

Last updated: 8 December 2022

SCELIPHRON

Sceliphron Klug, 1801:561. Type species: *Sphex spirifex* Linnaeus, 1758, designated by Bingham, 1897:235.

Pelopoeus Latreille, 1802b:334. Type species: *Pelopoeus spirifex*, Fab. [= *Pelopoeus spirifex* of Fabricius, 1804 = *Sphex spirifex* Linnaeus, 1758], designated by Latreille, 1810:438.

Pelopaeus Latreille, 1804:180. Lapsus or emendation of *Pelopoeus*.

Sceliphrum W. Schulz, 1906:192. Emendation of *Sceliphron* Klug, 1801.

Prosceliphron van der Vecht *in* van der Vecht and van Breugel, 1968:192, as subgenus of *Sceliphron*.

Type species: *Sceliphron coromandelicum* (Lepeletier de Saint Fargeau, 1845) [= *Pelopoeus coromandelicus* Lepeletier de Saint Fargeau, 1845], by original designation. Junior homonym of *Prosceliphron* Frenguelli, 1946.

Hensenia Pagliano and Scaramozzino, 1990:5. Substitute name for *Prosceliphron* van der Vecht, 1968.

Revisions: van der Vecht and van Breugel, 1968 (subgenus *Sceliphron* s.s.); Hensen, 1987 (subgenus *Prosceliphron*); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021 (Indian species).

Keys: Leclercq and Claparède, 1978 (key to European species including the introduced *Sceliphron caementarium*); Naumann, 1983b:135 (Australian species); Hensen, 1987 (revision of *Prosceliphron*, now *Hensenia*); Schmid-Egger, 2005a (key to European and Mediterranean species including the introduced *Sceliphron curvatum*); Bitsch and Barbier, 2006 (in key to French *Sceliphronini*, including three introduced species); Campagnucci and Roig Alsina, 2008 (species of Argentina); Augul, Abdul-Rassoul, Kaddou, and Jihad, 2014 (species of Iraq); Fernández and Castro-Huertas, 2014 (Neotropical species and species of Colombia); Danilov, 2014b:519 (Siberia).

List of Strepsiptera known from *Sceliphron*: Kifune and Yamane, 1985; nest parasite of *Sceliphron* sp. of the *spirifex* group in Ivory Coast: Rasplus, 1987:173 (*Leucospis reversa* Bouček, 1974).

Review of biology: Kazenas, 2001b:67.

Larval characters of Sceliphronini: Tormos, Poldori, and Asís, 2006:389.

1. *arabs* (Lepeletier de Saint Fargeau)

Pelopaeus arabs Lepeletier de Saint Fargeau, 1845:309, ♂. Lectotype: ♂, Arabia: no specific locality (MNHN, coll. Serville), designated by van der Vecht *in* van der Vecht and van Breugel, 1968:233.

– F. Smith, 1856:228 (in catalog of Hymenoptera in British Museum); Ed. André, 1888:107 (in revision of Sphecidae of Europe and Algeria), 1888:6* (bibliographic references). – **As *Sceliphron***

arabs: Dalla Torre, 1897:378 (new combination, in catalog of world Hymenoptera); Kohl, 1918:132 (original description copied); de Beaumont, 1967a:277 (Turkey), 1970c:3 (Iran: Kerman); van der Vecht and van Breugel, 1968:233 (in revision of *Sceliphron*); R. Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Ebrahimi, 1993:99 (Iran); Gayubo and Özbek, 2005:4 (Turkey: Antalya: Beldibi; Malatya: Battalgazi; Muş); Schmid-Egger, 2005a:10 (in key to European and Mediterranean *Sceliphron*), 14 (recognition, color, distribution); Mader, 2013:210 (color photograph); Augul, Abdul-Rassoul, Kaddou, and Jihad, 2014:665 (in key to *Sceliphron* of Iraq, locality records),

667 (photographs of taxonomically important characters including penis valve); Ebrahimi, 2014:16 (Iran: Fārs, Golestān, Khuzestān, and Tehrān provinces); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); Koçak and Kemal, 2015:279 (in checklist of Hymenoptera of Turkey); Dollfuss, 2016:1166 (locality records from Syria and Turkey); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:4 (Turkey: Malatya, Muş, Şanhurfa, and Tunceli provinces); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:22 (Iran: known from Alborz, Fars, Golestan, Kerman, Khuzestan, Markazi, Qom, Sistan-o Baluchistan, and Tehran provinces); Augul, 2019:500 (Iraq: Dokan, Sulaymaniyah, and Wasit provinces); Gülmez, 2019:3 (Turkey: Tokat Province: no specific locality); Maharramov, Mokrousov, and Proshchalykin, 2020:46 (Azarbaijan: Nakichivan Autonomous Republic); Kaplan and Yildirim, 2022:58 (Turkey: Bingöl Province).

Pelopaeus caucasicus Ed. André, 1888:109, ♀. Holotype or syntypes: ♀. Caucasus: no specific locality (MNHN). – Synonymized with *Sceliphron arabs* by van der Vecht and van Breugel, 1968:233. – Ed. André, 1888:6* (bibliographic reference). – **As *Sceliphron caucasicum***: Dalla Torre, 1897:382 (new combination, in checklist of world Hymenoptera); Kohl, 1918:90 (in revision of world Sceliphriini); Morice, 1921:821 (Iraq: Amara, Kurna); Gussakovskij, 1933b:2275 (Iran: Seistan: Husseinabad); de Beaumont, 1961e:2 (Iraq); Derwesh, 1965:71 (Iraq: no specific locality); Abdull Rassoul, 1976:31 (Iraq: Baghdad: Waziriya).

2. *argentifrons* (Cresson)

Pelopaeus argentifrons Cresson, 1865a:136, ♀. Holotype: ♀, Cuba: no specific locality (ANSP). – **As *Sceliphron argentifrons***: Cresson, 1916:93 (new combination, holotype in ANSP); Kohl, 1918:112 (in revision of world Sceliphriini); Berland, 1953:237 (French Antilles); van der Vecht and van Breugel, 1968:229 (in revision of world *Sceliphron*); Alayo Dalmau, 1973:183 (in catalog of Cuban Hymenoptera), 1976:10 (in key to Cuban *Sceliphron*), 26 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:105 (in checklist of world Sphecidae); de Zayas, 1981:78 (Cuba, illustration of habitus); Amarante, 2002:71 (in catalog of Neotropical Sphecidae); Fernández, Saríol, Vega, Ricardo, González, and Portuondo, 2002:46 (Cuba: Provincia Granma); Portuondo and Fernández, 2004:135 (Cuba: Sierra Maestra); Genaro, 2006:51 (in Catalog of Cuban Sphecidae and Crabronidae); Fernández and Castro-Huertas, 2014:384 (in key to Neotropical *Sceliphron*); Dollfuss, 2016:1166 (Cuba: Escambray).

As *Sceliphron fasciatum*: B. Porter, 1926:16 (in revision of New World *Sceliphron*), corrected to *Sceliphron argentifrons* by van der Vecht and van Breugel, 1968:229;

3. *asiaticum* (Linnaeus)

Sphex asiaticus Linnaeus, 1758:569, sex not stated (as *asiatica*, incorrect original termination). Holotype or syntypes: "in Indiis" = West Indies or Surinam: no specific locality (lost, see W. Schulz, 1912:56, and Day, 1979:50). – Linnaeus, 1764:405 (in museum of Queen Ludovica Ulrica, redescription); Gmelin, 1790:2726 (redescription); Christ, 1791:296 (redescription); Dalla Torre, 1897:415 (in catalog of world Hymenoptera); Day, 1979:50 (taxonomic history). – **As *Sceliphron asiaticum***: van der Vecht, 1959b:129 (new combination); van der Vecht and van Breugel, 1968:226 (in revision of world *Sceliphron*, as *asiaticum asiaticum*); R. Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Day and Fitton, 1978:193 (recuration of Linnean type material: no specimens); Fritz and Genise, 1980 (75 (characteristic of nest cells); Genise, 1980e:315 (copulation); Nascimento and Overal, 1980:9 (Brazil); Sielfeld, 1980b:71 (in checklist of Chilean Sphecidae); Freeman, 1982:343 (Trinidad: distribution, population dynamics); Steiner, 1986:95 (references to papers on nesting habits); Fowler, 1987:41 (principal causes of preimaginal mortality were chrysidids, eulophid, and bombyliids nest parasites, overall mortality rate was 54.96); Yústiz,

1987:13 (Venezuela: Central Lara Depression); Callan, 1990b:19 (in checklist of Trinidad Sphecidae); Amarante, 1993:19 (northeastern Brazil); Braet, Cerda, and Fretey, 2000:8 (French Guiana); Pinzón and Gonzáles, 2000:91 (possible prey specificity on *Alpaida veniliae* Keyserling, an araneid spider); Amarante, 2002:71 (in catalog of Neotropical Sphecidae); Starr and Hook, 2003:22 (in catalog of Aculeata of Trinidad, West Indies); Compagnucci and Roig Alsina, 2008:64 (in key to *Sceliphron* of Argentina; in review of *Sceliphron* of Argentina); Buys, 2009e:280 (Brazil: Rio de Janeiro: Iguaba Grande, Itatiaia, Niterói, Rio de Janeiro, Seropédica); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru); Buys, 2011b:2 (Brazil: Rio de Janeiro: Rio de Janeiro), 2014a:376 (description of last instar larva); Barrera-Medina and Sepúlveda-Osorio, 2014:296 (in key to *Sceliphron* of Chile); de Carvalho, Bevilaqua, and Querino, 2014:43 (nest parasite: eulophid *Melittobia australica* Girault); Fernández and Castro-Huertas, 2014:385 (in key to Neotropical *Sceliphron* and to *Sceliphron* of Colombia, in revision of *Sceliphron* of Colombia); Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:70 (Brazil: Mato Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco); Dollfuss, 2016:1167 (locality records from Argentina, Bolivia, Brazil, Chile, Ecuador, and Nicaragua); Trad and Silvestre, 2017:4 (Brazil: Mato Grosso do Sul); Buys, 2020b:80 (in cladistic analysis of larvae of Sphecidae s.s.); Pádua, Fernandes, Somavilla, and Oliveira, 2022:396 (Brazil: first records from Maranhão and Rondônia states).

Pelopoeus figulus Dahlbom, 1843:23, ♀ (authorship attributed to Westermann). Holotype: ♀, southern France: no specific locality, corrected to America by Dahlbom, 1845:434 (in key to *Pelopoeus*). Synonymized with *Sphex asiaticus* by van der Vecht, 1959:129. – F. Smith, 1856:234 (in catalog of Hymenoptera in British Museum); Cresson, 1863:319 (in catalog of North American Hymenoptera); de Saussure, 1867:31 (as synonym of *Pelopoeus* [sic] *vindex*); Taschenberg, 1869:429 (Argentina, Brazil, West Indies); Burmeister, 1872:241 (Argentina); F. Lynch Arribálzaga, 1878:327 (Argentina: Buenos Aires area); Rudow, 1904:197 (building nests out of mud); Strand, 1910a:127 (Paraguay); Schrottky, 1913:224 (Argentina, Paraguay, Uruguay). – **As *Sceliphron figulus***: Dalla Torre, 1897:384 (new combination, in catalog of world Hymenoptera); W. Fox, 1897b:374 (Brazil: Corumbá and Uacarizal); Schrottky, 1903b:123 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay), 1904:344 (first record from Paraguay); Fernald, 1907:263 (Argentina); Ducke, 1910:109 (Brazil: Ceará State); Strand, 1910a:127 (Paraguay); Jörgensen, 1912:284 (Argentina: Mendoza Province; floral records); Strand, 1912:278 (Paraguay: nest structure); Schrottky, 1913a:224 (Argentina, Paraguay, Uruguay, Antilles); Bodkin, 1918:315 (British Guyana, nesting behavior); Kohl, 1918:119 (in revision of world Sceliphronini); Frers, 1921:66 (nesting habits); Aravena, 1926:61 (nesting habits); B. Porter, 1926:11 (in revision of New World *Sceliphron*, as *figulum*); Gazulla and Ruiz Pereira, 1929:299 (Chile: Hacienda de "Las Mercedes"); Orfila and Salellas, 1929:247 (nesting habits); Bruch, 1930:367 (nesting habits); Ruiz Pereira, 1934:167 (Chile: Pahuano); Arndt, 1930:49 (nests built on dry sponge, *Parmula browni* (Bwk.), in Brazil); Richards, 1935d:212 (nest parasite: calliphorid fly *Pachyophthalmus floridensis antillarum* Richards); Bischoff and von Schulthess, 1937:165 (Argentina, Bolivia); Ruiz Pereira, 1937:164 (Chile: Coquimbo Province), 1942:31 (common to Chile and Argentina); Llano, 1959:52 (nest and prey, metamorphosis, as *figulus*).

Pelopaeus vindex Lepeletier de Saint Fargeau, 1845:317, ♂. Holotype or syntypes: ♂, French Guyana: Cayenne (originally Audinet-Serville coll., now Torino). Synonymized with *Sceliphron figulus* by Kohl, 1918:119. – Erichson, 1849:589 (British Guyana); de Saussure, 1867:31 (South America, re-description); Reed, 1894:623 (Chile, re-description); Delfin, 1904:21 (Chile: Departamento de Talcahuano); Cameron, 1912a:426 (Guyana); Janvier, 1923:83 (nesting habits), 1928:158 (nesting hab-

its); Fraga, 1938:200 (Chile: Hacienda Mauro); Bradley, 1957:39 (Lepelletier de Saint Fargeau's specimens in M. Spinola collection, Turin); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Maes, 1989:90 (in catalog of Nicaraguan Sphecidae); Pagliano, 2008:521, 522 (specimens including unpublished lectotype in M. Spinola collection, Torino). – **As *Sceliphron vindex***: Piek and Spanjer, 1986:189 (new combination, in list of Sphecidae with known prey).

Sceliphron figulus ab. *rufescens* Strand, 1910a: 127, ♀. Holotype: ♀, Paraguay: Sapucay (ZMHU). Synonymized with *Sceliphron asiaticum* by R. Bohart and Menke, 1976:105.

ssp. chilense (Spinola)

Pelopoeus chilensis Spinola, 1851a:395, ♀, ♂. Lectotype: ♀, Chile: no specific locality (M. Spinola collection, Torino), designated by Menke in R. Bohart and Menke, 1976:105. – F. Smith, 1856:234 (in catalog of Hymenoptera in British Museum); de Saussure, 1867:31 (as synonym of *Pelopoeus* [sic] *vindex*); Rudow, 1904:197 (building nests out of mud); B. Porter, 1926 (as new synonym of *Sceliphron figulum*); Ruíz Pereira and Porter, 1928 (is a junior synonym of *Sceliphron figulus*); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:521 (lectotype in M. Spinola collection, Torino). – **As *Sceliphron figulus* var. *chilense***: Dalla Torre, 1897:384 (new combination, new status, in catalog of world Hymenoptera); Kohl, 1918:120 (in revision of world *Sceliphron*). – **As *Sceliphron figulus chilensis***: Zapata, 1974:37 (new status, Chile: Lampa near Santiago). – **As *Sceliphron asiaticum chilense***: Pérez d'Angello, 1968:7 (nest parasite, *Pachyophthalmus ornaticauda*, a sarcophagid; nest used by *Megachile* sp.); van der Vecht and van Breugel, 1968:228 (new subspecific combination, in revision of world *Sceliphron*); Pérez D'Angello, Rojas A., and Gaultier A., 1971:118 (wing venation and cells); R. Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Amarante, 2002:71 (in catalog of Neotropical Sphecidae); Barrera-Medina and Garcete-Barrett, 2008:70 (in key to Chilean *Sceliphron*).

4. *assimile* (Dahlbom)

Pelopaeus assimilis Dahlbom, 1843:23, ♀, ♂. Lectotype: ♂, Cuba: no specific locality (Lund), designated by R. Bohart and Menke, 1963:115. – Dahlbom, 1845:434 (in key to *Pelopoeus*); Cresson, 1863:319 (in catalog of North American Hymenoptera); de Saussure, 1867:31 (as synonym of *Pelopoeus* [sic] *vindex*). – **As *Sceliphron figulus* var. *assimile***: Dalla Torre, 1897:384 (new combination, new status, in catalog of world Hymenoptera). – **As *Sceliphron assimile***: Ashmead, 1899d:355 (in checklist of North American Sphecidae, new combination), 1900:308 (in checklist of Caribbean Hymenoptera); B. Porter, 1926:9 (in revision of New World *Sceliphron*); Dow, 1932:10 (Cuba; prey, cocoon); Rau, 1943:647 (Murray in Muesebeck, Krombein, and Townes, 1951:978 (in catalog of North American Hymenoptera, as *assimilis*); Evans and Lin, 1956a:148 (description of larva); Freeman, 1974:115 (distribution in Jamaica); R. Bohart and Menke, 1963:115 (in checklist of world Sphecidae); van der Vecht and van Breugel, 1968:225 (in revision of world *Sceliphron*); Alayo Dalmau, 1973:182 (in catalog of Cuban Hymenoptera), 1976:10 (in key to Cuban *Sceliphron*), 25 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Freeman, 1977:231 (regulation of size population in Jamaica); Freeman and Johnston, 1978a:39 (nesting habits), 1978b:435 (gregarious roosting); Freeman and Parnell, 1979:779 (mortality caused by *Melittobia chalybii* Ashmead, a eulophid); Krombein, 1979b:1578 (in catalog of North American Hymenoptera); Freeman, 1980:19 (a population study in Jamaica); Hogue and Miller, 1981:18 (Costa Rica: Cocos Island); de Zayas, 1981:78 (Cuba); Freeman, 1981a:161 (parental investment); Radović, 1985:64 (sting apparatus analyzed, as *assimilae*); Alvarez Pereyra and Reyes Villanueva, 1987:207 (floral records); Maes, 1989:91 (in catalog of Nicara-

guan Sphecidae); Snelling, 1992:14 (Virgin Islands: Mona Island); Early and Townsend, 1993:52 (adventive to New Zealand, Fiji, and Tonga, not established in New Zealand); Hunt, 1993:51 (nesting habits); Snelling, 1993:18 (British Virgin Islands: Island of Guana), 19 (same: Island of Mona); Genaro, 1994a:268 (inquilines in Cuba); Hanson and Menke, 1995:637 (known from Costa Rica); Genaro, 1996a:239 (nest parasites); Amarante, 2002:71 (in catalog of Neotropical Sphecidae); Fernández, Saríol, Vega, Ricardo, González, and Portuondo, 2002:46 (Cuba: Provincia Granma); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:670 (in checklist of Mexican Sphecidae); Portuondo and Fernández, 2004:135 (Cuba: Sierra Maestra and Nipe-Sagua-Baracoa mountains); Fernández-Triana, Garcés Gonzales, Portuondo Ferrer, and Sánchez Ruiz, 2005:117 (list of spider prey, nest parasites, and pathogens); Snelling, 2005:292 (British Virgin Islands: Island of Guana); Genaro, 2006:50 (in Catalog of Cuban Sphecidae and Crabronidae, other countries: USA: Texas, Mexico to Panama, Isla de Juventud, Jamaica, Puerto Rico, Island of Guana, Island of Mona, Saint Martin, Saint Kitts, Monserrat); Evenhuis, 2007:6 (in checklist of Hymenoptera of Fiji, as *assimilis*); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007:48 (Mexico: Tamaulipas); Fernández and Castro-Huertas, 2014:385 (in key to Neotropical *Sceliphron*); Dollfuss, 2016:1167 (Mexico: Guerrero: El Carrizal 35 km west of Acapulco).

As *Pelopoeus cementarius* [sic]: Cresson, 1865a:134 (Cuba), corrected to *Sceliphron assimile* by van der Vecht and van Breugel, 1968:225. – As *Ammophila cementarius*: Ashmead, 1900:308 (new combination, in checklist of Caribbean Hymenoptera).

As *Sceliphron caementarium*: Rau, 1940:590 (Mexico: Hidalgo: Jacala; San Luis Potosí: Tamazunchale; Tamaulipas: Ciudad Victoria), corrected to *Sceliphron assimile* by Rau, 1943:647.

Sceliphron caementarium var. *nicaraguanum* Kohl, 1918:118, sex not stated. Holotype or syntypes: Nicaragua: no specific locality (ZMHU). Synonymized with *Sceliphron assimile* by ..

5. *aterrimum* (Marquet)

Pelopaeus aterrimus Marquet, 1875:207, sex not stated. Holotype or syntypes: France: Haute-Garonne: Toulouse: Pech-David (depository?). – Not listed by Dalla Torre, 1897; Kohl, 1918; de Beaumont, 1952b; van der Vecht and van Breugel, 1968; nor R. Bohart and Menke, 1976.

6. *caementarium* (Drury)

Mason Fly or Mouche Maçonne: Drury, 1770:105 pl. XLIV, fig. 6.

Sphex caementarius Drury, 1773:index to First Volume, ♀ (as *caementaria*, incorrect original termination). Syntypes: "Antigua and several other places in the West-Indies" (lost: van der Vecht and van Breugel, 1968:222). – Cresson, 1863:319 (in catalog of North American Hymenoptera). – As *Pelopoeus* [or *Pelopaeus*] *caementarius*: F. Smith, 1856:234 (new combination, in catalog of Hymenoptera in British Museum); A. Costa, 1864b:111 (two specimens from New Orleans, Louisiana, in Museo Zoologico di Napoli); nec Cresson, 1865a:134 (= *Sceliphron assimile*); A. Costa, 1866:24 (two specimens from Antilles in Museo Zoologico di Napoli); de Saussure, 1867:29 (synonymy and redescription, as *Pelopeus*); Taschenberg, 1869:429 (North America; sexual dimorphism); Cresson, 1873:210 (Texas, as *caementarius*), 1875:714 (Colorado, Nevada, New Mexico, as *caementarius*), 1876:208 (Colorado: Boulder, Utah: Spring Lake, as *caementarius*); Patton, 1880a:376 (recognition characters); Snow, 1881:96 (in checklist of Hymenoptera of Kansas: Douglas County: no specific locality, as *caementarius*); Provancher, 1883b:612 (in revision of Canadian Hymenoptera); Cameron in Blackburn and Cameron, 1886:173 (common on Hawaiian Islands); Cresson, 1887:275 (in catalog of North American Hymenoptera, as *caementarius*); Cameron, 1888a:24 (Mexico, Belize, Nicaragua); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado, as *caementarius*); C. Robertson, 1892:107 (visiting flowers of *Pycnanthemum linifolium* Ph., Lamiaceae), 1894:453 (visiting

flowers of *Eupatorium serotinum* Michx., Asteraceae), 455 (visiting flowers of *Solidago canadensis* Linnaeus, Asteraceae), 473 (visiting flowers of *Coreopsis aristosa* Michx., Asteraceae), 1896:73 (visiting flowers of *Polygonum hydropiperoides* Michx., Polygonaceae); G. Peckham and E. Peckham, 1898:176, 188 and 1905:265 (nesting habits, as *cementarius*); Bridwell, 1899:209 (Kansas: Baldwin); R. Perkins in R. Perkins and Forel, 1899:8 (introduced to Hawaiian islands and common there); Viereck, 1903d:121 (Maryland: Chestertown and College Park); Rudow, 1904:197 (building nests out of mud); Snow, 1906:133 (Arizona, as *cementarius*); Rudow, 1912:42 (description of nest); Rau, 1915: 62 (characteristics of cocoon); Britton, 1920:340 (in checklist of insects of Connecticut); Maes, 1989:90 (in catalog of Nicaraguan Sphecidae). – **As *Sceliphron caementarium***: Dalla Torre, 1897:379 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:354 (in checklist of North American Sphecidae, as *cementarius*); J. Smith, 1900:524 (in list of insects of New Jersey); Harrington, 1902:224 (Canada: Ontario: Ottawa, as *cementarius*); H. Smith, 1908b:327 (in revision of Nebraskan Sphecidae, as *coementarium*); Alfken, 1904:574 (Hawaii: Oahu: Honolulu); C. Turner, 1908:215 (homing experiments); J. Smith, 1910:676 (in new list of insects of New Jersey, as *cementarium*); Faull, 1913:384 (Canada: Toronto region); Rau and Rau, 1913:392, 397 (nesting behavior); Broomley, 1914:194 (prey of asilid *Proctacanthus philadelphicus* Macquart at Southbridge, Massachusetts, as *cementarium*), 197 (prey of asilid *Deromyia umbrina* Loew at Southbridge, Massachusetts, as *cementarium*); Rau and Rau, 1916:28 (nest and prey); Rohwer, 1916b:683 (in catalog of Hymenoptera of Connecticut); Holland, 1917:294 (Cuba: Isla de Pinos, now Isla de la Juventud: Los Indios); Kohl, 1918:115 (in revision of world Sceliphriini); Mickel, 1918b:407 (in catalog of Nebraskan Sphecidae, as *coementarium*); Rau and Rau, 1918:118 (miscellaneous biological observations); Washburn, 1919:222 (in list of Hymenoptera of Minnesota, as *cementarius*); Savin, 1922:327 (nesting behavior); Rohwer in Viereck, 1925:682 (in key to Sphecidae of Connecticut); J.Ch. Bradley, 1926:175 (New York: Lloyd-Cornell Reservation near McLean, as *coementarium*); B. Porter, 1926:5 (in revision of New World *Sceliphron*); Rau, 1926:188 (Missouri: Wickes: sheltered clay bank); F. Williams, 1927:434 (nesting habits on Hawaiian Islands); J.Ch. Bradley, 1928:1012 (in catalog of New York Sphecidae, as *coementarium*); Cheesman, 1928a:171 (Marquesas and Society Islands); Ogilvie, 1928:50 (Bermuda); Rau, 1928b:443 (nesting habits), 449 prey, experiments about filling nests with prey); Cheesman, 1929:151 (Martinique, as *coementarium*); Dow, 1930a:98 (observations of nests by J. Bartram, 1745, probably refer to *Sceliphron caementarium* and *Trypoxylon politum*), 99 (*Vespa Ichneumon* of M. Catesby, 1748, is *Sceliphron caementarium*), 100 (*Sphex pensylvanica* of B.H. Latrobe, 1806 and 1809, is probably *Sceliphron caementarium*); Hendrickson, 1930:159 (Iowa); Rau, 1931:200 (homing experiments); Bodine and Evans, 1932:235 (physiological changes during hibernation and diapause); Rau, 1935d:267 (list of prey species); Brimley, 1938:445 (North Carolina: statewide); nec Rau, 1940:590 (= *Sceliphron assimile*); Swezey, 1940:370 (Hawaiian Islands: Lualualei, prey: *Latrodectes mactans* (Fabricius)); Fernald, 1943a:290 (Florida); Dreisbach, 1944:274 (Michigan: locality records); Rau, 1944c:50 (attracted to honey); Berland, 1945:23 (Marquesas Islands, list of spider prey); Muma and Jeffers, 1945:251 (list of spider prey, nest); Berland, 1946 (France: Versailles); Rau, 1946:10 (dipteran nest parasites: *Pachyophthalmus floridensis* Tns., Sarcophagidae, and *Spogostylum obsoletum* Loew, Bombyliidae, courtship behavior); Strickland, 1947:129 (Canada: Alberta: Medicine Hat); F. Williams, 1947:318 and 330 (Fiji); Spencer and Wellington, 1948:10 (British Columbia); Krombein, 1949b:381 (in key to Sphecidae of Micronesia), 388 (Marshall and Mariana Islands); Shafer, 1949:1-78 (nesting habits); Krombein, 1950a:268 (North Carolina: Dare County), 1951a:143 (Virginia: Dunn Loring; visiting tulip-tree honeydew); Murray in Muesebeck, Krombein, and Townes, 1951:978 (in catalog of North American Hymenop-

tera); Wolcott, 1951:841 (in review of insects of Puerto Rico); Krombein, 1952a:94 (USA: Virginia: Westmoreland State Park); Berland, 1953:237 (French Antilles); K. Cooper, 1953:34 (Massachusetts: Island of Penikese); Krombein, 1953a:333 (North Carolina), 1953b:122 (visiting foliage of *Quercus marilandica* Muenchh.), 123 (visiting foliage of *Quercus virginiana* Mill.), 133 (North Carolina: Kill Devil Hills); Krombein and Evans, 1954:234 (Florida), 1955:233 (Florida); Evans and Lin, 1956a:147 (description of larva); Fullaway, 1957:279 (in checklist of Hymenoptera of Fiji); Krombein, 1958f:192 (in supplement to catalog of North American Hymenoptera: description of larva by Evans and Lin, 1956a, reported); Chandler, 1959:199 (old nests used for nesting by *Osmia cordata* Robertson and *O. lignaria* Say, Megachilidae); Stainer, 1959:66 (Canada: British Columbia: no specific locality); G. Stage, 1960:191 (nest parasite: *Chrysis fuscipennis* Brullé, Chrysididae); Suehiro, 1960:298 (Midway Atoll); Yoshimoto, 1960:334 (Hawaiian Islands); Krauss, 1961:417 (Cook Islands: Island of Aitutaki); W. Ferguson, 1962:82 (nest parasite: *Sphaerophthalma (Photopsioides)* sp., a mutillid); R. Bohart and Menke, 1963:116 (in revision of Nearctic Sceliphriini); Evans, 1963c:92 (nesting habits, discussion of Shafer, 1949); Krombein, 1963f:276 (Maryland: Plummers Island near Washington, D.C.); Kurczewski and Kurczewski, 1963:147 (Pennsylvania: Presque Isle State Park); Snelling, 1963:88 (*Macrosiagon cruentum* (Germar), Rhipiphoridae, emerged from nest of *Ancistrocerus campestris* (de Saussure), Vespidae, that were occupying nests of *Sceliphron caementarium*); Pilon and Steiner, 1966:484 (locality records from British Columbia, Michigan, and Quebec); Landers, 1967:1168 (stinging human eye and resulting nerve-blocking); van der Vecht and van Breugel, 1968:223 (in revision of world *Sceliphron*); G. Bohart, Nye, and Hawthorn, 1970:49 (Utah: Logan, onion pollinator); Eberhardt, 1970:247 (hunting behavior); Horning and Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); Riek, 1970:941 (in Insect Fauna of Australia); Nambu, 1972b:14 (Japan: Saitama Prefecture); Grisell, 1973:1 (morphology, biology, and host); Thorp, 1973:89 (Oklahoma: Lake Texoma region, used as prey by asilid *Diogmites symmachus* Loew), 90 (Oklahoma: Lake Texoma region, used as prey by asilid *Saropogon dispar* Coquillett); Leclercq, 1974a:414 (France: Var: Sanary-sur-Mer); Medina Gaud and Martorell, 1974:270 (Puerto Rico: island of Caja de Muertos at 17°54'N 66°32'W); Ward, 1974:221 (prey stolen from open nest by ants *Crematogaster lineolate* (Say)), 222 (stealing prey from nests of conspecific females); Lomholdt, 1975b:9 (Madeira); Nambu, 1975b:70 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Hurd and Linsley, 1975:116 (Arizona: Pima County: 18 mi. west of Tucson, on flowers of *Larrea tridentata* (De Candolle) Coville, Zygophyllaceae); Haeseler, 1976a:369 (France: Var: Sanary-sur-Mer 11 km west of Toulon); Leclercq, 1976:371 (established in France, Portugal, and Madeira); L. Davis, 1978:217 (North Carolina: Kill Devil Hills, data from Krombein, 1953a); Erlandsson, 1978a:205 (Madeira: Câmara de Lobos, Funchal, and Santa Cruz, as *cementaria*); Leclercq and Claparède, 1978:245 (France, Portugal, review of introduction to Europe); Hefetz and Batra, 1979:1138 (geranyl acetate and 2-decen-1-ol in cephalic secretion); Horner and Klein, 1979:30 (Oklahoma; list of spider prey); Krombein, 1979b:1578 (in catalog of North American Hymenoptera); A. Walker and Deitz, 1979:80 (recorded from Cook Islands); Finnamore, 1982:11 (in Sphecid Fauna of Southern Quebec); Naumann, 1983b:134 (Australia: Alice Springs; in key to Australian *Sceliphron*); Obin, 1983:321 (hunting spiders away from nesting sites); Della Lucia and Chandler, 1984:1 (mortality in overwintering generation); Cardale, 1985:221 (in catalog of Australian Sphecidae); Mitchell and Hunt, 1985:700 (nutrient and energy assays of larval provision and larval feces); Piek, 1985:33 (France); Radović, 1985:64 (sting apparatus analyzed); Rust, Menke, and Miller, 1985:46 (California: Channel Islands); R. Crawford, 1986:797 (spider prey in Washington State); Parks, 1986:34 (California: Torrey Pines State Reserve); Piek, 1986a:77 (supersedes

Sceliphron spirifex in France); Piek and Spanjer, 1986:188 (in list of Sphecidae with known prey), 221 (twenty two constituents of venom found by various chromatographic techniques); K. Smith, 1986:134 (nests open by downy woodpecker in Arkansas); Steiner, 1986:95 (references to papers on nesting habits); Fitton, Shaw, and Austin, 1987:78 (in list of European Hymenoptera that prey on spiders); Dean, Nyffeler, and Sterling, 1988:283 (Texas; prey of this species and of *Chalybion californicum*); Schneider and Pelles, 1988:89 (Luxembourg); C. Ferguson and Hunt, 1989:315 (nearest behavior); Hamon et al., 1989:115 (distribution in France); O'Brien, 1989b:203 (distribution in Michigan); Piek, 1989:54 (France: Var Department); Spofford, Kurczewski, and Downes, 1989:255 (summary of previous records for nest parasite *Amobia floridensis* (Townsend), a miltogrammine fly); Callan, 1990a:22 (New Caledonia: no specific locality); Hilburn et al., 1990:174 (Bermuda); Kurczewski and Acciavatti, 1990:59 (New York: Cayuga County); Harris, 1992:15 (in revision of species introduced to New Zealand); Pagliano, 1992b:5 (first record from Italy); Antropov, 1993e:156 (Ukraine: Odessa; in key to European species); Early and Townsend, 1993:53 (adventive to New Zealand but not established); Hamon, Fonfria, Clary, Eyraud, Schwartz, and Carrière, 1994:343 (current distribution in Europe, particularly France); Genaro, 1994c:243 (nesting behavior, utilization of nests by *Trypoxylon texense*); Ahlstrom, 1995:106 (in checklist of insects of North Carolina); Hanson and Menke, 1995:637 (known from Costa Rica); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:3 (in catalog of Italian fauna); Pagliano, 1995b:11 (Italy: Liguria: Garlenda); Blades and Maier, 1996: (Canada: British Columbia: Osoyoos - Mount Kobau area at 119°40'W 49°05'N); Gusenleitner, 1996c:818 (Croatia: Rovinj); Strumia, 1996b:176 (Italy: established in Pisa Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:38 (in Sphecidae Fauna of Western Europe); Harris, 1997:6 (New Zealand: accidental introduction on ship to Fiordland, nest and cocoon); Matthews, 1997a:152 (using nest in teaching ecological interactions); Grillenzoni and Pesarini, 1998:84 (Italy: Ferrara); Kami and Miller, 1998:57 (in checklist of Samoan insects); Kurczewski, 1998d:250 (pine barrens in upstate New York); Campadelli, Pagliano, Scaramozzino and Strumia, 1999:225 (Italy: parasitoids and inquilines); Pauly, 1999:108 (in catalog of Belgian aculeates, an accidental introduction); Volkova, Matthews, and Barber, 1999:325 (list of spider prey); Blackledge and Pickett, 2000:211 (preying on spider *Argiope*: capturing spiders that drop to the ground after the wasp hit the web); Canovai et al., 2000:83 (map of collecting localities in Italy and Corsica); Pagliano, Scaramozzino, and Strumia, 2000:290 (introduction into Italy); Smit, 2000:173 (Island of Madeira); Meagher, 2001b:291: Florida: Alachua County: collected in traps baited with pheromone and synthetic floral volatile compound); Skevington et al., 2001:128 (Canada: Ontario: Lambton County); Takahashi and Shimizu, 2001:13 (Japan: Ogasawara Islands: Iwô-Jima); Gusenleitner, 2002:1124 (first record from Austria: Kärnten: Rabenstein; also Croatia: Istria Peninsula); Amaranter, 2002:71 (in catalog of Neotropical Sphecidae); Konno et al., 2002:310 (bradykinins not found in venom); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:670 (in checklist of Mexican Sphecidae); Carrière, 2003:419 (France: Hérault: Saint-Michel de Bagnas, co-existence with *Sceliphron destillatorium* and *S. spirifex*); Drewes, 2003:142 (USA: no specific locality); Ohl and Linde, 2003:149 (number of ovarioles); Vernier, 2003:2 (Switzerland: Genève et Vaud cantons), 7 (in key to Swiss *Sceliphron*); Buck, 2004:24 (in checklist of Sphecidae of Ontario, Canada); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:29 (Japan: Gifu Prefecture); Terayama, 2004a:5 (Japan: Volcano Islands: Iwo islands); González, Matthews, and Matthews, 2005:50 (parasite: pteromalid *Dibrachys pelos* (Grissell)); Hellrigl, 2004a:174 and 2004b:187 (Italy: Trentino-Alto Adige, as Südtirol: Auer), 190 (in key to *Chalybion*, *Isodontia*, and *Sceliphron* of Trentino-Alto Adige), 191 (in key to nests of *Isodontia* and *Sceliphron*); Suda, 2004:36 (Japan: Yamanashi Prefecture); Bogusch and Macek, 2005:1071 (found in Czech Republic: Čelákovice, in

1942); Hellrigl, 2006a:371 (Italy: Verona Province: Cavaion Veronese and Monte de San Ambrogio); Fallahzadeh, Ostovan, and Shojaei, 2009:43 (first record from Iran: Fars: Jahrom); Negoro, Haneda, and Tano, 2005:43 (Japan: Toyama Prefecture); Pagliano and Negrisolò, 2005:79 (in Sphecidae Fauna of Italy); Rahola, 2005:334 (photograph of nest); Schmid-Egger, 2005a:10, 11 (in key to European and Mediterranean *Sceliphron*), 14 (recognition characters, color, distribution); Bitsch and Barbier, 2006:227 (distribution in France); Haneda, Nozaka, Tano, Kurokawa and Murota, 2006a:18 (Japan: Toyama Prefecture); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Kuhlmann, 2006:29 (Cook Islands); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas-Larrieu Nature Reserve near Argelès-sur-Mer), 2006c:7 (France: Pyrénées-Orientales: Réserve Naturelle du Mas-Larrieu); Nambu, 2006:246 (Japan: Tokyo: Imperial Palace garden); N. Schneider, 2006:143 (Luxemburg: anthropogenic habitats); Terayama, 2006b:35 (Volcano Islands: Iwo Jima Island); Terayama and Tano, 2006:11, 16, 18 (in key to Japanese Ampulicidae and Sphecidae); Evenhuis, 2007:6 (in checklist of Hymenoptera of Fiji); Gibb and R. Williams, 2007:2 (Indiana: reside around houses, in yards and gardens, as mud dauber); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007:48 (Mexico: Tamaulipas); Jacobs, 2007:40 (in key to Sphecidae of Germany, not yet found in Germany); Ohkusa, 2007:34 (Japan: central Honshu: Aichi Prefecture); Polidori, Federici, Pesarini, and Andrietti, 2007:13 (factors affecting spider prey selection); Vepřek and Straka, 2007:198 (in catalog of Sphecidae of Czech Republic and Slovakia), 210 (recorded from Bohemia by Bogusch and Macek, 2005, but not established there); Fallahzadeh, Ostovan, and Saghaei, 2009:235 (Iran: Fars: Jahrom), 239 (color photograph); Józán, 2009:165 (Croatia); Pagliano, 2009:176 (Italy: Piemonte: Tigliole; Marche: Offida); Shorenko, 2009:366 (in list of Sphecidae *sensu lato* of Crimea); Ardila-Garcia, Umphrey, and Gregory, 2010:339 (genome size dataset); Bitsch, 2010:102 (in supplement to vol. II of Faune de France, 1997: recent records from Western Europe reported; France: first records from the Départements of Aude, Haute-Garonne, Isère, Landes, Lot-et-Garonne, Lozère, and Pyrénées-Orientales); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru); Pérez De La Cruz and De La Cruz-Pérez, 2010:10 (prey spectrum in Tabasco, Mexico; the commonest prey were *Acanthepeira stellata* (Walckener), Araneidae, and *Eustala* sp., Araneidae); Rasplus, Villemant, Paiva, Delvare, and Roques, 2010:754 (in list of Hymenoptera introduced to Europe); Shorenko and Kononov, 2010:11 (Ukraine: Crimea: Feodosiya); Smit and Wijngaard, 2010:69 (in checklist of Sphecinae of Netherlands); Takahashi, 2010:18 (Japan: in list of Hymenoptera of Ogasawara = Bonin islands); Uma and Weiss, 2010:85 (females are able to distinguish between chemicals produced by spiders that build two-dimensional nets and those that build three-dimensional nets, preferring the former ones); van der Smits, 2010b:386 (France: Ardèche: Les Reynauds, Saint-Thomé, Valvignères; Gard: Collias; Vaucluse: Bédoin, le Beaucet-Venasque); Bogusch, Straka, Macek, Dvořák, Vepřek, and Říha, 2011: 93 (Czech Republic: Kašparák, Nachod); Cecconi and Paggetti, 2011:113 (Italy: locality records from Basilicata, Lazio, Molise, Toscana, and Umbria); Field, Ohl, and Kennedy, 2011:734 (in molecular cladistic analysis of Ammophilini); Gogala, 2011:8 (Slovenia); Polidori, Federici, Mendiola, Selfa, and Andrietti, 2011:57 (nest parasite *Acroricnus seductor* (Scopoli), Ichneumonidae); Poulsen, Oh, Clardy, and Currie, 2011:1 (wasp body contains bacteria of genus *Streptomyces*); Schmid-Egger, 2011a:43 (France: Parc National du Mercantour; Italy: Parco delle Alpi Marittime); Tischendorf, Frommer, Flügel et al., 2011:185 (known from Germany, but not from Hessen); Boillat, 2012:229 (Switzerland: in checklist of insects of Canton de Genève); Ceccolini and Paggetti, 2012:208 (Italy: Valle d'Aosta: Aosta); Chate-noud, Polidori, Federici, Licciardi, and Andrietti, 2012:939 (mud collecting consists of four phases: 1. search for suitable place, 2. removing leaves, twigs, etc. from chosen area, 3. forming mud balls, 4.

flying off with mud balls); U. Frommer, 2012:189 (appearing in Germany owing to accidental invasion); Gogala, 2012:219 (introduced to Slovenia); Hellrigl, 2012:129 (Italy: Provincia Autonoma di Bolzano-Alto Adige, as Südtirol); Protsenko, Fateryga, Ivanov, and Puzanov, 2012:55 (Ukraine: Crimea: near Feodosiya, Kerch); Strumia, Pagliano, and Gayubo, 2012:55 (Italy: Toscana: Riserva di San Rossore); Callot and Brua, 2013:34 (France: Alsace: established since 2009); Cillo and Bazzato, 2013:X (Italy: fist record from Sardegna: Oristano); Jennings, Krogmann, and Burwell, 2013:32 (in checklist of Hymenoptera of New Caledonia); Mader, 2013:74 (distribution in Europe); Barrera-Medina and Sepúlvedo-Osorio, 2014:295 (first record from Chile; Peru), 296 (in key to *Sceliphron* of Chile); Bitsch, 2014:395 (papers by Vallot and Brua, 2013, and Chapelin-Viscard and Larivière, 2014, recorded); Chapelin-Viscardi and Larivière, 2014:123 (France: Loiret: Orléans); Fernández and Castro-Huertas, 2014:385 (in key to Neotropical *Sceliphron* and to *Sceliphron* of Colombia), 389 (occurrence in Colombia questionable); Józán, 2014:131 (Croatia: Načinovići, Pridragam Rovinj); Kim, Yeo, and Kim, 2014:283 (in key to *Sceliphron* of South Korea, in revision of Sphecidae *sensu stricto* of South Korea); Vas and Józán, 2014:158 (first record from Hungary: Budapest), 161 (in key to *Chalybion* and *Sceliphron* of Hungary); Zettel, Ockermüller, and Wiesbauer, 2014:160 (Austria: Niederösterreich); R. Burger, 2015:15 (Germany: current distribution in Rheinland-Pfalz); Popelka, 2015:173 (Czech Republic: Čelákovice, Chvalovice); Ramage, Charlat, and Jacq, 2015:158 (French Polynesia: Fakahina, Gambier archipelago, Marquesas Islands, Moorea, Makatea, Nuku Hiva, Tahiti; New Caledonia; Wallis and Futuna); Shorenko, 2015:315 (in list of Sphecidae *sensu lato* of Crimea); Ratzlaff, 2016:29 (Canada: British Columbia: from Spencer and Wellington, 1948 and Buck, 2004); Dollfuss, 2016:1167 (locality records from Canada, Costa Rica, Croatia, Eritrea, France, Italy, Japan, and USA); Burguet and Durand, 2017:9 (France: Puy-de-Dôme: basin of river Crouël); Danilov, 2017b:214 (in catalog of Sphecidae *s.s.* of Russia); Gradinarov, 2017:1 (first record from Bulgaria: Sofia and Varna); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Fars Province); Kiran Vati and Bhasker Shenoy, 2017:67 (description of female mandible); Kumar and Kumar, 2017:44 (entomopathogenic fungi, *Beauveria bassiana* (Bals.-Criv.) Vuill. and *Metarhizium anisopliae* (Metchnikoff) Sorokin, both Clavicipitaceae, collected on larvae of *Sceliphron caementarium* in Fiji); Magdalou, 2017:20 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Mas Larrieu); E. Powell and Taylor, 2017:891 (individual specialization in prey selection); Ravoet, Barbier, and Klein, 2017:41 (first record from Belgium: Zaffelae); Shorenko, 2017:76 (in Crimea collected in June through August); Turrisi and Altadonna, 2017:754 (Italy: Sicilia: Tremestieri in Messina District at 38°08'36.9"N 15°31'21.7"E); Shorenko, 2018:126 (Crimea, including localities, habitats, and number of specimens); Carminati, Mora, and Cretin, 2019:28 (France: in list of Sphecidae *sensu lato* of Franche-Comté); Shorenko, 2019:210 (of particular interest in Crimea), 211 (among commonest sphecid species in Crimea); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:124 (in Sphecid Fauna of Europe); Beutel, Richter, Keller, Garcia, Matsumura, Economo, and Gorb, 2020:5 (detailed description of legs); Cassar and Mifsud, 2020:164 (in checklist of Sphecidae *s.s.* of Malta), 165 (first record from Malta); Danilov, 2020:319 (specimens from Canada, Japan, and USA in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Diaz-Calafat, 2020:2 (Spain: first record from Island of Mayorca), 3 (in key to *Sceliphron* of Mayorca); Field, Gonzalez-Voyer, and Boulton, 2020:7 (evolution of parental care); Gros, 2020:397 (nesting habits); Gurule, Jadhav, and Gangurde, 2020:151 (India: Maharashtra: Nashik); Shorenko, 2020:47 (Crimea: Karadag Nature Reserve); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*, in review of Indian *Sceliphron*); Ceccolini, 2021b:951 (Peru: Locality records); Cross, Baldock, and Wood, 2021:16 (in catalog of Sphecidae *sensu lato* of Portugal); Kosibowicz,

- 2021:1 (first record from Poland: Nasiczne near Brzegi Górne at 49.177369°N 22.601398°E); Olaszewski, Wiśniowski, and Ljubomirov, 2021:103 (in commented list of Sphecidae *sensu lato* of Poland); Terayama, 2021:18 (Japan: Port of Tokyo Wild Bird Park); Demetriou, Díaz-Calafat, Kalaentzis, Kazilas, Georgiadis, Turrisi, and Koutsoukos, 2022:536 (locality records from Albania, Greece, Montenegro, Poland, Serbia, and Slovakia). – **As *Sphex caementarium***: Shorenko, 2007d:554 (erroneous new combination; Ukraine: first record from Crimea: Feodosiya area).
- Sphex flavomaculatus* De Geer, 1773:588, sex not stated (as *flavo-maculata*, incorrect original hyphenation and termination). Syntypes: USA: Pennsylvania: no specific locality (Stockholm). Synonymized with *Pelopeus caementarius* by de Saussure, 1867:29 (by synonymizing the substitute name *Sphex flavipunctatus* Christ). – **As *Sceliphron caementarium* var. *flavomaculatum***: Dalla Torre, 1897:380 (new combination, new status, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae, as *flavimaculatum*).
- Sphex lunatus* Fabricius, 1775:347, sex not stated (as *lunata*, incorrect original termination). Lectotype: ♀, Antigua: no specific locality (ZMUC), designated by van der Vecht, 1961a:42. Synonymized with *Pelopeus caementarius* by de Saussure, 1867:29. – Fabricius, 1781:444 (redescription), 1787:274 (redescription); Christ, 1791:296 (redescription); Thunberg, 1791:126 (specimens donated to Academia Upsaliensis); Fabricius, 1793:203 (redescription), 1796:155 (in Index to his Entomologia Systematica, 1793); Lichtenstein, 1796:198 (in auction catalog); Turton, 1801:486 (redescription); Jurine, 1807:128 (in list of *Sphex*); Cresson, 1963:320 (in catalog of North American Hymenoptera). – **As *Pelopoeus lunatus***: Fabricius, 1804:202 (new combination, redescription); Latreille, [1805]:295 (redescription); Palisot de Beauvois, 1806:50 (Dominican Republic); Guérin-Ménéville, 1835:pl. 71, Fig. 5 (illustration of habitus); Dahlbom, 1843:23 (in revision of Sphecidae and Pompilidae); Guérin-Ménéville, 1844:436 (citation); Dahlbom, 1845: 1845:XX (study of specimens in collection Fabricius), 434 (in key to *Pelopoeus*); Lepeletier de Saint Fargeau, 1845:312 (in revision of world Hymenoptera); Osten-Sacken, 1862:411 (nest built of mud, is not a parasite of *Eumenes fraterna*); Girard, 1879:972 (morphology and distribution); Rudow, 1912:40 (description of nest, as *lunates* Dahlbom); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:521 (specimens in M. Spinola collection, Torino). – **As *Pelopoeus* [sic] *caementarius* var. *lunatus***: de Saussure, 1867:30 (new status). – **As *Sceliphron caementarium* var. *lunatum***: Dalla Torre, 1897:380 (new combination, in catalog of world Hymenoptera). – **As *Sceliphron caementarium* aberr. *lunatum***: W. Schulz, 1903:470 (new subspecific status, Martinique).
- Sphex flavipes* Fabricius, 1781:444, sex not stated (as *flavipes*). Lectotype: ♀, America: no specific locality (ZMUC), designated by van der Vecht, 1961a:42. Synonymized with *Pelopoeus* [sic] *caementarius* by de Saussure, 1867:29. – Fabricius, 1787:274 (redescription); Gmelin, 1790:2724 (redescription); Fabricius, 1793:202 (redescription), 1796:155 (in Index to his Entomologia Systematica, 1793); Lichtenstein, 1796:197, 199 (in auction catalog); Turton, 1801:486 (redescription); Cresson, 1863:319 (in catalog of North American Hymenoptera), 1865b:463 (color variation). – **As *Pelopoeus flavipes***: Fabricius, 1804:204 (new combination, redescription); Dahlbom, 1845:XX (closely resembles *Pelopoeus lunatus*); F. Smith, 1856:233 (in catalog of Hymenoptera in British Museum), 1979a:676 (Hawaii: Honolulu). – **As *Pelopoeus* [sic] *caementarius* var. *flavipes***: de Saussure, 1867:30 (new status). – **As *Sceliphron caementarium* var. *flavipes***: Dalla Torre, 1897:380 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae); Kohl, 1918:117 (in revision of world *Sceliphron*). – **As *Sceliphron caementarium* subsp. or var. *flavipes***: van der Vecht, 1961a:42 (study of type material).

Sphex flavipunctatus Christ, 1791:301 (as *flavipunctata*, incorrect original termination). Substitute name for *Sphex caementarius* Drury. Synonymized with *Pelopeus caementarius* by de Saussure, 1867:29. – **As *Sceliphron caementarium* var. *flavipunctatum***: Dalla Torre, 1897:380 (new combination, new status, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae).

Sphex affinis Fabricius, 1793:203, sex not stated. Syntypes: "in Americae insulis" (ZMUC). Synonymized with *Pelopaesus lunatus* by Palisot de Beauvois, 1806:50 and Dahlbom, 1845:XX, and with *Pelopoesus caementarius* by de Saussure, 1867:29. – Fabricius, 1796:155 (in Index to his Entomologia Systematica, 1793); Turton, 1801:486 (redescription); Cresson, 1863:319 (in catalog of North American Hymenoptera). – **As *Pelopoesus affinis***: Fabricius, 1804:204 (new combination, redescription). – **As *Sceliphron affine***: Dalla Torre, 1897:378 (new combination, in catalog of world Hymenoptera); Kohl, 1918:132 (original description copied). – **As *Sceliphron caementarium* subsp. or var. *affinis***: van der Vecht, 1961a:42 (new status, study of type material).

Pelopoesus architectus Lepeletier de Saint Fargeau, 1845:313, ♀. Holotype or syntypes: ♀, USA: Louisiana: New Orleans (M. Spinola collection, Torino). Synonymized with *Pelopeus* [sic] *caementarius* by de Saussure, 1867:29. – Cresson, 1863:319 (in catalog of North American Hymenoptera); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado); Rudow, 1904:198 (building nests out of mud); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:520 (holotype in M. Spinola collection, Torino). – **As *Pelopeus* [sic] *caementarius* var. *architectus***: de Saussure, 1867:30 (new status). – **As *Sceliphron caementarium* var. *architectus***: Dalla Torre, 1897:380 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae).

Pelopoesus servillei Lepeletier de Saint Fargeau, 1845:313, ♀ (as *Servillei*, incorrect original capitalization). Holotype or syntypes: ♀, origin unknown (originally Serville collection, now M. Spinola collection, Torino). Synonymized with *Sceliphron caementarium* by Kohl, 1918:115. – F. Smith, 1856:233 (in catalog of Hymenoptera in British Museum); Cresson, 1863:319 (in catalog of North American Hymenoptera); de Saussure, 1867:31 (California, redescription); Cresson, 1887:275 (in catalog of North American Hymenoptera); Cockerell, 1901:40 (floral records); Snow, 1906:133 (Arizona); Rohwer, 1917a:241 (California: Santa Barbara); Johnson and Ledig, 1918:24 (California: Claremont); Bradley, 1957:40 (Lepeletier de Saint Fargeau's specimens in M. Spinola collection in Turin); Casolari and Casolari Moreno, 1980:102 (specimens in M. Spinola collection, Torino); Pagliano, 2008:522 (specimens in M. Spinola collection, Torino). – **As *Sceliphron servillei***: Dalla Torre, 1897:389 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae); Ighere, Iloba, and Ukpowho, 2014:32 (prey capture and mass provisioning). – **As *Sceliphron caementarium* var. *servillei***: Kohl, 1918:118 (new status, in revision of world *Sceliphron*).

Pelopaesus solieri Lepeletier de Saint Fargeau, 1845:318, ♀ (as *Solieri*, incorrect original capitalization). Holotype or syntypes: ♀, Guadeloupe: no specific locality (M. Spinola collection, Torino). Synonymized with *Pelopeus* [sic] *caementarius* by de Saussure, 1867:29. – F. Smith, 1856:230 (in catalog of Hymenoptera in British Museum); Cresson, 1863:319 (in catalog of North American Hymenoptera); F. Smith, 1871a:359 (in catalog of Oriental Aculeata); Maindron, 1878:397 (in checklist of *Pelopaesus* of India and Indian Archipelago); Cameron, 1889c:102 (in list of Sphecidae of Oriental Region, as *solieri*); Rudow, 1904:198 (building nests out of mud); Bradley, 1957:39 (Lepeletier de Saint Fargeau's specimens in M. Spinola collection in Turin); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:521 (holotype in M. Spinola collection, Torino). – **As *Sceliphron solieri***: Bingham, 1897:238 (new combination,

original description translated into English, British India, now India and Pakistan); Begum and Bose, 1976:26 (Bangladesh: Dakka); Begum, Bose, and Howlander, 1989:125 (nesting habits in Bangladesh); Begum, Khan, and Bose, 1995:174 (Bangladesh: Dhaka University campus).

Pelopoeus canadensis F. Smith, 1856:233, ♂ (as *Canadensis*, incorrect original capitalization. Holotype or syntypes: ♂, Canada: no specific locality (BMNH). Synonymized with *Pelopoeus caementarius* by de Saussure, 1867:29. – Cresson, 1863:319 (in catalog of North American Hymenoptera), 1887:275 (in catalog of North American Hymenoptera). – **As *Sceliphron caementarium* [sic] var. *canadensis***: Ashmead, 1899d:355 (new combination, new status, in checklist of North American Sphecidae); J. Smith, 1900:524 (in list of insects of New Jersey).

Pelopoeus nigriventris A. Costa, 1864a:60, sex not stated. Holotype: North America: no specific locality (Napoli). Synonymized with *Sceliphron caementarium* by Murray in Muesebeck and Krombein, 1951:979. – **As *Sceliphron nigriventre***: Dalla Torre, 1897:388 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae). – **As *Sceliphron caementarium* var. *nigriventre***: Kohl, 1918:117 (new status, in revision of world *Sceliphron*).

Pelopoeus [sic] *tahitensis* de Saussure, 1867:27, ♀, ♂. Lectotype: ♂, Tahiti: Otahiti (NHMW), designated by Menke in R. Bohart and Menke, 1976:105. Synonymized with *Sceliphron caementarium* by Kohl, 1918:116. – **As *Sceliphron tahitensis***: Dalla Torre, 1897:391 (new combination, in catalog of world Hymenoptera); Kohl, 1908b:310 (Hawaii Islands: Honolulu).

Sphex economicus Curtiss, 1938:154, sex not stated (as *economica*, incorrect original termination). Syntypes: Tahiti: Tautira (depository unknown). Synonymized with *Sceliphron caementarium* by Menke in R. Bohart and Menke, 1976:105.

As *Sceliphron tubifex*: E. Saunders, 1903c:210 (Island of Madeira), corrected to *Sceliphron caementarium* by Lomholdt, 1975a:9.

As *Chalybion caeruleum*: Frost, 1933:51 (nest on a car), corrected to *Sceliphron caementarium* by Frost, 1933:104.

As The Mud Dauber: Stewart, 1935:341 (nesting in train air brakes).

7. *coromandelicum* (Lepelletier de Saint Fargeau)

Pelopaeus coromandelicus Lepelletier de Saint Fargeau, 1845:306, ♀ (as *Coromandelicus*, incorrect original capitalization). Holotype or syntypes: ♀, India: Coromandel Coast: no specific locality (M. Spinola collection, Torino). – F. Smith, 1856:231 (in catalog of Hymenoptera in British Museum), 1871a:359 (in catalog of Oriental Aculeata); Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago); Cameron, 1889:101 (listed), 104 (redescription); Casolari and Casolari Moreno, 1980:101 (specimen in M. Spinola collection, Torino); Pagliano, 2008:520 (specimen in M. Spinola collection, Torino). – **As *Ammophila coromandelica***: Casolari and Casolari Moreno, 1980:100 (new combination, specimens in M. Spinola collection, Torino). – **As *Sceliphron coromandelicum***: Bingham, 1897:238 (new combination, in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:382 (in catalog of world Hymenoptera); Rothney, 1903:104 (India: West Bengal: Barrackpore); Maxwell-Lefroy, 1909:206 (India: nesting habits as in *S. madraspatanum*); Dutt, 1912:216 (India: Pusa; nesting habits); Field, 1914:378 (nesting habits); Strand, 1915:91 (Sri Lanka); Kohl, 1918:125 (in revision of world *Sceliphron*); Iwata, 1964b:362 (Cambodia, Thailand; summary of biological information); van der Vecht and van Breugel, 1968:192 (type species of *Prosceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Joshi, 1984:762 (spinning cocoon by larva); Hensen, 1987:243 (in revision of subgenus *Prosceliphron*, now *Hensenia*; India, Sri Lanka, Bangladesh, Burma, Thailand, Laos, Malaysia);

Marathe and Joshi, 1990:24 (histological structure of corpora pedunculata); Early and Townsend, 1993:53 (adventive to New Zealand but not established); van Vondel, 1995:29 (specimens from India in Natuurmuseum Rotterdam); Jha and Farooqi, 1994:13 (description and illustration of male genitalia); Job and Olakkengil, 2014:14 (India: Kerala: Thrissur District); Dollfuss, 2016:1167 (India: Assam: Nameri National Park); Danilov, 2020:319 (specimen from Thailand in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 64 (in review of Indian *Sceliphron*); Snyman and Binoy, 2022:4 (mantispid *Afromantispa neptunica* (Navás) emerged from nest of this species in India: Kerala: Kozhikode District: Elathur).

8. *curvatum* (F. Smith)

Pelopaeus curvatus F. Smith, 1870:187, "♀", but actually ♂. Lectotype: ♂, India: North-West Provinces, now Uttar Pradesh: Manipuri (BMNH), designated by Hensen, 1987:230. – Bingham, 1897:239 (as synonym of *Sceliphron deforme*); Cameron, 1889c:101 (in list of Sphecidae of Oriental Region). – **As *Sceliphron curvatum***: Dalla Torre, 1897:382 (new combination, in catalog of world Hymenoptera); Strand, 1915:91 (India: Naga Hills); Kohl, 1918:122 (as synonym of *Sceliphron deforme*); van der Vecht in R. Bohart and Menke, 1976:106 (in checklist of world Sphecidae; resurrected status); van der Vecht, 1984a:213 (valid species, redescription, first record from Austria); Dollfuss, 1987:18 (Austria); Gepp and Bregant, 1987:221 (Austria: introduced into Styria; nesting habits); Hensen, 1987:230 (in revision of subgenus *Prosceliphron*, now *Hensenia*; Kazakhstan and Tajikistan, Pakistan, Nepal, India, Austria); Dollfuss, 1991:26 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1992:274 (Pakistan: Karakorum: Skardu); Ebmer, 1995:276 (Austria: Burgenland and Kärnten); Gepp, 1995:153 (history of invasion in Austria, nesting habits); S. Gupta, 1995:85 (India: Uttar Pradesh); Scaramozzino, 1995:9 (first record from Italy: Piemonte: Torino, Veneto); Gogala, 1995:73 (first record from Slovenia); Gusenleitner, 1996a:6 (Austria: Oberösterreich and Tirol: Lienz District), 1996c:817 (Croatia: Rovinj); Scaramozzino, 1996:9 (Italy: Bologna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:43 (in Sphecidae Fauna of Western Europe); Dollfuss, Gusenleitner, and Bregant, 1998:509 (Austria: summary of collecting records from Burgenland); Grillenzoni and Pesarini, 1998:83 (Italy: Ferrara); Józán, 1998:305, 310 (Hungary: Duna-Dráva National Park); Kofler, 1998:1 (Austria: Tirol: Lavant, Lienz); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Land Kärnten); M. Schwarz, 1999:84 (Austria: Oberösterreich: city of Linz area); Pagliano, Scaramozzino, and Strumia, 2000:291 (introduction into Italy); M. Schwarz, 2000:10 (Austria: Oberösterreich: Linz); Zettel, 2000:23 (Austria: Ternitz, Wien, Wiener Neustadt); Gonseth, Imbeck, and Tussac, 2001:99 (first records from France and Switzerland); Hellrigl, 2001:466 (Italy: list of localities from Bolzano–Alto Adige Province, as Südtirol); Józán, 2001:277 (Hungary: Somogy County); Zettel, Gross, and Mazzucco, 2001:66 (Austria: Wien); Gepp, 2003:18 (in Austria appears to be replacing *Sceliphron destillatorium*); F. Gusenleitner, 2003:1 (popular account); Hellrigl, 2003:345 (Italy: additional localities from Bolzano–Alto Adige Province, as Südtirol); Lukáš, 2003:73 (Slovakia: Bratislava: old fruit orchard); Osten, 2003:13 (Germany: Stuttgart); Rahola, 2003:57 (France: first record from Département du Gard); Shoreenko, 2003:97 (Ukraine: Zakarpat'ye, Khar'kov Oblast', Crimea); Vernier, 2003:2 (Switzerland: Vaud canton), 7 (in key to Swiss *Sceliphron*); Bogusch, 2004:62 (nesting habits and distribution in Czech Republic); Carrière, 2004:159 (France: Hérault: Saint-Michel du Bagnas, nesting habits, photographs); Četković, Radović, and Đorović, 2004:226 (Serbia, Croatia); Fluck, 2004:21 (Germany: first record from Hessen: Eltville at 50°01.4'N 8°06.5'E, also Darmstadt); Hellrigl, 2004a:174 (Italy: Trentino–Alto Adige, as Südtirol) and 2004b:182 (Italy: detailed

list of locality records from Trentino-Alto Adige, as Südtirol, and from other localities in northern Italy), 190 (Austria: in key to *Chalybion*, *Isodontia*, and *Sceliphron* of Tirol), 191 (in key to nests of *Isodontia* and *Sceliphron*); Schmid-Egger, 2004a:8 (distribution in Germany); Straka, Bogusch, Tyrner, and Vepřek, 2004:146 (Czech Republic: Brno, Moravský Krumlov, Praha, Přerov); Bogusch, Liška, Lukaš, and Dudich, 2005:215 (Czech Republic and Slovakia); Carrière, 2005:257 (nesting habits, photographs); Dorow and Jäger, 2005:37 (Germany: Hessen: Roßdorf near Darmstadt, list of prey species); Hellrigl, 2005:29 (Italy: distribution in Bolzano–Alto Adige Province, as Südtirol); Herrmann, 2005:6 (Germany: Baden-Württemberg: Konstanz); Jacobi, 2005a:35 (Germany: first record from Nordrhein-Westfalen: Oberhausen at 51°30'6"N 51°30'6"E), 2005b:36 (Italy: Toscana: Caldesi; France: Corse: Ostriconi); Jacobs, 2005a:438 (first record from Bulgaria: Plovdiv Region: Hissarya); Madl and Vidlar, 2005:164 (nest parasite: *Melittobia acasta* (Walker), a eulophid); Kofler, 2005:164 (Austria: Tirol: Lienz District: many localities); Pagliano and Negrisolò, 2005:80 (in Sphecidae Fauna of Italy); Rahola, 2005:331 (nesting habits), 334, 335 (photographs of nests); Schmid-Egger, 2005a:10 (in key to European and Mediterranean *Sceliphron*), 11 (recognition, color, distribution), 15 (distribution in Europe and history of colonization); Shorenko, 2005a:161 (Ukraine: Crimea), 2005b:97 (Ukraine: Crimea: Karadagh Nature Reserve); Bitsch and Barbier, 2006:227 (distribution in Europe), 228 (redescription), 229 (distribution in Europe), 230 (distribution in France); Dumon, 2006:109 (France: Ain Department: no specific locality); Foucart, 2006:192 (France: Pyrénées-Orientales: Villelongues-dels-Monts); Gayubo and Izquierdo, 2006:257 (first record from Spain: Burgos, Guadalajara, and Madrid Provinces, nesting habits); Hellrigl, 2006a:367 (Italy: Alto Adige, as Südtirol: additional localities, list of prey); Ljubomirov, 2006:536 (Bulgaria: Rhodope Mountains: Yurukovo Village); Magdalou, 2006a:6, 9 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane); Reder, 2006b:15 (Germany: first record from Rheinland-Pfalz: Worms); Standfuss and Standfuss, 2006c:307 (first record from Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Jacobs, 2007:40 (in key to Sphecidae of Germany); Józán, 2007:179 (Hungary: Zselic hills); Rahola, 2007:61 (nesting habit: unusual prey in one French population: a gryllid *Arachnocephalus vestitus* A. Costa, in addition to arachnids); Reder, 2007:71 (imagines emerged after 10 months in one case, after three weeks in two other cases); Shorenko, 2007b:257 (Ukraine: Crimea: Izobil'noye village in Alushta District); Sipos and Móczár, 2007:204 (Hungary: Bács-Kiskun megye: vicinity of Foktő); Vepřek and Straka, 2007:198 (in catalog of Sphecidae of Czech Republic and Slovakia), 210 (Bohemia and Moravia: locality records); Barrera-Medina and Garcete-Barrett, 2008:70 (first record from Chile: Región Metropolitana de Santiago and Provincia Cordillera: El Canelo; also, in key to Chilean *Sceliphron*), Compagnucci and Roig Alsina, 2008:64 (in key to *Sceliphron* of Argentina), 67 (first record from Argentina: Provincia de Buenos Aires); Reder and Bettag, 2008:21 (Germany: Rheinland-Pfalz: between Waldsee and Neuhofen, first record in Europe of nests outside human dwellings); Bendazzi and Pezzi, 2009:41 (Italy: Emilia-Romagna: Mezzano 11 km north of Ravenna at 44°27'N 12°06'E); Bury, Sudoł, Zięba, and Żyła, 2009:12 (first record from Poland: Tarnów, Wólka Lubelska, map of distribution in Poland); Carrière, 2009:73 (France: first record from Lozère: Marvejols; nesting habits); Cillo, Fois, Bazzato, and Piras, 2009:118 (Italy: first record from Sicilia: Sadali); Guéorguiev and Ljubomirov, 2009:261 (Bulgaria: Maleshevska Planina); S. Ivanov, Fateryga, and Zhidkov, 2009:218 (Ukraine: Crimea: Karadag Nature Reserve); Józán, 2009:165 (Croatia: Bibinje); López-Villalta, 2009:524 (southernmost point in Europe: Spain: Ciudad Real: Campo de Montiel); Pagliano, 2009:176 (Italy: Lombardia: Gallarate; Liguria: Casanova Lerrone; Sardegna: Cagliari); Shorenko, 2009:366 (in list of Sphecidae *sensu lato* of Crimea); Bitsch, 2010:103, 104 (in supplement to vol. II of Faune de France, 1997: recent records from Europe reported, new records from France: Dépar-

tements of Ain, Alpes-de-Haute-Provence, Alpes-Maritimes, Ardèche, Aude, Bouche-du-Rhône, Doubs, Drôme, Gard, Haute-Corse, Haute-Garonne, Hautes-Alpes, Hérault, Isère, Jura, Loire, Losère, Pyrénées-Orientales, Rhône, Saône-et-Loire, Savoie, Vaucluse, and Var); Carrière, 2010:83 (specimen previously observed in Hérault, France, was a female, not a male); Castro, 2010:437 (Spain: first records from La Rioja, Valencia, Murcia, Andalucía, and Baleares administrative regions and from provinces of Huesca, Zaragoza, Lérida, and Tarragona; currently known from 22 Spanish provinces); Dobosz, 2010:89 (Poland: Upper Silesia: Widów near Rudziniec); Esser, Fuhrmann, and Venne, 2010:38 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Hable, Krauss, von der Dunk, and Wickl, 2010:28 (Germany: Bayern: Sulz- and Ottmaringer Tal); Olivieri, 2010:135 (Italy: Abruzzi: San Vito Marina; Puglia: Otranto); Prokofiev and Skomorokhov, 2010:67 (Russia: Krasnodarskiy Krai: village Malyi Utrish between Novorossiysk and Anapa; history of colonization in Europe); Rasplus, Villemant, Paiva, Delvare, and Roques, 2010:755 (in list of Hymenoptera introduced to Europe); Schmid-Egger, 2010a:22 (in red list of Aculeata of Germany: relatively common); Shorenko and Kononov, 2010:11 (Ukraine: Karadag Nature Reserve); Smit and Wijngaard, 2010:69 (in checklist of Sphecinae of Netherlands); van der Smissen, 2010b:386 (France: Ardèche: Les Reynauds, Saint-Thomé, Valvignères); Van Keer, 2010:71 (diversity of arachnid prey); Burger, 2011:73 (Germany: Thüringen); Ceccolini and Paggetti, 2011:113 (Italy: Molise: Rocchetta al Volturmo and Castel San Vincenzo); Četković et al., 2011:95 (detailed distribution records from Eurasia and corrections to earlier records), 104 (history of range extension); Gogala, 2011:8 (Slovenia); Józán, 2011:179 (in checklist of Sphecidae *sensu lato* of Hungary); Schmid-Egger, 2011a:43 (France: Parc National du Mercantour); Tischendorf, Frommer, Flügel et al., 2011:170 (Germany: Hessen: not endangered); Amolin, 2012:28 (Ukraine: Donetsk); Boillat, 2012:229 (Switzerland: in checklist of insects of Canton de Genève); Ceccolini and Mascagni, 2012:209 (Italy: Valle d'Aosta: Molina di Fiemme); Chatenoud, Polidori, Federici, Licciardi, and Andrietti, 2012:939 (mud collecting consists of four phases: 1. searching for suitable place, 2. removing leaf, twigs, etc. from chosen area, 3. forming mud balls, 4. flying off with mud balls; body kept parallel to the ground during mud collecting); Fazekas, 2012:69 (current distribution in Hungary); U. Frommer, 2012:188 (probable recent migrant through southern Rhein area, Danube, and Czech Basin); Gogala, 2012:219 (introduced to Slovenia); Hellrigl, 2012:129 (Italy: Provincia Autonoma di Bolzano-Alto Adige, as Südtirol); Protsenko, Fateryga, Ivanov, and Puzanov, 2012:56 (Ukraine: Crimea, Kiev); Saure, 2012:31 (Germany: Berlin-Dahlem); Schardt, Renker, Staudt, and Reder, 2012:143 (current distribution in Germany); Strumia, Pagliano, and Gayubo, 2012:55 (Italy: Toscana: Riserva di San Rossore); Bitsch, Grouet, and Savina, 2013:292 (France: département d'Ariège: Ascou); Callot and Brua, 2013:34 (France: Alsace: established since 2009); Carbonell, 2013:72 (Spain: Cataluña: Girona Province: Garrotxa); Mader, 2013:74 (review of records from Europe), 205 (color photograph); Fateryga and Kovblyuk, 2013:309 (nesting habits in Ukraine); Olszewski, Wiśniowski, Pawlikowski, and Szpila, 2013:133 (Poland: Ojców National Park, Pieniny National Park, Wrocław); Polidori, Crottini, Della Venezia, Selfa, Saino, and Rubolini, 2013:40 (animal protein as food for larva, unable to manipulate food load, flight muscle ratio, wing loading); A. Scholz and Liebig, 2013:26 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Wiśniowski, Huflejt, Babik, Czechowski, and Pawlikowski, 2013:31 (current distribution in Poland); Baldock, 2014:354 (Spain: Island of Mallorca); Barrera-Medina and Sepúlveda-Osorio, 2014:296 (in key to *Sceliphron* of Chile); Bazzato and Cillo, 2014:94 (Italy: Sardegna); Bilański, Kołodziej, and Bury, 2014:109 (current distribution in Poland, synanthropic species); Bitsch, 2014:395 (history of introduction and distribution in Europe; new records from France: départements of Ariège, Aude, Bas-Rhin, Dordogne, Haute-Garonne, Hérault, and Tarn); Dunford, Turbyville, and Leavengood,

2014:11 (listed as medically important in Afghanistan); Fernández and Castro-Huertas, 2014:383 (in key to Neotropical *Sceliphron*); Grouet and Bitsch, 2014:221 (nest destroyed by eulophid *Melittobia australica* Girault near Toulouse, France); Khvir, 2014:91 (first record from Belorussia: Minsk, nest found inside human dwelling); Köhler, Creutzburg, and Loxdale, 2014:117 (Germany: Thüringen: further finding in Jena); N. Schneider, Barbier, Pauly, and Christian, 2014:251 (Belgium: Bruxelles, and Luxemburg: Echternach); Vas and Józán, 2014:161 (in key to *Chalybion* and *Sceliphron* of Hungary); Zimmermann, 2014:316 (Austria: Vorarlberg: no specific locality); R. Burger, 2015:15 (Germany: current distribution in Rheinland-Pfalz); Gülmez and Can, 2015a:1 (first record from Turkey: Amasya, Kocaeli, Samsun, and Tokat provinces, redescription, list of spider prey); Ramage, Charlat, and Jacq, 2015:159 (first record from French Polynesia: Bora Bora and Tahiti); Schedl, 2015:949 (Austria: Tirol: Innsbruck Botanical Garden); K. Schmidt, 2015:132 (Germany: Baden-Württemberg: Heidelberg); Shorenko, 2015:316 (in list of Sphecidae *sensu lato* of Crimea); Szinetár and Fazekas, 2015:115 (list of spider prey in Hungary); Tymkiv, Nazaruk, Shydlovskiy and Tsaryk, 2015:181 (detailed analysis of expansion in Central and Eastern Europe); Budrys and Orlovskytė, 2016:94 (first record from Lithuania: city of Kaunas: Žaliakalnis at 54°54'N 23°54'E); Dollfuss, 2016:1168 (collecting localities from Austria, Bulgaria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Kyrgyzstan, Montenegro, Slovenia, Tajikistan, and Uzbekistan); Gülmez and Dizer, 2016:57 (Turkey: Tokat Province); Klasa and Wiśniowski, 2016:48 (Poland: Ojców National Park); Mokrousov and Popov, 2016:562 (Russia: Abkhazia, Krasnodarskiy Krai); Schedl, 2016:1091 (Austria: Tirol); Wiśniowski, 2016:126 (Poland: Ojców National Park); Gülmez, Can, Çubuk, and Tayhan, 2016:431 (comparison of forewing variation by geometric morphometric analysis); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:3 (Turkey: Samsun: Vezirköprü: Kunduz Mountain); Arens, 2017a:625 (Greece: Peloponnesus); Danilov, 2017b:214 (in catalog of Sphecidae s.s. of Russia); Danilov and Mokrousov, 2017a:108 (Georgia: Borjomi); Di Giovanni, Mei, and Cerretti, 2017:73 (Italy: Lombardia: Riserva Naturale Bosco della Fontana 5 km from Mantova at 45°12'N 10°44'E, found in understory); Jansen, 2017:6 (Germany: Sachsen: Leipzig); Magdalou, 2017:20 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane, Julols); Röller and Burger, 2017:1 (Germany: Rheinland-Pfalz: southern Pfalz); Shorenko, 2017:76 (in Crimea collected in April through October); Turrisi and Altadonna, 2017:755 (Italy: Sicilia: Coronia in Messina District at 38°02'39.75"N 14°31'57.44"E); Reichholf, 2018:386 (Germany: Bayern: Inntal in Neuötting, nesting in soil); Segieth, 2018:384 (Germany: Bayern: Kirchham and Wolfakirchen); Shorenko, 2018:126 (Crimea, including localities, habitats, and number of specimens); Antropov, Valuyev, and Muldashev, 2019:3 (current distribution); Augul, 2019:500 (recorded from Iraq by Abdul Rassoul, 1976, as *Sceliphron deforme*); Carminati, Mora, and Cretin, 2019:28 (France: in list of Sphecidae *sensu lato* of Franche-Comté); Ertürk, Taş, Şahin, and Çaldaş, 2019:157 (physical analysis of mud nest material); Gülmez, 2019:3 (Turkey: Amasya, Kocaeli, Samsun, and Tokat provinces: no specific localities), 4 (abnormal forewing venation); S. Ivanov, Fateryga, and Zhidkov, 2019:75 (Crimea: reared from trap nests); Parejo-Pulido and Mora-Rubio, 2019:285 (Spain: Badajoz Province); Shorenko, 2019:210 (of particular interest in Crimea), 211 (among the most common sphecid species in Crimea); Zajac, Regner, Michałap, Smolis, and Kadej, 2019:121 (current geographic distribution in Poland); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:122 (in Sphecid Fauna of Europe); Buse and Förschler, 2020:24 (Germany: Baden-Württemberg: Nordschwarzwald); Castro, 2020:7 (current distribution in Spain, Portugal, and Balearic Islands); Danilov, 2020:319 (specimens from Bulgaria and Russia: Crimea, Krasnodar Krai, Voronezh Oblast' in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Diaz-Calafat, 2020:3 (in key to *Sceliphron* of

Mayorca); U. Frommer, 2020:151 (Germany: Hessen: Gießen; history of expansion in Europe); Gwardjan and Celary, 2020:117 (Poland: Małopolska Upland); Karl, Bellstedt, and Winter, 2020:6 (Germany: Thüringen: Erfurt-Daberstedt); Kejval, Blažej, and Erhart, 2020:120 (western Czech Republic); Shorengo, 2020:47 (Crimea: Karadag Nature Reserve); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 66 (in review of Indian *Sceliphron*); Ceccolini, 2021:213 (Portugal: Aveiro, Faro, Lisboa, Porto, Setúbal, and Viseo); Cross, Baldock, and Wood, 2021:16 (in catalog of Sphecidae *sensu lato* of Portugal); Drumont, N. Schneider, and Barbier, 2021:19 (Belgium: second Belgian specimen collected in Bruxelles); Ertürk and Taş, 2021:1 (Turkey: Ordu: Perşembe at 41°06'47"N 37°46'03"E; detailed locality records in Europe); Olszewski, Wiśniowski, and Ljubomirov, 2021:103 (in commented list of Sphecidae *sensu lato* of Poland); Yu. Prisiy and Cherkasova, 2021:160 (Russia: Belgorod Oblast': Belgorod at 50.565180°N 36.561865°E); Stetsun, 2021:1960 (detailed description of sting); Japoshvili and Ljubomirov, 2022:279 (Georgia: Lagodekhi Protected Areas).

As *Sceliphron deforme*: Basil-Edwardes, 1921:293 (nesting habits), corrected to *Sceliphron curvatum* by Hensen, 1987:220; Matsumura and Uchida, 1926:40 (Okinawa); Gussakovskij, 1935:416 (Tajikistan), present correction; de Beaumont, 1961b:272 (Afghanistan), present correction; Abdul Rassoul, 1976:32 (Iraq: Baghdad: Waziriya), present correction; de Beaumont, 1970a:390 (Afghanistan), corrected to *Sceliphron curvatum* by Hensen, 1987:230.

As *Sceliphron performe* (misspelling of *deforme*: Islamov, 1986:517 (Uzbekistan: Tashkent Oblast'), present correction based on geographic distribution.

9. *deforme* (F. Smith)

Pelopeus deformis F. Smith, 1856:231, ♀. Lectotype: ♀, North China: no specific locality (BMNH), designated by Hensen, 1987:238. – F. Smith, 1873a:191 (Japan: Hakodade); Bingham, 1897:239 (as synonym of *Sceliphron formosum*). – As *Sceliphron deforme*: Mocsáry, 1892:127 (new combination, Tibet: Yarkalo); Sickmann, 1894:220 (China: Hopei Province: Tientsin); Dalla Torre, 1897:383 (in catalog of world Hymenoptera); Strand, 1913a:85 (Taiwan), 1914c:116 (description of nest), 1915:91 (China: Tsingtau, now Qingdao); R. Turner, 1917e:176 (is full species or subspecies); Kohl, 1918:122 (in revision of world Sceliphri); nec Williams, 1919:122 (= *Sceliphron rufopictum laticinctum*); nec Basil Edwardes, 1921:293 (= *Sceliphron curvatum*); nec Rohwer, 1922:675 (= *Sceliphron rufopictum laticinctum*); Gussakovskij, 1932:4 (Russia: Primorskiy Krai), 1934a:4 (China: northeastern Szechuan), 1935:416 (Tajikistan: Zevar); Yasumatsu, 1935c:58 (Philippines: Island of Basilan: Maloong); Gussakovskij, 1936:4 (China: northeastern Szechuan), 1938:4 (China: Kiangsu Province); Iwata, 1939b:169 (Taiwan; nesting habits); Gussakovskij, 1940:84 (Tajikistan: Hissar Range); Yasumatsu, 1942c:106 (China: Beijing); nec de Beaumont, 1961b:272 (= *Sceliphron curvatum*); Iwata, 1964a:318 (nesting gregariously in Japan, but solitary in Thailand); Tsuneki, 1964c:10 (Japan: Kyushu); Yasumatsu and Hirashima, 1965:176 (Taiwan: Shôkei); Baltazar, 1966:346 (in catalog of Hymenoptera of Philippines); Tsuneki, 1967j:6 (Taiwan); Fukuda, 1968:26 (Japan); Itami, 1968a:16 (Japan: Yamagata Prefecture: foot of Mount Iide); Haneda, 1968a:45 (Japan), 1968b:56 (Japan: Nagano Prefecture: Ina District); Nishino, 1968:24 (Japan); Haneda, 1969:69 (Japan: Yamanashi Prefecture); Itami, 1969:46 (Japan: Niigata Prefecture); Tsuneki, 1969i:59 (Japan: Fukui Prefecture: Taichôdzi temple); nec de Beaumont, 1970a:390 (= *Sceliphron curvatum*); Tano, 1971:82 (Japan: Shikoku: Mount Tsurugi); Tsuneki 1971f:6 (Taiwan), 1971m:6 (China: Beijing: Tiendang); Nambu, 1973a:152 (Japan: Saitama Prefecture); nec Abdul Rassoul, 1976:32 (= *Sceliphron curvatum*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Tsuneki, 1976d:292 (China: Heilungkiang); Kazenas, 1978b:45 (in key to Sphe-

cidae of Kazakhstan and Central Asia); Esenbekova and Kazenas, 2000:6 (southeastern Kazakhstan: near Alma Ata, near Anatol'evka, near Chemolgan, near Issyk); Kazenas, 1980e:81 (Russia: Far East), 1986:237 (rare in Kazakhstan, needs protection); Hensen, 1987:230 (in revision of subgenus *Prosceliphron*, now *Hensenia*), 236 (as *deforme deforme*; Mongolia, China, Taiwan, Vietnam); Hua, 1989:116 (China); Sk. Yamane and Ikudome, 1990:104 (distribution in Ryukyu Islands, Japan); Nemkov, 1992b:243 (Russia: Far East: Khingan Nature Reserve); Tano, Nozaka, Kurokawa, and Murota, 1994:58 (Philippines); Q. Li, 1995:87 (in key to Chinese Sceliphronini); Q. Li and Ch. Yang, 1995c:271 (China: Zhejiang Province: Gutianshan); Nemkov in Nemkov, Kazenas, Budrys, and Antropov, 1995:382 (in key to Sphecidae of Russian Far East); Wu and Zhou, 1996a:26 (in revision in Economic Insect Fauna of China); Kazenas, 1998b:82 (in Sphecidae Fauna of Kazakhstan); Yamane, Ikudome, and Terayama, 1999:481 (Japan: in Identification Guide to Sphecidae of Nansei = Ryukyu Islands); Mokrousov, 2000a:23 (Russia: Nizhniy Novgorod Oblast': village Staraya Pustyn' in Arzamas District), 2000b:29 (Russia: Nizhniy Novgorod Oblast'), 32 (first member of subgenus *Prosceliphron* found in Europe); Kazenas, 2001b:12 (in checklist of Sphecidae of Kazakhstan and Central Asia), 70 (nest structure); Kazenas and Esenbekova, 2001:133 (Kazakhstan: Almatinskii Nature Reserve); Kazenas, 2002a:24 (geographic distribution, collecting localities in Kazakhstan); Mokrousov, 2003:222 (first record from European Russia: endangered in Nizhniy Novgorod Oblast'); Ohl and Linde, 2003:149 (number of ovarioles); Wu, Zhou, Q. Li, and Yang, 2003:803 (China: Fujian Province); Ćetković, Radović, and Đorović, 2004:227 (Montenegro: Ulcinj County: Vladimir); Kazenas, 2004b:97 (Kazakhstan: western Tien Shan Mountains); Q. Li and He, 2004:1123 (in hymenopterous fauna of Zhejiang Province, China, as *deforme deforme*); Kazenas, Egorov, and Aldiyarov, 2005:163 (nesting habits); Q. Li and L. Yang, 2005:884 (China: Gansu: Quinling Range and South Mountains); Schmid-Egger, 2005a:10 (in key to European and Mediterranean *Sceliphron*), 11 (recognition characters, color, distribution); Bitsch and Barbier, 2006:227 (taxonomic history); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Nemkov, 2006b:166 (Russia: Primorskiy Krai: Kedrovaya Pad' Nature Reserve); Terayama and Tano, 2006:9, 16, 18 (in key to Japanese Ampulicidae and Sphecidae); Mokrousov, 2008b:32 (Russia: should be excluded from list of endangered species of Nizhniy Novgorod Oblast'); Nemkov, 2008b:17 (in catalog of Sphecidae of Asiatic Russia); Danilov, 2009:53 (Russia: Western Siberia: Kulundinskaya Steppe); Nemkov, 2009b:43 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:235 (Russia: Primorskiy Krai: Lazovsky Nature Reserve); Bitsch, 2010:104 (in supplement to vol. II of Faune de France, 1997: diagnostic characters, recent records from Eastern Europe reported); Danilov, 2010b:44 (distribution of Palearctic-Indomalayan type); Ermilov and Mokrousov: 2010:89 (phoretic mites *Calvolia* sp. and *Parawinterschmidtia kneissli* (Krausse), both Winterschmidtidae, in Middle Volga Region of Russia); Mokrousov, 2010a:60 (Russia: Nizhniy Novgorod Oblast': no specific localities), 2010b:100 (Russia: Nizhniy Novgorod Oblast': no specific localities); Mokrousov and Zryanin, 2010:97 (does not need to be protected in Russia: Novgorod Oblast'); Rasplus, Villemant, Paiva, Delvare, and Roques, 2010:755 (in list of Hymenoptera introduced to Europe); Ćetković et al., 2011:94 (detailed distribution records from Eurasia and corrections to earlier records), 102 (history of range extension); Danilov, 2011a:188 (Russia: Krasnoyarskiy Krai: Minussinsk Rayon: village Malaya Minusa); Nemkov, 2012c:433 (in catalog of Sphecidae of Russian Far East), Kazenas, 2013a: 8, 9 (color photograph of adults and of nest cell, short information on geographic distribution and nesting habits); Mader, 2013:208 (color photograph); Mokrousov, Ruchin, and Egorov, 2013:198 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Barthélémy, 2014:6 (China: Hong Kong); Danilov, 2014a:423 (Russia: Siberia: Krasnoyarskiy Krai), 2014b:513 (in key to Sphecidae s.s. of Siberia); Ruchin and Antropov, 2014:34 (Russia: Re-

public of Mordovia); Vas and Józán, 2014:161 (in key to *Chalybion* and *Sceliphron* of Hungary, not yet found in Hungary); Pham, Kumar and Danilov, 2015:1585 (in list of Sphecidae *sensu lato* of Vietnam, as *deforme deforme*); Dollfuss, 2016:1170 (collecting localities from China, India, Japan, Laos, Thailand, Taiwan, and Vietnam); Pham, 2016b:687 (in key to *Sceliphron* of Vietnam, in Vietnam known only from Hoa Binh Province, as *deforme deforme*); Yudin, 2016:161 (Russia: Ul'yankovsk Oblast'); Danilov, 2017b:214 (in catalog of Sphecidae s.s. of Russia); Danilov and Mokrousov, 2017:108 (Russia: Chuvashia, North Osetia, Novosibirsk Oblast', Orenburg Oblast'); Polumordvinov, 2017:25 (Russia: first records from Penza Oblast'); Jacobs and Liebig, 2018:136 (Russia: Primorskiy Krai: Kalinovka and Novonezhino); Antropov, Valuyev, and Muldashev, 2019:4 (current distribution), 5 (Russia: first record from Bashkiria); Pham, Truong, Th.T. Nguyen, Th.H. Nguyen, Q. Nguyen, and Th.M. Nguyen, 2019:73 (Vietnam: Hanoi and vicinity); Ruchin and Antropov, 2019a:13220 (Russia: Mordovia State Nature Reserve); Antropov and Valuyev, 2020b:3 (Russia: second find from Bashkiria); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:1233 (in Sphecidae Fauna of Europe); Danilov, 2020:319 (specimens from Kyrgyzstan, Tajikistan, and Russia: Siberia and Far East in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 66 (in review of Indian *Sceliphron*); Antropov and Valuyev, 2021:4 (Russia: Bashkir Republic: Yumatovo village); Pham and Antropov, 2021:316 (recorded from Vietnam by several authors).

Sceliphron deforme taiwanum Tsuneki, 1971f:6, ♀, ♂. Holotype: ♀, Taiwan: Taitung Prefecture: Chulu (originally K. Tsuneki coll., now USNM). Synonymized with *Sceliphron deforme deforme* by Hensen, 1987:238. – Suda, 1972a:26 (Japan: Chiba Prefecture); Tsuneki, 1972b:20 (Japan: Chiba Prefecture); Murota, 1973b:116 (Taiwan); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Tsuneki, 1982g:56 (known from the Ryukyu archipelago); Nuhn and Menke, 1994:26 (holotype transferred to USNM). – **As *Sceliphron curvatum taiwanum***: Porter, Stange, and Wang, 1999:5 (new subspecific combination, in checklist of Sphecidae of Taiwan).

***spp. atripes* (F. Morawitz)**

Pelopoëus atripes F. Morawitz, 1888:271, ♀. Lectotype: ♀, Kazakhstan: Semipalatinsk, now Semey at 50°24'N 80°13'E (ZIL), designated by Hensen, 1987:240. – **As *Sceliphron atripes***: Dalla Torre, 1897:378 (new combination, in catalog of world Hymenoptera); Kohl, 1918:122 (as new synonym of *Sceliphron deforme*), 133 (original description copied). – **As *Sceliphron deforme atripes***: Bohart and Menke, 1976:106 (new status, in checklist of world Sphecidae); Hensen, 1987:240 (in revision of subgenus *Prosceliphron*, now *Hensenia*; Mongolia, China, Korea; Russia: Primorskiy Krai); Q. Li, 1995:87 (in key to Chinese Sceliphronini); Kazenas, 2001b:12 (in checklist of Sphecidae of Kazakhstan and Central Asia); Q. Li and He, 2004:1124 (in hymenopterous fauna of Zhejiang Province, China); Hua, 2006:276 (in list of Chinese insects, geographic distribution); J.-K. Kim, 2014:419 (in catalog of Sphecidae *sensu lato* of Korean Peninsula); Kim, Yeo, and Kim, 2014:283 (in key to *Sceliphron* of South Korea), 284 (in revision of Sphecidae *sensu stricto* of South Korea); Danilov, 2016:340 (lectotype preserved in Zoological Institute, Sankt Petersburg, Russia); Mokrousov and Popov, 2016:562 (Russia: Krasnodarskiy Krai).

Sceliphron deforme var. *koreanum* Uchida, 1925:329, .. Holotype or syntypes: Synonymized with *Sceliphron deforme atripes* by Hensen, 1987:240. – **As *Sceliphron deforme koreanum***: Tsuneki, 1967j:6 (new status, Korea; redescription, nec Japanese specimens which = *deforme nipponicum*), 1969e:25 (Japan: specimens in Osaka Museum of Natural History), 1971m:7 (redescription); Bohart

and Menke, 1976:106 (in checklist of world Sphecidae); Paik, 1985:197 (in list of Sphecidae of Korea); Miyatake, 1996:101 (specimens in Hiroshi Aoki collection).

ssp. femorale Hensen

Sceliphron deforme femorale Hensen, 1987:236, ♀. Holotype: ♀, Thailand: Chiangmai (USNM). Paratype: Laos.

ssp. nipponicum Tsuneki

As *Sceliphron deforme*: Tsuneki and Shimoyama, 1963:48 (Japan: Towada Prefecture); Tsuneki, 1964c:10 (Japan: Kyushu), 1969i:59 (Japan: Fukui Prefecture: Taichōdzi temple); Yamada, 1971:34 (Japan: Aichi Prefecture); Nambu, 1973d:152 (Japan: Saitama Prefecture).

As *Sceliphron deforme koreanum*: Tsuneki, 1967j:6 (Japanese specimens only), corrected to *Sceliphron deforme japonicum* by Tsuneki, 1971m:6 and to *Sceliphron deforme nipponicum* by Tsuneki, 1972b:1.

As *Sceliphron deforme japonicum* Gribodo: Tsuneki, 1971m:7 (redescription), corrected to *Sceliphron deforme nipponicum* by Tsuneki, 1972b:1.

Sceliphron deforme nipponicum Tsuneki, 1972b:1, ♀, ♂. Holotype: ♀, Japan: Fukui Prefecture: Iwaya (originally K. Tsuneki coll., now Hyogo Mus.). – Suda, 1973:123 (Japan: Yamanashi Prefecture); Nambu, 1975b:70 (Japan: Saitama Prefecture); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Hensen, 1987:240 (in revision of subgenus *Prosceliphron*, now *Hensenia*; Japan); Tano, 1994a:3 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:29 (holotype transferred to Hyogo Mus.); Haneda, 2003:3 (Japan: Nagasaki Prefecture: Tsushima); Tano, Kurokawa, Murota, and Nozaka, 2003:30 (Japan: Nagasaki Prefecture: Tsushima); Suda, 2004:36 (Japan: Yamanashi Prefecture); Kinota, Haneda, and Tano, 2005:29 (Japan: Hokkaido); N. Yamamoto, 2011:11 (Japan: Kyūshyū: mainland Nagasaki Prefecture). – As *Sceliphron curvatum nipponicum*: Haneda, Inoue, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2005:63 (Japan: Fukui Prefecture: Mount Monju); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:43 (new subspecific combination, Japan: Gifu Prefecture, as *nopponicum*), 2006a:18 (Japan: Toyama Prefecture), 2006b:46 (Japan: Nagasaki Prefecture: Tsushima).

ssp. tibiale Cameron

As *Sceliphron formosum*: Bingham, 1897:239 (in revision of wasps and bees of British India, now India and Pakistan), corrected to *Sceliphron deforme tibiale* by Hensen, 1987:234; Paiva, 1907:15 (India: Uttar Pradesh: Mussoorie), present correction.

Sceliphron tibiale Cameron, 1899:53, sex not stated. Lectotype: ♀, India: Assam, now Meghalaya: Khasia Hills (OXUM), designated by Hensen, 1987:236. – Ramakrishna Aiyar, 1916:554 (in catalog of Indian aculeates described after Bingham, 1897). – As *Sceliphron deforme tibiale*: Bohart and Menke, 1976:106 (new status, in checklist of world Sphecidae); Hensen, 1987:234 (in revision of subgenus *Prosceliphron*, now *Hensenia*; India, Burma); Jonathan, Ray, and Kundu, 2000:181 (India: previously recorded from Meghalaya: Khasi Hills); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 69 (in review of Indian *Sceliphron*). – As *Pelopaesus tibialis*: Rudow, 1904:198 (new combination, building nests out of mud), 1912:42 (Tanzania: Dar es Salaam; description of nest).

Sceliphron lineatipes Cameron, 1900a:36, ♂. Lectotype: ♂, India: Assam, now Meghalaya: Khasia (OXUM), designated by Hensen, 1987:236. Synonymized with *Sceliphron deforme* by Hensen, 1987:236. – Ramakrishna Aiyar, 1916:554 (in catalog of Indian aculeates described after Bingham, 1897).

As *Sceliphron deforme*: Strand, 1914:116 (nest).

10. *destillatorium* (Illiger)

Pepsis destillatoria Illiger, 1807b:94, sex not stated. Holotype or syntypes: Europe: no specific locality (destroyed). – As *Pelopaeus destillatorius*: Germar, 1817:261 (new combination, Dalmatia: Zara, now Croatia: Zadar); Vander Linden, 1827:366 (synonymy, Italy); Dahlbom, 1843:22 (in revision of Sphecidae and Pompilidae), 1845:434 (in key to *Pelopoeus*); Eversmann, 1848:248 (nesting habits), 1849:366 (Russia: Astrakhan, Orenburg, and Saratov provinces, also southern Ural Mountains and Kazakhstan); Wissmann, 1849:10 (Germany: Kingdom of Hannover: Hannover); Kirchner, 1854:311 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); F. Smith, 1856:227 (in catalog of Hymenoptera in British Museum); Schenck, 1857:219 (Germany: in revision of fossorial wasps of Nassau Region); A. Costa, 1858b:17 (in revision of Sphecidae of Kingdom of Naples); Taschenberg, 1858:59 (Germany); von Frauenfeld, 1861:103 (Croatia: Dalmatia: no specific locality); Schenck, 1861:162 (redescription, Austria, Czech Republic, and Germany: Hannover); Sichel, 1861:751 (Italy: Sicilia); Taschenberg, 1866:206 (in revision of Hymenoptera of Germany, as *Pelopoeus*); A. Costa, 1867b:74 and 1867c:18 (in revision of Italian Sphecidae); Kirchner, 1867:217 (in catalog of European Hymenoptera); Palma, 1867:38 (Italy: Sicilia settentrionale); Schenck, 1867a:357 (known from Germany); Wierzejski, 1868:117 (Ukraine: Stanisławów, now Ivano-Frankivsk and Bukowina Region: Kalinowce); von Aichinger, 1870:322 (Austria: Tirol); Łomnicki, 1870:65 (Ukraine: Podole Region: Dzvinohrad); Radoszkowski, 1871:198 (Iran: Astrabad, now Gorgan, as *distillatorius*); P. Ivanov, 1872:152 (Ukraine: Khar'kiv Oblast': Kupyansk area); Beletskiy, 1873:80 (Ukraine: vicinity of Khar'kiv); Dours, 1874:146 (in catalog of Hymenoptera of France); Mocsáry, 1874:120 (Siebenbürgen: Hermannstadt, now Romania: Transylvania: Sibiu); Wierzejski, 1874:258 (Ukraine: Bukowina Region: Kalinowce, Podole Region: Skała on Zbrucz River, Wolczyniec near Stanisławów, now Ivano-Frankivsk); Becker, 1880:152 (Russia: Sarepta, now Krasnoarmeysk south of Volgograd); Kohl, 1880:181 (Italy: Trentino-Alto Adige); Magretti, 1881:116 (Italy: Lombardia), 270 (in list of species discussed in this paper); Yaroshevskiy, 1881:126 (Ukraine: Khar'kiv Oblast': Khar'kiv, Slavyansk); De Stefani Perez, 1882:39 (Italy: Sicilia: Sciacca); Magretti, 1882b:160 (Italy: Sardegna); Sajó, 1882:5 (Hungary); Kohl, 1883e:674 (Switzerland); A. Costa, 1884b:32 (Italy: Sardegna); De Stefani Perez, 1884a:9 (nest parasite: *Stilbum splendidum* Fabricius, Chrysididae); Radoszkowski, 1886a:24 (Turkmenistan); Gasperini, 1887:18 (Dalmatia: Brusje and Island of Lissa, now Croatia: Brusje on Island of Hvar, Island of Vis); Kohl, 1888b:729 (Austria: Tirol, now Italy: Alto Adige); Gasperini, 1889:70 (Dalmatia: Spalato, now Croatia: Split); F. Morawitz, 1891a:205 (Russia: Astrakhan Governorate); Radoszkowski, 1892:580 (male genitalia); Baldini, 1894:49 (Italy: Modena area); N. Arnold, 1902:90 (Russia: Mohilev Province, now Belorussia); Chyzer, 1902:33 (Hungary); Antiga and Bofill, 1904:3 (Spain: Cataluña Province); Rudow, 1912:39 (description of nest); Strand, 1915:91 (Greece); Coulon, 1925:115 (Spain, Morocco, Romania: Bucharest); Kolosov, 1934a:99 (Eversmann observations of 1848 translated into Russian); Zavadil, 1934:187 (Slovakia); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:519 (specimens in M. Spinola collection, Torino). – As *Sceliphron destillatorium*: Kohl, 1893a:36 (new combination, Austria: Niederösterreich, as *destillatorius*); Schletterer, 1894:31 (Istria Peninsula, now part of Croatia, Slovenia, and Italy); Sickmann, 1894:218 (China: Hopei Province: Tientsin); Dalla Torre, 1897:383 (in catalog of world Hymenoptera); Mocsáry, 1897:79 (Kingdom of Hungary, some localities are in today's Croatia, Romania, and Slovakia); Kokujev, 1902:10 (Turkmenistan: Dushak); Zilahi Kiss, 1904:77 (Hungary: Hadad, Peér); Vängel, 1905:166 Hungary); Graeffe, 1906:455 (Tunisia: Tunis

area); Móczár and Henter, 1907:205 (Hungary: Acsalag, Hajdúszoboszló, Harta, Tiszaalpár, Zelenika); Schmiedeknecht, 1907:247 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:103 (in catalog of French Hymenoptera, also var. *pensile*); Graeffe, 1911:48 (Italy: Trieste area, as *destillatorius*); Kohl, 1913b:15 (Russia: Voronezh Oblast': Valuyki at 50°14'N 38°08'E); Smits van Burgst, 1913a:319 and 1913b:6 (Tunisia: no specific locality); Szilády, 1914:89 (Hungary: Nagyenyed, Novim Plitvicza); Kohl, 1918:100 (in revision of world Sceliphroni); Kerenskiy, 1919:36 (Russia: Penza Governorate); Fahringer and Friese, 1921:159 (Turkey: Erzurum: Das Dag in Amanus Mountains = Gavur Dağlari, as *destillatorius*); Fahringer, 1922:175 (Turkey, as *destillatorius*); Maidl, 1922:66 (Albania, Croatia, Montenegro); Berland, 1925d:43 (in Sphecidae Fauna of France); Friese, 1926:165 (in key to Sphecidae of Central Europe, short morphological and biological characteristics), 166 (illustrations of nest); von Schulthess, 1926b:208 (Tunisia, as *destillatorius*); F. Werner, 1927:67 (Austria: Niederösterreich: River Kamp valley); Berland, 1928b:175 (*Cryptus seductorius* Gravenhorst, Ichneumonidae, is nest parasite according to Mansion, 1926); A. Müller, 1930:181 (Bulgaria: Kaliakra; Romania: Brăila); Schmiedeknecht, 1930:708 (in keys to Hymenoptera of North and Central Europe); Bischoff, 1931:8 (Spain); Dusmet y Alonso, 1931:6 (Portugal: Gaharica); Giordani Soika, 1932a:21 (Italy: Lido di Venezia); Motaş, 1932:10 (nesting habits, from literature); Bernard, 1933:61 (France: Drôme: Dieulefit); Bischoff, 1933:6 (Morocco); Gussakovskij, 1933b:275 (Iran); Nadig, 1933:100 (Morocco, also var. *pensile*); Giner Marí, 1934a:131 (Spain); Grandi, 1934:130 (Italy: Lazio: Acilia); Gussakovskij, 1934a:4 (China); Maidl, 1934:64 (Greece: Aegean Islands: Amorgos, Samos); Bernard, 1935:61 (France: Var: Fréjus area), 62 (nest characteristics); Gussakovskij, 1935:415 (Tajikistan); Mazek-Fialla, 1935:470 (Austria: Neusiedler Lake); Bernard, 1936c:287 (France: Aude: Ile Sainte-Lucie; Hérault: Valvrás; Var: Fréjus) Mazek-Fialla, 1936:298 (nesting behavior); Zavadil, Šusterka, and Bat'a, 1937:215 (in catalog of Sphecidae of Czechoslovakia, as *destillatorius*); Guiglia, 1938b:9 (Italy: Sardegna); Kolubajiv, 1938:25 (Czechoslovakia: Slovakia: Kameňany); Kuntze and Noskiewicz, 1938:379 (in Poland known only from Podole region, now Ukraine); Móczár, 1938c:81 (Hungary: Kőszeg Hills); Kuntze, 1939:7 (Poland: Wołczyniec near Stanisławów, now Ukraine: Volchynets near Ivano-Frankovsk); Zavadil, 1939:121 (Czech Republic); Mader, 1940:103 (probable host of *Stilbum calens* F., Chrysididae); Guiglia, 1941c:164 (Italy: Calabria: Grande Sila); Berland, 1943b:48 (distribution extends from southern France to nearly all Africa); Giner Marí, 1943a:62 (in Sphecidae Fauna of Spain); Giordani Soika, 1944:13 (Italy: Sicilia: Falcone, Messina); Guiglia, 1944b:9 (Italy, as *distillatorium*); Giner Marí, 1945b:359 (eastern Morocco: Muley Rechid); L. Móczár, 1946:36 (nesting habits); Zavadil, 1946:9 (Czechoslovakia: Ostrava area, as *destillatorius*); Balthasar, 1948:144 (Slovakia: Kovačov, Parkan); Zavadil in Zavadil and Šnoflák, 1948:171 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:4 (Portugal); Sala de Castellarnau, 1949:89 (Spain: Teruel: Bronchales); de Beaumont, 1950f:396 (Algeria: Laghouat; Morocco: Marrakech, Tassiala); Scobiola, 1950:22 (Romania); de Beaumont, 1951e:270 (Morocco); Móczár, 1953:309 (Hungary); Nouvel and Ribaut, 1953:177 (France: cited from Hautes-Pyrénées: Luz, par Berland, 1925); de Beaumont, 1954e:86 (Italy); Hoffer, 1954:122 (Czechoslovakia: Praha; Moravia: Bystrice near Hostýn, Olomouc, Hodonín, Čejč; Slovakia: Šturovo, Turna); Grandi, 1954:236 (Italy; also *distillatorium pensilis*); Atanassov, 1955:205 (Bulgaria: Obzor in Pomoriye district, Sandanski, Varna, as Stalin); de Beaumont and Bytinski-Salz, 1955:44 (Israel); Harant and Leclercq, 1955:251 (France: Hérault: Avèze); Leclercq, 1955h:63 (bibliographic references, locality records from Africa); Steiner, 1955:134 (France: Dordogne); Vogrin, 1955:31 (Yugoslavia); Bytinski-Salz, 1956:224 (Turkey: Akşehir, Dinar, Karapınar); Ceballos, 1956:361 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:337 (France: Département des Pyrénées-Orientales); Bajári, 1957a:16 (in

key to Hungarian Sphecidae); Grandi, 1957:387 (Italy); Leclercq, 1956g:324 (Greece); Pulawski, 1958a:164 (Bulgaria: Varna); de Beaumont, 1959a:8 (Italy); Diniz, 1959:27 (Portugal: five localities); Giner Marí, 1959:387 (Morocco); Scobiola-Palade, 1959:499 (Romania: Constanța Region: Agigea, Mangalia; Tulcea Region: Rosseti); Suárez *in* Giner Marí, 1959:400 (recorded from Morocco by de Beaumont, 1951); Suárez, 1959:53 (Spain: Almería Province); Čingovski, 1960:7 (Macedonia: Bitola); Skopje Tsrna Gora, Skopje Park); de Beaumont, 1960a:6 (Greece: Island of Rhodes); Noskiewicz and Puławski, 1960:42 (in key to Polish Sphecidae, not yet found in Poland); de Beaumont, 1961b:272 (Afghanistan), 1961c:45 (Greece: Island of Crete); Atanassov, 1962:127 (Bulgaria: Petrich area); de Beaumont, 1962b:20 (Spain); Lehrer and Scutaru, 1963:287 (Romania: Iași); Myartseva, 1963b:59 (Turkmenistan: lower Murgab River); Ceballos, 1964:87 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:30 (in Sphecid Fauna of Switzerland); Atanassov, 1965:91 (Greece: Island of Thasos); de Beaumont, 1965a:17 (Greece); Diniz, 1965:3 (Portugal: ten localities); Myartseva, 1965:87 (Turkmenistan: Akibay, Iolotan'); Balthasar, Hrubant, and Hrubant, 1967:176 (Bulgaria: Slanchev Bryag near Nessebar); de Beaumont, 1967a:276 (Turkey); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Comarova, Mangalia), 1967b:37 (Romania); Benedek, 1968:70 (Hungary, floral records); Myartseva, 1968:61 (locality records from Turkmenistan), 63 (nesting behavior); Scobiola-Palade, 1968b:141 (Romania: Island of Letea in delta of Danube), 1968c:382 (Romania: Amara, Brănești, București, Giurgiu, Islaz, Putineiu); van der Vecht and van Breugel, 1968:238 (in revision of world *Sceliphron*); de Beaumont, 1969:81 (Turkey); Benedek, 1969a:83 (Hungary; marshy meadow), 1969b:421 (Hungary: Csopak, collected in vicinity of aphid *Hyalopteritena pruni* (Geoffroy)); Romanova, 1969:133 (Russia: North Caucasus); Benedek, 1970:96 (Hungary: Tapolca); Minoranskiy, Kharchenko, and Fomichev, 1970:15 (nesting habits in European Russia and Ukraine); Fomichev and Minoransky, 1979:494 (nesting in human dwellings allows distribution in northern direction); Islamov, 1971:55 (Uzbekistan: Tashkent Oblast': Aksakatasy River at 41°34'23"N 69°44'50"E, village Bogustan, also upper reaches of Chatkal River); Tsuneki, 1971m:6 (China: Beijing: Tiendang); Valetta, 1971:46 (Malta); Atanassov, 1972a:193 (Bulgaria: Stara Planina Mountains), 1972b:32, 48 (Bulgaria: Stara Planina Mountains); Balthasar, 1972:437 (in Sphecid Fauna of Czechoslovakia); Kazenas, 1972b:115 (Kazakhstan); Myartseva, 1972b:111 (parasite: *Chrysis (Tetrachrysis)* sp., Chrysididae); Scobiola-Palade, 1972a:148 (Romania: delta of Danube: Caraorman); Móczár, 1973:144 (invading active nest of *Paragygnomerus spiricornis* Spinola, Vespidae); Sychevskaya, 1973:50 (Tajikistan: Kondara and Uzbekistan: near Samarkand; nest building and species of spider prey); Egger, 1974:57 (Austria: Wien area); Erlandsson, 1974:59 (France, Yugoslavia); Esmaili and Rastegar, 1974:45 (Iran); Kazenas, 1974b:109 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, in Kazakhstan); Scobiola-Palade, 1974:144 (Romania: Sărăturile sandbank in Danube delta); Benedek, 1975:251 (Hungary; onion pollinator); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Haeseler, 1976a:370 (France, Spain); Kolesnikov, 1977:317 (Russia: Bryansk Oblast'); Kazenas, 1978b:45 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:86 (France, Morocco); Pulawski, 1978:185 (in key to Sphecidae of European part of USSR); Benedek, 1979:227 (Hungary: Bakony Hills); Radović and Krnić, 1979:unpaginated foldout (mud dauber, foreleg structure); Esenbekova and Kazenas, 2000:6 (southeastern Kazakhstan: 40-45 km northwest of Suzak); Pagliano, 1980:111 (Italy: Piemonte); Gayubo, 1981a:133 (northern Spain: Sierra de Béjar), 1982f:244 (Spain: Cádiz Province: Conil de la Frontera, Guadiaro); Dollfuss, 1983a:76 (Austria: endangered in Niederösterreich), 77 (Austria: endangered in Burgenland), 79 (Austria: endangered in Steiermark), 1983b:2 (in catalog of Sphecidae of Austria); Gayubo, 1983c:229 (Spain: Salamanca Province: Cantalpino, Ciudad Rodrigo, Salamanca); Mingo and Gayubo, 1983:139 (Spain); Józán, 1983:98 (Hungary);

Schmidt and Westrich, 1983:120 (northern Greece); Gayubo, 1984c:354 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:7 (Spain: Valencia); Pagliano, 1984:369 (Italy), 1985:22 (Italy); b:38 (France: Aude); Józán, 1985b:55 (Hungary south of Lake Balaton), 75 (floral records), 83 (ecological and zoogeographic characteristics); Radović, 1985:64 (sting apparatus analyzed); Scobiola-Palade, 1985:95 (Romania: delta of Danube); Soszyński and Soszyński, 1985:213 (southeastern Poland); Gayubo, 1986b:34 (Spain: Andalucía), 1986c:30 (Spain: Zamora Province); Gayubo and Heras, 1986:25 (Spain: Segovia and Valladolid Provinces; floral records); Gayubo and Sanza, 1986:26 (Spain: Burgos, Soria); Gayubo and Tormos, 1986a:7 (Spain: Castellón de la Plana), 1986b:3 (Spain: Valencia); Islamov, 1986:517 (Uzbekistan: Tashkent Oblast'); Józán, 1986:367 (Hungary: Kiskunság National Park); Asís and Jiménez, 1987:23 (Spain: Castellón Province); Campadelli and Pagliano, 1987:39 (nest parasites and inquilines); Fitton, Shaw, and Austin, 1987:78 (in list of European Hymenoptera that prey on spiders); Gayubo, 1987:105 (Spain: Ciudad Real Province); Dollfuss, 1987:18 (Austria); Scobiola-Palade, 1987:65 (Romania: Dobrogea); Tormos and Jiménez, 1987a:121 (Spain: Valencia), 1987b:316 (Spain: Valencia Province: Dehesa de El Saler); Karsai, 1988:99 (Hungary: Kiskunság National Park); Józán, 1989:100 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivý, 1989a:166 (in checklist of Czechoslovakian Sphecidae); Scobiola-Palade, 1989:87 (Romania: delta of Danube); Kuznetzova, 1990:17 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Pagliano, 1990:63 (in catalogue of Italian Sphecidae); Gayubo, Asís, and Tormos, 1990a:8 (Spain); Schwammler and Priesner, 1990:532 (Austria: Kärnten); Asís, Gayubo, and Tormos, 1991b:105 (description of larva); Dollfuss, 1991:26 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:391 (Italy); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Gusenleitner, 1991:644 (Austria: Wien, Steiermark, Kärnten); Józán, 1991:602 (Hungary: Bátorliget Nature Reserve); Negrisolo, 1991:315 (Italy: Udine and Treviso Provinces); Schembri, 1991:177 (Malta); Gayubo, Borsato, and Osella, 1992:274 (Greece, Morocco); Gusenleitner, 1992:683 (Austria: Steiermark); Józán, 1992a:228 (Hungary: Béda-Karapanca Protected Area), 1992c:289 (Hungary: Zselic Hills); Gorobchishin, 1993:46 (Ukraine: Kanev Nature Reserve); Negrisolo and Pagliano, 1993:90 (Italy: Sardegna); Dollfuss, 1994:103 (endangered in Austria); Tormos, Asís, and Gayubo, 1994:187, 191 (Spain: Albacete Province); Gayubo and Borsato, 1994:198 (Italy: Veneto, Toscana, Basilicata); Gorobchishin, 1995:17 (Ukraine: Kanev Nature Reserve); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Krasnobayev et al., 1995:139 (Russia: Zhiguli Hills northwest of Samara); Negrisolo, 1995a:22 (Italy: Veneto); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:3 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, and Antropov, 1995:384 (in key to Sphecidae of Russian Far East); Pagliano and Pesarini, 1995:82 (Italy: Ferrara Province); Scharer, 1995:22 (Hungary: Budapest area; Slovenia: Portorož); Celary, 1996:253 (distribution in Poland); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Gusenleitner, 1996b:810 (Austria: Oberösterreich), 1996c:818 (Croatia: Rovinj); Kuhlmann, 1996:220 (Portugal: Serra de Estrela); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Vernier, Barbalat, and Gonseth, 1996:179 (Switzerland: Basel, Neuchâtel, Zurich); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Wu and Zhou, 1996a:27 (in revision in Economic Insect Fauna of China); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:40 (in Sphecidae Fauna of Western Europe); Celary, 1997:57 (in checklist of Animals of Poland); Nazarova and Shomirsaidov, 1997:23 (Tajikistan: fruit tree orchards in Vakhsh River valley); Berezin and Krasilnikov, 1998:24 (Russia: Cheboksary District: village Khyrkasy); Celary, 1998a:106 (Poland: Muszyna); Dollfuss, Gusenleitner, and Brengant, 1998:509 (Austria: summary of collecting records from Burgenland); Gorobchishin, 1998b:53 (Ukraine: Sumy Oblast': Vakalivshchina); Józán, 1998:310 (Hungary: Duna-Dráva National Park);

Kazenas, 1998b:80 (in Sphecidae Fauna of Kazakhstan); Lukáš, 1998:134 (Slovakia: Devínska Kobyla Nature Reserve near Bratislava); Nazarova, 1998:39 (Tajikistan: Tigrovaya Balka Nature Reserve); Anan'eva and Kochetkov, 1999:6 (Russia: Ryazan' Oblast': no specific locality); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); Generani, Pagliano, Scaramozzino, and Strumia, 1999:79 (Italy: Toscana: Isola di Montecristo); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Kärnten); Salzmänn-Wandeler and Rezbanyai-Reser, 1999:101 (Switzerland: Tessin: Monte Generoso); M. Schwarz, 1999:84 (Austria: Oberösterreich: city of Linz area); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:104 (Greece); Józán, 2000:104 (Hungary: Bakony Mountains); Ljubomirov, 2000:7 (Bulgaria, specimens in N. Nedelkov collection); Mokrousov, 2000a:24 (Russia: Nizhniy Novgorod Oblast': village Staraya Pustyn' in Arzamas District), 2000b:29 (Russia: Nizhniy Novgorod Oblast'), 32 (Nizhniy Novgorod Oblast' is the northernmost area of its distribution); Shkuratov, 2000:55 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Wiśniowski, 2000:161 (Poland: Bieszczady Mountains); Zettel, 2000:23 (Austria: Kirchberg am Wechsel, Mödling, Wien); Anan'eva and Kochetkov, 2001:4 (Russia: Ryazan' Oblast'); Ivanov and Ljubomirov, 2001:210 (Bulgaria: Kresna Gorge area at 41°48'N 23°10'E); Józán, 2001:277 (Hungary: Somogy County); Kazenas, 2001b:13 (in checklist of Sphecidae of Kazakhstan and Central Asia), 70 (review of nesting behavior); Kazenas and Esenbekova, 2001:133 (Kazakhstan: Almatinskiy Nature Reserve); Mader, 2001:99 (potential migration routes into Germany); Ohl et al., 2001:142 (recorded from Germany but not occurring there); Salzmänn-Wandeler and Rezbanyai-Reser, 2001:158 (Switzerland: Tessin Canton: Meride area); Zettel, Gross, and Mazzucco, 2001:66 (Austria: Wien); Józán, 2002:53 (Hungary: Mecsek Mountains); Kazenas, 2002a:24 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:139 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Shlyakhtenok and Skibinska, 2002:32 (Belorussia: no specific locality); Stalling, 2002:185 (Germany: first record of reproduction: Baden-Württemberg: south of Grenzach-Wyhlen at 47°33'N 07°45'E); Carrière, 2003:419 (France: Hérault: Saint-Michel de Bagnas, coexistence with *Sceliphron caementarium* and *S. spirifex*); Drewes, 2003:142 (Croatia, Greece, Hungary, Italy: miscellaneous locality records); Generani, Pagliano, Scaramozzino, and Strumia, 2003:64 (Italy: Arcipelago Toscano); S. Ivanov and Fateryga, 2003:89 (eumenid wasp *Ancistrocerus auctus* (Fabricius) nesting in abandoned nests of *Sceliphron destillatorium* in Crimea); Józán, 2003: 226 (Hungary: Látrányi Puszta Nature Conservation Area); Lukáš, 2003:73 (Slovakia: Bratislava: old fruit orchard); Pagliano, Scaramozzino, and Strumia, 2003:64 (Italy: Arcipelago Toscano); Gepp, 2003:18 (in Austria appears to be replaced by *Sceliphron curvatum*); Gorobchishin, 2003:48 (Ukraine: Kiev: botanical garden); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (Germany: in catalog of wasps and bees of Bayern); Mokrousov, 2003:221 (Russia: endangered in Nizhniy Novgorod Oblast'); Pagliano, 2003b:130 (Italy: Island of Lampedusa); Protsenko, 2003:68, 69 (Ukraine: Odessa Oblast': Island of Malyi Tataru in Danube delta at 45.21°N 29.00°E); Schmid-Egger, 2003:757 (Italy: Sicilia: Castelammare, Ragusa); Vernier, 2003:7 (in key to Swiss *Sceliphron*); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: extinct or no longer collected); Gorobchishin, 2004:34 (Ukraine: Zaporiz'ka Oblast': Obitichna Kosa Nature Reserve); Hellrigl, 2004a:174 (Italy: Verona Province: Malcesine on Lake Garda), 2004b:190 (in key to *Chalybion*, *Isodontia*, and *Sceliphron* of Italy: Trentino-Alto Adige, as Südtirol), 191 (in key to nests of *Isodontia* and *Sceliphron*); Kazenas, 2004b:98 (Kazakhstan: western Tien Shan Mountains), 2004d:26 (Kazakhstan: northern Caspian area); Nazarova, 2004:103 (Tajikistan: Badakhshan Region: Langar village in Shakhdar River valley); Shkuratov, 2004a:73 (Russia: Rostov Oblast'), 2004b:164 (Russia: Rostov Oblast': Gosudar-

stvennyi Muzei-Zapovednik M.A. Sholokhova); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:358 (in catalog of Polish Sphecidae); Wiśniowski, 2004:38 and 59 (in checklist of Polish Sphecidae); Ebrahimi, 2005:122 (in key to selected Iranian Sphecidae); Gülmez and Tüzün, 2005:43 (Turkey: Ankara Province); Gayubo and Özbek, 2005:4 (Turkey: many localities); Jacobs, 2005a:438 (Bulgaria); Mokrousov and Selivanova, 2005:754 (Russia: Voronezh Oblast'); Pagliano and Negrisolo, 2005:81 (in Sphecid Fauna of Italy); Rahola, 2005:334 (photograph of nest); Schmid-Egger, 2005a:10 (in key to European and Mediterranean *Sceliphron*), 14 (recognition, color, distribution); Shorenko, 2005a:161 (Ukraine: Crimea), 2005b:97 (Ukraine: Crimea: Karadagh Nature Reserve); Straka, 2005a:402 (endangered in Czech Republic); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Yildirim and Ljubomirov, 2005:1786 (Turkey: Erzurum, Kahramanmaraş, and Konya provinces); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Ljubomirov, 2006:536 (Bulgaria: earlier records from Rhodope Mountains summarized, also: Belovo Railway Station); Lukáš, Bogusch, and Liška, 2006:723 (distribution in Moravia and Slovakia); Standfuss and Standfuss, 2006c:307 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Alieva and Humbatov, 2007:77 (Azerbaijan: Absheron Peninsula; nest and prey); Jacobs, 2007:41 (in key to Sphecidae of Germany); Baños-Picón, Gayubo, Asís, and González, 2007:255, 258 (Spain: Zamora: Cabañas de Aliste); Józán, 2007:179 (Hungary: Zselic hills); Kazenas, 2007a:89 (Kazakhstan: Akmala Oblast': Kurgandzhin Nature Reserve and vicinity); Vepřek and Straka, 2007:198 (in catalog of Sphecidae of Czech Republic and Slovakia: known only from Moravia and Slovakia); Vicidomini and Pignataro, 2007:2 (Italy: Salerno: known from Parco Nazionale del Cilento e Vallo di Diano), 15 (Italy: Provincia di Salerno: ubiquitous); Wiśniowski, 2007:145 (Poland: Ojców National Park); Gayubo, González, Tormos, and Asís, 2008:136 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008b:110 (Kazakhstan: foothills of Zailiskiy Alatau: sporadically found on loess cliffs), 2008c:255 (Kazakhstan: village Koktum south of Lake Alakol'); Ljubomirov and Yildirim, 2008:13 (in catalog of Sphecidae of Turkey); Nemkov, 2008b:17 (in catalog of Sphecidae of Asiatic Russia); Wiśniowski, 2008:635 (Poland: Ojców National Park, one specimen collected in 2006); Baños-Picón, Asís, Gayubo, and Tormos, 2009:310 (Spain: many localities; frequency of specimens collected with hand nets and Malaise traps); Belkheir, 2009:17 (France: Pyrénées-Orientales: commune d'Eyne); Bury, Sudol, Zięba, and Żyła, 2009:11 (Poland: new locality records, map of distribution in Poland); Danilov, 2009:53 (Russia: Western Siberia: Kulundinskaya Steppe); Gayubo, González, Tormos, and Asís, 2009:362 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:622 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:261 (Bulgaria: Maleshevska Planina); Józán, 2009:165 (Croatia: Koromačno: Tunarica, Medulin); Kowalczyk, Kurzac, and Soszyński, 2009:129 (Poland: Spała Landscape Park: Inowłódz); Nemkov, 2009b:44 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Polidori, Federici, Trombino, Barberini, Barbieri, and F. Andrietti, 2009:1 (weight, volume, and unbalancing of mud balls carried for nest construction); Ruchin, Antropov, and Shibayev, 2009:168 (Russia: Republic of Mordovia); Shorenko, 2009:366 (in list of Sphecidae *sensu lato* of Crimea); Bitsch, 2010:103 (in supplement to vol. II of Faune de France, 1997: recent records from Germany and Switzerland reported); Danilov, 2010b:44 (distribution of Tethyan type); Ghazi-Soltani, Ebrahimi, Iranipour, and Pour Abad, 2010:797 (Iran: East Azerbaijan: county of Tabriz); Ghazi-Soltani, Khaghaninia, and Shahim, 2010:637 (Iran: East Azerbaijan: Horand Forests); Mokrousov, 2010a:60 (Russia: Nizhniy Novgorod and Vladimir Oblast's, Mordoviya, Tatarstan: no specific localities); Rudoiskatel', 2010:147 (Russia: central and southern Ural Mountains); Schmid-Egger, 2010a:22 (in red list of

Aculeata of Germany: relatively common); Shorenko and Konovalov, 2010:11 (Ukraine); Tüzün and Yüksel, 2010:4467 (Turkey: Niğde Province); van der Smissen, 2010b:386 (France: Vaucluse: Bédoin); Baghirov, 2011b:139 (recorded from Altay by Nemkov *in* Nemkov, Kazenas, Budrys, and Antropov, 1995); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:497 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Gogala, 2011:8 (Slovenia); Mokrousov, Berezin, and Egorov, 2011:65 (Russia: Chuvash Republic); Murai and Amr, 2011:109, 120 (first record from Syria: Al Thawrah Nature Reserve at 35°51'N 28°38'E); Bilański, Kołodziej, and Pająk, 2012:131 (southeastern Poland: 49 localities); Boillat, 2012:229 (Switzerland: in checklist of insects of Canton de Genève); Mokrousov and Zryanin, 2010:97 (does not need to be protected in Russia: Novgorod Oblast'); Józan, 2011:179 (in checklist of Sphecidae *sensu lato* of Hungary); Rudoiskatel', 2011d:239 (Russia: central Ural Mountains); Chatenoud, Polidori, Federici, Licciardi, and Andrietti, 2012:939 (mud collecting consists of four phases: 1. search for suitable place, 2. removing leafs, twigs, etc. from chosen area, 3. forming mud balls, 4. flying off with mud balls); U. Frommer, 2012:188 (Germany: probable recent migrant through Rhône-Rhein trench); Jarosiewicz, 2012:89 (Poland: Żywiec); Kazenas, 2012b:168 (Kazakhstan: Korgalzhin State Nature Reserve); Prisniy, 2012:45 (Russia: Belgorod Oblast'); Protsenko, Fateryga, Ivanov, and Puzanov, 2012:56 (Ukraine: Crimea); Shibayev and Polumordvinov, 2012:278 (Russia: Penza Oblast'); Yildirim, 2012:74 (Turkey: Erzurum: Şenkaya: Akşar); Kazenas, 2013a:10, 11 (color photographs of adult wasps and of nest, short information on geographic distribution and nesting habits); Mader, 2013:1-236 (locality records, structure and coloration, nesting sites, distribution and migration, color photographs); Mokrousov, Ruchin, and Egorov, 2013:198 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Pankov, 2013:228 (Russia: Ivanovo Oblast'); Polidori, Crottini, Della Venezia, Selfa, Saino, and Rubolini, 2013:40 (animal protein as food for larva, unable to manipulate food load, flight muscle ratio, wing loading); A. Scholz and Liebig, 2013:26 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Shlyakhtenok, 2013:129 (in annotated catalog of aculeate wasps of Belorussia); Wiśniowski, Huflejt, Babik, Czechowski, and Pawlikowski, 2013:28 (current distribution in Poland); Baldock, 2014:354 (Spain: Island of Mallorca); Danilov, 2014a:424 (Russia: Siberia: Altayskiy Krai: no specific locality), 2014b:513 (in key to Sphecidae s.s. of Siberia); Dunford, Turbyville, and Leavengood, 2014:11 (listed as medically important in Afghanistan); Dyuzhaeva, 2013:116 (Russia: Samara Oblast': Zhiguli Nature Reserve); Ebrahimi, 2014:17 (Iran: Ardebil, Āzarbāijān-e Sharghi, Fārs, Ghom, Gilān, Golestān, Hamadān, Hormozgān, Kordestān, Markazi, Māzandarān, Tehrān, and Zanjan provinces); Fateryga and Kovblyuk, 2014:43 (nesting ecology in Crimea); Kazenas, 2014a:131 (Kazakhstan: Karatau Mountain Range); Mokrousov and Vafin, 2014:54 (Russia: Republic of Tatarstan); Ruchin and Antropov, 2014:34 (Russia: Republic of Mordovia); Shayestehfar, Noori, Talebi, and Moniri, 2014:24 (Iran: Isfahan: Golpayegan); Vas and Józan, 2014:160 (in key to *Chalybion* and *Sceliphron* of Hungary); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); R. Burger, 2015:14 (Germany: Baden-Württemberg: Mannheim); Gülmez and Can, 2015c:34 (Turkey: nest and prey); Koçak and Kemal, 2015:279 (in checklist of Hymenoptera of Turkey); Kovalchuk and Rutkowski, 2015:44 (Ukraine: Carpathian region, nesting habits); P. Rosa and Pagliano, 2015:96 (Italy: Lombardia and Piemonte: Parco del Ticino); Samin and Bagriacik, 2015:70 (Iran: Ardabil: Germi at 39°00'N 47°57'E); Samin, Bagriacik, and Monaem, 2015:195 (Iran: West Azerbaijan: Makoo); Shorenko, 2015:315 (in list of Sphecidae *sensu lato* of Crimea); Tatur-Dytkowski, 2015:74 (Poland: Dańczów near Kudowa Zdrój); Can, Gülmez, and Aydın, 2016a:2629 (venom active against human malignant tumors, but less so than venom of *Sphex flavipennis*); Dollfuss, 2016:1170 (collecting localities from Algeria, Austria, Bulgaria, Croatia, Czech Republic, France, Georgia, Greece, Hungary, Iran,

- Italy, Jordan, Kazakhstan, Kyrgyzstan, Macedonia, Montenegro, Morocco, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Syria, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan); Gülmez and Dizer, 2016:57 (Turkey: Tokat Province); Levárdá and Matache, 2016:44 (in catalog of Sphecidae s.s. of Romania); Miłkowski and Buchholz, 2016:81 (Poland: Góry Świętokrzyskie, Puszcza Kozienicka, Radom); Mokrousov and Popov, 2016:562 (Russia: Krasnodarskiy Krai); Wiśniowski, 2016:126 (Poland: Ojców National Park); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:4 (Turkey: Erzurum and Ordu provinces); Yudin, 2016:163 (Russia: Ul'yanovsk Oblast'); Arens, 2017a:624 (Greece: Peloponnesus); Danilov, 2017b:214 (in catalog of Sphecidae s.s. of Russia); Gülmez, Elmastaş, Kayır, and Can, 2017:21 (fatty acid composition in larva, pupa, adult, and prey); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Ardabil, East Azerbaijan, Fars, Golestan, Guilan, Hamadan, Hormozgan, Isfahan, Mazandaran, Qom, South Khorasan, Tehran, West Azerbaijan, and Zanjan provinces); Magdalou, 2017:20 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Mas Larrieu, Julols, Vallée d'Eyne); Shorenko, 2017:76 (in Crimea collected in May through August); Turrisi and Altadonna, 2017:757 (Italy: summary of records from Sicily); Kemal and Koçak, 2018:43 (Turkey: in list of pterygot insects of Van Province); Shorenko, 2018:127 (Crimea, including localities, habitats, and number of specimens); Gülmez, 2019:3 (Turkey: Amasya, Ankara, Sivas, and Tokat provinces: no specific localities), 4 (abnormal forewing venation); Nikolaeva, 2019:144 (Russia: Ryazan Oblast': should be excluded from Red Book, but be monitored); Ruchin and Antropov, 2019a:13220 (Russia: Mordovia State Nature Reserve); Shorenko, 2019:211 (among commonest sphecid species in Crimea); Zajac, Regner, Michořap, Smolis, and Kadej, 2019:120 (current geographic distribution in Poland); Ben Khedher, Yildirim, Braham, and Ljubomirov, 2020a:312 (in list of Tunisian Sphecidae *sensu stricto*); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:125 (in Sphecid Fauna of Europe); Cassar and Mifsud, 2020:164 (in checklist of Sphecidae s.s. of Malta); Danilov, 2020:319 (specimens from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Russia: Astrakhan' Oblast', Crimea, and Altayskiy Krai in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Diaz-Calafat, 2020:3 (in key to *Sceliphron* of Majorca); Gwardjan and Celary, 2020:114 (Poland: Małopolska Upland); Maharramov, Mokrousov, and Proshchalykin, 2020:46 (Azarbaijan: Nakichivan Autonomous Republic); Shorenko, 2020:47 (Crimea: Karadag Nature Reserve); Turrisi, Altadonna, Lo Cascio, Nobile, and Selis, 2020:727 (Italy: Aeolian Archipelago: island of Panarea); Willsch, Friedrich, Baum, Jurisch, and Ohl, 2020:53 (mesothoracic musculature); Graf, Willsch, and Ohl, 2021:26 (musculature of sting apparatus); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 69 (in review of Indian *Sceliphron*); Bury, 2021:173 (southeastern Poland: mass nesting in Tylawa village); Cross, Baldock, and Wood, 2021:17 (in catalog of Sphecidae *sensu lato* of Portugal); Olszewski, Wiśniowski, and Ljubomirov, 2021:103 (in commented list of Sphecidae *sensu lato* of Poland); Ceccolini, 2022:121 (locality records from Albania, Belorussia, Poland, and Greece: islands of Ithaka and Lefkada); Kaplan and Yildirim, 2022:58 (Turkey: Bingöl Province).
- Sphex flavipes* Christ, 1791:303 (♀ only, ♂ = *Sceliphron spirifex*), junior primary homonym of *Sphex flavipes* Fabricius, 1781. Holotype or syntypes: ♀, France: Provence Region: no specific locality (destroyed). Synonymized with *Sceliphron destillatorium* by Kohl, 1918:100.
- Pepsis pensilis* Illiger, 1807b:94, ♀, ♂. Syntypes: Italy: no specific locality (destroyed). Synonymized with *Sceliphron destillatorium* by Kohl, 1918:100. – **As *Pelopoeus pensilis***: Vander Linden, 1827:366 (new combination, synonymy, southern Europe); Klug *in* Waltl, 1835:88 (in list of Hymenoptera of Andalusia); Lepeletier de Saint Fargeau, 1845:306 (in revision of world Hymenoptera, as *pensilis* Latreille); Lucas, 1849:273 (Algeria: Alger, Bône, La Calle, Milah, Oran); Belke,

1853:433 (Ukraine: Kamieniec Podolski, now Kamianets Podil'skyi); F. Smith, 1856:228 (in catalog of Hymenoptera in British Museum); A. Costa, 1858b:17 (in revision of Sphecidae of Kingdom of Naples); Belke, 1859:71 (Ukraine: Kamieniec Podolski, now Kamianets Podil'skyi); A. Costa, 1861:35 (differences between female and male); Sichel, 1861:751 (Italy: Sicilia); A. Costa, 1863:65 (Italy: Calabria Ulteriore: Reggio), 1867b:75 and 1867c:19 (in revision of Italian Sphecidae); Kirchner, 1867:217 (in catalog of European Hymenoptera); Palma, 1867:38 (Italy: Sicilia settentrionale); Dours, 1874:146 (in catalog of Hymenoptera of France); Marquet, 1875:207 (France: Haute-Garonne: Toulouse, and Hérault, Cette, now Sète); Lucas, 1877a: XCII (nest structures, description of larva); Girard, 1879:972 (morphology and habits); A. Costa, 1883:57 (Italy: Sardegna: Tissi and Oschiri, as *pensilis* Latreille); De Stefani Perez, 1889:269 (in key to Sicilian *Sceliphron*); Ed. André, 1888:105 (in revision of Sphecidae of Europe and Algeria), 1888:5* (bibliographic references); A. Costa, 1893b:5 (Tunisia, as *pensilis* Latreille); Medina, 1894a:259 (Spain); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera); Medina, 1896:104 (Spain: Alcalá de Guadaíra), 1898:153; (Portugal: Mamede); Acloque, 1897:95 (in Sphecid Fauna of France and Algeria); de Cobelli, 1903:104 (Italy: Province of Trentino); Antiga and Bofill, 1904:3 (Spain: Cataluña Province); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:519 (specimens in M. Spinola collection, Torino). **As *Pelopoeus destillatorius* var. *pensile***: Coulon, 1925:115 (Italy: Sicilia); Guiglia, 1948c:200 (Italy: Sardegna: Villasalto). – **As *Sceliphron pensilis***: E. Saunders, 1904c:605 (new combination, Spain: Mayorca), 637 (France: Cerbère; Spain); Mantero, 1905:67 (Italy: Toscana: Isola del Giglio); Dusmet y Alonso, 1906:7 (Spain); Ferton, 1908:562 (nesting habits); Morice, 1911:71 (Algeria: Biskra); Dusmet y Alonso, 1915:86 (Spain: Aragón); Berland, 1921:533 (Greece, correctly spelled *pensile*); Ferton, 1923:71 (nest); Ceballos, 1956:361 (in catalog of Hymenoptera of Spain). – **As *Sceliphron destillatorium* ab. *pensile***: Maidl, 1933b:121 (new status, Morocco). – **As *Sceliphron destillatorium* var. *pensilis***: Dalla Torre, 1897:383 (new status, in catalog of world Hymenoptera); Berland, 1925d:43 (in Sphecid Fauna of France); Guiglia, 1938b:9 (Italy: Sardegna); Giner Marí, 1943a:63 (in Sphecid Fauna of Spain); Giordani Soika, 1944:13 (Italy: Sicilia: Falcone, Fiumetorto, Messina); Guiglia, 1944b:9 (Italy); Nouvel and Ribaut, 1958:9 (France: Pyrénées-Orientales: Banyuls-sur-Mer area); Józán, 2008:82 (first record from Hungary: Sárospatak). – **As *Sceliphron destillatorium pensile***: W. Schulz, 1904b:92 (new status, Czechoslovakia); Nadig, 1934:33 (France: Corse: Cap Corse; Italy: Sardegna: Aritzo, Mandas).

Pelopoeus sardonius Lepeletier de Saint Fargeau, 1845:308, ♀ (as *Sardonius*, incorrect original capitalization). Holotype or syntypes: ♀, Italy: Sardinia: no specific locality (depository?). Synonymized with *Sceliphron destillatorium* by Kohl, 1918:100. – F. Smith, 1856:228 (in catalog of Hymenoptera in British Museum); Kirchner, 1867:217 (in catalog of European Hymenoptera); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:519 (specimen in M. Spinola collection, Torino). – **As *Sceliphron sordonium***: Dalla Torre, 1897:389 (new combination, in catalog of world Hymenoptera).

Pelopoeus sardous Caruccio, 1872:275. Emendation of *Pelopoeus sardonius*.

Pelopoeus pensilis var. *trinacriensis* De Stefani Perez, 1889:269, sex not stated. Syntypes: Italy: Sicily: no specific locality (depository?). Synonymized with *Sceliphron destillatorium* by Kohl, 1918:100. – **As *Sceliphron destillatorium* var. *trinacriense***: Dalla Torre, 1897:384 (new combination, in catalog of world Hymenoptera); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera). – **As *Sceliphron pensilis* var. *trinacriense***: Mantero, 1905:68 (Italy: Toscana: Isola del Giglio).

As *Sphex spirifex*: Peets, 1909-1911:68 (*Sphex spirifex* of Panzer = *Sceliphron destillatorius*). – As *Sceliphron spirifex*: Gauss, 1997a:17 (Germany: Baden-Württemberg: Burg Birkenhof near Freiburg), corrected to *Sceliphron destillatorium* by Stalling, 2002:186.

11. *fasciatum* (Lepeletier de Saint Fargeau)

Pelopaeus fasciatus Lepeletier de Saint Fargeau, 1845:315, ♀. Holotype or syntypes: ♀, origin unknown (originally Audinet Serville coll., now M. Spinola coll., Torino). – F. Smith, 1856:234 (in catalog of Hymenoptera in British Museum); Cresson, 1863:319 (in catalog of North American Hymenoptera); de Saussure, 1867:33 (Antilles, redescription); Ashmead, 1896b:31 (Bahama Islands); Bradley, 1957:40 (Lepeletier de Saint Fargeau's type in M. Spinola collection, Turin); Casolari and Casolari Moreno, 1980:102 (specimens in M. Spinola collection, Torino); Pagliano, 2008:523 (specimens in M. Spinola collection, Torino). – As *Sceliphron fasciatum*: Dalla Torre, 1897:384 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae), 1900:229 (Lesser Antilles: Island of Saint Vincent), 308 (in checklist of Caribbean Hymenoptera); W. Schulz, 1903:470 (Haiti, description of ♂); nec B. Porter, 1926:16 (= *Sceliphron argentifrons*); Holland, 1917:294 (Cuba: Isla de Pinos, now Isla de la Juventud: Los Indios and Nueva Gerona); Ogilvie, 1928:50 (Bermuda); van der Vecht and van Breugel, 1968:228 (in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Simon Thomas, 1984:96 (Caribbean: islands of Saint Martin and of Dominica); Amaranter, 2002:71 (in catalog of Neotropical Sphecidae); Fernández and Castro-Huertas, 2014:384 (in key to Neotropical *Sceliphron*).

12. *fervens* (F. Smith)

Pelopaeus fervens F. Smith, 1858a:101, ♀. Lectotype: ♀, Malaysia: Sarawak: no specific locality (OXUM), designated by Hensen, 1987:242. – F. Smith, 1863b:134 (known from Borneo and Java), 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago); Cameron, 1889c:101 (in list of Sphecidae of Oriental Region). – As *Sceliphron fervens*: Dalla Torre, 1897:385 (new combination, in catalog of world Hymenoptera); R. Turner, 1912a:196 (Indonesia: Papua: Mimika River); R. Turner in R. Turner, Meade-Waldo, and Morley, 1915:3 (Indonesia: Papua: Mimika River); Kohl, 1918:130 (in revision of world Sceliphriini); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Hensen, 1987:242 (in revision of subgenus *Prosceliphron*, now *Hensenia*; southern Thailand, Malaysia, Sumatra, Bangka, western Java, Borneo, Palawan).

13. *fistularium* (Dahlbom)

Pelopaeus fistularius Dahlbom, 1843:23, ♀, ♂ (authorship attributed to Illiger). Syntypes: South Africa: Cape Town area; and Brazil: no specific locality (Lund). – Dahlbom, 1845:434 (in key to *Sceliphron*, America); F. Smith, 1856:233 (in catalog of Hymenoptera in British Museum); Taschenberg, 1869:428 (Brazil, variation); A. Costa, 1862a:17 (specimen from Brazil in Museo Zoologico di Napoli); Rudow, 1904:197 (building nests out of mud), 1912:40 (description of nest). – As *Sceliphron fistularium*: Dalla Torre, 1897:385 (new combination, in catalog of world Hymenoptera, as *fistulare*); W. Fox, 1897b:374 (Brazil: Chapada, Maruru, and Pedra Branca; as *fistulare*), 1899:199 (Brazil: Rio Grande do Sul, as *fistulare*); Strand, 1910a:127 (Paraguay, as *fistulare*); Bertoni, 1911:132 (nest structure); Strand, 1912:281 (Paraguay, nest structure, as *fistulare*); Bodkin, 1918:314 (British Guiana, nesting habits, as *fistulare*); Kohl, 1918:97 (in revision of world Sceliphriini); B. Porter, 1926:14 (in revision of New World *Sceliphron*, as *fistulare*); Cheesman, 1929:150 (Colombia: Island of Gorgona, as *fistulare*); Rau, 1933:160 (Panama: Barro Colorado Is-

land, nest, prey, egg deposited on first spider, as *fistulare*); Richards, 1937a:105 (Guyana, as *fistulare*); Soukup, 1943:265 (Peru); Callan, 1950:205 (common in Trinidad, as *fistulare*); van der Vecht and van Breugel, 1968:252 (in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Fritz and Genise, 1980 (75 (characteristic of nest cells); Nascimento and Overal, 1980:10 (Brazil); Freeman, 1982:343 (Trinidad, distribution and population dynamics); Callan, 1990b:19 (in checklist of Trinidad Sphecidae); F. Fernández, 1990:23 (Colombia: Meta: Parque Nacional Natural La Macarena); Lopez, 1994:15 (redescription, prey); Hanson and Menke, 1995:637 (known from Costa Rica); J.M. González and Terán, 1996:142 (nest parasite in Venezuela: *Melittobia acasta* (Walker), a eulophid), 144 (nest parasite in Venezuela: *Melittobia australica* Girault); Cambra and Santos, 2000:54 (Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Camillo, 2002:127 (nests, sex ratio, mortality); Amarante, 2002:72 (in catalog of Neotropical Sphecidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:670 (in checklist of Mexican Sphecidae); Starr and Hook, 2003:22 (in catalog of Aculeata of Trinidad, West Indies); Zama, Brito, Lino-Neto, Campos, Dolder, and Báó, 2005:314 (sperm structure); Compagnucci and Roig Alsina, 2008:64 (in key to *Sceliphron* of Argentina), 66 (in review of *Sceliphron* of Argentina); Buys, 2009e:280 (Brazil: Rio de Janeiro: Iguaba Grande, Itatiaia, Niterói, Rio de Janeiro, Seropédica, Teresópolis); Rasmussen and Asenjo, 2009:16 (in checklist of Crabronidae of Peru); Buys, 2011b:2 (Brazil: Rio de Janeiro: Nova Iguaçu, Itatiaia, Rio de Janeiro, Seropédica, Três Rios); Rodrigues and Buys, 2013:214 (Brazil: Espírito Santo: Alegre, Cariacica, Linhares, and Sooretama); Buys, 2014a:378 (description of last instar larva); Buys and Rodrigues, 2014:40 (Brazil: State of Espírito Santo: several localities); Fernández and Castro-Huertas, 2014:383 (in key to Neotropical *Sceliphron* and to *Sceliphron* of Colombia), 389 (in revision of *Sceliphron* of Colombia); Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:70 (Brazil: Mato Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco); Dollfuss, 2016:1175 (collecting localities from French Guiana, Panama, and Venezuela); Trad and Silvestre, 2017:4 (Brazil: Mato Grosso do Sul); León-Burgos, Murillo-Pacheco, Bautista-Zamora, and Quinto, 2019:6 (Colombia: Meta: Villavicencio at 4°04'30"N 73°35'07"W); Buys, 2020b:80 (in cladistic analysis of larvae of Sphecidae s.s.); Alarcón and Cazorla, 2021 (Venezuela: Merida; araneid prey); Santos-Murgas, Osorio-Arenas, Quintero A., Miranda C., and Gutierrez-Lanzas, 2021:203 (Panama; prey: *Alpaida veniliae* (Keyserling), an araneid); Pádua, Fernandes, Somavilla, and Oliveira, 2022:394 (nest parasite: *Photocryptus nigrosignatus* Kriechbaumer, Ichneumonidae in Amazonas State of Brazil; the eumenid *Pachodynerus nasidens* Latreille emerged from its nest).

Pelopoëus histrio Lepeletier de Saint Fargeau, 1845:316, ♀, ♂. Lectotype: ♂, French Guiana: Cayenne (M. Spinola collection, Torino), designated by Menke in R. Bohart and Menke, 1976:105. Synonymized with *Sceliphron fistularium* by Kohl, 1918:97. – Erichson, 1849:589 (British Guyana); de Saussure, 1867:32 (South America, redescription); Cameron, 1988a:25 (Mexico, Guatemala); Casolari and Casolari Moreno, 1980:102 (specimens in M. Spinola collection, Torino); Pagliano, 2008:523 (lectotype in M. Spinola collection, Torino). – **As *Sceliphron histrio***: W. Fox, 1895c:265 (new combination, Mexico: Baja California); Cameron, 1912a:426 (Guyana).

Pelopoëus bimaculatus Lepeletier de Saint Fargeau, 1845:317, ♀. Holotype or syntypes: ♀, French Guiana: Cayenne (originally Audinet-Serville coll., now Torino). Synonymized with *Sceliphron fistularium* by Kohl, 1918:97 (synonymy confirmed by Menke in R. Bohart and Menke, 1976:105), with *Sceliphron figulus* by B. Porter, 1926:11, and with *Sceliphron asiaticum* by van der Vecht and van Breugel, 1968:226. – F. Smith, 1856:233 (in catalog of Hymenoptera in British Museum); A. Costa, 1864a:60 (one specimen from Cayenne, French Guiana, in Museo Zoologico di Napoli),

1864b:112 (two specimens from Montevideo, Uruguay, in Museo Zoologico di Napoli); Rudow, 1904:197 (building nests out of mud), 1912:40 (description of nest); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:521 (unpublished lectotype in M. Spinola collection, Torino). – **As *Sceliphron fistulare* var. *bimaculatum***: Dalla Torre, 1897:385 (new combination, new status, in catalog of world Hymenoptera).

14. *formosum* (F. Smith)

Pelopaeus formosus F. Smith, 1856:230, ♀. Lectotype: ♀, Australia: Northern Territory: Port Essington (BMNH), designated by Hensen, 1987:258. – Froggatt, 1892:209 (in catalog of Australian Hymenoptera). – **As *Sceliphron formosum***: nec Bingham, 1897:239 (= *Sceliphron deforme tibiale*); Dalla Torre, 1897:385 (new combination, in catalog of world Hymenoptera); nec Paiva, 1907:15 (= *Sceliphron deforme tibiale*); Kohl, 1918:126 (in revision of world Sceliphriini); Riek, 1970:940 (in Insect Fauna of Australia); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Callan, 1981b:82 (Australia, nest parasite: *Macrosiagon semipunctatum* (Lea), a rhipiphorid); Naumann, 1983b:134 (in key to Australian *Sceliphron*); Cardale, 1985:222 (in catalog of Australian Sphecidae); Hensen, 1987:256 (in revision of subgenus *Prosceliphron*, now *Hensenia*), 258 (as *formosum formosum*; southern New Guinea, eastern Australia); Callan, 1988:78 (nesting habits); Harris, 1992:16 (in revision of species introduced to New Zealand); Naumann, 1993:182 (Australia: Queensland: Heathlands area in Cape York); Jonathan, Ray, and Kundu, 2000:181 (India: Meghalaya: East Giro Hilt: Dainadubi, Darugiri, and Soagsak); Pagliano, 2003a:505 (Australia: Northern Territory); Dollfuss, 2016:1175 (collecting localities from Indonesia and Japan); Yuan, Li, Yeates, and Rodriguez, 2019:109 (some of salticid spider prey are parasitized by acrocerid flies; flies emerge but cannot leave nests and die inside); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*, as *formosum formosum*), 70 (in review of Indian *Sceliphron*).

Sceliphron papuanum Cameron, 1906d:221, ♀. Holotype or syntypes: ♀, Indonesia: Papua: Merauke (Zool. Mus. Amsterdam). Synonymized with *Sceliphron formosum* by van der Vecht in R. Bohart and Menke, 1976:106. – Kohl, 1918:138 (original description copied).

ssp. bruinjnii (Maindron)

Pelopaeus bruinjnii Maindron, 1878:394, ♀ (as *Bruinjnii*, incorrect original capitalization). Lectotype: ♀, New Guinea: Dorey, now Manokwari (MNHN), designated by Hensen, 1987:256. – Maindron, 1878:396 (in checklist of *Pelopaeus* of India and Indian Archipelago). – W.F. Kirby, 1880, Zool. Records (as *bruininii*). – **As *Sceliphron bruinjnii***: Dalla Torre, 1897:379 (new combination, in catalog of world Hymenoptera); Cameron, 1906b:56 (Indonesia: West Papua: Manokwari, as *Bruynii*), 1906d:221 (Indonesia: Papua: Merauke: Etna Bay); Kohl, 1918:134 (original description copied); van der Vecht and van Breugel, 1968:fig.2-4 (illustrations of male sternum VIII and male genitalia); Bohart and Menke, 1976:106 (in checklist of world Sphecidae). – **As *Sceliphron formosum bruinjnii***: Hensen, 1987:256 (new status; in revision of subgenus *Prosceliphron*, now *Hensenia*; New Guinea).

Sceliphron fallax Kohl, 1918:129, ♀, ♂. Lectotype: ♀, Papua New Guinea: Astrolabe Bay: Stephansort (NHMW), designated by Hensen, 1987:256. Synonymized with *Sceliphron bruinjnii* by Bohart and Menke, 1976:106. – Dollfuss, 1989:12 (lectotype in NHMW).

ssp. ocellare Kohl

Sceliphron ocellare Kohl, 1918:128, ♀. – Syntypes: ♀, Papua New Guinea: Bismarck Archipelago: Ralum (ZMHU) and Kinigunang (TMB). – Bohart and Menke, 1976:106 (in checklist of world

Sphecidae); Tano, Nozaka, Kurokawa, and Murota, 1994:57 (Philippines). – **As *Sceliphron formosum ocellare***: Hensen, 1987:258 (new status; in revision of subgenus *Prosceliphron*, now *Hensenia*; Papua New Guinea: Admiralty Islands, New Britain, New Ireland, Solomon Islands).

15. *fossuliferum* (Gribodo)

Pelopaeus fossuliferus Gribodo, 1895:110, ♀. Syntypes: Mozambique: Rikatla (MSNG). – **As *Sceliphron fossuliferum***: Kohl, 1909:370 (new combination, Tanzania: Pemba Island), 1918:135 (original description copied); Arnold, 1952:480 (good species, Mozambique, redescription); Leclercq, 1955h:58 (bibliographic references); van der Vecht and van Breugel, 1968:214 (in revision of world *Sceliphron*), 215 (in key to subspecies of *Sceliphron fossuliferum*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Dollfuss, 1990:122 (Central African Republic); Pennati and Mariotti, 2015:54 (in list of Hymenoptera described by G. Gribodo); Dollfuss, 2016:1175 (collecting localities from Benin, Central African Republic, Malawi, Nigeria, Zambia, and Zimbabwe).

As *Sceliphron quartinae* (corrected to *Sceliphron fossuliferum* by van der Vecht and van Breugel, 1968:215): Brauns, 1911:119 (South Africa, nest structure, nocturnal rest sites); Mayer and von Schulthess, 1922:364 (nest); von Schulthess, 1926:21, Verh. III Intern. Kongr. (.); Arnold, 1928:245 (♀ only, in revision of southern African *Sceliphron*), corrected to *Sceliphron decipiens* by Arnold, 1952:482; Schouteden, 1930:95 (Zaire); Arnold, 1943:76 (Zaire); Leclercq, 1959:59 (Zaire, Ethiopia, South Africa; as *quartinae quartinae*).

Sceliphron decipiens Arnold, 1952:482, ♀. Holotype: ♀, Uganda: Unyoro (SAMC). Synonymized with *Sceliphron fossuliferum* by van der Vecht and van Breugel, 1968:215. – **As *Sceliphron voeltzkovii decipiens***: Leclercq, 1961b:52 (new status, Guinea, Tanzania, Zaire); Diniz, 1964c:107 (Angola: Lunda: Lago Calundo); Leclercq, 1969:1948 (Congo Brazzaville, as *voeltzkovi* f. *decipiens*, new status).

As *Sceliphron quartinae*: Leclercq, 1955h:59 (locality records), corrected to *Sceliphron voeltzkovii decipiens* by Leclercq, 1961b:52.

ssp. complex Kohl

Sceliphron complex Kohl, 1918:107, ♀. Holotype: ♀, Gabon: Chutes de Samlia River north of Gamio (NHMW). – Arnold, 1928b:246 (in revision of southern African *Sceliphron*), 1930:16 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:94 (Zaire); Berland, 1952b:276 (boundary of Ivory Coast, Guinea, and Liberia: Mount Nimba); Leclercq, 1955:59 (as synonym of *Sceliphron quartinae voeltzkovii*); I. Robertson, 1969:480 (Tanzania: Ukiriguru, Urambo). – **As *Sceliphron fossuliferum complex***: van der Vecht and van Breugel, 1968:216 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Dollfuss, 1989:12 (type material in NHMW).

ssp. voeltzkovii Kohl

Sceliphron voeltzkovii Kohl, 1909:370, ♀ (as *Voeltzkovii*, incorrect original capitalization). Holotype: ♀, Tanzania: Pemba Island: Chake-Chake (ZMHU or SIF). – Leclercq, 1961b:51 (discussion of nomenclature, as *voeltzkovii*), 52 (Zaire, as *voeltzkovii voeltzkovii*); Diniz, 1954c:107 (Angola: Lunda: Dundo). – **As *Sceliphron quartinae* var. *voeltzkovii***: Kohl, 1918:106 (new status, in revision of world *Sceliphron*, as *voeltzkovii*); Arnold, 1928:246 (comparison with *Sceliphron complex*). – **As *Sceliphron quartinae voeltzkovii***: Leclercq, 1955h:59 (new status, Zaire and Rwanda: locality records, specimens from Cameroon = *quartinae*). – **As *Sceliphron fossuliferum voeltzkovii***: van der Vecht and van Breugel, 1968:216 (new subspecific combination, in revision of world

Sceliphron); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Rodgers and Home-wood, 1982:233 (Tanzania: Usambara Mountains).

Sceliphron masaicum R. Turner, 1919c:393, ♀. Lectotype: ♀, Kenya: Ngare Narok (BMNH), designated by van der Vecht and van Breugel, 1968:216. Synonymized with *Sceliphron complex* by Arnold, 1928b:246, and with *Sceliphron fossuliferum voeltzkowii* by van der Vecht and van Breugel, 1968:216.

16. *funestum* Kohl

Sceliphron funestum Kohl, 1918:121, ♀. Holotype: ♀, Turkey: Smyrna (NHMW). – Bytinski-Salz, 1956:224 (Turkey: Aydın; misspelled *funereum*); de Beaumont, 1965a:17 (Greece), 1967a:277 (Turkey); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Hensen, 1987:226 (in revision of subgenus *Prosceliphron*, now *Hensenia*; Greece, Turkey); Dollfuss, 1989:12 (type material in NHMW); Gayubo and Özbek, 2005:4 (Turkey: Antalya: Arapsuyu, Manavgat; Aydın: Çine; Muğla: Köyzceđiz); Schmid-Egger, 2005a:9 (in key to European and Mediterranean *Sceliphron*), 13 (recognition, color, distribution); Ljubomirov and Yildirim, 2008:10 (in catalog of Sphecidae of Turkey); Bitsch, 2010:104 (in supplement to vol. II of Faune de France, 1997: recent records from Eastern Europe reported, diagnostic characters); Mader, 2013:209 (color photograph); Ebrahimi, 2014:18 (Iran: Markazi: Khomein: Shahābieh); Vas and Józán, 2014:160 (in key to *Chalybion* and *Sceliphron* of Hungary, not yet found in Hungary); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); Dollfuss, 2016:1175 (collecting localities from Greece and Turkey); Koçak and Kemal, 2015:279 (in checklist of Hymenoptera of Turkey); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:4 (Turkey: Adıyaman: Atatürk Barajı; Antalya: Demre: Beymelek, Manavgat Beşkonak); Arens, 2017a:625 (Greece: Peloponnesus); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Markazi Province); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:124 (in Sphecid Fauna of Europe).

17. *fuscum* Klug

Sphex hemipterus Fabricius, 1798:244, sex not stated (as *hemiptera*, incorrect original termination), junior primary homonym of *Sphex hemipterus* Scopoli, 1772. Lectotype: ♂, Isle de France, now Mauritius (MNHN, coll. Bosc), designated by van der Vecht, 1961a:43 (use of the word “type”). – Fabricius, 1799:46 (in Index to his Supplementum, 1798); Jurine, 1807:128 (in list of *Sphex*). – **As *Pelopoëus hemipterus***: Fabricius, 1804:204 (new combination, redescription); Dahlbom, 1843:23 (in revision of Sphecidae and Pompilidae), 1845:XX (study of specimens in collection Fabricius), 434 (in key to *Pelopoëus*); Lepeletier de Saint Fargeau, 1845:311 (in revision of world Hymenoptera, recorded from France, in error); F. Smith, 1856:229 (in catalog of Hymenoptera in British Museum); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:520 (specimens in M. Spinola collection, Torino). – **As *Sceliphron hemipterum***: de Saussure, 1892:440 (new combination, Madagascar); Pérez, 1895b:210 (Seychelles Islands); Dalla Torre, 1897:386 (in catalog of world Hymenoptera); Friese, 1900:267 (Madagascar: Nosy-Be); Cameron, 1907e:75 (Seychelles Islands; redescription); Kohl, 1909:371 (Madagascar); Turner, 1911b:369 (Seychelles Islands); Bordage, 1912:45 (Island of Réunion: use of provisioned nests by *Pison argentatum*), 68 (Island of Réunion: nesting habits); Kohl, 1918:108 (in revision of world Sceliphriini); Friederichs, 1918:30 (nesting habits), 48 (Madagascar: Antananarivo, Diego Suarez); R. Turner, 1919b:238 (New Caledonia); Arnold, 1945:86 (Madagascar); Williams, 1945:438 (New Caledonia); Vesey-Fitzgerald, 1950:75 (Seychelles Islands; nesting behavior); Leclercq, 1953b:211 (Madagascar); Vesey-Fitzgerald, 1956b:362 (Seychelles); Leclercq, 1961d:106 (Madagascar); van der Vecht and van Breugel, 1968:237 (in revision of world *Sceliphron*), 254 (*hemipterum* is invalid junior homonym).

Sceliphron fuscum Klug, 1801:566, sex not stated. Holotype or syntypes: “Isle de France” (ZMHU). – Strand, 1915:91 (as synonym of *Sceliphron coromandelicum*; authorship attributed to Lepeletier de Saint Fargeau); van der Vecht and

van Breugel, 1968:237 (as synonym of *Sceliphron hemipterum*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Nilsson, Jonsson, Rason, and Randrianjohany, 1986:412 (Madagascar: Toamasina: 4 km south of Mahavelona, as Foulpointe), 416 (pollinator of orchid *Cymbidiella flabellata* (Thou.) Rolfe in Madagascar); Callan, 1990a:22 (New Caledonia: no specific locality); Madl, Matyot, and Schödl, 1996:831 (Seychelles Islands); Madl, 1997:820 (Madagascar: Nosy Boraha Island), 821 (in checklist of Nosy Boraha Sphecidae); Pulawski, 2003b:795 (in checklist of Malagasy Sphecidae); Jennings, Krogmann, and Burwell, 2013:32 (in checklist of Hymenoptera of New Caledonia); Madl, 2014a:1019 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records), 2014b:23 (Madagascar: locality records); Dollfuss, 2016:1175 (collecting localities from Madagascar, Mascarene Islands, and Seychelles); Danilov, 2020:319 (specimens from Seychelles in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Kolosova, Potapov, Spitsyna, Spitsyn, and Bolotov, 2022:3 Seychelles Islands; insects nestings in abandoned nests of this species)

Sceliphron quodi Vachal, 1907:144, ♀, ♂. Syntypes: New Caledonia: no specific locality (MNHN). Synonymized with *Sceliphron hemipterum* by van der Vecht and van Breugel, 1968:237. – Vachal, 1908:23 (New Caledonia); Kohl, 1918:138 (original description copied); Rasmussen, 2012:42 (in list of species described by Vachal).

18. *intrudens* (F. Smith)

Pelopeus intrudens F. Smith, 1858b:15, ♀, ♂. Lectotype: ♀, Indonesia: Sulawesi: no specific locality (BMNH), designated by van der Vecht and van Breugel, 1968:212. – F. Smith, 1863b:134 (known from Sulawesi), 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:397 (in checklist of *Pelopaesus* of India and Indian Archipelago). – **As *Sceliphron intrudens***: Bingham, 1897:236 (new combination, in revision of wasps and bees of British India); Dalla Torre, 1897:387 (in catalog of world Hymenoptera); Kohl, 1918:110 (in revision of world Sceliphriini); nec Williams, 1919d:120 (= *Sceliphron javanum aemulum*); Iwata and Yoshikawa, 1961:398 (Thailand); van der Vecht and van Breugel, 1968:211 (in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Kifune and Tano, 2006:58 (parasite: *Paraxenos laetum* (Ogloblin, 1926), a strepsipteran, found in Sulawesi); Dollfuss, 2016:1175 (collecting localities from Indonesia); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 70 (in review of Indian *Sceliphron*).

19. *isaaci* Jha and Farooqi

Sceliphron isaaci Jha and Farooqi, 1995:13, ♀, ♂. Holotype: ♀, India: Andaman Islands: Port Blair: North Bay (depository?). – Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:81 (unrecognized species, short diagnosis provided).

20. *jamaicensis* (Fabricius)

Sphex jamaicensis Fabricius, 1775:347. Holotype or syntypes: Jamaica (lost: van der Vecht, 1961a:43). – Fabricius, 1781:444 (redescription, as *iamaicensis*), 1787:275 (redescription, as *iamaicensis*), 1793:203 (redescription). – **As *Pelopoeus jamaicensis***: Fabricius, 1804:204 (new combination, redescription); F. Smith, 1856:234 (in catalog of Hymenoptera in British Museum). – **As *Pelopeus* [sic] *caementarius* var. *jamaicensis***: de Saussure, 1867:30 (new status). – **As *Sceliphron caementarium* var. *jamaicense***: Dalla Torre, 1897:380 (new combination, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae). – **As *Sceliphron jamaicense***: Kohl, 1918:114 (in revision of world Sceliphriini); B. Porter, 1926:17 (in revision of New World *Sceliphron*, as *jamicensis*); Krombein, 1953c:17 (Bahamas: South Bimini Island); van der Vecht and van Breugel, 1968:229 (in revision of world *Sceliphron*, as *jamaicense jamaicense*), 254 (*jamaicense* is invalid junior homonym); Vardy, 1976:88 (*jamaicense* is the valid name, and never

was a junior homonym of *Vespa jamaicensis* Drury in *Sphex*); Elliott, Kurczewski, Claflin, and Salbert, 1979:357 (Bahama Islands: San Salvador Island); Elliott, 1992:45 (in list of wasps of Bahama Islands: occurring on islands of Bimini, Long Island, and San Salvador); Genaro, 1996a:239 (nest parasites), 2006:50 (in Catalog of Cuban Sphecidae and Crabronidae; other countries: Mexico, Isla de Juventud, Little Cayman, Bahamas, Hispaniola, and Jamaica); Fernández and Castro-Huertas, 2014:385 (in key to Neotropical *Sceliphron*); Starr, Falcón-Brindis, and Jiménez, 2018:467 (Mexico: Baja California Sur; fully provisioned, closed cells producing viable adults varied between 24% and 58%); Falcón-Brindis, Rodríguez-Estrella, and Jiménez, 2018:524 (Mexico: Baja California Sur; some females used both mud and concrete to seal the nests, and the brood was unable to emerge through the hardened material).

Pelopaeus annulatus Cresson, 1865a:135, ♀, ♂ (as Klug's MS name). Lectotype: ♀, Cuba: no specific locality (ANSP), designated by Cresson, 1916:93. Synonymized with *Sceliphron jamaicensis* by van der Vecht and van Breugel, 1968:254 (treated incorrectly as junior homonym). – de Saussure, 1867:31 (as synonym of *Pelopaeus* [sic] *vindex*). – **As *Ammophila annulatus***: Ashmead, 1900:308 (new combination, in checklist of Caribbean Hymenoptera). – **As *Sceliphron figulus* var. *annulatum***: Dalla Torre, 1897:384 (new combination, new status, in catalog of world Hymenoptera); Ashmead, 1899d:355 (in checklist of North American Sphecidae). – **As *Sceliphron annulatum***: Ashmead, 1900:308 (in checklist of Caribbean Hymenoptera, listed second time under different generic name); van der Vecht and van Breugel, 1968:254 (*annulatum* is valid name for *jamaicense*); Alayo Dalmau, 1973:182 (in catalog of Cuban Hymenoptera), 1976:10 (in key to Cuban *Sceliphron*), 26 (in checklist of Cuban Sphecidae); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); de Zayas, 1981:78 (Cuba); Alayo Soto, 1982:5 (nesting habits); Fernández, Sarriol, Vega, Ricardo, González, and Portuondo, 2002:46 (Cuba: Provincia Granma); Portuondo and Fernández, 2004:135 (Cuba: Sierra Maestra and Nipe-Sagua-Baracoa mountains).

ssp. *lucae* (de Saussure)

Pelopaeus lucae de Saussure, 1867:30, ♀, ♂. Lectotype: ♂, Mexico: Baja California Sur: Cabo San Lucas (MHNG), designated by Menke in R. Bohart and Menke, 1976:105. – Cresson, 1887:275 (in catalog of North American Hymenoptera). – **As *Sceliphron lucae***: W. Fox, 1893d:9 (new combination, Mexico: Baja California), 1895c:265 (Mexico: Baja California); Dalla Torre, 1897:387 (in catalog of world Hymenoptera); B. Porter, 1926:19 (in revision of New World *Sceliphron*); Murray in Muesebeck, Krombein, and Townes, 1951:978 (in catalog of North American Hymenoptera); Bohart and Menke, 1963:117 (in revision of Nearctic Sceliphriini). – **As *Sceliphron caementarium* [sic] var. *lucae***: Ashmead, 1899d:354 (new status, in checklist of North American Sphecidae). – **As *Sceliphron jamaicense lucae***: van der Vecht and van Breugel, 1968:230 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Jiménez et al., 1992:169 (prey spectrum). – **As *Sceliphron annulatum lucae***: Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:670 (new subspecific combination, in checklist of Mexican Sphecidae).

21. *javanum* (Lepelletier de Saint Fargeau)

Pelopaeus javanus Lepelletier de Saint Fargeau, 1845:309, ♀ (as *Javanus*, incorrect original capitalization). Holotype: ♀, Indonesia: Java: no specific locality (originally Audinet-Serville coll., now M. Spinola collection, Torino). – nec F. Smith, 1856:101 (= *Sceliphron javanum benignum*); F. Smith, 1856:231 (in catalog of Hymenoptera in British Museum), 1858a:101 (Malaysia: Sarawak), 1863b:134 (known from Borneo, Java, and Moluku); Radoszkowski, 1871:196 (China: Zheizhang Province: Ning-Po); F. Smith, 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:396

(nest attributed to this species found in Java), 397 (in checklist of *Pelopaeus* of India and Indian Archipelago); Cameron, 1889c:101 (in list of Sphecidae of Oriental Region), 104 (redescription); Bingham, 1896a:437 (Sri Lanka: Pundaluoya); Casolari and Casolari Moreno, 1980:102 (specimens in M. Spinola collection, Torino); Pagliano, 2008:523 (holotype in M. Spinola collection, Torino). – **As *Sceliphron javanum***: Bingham, 1897:239 (new combination, in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:386 (in catalog of world Hymenoptera); Cameron, 1901a:25 (Thailand: Singora); Bingham, 1905:45 (Malaysia: Biserat, Jalor); Cameron, 1905k:65 (Java); Strand, 1915:92 (India: Darjeeling); Kohl, 1918:92 (in revision of world Sceliphroni); Menzel, 1928:265 (nesting habits, may be *Sceliphron madraspatanum*); Bradley, 1957:39 (Lepeletier de Saint Fargeau's type in M. Spinola collection in Turin); Iwata, 1964b:362 (Cambodia, Thailand; summary of biological information); Naito and Iwata, 1964:506 (Thailand, spider prey); Iwata, 1965:107 (number of oocytes); van der Vecht and van Breugel, 1968:239 (in revision of world *Sceliphron*), 248 (as *javanum javanum*, in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); van Vondel, 1995:29 (specimens from Java and Sumatra in Natuurmuseum Rotterdam); Ohl and Linde, 2003:149 (number of ovarioles); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Barthélémy, 2014:7 (China: Hong Kong); Dollfuss, 2016:1176 (collecting localities from India, Indonesia, Laos, Malaysia, Nepal, and Vietnam); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 72 (in review of Indian *Sceliphron*); Pham and Antropov, 2021:316 (recorded from Vietnam by Dollfuss, 2016).

ssp. *aemulum* Kohl

Sceliphron aemulum Kohl, 1918:94, ♀. Syntypes: ♀, Philippines: Mindanao: no specific locality (NHMW). – Baltazar, 1966:346 (in catalog of Hymenoptera of Philippines). – **As *Sceliphron javanum aemulum***: van der Vecht and van Breugel, 1968:247 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Dollfuss, 1989:12 (type material in NHMW); Tano, Nozaka, Kurokawa, and Murota, 1994:56 (Philippines); Abenis, Lit, Choi, and Park, 2020:257 (female mandible is sharp and clypeus has middle emargination in young specimens, but not in old ones, results of nest construction).

As *Sceliphron intrudens*: F. Williams, 1919d:120 Philippines: Luzon: Los Baños: nesting behavior), corrected to *Sceliphron javanum aemulum* by van der Vecht and van Breugel, 1968:247.

Sceliphron luzonensis Rohwer, 1922:674, ♀. Holotype: ♀, Philippines: Luzon: Laguna: Mount Makiling (USNM). Synonymized with *Sceliphron javanum aemulum* by van der Vecht and van Breugel, 1968:247. – Baltazar, 1966:346 (in catalog of Hymenoptera of Philippines).

ssp. *benignum* (F. Smith)

Pelopaeus benignus F. Smith, 1858b:15, ♀. Syntypes: Sarawak, Borneo (OXUM). – Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago); F. Smith, 1863b:134 (known from Borneo), 1871a:359 (in catalog of Oriental Aculeata); Cameron, 1889c:101 (in list of Sphecidae of Oriental Region). – **As *Sceliphron benignum***: Dalla Torre, 1897:379 (new combination, in catalog of world Hymenoptera). – **As *Sceliphron javanum* var. *benignum***: Strand, 1915:92 (new status, Sri Lanka, redescription); Kohl, 1918:93 (in revision of world *Sceliphron*). – **As *Sceliphron javanum benignum***: van der Vecht and van Breugel, 1968:247 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae).

Sceliphron sintangense Strand, 1915:94, ♀, ♂. Syntypes: Borneo: Sintang (DEI). – Strand, 1927:254 (in list of species described by author); Oehlke and Wudowenz, 1974:425 (four syntypes in DEI).

As *Pelopoeus javanus*: Smith, 1856:101 (in catalog of Hymenoptera in British Museum, Sarawak, Borneo), corrected to *Sceliphron javanum benignum* by van der Vecht and van Breugel, 1968:246.

ssp. chinense van Breugel

Sceliphron javanum chinense van Breugel in van der Vecht and van Breugel, 1968:244, ♀, ♂. Holotype: ♀, China: Island of Hainan: Fan Heang (MCZ). – Paratypes: China: Canton; southern India, Vietnam, Laos. – Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Pádr and Tkalců, 1991:23 (Vietnam: Nam Cat Tien National Park); Q. Li, 1995:88 (in key to Chinese Sceliphriini, as *chinensis*); Wu and Zhou, 1996a:28 (in revision in Economic Insect Fauna of China); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Pham, Kumar and Danilov, 2015:1586 (in list of Sphecidae *sensu lato* of Vietnam); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:82 (excluded from review of Indian *Sceliphron* because of insufficient evidence of its occurrence in India).

ssp. laboriosum (F. Smith)

Pelopoeus laboriosus F. Smith, 1859a:159, ♀. Holotype or syntypes: ♀, Indonesia: Maluku: Island of Aru (OXUM). – F. Smith, 1863b:134 (known from Island of Aru), 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:396 (in checklist of *Pelopaeus* of India and Indian Archipelago). – **As *Sceliphron laboriosum***: Dalla Torre, 1897:387 (new combination, in catalog of world Hymenoptera); Kohl, 1918:136 (original description copied). – **As *Sceliphron javanum laboriosum***: van der Vecht and van Breugel, 1968:249 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:105 (in checklist of world Sphecidae).

Sceliphron lorentzi Cameron, 1911:201, ♀. Holotype: ♀, Indonesia: Papua: Island of Bivak near mouth of Lorentz River (ZMAN). Synonymized with *Sceliphron javanum laboriosum* by van der Vecht and van Breugel, 1968:249. – Kohl, 1918:137 (original description copied).

ssp. nalandicum Strand

As *Pelopoeus spinolae*: F. Smith, 1856:231 (Bombay, Sri Lanka), 1871a:359 (in catalog of Oriental Aculeata); Bingham, 1896a:438 (references); and Cameron, 1889c:102 (in list of Sphecidae of Oriental Region); corrected to *Sceliphron javanum* var. *nalandicum* by van der Vecht and van Breugel, 1968:244; Bingham, 1897:237 (in revision of wasps and bees of British India, now India and Pakistan, and Sri Lanka), corrected to *Sceliphron javanum* var. *nalandicum* by Kohl, 1918:92; Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino).

Sceliphron javanum var. *nalandicum* Strand, 1915:93, ♀. Syntypes: ♀, Sri Lanka: Nalanda and Kandy (DEI). – Kohl, 1918:93 (in revision of world *Sceliphriini*); Strand, 1927:254 (in list of species described by author); von Schulthess, 1935:304 (Indonesia: Flores: Endeh). – **As *Sceliphron javanum nalandicum***: van der Vecht and van Breugel, 1968:244 (new status, revision); Bohart and Menke, 1976:105 (in checklist of world Sphecidae); Job and Olakkengil, 2014:15 (India: Kerala: Thrissur District); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 72 (in review of Indian *Sceliphron*).

ssp. petiolare Kohl

Sceliphron petiolare Kohl, 1918:95, ♀. Holotype: ♀, Indonesia: Sumatra: Deli (ZMHU). – Pádr and Tkalců, 1991:23 (Vietnam: Nam Cat Tien National Park). – **As *Sceliphron javanum petiolare***: van der Vecht and van Breugel, 1968:246 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Pham, Kumar and Danilov, 2015:1586 (in list of Sphecidae *sensu lato* of Vietnam); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 72 (in review of Indian *Sceliphron*).

ssp. tenggarae van der Vecht

Sceliphron javanum tenggarae van der Vecht, 1957c:369, ♀, ♂. Holotype: ♀, Indonesia: Flores: Labuan Badjo (RMNH). – van der Vecht and van Breugel, 1968:248 (in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae).

ssp. timorensis van der Vecht

As *Pelopaeus spirifex*: F. Smith, 1963:34 (Indonesia) and as *Sceliphron spirifex*: F. Smith, 1871:360 (Timor), corrected to *Sceliphron javanum timorensis* by van der Vecht and van Breugel, 1968:249.

Sceliphron javanum timorensis van der Vecht, 1957c:369, ♀, ♂. Holotype: ♀, Indonesia: Timor: no specific locality (RMNH). – van der Vecht and van Breugel, 1968:249 (in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae).

22. laetum (F. Smith)

Pelopaeus laetus F. Smith, 1856:229, ♀, ♂. Lectotype: ♀, Australia: either New South Wales or Queensland: Macintyre River (BMNH), designated by van der Vecht and van Breugel, 1968:251. – F. Smith, 1862:55 (Indonesia), 1863a:34 (Indonesia), 1863b:134 (known from Gilolo, now Halmahera, Ternate, Ceram, and Australia); A. Costa, 1864a:60 (two specimens from Adelaide, Australia, in Napoli Museum), 1864b:111 (specimen from Australia in Museo Zoologico di Napoli); F. Smith, 1871a:359 (in catalog of Oriental Aculeata); Maindron, 1878:389 (nest structure), 391 (description of larva), 393 (description of pupa and cocoon), 394 (taxonomic history, occurring in Indonesia and Australia), 396 (in checklist of *Pelopaeus* of India and Indian Archipelago); Rawes Whittell, 1883:29 (nest construction, number or prey); H. Roth, 1885:318 (nest construction, prey, larva); Froggatt, 1892:209 (in catalog of Australian Hymenoptera); Rudow, 1904:197 (building nests out of mud), 1912:42 (description of nest). – As *Sceliphron laetum*: Dalla Torre, 1897:387 (new combination, in catalog of world Hymenoptera); W. Schulz, 1905a:213 (Papua New Guinea: Finschhafen; other faunal records); Cameron, 1905k:65 (Java), 1906b:55 (Indonesia: Papua), 1906d:220 (Indonesia: Papua: Merauke); Kohl, 1908b:310 (Papua New Guinea: Bismarck Archipelago: Neupommern: Gazelle Halbinsel, now New Britain: Gazelle Peninsula); Strand, 1911b:231 (Indonesia: Aru: Island of Terangan); Kohl, 1918:95 (in revision of world Sceliphroni); von Schulthess, 1935:304 (Australia: Northern Territory: Kadarri); Krombein, 1949b:381 (in key to Sphecidae of Micronesia), 386 (Guam, Mariana Islands), 1950b:138 (Caroline Islands); van der Vecht and van Breugel, 1968:250 (in revision of world *Sceliphron*), 251 (in revision of world *Sceliphron*, as *laetum laetum*); Riek, 1970:940 (Insect Fauna of Australia); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); A. Smith, 1979:181 (population dynamics and mortality factors); Callan, 1980a:134 (record from New Zealand is erroneous; as *laetus*); Nakajima et al., 1983:63 (biologically active amines in venom); Naumann, 1983b:134 (in key to Australian *Sceliphron* Australia), 135 (nesting habits); Cardale, 1985:221 (in catalog of Australian Sphecidae); Harris, 1987:58 (accidental introduction to New Zealand of diapausing prepupae in car trunk brought from Nambour, Queensland); N. Schneider, 1988:42 (nest building and content); Callan, 1990a:22 (New Caledonia: no specific locality); Harris, 1992:15 (in revision of species introduced to New Zealand); Early and Townsend, 1993:53 (New Zealand records); Naumann, 1993:182 (Australia: Queensland: Heathlands area in Cape York); van Vondel, 1995:29 (specimens from Indonesia: Island of Tanimbar in Natuurmuseum Rotterdam); Naumann, 1998:183 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); Elgar and Jebb, 1999:147 (Papua New Guinea: nest provisioning in Madang area); Pagliano, 2003a:505 (Australia: eight localities); Kuhlmann, 2006:29 (Cook Islands); Hoggard, Wilson, Beattie, and Stow, 2011:2 (antimicrobial defenses); Villemant, 2011:133 (Vanuatu: island of Espiritu Santo); Jennings, Krogmann, and Burwell, 2013:32

(in checklist of Hymenoptera of New Caledonia); Ramage, Charlat, and Jacq, 2015:158 (first record from French Polynesia: Moorea, Raiatea; and from Wallis and Futuna); Dollfuss, 2016:1176 (collecting localities from Australia, Fiji, and Indonesia); Terayama, 2020:16 (Micronesia: Palau).

Sceliphron laetum st. *cygnorum* R. Turner, 1910a:343, ♀. Syntypes: southwestern Australia: no specific locality (BMNH). Synonymized with *Sceliphron laetum* by van der Vecht and van Breugel, 1968:251.

ssp. *maindroni* van der Vecht

Sceliphron laetum maindroni van der Vecht in van der Vecht and van Breugel, 1968:252, ♀, ♂. Holotype: ♀, Indonesia: Island of Ternate: Bukonura (RMNH). – Bohart and Menke, 1976:105 (in checklist of world Sphecidae).

23. ? *leptogaster* Cameron

Sceliphron ? *leptogaster* Cameron, 1905m:227, ♂. South Africa: Eastern Cape Province: Dunbrody at 33°29'S 25°33'E (BMNH?). – Kohl, 1918:137 (original description copied); Leclercq, 1955h:63 (bibliographic references, species incertae sedis); Bohart and Menke, 1976:106 (may belong in *Ammophilini*).

24. *madraspatanum* (Fabricius)

Sphex madraspatanus Fabricius, 1781:445, sex not stated (as *madraspataka*, incorrect original termination). Lectotype: ♂, India: Kerala: former Malabar District (BMNH, coll. Banks), designated by van der Vecht, 1961a:43 (use of word “type”). – Fabricius, 1787:275 (redescription); Gmelin, 1790:2727 (redescription, as *maderospataka*); Fabricius, 1793:204 (redescription), 1796:156 (in Index to his *Entomologia Systematica*, 1793); Lichtenstein, 1796:200 (in auction catalog); Turton, 1801:487 (redescription); Jurine, 1807:128 (in list of *Sphex*). – **As *Pelopaeus madraspatanus***: Fabricius, 1804:203 (new combination, redescription), Billberg, 1820:105 (India: specimens from southern Malabar in collection Billberg); Dahlbom, 1843:22 (in revision of Sphecidae and Pompilidae), 1845: 1845:XX (study of specimens in collection Fabricius), 434 (in key to *Pelopaeus*); Lepeletier de Saint Fargeau, 1845:310 (in revision of world Hymenoptera); F. Smith, 1856:231 (in catalog of Hymenoptera in British Museum), 1858b:14 (Indonesia: Sulawesi), 1860b:123 (Indonesia: Moluccas: Amboina), 1863b:134 (known from India and Sulawesi); Taschenberg, 1869:428 (Java); Horne, 1870:161 (nesting habits), F. Smith, 1871a:359 (in catalog of Oriental Aculeata), 1873a:191 (Japan: Hyogo); Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago); Cameron, 1889c:102 (in list of Sphecidae of Oriental Region), 103 (redescription); Radoszkowski, 1892:581 (male genitalia). – **As *Sceliphron madraspatanum***: Mocsáry, 1892:127 (new combination, Tibet: Yarkalo); Bingham, 1897:237 (in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:387 (in catalog of world Hymenoptera); Cameron, 1899b:54 (comparison with *Sceliphron tibiale*), 1901a:25 (Malaysia: Singora, now in Thailand), 1901d:55 (Maldives); Rothney, 1903:104 (India: West Bengal: Barrackpore), 112 (India: sufficiently common); Ashmead, 1904a:6 (Philippines: Laguna Province); Bingham, 1905:45 (Malaysia); Cameron, 1905k:65 (Java); R. Brown, 1906:687 (in catalog of Philippine Hymenoptera); Paiva, 1907:15 (India: West Bengal: Siliguri; Nepal: Katmandu); Maxwell-Lefroy, 1909:204 (India: nesting habits); Matsumura, 1911:119 (in Thousand insects of Japan); Dutt, 1912:202 (nest, immature stages, nest parasites); Strand, 1913a:84 (Taiwan, as *maderospatanum*); Nurse, 1914:445 (India: Assam: Dibrugarh; as *madraspatanam*); R. Turner, 1917e:176 (variation, synonymy); Kohl, 1918:109 (in revision of world Sceliphriini); nec F. Williams, 1919d:123 (= *Sceliphron madraspatanum conspicillatum*); Gennerich, 1922:40 (cleaning apparatus; as *maderospatanum*);

Rohwer, 1922:675 (previously recorded from Philippines); Dover, 1926:234 (China: Hong Kong); Menzel, 1928:265 (nest structure, may belong to *Sceliphron javanum*); Matsumura and Uchida, 1926:40 (Okinawa); von Schulthess, 1935:304 (Indonesia: Java: Buitensorg, now Bogor; Bali); Yasumatsu, 1935b:35 (Japan: Ryukyu Archipelago: Ishigaki Island), 36 (Japan: Ryukyu Archipelago: Island of Iriomote), 1935c:58 (Philippines: Island of Basilan: Maloong); Ma, 1936a:470 (China: Szechwan: Kienwei), 1936b:67 (nesting habits); Yasumatsu, 1937a:127 (China: Botel Tobago Islands southeast of Taiwan, now Lang Hsu Islands), 1938e:345 (China: Nanking); Iwata, 1939b:169 (Taiwan; nesting habits); nec Krombein, 1949b:381 and 387 (= *Sceliphron madraspatanum conspicillatum*); Harant and Leclercq, 1955:251 (France: Hérault: Palavas-les-Flots); Leclercq, 1955h:60 (bibliographic references); Morel, Nouvel, and Ribaut, 1956:337 (France: Département des Pyrénées-Orientales); de Beaumont, 1961b:272 (Afghanistan), 1961c:45 (Greece: Island of Crete: no specific locality), 1961e:2 (Iraq); Iwata and Yoshikawa, 1961:398 (Thailand); Leclercq, 1961b:50 (Zaire); Tsuneki, 1962a:7 (Japan: Ryukyu Islands: Island of Amami-Oshima); Iwata, 1964a:318 (nesting gregariously in Japan, but solitary in Thailand), 1964b:361 (nesting behavior in Thailand); Spurway, Dronamraju, and Jaykar, 1964:1 (construction of nest by one female); Tano, 1964:38 (Japan: Kyushu: Island of Yakushima); de Beaumont, 1965a:17 (Greece); Derwesh, 1965:71 (Iraq: no specific locality, as *madraspatanum*); Iwata, 1965:107 (number of oocytes); Yasumatsu and Hirashima, 1965:176 (Taiwan: Karenkô, Shôkei); Baltazar, 1966:347 (in catalog of Hymenoptera of Philippines); Fukuda, 1968:26 (Japan); van der Vecht and van Breugel, 1968:199 (in revision of world *Sceliphron*, as *madraspatanum*), 205 (in revision of world *Sceliphron*, as *madraspatanum madraspatanum*); de Beaumont, 1967a:276 (Turkey); Tsuneki, 1967i:385 (Ryukyus), 1967j:5 (Taiwan); Haneda, 1968a:45 (Japan); T. Iida, 1969a:273 (description of mature larva); Tsuneki, 1969e:24 (Japan: specimens in Osaka Museum of Natural History); Haneda, 1971b:31 (Taiwan); Yamada, 1971:34 (Japan: Aichi Prefecture); Murota, 1973a:101 (Ryukyu Islands: Amami Oshima Islands); Tsuneki, 1974b:590 (Thailand); Nambu, 1975b:70 (Japan: Saitama Prefecture); Begum and Bose, 1976:26 (Bangladesh: Dakka); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Kazenas, 1978b:45 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:185 (in key to Sphecidae of European part of USSR); Radović, 1985:64 (sting apparatus analyzed, as *madraspatanum*); Islamov, 1986:517 (Uzbekistan: Surkhandarya Oblast); Begum, Bose, and Howlander, 1989:124 (nesting habits in Bangladesh); Hua, 1989:116 (China); Dollfuss, 1991:27 (in key to Sphecidae of North and Central Europe); Pádr and Tkalců, 1991:23 (Vietnam: Nam Cat Tien National Park); Early and Townsend, 1993:53 (adventive to New Zealand but not established there); Zhou and Wu, 1993a:670 (China: Wuling Mountains, as *madraspatanum*); Jha and Farooqi, 1994:13 (description and illustration of male genitalia, as *madraspatanum madraspatanum*); Tano, Nozaka, Kurokawa, and Murota, 1994:57 (Philippines); Begum, Khan, and Bose, 1995:174 (Bangladesh: Dhaka University Campus); S. Gupta, 1995:85 (India: Uttar Pradesh, as *madraspatanum madraspatanum*); Q. Li, 1995:88 (in key to Chinese Sceliphri); van Vondel, 1995:29 (specimens from Ambon, India, Java and Sumatra in Natuurmuseum Rotterdam); Wu and Zhou, 1996a:28 (in revision in Economic Insect Fauna of China, as *madraspatanum madraspatanum*); Nazarova and Shomirsaidov, 1997:23 (Tajikistan: fruit tree orchards in Vakhsh River valley); Kazenas, 1998b:84 (in Sphecidae Fauna of Kazakhstan); Yamane, Ikudome, and Terayama, 1999:481 (Japan: in Identification Guide to Sphecidae of Nansei = Ryukyu Islands); Jonathan, Ray, and Kundu, 2000:180 (India: Meghalaya: East Garo Hills: Dainadubi and Darugiri, as *madraspatanum madraspatanum*); Kazenas, 2001b:13 (in checklist of Sphecidae of Kazakhstan and Central Asia), 72 (review of nesting habits); Sudo, Tsuyuki, Ito, and Tani, 2001:1109 (wing apparatus and flapping behavior); Kazenas, 2002a:24 (geographic distribution, collecting localities in Kazakhstan);

Ohl and Linde, 2003:149 (number of ovarioles); Wu, Zhou, Q. Li, and Yang, 2003:804 (China: Fujian Province, as *Sceliphron madraspatanum madraspatanum*); Kazenas, 2004b:98 (Kazakhstan: western Tien Shan Mountains); Marisova, Sheshurak, and Berezhenyuk, 2004: 135 (Ukraine: eaten by green frog *Rana esculenta synklepton*); Gülmez and Tüzün, 2005:43 (Turkey: Ankara Province); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan); Schmid-Egger, 2005a:11 (in key to European and Mediterranean *Sceliphron*); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Terayama and Tano, 2006:11, 16, 18 (in key to Japanese Ampulicidae and Sphecidae); Munasinghe and Edirisinghe, 2007:78 (Sri Lanka: Meewathura Agriculture Farm); Kazenas, 2008a:97 (Kazakhstan: Semirechiye = Heptapotamia: near village Masak at River Chilik = Shelek, the northernmost known point of species distribution); Danilov, 2010b:44 (distribution of Palearctic-Ethiopian-Indomalayan type); Shorenko and Konovalov, 2010:11 (Ukraine: Crimea: Feodosiya); Murai and Amr, 2011:109, 120 (first record from Syria: Al Thawrah Nature Reserve at 35°51'N 28°38'E); Chatenoud, Polidori, Federici, Licciardi, and Andrietti, 2012:939 (mud collecting consists of four phases: 1. search for suitable place, 2. removing leaf, twigs, etc. from chosen area, 3. forming mud balls, 4. flying off with mud balls); Halder, Rai, Kodandaram, Shivalingaswamy, and Dey, 2012:373 (nesting habits, potential threat to trophic chain in agrosystems); Kundu, Ghosh, and Tiwari, 2012:152 (India: Andaman and Nicobar islands), 157 (geographic distribution, recognition characters); Dyuzhaeva, 2013:116 (Russia: Samara Oblast': Zhiguli Nature Reserve); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:361 (in new catalog of Sphecidae of Saudi Arabia: first record from country: Ad'Diriyah); Augul, Abdul-Rassoul, Kaddou, and Jihad, 2014:665 (in key to *Sceliphron* of Iraq, locality records), 667 (photographs of taxonomically important characters including penis valve); Danilov, 2014b:513 (in key to Sphecidae s.s. of Siberia, not yet found in Siberia); Dunford, Turbyville, and Leavengood, 2014:11 (listed as medically important in Afghanistan); Job and Olakkengil, 2014:15 (India: Kerala: Thrissur District); Madl, 2014a:1021 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records); Schmid-Egger, 2014:621 (United Arab Emirates); Deshmukh, 2015:37 (India: Maharashtra: Koradi Region in Nagpur District); Koçak and Kemal, 2015:279 (in checklist of Hymenoptera of Turkey); Murao, 2015:39 (Japan: Kyushu: coast of northwestern Fukuoka Prefecture); Pham, Kumar and Danilov, 2015:1586 (in list of Sphecidae *sensu lato* of Vietnam, as *madraspatanum madraspatanum*); Shorenko, 2015:315 (in list of Sphecidae *sensu lato* of Crimea); Dollfuss, 2016:1176 (collecting localities from Afghanistan, Bulgaria, China, Croatia, France, Greece, India, Indonesia, Italy, Iran, Japan, Kyrgyzstan, Laos, Malaysia, Montenegro, Oman, Pakistan, European Russia, Syria, Taiwan, Tajikistan, Thailand, Turkey, Turkmenistan, United Arab Emirates, Ukraine, Uzbekistan, and Vietnam); Arens, 2017a:625 (Greece: Peloponnesus); Danilov, 2017b:214 (in catalog of Sphecidae s.s. of Russia); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Bushehr, Hormozgan, Kerman, Markazi, North Khorasan, Sistan-O Baluchestan, and Tehran provinces); Sheikh, Thomas, Bandari, and Jubiraj, 2017:287 (India: Madhya Pradesh: Jabalpur District: Dumna Nature Park; diagnostic characters, as *madraspatanum madraspatanum*); Shorenko, 2017:76 (in Crimea collected in June through August), 2018:127 (Crimea, including localities, habitats, and number of specimens); Augul, 2019:501 (Iraq: Baghdad, Diyala, Sulaymaniyah, and Wasit provinces); Gülmez, 2019:3 (Turkey: Amasya, Ankara, and Tokat provinces: no specific localities); Pham, Truong, and Nguyen, 2019:422 (nest parasite: *Melittobia clavicornis* (Cameron, Eulophidae); Pham, Truong, Th.T. Nguyen, Th.H. Nguyen, Q. Nguyen, and Th.M. Nguyen, 2019:73 (Vietnam: Hanoi and vicinity); Danilov, 2020:319 (specimens from China, Croatia, Japan, Tajikistan, Thailand, Uzbekistan, Vietnam, and Russia: Astrakhan' Oblast' and Krasnodarskiy Krai in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Gadallah, 2020d:84 (in list of

aculeate wasps of Arabian Peninsula); Terayama, 2020:16 (Micronesia: Palau); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*, as *madraspatanum* *madraspatanum*), 77 (in review of Indian *Sceliphron*); Paulovics and Vas, 2021:56 (first record from Hungary: Csongrád-Csanád county: Maroslele at 46°16'29.8"N 20°20'24.5"E and Szeged county: Gyálarét at 46°12'04.5"N 20°06'18.4"E); Pham, Ohl, and Vu, 2021:2 (the vespids *Apodynerus troglodytes* (de Saussure), *Antepipina biguttata* (Fabricius), *Euodynerus trilobus* (Fabricius), and the bee *Amegilla zonata* (Linnaeus) are reusers of nests of *Sceliphron madraspatanum* in Vietnam, *Apodynerus troglodytes* also nest invader); Joothi, Arunagiri, Ambalavanan, Samidurai, Kaliyamoorthy, and Pankirias, 2021:52 (nest structure and prey in India).

? *Sphex lugubris* Christ, 1791:306, sex no indicated. Holotype or syntypes: St. Domingo, now Hispaniola: no specific locality (destroyed), junior primary homonym of *Sphex lugubris* Villers, 1789. – van der Vecht and van Breugel, 1968:205 (type locality probably erroneous, description agrees best with *Sceliphron madraspatanum*); Dalla Torre, 1897:379 (as synonym of *Sceliphron caementarium*). – **As *Sceliphron lugubre***: Dalla Torre, 1897:387 (new combination, in catalog of world Hymenoptera); Ashmead, 1900:309 (in checklist of Caribbean Hymenoptera); W. Schulz, 1903:470 (unrecognizable species).

Pelopoëus interruptus Palisot de Beauvois, 1806:51, sex not stated. Holotype or syntypes: origin unknown, but probably Asia (destroyed?). Synonymized with *Sceliphron maderospatanum* [sic] by W. Schulz, 1906:192. – **As *Sceliphron interruptum***: Dalla Torre, 1897:386 (new combination, in catalog of world Hymenoptera).

Pelopaeus bilineatus F. Smith, 1852a:47, ♀. Holotype or syntypes: ♀, India: Maharashtra: Bombay, now Mumbai (BMNH). Synonymized with *Sceliphron madraspatanum* by R. Turner, 1917e:176. – Horne, 1870:163 (nesting habits); F. Smith, 1871a:360 (in catalog of Oriental Aculeata); Cameron, 1889c:101 (in list of Sphecidae of Oriental Region), 103 (nesting sites). – **As *Sceliphron blineatum***: Bingham, 1897:238 (new combination, in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:379 (in catalog of world Hymenoptera); Bingham, 1908:355 (India: Meerut); nec Dutt, 1912:221 (= *Sceliphron rectum pulchellum*).

Pelopoëus separatus F. Smith, 1852:47, ♀. Holotype or syntypes: ♀, India: Maharashtra: Bombay, now Mumbai (BMNH). Synonymized with *Sceliphron madraspatanum* by Bingham, 1897:237. – F. Smith, 1871a:360 (in catalog of Oriental Aculeata); Cameron, 1889c:102 (in list of Sphecidae of Oriental Region). – **As *Sceliphron separatum***: Dalla Torre, 1897:389 (new combination, in catalog of world Hymenoptera).

ssp. *andamanicum* Kohl

Sceliphron madraspatanum var. *andamanicum* Kohl, 1918:109, sex not stated. Syntypes: India: Andaman Islands (NHMW). – **As *Sceliphron madraspatanum andamanicum***: van der Vecht and van Breugel, 1968:208 (new status, in revision of world *Sceliphron*, Andaman and Nicobar Islands); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Kundu, Ghosh, and Tiwari, 2012:152 (India: Andaman and Nicobar Islands), 158 (geographic distribution); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 74 (in review of Indian *Sceliphron*).

ssp. *conspicillatum* (A. Costa)

Pelopoëus conspicillatus A. Costa, 1864:112, sex not stated. Syntypes: Philippines: Luzon: no specific locality (Napoli). – Kohl, 1918:109 (as synonym of *Sceliphron madraspatanum*); Rohwer, 1921:675 (Philippines: Luzon, Leyte, Palawan). – **As *Sceliphron conspicillatum***: Dalla Torre, 1897:382 (new combination, in catalog of world Hymenoptera); Rohwer, 1922:675 (Philippines). –

As *Sceliphron madraspatanum* var. *conspicillatum*: Ashmead, 1904d:151 (new status, Philippines); R. Brown, 1906:687 (in catalog of Philippine Hymenoptera). – **As *Sceliphron madraspatanum* *conspicillatum***: van der Vecht and van Breugel, 1968:210 (new status, in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Tano, Nozaka, Kurokawa, and Murota, 1994:56 (Philippines); Haneda, 2011:43 (Philippines: Palawan); Abenis, Lit, Choi, and Park, 2020:259 (variation in yellow maculation on collar, propodeum, and gastral petiole).

As *Sceliphron madraspatanum* (corrected to *Sceliphron madraspatanum conspicillatum* by van der Vecht and van Breugel, 1968:210): F. Williams, 1919d:123 (Philippines: Luzon: Los Baños: nesting behavior, as *maderospatanum*); Krombein, 1949b:381 (in key to Sphecidae of Micronesia) and 387 (Caroline Islands).

ssp. *formosanum* van der Vecht

As *Sceliphron madraspatanum*: Rohwer, 1911a:482 (Taiwan).

Sceliphron madraspatanum formosanum van der Vecht in van der Vecht and van Breugel, 1968:204, ♀, ♂. Holotype: ♀, Taiwan: Chiayi Prefecture: Kagi, now Chiayi (RMNH). – Tsuneki, 1971f:6 (Taiwan); Haneda, 1972a:5 (Taiwan); Tano, 1972:23 (Japan: Ryukyu Islands); Murota, 1973b:116 (Taiwan); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Murota, 1982d:8 (Taiwan), 1982g:56 (known from Ryukyu archipelago); Kifune and Yamane, 1985:53 (stylopized by *Paraxenos orientalis* Kifune); Kifune, 1988:304 (stylopized by *Paraxenos orientalis* Kifune); Sk. Yamane and Ikudome, 1990:103 (Japan: distribution in Ryukyu Islands); Wu and Zhou, 1996a:29 (in revision in Economic Insect Fauna of China); Porter, Stange, and Wang, 1999:4 (in checklist of Sphecidae of Taiwan); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 74 (in review of Indian *Sceliphron*).

ssp. *kohli* Sickmann

Sceliphron kohli Sickmann, 1894:218, ♀, ♂. Syntypes: China: Hopei Province: Tientsin (NHMW). – Dalla Torre, 1897:387 (in catalog of world Hymenoptera); Kohl, 1918:109 (as new synonym of *Sceliphron madraspatanum*); Pádr and Tkalců, 1991:23 (Vietnam: Nam Cat Tien National Park). – **As *Sceliphron madraspatanum kohli***: Gussakovskij, 1938:4 (new status, China: Kiangsu Province); Yasumatsu, 1942:106 (China: Beijing); van der Vecht and van Breugel, 1968:203 (in revision of world *Sceliphron*); Tsuneki, 1971m:6 (China: Beijing: Tiendang); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Paik, 1985:197 (in list of Sphecidae of Korea); Sk. Yamane and Ikudome, 1990:102 (Japan: distribution in Ryukyu Islands); Q. Li, 1995:88 (in key to Sceliphriini of China); Miyatake, 1996:101 (specimens in Hiroshi Aoki collection); Wu and Zhou, 1996a:29 (in revision in Economic Insect Fauna of China); Q. Li and He, 2001:755 (China: Tianmushan Nature Reserve at 30°22'N 119°26'E); Haneda, 2003:3 (Japan: Nagasaki Prefecture: Tsushima); Wu, Zhou, Q. Li, and Yang, 2003:804 (China: Fujian Province); Q. Li and He, 2004:1124 (China: in hymenopterous fauna of Zhejiang Province); Suda, 2004:36 (Japan: Yamanashi Prefecture); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Haneda, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2007:52 (Japan: Kagoshima Prefecture: Amami Oshima Islands); Ohkusa, 2007:34 (Japan: central Honshu: Aichi Prefecture); Ohkusa and Tajima, 2008:74 (Japan: central Honshu: Aichi Prefecture); Murota and Kurokawa, 2009:12 (Japan: Ryukyu Archipelago: Amami Oshima Islands); N. Yamamoto, 2011:11 (Japan: Kyūshū: mainland Nagasaki Prefecture); J.-K. Kim, 2014:419 (in catalog of Sphecidae *sensu lato* of Korean Peninsula), 450 (recorded from Korea but no occurring there); Kim, Yeo, and Kim, 2014:283 (in key to *Sceliphron* of South Korea), 285 (in

revision of Sphecidae *sensu stricto* of South Korea); Pham, Kumar and Danilov, 2015:1586 (in list of Sphecidae *sensu lato* of Vietnam); Tano and Kurokawa, 2015:26 (central Vietnam: Danag, My Son, and Nam Cat Tien National Park); Pham, 2016b:687 (in key to *Sceliphron* of Vietnam, Vietnam: first records from Quang Ninh and Thai Binh Provinces).

ssp. *pictum* (F. Smith)

Pelopaeus pictus F. Smith, 1856:231, ♂. Syntypes: India: no specific locality (OXUM). – Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago); F. Smith, 1871a:359 (in catalog of Oriental Aculeata); Cameron, 1889c:102 (in list of Sphecidae of Oriental Region). – **As *Sceliphron pictum***: Dalla Torre, 1897:388 (new combination, in catalog of world Hymenoptera); R. Turner, 1917e:176 (Arabia, India, Iran, Pakistan). – **As *Sceliphron madraspatanum pictum***: van der Vecht and van Breugel, 1968:203 (new status, in revision of world *Sceliphron*); de Beaumont, 1970a:390 (Afghanistan); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Guichard, 1980:224 (Oman), 1988a:117 (Arabian Peninsula); Ebrahimi, 1993:99 (Iran); Jha and Farooqi, 1994:13 (description and illustration of male genitalia); Schmid-Egger, 2011b:603 (United Arab Emirates: Al-Ajban, Dubai/al-Awir, Fujairah, Hatta, Wadi Hayl, Wadi Madaq, Wadi Wurrayah; just a color form, not a subspecies); Ebrahimi, 2014:18 (Iran: Bushehr, Fārs, Hormozgān, Kermān, Khorāsān-e Shomālī, Markazi, and Sistān-Baluchestān provinces); S. Gess and Roosenschoon, 2016:104 (Dubai Desert Conservation Reserve, visiting flowers of *Rumex dentatus* L., Polygonaceae); Gadallah, 2020d:84 (in list of aculeate wasps of Arabian Peninsula); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 78 (in review of Indian *Sceliphron*).

ssp. *sutteri* van der Vecht

Sceliphron madraspatanum sutteri van der Vecht, 1957c:368, ♀, ♂. Holotype: ♀, Indonesia: Sumba Island: Waikarudi (Basel). – van der Vecht and van Breugel, 1968:211 (in revision of world *Sceliphron*, possibly a synonym of *Sceliphron madraspatanum madraspatanum*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae).

ssp. *tubifex* (Latreille)

Pelopaeus tubifex Latreille, 1809:61, sex not stated. Syntypes: Europe: no specific locality (lost). – Vander Linden, 1827:366 (Italy); Lepeletier de Saint Fargeau, 1845:314 (in revision of world Hymenoptera); F. Smith, 1856:228 (in catalog of Hymenoptera in British Museum); A. Costa, 1861:31 (Italy: in revision of Sphecidae of Kingdom of Naples), 1867b:75 and 1867c:19 (in revision of Italian Sphecidae); Kirchner, 1867:217 (in catalog of European Hymenoptera); Taschenberg, 1869:428 (southern Europe); Marquet, 1875:207 (France: Hérault: Cette, now Sète); A. Costa, 1882b:22 (Italy: Sardegna); De Stefani Perez, 1882:39 (Italy: Sicilia: Sciacca), 1886:171 (Italy: Sicilia: monte di Renda near Palermo); Gasperini, 1887:18 (Dalmatia: Island of Lesina, Spalato, now Croatia: Island of Hvar, Split); Ed. André, 1888:108 (in revision of Sphecidae of Europe and Algeria), 1888:6* (bibliographic references); De Stefani Perez, 1889:269 (in key to Sicilian *Sceliphron*); A. Costa, 1893b:5 (Tunisia); De Stefani Perez, 1894:216 (Italy: Sicilia); Medina, 1894a:259 (Spain: Sevilla and Chiclana); F. Morawitz, 1894:340 (Turkmenistan: Keltechinar); De Stefani Perez, 1895:226 (Italy: in catalog of Sicilian Hymenoptera); Acloque, 1897:95 (in Sphecid Fauna of France and Algeria); Ghigi, 1902:190 (Greece: Ionian Islands: Island of Kefalonia: Argostoli); Antiga and Boffill, 1904:3 (Spain: Cataluña Province); Pagliano, 2008:520 (specimens in M. Spinola collection, Torino). – **As *Sceliphron tubifex***: Dalla Torre, 1897:392 (new combination, in catalog of world Hymenoptera); Kokujev, 1902:10 (Turkmenistan: Ashkhabad); nec E. Saunders, 1903c:210 (= *Sceliphron*

caementarium); Mantero, 1905:68 (Italy: Toscana: Isola del Giglio); de Gaulle, 1908:103 (in catalog of French Hymenoptera); Graeffe, 1911:48 (Italy: Trieste area); Morice, 1911:71 (Algeria); Szilády, 1914:89 (Hungary: Spalato, now Croatia: Split); Kohl, 1918:103 (in revision of world Sceliphriini); Berland, 1921:533 (Greece); Fahringer and Friese, 1921:160 (Turkey: Erzurum: Chanziri in Amanus Mountains = Gavur Dağları); Morice, 1921:821 (Iraq: Basrah); Fahringer, 1922:176 (Turkey); Maidl, 1922:66 (Albania, Croatia); Berland, 1925d:43 (in Sphecidae Fauna of France); von Schulthess, 1927:297 (Iran: Bender Abbas); Ebner, 1930:25 (Syria: Alexandrette, now Iskenderun); Grandi, 1930:340 (Italy: Toscana: Maremma); Giordani Soika, 1932a:21 (Italy: Lido di Venezia); Gussakovskij, 1933b:275 (Iran); Giner Marí, 1934a:131 (Spain); Grandi, 1934:130 (Italy: Lazio: Acilia, and Toscana: San Vincenzo); Shirôzu, 1934:122 (Japan: Goto Islands); Bernard, 1935:61 (France: Var: Fréjus area), 62 (nest characteristics); Katayama and Ikushima, 1935:41 (nesting habits); Bernard, 1936c:287 (France: Aude: Ile Sainte-Lucie; Var: Fréjus); Giner Marí, 1943a:63 (in Sphecidae Fauna of Spain); Guiglia, 1943b:69 (Albania: Kopliku); Timon-David, 1943:29, 30 (France: Bouches-du-Rhône: plage de Fos); Giordani Soika, 1944:13 (Italy: Sicilia: Falcone); Guiglia, 1944b:9 (Italy); Zavadil in Zavadil and Šnoflák, 1948:171 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Ceballos, 1949:101 (Spain); de Andrade, 1949:4 (Portugal: Lagos, Vale de Gaio); de Beaumont, 1951e:270 (Morocco); Grandi, 1954:236 (Italy); Hertzog, 1954:100 (France: Bouches-du-Rhône: Camargue); de Beaumont and Bytinski-Salz, 1955:44 (Israel); Leclercq, 1955h:60 (is a synonym of *Sceliphron madraspatanum*); Vogrin, 1955:32 (Yugoslavia); Bytinski-Salz, 1956:224 (Turkey: Altinkum, Finike); Ceballos, 1956:362 (in catalog of Hymenoptera of Spain); Hertzog, 1956:168 (prey; spiders of genus *Araneus*, nest construction); Pulawski, 1958a:164 (Bulgaria: Burgas); de Beaumont, 1959a:9 (Italy); Diniz, 1959:27 (Portugal: Lagos, Vale de Gaio); Grandi, 1959b:287 (Italy: Ravenna); Suárez, 1959:53 (Spain: Almería Province); Tsunekii, 1962e:70 (*Sceliphron tubifex* in Iconographia Insectorum Japonicorum, Ed. II is actually *Sceliphron madraspatanum*); Myartseva, 1963b:59 (Turkmenistan: lower Murgab River); Ceballos, 1964:87 (in supplement to catalog of Spanish Sphecidae); Derwesh, 1965:71 (Iraq: no specific locality); Diniz, 1965:3 (Portugal: Coimbra, Évora, Vale de Gaio); Myartseva, 1965:87 (Turkmenistan: Akibay, Iolotan' District, Mary District, and Murgab District); Nishino, 1968:24 (Japan); Balthasar, 1972:438 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Radović and Krnić, 1979:unpaginated foldout (mud dauber, foreleg structure); Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino). – **As *Sceliphron madraspatanum tubifex***: Gussakovskij, 1935:415 (new status; Tajikistan: Kulab), 1938:4 (*tubifex* is a subspecies of *madraspatanum*); Yasumatsu, 1942c:106 China: Beijing); Myartseva, 1968:62 (locality records from Turkmenistan), 64 (nesting behavior); van der Vecht and van Breugel, 1968:200 (in revision of world *Sceliphron*); Islamov, 1971:55 (Uzbekistan: Tashkent Oblast': village Sidjak, Termez District: kolkhoz imeni Zhdanova and sovkhos Tallimoron); Myartseva, 1972b:111 (nest parasite: *Chrysis (Tetrachrysis)* sp., Chrysididae); Erlandsson, 1974:59 (Yugoslavia); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Haeseler, 1976a:370 (France, Yugoslavia, Spain); Pagliano, 1980:112 (Italy: Liguria); Mingo and Gayubo, 1983:140 (Spain); Schmidt and Westrich, 1983:120 (northern Greece); Gayubo, 1984c:354 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:7 (Spain: Valencia); Chevin and Chevin, 1985:38 (France: Aude); Pagliano, 1984:369 (Italy), 1985:23 (Italy); Gayubo, 1986b:34 (Spain: Andalucía); Gayubo and Tormos, 1986a:7 (Spain: Castellón de la Plana); Asís and Jiménez, 1987:23 (Spain: Castellón Province); Tormos and Jiménez, 1987a:121 (Spain: Valencia); Gayubo, Asís, and Tormos, 1990a:8 (Spain); Pagliano, 1990:64 (in catalog of Italian Sphecidae); Gayubo, Borsato, and Osella, 1991:391 (Italy: Veneto, Sicilia); Negrisolo, 1991:315 (Italy: Udine Province); Fancello, 1993:76 (first record from

Sardegna, Italy); Torregrosa, Gayubo, Tormos, and Asís, 1993b:11 (Spain: Alicante Province); Gayubo and Borsato, 1994:198 (Italy: Sardegna); Tormos, Asís, and Gayubo, 1994:187, 192 (Spain: Albacete Province); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:3 (in catalog of Italian fauna); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:41 (in Sphecidae Fauna of Western Europe); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:104 (Greece); Drewes, 2003:142 (Spain: Tarragona); Generani, Pagliano, Scaramozzino, and Strumia, 2003:64 (Italy: Arcipelago Toscano); Schmid-Egger, 2003:757 (Italy: Sicilia: Castelammare); Shorenko, 2003:97 (Ukraine: Crimea: village Rybach'ye in Alushta District); Gayubo and Özbek, 2005:4 (Turkey: Ýcel: Silifke, Muğla); Pagliano and Negrisolo, 2005:82 (in Sphecidae Fauna of Italy); Schmid-Egger, 2005a:15 (recognition, color, distribution); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Standfuss and Standfuss, 2006c:307 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Roche, 2007a:36 (in checklist of Egyptian Sphecidae, redescription), 2007b:2 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Shorenko, 2007b:257 (Ukraine: Crimea: Feodosiya); Ljubomirov and Yildirim, 2008:14 (in catalog of Sphecidae of Turkey); Józán, 2009:165 (Croatia: Bibinje); Pagliano, 2009:176 (Italy: Sardegna: Assemmini); Shorenko, 2009:366 (in list of Sphecidae *sensu lato* of Crimea); Bitsch, 2010:103 (in supplement to vol. II of Faune de France, 1997: does not occur in northern half of France, new record: France: Aude: Fleury-d'Aude); Gogala, 2011:8 (Slovenia); Protsenko, Fateryga, Ivanov, and Puzanov, 2012:57 (Ukraine: Crimea); Mader, 2013:74 (original resident of southern Europe), 207 (color photograph); Vas and Józán, 2014:160 (in key to *Chalybion* and *Sceliphron* of Hungary, not yet found in Hungary); Gülmez and Dizer, 2016:57 (Turkey: Tokat Province); Mokrousov and Popov, 2016:563 (Russia: Krasnodarskiy Krai); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); Turrisi and Altadonna, 2017:758 (Italy: summary of records from Sicilia); Ben Khedher, Yildirim, Braham, and Ljubomirov, 2020a:313 (in list of Tunisian Sphecidae *sensu stricto*); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:125 (in Sphecidae Fauna of Europe); Cross, Baldock, and Wood, 2021:17 (in catalog of Sphecidae *sensu lato* of Portugal); Kaplan and Yildirim, 2022:56 (Turkey: Bingöl Province).

Pelopoeus pectoralis Dahlbom, 1845:434, sex not stated. Holotype: sex unknown, France: Landes: Saint-Sever (Lund). Synonymized with *Sceliphron tubifex* by Ed. André, 1888:6*, synonymy confirmed by de Beaumont, 1953h:196. – von Frauenfeld, 1861:103 (Croatia: Dalmatia: no specific locality); Sichel, 1861:751 (Italy: Sicilia); Palma, 1867:38 (Italy: Sicilia settentrionale). – **As *Sceliphron pectorale***: Dalla Torre, 1897:388 (new combination, in catalog of world Hymenoptera).

Pelopoeus transcaspicus Radoszkowski, 1886a:24, ♀. Syntypes: Turkmenistan: Ashkhabad area (Kra-ków). Synonymized with *Sceliphron tubifex* by Kohl, 1918:103. – Ed. André, 1886:107 (in revision of Sphecidae of Europe and Algeria), 1888:6* (bibliographic references).

25. *murarium* (F. Smith)

Pelopoeus murarius F. Smith, 1863a:34, ♀. Lectotype, ♀, Indonesia: Ceram (OXUM), designated by Hensen, 1987:254. – F. Smith, 1865a:84 (New Guinea). – F. Smith, 1863b:134 (known from Ceram), 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:396 (in checklist of *Pelopaeus* of India and Indian Archipelago). – **As *Sceliphron murarium***: Dalla Torre, 1897:388 (new combination, in catalog of world Hymenoptera); Hensen, 1987:254 (in revision of subgenus *Prosceliphron*, now *Hensenia*; resurrected species status; southern Moluccas). – **As *Sceliphron fervens murarium***: Bohart and Menke, 1976:106 (new status, in checklist of world Sphecidae).

Pelopoeus rufipes Mocsáry, 1883:24, ♀, junior secondary homonym of *Sceliphron rufipes* (Fabricius, 1804). Holotype or syntypes: ♀, Indonesia: Maluku: Island of Ambon (TMB). Synonymized with *Sceliphron murarium* by Hensen, 1987:254. – Kohl, 1918:131 (in revision of world Sceliphriini). *Sceliphron mocsaryi* Dalla Torre, 1897:388. Substitute name for *Pelopoeus rufipes* Mocsáry, 1883.

26. *neobilineatum* Jha and Farooqi

Sceliphron neobilineatum Jha and Farooqi, 1995:15, ♀, ♂. Holotype: ♀, India: Bihar: Pusa (depository?). – Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:81 (unrecognized species, short diagnosis provided).

27. *paraintrudens* Jha and Farooqi

Sceliphron paraintrudens Jha and Farooqi, 1995:17, ♀, ♂. Holotype: ♀, India: Bihar: Pusa (depository?). – Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:82 (unrecognized species, short diagnosis provided).

28. *pietschmanni* Kohl

Sceliphron pietschmanni Kohl, 1918:91, ♀ (as *Pietschmanni*, incorrect original capitalization). Holotype: ♀, Iraq: Hsitsche (NHMW). – de Beaumont, 1961e:2 (Iraq); van der Vecht and van Breugel, 1968:233 (in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Vardy, 1976 (description of ♂, Iraq); Dollfuss, 1989:12 (type material in NHMW); Ghahari, Hayat, Tabari, Ostovan, and Imani, 2008:739 (first record from Iran: Mazandaran: Sari); Augul, Abdul-Rassoul, Kaddou, and Jihad, 2014:668 (bibliographic reference to Kohl, 1918 record from Baghdad); Dollfuss, 2016:1178 (Syria: Dsir at 35°41'N 37°19'E); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Mazandaran Province); Augul, 2019:501 (recorded from Iraq by Kohl, 1918).

29. *quartinae* (Gribodo)

Pelopoeus quartinae Gribodo, 1884c:298, ♀, ♂ (as *Quartinae*, incorrect original capitalization). Lectotype: ♀, Ethiopia: Shoa: Let Marefia 16 km north of Ankober (MSNG), designated by van der Vecht and van Breugel, 1968:212. – Penati and Mariotti, 2015:105 (in list of Hymenoptera described by G. Gribodo). – As *Sceliphron quartinae*: Kohl, 1894:342 (new combination, Mozambique Delagoa Bay, now Maputo Bay); Dalla Torre, 1897:389 (in catalog of world Hymenoptera); W. Schulz, 1906:192 (correction of Dalla Torre's data); nec Brauns, 1911:119 (= *Sceliphron fossuliferum*); W. Schulz, 1911b:159 (redescription); Kohl, 1918:105 (in revision of world Sceliphriini); nec Mayer and von Schulthess, 1922:364 (= *Sceliphron fossuliferum*); nec von Schulthess, 1926:21 (= *Sceliphron fossuliferum*); Arnold, 1928b:245 (in revision of southern African *Sceliphron*, nec ♀ = *fossuliferum*), 1930:16 (in checklist of Afrotropical Sphecidae); nec Schouteden, 1930:95 (= *Sceliphron fossuliferum*); Scott in Arnold, 1933a:370 (Ethiopia: Harar District, also Alaba and Higo Samula); Arnold, 1943:76 (Zaire); Guiglia, 1943c:76 (Ethiopia: Gamo Gofa: Sagan–Omo region), 1950:245 (Ethiopia: Gamo Gofa: Gondaraba at 4°58'N 36°49'E); Arnold, 1952:482 (redescription); Leclercq, 1955h:58 (bibliographic references), nec 59 (= *Sceliphron fossuliferum*), 1961b:51 (Cameroon, diagnostic characters); Diniz, 1964c:106 (Angola: Lunda: Xá-Ua, Rio Luíta); van der Vecht and van Breugel, 1968:212 (in revision of world *Sceliphron*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Gess, 1981:35, 72 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown; building nests of mud or cow dung on grass); Dollfuss, 1990:122 (Central African Republic), 2016:1178 (collecting localities from Benin, Central African Republic, Ethiopia, Kenya, Malawi, Mali, Mozambique, South Africa, Tanzania, Zambia, and Zimbabwe).

Sceliphron fulvohirtum Arnold, 1928b:246, ♀, ♂. Syntypes: Zimbabwe: Sanyati River (originally R. Stevenson coll., now SAM). Synonymized with *Sceliphron quartinae* by van der Vecht and van Breugel, 1968:212. – Arnold, 1930:16 (in checklist of Afrotropical Sphecidae), 1951:139 (Ethiopia: Lekempti); Leclercq, 1955h:58 (bibliographic references, locality records), 1951i:406 (Rwanda), 1961b:50 (Zaire), 1969:1048 (Congo Brazzaville).

As *Sceliphron quartinae voeltzkovii*: Leclercq, 1955h:59 (Cameroon), corrected to *Sceliphron quartinae* by Leclercq, 1961b:51.

30. *rectum* Kohl

Sceliphron rectum Kohl, 1918:124, ♀. Holotype: ♀, India: Sikkim: no specific locality (ZMHU). – Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Hensen, 1987:226 (in revision of subgenus *Prosceliphron*, now *Hensenia*; as *rectum rectum*; Sikkim); Guichard, 1988a:117 (Arabian Peninsula; as *pulchellum rectum*); Augul, Abdul-Rassoul, Kaddou, and Jihad, 2014:665 (in key to *Sceliphron* of Iraq, locality records), 666 (photographs of taxonomically important characters including penis valve); Ebrahimi, 2014:19 (Iran: Markazi: Khomein: Rezā-ābād and Varche); Dollfuss, 2016:1179 (collecting localities from Croatia and Italy); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Bushehr and Markazi provinces); Augul, 2019:501 (Iraq: Baghdad Province: Tarmia); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 81 (in review of Indian *Sceliphron*).

ssp. pulchellum Gussakovskij

As *Sceliphron bilineatum*: Maxwell-Lefroy, 1909:207 (described from Western India, but occurring also in other parts of India; nest); Dutt, 1912:221 (nesting habits): corrected to *Sceliphron rectum pulchellum* by Hensen, 1987:228.

rufopictum* (F.)** *Sceliphron pulchellum* Gussakovskij, 1933b:275, ♂. Holotype: ♂, Iran: Bushire, now Bushehr at 28°58'N 50°50'E (ZIN). – Bohart and Menke, 1976:106 (in checklist of world Sphecidae). – **As *Sceliphron rectum pulchellum: Hensen, 1987:226 (new status, in revision of subgenus *Prosceliphron*, now *Hensenia*; Iran, India, Pakistan, United Arab Emirates); Schmid-Egger, 2011b:603 (recorded from United Arab Emirates by Hensen, 1987); Danilov, 2016:351 (holotype preserved in Zoological Institute, Sankt Petersburg, Russia); Gadallah, 2020d:84 (in list of aculeate wasps of Arabian Peninsula); Anagha, Girish Kumar, Binoy, Mazumdar, and Sureshan, 2021:63 (in key to Indian *Sceliphron*), 78 (in review of Indian *Sceliphron*).

31. *Smithi*

Pelopoeus rufopictus F. Smith, 1856:232, ♀. Lectotype: ♀, Indonesia: Sulawesi: no specific locality (BMNH), designated by Hensen, 1987:249. – F. Smith, 1871a:359 (in catalog of Oriental Aculeata); Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago). – **As *Sceliphron rufopictum***: Dalla Torre, 1897:389 (new combination, in catalog of world Hymenoptera); Kohl, 1918:129 (in revision of world Sceliphroni); Hensen, 1987:249 (in revision of subgenus *Prosceliphron*, now *Hensenia*; as *rufopictum rufopictum*; Celebes, now Sulawesi); Dollfuss, 2016:1179 (Indonesia: Lesser Sunda islands: Island of Lamalera (formerly Lomblen): near Lambata. – **As *Sceliphron deforme rufopictum***: van der Vecht, 1957:370 (new status, Indonesia: Celebes, now Sulawesi, has unusually wide band on gastral tergum III); Bohart and Menke, 1976:106 (in checklist of world Sphecidae).

Pelopoeus flavofasciatus F. Smith, 1858b:15, ♀ (as *flavo-fasciatus*, incorrect original hyphenation). Lectotype: ♀, Indonesia: Celebes, now Sulawesi: no specific locality (OXUM), designated by Hensen, 1987:249. Synonymized with *Sceliphron rufopictum* by Kohl, 1918:129. – F. Smith, 1863b:134

(known from Sulawesi), 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago). – As *Sceliphron flavofasciatum*: Dalla Torre, 1897:385 (new combination, in catalog of world Hymenoptera).

ssp. *bicinctum* van der Vecht

Sceliphron deforme bicinctum van der Vecht, 1957c:370, ♀. Holotype: ♀, Indonesia: Sumba: no specific locality (Mus. Basel). – Bohart and Menke, 1976:106 (in checklist of world Sphecidae). – As *Sceliphron rufopictum bicinctum*: Hensen, 1987:249 (in revision of subgenus *Prosceliphron*, now *Hensenia*; new subspecific combination; Indonesia: Sumba).

ssp. *kalshoveni* Hensen

Sceliphron rufopictum kalshoveni Hensen, 1987:249, ♀. Holotype: ♀, Indonesia: Java: Parjitan (RMNH).

ssp. *laticinctum* Hensen

As *Sceliphron deformis* (corrected to *Sceliphron rufopictum laticinctum* by Hensen, 1987:252): F. Williams, 1919d:122 (Philippines: Luzon: Los Baños: nesting behavior), Rohwer, 1921:675 (Philippines: Luzon).

Sceliphron rufopictum laticinctum Hensen, 1987:252, ♀, ♂. Holotype: ♀, Philippines: Los Baños (RMNH). – Abenis, Lit, Choi, and Park, 2020:257 (female mandible is sharp and clypeus has lateral emargination in young specimens, but not in old ones, results of nest construction), 58 (variation in propodeal yellow maculation).

32. *seistaniensis* Jha and Farooqi

Sceliphron seistaniensis Jha and Farooqi, 1995:20, ♀, ♂. Holotype: ♀, Seistan, now parts of Iran and Afghanistan: McMohan [may be the collector's name, not locality] (depository?). – Dunford, Turbyville, and Leavengood, 2014:11 (listed as medically important in Afghanistan); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:23 (Iran: known from Sistan-o Baluchestan Province).

33. *shestakovi* Gussakovskij

Sceliphron shestakovi Gussakovskij, 1928a:4, ♀. Syntypes: ♀: Turkmenistan: Merv, now Mary at 37°39'N 62°11'E (ZIL). – Myartseva, 1968:62 (Turkmenistan: Ashkhabad district, Farab, Mary); Islamov, 1971:55 (Uzbekistan: village Sidjak in Tashkent Oblast'); Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Islamov, 1986:517 (Uzbekistan: Tashkent Oblast'); Kazenas, 1986:237 (rare in Kazakhstan, needs protection); Hensen, 1987:224 (in revision of subgenus *Prosceliphron*, now *Hensenia*; Tajikistan and Uzbekistan); Kazenas, 1998b:86 (in Sphecid Fauna of Kazakhstan), 2001b:12 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:24 (geographic distribution, collecting localities in Kazakhstan), 2004b:98 (Kazakhstan: western Tien Shan); Danilov, 2010b:45 (distribution of Tethyan type), 2016:351 (syntypes preserved in Zoological Institute, Sankt Petersburg, Russia), 2020:319 (specimens from Tajikistan and Turkmenistan in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia).

34. *spirifex* (Linnaeus)

Sphex spirifex Linnaeus, 1758:570, sex not stated. Lectotype: ♀, southern Europe: no specific locality (Linnean Society, London), designated by Day, 1979:72. – Fabricius, 1775:347 (redescription); Fueßlin, 1775:50 (Switzerland); Sulzer, 1776a:191 (Switzerland: Genf = Genève, redescription), 1776b (plate XXVII, Fig. 2: color illustration of female); Fabricius, 1781:445 (redescription); Scopoli, 1786:57 (redescription, Italy: Insubria = historical province north of river Po); Fabricius, 1787:275 (redescription); de Villers, 1789:220 (redescription); Gmelin, 1790:2726 (redescription);

Rossi, 1790:61 (in revision of insects of Etruria, now Toscana, Italy); Christ, 1791:303 (redescription); Fabricius, 1793:204 (redescription), 1796:156 (in Index to his Entomologia Systematica, 1793); Panzer, 1800, Heft 76:15 (in revision of German insects, illustration of habitus, actually *Sceliphron destillatorium*); Turton, 1801:486 (redescription); Illiger, 1807b:93 (synonymy, redescription); Jurine, 1807:128 (in list of *Sphex*); Duméril, 1860:950 (example of *Sphex*, brief description); Peets, 1909-1911:68 (*Sphex spirifex* of Panzer = *Sceliphron destillatorius*); Day and Fitton, 1978:193 (recuration of Linnean type material); Pagliano, 2008:523 (specimens in M. Spinola collection, Torino). – **As *Pelopaeus spirifex***: Fabricius, 1804:202 (new combination, redescription); Latreille, [1805]:295 (redescription); Palisot de Beauvois, 1806:49 (Chama; Nigeria: Benin and Owara, now Warri; Isle-du-Prince, now São Tomé and Príncipe; nest building, spider prey); Panzer, 1806:125 (in critical review of his earlier work); Spinola, 1806:70 (Italy: Liguria); Billberg, 1820:105 (specimens from southern Europe and Egypt in collection Billberg); Vander Linden, 1827:365 (synonymy, southern Europe); Guérin-Ménéville, 1828a:163 (in Dictionnaire classique d'histoire naturelle); Stephens, 1829b:33 (in checklist of British insects); Brullé, 1833a:370 (Greece: Peloponnesus), 1839:92 (Canary Islands); Dufour, 1841a:513 and 1841b:245 (digestive tract), 1841a:515 and 1841b:251 (male reproductive system), 1841a:517 and 1841b:253 (female reproductive system); Dahlbom, 1843:22 (in revision of Sphecidae and Pompilidae), 1845:XX (study of specimens in collection Fabricius), 433 (in key to *Pelopoeus*); Lepeletier de Saint Fargeau, 1845:305 (in revision of world Hymenoptera); Gistel, 1848:142 (southern and central Europe, description); Lucas, 1849:273 (Algeria: Alger, Bône, La Calle, Milah, Oran, description of nest and larva); Kirchner, 1854:311 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); F. Smith, 1856:227 (in catalog of Hymenoptera in British Museum); A. Costa, 1858b:16 (in revision of Sphecidae of Kingdom of Naples); Fairmaire, 1858:264 (Gabon); Gerstaecker in Peters, 1858:510 (Mozambique); von Frauenfeld, 1861:103 (Croatia: Dalmatia: no specific locality); Schenck, 1861:162 (redescription, Austria, Czech Republic); Gerstaecker, 1862:481 (Mozambique); A. Costa, 1863:65 (Italy: Calabria Ulteriore: no specific locality); nec F. Smith, 1863a:34 and 1871:360 (= *Sceliphron javanum timorense*), 1863b:134 (known from Timor and Europe); A. Costa, 1866:24 (specimen from Gabon in Museo Zoologico di Napoli), 1867b:74 and 1867c:18 (in revision of Italian Sphecidae); Kirchner, 1867:217 (in catalog of European Hymenoptera); Palma, 1867:38 (Italy: Sicilia settentrionale); Schenck, 1867a:357 (known from Germany); Lucas, 1869:427 (nesting habits); Taschenberg, 1869:428 (southern Europe); F. Smith, 1871a:360 (in catalog of Oriental Aculeata); Walker, 1871:19 (Egypt: Cairo); Taschenberg, 1872:12 (nest structure and prey); Dours, 1874:146 (in catalog of Hymenoptera of France); Ritsema, 1874:194 (Guinea); Marquet, 1875:206 (France: Haute-Garonne: Toulouse); Bertolini, 1876:52 (Italy: Calabria); Maindron, 1878:396 (in checklist of *Pelopaeus* of India and Indian Archipelago, supposedly collected at Timor); Girard, 1879:971 (morphology and habits); Gribodo, 1881b:244 (Ethiopia: Kingdom of Scioa = Schioa: Let-Marefia); Magretti, 1881:115 (Italy: Lombardia), 270 (in list of species discussed in this paper); Radoszkowski, 1881:211 (Angola); A. Costa, 1882b:22 (Italy: Sardegna); De Stefani Perez, 1882:39, 41 (Italy: Sicilia: Sciacca); Magretti, 1882a:160 (Italy: Sardegna); A. Costa, 1883:57 (Italy: Sardegna); Magretti, 1884a:249 (Sudan); Gribodo, 1884c:298 (Ethiopia: Daimbi, Let-Marefia 16 km north of Ankober); Gasperini, 1887:18 (Dalmatia: Lesina and Lissa islands, Spalato, now Croatia: Vis and Hvar islands, Split); Magretti, 1884c:576 (Ethiopia); De Stefani Perez, 1884b:9 (nest parasite: *Sitaris muralis* Forst., Meloidae); Ed. André, 1886:103 (in revision of Sphecidae of Europe and Algeria); De Stefani Perez, 1886:171 (Italy: Sicilia: monte di Renda near Palermo); Ed. André, 1888:5* (bibliographic references); Cuní y Martorell, 1888:164 (Spain: Barcelona); Riggio and De Stefani Perez, 1888:149 (Italy: Island of Ustica);

De Stefani Perez, 1889:269 (in key to Sicilian *Sceliphron*); Radoszkowski, 1892:580 (male genitalia); Schletterer, 1891:13 (Zaire); A. Costa, 1893b:5 (Tunisia); Kohl, 1883e:183 (Mozambique, Tanzania); Baldini, 1894:49 (Italy: Modena area); De Stefani Perez, 1894:216 (Italy: Sicilia); Gribodo, 1894:136 (Mozambique: Magnarra River); Medina, 1894a:259 (Spain: Sevilla, Morón, Huévar, and Puerto-Real); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera); La-boulbène, 1895:180 (preying on spiders); W.F. Kirby, 1896:265 (Gabon); Medina, 1896:104 (Spain: Jerez and Cádiz); Acloque, 1897:95 (in Sphecid Fauna of France and Algeria); Medina, 1897:192 (Spain: Jerez de la Frontera); Cuní y Martorell, 1897:331 (Spain: Cataluña: villa de Calella); Flamary, 1898:38 (France: Saône-et-Loire: Mâcon area); Friese, 1900:267 (Madagascar, determination tentative); E. Saunders, 1901:208 (Spain: Minorca); de Cobelli, 1903:104 (Italy: Province of Trentino); Antiga and Bofill, 1904:3 (Spain: Cataluña Province); Olivier, 1910:163 (Algeria: Saïda, Hamman-Meskoutine); Innes Bey, 1912:111 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected in Sinai); Rudow, 1912:39 (description of nest); Chevalier, 1922:45 (nest parasite: *Pachyoptalmus signatus* (Meigen), a calliphorid); Coulon, 1925:115 (Spain, Sicily, Morocco); Guiglia, 1928:499 (Somalia); Bugnion, 1929:164 (labiomaxillary complex); Ceballos, 1949:101 (Spain); Casolari and Casolari Moreno, 1980:101, 102 (specimens in M. Spinola collection, Torino); Pagliano, 2008:519, 523 (specimens in M. Spinola collection, Torino). – *As Trypoxylon spirifex*: Duméril, 1860:942 (new combination, building nests on walls, preying on caterpillars, clearly in error). – *As Sceliphrum spirifex*: W. Schulz, 1906:43 (new combination, Greece: Crete), 308 (Fernando Po, now Bioko). – *As Sceliphron spirifex*: Blanchard, 1840:.. (new combination, as *spinifer*); Gribodo, 1894c:136 (Mozambique: Magnarra River); Kohl, 1894:342 (Cameroon: no specific locality, Congo: Gabun, West Africa (Nigeria?): Eloby Island, Kriby); Schletterer, 1894:31 (Istria Peninsula, now part of Croatia, Slovenia, and Italy); Dalla Torre, 1897:390 (in catalog of world Hymenoptera); Bingham, 1898a:105 (Yemen: Aden); du Buysson, 1898:358 (South Africa: Cape Province: Hamanskraal); Magretti, 1899:601 (Somalia); Mocsáry, 1897:79 (Kingdom of Hungary, all localities are in today's Croatia); Bingham, 1902:217 (South Africa); E. Saunders, 1904c:605 (Spain: Mayorca), 637 (Spain: Barcelona); Tullgren, 1904:442 (Cameroon); Ferton, 1905:63 (prey, prey condition); Mantero, 1905:67 (Italy: Toscana: Isola del Giglio); Zavattari, 1905b:4 (Lebanon: Bekfeiya); Schmiedeknecht, 1907:247 (in key to Hymenoptera of Central Europe); Cameron, 1908a:268 (Tanzania: Mount Kilimanjaro); Cecconi, 1908:23 (Italy: Puglia: Isole Tremiti); de Gaulle, 1908:103 (in catalog of French Hymenoptera); Kohl, 1909:370 (Kenya: Mombasa); von Schulthess, 1909:440 (Libya: Dernah, Tripoli); Cameron, 1910b:136 (South Africa: Transvaal, now Gauteng, Limpopo, and Mpumalanga); Zavattari, 1910:4 (Italy: Isola d'Elba: Portoferraio); Brauns, 1911a:118 (South Africa, nesting); Graeffe, 1911:48 (Italy: Trieste area); Longstaff, 1911:125 (Sudan: Khartum and Mut Mir railroad station); W. Schulz, 1911b:159 (Gribodo's 1881 record from Ethiopia confirmed); Bischoff, 1912:220 (Zaire); Zavattari, 1912:3 (Italy: Sardegna: Pantaleo); Mantero, 1915:323 (Libya); Strand, 1915:91 (Italy and "Barbaria", now northwestern Africa); Storey, 1916:107 (Egypt: common everywhere); Kohl, 1918:86 (in revision of world Sceliphronini); Roth, 1920c:140 (specimen with two submarginal cells); Berland, 1921:533 (Greece); Fahringer and Friese, 1921:160 (Turkey: Erzurum: Das Daghin Amanus Mountains = Gavur Dağları); Fahringer, 1922:175 (Turkey); Maidl, 1922:66 (Albania, Croatia); Ferton, 1923:70 (nesting habits); Gribodo, 1924b:48 (Libya: Benghazi, Marsa, Zavia Mechili); Maidl, 1924:246 (Sudan: Atbara, Khartum); Roth, 1924:123 (Algeria: Nemours, now Ghazaouet); Zanon, 1926:91 (Libya: Fueihat 15 km south of Benghazi); von Schulthess, 1926b:208 (Tunisia, Libya); Eidmann, 1927:33 (Spain: Balearic Islands); Arnold, 1928b:244 (in revision of southern African *Sceliphron*); Aptel, 1929:236 (nesting habits); Bugnion, 1929:164 (bucco-pharyngeal complex); Grandi,

1929:262 (prey capture), 263 (description of mature larva); Alfken, 1930:10 (Malta); Arnold, 1930:16 (in checklist of Afrotropical Sphecidae); Grandi, 1930:304 (list of prey, nest parasites), 307 (description of young larva), 340 (Italy: Toscana: Maremma); Schmiedeknecht, 1930:709 (in keys to Hymenoptera of North and Central Europe); Schouteden, 1930:95 (Zaire); Guiglia, 1931:45 (nest, cocoon, nest parasite: *Cryptus seductorius* Gravenhorst, Ichneumonidae); Giordani Soika, 1932a:21 (Italy: Lido di Venezia); Guiglia, 1932a:124 (Kenya, Somalia); Motaş, 1932:14 (nest parasite: *Pachyophthalmus pelopaei* Rudow, a tachinid); Arnold, 1933a:357 (Ethiopia, southern Arabia); Bischoff, 1933:6 (Morocco); Masi, 1933:197 (Italy: Toscana: Isola di Capraia); Nadig, 1933:100 (Morocco); Giner Marí, 1934a:131 (Spain: Valencia: Picassent); Grandi, 1934:66 (list of prey), 130 (Italy: Lazio: Acilia, and Toscana: San Vincenzo); Guiglia, 1934b:295 (Libya: bibliography and summary of locality records); Maidl, 1934:64 (Greece: Aegean Islands: Milos); Nadig, 1934:33 (France: Corse: Bastia, Cap Corse; Italy: Sardegna: Cagliari, Iglesias); Arnold, 1935b:1 and 8 (Mauritania: Nema); Bernard, 1935:61 (France: Var: Fréjus area), 62 (nest characteristics), 1936c:287 (France: Var: Fréjus); Grandi, 1935a:53 (nesting habits, list of prey); Bischoff, 1937b:2 (Canary Islands); Grandi, 1937:291 (nesting habits), 302 (description of larva); Guiglia, 1938a:186 (Somalia: Belet Amin in Jubba River area), 1938b:9 (Italy: Sardegna); Giordani Soika, 1939a:169 (Eritrea: Tessenei), 1939c:104 (Eritrea: Adi Ugri); Guiglia, 1939a:200 (Eritrea: Keren, Ethiopia: Gonder), 1939b:90 (Ethiopia: Lake Tana: Bahar-Dar, Gorgora), 1940d:287 (Somalia); Mader, 1940:103 (probable host of *Stilbum calens* F., Chrysididae); Guiglia, 1942a:58 (Greece: Island of Rhodes: Villanova); Arnold, 1943:76 (Zaire); Giner Marí, 1943a:63 (in Sphecid Fauna of Spain); Guiglia, 1943b:69 (Albania: Kopliku), 1943c:75 (Ethiopia: Gamo Gofa: Sagan-Omo region); Giordani Soika, 1944:13 (Italy: Sicilia: Falcone, Messina); Guiglia, 1944b:8 (Italy); de Beaumont, 1947b:384 (Cyprus); Zavadil *in* Zavadil and Šnoflák, 1948:171 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); de Andrade, 1949:5 (Portugal: Conceição de Faro, Bela Salema); Guiglia, 1948c:200 (Italy: Sardegna: Oristano, Villasalto); de Beaumont, 1950b:70 (first record from Switzerland), 1950d:7 (Egypt: Siwa oasis), 1950f:396 (Algeria, Morocco); Guiglia, 1950:245 (Ethiopia: Gamo Gofa: Caschei, El Dire, Murle Omo); Pittioni, 1950:21 (Cyprus); de Beaumont, 1951e:270 (Morocco); Berland, 1952b:276 (boundary of Ivory Coast, Guinea, and Liberia: Mount Nimba); Cleu, 1953:50 (France: Ardèche River basin); Balthasar, 1954b:281 (Palestine); Grandi, 1954:236 (Italy); Hertzog, 1954:100 (France: Bouches-du-Rhône: Camargue); de Beaumont and Bytinski-Salz, 1955:44 (Israel); Harant and Leclercq, 1955:251 (France: Hérault: Castelnau, Palavas-les-Flots); Leclercq, 1955h:60 (bibliographic references, locality records from Africa), 1955i:406 (Burundi, Rwanda); Steiner, 1955:134 (France: Dordogne); Vogrin, 1955:31 (Yugoslavia); Bytinski-Salz, 1956:224 (Turkey: Büyük Ada, Saryyer, Seki); Ceballos, 1956:361 (in catalog of Hymenoptera of Spain); de Beaumont, 1956d:2 (Cabo Verde Islands); Evans and Lin, 1956a:149 (larval characters as described by Grandi, 1929); Hertzog, 1956:169 (prey: juvenile spiders, nest construction); Morel, Nouvel, and Ribaut, 1956:337 (France: Département des Pyrénées-Orientales); Bajári, 1957a:16 (in key to Hungarian Sphecidae); Grandi, 1957:344 (prey: *Araneus* sp., Araneidae, nest content), 387 (Libya: Tripolitania: Wadi Kaam); Nouvel and Ribaut, 1958:9 (France: Pyrénées-Orientales: Banyuls-sur-Mer area); de Beaumont, 1959a:9 (Italy); Compte Sart, 1959:131 (Spain: Mayorca); Diniz, 1959:27 (Portugal: Bela Salema, Conceição de Faro); Giner Marí, 1959:387 (Morocco); Suárez, 1959:53 (Spain: Almería Province); Suárez *in* Giner Marí, 1959:400 (recorded from Morocco by de Beaumont, 1951); Čingovski, 1960:7 (Macedonia: Katlanovo, Ognjantsy, Skopje Park, Vodno, Zelenikovo); de Beaumont, 1960a:6 (Greece: Island of Rhodes), 1961c:45 (Greece: Crete Island); Grandi, 1961:104 (structure of gastral segment I, illustration), 148 (nesting habits), 471 (description of larva); Leclercq, 1961b:52 (Zaire); Atanassov,

1962:127 (Bulgaria: Petrich area); Krombein and Walkley, 1962:78 (nest parasites: *Dolichomutilla minor*, Mutillidae, *Chrysis lyncea* Fabricius, Chrysididae, and *Osprynchotus gigas* Kriechbaumer, Ichneumonidae); Leclercq, 1962a:394 (Uganda: Jinja); E. White, 1962:317 (Sierra Leone; nest-building and provisioning in relation to sex); MacNulty, 1962:118 (nest building in Nigeria); Ceballos, 1964:87 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:30 (in Sphecidae Fauna of Switzerland); Diniz, 1964b:238 (Cabo Verde Islands, Guinea Bissau, São Tomé, redescription), 1964c:107 (Angola: Lunda: Dundo, Muíta-Luembe); de Beaumont, 1965a:17 (Greece); Diniz, 1965:3 (Portugal: Conceição de Faro, Miranda do Corvo, Póvoa); Roberti, Frilli, and Pizzaghi, 1965:109 (Italy); de Beaumont, 1967a:276 (Turkey), 1967b:504 (South Africa), 1968a:255 (Canary Islands: Gran Canaria, Tenerife); van der Vecht and van Breugel, 1968:238 (in revision of world *Sceliphron*); Leclercq, 1969:1048 (Congo Brazzaville); de Beaumont, 1969:81 (Turkey); I. Robertson, 1969:480 (Tanzania: Ukiriguru); Zangheri, 1969:1700 (Italy: in catalog of flora and fauna of Romagna Region); Atanassov, 1972a:193 (Bulgaria: Stara Planina Mountains, as *sperifex*), 1972b:32, 48, 53 (Bulgaria: Stara Planina Mountains); Balthasar, 1972:438 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Erlandsson, 1974:60 (Greece, Italy, Malta, Spain, Yugoslavia); Esmaili and Rastegar, 1974:45 (Iran); Leclercq, 1974a:414 (Belgium: in custom office from parcels coming from central Africa); R. Bohart and Menke, 1976:106 (in checklist of world Sphecidae); Bonelli, 1976:226 (nesting behavior); Haeseler, 1976a:370 (France, Sardinia, Spain, Yugoslavia); Georghiou, 1977:191 (Cyprus); Báez and Ortega, 1978:192 (Canary Islands); Erlandsson, 1978a:205 (Canary Islands); Guichard, 1978:270 (Greece); Kazenas, 1978b:46 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:86 (Corsica, Morocco, Gabon); Pulański, 1978:185 (in key to Sphecidae of European part of USSR); Radović and Krunić, 1979:unpaginated foldout (mud dauber, foreleg structure); Guichard, 1980:224 (Oman); Pagliano, 1980:111 (Italy: Liguria, Piemonte); Gayubo, 1981a:134 (northern Spain: Sierra de Béjar); Gess, 1981:27 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown; nesting on vertical banks; prey: small spiders; nest parasite: *Osprynchotus violator* (Thunberg), an ichneumonid), 61 (nest built in protected situations); Heath and Leclercq, 1981:map 14 (distribution in Europe); Gayubo, 1982f:245 (Spain: Cadiz Province: Cortijo de Ahojiz, Cádiz); Groh, 1982:260 (Cape Verde Islands); Dollfuss, 1983b:2 (occurrence in Austria doubtful); Gayubo, 1983c:229 (Spain: Salamanca Province: Cabrerizos, Herguiejuela de la Sierra, Ladesma, Valdecarros); Mingo and Gayubo, 1983:140 (Spain); Piek, Buitenhuis, Veldsema-Currie, and Mantel, 1983:153-159 (venom contains histamine, but no acetylcholine); Schmidt and Westrich, 1983:120 (northern Greece); Gayubo, 1984c:355 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:7 (Spain: Valencia); Pagliano, 1984:369 (Italy); Chevin and Chevin, 1985:38 (France: Aude); Gayubo, 1985c:166 (Spain: Valladolid: Valladolid); Józán, 1985b:55 (Hungary south of Lake Balaton), 83 (ecological and zoogeographic characteristics); Pagliano, 1985:24 (Italy); Radović, 1985:64 (sting apparatus analyzed); Gayubo, 1986b:35 (Spain: Andalucía), 1986c:30 (Spain: Zamora Province); Gayubo and Heras, 1986:26 (Spain: Segovia Province); Gayubo and Tormos, 1986a:7 (Spain: Castellón de la Plana), 1986b:3 (Spain: Valencia); Piek and Spanjer, 1986:189 (in list of Sphecidae with known prey), 221 (venom does not contain acetylcholine but a histamine-like activity); Steiner, 1986:95 (references to papers on nesting habits); Asís and Jiménez, 1987:23 (Spain: Castellón Province); Fitton, Shaw, and Austin, 1987:78 (in list of European Hymenoptera that prey on spiders); Gayubo, 1987:106 (Spain: Ciudad Real Province); Tormos and Jiménez, 1987a:121 (Spain: Valencia), 1987b:316 (Spain: Valencia Province: Dehesa de El Saler); Guichard, 1988a:117 (Arabian Peninsula); Jocqué, 1988:7 (list of spider families used as prey in Malawi); Piek, 1989:54 (France: Var Department, nest reused by *Ancistrocerus renimacula* Lepeletier, Vespidae); Dollfuss, 1990:122 (Cen-

tral African Republic); Edmunds, 1990:120 (list of spider prey in Ghana); Gayubo, Asís, and Tormos, 1990a:8 (Spain); Pagliano, 1990:64 (in catalogue of Italian Sphecidae); Gayubo, Borsato, and Osella, 1991:391 (Italy); Dollfuss, 1991:27 (in key to Sphecidae of North and Central Europe); Gayubo and Torres, 1991:Table I and p. 81 (Spain: Salamanca; effects of urban pressure); Negrisolo, 1991:315 (Italy: Udine, Treviso, and Venezia Provinces); Schembri, 1991:177 (Malta); Gayubo, Borsato, and Osella, 1992:274 (Greece); Early and Townsend, 1993:53 (adventive to New Zealand but not established there); Gayubo, Tormos, and Asís, 1993:308 (teratological specimen); Hohmann, La Roche, Ortega, and Barquín, 1993:207 (detailed records from Canary Islands); Luchetti, 1993:105 (Italy: Sardegna: Maddalena archipelago); Simon Thomas and Wiering, 1993:403 (Cape Verde Islands); Torregrosa, Gayubo, Tormos, and Asís, 1993:11 (Spain: Alicante Province); Gayubo and Borsato, 1994:199 (Italy: Veneto, Sardegna); Roche and Zalut, 1994:113 (Egypt: Sinai Peninsula); Tormos, Asís, and Gayubo, 1994:187, 192 (Spain: Albacete Province); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:3 (in catalog of Italian fauna); Pagliano and Pesarini, 1995:82 (Italy: Ferrara Province); Pagliano and Scaramozzino, 1995:731 (Italy: Island of Lampedusa); Scharrer, 1995:22 (France: Gard: Nîmes; Greece: Attica: no specific locality; Italy: Lombardia: Siomione; Slovenia: Portorož); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:42 (in Sphecid Fauna of Western Europe); nec Gauss, 1997a:17 (= *Sceliphron destillatorium*); Pezzi, 1998:71 (nesting habits)Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); Generani, Pagliano, Scaramozzino, and Strumia, 1999:79 (Italy: Toscana: Isola di Montecristo); Ljubomirov, 1999b:44 (Bulgaria: Mount Vitosha near Sofia); Tüzün, Gülmez, and Bağriaçık, 1999:383 (Turkey: Aegean Region); Ljubomirov, 2000:6, 7 (Bulgaria, specimens in N. Nedelkov collection); Basset, 2001:79 (France: Département de Gironde); Bayliss and Brothers, 2001:2 (in South Africa host of *Dolichomutilla sycorax* (Smith), Mutillidae); Józán, 2001:277 (Hungary: Somogy County); Kazenas, 2001b:13 (in checklist of Sphecidae of Kazakhstan and Central Asia), 72 (review of nesting habits); Nachtigall, 2001:161 (formation of clay globules for nest building); Tüzün, 2001:44 (Turkey); Carrière, 2003:419 (France: Hérault: Saint-Michel de Bagnas, coexistence with *Sceliphron caementarium* and *destillatorium*); Drewes, 2003:142 (Croatia, Italy, Spain: miscellaneous locality records); Generani, Pagliano, Scaramozzino, and Strumia, 2003:64 (Italy: Arcipelago Toscano); S. Gess and F. Gess, 2003:90 (Lesotho, Namibia, and South Africa: visiting flowers of *Foeniculum vulgare* L., Apiaceae, *Calpurnia glabrata* Brummitt, Fabaceae, and *Zygophyllum stapfii* Schinz, Zygophyllaceae); Pagliano, 2003b:130 (Italy: Islands of Lampedusa and Pantelleria); Schmid-Egger, 2003:757 (Italy: Sicilia: Avola; Malta: Busket, Mgarr); Vernier, 2003:8 (in key to Swiss *Sceliphron*); Hellrigl, 2004a:174 (Italy: Trentino-Alto Adige, as Südtirol: Auer; Verona Province: Malcesine, Torri del Benaco), 2004b:190 (in key to *Chalybion*, *Isodontia*, and *Sceliphron* of Italy: Trentino-Alto Adige, as Südtirol), 191 (in key to nests of *Isodontia* and *Sceliphron*); Gayubo and Özbek, 2005:4 (Turkey: many localities); Jacobs, 2005a:438 (Bulgaria); Pagliano and Negrisolo, 2005:82 (in Sphecid Fauna of Italy); Polidori, Trombino, Fumagalli, and Andrietti, 2005:153 (use of granulometric method to analyze cocoon structure and content); Rahola, 2005:334 (photograph of nest); Schmid-Egger, 2005a:10 (in key to European and Mediterranean *Sceliphron*), 15 (recognition, color, distribution); Shorenko, 2005a:161 (Ukraine: Crimea: Yalta); Yildirim and Ljubomirov, 2005:1786 (Turkey: İcel Province: Bozyazı: Gözce); Blösch, 2006:62 (males spend nights attached to plant stems or leave blades); Dathe, 2006:37 (*Sphex spirifex* recorded from Plauenscher Grund near Dresden, Germany, by von Block, 1799, is now *Sceliphron spirifex*); Ljubomirov, 2006:536 (Bulgaria: records from Rhodope Mountains summarized, also: Belovo Railway station); Bitsch, 2010:103 (in supplement to vol. II of Faune de France, 1997); Standfuss and Standfuss, 2006c:307 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Jacobs, 2007:41 (in key to Sphecidae of

Germany, not yet found in Germany); Polidori, Federici, Pesarini, and Andrietti, 2007:13 (factors affecting spider prey selection); Roche, 2007a:36 (in checklist of Egyptian Sphecidae, redescription), 2007b:2 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Smit, 2007:652 (Canary Islands: first record from La Gomera: San Sebastian); Vicidomini and Pignataro, 2007:2 (Italy: Salerno: known from Parco Nazionale del Cilento e Vallo di Diano), 15 (Italy: Provincia di Salerno: ubiquitous); Ljubomirov and Yildirim, 2008:15 (in catalog of Sphecidae of Turkey); Baños-Picón, Asís, Gayubo, and Tormos, 2009:310 (Spain: many localities; frequency of specimens collected with hand nets and Malaise traps); Fallahzadeh, Ostovan, and Saghaei, 2009:235 (Iran: Fars: Jahrom), 240 (color photograph); Gayubo, González, Tormos, and Asís, 2009:362 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:622 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Polidori, Federici, Trombino, Barberini, Barbieri, and F. Andrietti, 2009:1 (weight, volume, and unbalancing of mud balls carried for nest construction); Shorenko, 2009:366 (in list of Sphecidae *sensu lato* of Crimea); Bitsch, 2010:103 (in supplement to vol. II of Faune de France, 1997: recent records on nesting habits reported, new records from France: Côte-d’Or: Dijon, and Côtes-du-Nord: Trégastel); Tüzün and Yüksel, 2010:4467 (Turkey: Niğde Province); Gogala, 2011:8 (Slovenia: Portorož); Józán, 2011:179 (in checklist of Sphecidae *sensu lato* of Hungary); Murai and Amr, 2011:109, 120 (first record from Syria: Al Thawrah Nature Reserve at 35°51’N 28°38’E); Schmid-Egger, 2011b:603 (recorded from United Arab Emirates by Guichard, 1988a); Chatenoud, Polidori, Federici, Licciardi, and Andrietti, 2012:939 (mud collecting consists of four phases: 1. search for suitable place, 2. removing leaves, twigs, etc. from chosen area, 3. forming mud balls, 4. flying off with mud balls); Cucumano, González, Colazza, and Vinson, 2012:46 (Italy: Sicilia: Contessa Entellina; nest parasite *Melittobia australica* Girault, Tetrastichidae, reared from nests of *Sceliphron spirifex*); Japoshvili and Ljubomirov, 2012:96 (Turkey: Isparta: Gölcük Nature Park 8 km southwest of city of Isparta); Protsenko, Fateryga, Ivanov, and Puzanov, 2012:57 (Ukraine: Crimea); Strumia, Pagliano, and Gayubo, 2012:55 (Italy: Toscana: Riserva di San Rossore); Yildirim, 2012:72 (Turkey: İzmir: Bayındır: Kızıloba); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:361 (in new catalog of Sphecidae of Saudi Arabia); Mader, 2013:74 (original inhabitant of Southern Europe and North Africa), 206 (color photograph); Baldock, 2014:355 (Spain: Island of Mallorca); P. Rosa and Pagliano, 2015:96 (Italy: Lombardia and Piemonte: Parco del Ticino); Vas and Józán, 2014:160 (in key to *Chalybion* and *Sceliphron* of Hungary); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); Koçak and Kemal, 2015:279 (in checklist of Hymenoptera of Turkey); Samin and Bagriacik, 2015:70 (Iran: Ilam: Ilam at 33°41’N, 46°16’E); Shorenko, 2015:315 (in list of Sphecidae *sensu lato* of Crimea); Dollfuss, 2016:1179 (collecting localities from Albania, Australia, Benin, Botswana, Bulgaria, Cameroon, Central African Republic, Croatia, Cyprus, Egypt, Ethiopia, France, Greece, Guinea, Israel, Italy, Jordan, Kenya, Libya, Macedonia, Malawi, Mali, Morocco, Mozambique, Namibia, Nigeria, Oman, Rwanda, Senegal, South Africa, Spain, Syria, Tanzania, Tunisia, Turkey, Uganda, Yemen, Zaire, Zambia, and Zimbabwe); Gülmez and Dizer, 2016:57 (Turkey: Tokat Province); Mokrousov and Popov, 2016:563 (Russia: Abkhazia); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:4 (Turkey: Adiyaman and Antalya provinces); Arens, 2017a:625 (Greece: Peloponnesus); Danilov, 2017b:214 (in catalog of Sphecidae s.s. of Russia); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:24 (Iran: known from Fars and Ilam provinces); Pagliano, 2017:190 (Italy: Island of Lampedusa); Shorenko, 2017:76 (in Crimea collected in July and August); Turrisi and Altadonna, 2017:758 (Italy: summary of records from Sicilia); Shorenko, 2018:127 (Crimea, including localities, habitats, and number of specimens); Augul, 2019:501 (recorded from Iraq by Khalaf and Al-Omar, 1974); Gülmez, 2019:3 (Turkey: Tokat

Province: no specific locality); Ben Khedher, Yildirim, Braham, and Ljubomirov, 2020a:313 (in list of Tunisian Sphecidae *sensu stricto*; additional records: Tunisia: Beja, Gabes, Kairouan, Kasserine, Kebili, Mahdia, Sfax, Sidi Bouzid, Sousse, and Tozeur provinces); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:125 (in Sphecid Fauna of Europe); Cassar and Mifsud, 2020:164 (in checklist of Sphecidae s.s. of Malta); Danilov, 2020:319 (specimens from Rwanda, Turkey, and Yemen in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Diaz-Calafat, 2020:3 (in key to *Sceliphron* of Majorca); Gadallah, 2020d:84 (in list of aculeate wasps of Arabian Peninsula); Turrise, Altadonna, Lo Cascio, Nobile, and Selis, 2020:727 (Italy: Aeolian Archipelago: island of Vulcano); Cross, Baldock, and Wood, 2021:17 (in catalog of Sphecidae *sensu lato* of Portugal).

Sphex aegyptius Linnaeus, 1758:569, sex not stated (as *aegyptia*, incorrect original termination). Holotype: ♂, Egypt: no specific locality (Museum Ludovicae Ulricae, Uppsala). Synonymized with *Sceliphron spirifex* by Dalla Torre, 1897:391 (by treating the name as a variety of *spirifex*) according to Day, but this is contrary to Article 23.3.1 of the Code. – Linnaeus, 1764:406 (in museum of Queen Ludovica Ulrica, redescription); Christ, 1791:304 (redescription); Gmelin, 1790:2727 (redescription); Lichtenstein, 1796:199 (in auction catalog); Klug, 1801:565 (as synonym of *Sceliphron destillatorium*, misspelled *aegyptiaca*); W Schulz, 1912:56 (*aegyptiacum* is the valid name for *spirifex*); Day, 1979:48 (study of holotype); Day and Fitton, 1978:193 (recuration of Linnean type material: no specimens). – **As *Sceliphron aegyptium***: W.F. Kirby, 1903:240 (Socotra). – **As *Pelopaeus aegyptius***: Kollar, 1851:201 (new combination, Egypt: Cairo); W.F. Kirby, 1881b:650 (Island of Socotra).

Sphex spirifex atra Scopoli, 1786:57, sex not stated. Holotype or syntypes: Italy: Insubria (= Italy north of river Po): no specific locality (lost). Synonymized with *Sceliphron spirifex* by Kohl, 1918:86

Sphex flavipes Christ, 1791:303 (♂ only, ♀ = *Sceliphron destillatorium*), junior primary homonym of *Sphex flavipes* Fabricius, 1781. Holotype or syntypes: ♂, France: Provence: no specific locality (destroyed). Synonymized with *Sceliphron spirifex* by Kohl, 1918:86.

Sceliphron spirifex var. *aegyptiacum* Dalla Torre, 1897:391. Unjustified emendation of *Sphex aegyptia* Linnaeus, 1758, new status. – Maidl, 1913:560 (Egypt: Aswan Dam, Nagh Hamadi)

35. *unifasciatum* (F. Smith)

Pelopaeus unifasciatus F. Smith, 1860b:123, ♀. Holotype: ♀, Indonesia: Maluku Islands: Batjan, now Bacan: no specific locality (OXUM). – F. Smith, 1863b:134 (known from Batjan, now Bacan), 1871a:360 (in catalog of Oriental Aculeata); Maindron, 1878:396 (in checklist of *Pelopaeus* of India and Indian Archipelago). – **As *Sceliphron unifasciatum***: Dalla Torre, 1897:392 (new combination, in catalog of world Hymenoptera); Kohl, 1918:129 (as synonym of *Sceliphron rufopictum*); Bohart and Menke, 1976:106 (in checklist of world Sphecidae, as *deforme unifasciatum*); Hensen, 1987:254 (in revision of subgenus *Prosceliphron*, now *Hensenia*; northern Moluccas).

Pelopaeus affinis Maindron, 1878:395, ♀. Holotype: ♀, Indonesia: Halmahera: Doddinga (depository?), junior secondary homonym of *Sceliphron affine* (Fabricius, 1793). Synonymized with *Sceliphron unifasciatum* by Hensen, 1987:254. – Maindron, 1878:397 (in checklist of *Pelopaeus* of India and Indian Archipelago). – **As *Sceliphron affine***: Kohl, 1918:129 (new combination, tentative synonym of *Sceliphron rufopictum*), 132 (original description copied).

sp.

Sörensen, 1884:13 (nesting habits of *Pelopaeus lunato* affinis, South America); Schouteden, 1930:95 (Zaire); de Beaumont, 1967b:505 (South Africa); Dorris, 1970:10 (list of prey); Al-Ali, 1977:100 (Iraq: Diwaniya); Abdu and Shaumar, 1985:229 (Qatar: Abu Samrah); P. Moreira, Brito,

and Lino-Neto, 2003:569 (morphology and number of spermatozoa per cyst); Martins, Serrão, and Schmidt, 2005:121 (spermatheca long, coiled, with reservoir more developed than in *Trypoxylon* or *Microstigmus*); Ruíz Cancino, Coronado Blanco, and Horta Vega, 2005:170 (Mexico: recorded from Tamaulipas State); Patil and Arade, 2011:1517 (nest and prey); Madl, 2014a:1023 (reference to Voeltzkow, 1897:34); Rodrigues, Lago, Santos, and Bitencourt, 2018 (Brazil: nests are crushed and mixed with oil; the resulting pasta is used against mumps by riverine communities of Amazon); Gadallah, 2020d:84 (in list of aculeate wasps of Arabian Peninsula).

UNRECOGNIZABLE NAME

Pelopaeus clypeatus Kohl: Verlaine, 1924:197 (nesting habits and experiments), 1926:[174] (nesting habits and experiments). The species is said to be barely distinguishable from *spirifex*.

NOMINA NUDA IN SCELIPHRON

Pelopoeus habilis Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:519 (specimens in M. Spinola coll., Torino).

Pelopoeus madraspalenus Casolari and Casolari Moreno, 1980:101 (specimens in M. Spinola collection, Torino); Pagliano, 2008:520 (specimens in M. Spinola collection, Torino).

Pelopoeus nigrotarsis Billberg, 1820:106 (origin unknown).

Pelopaeus ? *dimidiativentris* de Motschoulsky, 1859:500 (Russia: eastern Siberia: between Shilka and Nikolayevsk: no specific locality).

FOSSIL SCELIPHRON

tertiarium Meunier

Sceliphron tertiaryum Meunier, 1915:9, sex not stated. Holotype: France: Bouche-du-Rhône Department: Aix-en-Provence. Oligocene (depository?). – R. Bohart and Menke, 1976:106 (in checklist of world Sphecidae).

SPECIES DESCRIBED IN SCELIPHRON AND TRANSFERRED TO OTHER GENERA

abbreviatus (*Pelopoeus*) = *Eremnophila*

brasiliense Schrottky, 1903 = *Penepodium*

brevior Cockerell, 1921 = *Protosceliphron*

clypeatum Phong, 2016 = *Chalybion sumatranum* (Kohl, 1884)

frontale Kohl, 1906 = *Chalybion*

horni Strand, 1915 = *Chalybion malignum* (Kohl, 1906)

hortivagans Strand, 1910 = *Penepodium*

inflexum Sickmann, 1894 = *Chalybion*

junonium Schrottky, 1903 = *Penepodium*

pauloense Schrottky, 1903 = *Penepodium*

ritsemae Dalla Torre, 1897 = *Chalybion japonicum* (Gribodo, 1883)

taprobanense Strand, 1916 = *Chalybion fuscum* (Lepeletier de Saint Fargeau, 1845)

vicinum Dalla Torre, 1897 = *Trigonopsis*

violascens Dalla Torre, 1897 = *Trigonopsis*

