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LARRA

Larra Fabricius, 1793:220. Type species: *Larra ichneumoniformis* Fabricius, 1793 [= *Sphex anathema* Rossi, 1790], designated by Latreille, 1810:438.

Larrana Rafinesque, 1815:124. Emendation or new name for *Larra* Fabricius, 1793.

Lara Drapiez, 1819:54. Lapsus or emendation of *Larra* Fabricius, 1793. [*Lara* LeConte, 1852, is a junior homonym]

Monomatium Shuckard, 1840:181, no included species. Type species: *Larraxena princeps* F. Smith, 1851, designated by Pate, 1935:246, by subsequent designation (first included species).

Lyrops Dahlbom, 1843:132, junior homonym of *Lyrops* Illiger, 1807. Type species: *Tachytes paganus* Dahlbom, 1843, by monotypy.

Larraxena F. Smith, 1851:30. Type species: *Larraxena princeps* F. Smith, 1851, by monotypy. Synonymized with *Monomatium* Shuckard by Pate, 1935:246.

Larrada F. Smith, 1856:273. Type species: *Larrada anathema* (Rossi, 1790) [= *Sphex anathema* Rossi, 1790], by original designation.

Cratolarra Cameron, 1900a:34. Type species: *Cratolarra femorata* Cameron, 1900, junior secondary homonym of *Larra femorata* (de Saussure, 1854), by monotypy. Treated as subgenus of *Larra* by Menke in R. Bohart and Menke, 1976:42.

Biology: Berland, 1931 (members of *Larra* prey upon various genera of Gryllotalpidae); Steiner, 1984a (evolution of temporary paralysis).

Keys: Leclercq, 1990b:115 (Madagascar); Schmid-Egger, 2014:565 (western and central Palearctic Region).

Revision: Menke, 1992d (New World species; species groups worldwide).

Review of biology: Kazenas, 2001b:146.

1. *abdominalis* Guérin-Méneville (preoccupied)

Larra abdominalis Guérin-Méneville in Lefebvre, 1849:358, ♂, junior primary homonym of *Larra abdominalis* Say, 1823, now in *Tachytes*. Holotype: ♂, Ethiopia: no specific locality (Genoa). – Kohl, 1885a:240 (in checklist of world *Larra*); Dalla Torre, 1897:661 (in catalog of world Hymenoptera); Arnold, 1923b:226 (unrecognizable species); Guiglia, 1948b:179 (holotype in Genova), 189 (redescription of holotype); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae). – **As *Larrada abdominalis***: F. Smith, 1856:280 (new combination, in catalog of Hymenoptera in British Museum).

2. *alecto* (F. Smith)

Larrada alecto F. Smith, 1858a:103. ♀ (as *Alecto*, incorrect original capitalization). Holotype or syntypes: ♀, Singapore (OXUM). – F. Smith, 1863b:135 (known from Singapore), 1871a:364 (in catalog of Oriental Aculeata). – **As *Notogonia alecto***: Cameron, 1890c:314 (new combination). – **As *Larra alecto***: Kohl, 1885a:240 (new combination, in checklist of world *Larra*); Cameron, 1889c:124 (in list of Oriental Sphecidae); Dalla Torre, 1897:661 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Cardale, 1985:234 (in catalog of Australian Sphecidae).

3. *altamazonica* F. Williams

Larra altamazonica F. Williams, 1928a:57, ♀, ♂. Holotype: ♀, Ecuador: Tena (Bishop Mus.). – R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Callan, 1991a:8 (Trinidad); Menke, 1992d:212 (in revision of New

World *Larra*); Cambra, 1993:16 (Peru: Pakitza, 11°57'S, 71°17'W); Menke, 1993g:6 (Panama); Amarante, 2002:38 (in catalog of Neotropical Crabronidae); Rasmussen and Asenjo, 2009:10 (in checklist of Crabronidae of Peru).

4. *amplipennis* (F. Smith)

Larrada amplipennis F. Smith, 1873a:193, ♂. Holotype or syntypes: ♂, Japan: Hyogo (BMNH). – **As *Larra amplipennis***: Kohl, 1885a:241 (new combination, in checklist of world *Larra*), 258 (original description copied); Dalla Torre, 1897:662 (in catalog of world Hymenoptera); Tsuneki, 1962a:4 (Japan: Ryukyu Islands: Island of Amami-Oshima); Iwata, 1963:115 (prey, egg, temporary paralysis of prey); Iwata and Tanihata, 1963:101 (nesting habits); Tsuneki, 1964h:221 (bibliography, synonymy), 1964l:62 (in key to Larrini of Japan and Korea), 1967b:8, 9 (in key to Larrinae of Taiwan), 18 (Taiwan), 1967i:388 (Japan: Ryukyus); Nishino, 1968:25 (Japan); Itami, 1969:48 (Japan: Niigata Prefecture); Nambu, 1970:1-8 (nesting habits, description of larva); Haneda, 1971b:29 (Taiwan); Tsuneki, 1971h:1 (Taiwan); Haneda, 1972a:3 (Taiwan); Tano, 1972:23 (Japan: Ryukyu Islands); Murota, 1973a:102 (Japan: Ryukyus Islands: Amami Group), 1973b:118 (Taiwan); Nambu, 1975b:61 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Tsuneki, 1977j:267 (Taiwan), 1982b:18 (known from Korea), 1982g:58 (known from the Ryukyu archipelago); Steiner, 1984a:153 (reference to Iwata and Tanihata, 1963); Paik, 1985:198 (in list of Sphecidae of Korea); Steiner, 1986:101 (references to papers on nesting habits); Zhou and Wu, 1993a:671 (China: Wuling Mountains, as *ampulipennis*); Wu and Zhou, 1996a:73 (in revision in Economic Insect Fauna of China); Porter, Stange, and Wang, 1999:7 (in checklist of Sphecidae of Taiwan); Yamane, Ikudome, and Terayama, 1999:509 (in Identification Guide to Crabronidae of Nansei = Ryukyu Islands, Japan); Nozaka and Kurokawa, 2003:56 (Japan: town of Awara: lake side of Kitagata); Ohl and Linde, 2003:150 (number of ovarioles); Li and He, 2004:1098 (China: in hymenopterous fauna of Zhejiang Province); Negoro, Haneda, and Tano, 2005:45 (Japan: Toyama Prefecture); Haneda, Nozaka, Tano, Kurokawa and Murota, 2006a:22 (Japan: Toyama Prefecture); Hua, 2006:280 (in list of Chinese insects, geographic distribution); Haneda, Nozaka, Tano, Kurokawa, Murota, and Murota, 2007:53 (Japan: Kagoshima Prefecture: Amami Oshima Islands); Okusa and Tajima, 2008:74 (Japan: central Honshu: Aichi Prefecture); S. Tanaka, 2008:38 (Japan: Yamaguchi Prefecture); J.-K. Kim, 2014:436 (in catalog of Sphecidae s.l. of Korean Peninsula).

ssp. aeripilosa Tsuneki

Larra sanguinea aeripilosa Tsuneki, 1963c:8, ♂. Holotype: ♂, Thailand: Chiangmai (Sasayama). – R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae; as synonym of *Larra amplipennis*).

ssp. sanguinea F. Williams

Larra sanguinea F. Williams, 1928:67a, ♀, ♂. Holotype: ♀, Philippines: Luzon: Los Baños (Bishop Mus.). – F. Williams, 1928a:40 (nesting habits); Tsuneki, 1964h:221 (as new synonym of *Larra amplipennis*); Baltazar, 1966:330 (in catalog of Hymenoptera of Philippines); Bohart and Menke, 1976:237 (as synonym of *Larra amplipennis*). – **As *Larra amplipennis sanguinea***: Tsuneki, 1966g:8 (new status; Ryukyus; geographic variation).

5. *analisis* Fabricius

Larra analisis Fabricius, 1804:220, sex not indicated. Holotype or syntypes: USA: "Carolina": no specific locality (MNHN, coll. Bosc). – Cresson, 1862:237 (in catalog of North American Hymenoptera); Patton, 1880b:389 (in checklist of North American Larrinae); Kohl, 1885a:241 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); de Saussure, 1887:17 (is a member of *Larra*); W. Fox, 1892c:138 (is not a *Tachysphex*); W. Fox, 1894a:481 (in revision of North American Larrinae); Dalla Torre, 1897:662 (in catalog of world Hymenoptera); Ashmead, 1899d:249 (in checklist of North American Crabronidae); J. Smith, 1900:518 (in list of insects of New Jersey); Viereck, 1903d:120 (Maryland: College Park); J. Smith, 1910:683 (in new list of insects of New Jersey); F. Williams, 1914a:141 (in revision of Larrinae of Kansas), 189 (nesting habits); Mickel,

1918b:412 (in catalog of Nebraskan Sphecidae); J.Ch. Bradley, 1928:1009 (in catalog of Hymenoptera of New York); Cushman, 1935:82 (description of larva); Ch. Smith, 1935:65 (nesting habits and control of mole cricket *Gryllotalpa hexadactyla* Perty); Brimley, 1938:442 (statewide in North Carolina); van der Vecht, 1961a:17 (study of type); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Krombein, 1979b:1616 (in catalog of North American Hymenoptera); Nascimento and Overal, 1980:6 (Brazil, Colombia, Paraguay); Steiner, 1984a (reference to Ch. Smith, 1935); Radović, 1985:64 (sting apparatus analyzed); Piek and Spanjer, 1986:185 (in list of Sphecidae with known prey); Steiner, 1986:101 (references to papers on nesting habits); Al-Houty, 1989:160 (Kuwait: Sulabiya, obviously in error); Menke, 1992d:210 (in revision of New World *Larra*); Ahlstrom, 1995:108 (in checklist of insects of North Carolina); Meagher and Mitchell, 1999:368 (collected in pheromone- and synthetic floral volatile-baited traps). – **As *Larrada analis***: F. Smith, 1856:291 (new combination, in catalog of Hymenoptera in British Museum); Cresson, 1873:214 (Texas); Snow, 1881:96 (in checklist of Hymenoptera of Kansas: Wallace County: no specific locality). – **As *Tachysphex analis***: Patton, 1892 (new combination).

Larrada canescens F. Smith, 1856:292, ♀, actually ♂. Holotype or syntypes: ♂, USA: Georgia: no specific locality (BMNH). Synonymized with *Larra analis* by R. Bohart in R. Bohart and Menke, 1976:237. – Cresson, 1862:237 (in catalog of North American Hymenoptera); W. Fox, 1894a:483 (unidentified species, original description copied). – **As *Larra canescens***: Patton, 1880b:389 (new combination, in checklist of North American Larrinae); Cresson, 1887:277 (in catalog of North American Hymenoptera); Dalla Torre, 1897:665 (in catalog of world Hymenoptera). – **As *Ancistromma canescens***: Ashmead, 1899d:249 (new combination, in checklist of North American Crabronidae, generic placement tentative).

Larrada americana Cresson, 1873:214, ♂, junior primary junior homonym of *Larrada americana* de Saussure, 1867. Holotype: ♂, USA: Texas: presumably Bosque County: no specific locality (ANSP). Synonymized with *Larra analis* by R. Bohart and Menke, 1976:237. – Cresson, 1916:95 (holotype in ANSP). – **As *Larra americana***: Patton, 1880b:389 (new combination, in checklist of North American Larrinae); Kohl, 1885a:240 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); Dalla Torre, 1897:662 (in catalog of world Hymenoptera); W. Fox, 1899:200 (Brazil: Rio Grande do Sul); J. Smith, 1900:518 (in list of insects of New Jersey); Hartman, 1905:61 (nesting habits); Cresson, 1916:95 (type in ANSP); G. Bohart in Muesebeck et al., 1951:953 (in catalog of North American Hymenoptera); Llano, 1959:100 (nest and prey, metamorphosis); Piek and Spanjer, 1986:184 (in list of Sphecidae with known prey).

Larra cressoni W. Fox, 1894b:482. Substitute name for *Larra americana* (Cresson). – W. Fox, 1894a:482 (in revision of North American Larrinae); Dalla Torre, 1897:666 (in catalog of world Hymenoptera); Ashmead, 1899d:249 (in checklist of North American Crabronidae); J. Smith, 1900:518 (in list of insects of New Jersey: “probably in New Jersey”).

6. *anathema* (Rossi)

Sphex anathema Rossi, 1790:65, sex not indicated. Holotype or syntypes: Italy: Etruria, now Toscana: no specific locality (destroyed). – Illiger, 1807b:101 (synonymy, redescription). – **As *Larrada anathema***: F. Smith, 1856:274 (new combination, in catalog of Hymenoptera in British Museum); Taschenberg, 1870:5 (bibliographic references); Walker, 1871:20 (Egypt: Cairo); Dours, 1874:140 (in catalog of Hymenoptera of France); Girard, 1879:953 (morphology and habits); Gribodo, 1880:402 (Tunisia); Sajó, 1882:5 (Hungary); Cuní y Martorell, 1888:164 (Spain: Barcelona); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera); Cuní y Martorell, 1897:331 (Spain: Cataluña: villa de Calella); Chyzer, 1902:33 (Hungary); Innes Bey, 1912:111 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected in unknown locality). – **As *Tachytes anathema***: Lepeletier de Saint Fargeau, 1845:254 (new combination, in revision of world Hymenoptera); Lucas, 1849:250 (Algeria: La Calle, now El Kala, Oran); Fabre, 1886:231 (preying on mole cricket); Acloque, 1897:93 (in Sphecid Fauna of France and Algeria). – **As *Larra anathema***: Coquebert, 1801:53 (new combination, original description copied), pl.

XII, Fig. 11 (illustration of Fabrician specimen); Vander Linden, 1829:20 (bibliographic references, southern France, Germany, Hungary, Italy); Shuckard, 1837:87 (in revision of British Aculeata; recorded from Devonshire); von Siebold, 1839:48 (Germany: Danzig, now Poland: Gdańsk, record not confirmed by subsequent authors); Dahlbom, 1843:136 (in revision of Sphecidae and Pompilidae), 1845:472 (in key to three species of world *Larra*); Eversmann, 1849:386 (Russia: lower Volga); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); F. Smith, 1851c:18 (Great Britain: Devonshire, identification tentative), 1853:62 (in checklist of British Hymenoptera); Schenck, 1857:198 (in revision of fossorial wasps of Germany); Taschenberg, 1858:85 (Germany); von Frauenfeld, 1861:103 (Croatia: Dalmatia: no specific locality); Sichel, 1861:752 (Italy: Sicilia); A. Costa, 1863:65 (Italy: Calabria Ulteriore: near Reggio); Funk, 1864:156 (Germany: Bayern: Bamberg); Taschenberg, 1866:199 (in revision of Hymenoptera of Germany); A. Costa, 1867b:81 and 1867c:25 (in revision of Italian Sphecidae); Kirchner, 1867:216 (in catalog of European Hymenoptera); Schenck, 1867a:356 (known from southern Germany); von Aichinger, 1870:320 (Tirol); Radoszkowski, 1877:30 (Uzbekistan); Kohl, 1880:179 (Austria: Tirol, and Italy: Trentino–Alto Adige); Magretti, 1881:108 (Italy: Lombardia), 270 (in list of species discussed in this paper); Marquet, 1881:180 (southern France); Yaroshevskiy, 1881:125 (Ukraine: Khar'kiv Oblast': Khar'kiv, Slavyansk); A. Costa, 1882b:22 (Italy: Sardegna); De Stefani Perez, 1882:39 (Italy: Sicilia: Sciacca); Kohl, 1883e:672 (Switzerland); Mocsáry, 1884:222 (Hungary: Budapest, Debreczin, Grosswardein, Zilah; Romania: Transylvania: Elisabethstadt, now Dumbrăveni); Kohl, 1885a:238 (in revision of European Larrinae), 241 (in checklist of World *Larra*); Radoszkowski, 1886a:28 (male genitalia); Gasperini, 1887:15 (cited from Dalmatia, now Croatia, by Germar 1817, Carrara, 1842, and Frauenfeld, 1861); de Saussure, 1887:17 (member of *Larra*); Kohl, 1888b:728 (Austria: Tirol, now Italy: Alto Adige); F. Morawitz, 1891a:207 (Russia: Astrakhan Government); Radoszkowski, 1891:590 (reference to Radoszkowski, 1886a); Baldini, 1894:62 (Italy: Modena area); Schletterer, 1894:31 (Istria Peninsula, now part of Croatia, Slovenia, and Italy); Sickmann, 1894:204 (China: Hopei Province: Tientsin); Dalla Torre, 1897:662 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Kingdom of Hungary, some localities are in today's Romania and Croatia); Bingham, 1902:210 (South Africa, Malawi; records not confirmed by subsequent authors); de Cobelli, 1903:111 (Italy: Province of Trentino); Antiga and Bofill, 1904:9 (Spain: Cataluña Province); W. Schulz, 1904b:102 (miscellaneous faunal records); Ferton, 1905:67 (prey: mole cricket); Mantero, 1905:72 (Italy: Toscana: Isola del Giglio); W. Schulz, 1905b:20 (Morocco: Tanger area); Ván-gel, 1905:166 (Hungary); Pérez, 1907:496 (Bahrain); Schmiedeknecht, 1907:235 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); von Schulthess, 1909:441 (Libya: Benghazi); Mercet, 1910b:165 (listed from Spain); Graeffe, 1911:46 (Italy: Trieste area); Szilády, 1913:88 (Hungary: Nagyenyed); Dusmet y Alonso, 1915:87 (Spain: Aragón); Storey, 1916:110 (Egypt: abundant everywhere); Gribo-do, 1919:857 (Italy: Piemonte: Susa); Berland, 1921:533 (Greece); Fahringer, 1922:184 (Turkey); Maidl, 1922:69 (Croatia); Berland, 1925d:111 (in Sphecidae Fauna of France); Coulon, 1925:121 (Spain, Turkey; Morocco: Tanger); Shestakov, 1925:36 (Russia: Yaroslavl' area); Friese, 1926:162 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); von Schulthess, 1926b:213 (Tunisia); Grandi, 1928a:21 (visiting flowers of Umbelliferae); Schmiedeknecht, 1930:696 (in keys to Hymenoptera of North and Central Europe); Bischoff, 1931:9 (Spain); Dusmet y Alonso, 1931:7 (Portugal: “Oliv. do Hosp.”); Giordani Soika, 1932a:22 (Italy: lido di Venezia); Guiglia, 1932b:100 (Libya: Fezzan: Brak), 1932d:473 (Libya: Gialo); Bischoff, 1933:5 (Morocco); Nadig, 1933:85 (Morocco); E. Nielsen, 1933:295 (preying on mole crickets, *Gryllotalpa*); Giner Marí, 1934:133 (Spain); Guiglia, 1934b:301 (Libya: bibliography and summary of locality records); Maidl, 1934:64 (Greece: Aegean Islands: Seriphos); Zavadil, 1934:187 (Slovakia); Zavadil, Šusterka, and Bat'a, 1937:204 (in catalog of Sphecidae of Czechoslovakia); Guiglia, 1939c:189 (Libya: Fezzan: Gat); Móczár, 1939:4 (Hungary: Jászberény); Zavadil, 1939:121 (Czech Republic: Morava: Mutěnice); Schneid, 1941:1046 (Germany: Bayern: not found in Bamberg area); Guiglia, 1942b:233 (Libya); Giner Marí, 1943a:122 (in Sphecidae Fauna of Spain); Matthey,

1943:522 (Switzerland: 5 km W Lausanne); Timon David, 1943:29, 30 (France: Bouches-du-Rhône: plage de Fos); Giordani Soika, 1944:10 (Italy: Sicilia: Agrigento, Falcone); Guiglia, 1944a:148 (Cyprus: Limassol), 1944b:25 (Italy); Giner Marí, 1945:360 (Morocco: Ain Zorah, Muley Ali); Balthasar, 1948:142 (Czech Republic: Seleška; Slovakia: Nove Mesto, Parkan); Zavadil *in* Zavadil and Šnoflak, 1948:155 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:13 (Portugal); de Beaumont, 1950d:14 (Egypt: Siwa oasis), 1950f:405 (Algeria); Pittioni, 1950:24 (Cyprus); Scobiola, 1950:19 (Romania); Móczár, 1953:310 (Hungary); de Beaumont, 1954a:53 (Italy); Grandi, 1954:238 (Italy); Aerts, 1955:63 (Germany: Rheinland); de Beaumont, 1955a:169 (Morocco); Harant and Leclercq, 1955:251 (France: Hérault: Aiguelongue, Bione, Montpellier, Paillade); Steiner, 1955:137 (France: Dordogne); Vergne, 1955:4 (France: Auvergne); Vogrin, 1955:37 (Yugoslavia); Bytinski-Salz, 1956:226 (Turkey: Ankara, Beykoz, Büyükada, Istanbul, Kilyos, Sapanca); Ceballos, 1956:374 (in catalog of Hymenoptera of Spain); Dulac, 1956:9 (France: Saône-et-Loire: Mâcon); Morel, Nouvel, and Ribaut, 1956:338 (France: Département des Pyrénées-Orientales); Bajári, 1957a:48 (in key to Hungarian Sphecidae); Nouvel and Ribaut, 1958:12 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958:178 (Bulgaria: Sandanski); Compte Sart, 1959:132 (Majorca); de Beaumont, 1959a:26 (Italy); Diniz, 1959:28 (Portugal: seven localities); Giner Marí, 1959:388 (Morocco: Fès); Suárez, 1959:56 (Spain: Almería Province); Wolf, 1959b:24 (Tischbein's 1850 record from Germany is doubtful); Čingovski, 1960:6 (Macedonia: Rashke); de Beaumont, 1960a:14 (Greece: Rhodes Island), 1960b:237 (Libya); Noskiewicz and Puławski, 1960:127 (in key to Polish Sphecidae, not yet found in Poland); de Beaumont, 1961c:49 (Greece: Crete Island), 1961:4 (Iraq); Grandi, 1961a:190 (nesting habits); Atanassov, 1962:124 (Bulgaria: Petrich area); Lehrer and Scutaru, 1963:286 (Romania: Moldova: Mircești in Iași District); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River); Scobiola, 1963:825 (Romania: Letea and Periprava); Ceballos, 1964:89 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:71 (in Sphecid Fauna of Switzerland); Diniz, 1964a:7 (Portugal: nine localities); de Beaumont, 1965:45 (Greece); Derwesh, 1965:70 (Iraq: no specific locality); Isensee, Lesemann, and Röseler, 1965:612 (Spain: no specific locality); Myartseva, 1965:78 (Turkmenistan: Akibay); Bonelli, 1966c:218 (Italy: Trentino–Alto Adige: Appiano in Bolzano); Gauss, 1966a:65 and 1966b:307 (Germany: Baden-Württemberg: Kaiserstuhl: Lilienhof); Myartseva, 1966:48 (preying on orthopterans), 49 (Turkmenistan: lower course of Murgab and Tedjen rivers; preying on adult and larval *Gryllotalpa gryllotalpa* L.); Balthasar, Hrubant, and Hrubant, 1967:172 (Bulgaria: Slanchev Bryag near Nessebar); de Beaumont, 1967a:329 (Turkey); Gauss, 1967:553 (Germany: Baden-Württemberg: Kaiserstuhl); Scobiola-Palade, 1967a:162 (Romania: Constanța District: Hagieni, Mangalia), 1967b:42 (Romania); Benedek, 1968:73 (Hungary, floral records); Scobiola-Palade, 1968b:142 (Romania: Island of Letea in delta of Danube), 1968c:384 (Romania: Amara, București, Budești, Giurgiu); Benedek, 1969a:83 (hygrophilous meadow), 1970:98 (Hungary: Tapolca); Oehlke, 1970:711 (in Democratic Germany found only in Potsdam area by Friese, 1926:162); Balthasar, 1972:298 (in Sphecid Fauna of Czechoslovakia); Kazenas, 1972b:166 (Kazakhstan); Myartseva, 1972a:80 (Turkmenistan); Scobiola-Palade, 1972a:151 (Romania: delta of Danube: Caraorman); de Beaumont, Bytinski-Salz and Pulawski, 1973:4 (Israel); Esmaili and Rastegar, 1974:45 (Iran); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp., *Statice gmelini* Willd., Plumbaginaceae, and *Cynanchum sibiricum* Willd., Asclepiadaceae, in Kazakhstan), 110 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, in Kazakhstan); Scobiola-Palade, 1974:144 (Romania: Sărăturile sandbank in Danube delta); Simon Thomas and Veenendaal, 1974b:4 (France: Gironde: Andernos-les-Bains); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Myartseva, 1976:79 (nesting habits); Simon Thomas, 1976:5 (France: Lot-et-Garonne: Forêt de Campet); Georghiou, 1977:190 (Cyprus); Kazenas, 1978b:102 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:214 (in key to Sphecidae of European part of former USSR); Benedek, 1979:231 (Hungary: Bakony Hills: Káptalanfüred); Radović and Krnić, 1979:unpaginated foldout (nesting in coarse sand and loose soil, foreleg structure); Valletta, 1979:215 (Malta); Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 1980:126 (Italy:

Abruzzo, Piemonte); Józán, 1981:304 (Hungary: Hortobágy National Park); Schmidt, 1981:180 (Germany: Baden-Württemberg: Lilienhof near Wasenweiler Samenplantage); Gayubo, 1982a:97 (northern Spain: Sierra de Béjar); Gayubo, 1982f:250 (Spain: Cádiz Province: San Roque); Gayubo and Tormos, 1984b:13 (Spain: Valencia); Gayubo, 1984b:83 (Spain: Salamanca Province), 1984c:361 (Portugal: El Algarve Province); Eiroa and Novoa, 1985:23 (Spain: Pontevedra: Barra beach near Cangas); Gayubo, 1985a:485 (attempts at mating); Józán, 1985b:57 (Hungary south of Lake Balaton), 78 (floral records), 83 (ecological and zoogeographic characteristics); Radović, 1985:64 (sting apparatus analyzed); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Westrich and Schmidt, 1985b:111 (Germany: endangered in Baden-Württemberg); Gayubo, 1986c:32 (Spain: Zamora Province); Gayubo and Heras, 1986:38 (Spain: Segovia and Valladolid Provinces; floral records); Gayubo and Sanza, 1986:42 (Spain: Burgos); Józán, 1986:370 (Hungary: Kiskunság National Park); Piek and Spanjer, 1986:185 (in list of Sphecidae with known prey); Steiner, 1986:101 (references to papers on nesting habits); Gayubo, 1987a:110 (Spain: Ciudad Real Province); Tormos and Jiménez, 1987a:124 (Spain: Valencia), 1987b:316 (Spain: Valencia Province: Dehesa de El Saler); Asís and Jiménez, 1988:270 (Spain: Castellón Province); Gayubo and Mingo, 1988:73 (Spain); Karsai, 1988:100 (Hungary: Kiskunság National Park); Pádr *in* Šedivý, 1989a:167 (in checklist of Czechoslovakian Sphecidae); Scobiola-Palade, 1989:87 (Romania: delta of Danube); Gayubo, Asís, and Tormos, 1990a:16 (Spain); Jacobs and Oehlke, 1990:122 and 162 (occurrence in Democratic Germany questionable); Pagliano, 1990:101 (in catalogue of Italian Sphecidae); Day, 1991:xvi (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:98 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:401 (Italy); Józán, 1991:603 (Hungary: Bátorliget Nature Reserve); Negrisolo, 1991:318 (Italy: Udine and Venezia provinces); Schembri, 1991:180 (Malta); Gayubo, Borsato, and Osella, 1992:281 (Turkey); Gusenleitner, 1992:685 (first record from Austria: Burgenland: Oberdrosen south of St. Martin/Raab); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area); K. Weber, 1992:87 (Germany: Bayern: Bamberg District); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Gusenleitner, 1995:161 (Austria: Burgenland); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Pagliano and Pesarini, 1995:86 (Italy: Ferrara Province); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Nazarova and Shomirsaidov, 1997:23 (Tajikistan: fruit tree orchards in Vakhsh River valley); Schmidt and Schmid-Egger, 1997:16 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:514 (Austria: summary of localities from Burgenland); Józán, 1998:311 (Hungary: Duna-Dráva National Park); Moroz, 1998:37 (Ukraine: near Melitopol); Nazarova, 1998:40 (Tajikistan: Tigrovaya Balka Nature Reserve); Tüzün, Gülmez, and Bağrıaçık, 1999:384 (first record from Turkey: Aegean Region); Blösch, 2000:222 (in Sphecid Fauna of Germany); Esenbekova and Kazenas, 2000:26 (southeast Kazakhstan: near village Kazakhstan on Ili River); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Józán, 2000:107 (Hungary: Bakony Mountains), 2001:279 (Hungary: Somogy County); Ljubomirov, 2000:10 (Bulgaria, specimens in N. Nedelkov collection); Kazenas, 2001:25 (in checklist of Sphecidae of Kazakhstan and Central Asia), 147 (review of known biology); K. Schmidt and Bitsch *in* Bitsch et al., 2001:197 (in Sphecid Fauna of Western Europe); Ohl et al., 2001:139 (distribution in Germany by provinces); Tüzün, 2001:44 (Turkey); Gusenleitner, 2002:1124 (Austria: Steiermark: Obergiem south of Felbach); Kazenas, 2002a:60 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:140 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Shlyakhtenok and Skibinska, 2002:33 (Belarus': no specific locality); Gayubo, Özbek, and Yıldırım, 2003:87 (Turkey: many localities); Drewes, 2003:138 (Italy: Trentino: Torbole; Spain: Tarragona); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Józán, 2003:227 (Hungary: Látrányi Puszta Nature Conservation Area); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:66 (in catalog of wasps and bees of Bayern, Germany); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: ex-

tinct or no longer collected); Gadallah and Assery, 2004b:1396 (skeletal parts of sting apparatus); Gorobchishin, 2004:34 (Ukraine: Zaporiz'ka Oblast': Obitichna Kosa Nature Reserve); Gorobchishin and Protsenko, 2004:39 (Ukraine: Kherson Oblast': Chernomorskiy Nature Reserve); Kazenas, 2004d:29 (Kazakhstan: northern Caspian region); Nazarova, 2004:106 (Tajikistan: Badakhshan Region: Rushan District: villages Siponch and Visav in Bartang River valley); Sheshurak, Voblenko, and Kazurka, 2004:30 (Ukraine: Chernigov Oblast', as *anachema*); Shkuratov, 2004a:76 (Russia: Rostov Oblast'); Wiśniowski, 2004:43 and 59 (in checklist of Polish Sphecidae: mistakenly reported from Baltic coast by Siebold, 1839); Ebrahimi, 2005:124 (in key to selected Iranian Sphecidae); Jacobs, 2005a:447 (Bulgaria: Banya near Hissarya, Melnik); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan); Pagliano and Negrisolo, 2005:347 (in Sphecid Fauna of Italy); Shorenko, 2005a:163 (Ukraine: Crimea), 2005b:99 (Ukraine: Crimea: Karadagh Nature Reserve); Yildirim and Ljubomirov, 2005:1797 (Turkey: Erzincan, Erzurum, and Kahramanmaraş provinces); Gorobchishin, 2006:106 (Ukraine: Poltava); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Standfuss and Standfuss, 2006b:96 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Jacobs, 2007:92 (in key to Crabronidae of Germany); Roche, 2007a:64 (in checklist of Egyptian Crabronidae), 2007b:4 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Saure, 2007:82 (Germany: in checklist of Aculeata of Brandenburg); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia, known from Moravia and Slovakia only); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:191 (in catalog of Crabronidae of Turkey); Pagliano, 2008:541 (specimens in M. Spinola collection, Torino); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); Libersat, Delago, and Gal, 2009:213 (preying behavior described); Shorenko, 2009:367 (in list of Sphecidae s.l. of Crimea); Danilov, 2010a:20 (Russia: Novosibirsk Oblast': 5 km E Troitskoye); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Ghazi-Soltani, Ebrahimi, Iranipour, and Pour Abad, 2010:799 (Iran: East Azarbaijan: Maragheh: Checkan, Varzeghan: Sarand); Schmid-Egger, 2010a:16 (in red list of Aculeata of Germany: extinct, last collected in 1977); Shorenko and Konovalov, 2010:20 (Ukraine); Tüzün and Yüksel, 2010:4470 (Turkey: Niğde Province); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:498 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Gogala, 2011:14 (Slovenia); Józán, 2011:180 (in checklist of Sphecidae s.l. of Hungary); Murai and Amr, 2011:111, 119 (first record from Syria: Al Thawrah Nature Reserve at 35°51'N 28°38'E); Boillat, 2012:226 (Switzerland: in checklist of insects of Canton de Genève); Kazenas, 2012b:169 (Kazakhstan: Korgalzhin State Nature Reserve); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Yildirim, 2012:79 (Turkey: Adiyaman, Erzurum, and Iğdır provinces); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:351 (in new catalog of Sphecidae of Saudi Arabia); Kazenas, 2013a:56 (color photograph of female, short information on geographic distribution and nesting habits), 2013b:494 (southeast Kazakhstan: Sortogay 10 NW Chundzha on Sharyn River); Shlyakhtenok, 2013:164 (in annotated catalog of aculeate wasps of Belarus'); Baldock, 2014:355 (Spain: Island of Mallorca); Bitsch, 2014:403 (record from France by Burgut, 2010 reported); Ebrahimi, 2014:36 (Iran: Alborz, Āzarbāijāb-e Gharbi, Ardebil, Fārs, Gilān, Khuzestān, and Māzandarān provinces); Nemkov, 2014c:287 (recorded from Asiatic Russia by Danilov, 2010:20); Schmid-Egger, 2014:566 (in key to *Larra* of western and central Palearctic Region), 566 (United Arab Emirates, diagnostic characters), 567 (color photographs of female and male); Yildirim, Ljubomirov, and Lelej, 2014:11 (distribution in Turkey by biogeographic provinces); Atbaei, Fallahzadeh, and Ljubomirov, 2015:12 (Iran: Fars Province, as *anathema anathema*); Ivanov, Fateryga, and Filatov, 2015:301 (Crimea: Karadag Nature Reserve, a protected species); Protsenko and Gorobchishin, 2015:23 (in Red Book of Ukraine; map of locality records in Ukraine); P. Rosa and Pagliano, 2015:102 (Italy: Lombardia and Piemonte: Parco del Ticino); Mokrousov and Popov, 2016:582 (Russia: Krasnodarskiy Krai); Schmid-Egger, Dandria, and Xuereb, 2016:80 (in checklist of

Crabronidae of Maltese Islands); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:33 (Turkey: Aksaray, Ankara, Artvin, Iğdır, Kars, and Tunceli provinces provinces); Antropov, 2017b:236 (in catalog of Crabroninae of Russia); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:64 (Iran: known from Alborz, Ardabil, East Azerbaijan, Fars, Guilan, Khuzestan, Mazandaran, Tehran, and West Azerbaijan provinces); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Mas Larrieu); Shoreenko, 2017:77 (in Crimea collected in July and August).

Larra ichneumoniformis Fabricius, 1793:221, sex not indicated. Holotype: ♀, Hungary: no specific locality (ZMUC). Synonymized with *Larra anathema* by ..., synonymy confirmed by van der Vecht, 1961a:18. – Fabricius, 1796:89 (in Index to his Entomologia Systematica, 1793); Panzer, 1800, Heft 76:18 (in revision of German insects, illustration of habitus); Coquebert, 1801:53 (original description copied), pl. XII, Fig. 10 (illustration of Fabrician type); Fabricius, 1804:220 (redescription); Latreille, [1805]:296 (redescription); Panzer, 1906:128 (in critical review of his earlier work); Spinola, 1806:72 (Italy: Liguria); Jurine, 1807:145 (in checklist of European *Larra*); Germar, 1817:261 (Dalmatia: Arbe, now Croatia: Rab); Stephens, 1829:363 (in catalog of British insects), 1829b:33 (in checklist of British insects); Haliday, 1833:516 (Ireland: eastern coast N Dublin, certainly in error); Dufour, 1841a:497 and 1841b:236 (digestive tract), 1841a:503 and 1841b:239 (male reproductive system), 1841a:507 and 1841b:243 (female reproductive system); Ghiliani, 1842:25 (listed from Italy: Sicilia after Fabricius); Gistel, 1848:142 (central Europe, description); Martinez y Saez, 1874:31 (specimens from Spain: Madrid area, donated to Leon Dufour); Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:541 (specimens in M. Spinola collection, Torino); Haris, 2016:12 (in list of species described by J.Ch. Fabricius from Carpathian Basin).

Pompilus teutonius Fabricius 1804:194, ♀. Holotype ♀: Germany: no specific locality (ZMUC). Synonymized with *Larra anathema* by Dahlbom, 1843:136, 1845:XIX, synonymy confirmed by W. Schulz, 1912:79. – **As *Larra teutona***: van der Vecht, 1961a:19 (discussion of identity).

Tachytes grandis Chevrier, 1872:508, ♂. Holotype: ♂, Switzerland: Nyon area (MHNG). Synonymized with *Larra anathema* by Kohl, 1883d:226 and 1883e:672. – Girard, 1879:955 (listed).

ssp. *melanaria* Kohl

Larra anathema var. *melanaria* Kohl, 1880:179, sex not indicated. Holotype or syntypes: Austria: Tirol: Rentsch near Bozen, now Italy: Alto Adige: Bolzano (NHMW). – Dalla Torre, 1897:663 (in catalog of world Hymenoptera); Nadig, 1933:85 (Morocco: Goundafa). – **As *Larra anathema melanaria***: R. Bohart and Menke, 1976:237 (new status, in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW).

ssp. *nudiventris* Costa

Larra anathema var. *nudiventris* A. Costa, 1893b:5, ♀, ♂. Syntypes: Tunisia: no specific locality (Napoli). – **As *Larra anathema nudiventris***: R. Bohart and Menke, 1976:237 (new status, in checklist of world Sphecidae).

7. *angustifrons* Kohl

Larra angustifrons Kohl, 1892:219, ♀. Syntypes: Indonesia: Java: no specific locality (NHMW). – Dalla Torre, 1897:663 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW).

8. *apicipennis* Cameron

Larra apicipennis Cameron, 1904f:302, ♀. Holotype or syntypes: ♀, India: Assam: Khasia Hills; or Himachal Pradesh: Simla (OXUM). – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897, as *apicepennis*); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae).

9. *aponis* Tsuneki

Larra aponis Tsuneki, 1983a:4, ♂. Holotype: ♂, Philippines: Mindanao: North Cotobato: Mount Apo (originally K. Tsuneki coll., now USNM). – Nuhn and Menke, 1994:26 (holotype not transferred to USNM, possibly returned to T. Murota, the collector); Menke, 1995:14 (type still in K. Tsuneki collection); Tano, 1995:45 (holotype in K. Tsuneki collection).

10. *arabica* Schmid-Egger

Larra arabica Schmid-Egger, 2014:566, ♀, ♂. Holotype: ♀, United Arab Emirates: Hatta (Ch. Schmid-Egger coll.). – Schmid-Egger, 2014:566 (in key to *Larra* of western and central Palearctic Region), 568 (color photographs of female), 570 (color photographs of male); Sadeghi, Fallahzadeh, Ostovan, Ljubomirov, and Hesami, 2016:431 (first record from Iran: Fars Province).

11. *betsilea* de Saussure

Larra betsilea de Saussure, 1887:17, ♀ (as *Betsilea*, incorrect original capitalization). Holotype or syntypes: ♀, Madagascar: no specific locality (MHNG or MNHN). – de Saussure, 1892:488 (Madagascar, redescription, description of ♂); Dalla Torre, 1897:664 (in catalog of world Hymenoptera); W. Schulz, 1911b:189 (is a subspecies of *Larra anathema*); Arnold, 1945:114 (Madagascar; redescription); Leclercq, 1960a:96 (Madagascar), 1961d:121 (Madagascar); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Leclercq, 1990b:115 (in key to *Larra* of Madagascar), 116 (Madagascar); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:963 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records, as *betsilea betsilea*).

ssp. proditor Kohl

Larra proditor Kohl in Schletterer, 1891:15, ♂. Holotype: ♂, Zaire: Equateur Province: no specific locality (Inst. Roy. Sci. Natur. Bruxelles). – Dalla Torre, 1897:672 (in catalog of world Hymenoptera); Arnold, 1923b:221 (in revision of southern African Sphecidae), 1930:5 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:91 (Zaire); Scott in Arnold 1933a:369 (Ethiopia: Harar District); de Beaumont, 1955a:169 (Morocco; diagnostic characters), 1958b:60 (Algeria: Tassili des Ajjer); I. Robertson, 1969:480 (Tanzania: Ukiriguru). – **As *Larra betsilea proditor***: Arnold, 1944:23 (new status); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Schmid-Egger, 2014:566 (first record from Tunisia: Gabes, diagnostic characters).

Larra pseudanathema Kohl, 1894:296, ♀. Syntypes: Cameroon: no specific locality and Sierra Leone: Sherbro Island (TMP). Synonymized with *Larra betsilea proditor* by ... – Dalla Torre, 1897:672 (in catalog of world Hymenoptera).

Larra proditrix W. Schulz, 1906:212. Unjustified emendation of *Larra proditor* Kohl, 1891.

Larra semirubra Bischoff, 1913c:75, ♀. Holotype: ♀, Zimbabwe: Bembesi (ZMHU). Synonymized with *Larra betsilea proditor* by ...

12. *bicolor* Fabricius

Larra bicolor Fabricius, 1804:221, sex not indicated. Lectotype: ♀, South America: no specific locality (ZMUC), designated by van der Vecht, 1961a:17. – Patton, 1880b:389 (in checklist of North American Larrinae); van der Vecht, 1961a:17 (redescription of lectotype); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Menke, 1982c:6 (established in Florida); Castner, 1984:323 (experiments with *Scapteriscus* prey); Castner and Fowler, 1984:482 (distribution in Puerto Rico); Castner, 1986:252 (response to parasitized and unparasitized mole crickets); Castner and Fowler, 1987:77 (nesting habits in Puerto Rico); Bennett and Pruett, 1991:16 (mating habits in Santa Cruz, Bolivia); Callan, 1991a:8 (Trinidad); Menke, 1992d:193 (in revision of New World *Larra*); Pruett and Bennett,

- 1991:15 (preying habits in Santa Cruz, Bolivia); Frank, Parkman, and Bennett, 1995:619 (successful introduction to northern Florida); Frank, 1998:1832 (attempts at using *Larra bicolor* as biocontrol agent against *Scapteriscus* mole crickets in Florida); Meagher and Frank, 1998:555 (attracted to pheromone and phenylacetaldehyde traps); Wcislo, 1998:181 (proportions of antennae in relations to parasitic/non-parasitic habits); Meagher and Mitchell, 1999:368 (collected in pheromone- and synthetic floral volatile-baited traps); Meagher, 2001b:291: Florida: Alachua County: collected in traps baited with pheromone and synthetic floral volatile compound); Amarante, 2002:38 (in catalog of Neotropical Crabronidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies); Arévalo and Frank, 2005:146 (in Florida visiting mainly flowers of Neotropical *Spermacoce verticillata* L., Rubiaceae); Held, 2005:327 (first record from Mississippi: Biloxi and Ocean Springs, both coastal); Frank and Walker, 2006:139 (history of introduction into Florida, nesting behavior, mortality caused to mole cricket prey); Leppla, Frank, Adjei, and Vicente, 2007:230 (*Larra bicolor* efficiently controls the introduced mole crickets *Scapteriscus vicinus* Scudder and *S. didactylus* (Latreille) in Florida and Puerto Rico, respectively); Abraham, Held, and Wheeler, 2008:81 (first records from Alabama); Pagliano, 2008:542, 543 (specimens in M. Spinola collection, Torino); Frank, Leppla, Sprengel, Blount, and Mizzell, 2009 (now distributed in most of Florida); Frank and Sourakov, 2009:1 (morphology, life history, history of introduction into Florida); Portman, Frank, McSorley, and Leppla, 2009:58 (fecundity); Rasmussen and Asenjo, 2009:10 (in checklist of Crabronidae of Peru); Portman, Frank, McSorley, and Leppla, 2009:58, 2010:939 (nectar-seeking and host-seeking); Ardila-Garcia, Umphrey, and Gregory, 2010:339 (genome size dataset); Hertl and Brandenburg, 2013:175 (first record from North Carolina: Scotch Meadows Golf Course in Laurinburg at 34.6914°N 79.5123°W); Bitsch, 2014:403 (observations by Portman et al., 2010 reported). – **As *Tachytes bicolor***: Dahlbom, 1845:471 (new combination, in key to world *Tachytes*); F. Smith, 1856:303 (in catalog of Hymenoptera in British Museum); Dalla Torre, 1897:687 (in catalog of world Hymenoptera).
- Tachytes paganus* Dahlbom, 1843:132, ♂ (as *pagana*, incorrect original termination). Holotype: ♂, Caribbean Islands: Virgin Islands: St. Croix Island (ZMHU). Synonymized with *Pompilus bicolor* by Dahlbom, 1845:XX and 471. – Cresson, 1862:238 (in catalog of North American Hymenoptera). – **As *Larrada pagana***: F. Smith, 1856:286 (new combination, in catalog of Hymenoptera in British Museum). – **As *Larra pagana***: Kohl, 1885a:246 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:671 (in catalog of world Hymenoptera); Stadelmann, 1897:255 (study of type, new combination); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).
- Larrada americana* de Saussure, 1867:74, ♀, ♂. Lectotype: ♂, Venezuela: Caracas (MHNG), designated by Menke, 1992d:193. Synonymized with *Larra bicolor* by Patton, 1880b:389 and van der Vecht, 1961a:17 (as new synonym). – **As *Larra americana***: Kohl, 1885a:241 (new combination, in checklist of world *Larra*); F. Williams, 1928a:48 (oviposition records); Wolcott, 1938:193 (introduction into Puerto Rico); Martorell, 1939 (collecting and shipping specimens); Wolcott, 1941:53 (established in Puerto Rico); Callan, 1950:205 (Trinidad, established in Puerto Rico for control of mole-cricket *Scapteriscus vicinus* Scudder); Wolcott, 1951:844 (in review of insects of Puerto Rico); Dollfuss, 1989:10 (type material in NHMW).
- Larrada gastrica* Taschenberg, 1870:5, ♀, ♂. Lectotype: ♂, Brazil or Argentina: Paraná (Halle), designated by Menke in R. Bohart and Menke, 1976:238. Synonymized with *Larra bicolor* by Menke, 1992d:193. – Schrottky, 1913a:231 (Argentina, Paraguay, Uruguay). – **As *Larra gastrica***: Kohl, 1885a:244 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:668 (in catalog of world Hymenoptera); Schrottky, 1903b:177 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay); Strand, 1910a:157 (Paraguay); Brèthes, 1913:146 (as synonym of *Larra princeps*); Bischoff and von Schulthess, 1937:168 (Bolivia); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

Larra guiana Cameron, 1912:433, ♀. Holotype: ♀, Guyana: Demerara: no specific locality (BMNH). Synonymized with *Larra bicolor* by Menke, 1992d:193. – F. Williams, 1928a:45 (British Guiana); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

Larra scapteriscica F. Williams, 1928a:58, ♀, ♂. Holotype: ♀, Brazil: Pará (Bishop Mus.). Synonymized with *Larra bicolor* by Menke, 1992d:193. – F. Williams, 1928a:48 (oviposition records); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

13. *bicolorata* Cameron

Larra bicolorata Cameron, 1904f:294, ♀. Holotype or syntypes: ♀, India: Assam: Khasia Hills; or Himachal Pradesh: Simla (OXUM). – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae).

14. *bulawayoensis* Bischoff

Larra bulawayoensis Bischoff, 1913c:73, ♂, ♀. Syntypes: Zimbabwe: Bulawayo and Bembesi (SAMP). – Arnold, 1923b:223 (in revision of southern African Sphecidae), 1930:6 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae).

ssp. occidentalis Arnold

Larra bulawayoensis, race *occidentalis* Arnold, 1923b:224, ♂. Holotype: ♂, Cameroon (SAMP). – Arnold, 1930:6 (in checklist of Afrotropical Sphecidae). – **As** *Larra bulawayoensis occidentalis*: R. Bohart and Menke, 1976:237 (new status, in checklist of world Sphecidae).

15. *burmeisterii* (Holmberg)

Larrada burmeisterii Holmberg, 1884:221, ♀ (as *Burmeisterii*, incorrect original capitalization, authorship attributed to E. Lynch Arribálzaga). Holotype: ♀, Paraguay: Colonia (lost). – Schrottky, 1913a:231 (Argentina, Uruguay). – **As** *Larra burmeisterii*: – Kohl in Dalla Torre, 1897:661 (new combination, in catalog of world Hymenoptera); Schrottky, 1903b:177 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Menke, 1992d:207 (in revision of New World *Larra*); Amarante, 2002:38 (in catalog of Neotropical Crabronidae).

16. *carbonaria* (F. Smith)

Larrada carbonaria F. Smith, 1858a:102, ♀. Holotype or syntypes: ♀, Singapore (OXUM). – F. Smith, 1863b:135 (known from Singapore), 1871a:364 (in catalog of Oriental Aculeata). – **As** *Larra carbonaria*: Kohl, 1885a:242 (new combination, listed); Cameron, 1889c:125 (listed); Bingham, 1897:199 (redescription, Burma); Dalla Torre, 1897:665 (in catalog of world Hymenoptera); Bingham, 1905:43 (Malaysia: Semangko Pass); Kohl, 1909:372 (Madagascar: Toamasina; probably misdetermined specimens of *Larra betsilea*); Maidl, 1925a:381 (Indonesia: Sumatra); F. Williams, 1928a:41 (nesting habits), 67 (in revision of *Larra* of Philippines); Iwata, 1963:115 (prey, egg); Baltazar, 1966:330 (in catalog of Hymenoptera of Philippines); Tsuneki, 1966g:9 (Taiwan, Ryukyus, comparison of Japanese and Taiwanese specimens), 1967b:9, 13 (in key to Larrinae of Taiwan), 20 (Taiwan, recognition), 1967i:388; Haneda, 1970:12 (Japan: Akita Prefecture), 1971b:29 (Taiwan); Tsuneki, 1969e:25 (Japan: specimens in Osaka Museum of Natural History), 1971h:1 (Taiwan); Haneda, 1972a:3 (Taiwan); Murota, 1973b:118 (Taiwan); Tsuneki, 1974b:598 (Indonesia: Island of Bali); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Tsuneki, 1976b:58 (Philippines), 1982f:47 (Ryukyu Islands: Okinawa), 1982g:58 (known from the Ryukyu archipelago), 1983a:4 (Philippines); van Vondel, 1995:30 (specimens from Sumatra in Natuurmuseum Rotterdam); Miyatake, 1996:101 (specimens in Hiroshi Aoki collection); Wu and Zhou, 1996a:72 (in revision in Economic Insect Fauna of China); Yamane, Ikudome, and Terayama, 1999:509 (in Identification Guide to Crabronidae of Nansei = Ryukyu Islands, Japan); Tano, Kurokawa, T. Murota, and Nozaka, 2003:30 (Japan: Nagasaki Prefecture: Tsu-

shima); Ohl and Linde, 2003:150 (number of ovarioles); Li and He, 2004:1096 (in hymenopterous fauna of Zhejiang Province, China); Suda, 2004:40 (Japan: Yamanashi Prefecture); Kinota, Haneda, and Tano, 2005:30 (Japan: Hokkaido); Negoro, Haneda, and Tano, 2005:45 (Japan: Toyama Prefecture); Hua, 2006:280 (in list of Chinese insects, geographic distribution); Nambu, 2006:247 (Japan: Tokyo: Imperial Palace garden); Haneda, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2007:53 (Japan: Kagoshima Prefecture: Amami Oshima Islands); T. Murota and Kurokawa, 2009:14 (Japan: Ryukyu Archipelago: Amami Oshima Islands).

Larra sparsa Rohwer, 1911a:483, ♂. Holotype: ♂, Taiwan: Horisha (USNM). Synonymized with *Larra carbonaria* by Tsuneki, 1967b:20.

ssp. *erebus* (F. Smith)

Larrada erebus F. Smith, 1873a:193, ♀ (as *Erebus*, incorrect original capitalization). Holotype or syntypes: ♀, Japan: Hyogo (BMNH). – **As *Larra erebus***: Kohl, 1885a:243 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:666 (in catalog of world Hymenoptera). – **As *Larra carbonaria erebus***: Tsuneki, 1964h:221 (new status, syntype male of *Larrada docilis* Smith, 1873 = *carbonaria erebus*), 1964l:62 (in key to Larrinae of Japan and Korea), 1969b:15 (nesting habits); Itami, 1969:48 (Japan: Niigata Prefecture); Yamada, 1971:35 (Japan: Aichi Prefecture); Nambu, 1975b:61 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:237 (as synonym of *Larra carbonaria*); Tsuneki, 1982b:15 (known from Korea); Steiner, 1984a:153 (reference to Tsuneki, 1969c; prey maxillary and labial palpi could move right after stinging, in contrast to *Liris*); Paik, 1985:198 (in list of Sphecidae of Korea); Steiner, 1986:101 (references to papers on nesting habits); J.-K. Kim, 2014:436 (in catalog of Sphecidae s.l. of Korean Peninsula).

17. *cassandra* Schrottky

Larra cassandra Schrottky, 1902b:113, ♀. Syntypes: Argentina: Buenos Aires: Botanical Garden (depository?). – Schrottky, 1903b:177 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae).

18. *coelestina* (F. Smith)

Larrada coelestina F. Smith, 1873c:293, ♀. Holotype or syntypes: ♀, China: Hong Kong (BMNH). – **As *Larra coelestina***: Kohl, 1885a:242 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:664 (in catalog of world Hymenoptera, as *caelestina*); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

19. *corrugata* R. Turner

Larra corrugata R. Turner, 1912a:198, ♂. Syntypes: Indonesia: Western Papua (= Indonesian New Guinea): Mimika River (BMNH). – R. Turner in R. Turner, Meade-Waldo, and Morley, 1915:5 (Indonesian New Guinea: Mimika River; redescription); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

20. ? *diversa* (Walker)

Larrada diversa Walker, 1871:105, ♀, ♂. Syntypes: Egypt: Cairo (lost). – Innes Bey, 1912:111 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected in Cairo); Roche, 2007a:140 (is a *nomen dubium*). – **As *Larra diversa***: Kohl, 1885a:243 (new combination, in checklist of world *Larra*), 259 (original description copied); Dalla Torre, 1897:666 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae, tentatively in *Larra*).

21. *dorsalis* Tsuneki

Larra dorsalis Tsuneki, 1982a:5, ♂, ♀. Holotype: ♂, Bismarck Archipelago: New Britain: Yalom (ZMUC).

22. *dux* (Kohl)

Larraxena dux Kohl, 1892:220, ♀. Syntypes: Senegal and Zanzibar (NHMW). – Kohl, 1894:306 (description of ♂, Batta); Dalla Torre, 1897:676 (in catalog of world Hymenoptera); Arnold, 1923b:227 (in revision of southern African Sphecidae), 1930:5 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:91 (Zaire); Arnold, 1943:81 (Zaire). – **As *Larra dux***: R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

23. *erratica* Bingham

Larra erratica Bingham, 1897:199, ♀, ♂. Syntypes: Sri Lanka and Burma: Tenasserim (BMNH). – Chhotani and Ray, 1975:26 (first record from India: Rajasthan: Gudha); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Kundu, Ghosh, and Tiwari, 2012:153 (India: Andaman and Nicobar Islands), 159 (geographic distribution, recognition characters).

24. *erythropyga* R. Turner

Larra erythropyga R. Turner, 1916b:251, ♀. Malawi: SW Lake Chilva (BMNH). – Arnold, 1923b:222 (in revision of southern African Sphecidae), 1930:6 (in checklist of Afrotropical Sphecidae), 1944:23 (description of ♂); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

25. *extrema* Dahlbom

Larra extrema Dahlbom, 1845:472, ♀. Holotype or syntypes: ♀, South Africa: Kwazulu Natal: Port Natal, now Durban (Lund). – Dalla Torre, 1897:667 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

26. *femorata* (de Saussure)

Tachytes femoratus de Saussure, 1854:20, ♂. Holotype or syntypes: New Holland, now Australia: no specific locality (MHNG). – **As *Larrada femorata***: F. Smith, 1856:285 (new combination, in catalog of Hymenoptera in British Museum, description of ♀); de Saussure, 1863:69 (transfer to *Larrada* recorded); 1867:74 (Tasmania, redescription); Froggatt, 1892:218 (in catalog of Australian Hymenoptera). – **As *Larra femorata***: Kohl, 1885a:243 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:667 (in catalog of world Hymenoptera); R. Turner, 1908:473 (Australia: Cairns, Mackay, and Sydney), 1915b:553 (Tasmania), 1916b:250 (Australia), 1916c:306 (belongs in *Larra*); F. Williams, 1928a:35 (nesting habits); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Steiner, 1984a (reference to F. Williams, 1928a); Cardale, 1985:233 (in catalog of Australian Sphecidae); Piek and Spanjer, 1986:185 (in list of Sphecidae with known prey); Steiner, 1986:101 (references to papers on nesting habits); K. Walker, Naumann, Austin, Taylor, and Cardale, 1992:48 (in catalog of insects of Tasmania).

Larra scelestia R. Turner, 1908:474, ♀. Syntypes: Australia: Queensland: Mackay, and Northern Territory: Adelaide River (BMNH). – R. Turner, 1916b:251 (no more than a variety of *Larra femorata*); F. Williams, 1928a:35 (nesting habits, as *Larra femorata* black phase *scelestia*); R. Bohart and Menke, 1976:238 (as tentative synonym of *Larra femorata*); Piek and Spanjer, 1986:185 (in list of Sphecidae with known prey).

27. *femorata* Cameron (preoccupied)

Cratolarra femorata Cameron, 1900a:34, ♀, junior secondary homonym of *Larra femorata* (de Saussure, 1854). Holotype or syntypes: ♀, India: Assam: Khasia (OXUM). – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897). – **As *Larra femorata***: Richards, 1935a:163 (new combination); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

28. *fenchihuensis* Tsuneki

Larra fenchihuensis Tsuneki, 1967b:22, ♀, ♂. Holotype: sex not indicated, Taiwan: Chiayi Prefecture: Fenchihu (originally K. Tsuneki coll., now USNM). – Tsuneki, 1967b:9, 13 (in key to Larrinae of Taiwan), 1971h:1 (Taiwan),

1972c:10 (Taiwan); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Tsuneki, 1977j:267 (Taiwan: Taihorinsho); Zhou and Wu, 1993a:671 (China: Wuling Mountains); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Wu and Zhou, 1996a:73 (in revision in Economic Insect Fauna of China); Li and He, 1998b:398 (China: Longwangshan Nature Reserve); Porter, Stange, and Wang, 1999:7 (in checklist of Sphecidae of Taiwan); Li and He, 2004:1096 (in hymenopterous fauna of Zhejiang Province, China); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

29. *fuscinerva* Cameron

Larra fuscinerva Cameron, 1900a:26, ♀. Holotype or syntypes: ♀, India: Uttar Pradesh: Allahabad (OXUM). – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae). – *As Cratolarra fuscinerva*: Tsuneki, 1963c:9 (new combination, Thailand; may be a synonym of *Liris nigriventris* (Cameron), additional description); Iwata, 1964b:371 (nesting habits in Thailand); Tsuneki, 1966g:8 (Taiwan; synonymy).

30. *godmani* Cameron

Larrada aethiops F. Smith, 1873b:56, ♀, junior primary homonym of *Larrada aethiops* Cresson, 1865 (now in *Tachysphex*). Syntypes: Brazil: Amazonas: Ega, now Tefé, and São Paulo de Olivença (BMNH). – *As Larra aethiops*: Patton, 1880b:389 (new combination, in checklist of North American Larrinae); Kohl, 1885a:240 (in checklist of world *Larra*); Dalla Torre, 1897:661 (in catalog of world Hymenoptera); F. Williams, 1928a:56 (Ecuador; redescription); R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae).

Larra godmani Cameron, 1889a:49, ♀. Lectotype: ♀, Mexico: Veracruz: Orizaba (BMNH), designated by Menke, 1992d:212. Synonymized with *Larra aethiops* (F. Smith) by Menke, 1992d:212. – Dalla Torre, 1897:668 (in catalog of world Hymenoptera); Ashmead, 1899d:249 (in checklist of North American Crabronidae); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Callan, 1991a:8 (Trinidad); Menke, 1992d:212 (in revision of New World *Larra*), 1994c:13 (first record from USA: Texas: Hidalgo County: McAllen); Hanson and Menke, 1995:639 (known from Costa Rica); Amarante, 2002:38 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:663 (in checklist of Mexican Sphecidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies); Rasmussen and Asenjo, 2009:10 (in checklist of Crabronidae of Peru);

Larra braunsii Kohl, 1898a:351, ♀ (as *Braunsii*, incorrect original capitalization). Lectotype: ♀, Brazil: São Paulo: Santos (NHMW), designated by Menke, 1992d:212. Synonymized with *Larra godmani* by Menke, 1992d:212. – R. Bohart and Menke, 1976:237 (in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW).

Larra transandina F. Williams, 1928a:56, ♀, ♂. Holotype: ♀, Ecuador: Tena (Bishop Mus.). Synonymized with *Larra godmani* by Menke, 1992d:212

31. *glabrata* (F. Smith)

Larrada glabrata F. Smith, 1856:279, ♀. Holotype of syntypes: ♀, Indonesia: Sulawesi: no specific locality (BMNH). – F. Smith, 1871a:364 (in catalog of Oriental Aculeata). – *As Larra glabrata*: Kohl, 1885a:244 (new combination, in checklist of world *Larra*); Cameron, 1890c:314 (new combination); Dalla Torre, 1897:668 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

32. *heydenii* (de Saussure)

Notogonia heydenii de Saussure, 1890:pl.12, fig. 18, ♀ (as *Heydenii*, incorrect original capitalization). Holotype: ♀, illustrated specimen, Madagascar: no specific locality (MHNG). – Arnold, 1945:115 (Madagascar; redescription); Leclercq, 1960a:96 (Madagascar); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Leclercq, 1990b:115 (in key to *Larra* of Madagascar), 116 (Madagascar); Pulawski, 2003b:796 (in checklist of Malagasy

Sphecidae); Madl, 2014a:964 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

Notogonia heidenii de Saussure, 1891:261 (as *Heidenii*, incorrect original capitalization). Objective synonym of *Larra heydenii* de Saussure, 1890. – **As *Larra heydeni***: Dalla Torre, 1897:668 (in catalog of world Hymenoptera).

Larra heydenii de Saussure, 1892:494, ♀, ♂. Syntypes: Madagascar: Anosibé in Bezanozano Province and Imerina Province (MHNG). Objective synonym of *Notogonia heydenii* de Saussure, 1890.

33. *iliensis* Kazenas

Larra iliensis Kazenas, 1978b:102, sex not indicated. Syntypes: Kazakhstan or Central Asia: no specific locality (depository not indicated). – Kazenas, 1986:238 (rare in Kazakhstan, needs protection); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on *Gryllotalpa unispina* Sauss.); Esenbekova and Kazenas, 2000:26 (southeast Kazakhstan: near Bakanas); Kazenas, 2001:25 (in checklist of Sphecidae of Kazakhstan and Central Asia), 148 (prey: *Gryllotalpa unispina* Sauss.), 2002a:69 (geographic distribution, collecting localities in Kazakhstan), 2008a:101 (southeastern Kazakhstan: Ili River valley: near Bakanas, 50 km NW Bakanas, near Kapchagay, 70 km E Kapchagay, 35 km NW Kapchagay).

Larra iliensis Kazenas, 1979a:131, ♂. Holotype: ♂, Kazakhstan: Ili village area circa 15 km east of Kapchagay, now bottom of Kapchagay Lake (ZIN?). Objective synonym of *Larra iliensis* Kazenas, 1978

34. *impressifrons* Arnold

Larra impressifrons Arnold, 1923b:224, ♂. Holotype: ♂, Zimbabwe: Inyanga (SAMP). – Arnold, 1930:6 (in checklist of Afrotropical Sphecidae), 1944:25 (description of ♀); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

35. *madecassa* de Saussure

Larra madecassa de Saussure, 1887:17, ♂. Holotype or syntypes: ♂, Madagascar: no specific locality (MHNG or MNHN). – de Saussure, 1892:496 (Madagascar, redescription); Dalla Torre, 1897:669 (in catalog of world Hymenoptera); W. Schulz, 1911b:191 (diagnostic characters); Arnold, 1945:116 (Madagascar; redescription); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Leclercq, 1990b:115 (in key to *Larra* of Madagascar), 116 (Madagascar); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:964 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

36. *mansueta* (F. Smith)

Larrada mansueta F. Smith, 1865a:84, ♀. Holotype or syntypes: ♀, Indonesia: Western Papua (= Indonesian New Guinea): no specific locality (BMNH or OXUM). – F. Smith, 1871a:365 (in catalog of Oriental Aculeata). – **As *Larra mansueta***: Kohl, 1885a:245 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:669 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

37. *maura* (Fabricius)

Sphex maura Fabricius, 1787:276, ♂. Holotype: ♂, India: Tamil Nadu: Tranquebar (ZMUC). – Gmelin, 1790:2730 (redescription); Fabricius, 1793:212 (redescription), 1796:156 (in Index to his Entomologia Systematica, 1793); Turton, 1801:490 (redescription). – **As *Pompilus maurus***: Fabricius, 1798:247 (new combination, redescription). – **As *Tachytes maurus***: Dahlbom, 1845:469 (new combination, in key to *Tachytes*); F. Smith, 1871a:366 (in catalog of Oriental Aculeata). – **As *Larrada maura***: F. Smith, 1856:277 (new combination, in catalog of Hymenoptera in British Museum); Taschenberg, 1870:5 (Java); F. Smith, 1871a:364 (in catalog of Oriental Aculeata). – **As *Liris maura***: Fabricius, 1804:230 (new combination, redescription). – **As *Larra maura***: Kohl, 1885a:245 (new combination, in checklist of world *Larra*); Cameron, 1889c:125 (in checklist of Oriental *Larra*); Bingham, 1897:199 (redescription); Dalla Torre, 1897:669 (in catalog of world Hymenoptera); Paiva, 1907:15 (India: West Bengal: Siliguri);

van der Vecht, 1961a:18 (study of type); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); S. Gupta, 1995:85 (India: Uttar Pradesh); van Vondel, 1995:30 (specimens from India in Natuurmuseum Rotterdam); Pagliano, 2008:544 (specimens in M. Spinola collection, Torino).

ssp. *rechingeri* Kohl

Larra maura var. *rechingeri* Kohl, 1908:310, ♀ (as *Rechingeri*, incorrect original capitalization). Syntypes: Papua New Guinea: Bismarck Archipelago: Neupommern: Gazelle-Halbinsel, now New Britain: Gazelle Peninsula (NHMW). – **As *Larra maura rechingeri***: R. Bohart and Menke, 1976:238 (new status, in checklist of world Sphecidae, as tentative subspecies of *Larra maura*).

38. *mediterranea* Gistel

Larra mediterranea Gistel, 1857:52, sex not indicated. Holotype or syntypes: Greece: Ionian Islands: no specific locality (depository?). – Strand, 1916c:98 (in review of Gistel, 1857); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae, tentatively in *Larra*).

39. *melania* Tsuneki

Larra melania Tsuneki, 1982a:9, ♀, ♂. Holotype: ♀, Bismarck Archipelago: New Britain: Yalom (ZMUC).

40. *melanocnemis* R. Turner

As *Larrada nigripes*: R. Turner, 1908:473 (Australia, Tasmania), corrected to *Larra melanocnemis* by R. Turner, 1916b:250.

Larra melanocnemis R. Turner, 1916b:249, ♀. Syntypes: Australia: Queensland: Mackay, Northern Territory: Adelaide River, and South Australia: Adelaide (BMNH). – R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Cardale, 1985:233 (in catalog of Australian Sphecidae); Naumann, 1998:185 (Australia: northwestern Queensland: Musselbrook area, approximately 18°40'S 138°23'E).

41. *melanoptera* Kohl

Larra melanoptera Kohl, 1884a:353, ♀. Holotype or syntypes: ♀, Mauritius: no specific locality (NHMW). – Kohl, 1885a:245 (in checklist of world *Larra*); Dalla Torre, 1897:670 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:964 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

42. *mendax* (F. Smith)

Larrada mendax F. Smith, 1865a:84, ♀. Holotype or syntypes: ♀, Indonesia: Moluccas: Gilolo, now Halmahera Island (BMNH or OXUM). – F. Smith, 1871a:365 (in catalog of Oriental Aculeata). – **As *Larra mendax***: Kohl, 1885a:245 new combination, in checklist of world *Larra*; Dalla Torre, 1897:670 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

43. *mundula* Kohl

Larra mundula Kohl, 1894:296, ♀. Holotype or syntypes: ♀, Sierra Leone: Sherbro Island (NHMW). – Dalla Torre, 1897:670 (in catalog of world Hymenoptera); Arnold, 1923b:222 (in revision of southern African Sphecidae), 1930:6 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

44. *neaera* Nurse

Larra neaera Nurse, 1903b:4, ♀. Syntypes: Pakistan: Quetta (BMNH). – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897, as *Tachytes neaera*), 552 (as *Larra neaera*); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

45. *nigripes* (Fabricius)

Sphex nigripes Fabricius, 1793:216, sex not indicated. Holotype: ♀, South Africa: Western Cape Province: Cape of Good Hope (ZMUC). – Fabricius, 1796:156 (in Index to his Entomologia Systematica, 1793); Turton, 1801:493 (redescription). – **As *Pompilus nigripes***: Fabricius, 1798:252 (new combination, redescription). – **As *Liris nigripes***: Fabricius, 1804:230 (new combination, redescription). – **As *Larra nigripes***: Kohl in Dalla Torre, 1897:670 (new combination, in catalog of world Hymenoptera); van der Vecht, 1961a:18 (not identical to any of the species discussed by Arnold, type locality may be in error); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

46. *obscurior* Dalla Torre

Larra obscura Sickmann, 1894:213, ♀. Syntypes: China: Beijing and Hopei Province: Tientsin (Münster), junior primary homonym of *Larra obscura* Magretti, 1884.

Larra obscurior Dalla Torre, 1897:671. Substitute name for *Larra obscura* Sickmann. – R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

47. *outeniqua* Arnold

Larra outeniqua Arnold, 1923b:224, ♀ (authorship attributed to Brauns). Holotype: ♀, South Africa: Western Cape Province: George (TMP). – Arnold, 1930:6 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

48. *polita* (F. Smith)

Larrada polita F. Smith, 1858a:102, ♀. Holotype or syntypes: ♀, Malaysia: Sarawak: no specific locality (OXUM). – F. Smith, 1863b:135 (known from Borneo), 1871a:364 (in catalog of Oriental Aculeata). – **As *Larra polita***: Kohl, 1885a:246 (new combination, in checklist of world *Larra*); Cameron, 1889c:125 (in checklist of Oriental *Larra*); Dalla Torre, 1897:672 (in catalog of world Hymenoptera); Tsuneki, 1967b:9, 14 (in key to Larrinae of Taiwan), 24 (Taiwan), 1971h:2 (Taiwan); Haneda, 1971b:29 (Taiwan); Tsuneki, 1972c:2 (Taiwan); Haneda, 1972a:3 (Taiwan); Murota, 1973b:118 (Taiwan); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Tsuneki, 1976b:57 (Philippines), 1977j:267 (Taiwan: Takao, Taihanroku), 1982a:5 (Bismarck Archipelago: Lavongai Island, New Britain); Tsuneki, 1982e:26 (Taiwan), 1983a:3 (Philippines); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

***ssp. luzonensis* Rohwer**

Larra luzonensis Rohwer, 1919:10, ♀. Holotype: ♀, Philippines: Luzon: Los Baños (USNM). – F. Williams, 1919d:132 (Philippines: Luzon: Los Baños: nesting habits), 1927:439 (introduced to Hawaii from Philippines by Pemberton in June and July 1925, nesting habits), 1928a:39 (nesting habits), 68 (in revision of *Larra* of Philippines), 1932d:25 (Hawaiian Islands: Oahu: Koolau Mountains; Evans, 1968c:122 (discussion of larval description by Williams, 1919); Yoshimoto, 1960:332 (Hawaiian Islands); Baltazar, 1966:330 (in catalog of Hymenoptera of Philippines); Tsuneki, 1966g:9 (Japan: Ryukyu Islands), 1967b:9, 14 (in key to Larrinae of Taiwan), 22 (Taiwan); Tano, 1969:74 (Japan: Ryukyu Islands: Yaeyama Group); Tsuneki, 1971h:2 (Taiwan); Haneda, 1972a:3 (Taiwan); Tano, 1972:23 (Japan: Ryukyu Islands); Murota, 1973b:118 (Taiwan); Tsuneki, 1977j:267 (Taiwan: Takao), 1982g:58 (known from the Ryukyu archipelago), 1983a:3 (Philippines); Piek and Spanjer, 1986:185 (in list of Sphecidae with known prey, as *luzonensis*); Zhou and Wu, 1993a:671 (China: Wuling Mountains); Wu and Zhou, 1996a:74 (in revision in Economic Insect Fauna of China); Yamane, Ikudome, and Terayama, 1999:509 (in Ident-

fication Guide to Crabronidae of Nansei = Ryukyu Islands, Japan); Li and He, 2004:1098 (in hymenopterous fauna of Zhejiang Province, China). – **As *Larra polita luzonensis***: van der Vecht *in* R. Bohart and Menke, 1976:238 (new status, in checklist of world Sphecidae); Steiner, 1986:101 (references to papers on nesting habits); Porter, Stange, and Wang, 1999:7 (in checklist of Sphecidae of Taiwan); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

ssp. *papuana* Tsuneki

Larra polita papuana Tsuneki, 1983c:6, ♀, ♂. Holotype: ♂, Papua New Guinea: Berlinhafen: Seleo (TMB).

ssp. *rufipes* (F. Smith)

Larrada rufipes F. Smith, 1858b:17, ♀, ♂. Syntypes: Indonesia: Sulawesi: no specific locality (BMNH). – F. Smith, 1863b:135 (known from Sulawesi), 1871a:365 (in catalog of Oriental Aculeata). – **As *Notogonia rufipes***: Cameron, 1905j:64 (new combination, Java). – **As *Larra rufipes***: Kohl, 1885a:247 (new combination, in checklist of world *Larra*); Cameron, 1890c:314 (new combination); Bingham, 1897:200 (redescription); Dalla Torre, 1897:673 (in catalog of world Hymenoptera); Rothney, 1903:104 (India: West Bengal: Barrackpore); Maidl, 1925a:381 (Indonesia: Sumatra); von Schulthess, 1935:305 (Indonesia: Java: Buitenzorg, now Bogor; Flores: Endeh-Todabeloe); F. Williams, 1936b:124 (Solomon Islands); Yasumatsu, 1940b:97 (Botel Tobago Islands); van Vondel, 1995:30 (specimens from Java in Natuurmuseum Rotterdam). – **As *Larra polita rufipes***: van der Vecht *in* R. Bohart and Menke, 1976:238 (new status).

49. *praedatrix* (Strand)

Larra paraguayana Strand, 1910a:158, ♀ (proposed conditionally under *Larra rubricata*). Holotype: ♀, Paraguay: Asunción (ZMHU). Synonymized with *Larra praedatrix* by Menke, 1992d:200. – Strand, 1927:254 (in list of species described by the author); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Amarante, 2005a:11 (correction to his 2002 catalog).

Notogonia praedatrix Strand, 1910a:159, ♂. Holotype: ♂, Paraguay: Asunción (ZMHU). – Strand, 1927:254 (in list of species described by the author). – **As *Liris praedatrix***: R. Bohart and Menke, 1976:247 (in checklist of world Sphecidae). – **As *Larra praedatrix***: Bennett and Pruett, 1991:16 (mating habits in Santa Cruz, Bolivia); Pruett and Bennett, 1991:15 (preying habits in Santa Cruz, Bolivia); Menke, 1992d:200 (in revision of New World *Larra*); Hanson and Menke, 1995:639 (known from Costa Rica); Amarante, 2002:39 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:663 (in checklist of Mexican Sphecidae); Rasmussen and Asenjo, 2009:10 (in checklist of Crabronidae of Peru). – **As *Larra bicolor praedatrix***: Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:68 (new status, Brazil: Mato Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco).

Notogonia gastrifera Strand, 1910a:160, ♂. Lectotype: ♂, Paraguay: Villa Morra in Asunción (ZMHU). Tentatively synonymized with *Larra praedatrix* by Menke, 1992d:200. – Strand, 1927:254 (in list of species described by the author). – **As *Liris gastrifera***: R. Bohart and Menke, 1976:245 (new combination, in checklist of world Sphecidae).

Larra pacifica F. Williams, 1928a:55, ♀, ♂. Holotype: ♀, Ecuador: Bucay (Bishop Mus.). Synonymized with *Larra praedatrix* by Menke, 1992d:200. – R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

50. *princeps* (F. Smith)

Larraxena princeps F. Smith, 1851a:30, ♀. Lectotype: ♀, Brazil: no specific locality (BMNH), designated by Menke, 1992d:205. – Kohl, 1885:262 (in checklist of world Larrinae); Dalla Torre, 1897:676 (in catalog of world Hymenoptera). – **As *Larrada princeps***: F. Smith, 1856:293 (new combination, in catalog of Hymenoptera in British Museum). – **As *Larra princeps***: Jörgensen, 1912:291 (new combination, Argentina: Mendoza Province); Brèthes, 1913:146 (Argentina); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Menke, 1992d:205 (in

revision of New World *Larra*); Amarante, 2002:39 (in catalog of Neotropical Crabronidae); Rasmussen and Asenjo, 2009:10 (in checklist of Crabronidae of Peru).

51. *psilocera* Kohl

Larra psilocera Kohl, 1884:355, ♀. Holotype or syntypes: ♀, Australia: no specific locality (NHMW). – Kohl, 1885a:247 (in checklist of world *Larra*); Froggatt, 1892:220 (in catalog of Australian Hymenoptera); Dalla Torre, 1897:672 (in catalog of world Hymenoptera); R. Turner, 1908:473 (as synonym of *Larrada nigripes* de Saussure); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW).

52. *pusilla* Arnold

Larra pusilla Arnold, 1932:3, ♀. Holotype: ♀, Zimbabwe: Salisbury, now Harar (SAMP). – R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

53. *pygidialis* Cameron

Larra pygidialis Cameron, 1904f:295, ♀. Holotype or syntypes: ♀, India: Assam: Khasia Hills; or Himachal Pradesh: Simla (OXUM). – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

54. *rufa* Arnold

Larra proditor var. *rufa* Arnold, 1929c:393, sex not indicated. Holotype: sex not indicated, Zimbabwe: Lubutu (MRAC). – Arnold, 1930:5 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:91 (Zaire). – As *Larra betsilea rufa*: R. Bohart and Menke, 1976:237 (new status, in checklist of world Sphecidae). – As *Larra rufa*: Schmid-Egger, 2014:566 (in key to *Larra* of western and central Palearctic Region), 571 (new status, United Arab Emirates, redescription), 572 (color photographs of female), 573 (color photographs of male).

55. *saussurei* Kohl

Larra prismatica de Saussure, 1887:17, ♀, junior primary homonym of *Larra prismatica* F. Smith, 1857 (now in *Bembecinus*). Holotype or syntypes: ♀, Madagascar: no specific locality (MNHN). – Dalla Torre, 1897:672 (in catalog of world Hymenoptera); Arnold, 1945:114 (Madagascar; redescription); Leclercq, 1960a:97 (Madagascar), 1961d:112 (Madagascar).

Larra saussurei Kohl, 1892:219, ♀ (as *Saussurei*, incorrect original capitalization). Syntypes: Madagascar: no specific locality (NHMW). Synonymized with *Larra prismatica* de Saussure by W. Schulz, 1911b:190. – Kohl in Dalla Torre, 1897:673 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW); Leclercq, 1990b:115 (in key to *Larra* of Madagascar), 117 (Madagascar); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:965 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

56. *similis* (Mocsáry)

Larrada similis Mocsáry, 1892:127, ♀. Holotype or syntypes: ♀, China: Nanking (TMB). – As *Larra similis*: Kohl in Dalla Torre, 1897:674 (new combination, in catalog of world Hymenoptera); W. Schulz, 1906:212 (correction to Dalla Torre: described from female sex); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

57. *simillima* (F. Smith)

Larrada simillima F. Smith, 1856:275, ♀. Syntypes: India, Africa: no specific localities (BMNH). – F. Smith, 1871a:364 (in catalog of Oriental Aculeata). – As *Larra simillima*: Kohl, 1885a:247 (new combination, in checklist of world *Larra*); Cameron, 1889c:125 (redescription); Bingham, 1897:199 (in revision of Aculeata of British India); Dalla Torre, 1897:674 (in catalog of world Hymenoptera); Rothney, 1903:103 (India: West Bengal: Barrack-

pore); Nurse, 1909:517 (India, description of ♂); W. Schulz, 1911b:189 (as subspecies of *Larra anathema*); Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897, reference to Nurse, 1909); R. Turner, 1917e:195 (India); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Pu, 1986:8 (China); Hua, 2006:280 (in list of Chinese insects, geographic distribution).

Larra fuscipennis Cameron, 1889c:126, ♂, junior primary homonym of *Larra fuscipennis* F. Smith, 1856 (now is *Stizus*). Holotype or syntypes: ♂, India: Bengal: Tirhoot (OXUM). Synonymized with *Larra simillima* by W. Schulz, 1911b:189 and R. Turner, 1917e:195. – Bingham, 1897:197 (redescription); Dalla Torre, 1897:668 (in catalog of world Hymenoptera).

ssp. personata (F. Smith)

Larrada personata F. Smith, 1858b:16, ♀, ♂. Syntypes: Indonesia: Sulawesi: no specific locality (BMNH). – F. Smith, 1863b:135 (known from Sulawesi), 1871a:364 (in catalog of Oriental Aculeata). – **As *Larra personata***: Kohl, 1885a:246 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:672 (in catalog of world Hymenoptera). – **As *Larra simillima personata***: R. Bohart and Menke, 1976:238 (new status, in checklist of world Sphecidae).

ssp. sumatrana Kohl

Larra sumatrana Kohl, 1884a:354, ♀. Holotype or syntypes: Indonesia: Sumatra: no specific locality (NHMW). – Kohl, 1885a:248 (in checklist of world *Larra*); Cameron, 1889c:126 (in checklist of Oriental *Larra*); Bingham, 1897:198 (Burma, in revision of Aculeata of British India); Dalla Torre, 1897:674 (in catalog of world Hymenoptera). – **As *Larra simillima sumatrana***: R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW).

58. sinensis (Mocsáry)

Larrada sinensis Mocsáry, 1892:128, ♀. Holotype or syntypes: ♀, China: Nanking (TMB). – **As *Larra sinensis***: Kohl in Dalla Torre, 1897:674 (new combination, in catalog of world Hymenoptera); W. Schulz, 1906:212 (correction to Dalla Torre: described from female sex); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

59. stangei Menke

Larra stangei Menke, 1992d:202, ♀, ♂. Holotype: ♂, Bolivia: Santa Cruz: El Palmar Oratorio 40 km southeast of Santa Cruz (FSDA). Paratypes: Argentina. – Amarante, 2002:39 (in catalog of Neotropical Crabronidae).

60. tarsata (F. Smith)

Larrada tarsata F. Smith, 1860b:124, ♀. Holotype or syntypes: ♀, Indonesia: Moluccas: Batjan: no specific locality (OXUM). – F. Smith, 1863b:135 (known from Dory in New Guinea), 1871a:365 (in catalog of Oriental Aculeata). – **As *Larra tarsata***: Kohl, 1885a:248 (new combination, in checklist of world *Larra*, junior secondary homonym of *Larra tarsata* Say, 1823, now in *Tachysphex*); Dalla Torre, 1897:674 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae).

61. tawitawiensis Tsuneki

Larra tawitawiensis Tsuneki, 1976b :57, ♂. Holotype: ♂: Philippines: Tawi Tawi: Tarawakan (ZMUC).

62. transcaspica F. Morawitz

Larra transcaspica F. Morawitz, 1894:340, ♂. Syntypes: Turkmenistan: Sulfagar (ZIN). – Dalla Torre, 1897:674 (in catalog of world Hymenoptera); Gussakovskij, 1933b:276 (Iran: Seistan: Husseinabad; Transcaspia); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River), 1965:79 (Turkmenistan: Akibay), 1972a:80 (Turkmenistan); Kazenas, 1978b:102 (in key to Sphecidae of Kazakhstan and Central Asia); Nazarova, 1998:40 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:25 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:61

(geographic distribution, collecting localities in Kazakhstan); Schmid-Egger, 2014:565, 566 (in key to *Larra* of western and central Palearctic Region), 574 (United Arab Emirates, diagnostic characters), 574 (color photograph of female); Jahantigh, Rakhshani. Mokhtari, and Ramroodi, 2017:65 (Iran: known from Sistan-o Baluchestan Province).

Larra lativalvis Kohl, 1899:315, ♀. Syntypes: Kirghizia: Issyk-Kul area (NHMW). Synonymized with *Larra transcaspica* by Gussakovskij, 1933b:276.

63. *variipes* de Saussure

Larra carbonaria de Saussure, 1892:491, ♀, junior secondary homonym of *Larra carbonaria* (F. Smith, 1858). Holotype or syntypes: ♀, Madagascar: Bezanozano: Anosibé (MHNG). – W. Schulz, 1911b:190 (diagnostic characters).

Larra variipes de Saussure, 1892:493, ♂. Syntypes: ♂, Madagascar: Andrangoloaka and Bezanozano: Anosibé (MHNG). Synonymized with *Larra carbunculus* by Arnold, 1945:113 and 116. – Dalla Torre, 1897:675 (in catalog of world Hymenoptera); W. Schulz, 1911:190 (as new synonym of *Larra prismatica* de Saussure); R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae, as valid species); Leclercq, 1990b:115 (in key to *Larra* of Madagascar), 117 (Madagascar); Madl, 1997:820 (Madagascar: Nosy Boraha Island), 821 (in checklist of Nosy Boraha Sphecidae); Pulawski, 2003b:796 (in checklist of Malagasy Sphecidae); Madl, 2014a:965p (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

Larra carbunculus Dalla Torre, 1897:665. Substitute name for *Larra carbonaria* de Saussure, 1892. – Arnold, 1945:116 (Madagascar; redescription); Leclercq, 1960a:96 (Madagascar), 1961d:112 (Madagascar).

64. *vehti* Sudheendrakumar and Narendran

Larra vehti Sudheendrakumar and Narendran, 1985:52, ♀. Holotype: ♀, India: Kerala: Malabar: Thannur (USNM).

65. *zarudniana* Gussakovskij

Larra zarudniana Gussakovskij, 1933b:277, ♀. Holotype: ♀, Iran: Kerman: Bazman (ZIN). – R. Bohart and Menke, 1976:238 (in checklist of world Sphecidae); Jahantigh, Rakhshani. Mokhtari, and Ramroodi, 2017:65 (Iran: known from Sistan-o Baluchestan Province).

sp.

Schouteden, 1930:91 (Zaire); de Beaumont, 1967b:508 (South Africa: Natal); Kazenas, 1972b:166 (Kazakhstan); Alayo Dalmau, 1973:178 (in catalog of Cuban Hymenoptera); Esmaili and Rastegar, 1974:45 (Iran); Alayo Dalmau, 1976:22 (in checklist of Cuban Sphecidae); Begum and Bose, 1976:26 (Bangladesh: Dakka); Al-Ali, 1977:100 (Iraq: Baghdad, Mosul); Guichard, 1980:226 (listed); Sielfeld, 1980b:73 (in checklist of Chilean Sphecidae); Groh, 1982:260 (= *Liris agilis* and *atratus*); Fowler, 1989:13 (optimization of nectar foraging in Brazil); F. Fernández, 1990:24 (Colombia: Meta: Parque Nacional Natural La Macarena); Amarante, 1993:19 (ne. Brazil); Cambra, 1993:16 (Peru: Pakitza at 11°57'S, 71°17'W); Ruíz Cancino, Coronado Blanco, and Horta Vega, 2005:170 (Mexico: recorded from Tamaulipas State); Pagliano, 2011:112, 113 (specimens in coll. Spinola, Torino, are *Liris* sp. and *Tachysphex panzeri*), 114 (specimens in coll. Spinola, Torino, is a *Tachytes* sp. from Australia), 115 (specimen in coll. Spinola, Torino, is a *Liris* sp. from French Guiana); Jahantigh, Rakhshani. Mokhtari, and Ramroodi, 2017:65 (Iran: no specific locality or province).

NOMINA NUDA IN LARRA

Larra australasiae: Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:545 (specimens in M. Spinola collection, Torino, are a *Liris* sp.).

Larra bella: Casolari and Casolari Moreno, 1980:113 (specimens in M. Spinola collection, Torino).

- Larra costipennis*: Casolari and Casolari Moreno, 1980:113 (specimens in M. Spinola collection, Torino); Pagliano, 2011:111 (specimens in coll. Spinola, Torino, are *Tachytes* sp.).
- Larra difficilis*: Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:543 (specimens in M. Spinola collection, Torino).
- Larra latreillei*: Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:544 (specimens in M. Spinola collection, Torino).
- Larra grisea*: Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:544 (specimens in M. Spinola collection, Torino).
- Larra incana*: Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:544 (specimens in M. Spinola collection, Torino).
- Larra psammophila* Schrottky, 1913 = *Bembecinus*
- Larra subita* Harris. Catalog of the insects of Massachusetts, 2nd edition. – Cresson, 1862:237 (in catalog of North American Hymenoptera).
- Larra unguulate* Fabricius, 1796:89 (in Index to his Entomologia Systematica, 1793, not cited there).

SPECIES DESCRIBED IN LARRA AND TRANSFERRED TO OTHER GENERA

- abdominalis* Say, 1823 = *Tachytes*
- acuta* Patton, 1881 = *Tachysphex*
- annulata* Klug, 1845 = *Stizus*
- annulata* Walker, 1871 = *Palarus laetus* Klug, 1845
- antennata* Klug, 1845 = *Sphecius*
- apicalis* Klug, 1845 = *Stizoides klugii* (F. Smith, 1856)
- arcuata* F. Smith, 1856 (*Larrada*) = *Lyroda subita* Say, 1837
- argentata* Palisot de Beauvois, 1811 = *Liris*
- argyrea* F. Smith, 1856 (*Larrada*) = *Tachytes*
- aurantia* W. Fox, 1891 = *Larropsis*
- bicincta* Taschenberg, 1875 = *Bembecinus*
- bifasciata* Fabricius, 1798 = *Stizoides tridentatus* (Fabricius, 1781)
- bizonata* Klug, 1845 = *Stizus*
- cassandra* Schrottky, 1903 = *Liris*
- chilensis* Spinola, 1851 = *Tachytes*
- cineta* Fabricius, 1793 = tentatively in *Stizus*
- cingulata* Fabricius, 1798 = *Stizus biclipeatus* Christ, 1791
- citrina* Klug, 1845 = *Stizoides*
- combusta* F. Smith, 1856 = *Stizus*
- confusa* Radoszkowski, 1887 = *Liris*
- dahlbomi* Cresson, 1865 (*Larrada*) = *Liris fuliginosus* (Dahlbom, 1843)
- dichroa* Klug, 1845 = *Stizus aegyptius* Lepeletier de Saint Fargeau, 1845
- divisa* Patton, 1879 = *Larropsis*
- distinguenda* Spinola, 1841 = *Liris*
- docilis* F. Smith, 1873 (*Larrada*) = *Liris subtessellatus* (F. Smith, 1856)
- dubia* Panzer, 1806-1809 = *Miscophus bicolor* Jurine, 1807
- ducalis* F. Smith, 1860 (*Larrada*) = *Liris*
- elegans* Bingham, 1897 = *Liris*

erythrocephala Fabricius, 1793 = tentatively in *Stizus*
exilipes F. Smith, 1856 = *Liris subtessellatus* (F. Smith, 1856)
extensa Walker, 1860 (*Larrada*) = *Liris*
facilis F. Smith, 1873 = *Liris*
fasciata Fabricius, 1798 = *Stizoides assimilis* (Fabricius, 1787)
fasciata F. Smith (*Larrada*) = *Liris*
fasciata Klug, 1845 = *Stizus*
ferox F. Smith, 1873 = *Tachytes dichrous* F. Smith, 1856
festinans F. Smith, 1858 = *Liris*
flavomaculata F. Smith, 1856 = *Stizus atrox* (F. Smith, 1856)
fuliginosa Dahlbom, 1843 = *Liris*
fuliginosa Klug, 1845 = *Stizus combustus* (F. Smith, 1856)
fulvipes F. Smith, 1856 (*Larrada*) = *Tachytes*
funerea F. Smith, 1863 = *Liris*
gayi Spinola, 1851 = *Tachytes*
hungarica Frivaldszky, 1876 = *Bembecinus*
ignipennis F. Smith, 1856 (*Larrada*) = *Liris labiatus* (Fabricius, 1793)
infuscata Klug, 1845 = *Stizoides basalis* (Guérin-Ménéville, 1844)
insularis de Saussure, 1867 = *Liris*
iridipennis Cameron, 1900 = *Liris niger* (Fabricius, 1775)
irrorata F. Smith, 1856 (*Larrada*) = *Liris*
jaculator F. Smith, 1856 (*Larrada*) = *Liris*
jugurthae Gribodo, 1894 = *Liris nigricans* (Walker, 1871)
laboriosa F. Smith, 1856 (*Larrada*) = *Liris*
laevifrons F. Smith, 1856 (*Larrada*) = *Tachysphex*
laterisetosa Spinola, 1851 = *Liris*
latifascia Walker, 1871 = *Bembecinus*
lepida Klug, 1845 = *Stizus*
limpidipennis F. Smith, 1873 (*Larrada*) = *Liris*
longicornis Cameron, 1900 = *Liris*
luctuosa F. Smith, 1856 (*Larrada*) = *Liris*
luteipennis Cresson, 1869 (*Larrada*) = *Liris*
memnonia F. Smith, 1856 (*Larrada*) = *Liris*
micans Spinola, 1806 = *Liris atratus* Spinola, 1806
minor Provancher, 1887 = *Tachysphex terminatus* (F. Smith, 1856)
modesta F. Smith, 1859 (*Larrada*) = *Liris*
moneduloides F. Smith, 1856 = *Bembecinus*
montana Cresson, 1865 (*Larrada*) = *Tachysphex*
nana Bingham, 1897 = *Liris*
nigricans F. Smith, 1873 (*Larrada*) = *Tachysphex nigricolor* (Dalla Torre, 1897)
nigricans Walker, 1871 (*Larrada*) = *Liris*
nigripes de Saussure, 1867 (*Larrada*) = *Liris*
nigriventris Cameron, 1889 = *Liris*
nitidiuscula F. Smith (*Larrada*) = *Tachytes*

- nuda* Taschenberg, 1870 (*Larrada*) = *Liris argentatus* (Palisot de Beauvois, 1811)
obliqua F. Smith, 1856 (*Larrada*) = *Larropsis*
pacificatrix R. Turner, 1908 = *Liris*
pallipes F. Smith, 1856 (*Larrada*) = ? *Liris ferrugineipes* (Lepelletier de Saint Fargeau, 1845)
pensylvanica Palisot de Beauvois, 1811 = *Liris argentatus* (Palisot de Beauvois, 1811)
pinguis Dahlbom, 1832 = *Dryudella*
plebeja Taschenberg, 1870 (*Larrada*) = *Liris*
polita Taschenberg, 1870 (*Larrada*) = *Liris politicus* (Dalla Torre, 1897)
pruinosa F. Smith, 1873 (*Larrada*) = *Liris*
punctata F. Smith, 1856 (*Larrada*) = *Tachysphex*
punctifrons W. Fox, 1891 = *Tachysphex*
quadrifasciatus F. Smith, 1856 (*Larrada*) = *Liris*
quadripustulata Fabricius, 1793:222, sex not indicated (as *4-pustulata*, incorrect original spelling). Holotype or syntypes: India: Tranquebar: no specific locality (depository?) = ? – Fabricius, 1796:89 (in Index to his Entomologia Systematica, 1793).
quebecensis Provancher, 1883 = *Tachysphex pompiliformis* (Panzer, 1805)
rubella F. Smith, 1856 (*Larrada*) = *Liris*
rubricata F. Smith, 1856 (*Larrada*) = *Liris*
rufifrons Fabricius, 1793 = *Meria* (Tiphidae).
rufipes Provancher, 1895 = *Tachysphex ashmeadii* W. Fox, 1894
rufitarsis Spinola, 1851 = *Tachysphex*
rufitarsis Cameron, 1889 = *Tachysphex aequalis* W. Fox, 1894
sabulosa F. Smith, 1863 (*Larrada*) = *Liris*
semiargentea Taschenberg, 1870 (*Larrada*) = *Liris memnonius* (F. Smith, 1856)
semirufa Cresson, 1865 (*Larrada*) = *Tachysphex*
sericea F. Smith, 1856 (*Larrada*) = *Tachysphex*
simillima F. Smith, 1859 = *Bembecinus*
solstitialis F. Smith, 1856 (*Larrada*) = *Liris*
sonorensis Cameron, 1889 = *Tachysphex*
spgazzinii Brèthes, 1909 = *Bembecinus*
suada F. Smith, 1865 = *Bembecinus*
subapicalis Walker, 1871 = *Stizus*
subfasciata Walker, 1871 (*Larrada*) = *Liris*
subpetiolata F. Smith, 1856 (*Larrada*) = *Liris*
subtessellata F. Smith, 1856 (*Larrada*) = *Liris*
succinea Klug, 1845 = *Stizus savignyi* Spinola, 1839
scorax F. Smith, 1858 = *Paraliris*
syriaca Klug, 1845 = *Sphecius conicus syriacus* Klug
tarsata Say, 1823 = *Tachysphex*
tenebrosa F. Smith, 1873 (*Larrada*) = *Liris*
tenella Klug, 1845 = *Bembecinus*
tenuicornis F. Smith, 1856 = *Stizus*
tenuicornis F. Smith, 1856 (*Larrada*) = *Larropsis*
terminata F. Smith, 1856 (*Larrada*) = *Tachysphex*

texana Cresson, 1873 (*Larrada*) = *Tachysphex*
tisiphone F. Smith, 1858 (*Larrada*) = *Liris*
trifasciata F. Smith, 1856 (*Larrada*) = *Liris*
tristis F. Smith, 1856 (*Larrada*) = *Liris*
truncata F. Smith, 1856 (*Larrada*) = *Liris rufipennis* Fabricius, 1804
vespoides Walker, 1871 = *Stizus*
vestita F. Smith, 1873 (*Larrada*) = *Tachytes*
vigilans F. Smith, 1856 (*Larrada*) = *Liris*
vindex F. Smith, 1860 (*Larrada*) = *Liris modestus* (F. Smith, 1859)
vinulenta Cresson, 1865 (*Larrada*) = *Liris fuliginosus* (Dahlbom, 1843)
vollenhovia Ritsema, 1874 (*Larrada*) = *Liris*
zonata Klug, 1845 = *Stizus*