin, 1998a:49 (Ukraine: Kiev and surroundings); Jakubzik, Schlüter, and Cölln, 1998:1181, 1183 (Germany: Rheinland-Pfalz); Józán, 1998:311 (Hungary: Duna-Dráva National Park); Lefebvre, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); Salzmann-Wandeler, 1998a:98 (Switzerland: Luzern Canton: Sempach); van der Smissen, 1998:60 (Germany: Mecklenburg-Vorpommern, Schleswig-Holstein); K. Weber, 1998:140 (Germany: Bayern: Bamberg area); Anan'eva and Kochetkov, 1999:7 (Russia: Ryazan Oblast': no specific locality); Cretin, 1999:9 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); Kuhlmann, Wolf, and Woydak, 1999:569 (Germany: endangered in Nordrhein-Westfalen); Ljubomirov, 1999b:52 (Bulgaria: Mount Vitosha near Sofia); Mandery, 1999:105 (Germany: Bayern: Coburg area); Neumayer, Schwarz, and Bregant, 1999:224 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:110 (in catalog of Belgian aculeates); Petit, 1999:113 (Netherlands: Nieuw-Namen); Salzmann-Wandeler and Rezbanyai-Reser, 1999:100 (Switzerland: Tessin: Monte Generoso); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:275 (in Sphecidae Fauna of Germany); Dressler, 2000:32 (Germany: Hessen: Darmstadt area); Esenbekova and Kazenas, 2000:46 (southeastern Kazakhstan: eight localities); Flügel, 2000:46 (Germany: Hessen: Halberg near Neumorschen); Gayubo, González, and Torres, 2000:186 (Spain: Salamanca Province); Gonzáles, Gayubo, and Tormos, 2000:20 (Andorra: Santa Coloma); Grace, Yates, and Triplet, 2000:20 (Great Britain: East Sussex: Rye Bay area); Jacobs, 2000:7, 17 (Germany: Land Mecklenburg-Vorpommern: not endangered); Józán, 2000:109 (Hungary: Bakony Mountains); Kuhlmann, 2000:60, 64 (Germany: Hessen: Diemel River valley); Q. Li and He, 2000a:55 (in key to *Entomognathus* of China); Ljubomirov, 2000:11 (Bulgaria: specimens in N. Nedelkov collection); M. Mader and Chalwatzis, 2000:60 (Germany: Hessen: Oderwald Mountains); Mokrousov, 2000b:31 (Russia: Nizhniy Novgorod

Oblast'); Schmid-Egger, 2000b:275 (Germany: Baden-Württemberg: shores of Rhine River); Vicidomini, 2000b:24 (Italy: previously recorded from Campania); Edwards and Telfer, 2001:68 (Great Britain: distribution, status, habitat, flight period, prey, nesting habits, flower visiting, parasites, and distribution map); Józán, 2001:279 (Hungary: Somogy County); Kazenas, 2001b:38 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Ohl et al., 2001:139 (distribution in Germany by provinces); Salzmann-Wandeler and Rezbanyai-Reser, 2001:157 (Switzerland: Tessin Canton: Meride area); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Tischendorf, 2001:30 (Germany: Hessen: Kühkopf-Knoblochsaue Nature Reserve); van der Smissen, 2001:60 (Germany: Schleswig-Holstein: endangered); Zettel, Gross, and Mazzucco, 2001:74 (Austria: Wien); Archer, 2002b:119 (Great Britain: Watsonian Yorkshire: distribution map); Archer and Edwards, 2002:102 (Great Britain: West Sussex: Ambersham and Iping commons); Beavis, 2002:109 (Great Britain: Kent: Tunbridge Wells area); Bieri, 2002:75 (Liechtenstein); Deván, 2002a:200 (Slovakia: Kobela Nature Reserve near Nové Mesto); Herrmann and Zinnert, 2002:25 (Germany: Baden-Württemberg: Bettenberg near Konstanz); Józán, 2002:53 (Hungary: Mecsek Mountains); Kazenas, 2002a:93 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:154 (Poland: Kampinos National Park near Warszawa); Shlyakhtenok and Skibinska, 2002:34 (Belorussia: no specific locality); Söderman and Vikberg, 2002:52 (in list of Aculeata of Finland); Vischer, 2002:289 (Germany: Sachsen-Anhalt: vineyards in Saale-Unstrut area); Wiśniowski, 2002:71 (Poland: Ojców National Park); Blösch, 2003b:82 (Germany: Bayern: Erlangen area, nesting in rotten willow poles); Cölln, Esser, and Jakubzik, 2003:62 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:138 (France, Germany, Hungary, Italy, Spain: miscellaneous locality records); Flügel, 2003:8 (Germany: Hessen: Knüllwald); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Józán, 2003:227 (Hungary: Látányi Pusztá Nature Conservation Area); Kula and Tyrner, 2003a:150 (Czech Republic: Děčín Sandstone Uplands: forest district Snežník: birch stands in air-polluted area); Lukáš, 2003:73 (Slovakia: Bratislava: old fruit orchard); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:66 (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); Protsenko, 2003:68, 69 (Ukraine: Odessa Oblast': island of Malyyi Tataru in Danube delta at 45.21°N 29.00°E); Schmid-Egger, 2003:753 (Italy: Sicilia: six localities); Wiśniowski in Dylewska and Wiśniowski, 2003:156 (Poland: Ojców National Park); Deván, 2004:147 (western Slovakia); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:262 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:131 (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); Kazenas, 2004b:106 (Kazakhstan: western Tien Shan), 2004d:33 (Kazakhstan: Khar'kino); Klein and Lefebvre in Peeters, van Achterberg, et al., 2004:386 (in Wasp and Ant Fauna of Netherlands); Majzlan and Deván, 2004:32 (Slovakia: Malacky-Široké); Shkuratov, 2004a:79 (Russia: Donetsk, Rostov, and Volgograd oblast's); 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, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:47 and 61 (in checklist of Polish Sphecidae); Wright, 2004:19 (Great Britain: Isle of Wight); Archer, 2005c:56 (Great Britain: Suffolk County); Burger, 2005:33 (Germany: Thüringen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Dubitzky, Blank, and Schönlitzer, 2005:274 (Germany: Bayern: area north of Dachau); Gayubo and Özbek, 2005:27 (Turkey: Erzurum: Palandöken, Penkaya, Olur); Gregory and Wright, 2005:140 (Great Britain: Shotover Hill 5 km east of Oxford); Jacobs, 2005a:445 (Bulgaria: Melnik); Kofler, 2005:175 (Austria: Tirol: Lienz District: several localities); Mandery, 2005:174 (Germany: Bayern: Hainberg Nature Reserve near Nürnberg); Mokrousov and Selivanova, 2005:753 (Russia: Voronezh Oblast'); Pagliano and Negrisoló, 2005:278 (in Sphecidae Fauna of Italy); Riemann and Hohmann, 2005:558 (Germany: Niedersachsen: city of Bremen and adjacent area); Saure, 2005:15 (Germany: Berlin); Schmalz, 2005:57 (references to XIXth century authors); Shorenko, 2005a:165 (Ukraine: Crimea); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen);

Wiśniowski, 2005a:312 (Poland: Ojców National Park; occurring in all non-forest biotopes); Archer, 2006a:21 (Great Britain: Lincolnshire: Rauceby Warren National Park), 2006d:76 (Great Britain: Watsonian Yorkshire: Pollington Quarry); Blösch, 2006:58 (males spend nights in galleries in wood); Dollfuss, 2006:519 (Algeria, Bulgaria, Italy, Kazakhstan, Kyrgyzstan, Morocco, Romania, Serbia, Spain, Syria, Tajikistan, Turkmenistan); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); Gorobchishin, 2006:120 (Ukraine: several localities); Hua, 2006:280 (in list of Chinese insects, geographic distribution); Kroupa, 2006b:25 (Germany: Bayern: Oberfranken Region); Liška, 2006:88 (Slovakia: Váh river valley near Trenčín); Ljubomirov, 2006:540 (Bulgaria: Rhodopes Mountains: Mutenitsa River valley; Greece: record from Rhodope Mountains by Schmidt and Westrich, 1983, reported); Magdalou, 2006a:7, 10 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane), 2006b:109 (France: Pyrénées-Orientales: Mas-Larrieu Nature Reserve near Argelès-sur-Mer), 2006c:7 (France: Pyrénées-Orientales: Réserve Naturelle du Mas-Larrieu); Nemkov, 2006b:168 (Russia: Primorskiy Kray: Kedrovaya Pad' Nature Reserve); N. Schneider, 2006:142 (Luxemburg: anthropogenic habitats); Vepřek, 2006:510 (Czech Republic: Kokořínsko area); Baghirov, 2007:93 (Russia: southwestern Siberia); Beavis, 2007:94 (Great Britain: Tunbridge Wells and Central High Weald); Burguet, 2007:unnumbered p. 18 (France: Puy-de-Dôme: sands Girauds-Faures in Orléat commune); Chevin, Livory, Lair, Sagot, and Baldock, 2007:36 (France: Département de la Manche); Cungs, Jakubzik, and Cölln, 2007:140 (Luxemburg: Haardt Nature Reserve); Dvořák, Straka, Smetana, Halada, Vepřek, and Karas, 2007:168 (Czech Republic: Vyšenské Kopce National Nature Reserve); Flügel, 2007:39 (Germany: Hessen: Halberg near Neumorschen); Herrmann, 2007b:94 (Germany: Baden-Württemberg: Fürstenberg in Konstanz); Jacobs, 2007:121 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Józán, 2007:180 (Hungary: Zselic hills); Kazenas, 2007a:91 (Kazakhstan: Akmala Oblast': Kurgandzhin Nature Reserve and vicinity); Kowalczyk and Nadolski, 2007:283 (Poland: Łódź: railway areas); Roche, 2007a:105 and 2007b:7 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Saure, 2007:82 (Germany: in checklist of Aculeata of Brandenburg); Vago, 2007:175 (France: départements du Nord and Pas-de-Calais); Vepřek and Straka, 2007:206 (in catalog of Sphecidae of Czech Republic and Slovakia); Yildirim and Ljubomirov, 2007:120 (Turkey: Antalya and Konya provinces); Haneda, 2008:4 (in key to Japanese Crabroninae); Danilov, 2008:348 (Russia: Altayskiy Kray: Barnaul area); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas–Sierra de Francia); Kazenas, 2008b:113 (Kazakhstan: foothills of Zailiyskiy Alatau: in the mountains, occurring on basis of loess cliffs); Ljubomirov and Ban-Calefariu, 2008:205 (Romania: Maramureş District: Bârsana, Ieud, Poienile de Sub Munte, Vişeu Valley); Ljubomirov and Yildirim, 2008:256 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); Theunert, 2008:39 (Germany: map of distribution in Niedersachsen and Bremen); Archer, 2009a:24 (Great Britain: Yorkshire: Sheffield); Baños-Picón, Asís, Gayubo, and Tormos, 2009:312 (Spain: frequency of specimens collected with hand nets and Malaise traps); Debuyser and Vago, 2009:6 (in list of Sphecidae *sensu lato* of northern France); U. Frommer, 2009a:27 (Germany: in checklist of Sphecidae of Hessen); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño–Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:624 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:265 (Bulgaria: Maleshevska Planina); Józán, 2009:166 (Croatia: Lindar); Mokrousov, 2009:280 (Russia: Republic Mari El); Nemkov, 2009b:93 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:71 (Norway: locality records); Pagliano, 2009:182 (Italy: Molise: Campolieto); Shoreiko, 2009:368 (in list of Sphecidae *sensu lato* of Crimea); Straka, Dvořák, and Bogusch, 2009:261 (Czech Republic: Jizerské Mountains and Frýdlant region); S. Takahashi, Haneda, and Tano, 2009:43, 54 (distribution in Japan); Esser, Fuhrmann, and Venne, 2010:36 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Hable, Krauss, von der Dunk, and Wickl, 2010:27 (Germany: Bayern: Sulz- and Ottmaringer Tal); Johansson, 2010:121 (Sweden: Småland: upper Emå river valley); Mokrousov, 2010a:62 (Russia: Kirov and Nizhniy Novgorod Oblast's, Chuvash Republic, Mari El Republic: no specific localities); Rudoiskatel',

2010:155 (Russia: central and southern Ural Mountains); Schmid-Egger, 2010a:16 (in red list of Aculeata of Germany: relatively common); Schmidt, 2010:135 (Germany: Bayern: collected along Main-Donau canal); Shorenko and Kononov, 2010:20 (Ukraine); Smetana, Roller, Beneš, Bogusch, Dvořák, Holý, Karas, Macek, Straka, Šima, Tyrner, Vepřek, and Zeman, 2010:101 (Western Slovakia: recorded from Borská nížina); Treiber, 2010:135 (France: Département du Bas-Rhin); van der Smitten, 2010a:341 (Germany: Schleswig-Holstein and Mecklenburg-Vorpommern: locality records), 2010b:384 (France: Ardèche: Saint-Thomé, Valvignères-Intras; Vaucluse: Bédoin); Archer, 2011d:187 (Great Britain: Watsonian Yorkshire: Hatfield Moor); Baghirov, 2011b:143 (Russia: Altayskiy Kray and Altay Republic); Burger, 2011a:287 (Germany: in red list of Sphecidae *sensu lato* of Thüringen); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:499 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Falk, 2011:66 (Great Britain: Sussex: South Downs); Gogala, 2011:23 (Slovenia); Józán, 2011:182 (in checklist of Sphecidae *sensu lato* of Hungary); Mokrousov, Berezin, and Egorov, 2011:69 (Russia: Chuvash Republic); Rudoiskatel', 2011d:242 (Russia: central Ural Mountains); Saure, 2011c:198 (Germany: Berlin-Spandau: Fort Hahneberg); Schmid-Egger, 2011a:38 (France: Parc National du Mercantour: Mollières; Italy: Parco delle Alpi Maritime: Valle Maira: Macra); Shlyakhtenok, 2011:95 (Belorussia: city of Minsk); Schwarz, Link, Pöll, Ambach, and Rabitsch, 2011:255 (Austria: Oberösterreich: Welser Heide); Theunert, 2011a:19 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:136 (Germany: Hessen: not endangered); Archer, 2012:183 (Great Britain: urban York); Boillat, 2012:226 (Switzerland: in checklist of insects of Canton de Genève); Burguet in Durand and Burguet, 2012:3 (France: Puy-de-Dôme: sands Girauts-Faures in Orléat commune); Franzén, Molander, Norén, and Nilsson, 2012:26 (Sweden: Skåne: Kullaberg Peninsula); Kazenas, 2012b:169 (Kazakhstan: Korgalzhin State Nature Reserve); Nemkov, 2012c:444 (in catalog of Crabronidae of Russian Far East); Prisniy, 2012:48 (Russia: Belgorod Oblast'); Shibayev and Polumordvinov, 2012:278 (Russia: Penza Oblast'); Shlyakhtenok, 2012a:171 (Belorussia, and Russia: Krasnaya Polyana near Sochi: collected in private plots), 2012b:91 (Belorussia: Beresina National Reserve: overgrowing dry meadow); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Yildirim, 2012:81 (Turkey: Bayaburt, Erzincan, and Erzurum provinces); Braun-Reichert, 2013:14 (Germany: Bayern: pastures between Regensburg and Nürnberg); Danilov and Odintseva, 2013:333 (Russia: Western Siberia: 65 km north-northeast of Tobol'sk at 58°45'N 68°74'E); Dyuzhaeva, 2013:117 (Russia: Samara Oblast': Zhiguli Nature Reserve); Flügel, 2013c:303 (Germany: Hessen: Kassel); Kazenas, 2013a:83 (color photograph of adult wasp, short information on geographic distribution and nesting habits); Mokrousov, Ruchin, and Egorov, 2013:200 (Russia: Mordovian Republic: Mordovian State Nature Reserve); A. Scholz and Liebig, 2013:20 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Shlyakhtenok, 2013:184 (in annotated catalog of aculeate wasps of Belorussia); Vieira, Oliveira, Brewster, and Gayubo, 2013:16 (Portugal: Serras de Aire e Candeeiros Natural Park); Wiśniowski and Piotrowski, 2013:21 (Poland: Poleski National Park); Bitsch, 2014:400 (record from France: Savoie by Drewes, 2003 noted); U. Frommer, 2014:27 (Germany: Hessen: Lorch); Hellqvist, Abenius, and Norén, 2014:91 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Kazenas, 2014a:136 (Kazakhstan: Karatau Mountain Range); Mokrousov and Vafin, 2014:56 (Russia: Republic of Tatarstan); Yildirim, Ljubomirov, and Lelej, 2014:14 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:143 (in checklist of Hymenoptera of Turkey); P. Rosa and Pagliano, 2015:101 (Italy: Lombardia and Piemonte: Parco del Ticino); Saure, 2015:13 (Germany: Berlin-Lichterfelde); Shorenko, 2015:324 (in list of Sphecidae *sensu lato* of Crimea); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine); Blažej, Macek, and Trýzna, 2016:120 (Czech Republic: České Švýcarsko = Bohemian Switzerland National Park); Cölln and Jakubzik, 2016:17 (Germany: Rheinland-Pfalz: Vulkaneifel District); Else, Bolton, and Broad, 2016:26 (in checklist of Aculeata of Great Britain and Ireland: England, Wales); Le Divelec, Chapelin-Viscardi, and Larivière, 2016:108 (northern France: in agricultural landscapes); Mokrousov and Popov, 2016:571 (Russia: Krasnodarskiy Kray); Stolle and Saure, 2016:923 (Germany: in list of Sphecidae *sensu lato* of Sachsen-Anhalt); Vas, Szöllösi-Tóth, and Muskovits, 2016:154 (Romania: Sălaj County); Wiśniowski, 2016:128 (Poland: Ojców National Park); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:43 (Turkey: Bayburt, Erzurum, and

Tunceli provinces); Antropov, 2017b:234 (in catalog of Crabroninae of Russia); Flügel, 2017:5 (Germany: Rheinland-Pfalz: Doline near Rockensüß); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:45 (Iran: known from Tehran Province); Jansen, 2017:8 (Germany: Sachsen: Leipzig); Magdalou, 2017:19 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane, Mas Larrieu); Shorenko, 2017:777 (in Crimea collected in June); Carminati, Mora, and Cretin, 2019:17 (France: in list of Sphecidae *sensu lato* of Franche-Comté); J.-K. Kim, 2019:192 (first record from South Korea: Gangwon Province: Yanggu County: Hae-an-myeon); Mokrousov, Proshchalykin, Aliyev, and Maharramov, 2019:11 (Azerbaijan: Nakhichevan Autonomous Republic); Olszewski and Kowalczyk, 2019:99 (northern Poland: Pomorze Gdańskie = Gdańsk Pomerania); Ruchin and Antropov, 2019a:13224 (Russia: Mordovia State Nature Reserve); Akulov, Proshchalykin, and Mokrousov, 2020:48 (Russia: central Krasnoyarsk Krai); Kejval, Blažej, and Erhart, 2020:101 (western Czech Republic); Bitsch and Leclercq *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:11 (in revision of Sphecidae *sensu lato* of Europe); Cross, Baldock, and Wood, 2021:33 (in catalog of Sphecidae *sensu lato* of Portugal); Kaplan and Yildirim, 2021:46 (in catalog of Crabronidae of Turkey); Olszewski, Wiśniowski, and Ljubomirov, 2021:90 (in commented list of Sphecidae *sensu lato* of Poland); Saure, 2021:82 (Germany: Brandenburg: Nature Reserve Ferbitzer Bruch near Potsdam); Jakubzik and Cölln, 2022:11 (Germany: Rheinland-Pfalz: Moselle River valley between Drohn and Kattenes); Japoshvili and Ljubomirov, 2022:277 (Georgia: Lagodekhi Protected Areas); U. Frommer and Bahmer, 2023:194 (Germany: Hessen: Giessen University Botanical Garden); Kaplan and Yildirim, 2023:1684 (in checklist of Sphecidae *sensu lato* of Turkey); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:425 (Uzbekistan: distribution); Gülmez, Çubuk, and Can, 2025:160 (Turkey: Çanakkale: Kelkit River Valley).

Lindenius apicalis Lepeletier and Brullé, 1835:794, ♀, ♂ (authorship attributed to Ziegler). Syntypes: France: Paris area (M. Spinola collection, Torino). Synonymized with *Crabro brevis* by Kohl, 1915:316. – Herrich-Schaeffer, 1840:294 (Germany: Bayern: Regensburg area); Dahlbom, 1844:307 (in revision of Sphecidae and Pompilidae), 1845:517 (in key to *Entomognathus*); Lepeletier de Saint Fargeau, 1845:196 (in revision of world Hymenoptera); Schenck, 1861:161 (redescription, Germany: Danzig, now Poland: Gdańsk); Brischke, 1862:105 (Germany: Preussen Province, now Poland: Pomorze Region); A. Costa, 1867c:124 (in revision of Italian Sphecidae); Kirchner, 1867:224 (in catalog of European Hymenoptera); A. Costa, 1871b:53 (in revision of Italian Sphecidae); Dours, 1874:154 (in catalog of Hymenoptera of France); Brischke, 1888b:100 (Germany: Preussen Province, now Poland: Pomorze Region); Baldini, 1894:69 (Italy: Modena area); Acloque, 1897:90 (in Sphecid Fauna of France and Algeria); Dalla Torre, 1897:583 (in catalog of world Sphecidae); Antiga and Bofill, 1904:23 (Spain: Cataluña Province); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Bradley, 1957:45 (Lepeletier's specimens in M. Spinola collection, Turin); Casolari and Casolari Moreno, 1980:117 (specimens in M. Spinola collection, Torino); Pagliano, 2011a:139 (specimens in M. Spinola collection, Torino). – **As *Crabro apicalis***: F. Smith, 1856:409 (new combination, in catalog of Hymenoptera in British Museum); Schenck, 1867a:352 (known from Germany).

Lindenius nasutus Gribodo, 1884b:276, ♀. Holotype: ♀, Italy: Casale (lost). Tentatively synonymized with *Entomognathus brevis* by de Beaumont, 1956b:185, definitely synonymized by Pagliano, 1990:92. – Kohl, 1915:306 (original description copied); R. Bohart and Menke, 1976:384 (in checklist of world Sphecidae); Leclercq, 1989b:36 (certainly an *Entomognathus*); Penati and Moretti, 2015:95 (in list of Hymenoptera described by G. Gribodo). – **As *Crabro nasutus***: Dalla Torre, 1897:611 (new combination, in catalog of world Sphecidae).

11. *breviusculus* (Gussakovskij)

Crabro brevisculus Gussakovskij, 1952:267, ♀, ♂. Lectotype: ♀, Tajikistan: Stalinabad, now Dushanbe (ZIL), designated by Marshakov, 1976b:618. – **As *Entomognathus brevisculus***: R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Marshakov, 1976b:618 (in revision of *Entomognathus* of USSR); Leclercq, 1996d:261 (bibliographic references); Kazenas, 2001b:38 (in checklist of Sphecidae of Kazakhstan and Central Asia); Dollfuss,

2006:520 (Tajikistan: Nurek; Uzbekistan: Samarkand); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:425 (Uzbekistan: distribution).

12. *collarti* Leclercq

Entomognathus collarti Leclercq, 1961b:71, ♀. Holotype: ♀, Zaire: Stanleyville, now Kisangani (MRAC). – Leclercq, 1961b:67 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:117 (in key to African and Asian *Entomognathus*), 121 (bibliographic references, locality records, description of ♂).

13. *coloratus* R. Bohart

Entomognathus coloratus R. Bohart, 1995:505, ♀. Holotype: ♀, USA: Arizona: Cochise County: 1 mi. east of Douglas (UCD). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 123 (distribution: Arizona, New Mexico).

14. *corgus* Marshakov

Entomognathus corgus Marshakov, 1976b:617, ♀, ♂. Holotype: ♀, Turkmenistan: Firyuza (ZIN). – Leclercq, 1996d:262 (reference to origin).

15. *dentifer* (Noskiewicz)

Crabro dentifer Noskiewicz, 1929:197, ♀, ♂. Syntypes: originally Poland, now Ukraine: Podole region: Nizhniov, Sinków (now Sinkiv), Volkovtse, Zaleszczyki (now Zalizhchyky), all in Dnestr valley (originally Dzieduszycki Mus., Lviv, now Zool. Inst. Wrocław Univ.). – Kuntze and Noskiewicz, 1938:376 (in Poland known only from Podole region, now Ukraine); Noskiewicz, 1939:162 (first record from Czechoslovakia: Pouzdřany, specimens recorded as *Crabro brevis* by Zavadil, Šustera and Baťa, 1937:168); Zavadil in Zavadil and Šnoflak, 1948:137 (in key to Sphecidae of Czechoslovakia); Noskiewicz and Puławski, 1960:157 (in key to Polish Sphecidae, not yet found in Poland); Lehrer and Scutaru, 1963:284 (Romania: Moldova: Surănești in Iași District); Balthasar, M. Hrubant, and E. Hrubant, 1967:170 (Bulgaria: Slanchev Bryag near Nesebar); Balthasar, 1972:132 (in Sphecidae Fauna of Czechoslovakia). – **As *Entomognathus dentifer***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1956g:326 (Greece, Sardinia); Balthasar, 1958:337 (Slovakia: Štúrovo); Móczár, 1958a:261, 268 (first record from Hungary, in annotated catalog of Hungarian Crabronini, comparison with *Entomognathus brevis*, 1958b:194 (Hungary: locality records); Pulawski, 1958a:187 (Bulgaria); de Beaumont, 1965a:61 (Greece), 1967a:362 (Turkey); Scobiola-Palade, 1967b:54 (Romania); Benedek, 1968:78 (Hungary, visiting flowers of *Anethum graveolans* L., *Angelica silvestris* L., *Pastinaca sativa* L., and *Peucedanum cervaria* L., all Apiaceae), 1969a:85 (Hungary: marshy meadow), 1970:104 (Hungary: Tapolca); Leclercq, 1960c:424 (Italy: Firenze), 1974d:285 (synonymy), 1975b:2 (France); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Marshakov, 1976b:616 (in revision of *Entomognathus* of USSR); Guichard, 1978:272 (Greece); Pulawski, 1978:254 (in key to Sphecidae of European part of USSR); Benedek, 1979:236 (Hungary: Bakony Hills); Gayubo, 1882e:104 (Spain: Cádiz Province); Dollfuss, 1983a:75 (Austria: endangered in Niederösterreich), 77 (Austria: endangered in Burgenland), 1983b:14 (in catalog of Sphecidae of Austria); Józán, 1985b:58 (Hungary south of Lake Balaton: Magyaregres area), 79 (floral records), 84 (ecological and zoogeographic characteristics), 1986:372 (Hungary: Kiskunság National Park); Pádr in Šedivy, 1989a:169 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:97 (Belorussia: Berezinskiy Nature Reserve); Day, 1991:xv (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:135 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:405 (Italy: Piemonte: Perosa Argentina); Leclercq, 1993c:33 (collecting localities from Cyprus, Czechoslovakia, Greece, and Yugoslavia); Bitsch and Leclercq, 1993:190 (in revision of western European Crabroninae); Leclercq and Barbier, 1993:72 (map of distribution in France); Negrisoló in Minelli, Ruffo, and La Posta, 1995b:7 (in catalog of Italian fauna); Leclercq, 1996d:262 (previous records from Cyprus are due to misidentification); Minoranskiy and Shkuratov, 1996:82 (Russia: Rostov Oblast'); Dollfuss, Gusenleitner, and Bregant, 1998:520 (Austria:

summary of collecting records from Burgenland); Shkuratov, 2000:59 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Józán, 2001:279 (Hungary: Somogy County), 2002:53 (Hungary: Mecsek Mountains); Shkuratov, 2004a:79 (Russia: Lugansk and Rostov Oblast's); 2004b:168 (Russia: Rostov Oblast': Gosudarstvennyi Muzei-Zapovednik M.A. Sholokhova); Pagliano and Negrisola, 2005:278 (in Sphecidae Fauna of Italy); Straka, 2005a:394 (extinct in Czech Republic); Dollfuss, 2006:520 (Morocco: 10 km south of Rich; Ukraine: Crimea: Simferopol; Uzbekistan: Aktash 70 km northeast of Tashkent); Gorobchishin, 2006:120 (Ukraine: Khmelnytsky Oblast': Medzhybozh, Shidlovtsi; Vinnitsa Oblast': Dubovets); Jacobs, 2007:121 (in key to Crabronidae of Germany, not yet found in Germany); Vepřek and Straka, 2007:206 (in catalog of Sphecidae of Czech Republic and Slovakia); Ljubomirov and Yildirim, 2008:256 (in catalog of Crabronidae of Turkey); Bitsch and Leclercq, 2009:225 (in supplement to vol. I of Faune de France, 1993: record from Cyprus is based on misidentified *Entomognathus libanonis*; France: first record from Vaucluse: Apt); Gogala, 2011:23 (Slovenia: Podčetrtek); Józán, 2011:182 (in checklist of Sphecidae *sensu lato* of Hungary); Shlyakhtenok, 2012a:171 (Russia: Krasnaya Polana near Sochi: collected in private plots), 2012b:91 (Belorussia: Beresina National Reserve: overgrowing dry meadow), 2013:184 (in annotated catalog of aculeate wasps of Belorussia); Yıldırım, Ljubomirov, and Lelej, 2014:14 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:144 (in checklist of Hymenoptera of Turkey); Mokrousov and Popov, 2016:571 (Russia: Krasnodarskiy Kray); Yıldırım, Ljubomirov, Özbek, and Yüksel, 2016:44 (Turkey: Bingöl: Karlıova: Çobantaşı); Antropov, 2017b:234 (in catalog of Crabroninae of Russia); Mokrousov, Proshchalykin, Aliyev, and Maharramov, 2019:11 (Azerbaijan: Nakhichevan Autonomous Republic); Bitsch and Leclercq in Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:12 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yıldırım, 2021:46 (in catalog of Crabronidae of Turkey), 2023:1684 (in checklist of Sphecidae *sensu lato* of Turkey); Gülmez, Çubuk, and Can, 2025:160 (Turkey: Çanakkale: Kelkit River Valley).

Entomognathus permixtus Nouvel et Ribaut, 1956:263, ♀, ♂. Syntypes: France: Toulouse, also Fenouillet and Grépiac near Toulouse (depository not stated). Synonymized with *Entomognathus dentifer* by Móczár, 1958a:262, 296.

16. *dinocerus* R. Bohart

Entomognathus dinocerus R. Bohart, 1995:507, ♀. Holotype: ♀, Mexico: Morelos: Alpuyecá (UCD). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Leclercq, 2012b:120 (in key to *Entomognathus* of North and Central America), 123 (known only from Mexico: state of Morelos; discussion of relationships).

17. *diversicornis* (Arnold)

Crabro diversicornis Arnold, 1945:168, ♀, ♂. Syntypes: Madagascar: Bekily (MNHN). – *As Entomognathus diversicornis*: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:118 (in key to African and Asian *Entomognathus*), 121 (bibliographic references, correction to original description); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:955 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

18. *euryops* (Kohl)

Crabro euryops Kohl, 1899:312, ♂. Holotype or syntypes: ♂, Tunisia: no specific locality (NHMW). – Graeffe, 1906:455 (Tunisia: Tunis area); Kohl, 1915:315 (in revision of Palearctic Crabronini). – *As Entomognathus euryops*: Leclercq, 1954c:200 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Dollfuss, 1989:9 (type material in NHMW); Leclercq, 1993c:33 (in list of Crabroninae of Europe and Mediterranean Basin), 1996d:262 (diagnostic characters); Dollfuss, 2006:520 (Tunisia: 10 km north of Jendouba, variation); Ben Khedher, Yıldırım, and Braham, 2020a:101 (Tunisia: Mahdia Province).

19. *evolutionis* (Leclercq)

Encopognathus evolutionis Leclercq, 1956b:8, ♂. Holotype: ♂, Mexico: Guanajuato: no specific locality (Inst. Roy. Sci. Nat. Belgique). – *As Entomognathus evolutionis*: Leclercq in R. Bohart and Menke, 1976:382 (new combination, in

checklist of world Sphecidae); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Amarante, 2002:29 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:663 (in checklist of Mexican Sphecidae); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 124 (locality records, corrections to earlier descriptions, color variation).

20. *faunus* (Arnold)

Crabro faunus Arnold, 1945:166, ♀. Syntypes: Madagascar: Bekily (MNHN). – **As *Entomognathus faunus***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:115 (in key to African and Asian *Entomognathus*); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:955 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

21. *fortuitus* (Kohl)

Crabro fortuitus Kohl, 1915:314, ♀. Holotype: ♀, Spain: no specific locality (NHMW). – Giner Marí, 1943a:250 (in Sphecid Fauna of Spain); Ceballos, 1956:393 (in catalog of Hymenoptera of Spain), 1959:230 (in supplement to catalog of Spanish Sphecidae); Ceballos, 1964:94 (in supplement to catalog of Spanish Sphecidae). – **As *Entomognathus fortuitus***: Leclercq, 1954c:200 (new combination, in catalog of world Crabronini), 1960c:424 (Spain, diagnostic characters, description of ♂), 1971:222 (Spain); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Gayubo, 1984b:93 (Spain: Salamanca Province); Gayubo, 1986a:62 (Spain: Ciudad Real Province); Gayubo and Sanza, 1986:63 (Spain: Burgos); Bitsch and Leclercq, 1993:191 (in revision of western European Crabroninae); Leclercq, 1993c:33 (collecting localities from Spain); Leclercq and Barbier, 1993:73 (map of distribution); Leclercq, 1996d:262 (absence of epicnemial carina is unusual for the genus); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Dollfuss, 2006:520 (Spain: Murcia: 20 km southwest of Murcia); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas–Sierra de Francia); Baños-Picón, Asís, Gayubo, and Tormos, 2009:313 (Spain: frequency of specimens collected with hand nets and Malaise traps); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño–Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:624 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Vieira, Oliveira, Brewster, and Gayubo, 2013:16 (Portugal: Serras de Aire e Candeeiros Natural Park); Bitsch and Leclercq in Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:12 (in revision of Sphecidae *sensu lato* of Europe); Cross, Baldock, and Wood, 2021:33 (in catalog of Sphecidae *sensu lato* of Portugal).

22. *evansi* Leclercq

Entomognathus evansi Leclercq, 2012b:123, ♂. Holotype: ♂, Mexico: Chiapas: Simojoval (Texas A & M University Insect Collection). – Leclercq, 2012b:122 (in key to *Entomognathus* of North and Central America).

23. *geometricus* Leclercq

Entomognathus geometricus Leclercq, 1955b:193, ♂. Holotype: ♂, Panama: Bugaba (BMNH). – R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Hanson and Menke, 1995:644 (known from Costa Rica); Amarante, 2002:29 (in catalog of Neotropical Crabronidae, as *geometrica*); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:663 (in checklist of Mexican Sphecidae); Amarante, 2005a:10 (correction to his 2002 catalog); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 124 (locality records, additional description by R. Miller).

24. guerreroi R. Bohart

Entomognathus guerreroi R. Bohart, 1995:505, ♀, ♂. Holotype: ♀, Mexico: Guerrero: 9 mi. south of Tierra Colorado (UCD). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Amarante, 2002:29 (in catalog of Neotropical Crabronidae); Leclercq, 2012b:120 (in key to *Entomognathus* of North and Central America), 125 (locality records).

25. ignavus (Arnold)

Thyreopus ignavus Arnold, 1927:123, ♀, ♂. Syntypes: Zimbabwe: Bulawayo (originally R. Stevenson collection, now SAM). – Arnold, 1930:13 (in checklist of Afrotropical Sphecidae). – **As *Entomognathus ignavus***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:67 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:117 (in key to African and Asian *Entomognathus*), 122 (bibliographic references).

26. jacoti Leclercq

Entomognathus jacoti Leclercq, 1997b:122, ♀. Holotype: ♀, Lesoto: Mamathes (AMG). – Leclercq, 1997b:118 (in key to African and Asian *Entomognathus*); Dollfuss, 2006:520 (Zambia: 60 km west of Solwezi).

27. junglanus Leclercq

Entomognathus junglanus Leclercq, 1997b:123, ♀. Holotype: ♀, Sri Lanka: Trincomalee District: China Bay Ridge Bungalow (USNM). – Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*).

28. lenapeorum Viereck

Entomognathus lenapeorum Viereck, 1904c:239, ♀. Holotype: ♀, USA: Pennsylvania: Lehigh Gap (ANSP). – Cresson, 1928:54 (holotype in ANSP); Krombein, 1951a:143 (Virginia: Dunn Loring; visiting tulip-tree honeydew); Krombein in Muesebeck, Krombein, and Townes, 1951:1013 (in catalog of North American Hymenoptera); Leclercq, 1954c:203 (in catalog of world Crabronini); Krombein, 1963e:251 (recognition characters; New Jersey, Pennsylvania, Maryland, Virginia, Kansas); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Krombein, 1979b:1659 (in catalog of North American Hymenoptera); Kurczewski and Miller, 1991:254 (Pennsylvania: Erie County); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Buck, 2004:26 (Canada: in checklist of Crabronidae of Ontario), 30 (distribution within Ontario), 57 (first record from Canada: Ontario: Windsor); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 125 (known from USA east of 100th meridian and from Canada: Ontario); Buck and Bennett, 2025:211 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Ontario, first record from Quebec: no specific locality).

29. libanonis (Kohl)

Crabro libanonis Kohl, 1905a:220, ♀. Holotype: ♀, Lebanon: no specific locality (NHMW). – Kohl, 1915:315 (in revision of Palearctic Crabronini). – **As *Entomognathus libanonis***: Leclercq, 1954c:200 (new combination, in catalog of world Crabronini); de Beaumont, 1957b:138 (northern Iran; diagnostic characters); de Beaumont, Bytinski-Salz and Pulawski, 1973:22 (Israel); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Dollfuss, 1989:9 (type material in NHMW); Leclercq, 1993c:34 (collecting localities from Cyprus and Israel), 1996d:262 (diagnostic characters, comparison with *Entomognathus dentifer*); Dollfuss, 2006:520 (Iran: near Kashan; Syria: 20 km northeast of Latakia; Turkmenistan: Ashgabad); Murai and Amr, 2011:119 (recorded from Syria by Dollfuss, 2006); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:46 (Iran: known from Isfahan and Qazvin provinces).

30. malianus Leclercq

Entomognathus malianus Leclercq, 1997b:123, ♀, ♂. Holotype: ♂, Niger: 20 km south of Tahoua at 14°45'N 5°20'E (FSAG). – Leclercq, 1997b:120 (in key to African and Asian *Entomognathus*); Dollfuss, 2006:520 (Kenya: Voi); Leclercq, 2007g:194 (holotype in FSAG).

31. matthewsi Leclercq

Entomognathus matthewsi Leclercq, 1997b:123, ♀, ♂. Holotype: ♀, Mali: Mourdiah (BMNH). – Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*).

32. memorialis Banks

Entomognathus memorialis Banks, 1921:16, ♀. Holotype: ♀, USA: Virginia: Glencarlyn (MCZ). – Krombein in Muesebeck, Krombein, and Townes, 1951:1013 (in catalog of North American Hymenoptera); Krombein, 1952:95 (USA: Virginia: Westmoreland State Park); Leclercq, 1954c:203 (in catalog of world Crabronini); Krombein, 1963e:251 (Connecticut, New Jersey, Maryland, Virginia, Kansas), 1963f:277 (Maryland: Plummers Island near Washington, D.C.); R. Miller and Kurczewski, 1972:64 (mating, nesting habits, description of mature larva); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Krombein, 1979b:1659 (in catalog of North American Hymenoptera); Steiner, 1986:106 (references to publications on nesting habits); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Buck, 2004:26 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario), 57 (first record from Canada: Ontario: list of localities); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 125 (locality records); Buck and Bennett, 2025:211 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Ontario: no specific locality).

33. mexicanus Cameron

Entomognathus mexicanus Cameron, 1904i:266, sex not stated. Lectotype: Mexico: no specific locality (BMNH), designated by Leclercq, 2012b:125. – Leclercq, 1950a:7 (member of subgenus *Toncahua*), 1954c:203 (in catalog of world Crabronini); Krombein in Muesebeck, Krombein, and Townes, 1951:1013 (in catalog of North American Hymenoptera, as *mexicana*); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Amarante, 2002:29 (in catalog of Neotropical Crabronidae, as *mexicana*); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:663 (in checklist of Mexican Sphecidae); Amarante, 2005a:10 (correction to his 2002 catalog); Leclercq, 2012b:122 (in key to *Entomognathus* of North and Central America), 125 (locality records).

34. midas (Arnold)

Crabro midas Arnold, 1945:161, ♀. Syntypes: Madagascar: Behara (MNHN). – As *Entomognathus midas*: Leclercq, 1954c:203 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae; as *midus*); Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*), 124 (bibliographic references); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:956 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

35. mimicus (Arnold)

Crabro mimicus Arnold, 1945:163, ♀, ♂. Syntypes: Madagascar: Bekily (MNHN). – As *Entomognathus mimicus*: Leclercq, 1954c:203 (new combination, in catalog of world Crabronini), 303 (nest and prey records); R. Miller and Kurczewski, 1972:61 (in review of nesting habits of *Entomognathus*); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*), 124 (bibliographic references); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:956 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

36. nadeni Marshakov

Entomognathus nadeni Marshakov, 1976b:617, ♂. Holotype: ♂, Turkmenistan: Firyuza (ZIN). – Leclercq, 1996d:263 (reference to country of origin); Kazenas, 2001b:38 (in checklist of Sphecidae of Kazakhstan and Central Asia).

37. namibiae Leclercq

Entomognathus namibiae Leclercq, 1997b:124, ♂. Holotype: ♂, Namibia: Lüderitz District: Aus (BMNH). – Leclercq, 1997b:118 (in key to African and Asian *Entomognathus*).

38. nanus (Cameron)

Crabro nanus Cameron, 1890b:274, ♀. Holotype or syntypes: ♀, India: West Bengal: Barrackpore (OXUM). – Cameron, 1890:270 (India: Barrackpore); Bingham, 1897:330 (in revision of Indian Hymenoptera); Rothney, 1903:106 (India: West Bengal: Barrackpore). – **As *Entomognathus nanus***: R. Turner, 1917e:185 (new combination; India: Bihar: Chapra); Leclercq, 1954c:201 (in catalog of world Crabronini); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*), 125 (bibliographic references, faunal records); Mawadda and Girish Kumar, 2023a:107 (in checklist of Crabroninae of Northern India).

39. narratus Leclercq

Entomognathus narratus Leclercq, 1963:45, ♀. Holotype: ♀, India: Madhya Pradesh: Jabalpur (originally G.R. Ferguson collection, now CAS). – R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*); Mawadda and Girish Kumar, 2023a:107 (in checklist of Crabroninae of Northern India).

40. nathani Leclercq

Entomognathus nathani Leclercq, 1963:44, ♀. Holotype: ♀, India: Tamil Nadu: Cinchona in Anamalai Hills (originally G.R. Ferguson collection, now CAS). – R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*), 125 (bibliographic references, faunal records, description of ♂).

41. nitidus (Cameron)

Oxybelus nitidus Cameron, 1890b:281, ♀. Holotype or syntypes: India: West Bengal: Barrackpore (OXUM). – Cameron, 1890b:276 (India: Barrackpore); Dalla Torre, 1897:646 (in catalog of world Sphecidae). – **As *Crabro nitidus***: Bingham, 1897:330 (new combination, redescription); Rothney, 1903:106 (India: West Bengal: Barrackpore); W. Schulz, 1906:210 (is a *Crabro*, not an *Oxybelus*). – **As *Entomognathus nitidus***: Leclercq, 1954c:201 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:115 (in key to African and Asian *Entomognathus*), 126 (bibliographic references, faunal records from Sri Lanka, description of ♂).

42. occidentalis R. Bohart

Entomognathus occidentalis R. Bohart, 1995:506, ♀, ♂. Holotype: ♀, USA: California: Tulare County: Ash Mountain (UCD). – R. Bohart, 1995:501 (in key to North American *Entomognathus*); Leclercq, 2012b:120 (in key to *Entomognathus* of North and Central America), 125 (known from California and Nevada).

43. patricius (Arnold)

Thyreopus patricius Arnold, 1932:13, ♀, ♂. Syntypes: Zimbabwe: Bulawayo (SAM). – **As *Crabro patricius***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 303 (nest and prey records), 1961b:66 (in key to *Entomognathus* of continental Africa); R. Miller and Kurczewski, 1972:61 (in review of nesting habits of *Entomognathus*); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*), 126 (bibliographic references, faunal records from Zimbabwe and South Africa, prey: Galerucinae chrysomelids); Dollfuss, 2006:520 (Keya: Voi).

44. pulicus Leclercq

Entomognathus pulicus Leclercq, 1963:43, ♂. Holotype: ♂, India: Tamil Nadu: Dohnavur near Tirunelveli (FSAG). – R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*), 126 (bibliographic references), 2007g:194 (holotype in FSAG).

45. resinus Leclercq

Entomognathus resinus Leclercq, 1997b:127, ♀. Holotype: ♀, Cameroon: Mindif, shore of Mayo Boula at 10°27'N 14°25'E (FSAG). Paratype: Kenya. – Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*), 2007g:194 (holotype in FSAG).

46. *rochei* Leclercq

Entomognathus rochei Leclercq, 1997b:127, ♀, ♂. Holotype: ♀, Malaysia: Perak: Kledong Siong Forest Reserve (BMNH). – Leclercq, 1997b:115 (in key to African and Asian *Entomognathus*); Dollfuss, 2006:520 (Malaysia: Ipoh 5 km east of Tanjong Rambutan); Pham, Kumar and Danilov, 2015:1592 (in list of Sphecidae *sensu lato* of Vietnam).

47. *ruficaudatus* (Arnold)

Crabro ruficaudatus Arnold, 1945:164, ♀. Syntypes: Madagascar: Ivondro, Rogez (MNHN). – *As Entomognathus ruficaudatus*: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:71 (Madagascar); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:115, 119 (in key to African and Asian *Entomognathus*), 128 (bibliographic references, tentatively assigned to subgenus *Mashona*); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:956 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

48. *rugosissimus* R. Turner

Entomognathus rugosissimus R. Turner, 1917g:83, ♀. Holotype or syntypes: ♀, Malawi: Mlanje (BMNH). – Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:66 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*), 128 (bibliographic references, description of ♂); Dollfuss, 2006:520 (Zimbabwe: 15 km southeast of Muzarabani, 30 km west of Harare). – *As Thyreopus rugosissimus*: Arnold, 1926:342 (revision), 1930:13 (in checklist of Afrotropical Sphecidae).

49. *sahlbergi* (A. Morawitz)

Crabro sahlbergi A. Morawitz, 1866a:257, ♀ (as *Sahlbergi*, incorrect original capitalization). Holotype: ♀, Russia: Siberia: Okhotsk (ZIL). – Dalla Torre, 1897:624 (in catalog of world Sphecidae); Kohl, 1915:319 (original description copied). – *As Entomognathus sahlbergi*: Leclercq, 1954c:200 (new combination, in catalog of world Crabronini); Tsuneki, 1972a:158 (Mongolia, description of ♀); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Marshakov, 1976b:618 (in revision of *Entomognathus* of USSR); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:425 (in key to Sphecidae of Russian Far East); Leclercq, 1996d:263 (review of previous citations); Q. Li and He, 2000a:55 (in key to *Entomognathus* of China); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia), 2009b:93 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); 2011:95 (was described from Okhotsk area, later found in Mongolia), 2012c:444 (in catalog of Crabronidae of Russian Far East); Antropov, 2017b:234 (in catalog of Crabroninae of Russia).

Crabro sahlbergi A. Morawitz, 1866b:329. Objective synonym of *Crabro sahlbergi* A. Morawitz, 1866a:257.

50. *sauditus* Gadallah

Entomognathus sauditus Gadallah in Gadallah and Abu El-Ghiet, 2024:83, ♂. Holotype: ♂, Saudi Arabia: Jazan Province: Abu Arish at 16°58'N 42°49'E (Efflatoun Bey collection, Department of Entomology, Cairo University, Giza, Egypt).

51. *schmidtii* de Beaumont

Entomognathus schmidtii de Beaumont, 1967a:362, ♀, ♂. Holotype: ♀, Turkey: Mersin: Namrun (Lausanne). – de Beaumont, 1969:94 (Turkey); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1993c:34 (in list of Crabroninae of Europe and Mediterranean Basin), 1996d:263 (reference to original description); Ljubomirov and Yildirim, 2008:257 (in catalog of Crabronidae of Turkey); Yıldırım, Ljubomirov, and Lelej, 2014:14 (distribution in Turkey by biogeographic provinces), 19 (is an endemic of Turkey); Koçak and Kemal, 2015:144 (in checklist of

Hymenoptera of Turkey); Eroğlu and Yüksel, 2019:5230 (recorded from Niğde Province of Turkey by de Beaumont, 1967, but not rediscovered since then); Kaplan and Yildirim, 2021:46 (in catalog of Crabronidae of Turkey), 2023:1684 (in checklist of Sphecidae *sensu lato* of Turkey).

52. *schmiedeknechti* (Kohl)

Crabro schmiedeknechti Kohl, 1905a:219, ♀, ♂ (a *Schmiedeknechti*, incorrect original capitalization). Syntypes: Greece: Korfu, Kephallonia, Zante, Athens (NHMW). – Kohl, 1915:318 (in revision of Palearctic Crabronini); de Beaumont, 1954e:98 (Italy); Pulawski, 1958:187 (Bulgaria: Kniazhevo near Sofia); Balthasar, M. Hrubant, and E. Hrubant, 1967:170 (Bulgaria: Slanchev Bryag near Nesebar). – **As *Entomognathus schmiedeknechti***: Leclercq, 1954c:200 (new combination, in catalog of world Crabronini); de Beaumont, 1959a:44 (Italy), 1965a:61 (Greece), 1967a:364 (Turkey); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Marshakov, 1976b:617 (in revision of *Entomognathus* of USSR); Pulawski, 1978:254 (in key to Sphecidae of European part of USSR); Dollfuss, 1989:9 (type material in NHMW); Pagliano, 1990:92 (in catalog of Italian Sphecidae), 1991b:355 (in key to Italian Crabroninae); Bitsch and Leclercq, 1993:191 (in revision of western European Crabroninae); Leclercq, 1993c:34 (collecting localities from Greece and Turkey); Negrisola *in* Minelli, Ruffo, and La Posta, 1995b:7 (in catalog of Italian fauna); Leclercq, 1996d:263 (individual variation of clypeus); Shkuratov, 2004a:79 (Russia: Rostov Oblast': village Avilo-Uspenka); Gayubo and Özbek, 2005:27 (Turkey: Erzurum: University campus, Olur); Pagliano and Negrisola, 2005:279 (in Sphecidae Fauna of Italy); Yildirim and Ljubomirov, 2005:1794 (Turkey: Erzurum: Olur); Dollfuss, 2006:521 (Bulgaria: Slanchev Bryag; Syria: 20 km northeast of Latakia); Ljubomirov and Yildirim, 2008:257 (in catalog of Crabronidae of Turkey); Pagliano, 2009:182 (Italy: Molise: Campolieto); Prisniy, 2012:48 (Russia: Belgorod Oblast'); Yildirim, Ljubomirov, and Lelej, 2014:14 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:144 (in checklist of Hymenoptera of Turkey); Shorenko, 2015:324 (in list of Sphecidae *sensu lato* of Crimea); Mokrousov and Popov, 2016:571 (Russia: Krasnodarskiy Kray); Antropov, 2017b:234 (in catalog of Crabroninae of Russia); Shorenko, 2019:211 (rare in Crimea); Bitsch and Leclercq *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:12 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yildirim, 2021:46 (in catalog of Crabronidae of Turkey), 2023:1684 (in checklist of Sphecidae *sensu lato* of Turkey); Gülmez, Çubuk, and Can, 2025:160 (Turkey: Çanakkale: Kelkit River Valley).

53. *schwarzi* Leclercq

Entomognathus schwarzi Leclercq, 1997b:129, ♀, ♂. Holotype: ♀, Niger: Moujia at 14°24'N 5°22'E (FSAG). Paratypes: Gambia, Mali, Senegal. – Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*), 2007g:194 (holotype in FSAG).

54. *singarae* Leclercq

Entomognathus singarae Leclercq, 1963:45, ♀. Holotype: India: Tamil Nadu: Singara in Nilgiri Hills (originally G.R. Ferguson personal collection, now CAS). – R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:116 (in key to African and Asian *Entomognathus*), 129 (bibliographic references, faunal records from Sri Lanka, additional description).

55. *siraiya* Pate

Entomognathus siraiya Pate, 1944:341, ♀, ♂. Holotype: ♂, Taiwan: Taihorinsho (MCZ). – Leclercq, 1954c:201 (in catalog of world Crabronini); Leclercq, 1958d:101 (Malaysia: Selangor; Taiwan); Tsuneki, 1966d:2 (Taiwan, listed); Tsuneki, 1968g:17 (Taiwan), 28 (in key to Crabronini of Taiwan and Ryukyus); Haneda, 1971b:33 (Taiwan); Leclercq, 1963:47 (Vietnam), 1973c:300 (Taiwan); 1977j:291 (Taiwan: Taihorinsho); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Wu and Zhou, 1996a:111 (in revision in Economic Insect Fauna of China); Leclercq, 1997b:115 (in key to African and Asian *Entomognathus*), 130 (bibliographic references, specimens previously recorded by Leclercq from Burma, Malaysia, and Vietnam actually are *rochei*); Porter, Stange, and Wang, 1999:10 (in checklist of Sphecidae of Taiwan); Q. Li and He, 2000a:55 (in key to *Entomognathus* of China), 2001:757

(China: Tianmushan Nature Reserve at 30°22'N 119°26'E), 2004:1088 (in hymenopterous fauna of Zhejiang Province, China); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

56. *srianus* Leclercq

Entomognathus srianus Leclercq, 1997b:130, ♂. Holotype: ♂, Sri Lanka: Ratnapura District: 2 mi south of Meddagala in Sinharaja Jungle (USNM). – Leclercq, 1997b:117 (in key to African and Asian *Entomognathus*); Dollfuss, 2006:521 (Sri Lanka: Matara District: 3 km northwest of Kotapola).

57. *stevensoni* (Arnold) (homonym)

Thyreopus stevensoni Arnold, 1926:344, ♀, ♂ (as *Stevensoni*, incorrect original capitalization), primary homonym of *Thyreopus stevensoni* Arnold, 1926:369. Holotype: sex not stated: Zimbabwe: Bulawayo, or South Africa: North West Province: Lichtenburg (SAM). – Arnold, 1930:13 (in checklist of Afrotropical Sphecidae). – **As *Entomognathus stevensoni***: Leclercq, 1954c:201 (new combination, in catalog of world Crabronini), 1961b:70 (Zaire), 1961b:67 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*), 131 (bibliographic references, locality records from Botswana, Burkina Faso, Gabon, Gambia, Mali, Namibia, Nigeria, Senegal, South Africa, Togo, Zaire, and Zimbabwe); Dollfuss, 2006:521 (Kenya: Lodwar, Voi; South Africa: Klerksdorp, Ritchie; Zimbabwe: Mount Selinda); Schmid-Egger, 2011b:526 (United Arab Emirates: north of Ajman, Wadi Madaq, discussion of recognition), 528 (color photograph of male); Gadallah, 2020b:35 (in list of aculeate wasps of Arabian Peninsula).

ssp. fraternus (Arnold)

Thyreopus Stevensoni var. *fraternus* Arnold, 1936:29, ♀. Holotype: ♀, Zimbabwe: Chirinda Forest (SAM). – **As *Entomognathus stevensoni fraternus***: Leclercq, 1954c:201 (new combination, in catalog of world Crabronini, as synonym of *Entomognathus stevensoni*); R. Bohart and Menke, 1976:382 (new status, in checklist of world Sphecidae).

58. *subnasutus* (Arnold)

Thyreopus subnasutus Arnold, 1927:124, ♀. Holotype: ♀, Zimbabwe: Sawmills (originally R. Stevenson collection, now SAM?). – Arnold, 1930:13 (in checklist of Afrotropical Sphecidae). – **As *Entomognathus subnasutus***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:66 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:117 (in key to African and Asian *Entomognathus*), 132 (bibliographic references, faunal records from Namibia, description of ♂); Dollfuss, 2006:521 (Zambia: 50 km west of Chingola).

59. *surgicus* Leclercq

Entomognathus surgicus Leclercq, 1961b:68, ♂. Holotype: ♂, Zaire: Garamba National Park (MRAC). – Leclercq, 1961b:67 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:119 (in key to African and Asian *Entomognathus*), 132 (bibliographic references, recorded from Cameroon, Gabon, Gambia, Mali, Nigeria, Senegal, variation, description of ♀).

60. *swellendamensis* (Arnold)

Thyreopus swellendamensis Arnold, 1934:20, ♀, ♂. Syntypes: South Africa: Western Cape Province: Swellendam (BMNH, SAM). – **As *Entomognathus swellendamensis***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:67 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:118 (in key to African and Asian *Entomognathus*), 133 (bibliographic references, South Africa: Cape Town).

61. *syritus* Leclercq

Entomognathus syritus Leclercq, 1961b:70, ♀. Holotype: ♀, Zaire: Haut-Uele: Paulis (MRAC). – Leclercq, 1961b:68 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae);

Leclercq, 1997b:118 (in key to African and Asian *Entomognathus*), 133 (bibliographic references, records from Gabon, South Africa, Tanzania, Uganda).

62. *texanus* Cresson

Entomognathus texanus Cresson, 1887:286, footnote, ♀, ♂. Lectotype: ♀, USA: Texas: no specific locality (ANSP), designated by Cresson, 1916:103. – W. Fox, 1895a:132 (in revision of North American Crabronini); Dalla Torre, 1897:631 (in catalog of world Sphecidae, as *Crabro texanus*); Ashmead, 1899d:166 (in checklist of North American Crabronidae); Cresson, 1916:103 (type material in ANSP); Pate, 1944:341 (type species of subgenus *Toncahua*); Krombein in Muesebeck, Krombein, and Townes, 1951:1014 (in catalog of North American Hymenoptera, as *texana*); Leclercq, 1954c:203 (in catalog of world Crabronini); Krombein, 1963e:252 (taxonomic history, diagnostic characters; Pennsylvania, Kansas, Oklahoma, Texas, Mexico: Tamaulipas); Cazier and Mortenson, 1965d:33 (nesting habits, as *texana*); R. Miller and Kurczewski, 1972:63 (in review of nesting habits of *Entomognathus*, as *texana*); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Krombein, 1979b:1660 (in catalog of North American Hymenoptera); R. Bohart, 1995:501 (in key to North American *Entomognathus*); Amarante, 2002:29 (in catalog of Neotropical Crabronidae, as *texana*); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:663 (in checklist of Mexican Sphecidae); Amarante, 2005a:10 (correction to his 2002 catalog); Ruíz Cancino, Coronado Blanco, and Horta Vega, 2005:170 (Mexico: recorded from Tamaulipas State); Leclercq, 2012b:121 (in key to *Entomognathus* of North and Central America), 125 (locality records from Kansas and New Mexico).

Anothyreus panurgoides Viereck, 1904c:239, ♀, ♂ (♀ = *Crabro tenuis*). Lectotype: ♂, USA: Pennsylvania: Lehigh Gap (ANSP), designated by Cresson, 1928:55. Synonymized with *Entomognathus texanus* by Krombein, 1963e:253. – **As *Entomognathus panurgoides***: Krombein in Muesebeck, Krombein, and Townes, 1951:1014 (new combination, in catalog of North American Hymenoptera); Leclercq, 1954c:203 (in catalog of world Crabronini).

63. *tricoloripes* (Arnold)

Thyreopus tricoloripes Arnold, 1934:18, ♀, ♂. Syntypes: South Africa: Eastern Cape Province: Katberg (BMNH, SAM). – **As *Entomognathus tricoloripes***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:66 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:117 (in key to African and Asian *Entomognathus*), 133 (bibliographic references).

64. *verecundus* (Arnold)

Thyreopus verecundus Arnold, 1932:15, ♀, ♂. Syntypes: Zimbabwe: Spongweni (SAM). – **As *Entomognathus verecundus***: Leclercq, 1954c:202 (new combination, in catalog of world Crabronini), 1961b:67 (in key to *Entomognathus* of continental Africa); R. Bohart and Menke, 1976:382 (in checklist of world Sphecidae); Leclercq, 1997b:117, 118 (in key to African and Asian *Entomognathus*), 133 (bibliographic references, Botswana: Serowe); Dollfuss, 2006:521 (Zimbabwe: Matobo 50 km south of Bulawayo).

65. *yunnanensis* Q. Li and He

Entomognathus yunnanensis Q. Li and He, 2000c:198, ♂. Holotype: ♂, China: Yunnan: Menglun, Banna: Yiwu (Academia Sinica, Beijing).

sp.

Brimley, 1938:450 (North Carolina: Bryson City); Krombein and Evans, 1954:235 (Florida); Morice, 1921:824 (Iran: Qazvin); de Beaumont, 1969:94 (Turkey); S. Gess and F. Gess, 2003:102 (Namibia: visiting flowers of *Deverra denudata* (Viv.) Pfisterer and Podl., Apiaceae); Ljubomirov and Yildirim, 2008:258 (in catalog of Crabronidae of Turkey); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:46 (Iran: Qazvin Province).

SPECIES DESCRIBED IN ENTOMOGNATHUS AND TRANSFERRED TO ENCOPOGNATHUS

chapraensis R. Turner, 1917 = *Encopognathus*

isolatus R. Turner, 1917 = *Encopognathus*

NOMINA NUDA IN ENTOMOGNATHUS

Entomognathus cephalicus Miller: Leclercq, 2012b:119, 123.

Entomognathus clypeatus Miller: Leclercq, 2012b:119, 123.

Entomognathus kohlii Brauns: Dollfuss, 1989:9 (type material in NHMW).

Entomognathus prothoracicus Miller: Leclercq, 2012b:119, 123.

Entomognathus pygidialis Miller: Leclercq, 2012b:119, 123.

Entomognathus reticulatus Miller: Leclercq, 2012b:119, 123 (synonym of *Entomognathus arizonae*).