

Last updated: 9 June 2025

PHILANTHUS

Philanthus Fabricius, 1790:224. Type species: *Philanthus coronatus* Fabricius, 1790 [= *Sphex coronatus* Thunberg, 1784], designated by Shuckard, 1837:246 according to Bohart and Menke, 1976:54, but *Crabro androgynus* Rossi, 1792 [= *Vespa triangulum* Fabricius, 1790], designated by Curtis, 1829:273 according to J. Ch. Bradley, 1919a:61. *Symblephilus* Panzer, 1806:171 (authorship attributed to Jurine, as synonym of *Philanthus*). Type species: *Philanthus pictus* Panzer, 1797 [= *Vespa triangulum* Fabricius, 1775], designated by Pate, 1937c:62.

Simblephilus Jurine, 1807:185. Type species: *Vespa triangulum* Fabricius, 1775, designated by Morice and Durrant, 1915:402.

Cheilopogonus Westwood, 1835a:441. Type species: *Cheilopogonus punctiger* Westwood, 1835 [= *Vespa gibbosa* Fabricius, 1775], by monotypy.

Philanthus Guérin-Ménéville, 1835:pl. 71, fig 8. Lapsus for *Philanthus* Fabricius, 1790.

Anthophilus Dahlbom, 1844:190. Type species: *Philanthus politus* Say, 1824, designated by Ashmead, 1899d:294.

Chilopogon Kohl, 1897a:329. Emendation of *Cheilopogonus* Westwood, 1834.

Ephiphilanthus Ashmead, 1899d:294. Type species: *Philanthus solivagus* Say, 1837, by original designation.

Pseudanthophilus Ashmead, 1899d:294. Type species: *Philanthus ventilabris* Fabricius, 1798, by original designation.

Oclocletes Banks, 1913b:423. Type species: *Philanthus sanbornii* Cresson, 1865, by original designation.

Oclocletes Mickel, 1916a:407. Lapsus or emendation of *Oclocletes* Banks, 1913.

Keys: Arnold, 1925:140 (southern African species); Strandtmann, 1946 (North America); de Beaumont, 1951c:299 (Europe), 1961a:210 (North Africa); van der Vecht, 1966 (three Oriental species); R. Bohart and Grissell, 1975 (North America); G. Ferguson, 1983a (*politus* group), 1984a (*zebratus* group); Gayubo, 1991a (Iberian Peninsula); Guichard, 1994a (Arabia); Gadallah, 1996 (Egypt); Girish Kumar, Monks, and Sheikh, 2021 (India).

Revisions: Gadallah, 1996 (Egyptian species).

Comparative life histories of North American *Philanthus*: Evans and O'Neill, 1988.

Nest: Barth, 1910:119

Review of biology: Kazenas, 2001b:241.

Presence of bacterium *Streptomyces* in female antennal glands: Kaltenpoth et al., 2005, 2006.

1. *adamsoni* Arnold

Philanthus adamsoni Arnold, 1952:466, ♂. Holotype: ♂, Kenya: South Kulal (SAM). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

2. *albopictus* Taschenberg

Philanthus albopictus Taschenberg, 1880:782, ♂. Syntypes: Ethiopia: no specific locality (Halle). – Kohl, 1891:363 (in checklist of world *Philanthus*); Dalla Torre, 1897:482 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

3. *albopilosus* Cresson

Philanthus albopilosus Cresson, 1865c:91, ♂. Lectotype: ♂, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1916:99. – Packard, 1866:55 (in key to North American *Philanthus*), 56 (bibliographic reference, geographic distribution); Cresson, 1887:280 (in catalog of North American Hymenoptera); Kohl, 1891:366 (in checklist of world *Philanthus*); Dalla Torre, 1897:482 (in catalog of world Hymenoptera); Cockerell, 1899a:141 (New Mexico); Viereck

and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico); H. Smith, 1908b:355 (in revision of Nebraskan Sphecidae; partly = *Philanthus barbigus*); Stevens, 1917:421 (North Dakota); Mickel, 1918b:386 (in catalog of Nebraskan Sphecidae); Strandtmann, 1945b:151 (in review of North American *Philanthus*), 1946:21 (in revision of North American species); Dreisbach, 1947:142, 143 (in key to *Philanthus* of Michigan); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Evans and Lin, 1959:128 (nesting habits); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); Evans, 1975d:888 (nesting habits and male behavior in two widely separated populations); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1979b:1721 (in catalog of North American Hymenoptera, nest, list of prey); Hilchie, 1982:91 (geographic variation in prey and color), 110 (accessory burrows reviewed), 119 (range of *albocinctus albocinctus*: Canada: Alberta, Manitoba, Saskatchewan; USA: Illinois, Iowa, Montana, Nebraska, New York, North Dakota, Ohio, South Dakota); O'Neill and Evans, 1982:798 (major prey: family and genus); Evans and O'Neill, 1988:183 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:257 (reference to publication on nest parasite *Phrosinella fulvicornis* (Coquillett), a miltogrammine fly); Kurczewski, 1998d:250 (pine barrens in upstate New York); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Amaranter, 2002:63 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, Manitoba, Ontario, Saskatchewan: no specific locality). – **As *Anthophilus albopilosus***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae).

Philanthus simillimus Cresson, 1865c:95, ♀. Lectotype: ♀, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1916:101. Synonymized with *Philanthus albopilosus* by Strandtmann, 1945b:151. – Packard, 1866:55 (in key to North American *Philanthus*), 56 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:369 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Mickel, 1918b:387 (in catalog of Nebraskan Sphecidae).

ssp. *manuelito* Hilchie

Philanthus albopilosus manuelito Hilchie, 1982:120, ♀, ♂. Holotype: ♀, USA: Texas: Ward County: Manhattan State Park (USNM). Range: USA: Arizona, Colorado, Idaho, Kansas, New Mexico, Texas, Utah; Mexico: Chihuahua.

4. *amabilis* Arnold

Philanthus amabilis Arnold, 1946:79, ♀, ♂. Syntypes: Tanzania: Mbisi Forest near Sumbuwango (SAM). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntype in Bulawayo Museum).

5. *ammochrysus* W. Schulz

Philanthus ammochrysus W. Schulz, 1905b:59, ♂. Holotype: ♂, Tunisia: Sfax (depository?). – de Beaumont, 1949b:189 (in revision of northwestern African *Philanthus*), 1950f:396 (Algeria), 1953g:119 (Morocco), 1961a:205 (diagnostic characters); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Dollfuss, 2017b:1246 (locality records from Jordan, Morocco, and Tunisia); Ben Khedher, Yildirim, and Braham, 2021b:2 (Tunisia: Tataouine Governorate); Malash, Edmardash, and Gadallah, 2022:57 (in catalog of Middle Eastern and North African Philanthinae), 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 160 (in revision of Egyptian *Philanthinus* and *Philanthus*).

Philanthus kruegeri von Schulthess, 1926a:152, ♀, ♂ (as *krügeri*, incorrect original diacritic mark). Syntypes: Libya: Cyrenaica: Agedabia (Zurich). Synonymized with *Philanthus ammochrysus* by de Beaumont, 1949b:189. – von Schulthess, 1926b:212 (redescription); Guiglia, 1934b:296 (Libya: bibliography and summary of locality records).

As *Philanthus komarovi*: Morice, 1911:93 (Algeria: Biskra), corrected to *Philanthus ammochrysus* de Beaumont, 1949b:190.

ssp. *psammophilus* Bytinski-Salz

Philanthus ammochrysus psammophilus Bytinski-Salz in de Beaumont and Bytinski-Salz, 1959:146, ♂, ♀. Holotype: ♂, Israel: Bat Yam (originally H. Bytinski-Salz coll., now Tel Aviv Univ.). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Malash, Edmardash, and Gadallah, 2022:57 (in catalog of Middle Eastern and North African Philanthinae).

6. *arizonicus* R. Bohart

Philanthus arizonicus R. Bohart, 1972:397, ♂. Holotype: ♂, USA: Arizona: Maricopa County: 18 mi. south of Gila Bend (UCD). – R. Bohart and Grissell, 1975:6 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1979b:1721 (in catalog of North American Hymenoptera).

7. *arnoldi* Berland

Philanthus arnoldi Berland, 1936:278, ♀. Holotype: ♀, Mali: Niafouké (MNH). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

8. *asmarensis* Giordani Soika

Philanthus asmarensis Giordani Soika, 1939c:101, ♀, ♂ (authorship attributed to Arnold). Holotype: ♀, Eritrea: Asmara: Adi Caie (Venezia). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Dollfuss, 2017b:1247 (locality records from South Africa); Madl, 2023:258 (in catalog of Crabronidae of Eritrea).

Philanthus asmarensis Arnold, 1940:104, ♀. Objective synonym of *Philanthus asmarensis* Giordani Soika, 1939. – Vanni, Bartolozzi, and Whitman-Mascherini, 1985:129 (one syntype in Firenze Univ.).

9. *banabacoa* Alayo Dalmau

Philanthus banabacoa Alayo Dalmau, 1968a:3, ♀, ♂. Syntypes: Cuba: Oriente: several localities (IZAC). – Alayo Dalmau, 1973:190 (in catalog of Cuban Hymenoptera); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); Alayo Dalmau, 1976:30 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Alayo Soto, 1982:6 (prey: *Agapostemum poeyi* (Lucas), a halictid); Reyes and Hernández, 1995:3 (holotype in Inst. Ecol. Sist., La Havana, Cuba); Amarante, 2002:63 (in catalog of Neotropical Crabronidae); Hidalgo-Gato González, Reyes Sánchez, Mestre Novoa, Fernández García, Rodríguez-León Merino, Rodríguez Velázquez, Genaro Artola, and Fontenla Rizo, 2002:30 (syntypes deposited at IZAC); Genaro, 2006:58 (in checklist of Cuban Sphecidae and Crabronidae); Dollfuss, 2017b:1247 (Cuba: Guantanamo).

10. *barbatus* F. Smith

Philanthus barbatus F. Smith, 1856:473, ♂. Holotype or syntypes: ♂, North America: no specific locality (BMNH). – Cresson, 1962:236 (in catalog of North American Hymenoptera), 1865c:103 (original description copied); Packard, 1866:58 (bibliographic references, geographic distribution); Cresson, 1887:280 (in catalog of North American Hymenoptera); Kohl, 1891:366 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1979b:1721 (in catalog of North American Hymenoptera, nesting sites, list of prey); Evans, 1982c:571 (nesting and territorial behavior); Evans and O'Neill, 1988:101 (male behavior, nesting habits); Spofford, Kurczewski, and Downes, 1989:261 (reference to publication on nest parasite: undetermined species of Miltogrammini); McDaniel, J. Schmidt, and Howard, 1992:27 (mandibular gland secretion); Evans, 1993:29 (male aggregations); Amarante, 2002:63 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Dollfuss, 2017b:1247 (locality records from Arizona, Colorado, and New Mexico).

Philanthus albifrons Cresson, 1865c:101, ♀, ♂. Lectotype: ♀, USA: Colorado: Rocky Mountains: no specific locality (ANSP), designated by Cresson, 1916:99. Synonymized with *Philanthus barbatus* by R. Bohart in R. Bohart and

Menke, 1976:564. – Packard, 1866:55 (in key to North American *Philanthus*), 58 (bibliographic reference, geographic distribution); Cresson, 1887:280 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:366 (in checklist of world *Philanthus*); Dalla Torre, 1897:482 (in catalog of world Hymenoptera); Bridwell, 1899:209 (Kansas: no specific locality); Viereck, 1903a:67 (New Mexico: Beulah); Viereck and Cockerell, 1904b:144 (in revision of *Philanthus* of New Mexico); Snow, 1906:135 (Arizona); nec H. Smith, 1908b:356 (= *Philanthus serrulatae*); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); Strandtmann, 1945b:153 (in review of North American *Philanthus*), 1946:69 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera). – **As *Anthophilus albifrons***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae). *Philanthus henricus* Dunning, 1898b:153, ♀ (authorship attributed to Dunning and Cockerell). Holotype: ♀, USA: New Mexico: Gila National Forest (USNM). Synonymized with *Philanthus barbatus* by Strandtmann, 1945b:153, and by R. Bohart in R. Bohart and Menke, 1976:564. – Cockerell, 1899a:141 (New Mexico).

11. *barbiger* Mickel

As *Philanthus albopilosus*: H. Smith, 1908:355, partly (Nebraska), corrected to *Philanthus barbiger* by Mickel, 1916a:405.

Philanthus barbiger Mickel, 1916a:405, ♂, ♀. Holotype: ♂, USA: Nebraska: Harrison (UNL). – Mickel, 1918b:386 (in catalog of Nebraskan Sphecidae); Muma, 1952:22 (holotype in UNL), 28 (paratypes in UNL); R. Bohart and Grissell, 1975:6, 8 (in key to North American *Philanthus*, as full species), 8 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae, as new status by R. Bohart); Krombein, 1979b:1721 (in catalog of North American Hymenoptera); O'Neill and Evans, 1982:792-800 (prey use); Evans and O'Neill, 1988:134 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:257, 259 (references to publications on nest parasites *Phrosinella pilifrons* Allen and *Senotainia trilineata* (Wulp), miltogrammine flies); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts). – **As *Philanthus politus barbiger***: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:85 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera).

12. *basalis* F. Smith

Philanthus basalis F. Smith, 1856:473, ♀. Holotype or syntypes: ♀, Sri Lanka: no specific locality (BMNH). – de Motschoulsky, 1863:23 (Sri Lanka, listed); F. Smith, 1871a:371 (in catalog of Oriental Aculeata); Cameron, 1890b:248 (listed); Kohl, 1891:363 (in checklist of world *Philanthus*); Bingham, 1896a:446 (bibliographic references), 1897:296 (redescription); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); van der Vecht, 1966:424 (description of ♂); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1981:9 (nesting habits), 22 (in revision of Sri Lanka Philanthinae); Radović, 1985:66 (sting apparatus analyzed); Evans and O'Neill, 1988:197 (review of nesting habits); Dollfuss, 2017b:1247 (Laos: Khammouan Province: Ban Khoun Ngeum at 18°07'N 104°29'E); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 3 (in review of Indian *Philanthus*).

Philanthus avidus Bingham, 1896c:440, ♀. Holotype or syntypes: ♀, Burma: Tenasserim: no specific locality (BMNH). Synonymized with *Philanthus basalis* by Girish Kumar, Monks, and Sheikh, 2021:4. – Bingham, 1897:297 (redescription); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

Philanthus scrutator Nurse, 1902:87, ♀, ♂. Syntypes: India: Gujarat: Deesa (BMNH). Synonymized with *Philanthus basalis* by Girish Kumar, Monks, and Sheikh, 2021:4. – Ramakrishna Aiyar, 1916:557 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae).

ssp. *tsunekii* Tano

Philanthus basalis clypeatus Tsuneki, 1963c:26, ♂, junior primary homonym of *Philanthus clypeatus* Thunberg, 1815.

Holotype: ♂, Thailand: Chiangmai (Sasayama). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1981:23 (comparison with nominotypical subspecies).

Philanthus basalis tsunekii Tano, 2008:82, substitute name for *Philanthus basalis clypeatus* Tsuneki.

13. *basilewskyi* Leclercq

Philanthus basilewskyi Leclercq, 1955i:408, ♂. Holotype: ♂, Rwanda: Nyanza Territory: Ndiza (MRAC). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae)

14. *bicinctus* (Mickel)

Ococletes bicinctus Mickel, 1916a:407, ♀. Holotype: ♀, USA: Colorado: Fort Garland (UNL). – Mickel, 1918:326 (...); Muma, 1952:21 (holotype in UNL). – **As *Philanthus bicinctus***: Strandtmann, 1945b:152 (new generic assignment, in review of North American *Philanthus*), 1946:35 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Evans, 1964b:275 (description of larva); Armitage, 1965:89 (nesting habits); Krombein, 1967:413 (listed); Evans, 1970:494 (Wyoming: Jackson Hole, nesting habits); R. Bohart and Grissell, 1975:5, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Gwynne, 1978:89 (male territoriality); Krombein, 1979b:1721 (in catalog of North American Hymenoptera, nest sites, list of prey); Gwynne and O'Neill, 1980:220-223 (male territoriality results in higher predation by Asilidae); Gwynne, 1980:213 (male territoriality), 1981:130 (nesting habits); O'Neill and Evans, 1982:792-800 (prey use); G. Ferguson, 1984a:293 (in revision of *Philanthus zebratus* species group); O'Neil, 1985:2188 (egg and prey size; sexual dimorphism in size); J. Schmidt, O'Neill, Fales, McDaniel, and Howard, 1985:895 (volatiles from male mandibular glands); Steiner, 1986:112 (references to publications on nesting habits); McDaniel, Howard, O'Neill, and J. Schmidt, 1987:227 (chemistry of male mandibular gland secretions); Evans and O'Neill, 1988:32 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:256, 259 (references to publications on nest parasites *Metopia argyrocephala* (Meigen) and *Senotainia trilineata* (Wulp), miltogrammine flies); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Dukas, 2005:1401 (predation on bumblebees significantly reduces prey population); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts).

Ococletes hirticulus Mickel, 1918a:326, ♂. Holotype: ♂, USA: Colorado: Ute Creek (UNL). Synonymized with *Philanthus bicinctus* by Krombein, 1967:413. – Muma, 1952:21 (holotype in UNL), 27 (paratypes in UNL). – **As *Philanthus hirticulus***: Strandtmann, 1945b:152 (new generic assignment, in review of North American *Philanthus*), 1946:40 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera).

15. *bilineatus* Gravenhorst

Philanthus bilineatus Gravenhorst, 1807:278, sex not stated. Holotype or syntypes: origin unknown, probably Germany (destroyed?). – Dalla Torre, 1897:483 (in catalog of world Hymenoptera); W. Schulz, 1912b:50 (original description copied); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

16. *bilunatus* Cresson

Philanthus bilunatus Cresson, 1865c:97, ♂. Lectotype: ♂, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1916:99. – Packard, 1866:55 (in key to North American *Philanthus*), 56 (bibliographic reference, geographic distribution, individual variation); Provancher, 1883b:643 (in revision of Canadian Hymenoptera); Cresson, 1887:280 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:367 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Dunning, 1897:70 (size variation); Ashmead, 1899d:297 (in checklist of North American Crabronidae); Harrington, 1902:222

(Canada: Ontario: Ottawa); H. Smith, 1908b:357 (in revision of Nebraskan Sphecidae); J. Smith, 1910:678 (in new list of insects of New Jersey); Faull, 1913:384 (Canada: Toronto region); Rohwer, 1916b:673, 674 (in catalog of Hymenoptera of Connecticut); Mickel, 1918b:386 (in catalog of Nebraskan Sphecidae); Britton, 1920:339 (in checklist of insects of Connecticut); Rohwer in Viereck, 1925:673, 674 (in key to Sphecidae of Connecticut; Vanterbury, Hartford, North Haven); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); A. Brown, 1934:265 (Canada: Ontario: Timagami); Krombein, 1936:98 (New York: Buffalo; floral records); Brimley, 1938:447 (North Carolina: Highlands, Linville); Strandtmann, 1945b:154 (in review of North American *Philanthus*), 1946:95 (in revision of North American *Philanthus*); Dreisbach, 1947:143, 144 (in key to *Philanthus* of Michigan), 144 (Michigan: locality records); Strickland, 1947:128 (Canada: Alberta, as *bilunatus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Evans, 1957b:83 (description of larva); Evans and Lin, 1959:126 (nesting habits); Kurczewski and Kurczewski, 1963:148 (Pennsylvania: Presque Isle State Park); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1979b:1721 (in catalog of North American Hymenoptera, nesting sites, list of prey); Finnamore, 1982:236 (in Sphecid Fauna of southern Quebec); Radović, 1985:66 (sting apparatus analyzed); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Evans and O'Neill, 1988:175 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:257, 259, 260 (references to publications on nest parasites *Phrosinella* sp., *Senotainia trilineata* (Wulp), and *Senotainia* sp., miltogrammine flies); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County); Ahlstrom, 1995:112 (in checklist of insects of North Carolina); Kurczewski, 1998d:250 (pine barrens in upstate New York); Skevington et al., 2001:128 (Canada: Ontario: Lambton County); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: first record from British Columbia: Central Interior), 38 (British Columbia: locality records); Dollfuss, 2017b:1247 (locality records from Canada and USA); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Quebec, first records from Manitoba and Saskatchewan: no specific locality). – **As *Anthophilus bilunatus***: J. Smith, 1900:520 (new generic assignment, in list of insects of New Jersey); Viereck, 1903d:120 (Maryland: College Park).

Philanthus scelestus Cresson, 1880a:xxxiii, ♀. Lectotype: ♀, USA: Colorado: no specific locality (ANSP), designated by Cresson, 1916:101. Synonymized with *Philanthus pacificus* by Kohl, 1891:369 and with *Philanthus bilunatus* by Strandtmann, 1945b:155. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Dunning, 1898b:152 (Colorado, New Mexico); Cockerell, 1899a:141 (New Mexico); Viereck and Cockerell, 1904b:144 (in revision of *Philanthus* of New Mexico). – **As *Anthophilus scelestus***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae).

Philanthus assimilis Banks, 1915:404, ♂, junior primary homonym of *Philanthus assimilis* Banks, 1913b:422. Holotype or syntypes: ♂, USA: New York: Boston which is at 42°37'N48°44'W (MCZ). Synonymized with *Philanthus bilunatus* by Strandtmann, 1945b:155.

Philanthus consimilis Banks, 1923:21, junior primary homonym of *Philanthus consimilis* Kohl, 1891. Substitute name for *Philanthus assimilis* Banks, 1915:404. – J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae).

17. *bimacula* de Saussure

Philanthus bimacula de Saussure, 1891:261, ♀ (actually ♂). Holotype or syntypes: ♂, Madagascar: no specific locality (MHNG). – de Saussure, 1892:535 (Madagascar; redescription, as ♂); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Arnold, 1945:16 (Madagascar); Leclercq, 1962b:209 (Madagascar); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae; as *bimaculus*), 565 (footnote: nomenclatorical history); Leclercq, 1990b:120 (Madagascar, as *bimaculus*); Pulawski, 2003b:799 (in checklist of Malagasy Sphecidae); Madl, 2014a:1004 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

Philanthus immitis de Saussure, 1892:537, ♀. Syntypes: ♀, Madagascar: Antananarivo (MHNG). Synonymized with *Philanthus bimacula* by W. Schulz, 1911b:173. – Dalla Torre, 1897:487 (in catalog of world Hymenoptera).

18. *boharti* G. Ferguson

As *Philanthus serrulatae*: R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 17 (in revision of *Philanthus* of California), corrected to *Philanthus boharti* by G. Ferguson, 1983a:56.

Philanthus boharti G. Ferguson, 1983a:56, ♀, ♂. Holotype: ♂, USA: California: San Diego County: Borrego Springs (CAS).

19. *bredoi* Arnold

Philanthus bredoi Arnold, 1946:77, ♀ (as *Bredoi*, incorrect original capitalization). Holotype: ♀, Tanzania: Mbisi Forest near Sumbuwango (SAM). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

20. *brevicornis* Guichard

Philanthus brevicornis Guichard, 1994a:209, ♀, ♂. Holotype: ♀, Kuwait: near Iraq (BMNH). – Gadallah, 2020b:67 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:57 (in catalog of Middle Eastern and North African Philanthinae).

21. *bucephalus* F. Smith

Philanthus bucephalus F. Smith, 1856:472, ♂. Holotype or syntypes: ♂, Gambia: no specific locality (BMNH). – Kohl, 1891:363 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Bingham, 1902:213 (South Africa); Arnold, 1925:172 (in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae), 1946:82 (variation); Leclercq, 1969:1052 (locality records from West and Central Africa); R. Bohart and Menke, 1976:139 (in checklist of world Sphecidae); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Dollfuss, 2017b:1247 (locality records from Central African Republic, South Africa, and Zimbabwe).

Philanthus spilaspis Cameron, 1910:145, ♀, actually ♂ (Brauns, 1917:240). Holotype or syntypes: ♀, South Africa: Transvaal: Pretoria (TMP). Synonymized with *Philanthus bucephalus* by Arnold, 1925:172. – Brauns, 1917:240 (holotype is a ♂).

ssp. rotundicollis Arnold

Philanthus bucephalus race *rotundicollis* Arnold, 1925:174, ♀. Holotype: ♀, Nigeria: Abak (SAM). – Arnold, 1930:11 (in checklist of Afrotropical Sphecidae). – As *Philanthus bucephalus rotundicollis*: R. Bohart and Menke, 1976:564 (new status, in checklist of world Sphecidae).

22. *camerunensis* Tullgren

Philanthus camerunensis Tullgren, 1904:444, ♀. Holotype: ♀, Cameroon: Itoki (Stockholm). – Arnold, 1925:175 (unknown to author); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

23. *capensis* Dahlbom

Philanthus capensis Dahlbom, 1845:495, ♀. Holotype or syntypes: ♀, South Africa: Cape Province: no specific locality (depository?). – Kohl, 1891:363 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Brauns, 1911a:90 (host of chrysidid *Hedychrum coelestinum* Spinola), W. Schulz, 1912:94 (type not in Lund); Arnold, 1925:146 (in revision of southern African *Philanthus*, South Africa: Eastern Cape Province: Algoa Bay, Western Cape Province: Mossel Bay), 1930:10 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Gess and Gess, 1994:100 (visiting flowers of *Aspalathus spinescens* Thunb., Fabaceae); S. Gess, 1996:295, 296 (floral records); S. Gess and F. Gess, 2003:129 (South Africa: visiting flowers of *Prenia pallens* (Ait.) N.E. Br., Aizoaceae, *Pteronia divaricata* (Berg.) Less., Asteraceae, *Aspalathus spinescens* Thunb., Fabaceae, *Hermannia* sp., Malvaceae, and *Leucadendron* sp., Proteaceae), 2006:10 (South Africa:

visiting flowers of *Leucadendron* sp., Proteaceae), 21 (Namibia, visiting flowers of *Hermannia* sp., Malvaceae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Dollfuss, 2017b:1247 (locality records from South Africa).

ssp. *nordicus* Leclercq

Philanthus capensis subsp. *nordicus* Leclercq, 1962a:395, ♀, ♂. Holotype: ♂, Tanzania: Mount Meru: Olkokola (MRAC). – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae).

24. *coarctatus* Spinola

Philanthus coarctatus Spinola, 1839:486, ♀, ♂. Lectotype: ♂, Egypt: no specific locality (M. Spinola collection, Torino), designated by de Beaumont, 1952e:49. – Spinola, 1843b:XXXVI (represented in Berlin Museum under the name *Philanthus concinnus*). – Radoszkowski, 1876b:136 (Egypt); Magretti, 1884a:250 (eastern Africa); Kohl, 1891:363 (in checklist of world *Philanthus*); Magretti, 1884b:594 (Sudan: Sawakin, Sogodas, Atbara; Ethiopia: Metemma); Radoszkowski, 1888a:325 (male genitalia), 1892:579 (reference to Radoszkowski, 1888a); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Longstaff, 1911:125 (Sudan: Khartum); Storey, 1916:107 (Egypt: Maadi); Morice, 1921:822 (Iraq: Baquba); Maidl, 1924:242 (Sudan: El Obeid, Sennar); von Schulthess, 1927:299 (Sudan: Port Sudan); Mellor, 1928:129 (Egypt); Guiglia, 1939c:182 (Libya); Mochi, 1939a:100 (in revision of Egyptian *Philanthus*); Guiglia, 1940a:281 (Libya: Wadi Mimum), 1942b:230 (Libya: Fezzan: Tin Alcun); Guiglia, 1943c:75 (Ethiopia: Gamo Gofa: Sagan – Omo region, var.?); Giner Marí, 1945e:230 (Morocco: Western Sahara), 1947:21 (Morocco: Western Sahara); de Beaumont, 1949b:191 (in revision of northwestern African *Philanthus*); Guiglia, 1950:233 (Ethiopia: Gamo Gofa: Asile, var.?); Arnold, 1951:99 (Ethiopia: Ufdem); de Beaumont, 1953a:173 (Mauritania), 1956a:185 (Libya; Chad: Tibesti; diagnostic characters); Grandi, 1957:387 (Libya: Tripolitania: Wadi Kaam); de Beaumont, 1958b:58 (Algeria: Tassili des Ajjer); de Beaumont and Bytinski-Salz, 1959:148 (Israel; color variation); de Beaumont, 1960b:229 (Libya), 1961a:209 (references to recent publications), 1962c:222 (Arabia: El Riyadh); Pulawski, 1964:68 (Egypt: Aswan, Luxor; Sudan: Wadi Halfa); de Beaumont, 1965b:772 (Chad: Ennedi); Derwesh, 1965:71 (Iraq: no specific locality, as *coarctatus*); de Beaumont, 1967a:279 (Turkey; variation); Pulawski, 1967c:388 (Sudan: Khor Musa Pasha south of Wadi Halfa, Nile second cataract); Osborn and Krombein, 1969:16 (northwestern Sudan: Gebel 'Uweinat: Wadi Ain el Brins); Krombein, 1974b:451: (Egypt: Gebel 'Uweinat); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Kazenas, 1978b:49 (in key to Sphecidae of Kazakhstan and Central Asia); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Guichard, 1980:230 (Oman); Pagliano, 1980:125 (Italy: Sicilia); Roche, 1981:5 (in checklist of Sphecidae of United Arab Emirates); Pagliano, 1987:159 (Italy, in key to Italian Philanthini), 1988 (in revision of Italian Philanthinae), 1990:94 (in catalog of Italian Sphecidae); Gayubo, 1991a:129 (characteristics of species); Guichard, 1991a:338 (Jordan), 1994a:210 (Arabian Peninsula); Roche and Zalut, 1994:117 (Egypt: Sinai Peninsula); Gadallah, 1996:71 (in revision of Egyptian *Philanthus*); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:289 (in Sphecid Fauna of Western Europe); Gadallah and Assery, 2004a:219 (Saudi Arabia: in key to Sphecidae of Jeddah Region), 232 (in catalog of Sphecidae of Saudi Arabia: Jeddah area), 2004b:1398 (skeletal parts of sting apparatus); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Roche, 2007a:126 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Ebrahimi, 2008:95 (first record from Iran: Sistan-Baluchistan: Iranshahr); Ljubomirov and Yildirim, 2008:124 (in catalog of Crabronidae of Turkey); Sakenin, Samin, and Bagriacik, 2010:17 (Iran: Khuzestan: Andimeshk); Schmid-Egger, 2011b:569 (United Arab Emirates: many localities), 571 (color photographs of male and female); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:359 (in new catalog of Sphecidae of Saudi Arabia); Ebrahimi, 2014:47 (Iran: Sistan-Baluchistan: Iranshahr: Bampur); Pagliano, 2014:103 (specimens in M. Spinola collection, Torino, are *Philanthus coarctatus coarctatus* and *Philanthus pulchellus*), 2014:103 (specimens in M. Spinola collection, Torino, as *ventilabris*, are *Philanthus ventilabris*); Schmid-Egger, 2014:591 (United Arab Emirates); Yildirim, Ljubomirov, and Lelej,

2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); S. Gess and Roosenschoon, 2016:106 (Dubai Desert Conservation Reserve, visiting flowers of *Calotropis procera* (Aiton) W.T. Aiton, Apocynaceae, and of *Rhanterium epapposum* Oliv., Asteraceae); Dollfuss, 2017b:1247 (locality records from Algeria, Egypt, Ethiopia, Iran, Israel, Italy, Jordan, Mali, Morocco, Oman, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates, Uzbekistan, and Yemen); Gülmez and Can, 2017:82 (Turkey: Erzincan Province); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:82 (Iran: known from Khuzestan and Sistan-o Baluchestan provinces); Ben Khedher, Yildirim, Braham, and Chaaban, 2019:193 (known from Tunisia: Tozeur Province); Gadallah, 2020b:67 (in list of aculeate wasps of Arabian Peninsula); Ghaderipour, Khayrandish, Madjdzadeh, Ebrahimi, and Schmid-Egger, 2020:120 (Iran: Kerman); Ben Khedher, Yildirim, and Braham, 2021b:2 (Tunisia: Kairouan, Kasserine, Kebili, Mahdia, Sidi Bouzid, Sousse, Tataouine, and Tozeur governorates, as *coarctatus coarctatus*); Gadallah, Abu el-Ghiet, and Edmardash, 2021:1716 (first record from Saudi Arabia: Jazan Province); Kaplan and Yildirim, 2021:101 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:57 (in catalog of Middle Eastern and North African Philanthinae); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Schmidt, 2022:282 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yildirim, 2023:1690 (in checklist of Sphecidae *sensu lato* of Turkey); Madl, 2023:258 (in catalog of Crabronidae of Eritrea); Malash, Edmardash, and Gadallah, 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 162 (in revision of Egyptian *Philanthinus* and *Philanthus*); Gadallah and Abu El-Ghiet, 2024:90 (Saudi Arabia: Jazan Province: Abu Arish).

Philanthus concinnus Spinola, 1843b:XXXVI, sex not stated, origin unknown, specimen(s) in Berlin Museum, as junior synonym of *Philanthus coarctatus*. Not available: first proposed as a junior synonym (Article 11.6).

Philanthus niloticus F. Smith, 1873c:415, ♀. Holotype or syntypes: ♀, Sudan: White Nile: no specific locality (BMNH). Synonymized with *Philanthus coarctatus* by de Beaumont, 1949b:191. – Storey, 1916:107 (Egypt: Ezbet el Nakhlik, Maadi); Mellor, 1928:129 (Egypt); Mochi, 1939:102, (in revision of Egyptian *Philanthus*, description of ♂); Giner Marí, 1945b:362 (Western Sahara: El Aiun, Zug), 1947:21 (Western Sahara).

spp. raptor Lepeletier de Saint Fargeau

Philanthus raptor Lepeletier de Saint Fargeau, 1845:38, ♀. Holotype or syntypes: ♀, Algeria: Oran (MNHN). – Lucas, 1849:259 (Algeria: Oran; original description copied with modifications); F. Smith, 1856:471 (in catalog of Hymenoptera in British Museum); nec Costa, 1867c:97 and 1869b:113 (= *Philanthus coarctatus siculus*); Sichel, 1861:752 (Italy: Sicilia, probably *Philanthus coarctatus siculus*); Dours, 1874:143 (in catalog of Hymenoptera of France: Cannes); Marquet, 1875:204 (France: Hérault: Cette, now Sète, may in reality be *Philanthus venustus*); Girard, 1879:928 (geographic distribution); Marquet, 1881:189 (southern France, may in reality be *Philanthus venustus*); Acloque, 1897:82 (in Sphecid Fauna of France and Algeria); Cavo, 1910:685 (France: Département du Nord: Féchain, may in reality be *Philanthus venustus*); nec Berland, 1925:46 (= *Philanthus pulchellus*); nec Guiglia, 1944b:11 and Grandi, 1954:236 (= *Philanthus venustus*); de Beaumont, 1949b:193 (in revision of northwest African *Philanthus*), 1950f:396 (Algeria), 1953g:119 (Morocco); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Gayubo, 1985c:172 (Morocco: Kebdana). – **As *Philanthus coarctatus raptor***: Pagliano, 1988:134 (new status), 1990 (in catalog of Italian Sphecidae); Ben Khedher, Yildirim, and Braham, 2021b:2 (Tunisia: Kairouan, Kasserine, Kebili, Mahdia, Nabeul, and Sousse governorates); Malash, Edmardash, and Gadallah, 2022:58 (in catalog of Middle Eastern and North African Philanthinae).

Philanthus maroccanus Shestakov in Nadig, 1933:95, ♂, ♀. Syntypes: ♀, ♂, Morocco: Agadir, Azemmour, Goundafa, Marrakech, Tanger (originally Nadig coll., now Zurich and ZIN). Synonymized with *Philanthus raptor* by de Beaumont, 1949b:19. – Rungs, 1936:24 (Morocco: Erfoud, as *maroccanus*); Giner Marí, 1945b:359 (eastern Morocco: Muley Ali).

As *Philanthus melliniformis* (corrected to *Philanthus raptor* by de Beaumont, 1949b:191): Morice, 1911:93 (Algeria: Bône, Forest of Yakouren); von Schulthess, 1926b:212 (Tunisia: Monastir, Libya: Agebadia); Guiglia, 1934b:297 (Libya: bibliography and summary of locality records); .

As *Philanthus andalusiacus*: Bischoff, 1933:5 (Morocco), corrected to *Philanthus raptor* by de Beaumont, 1949b:191 and 1961a:210.

ssp. *siculus* Giordani Soika

As *Philanthus sieboldti*: A. Costa, 1860:5 (in revision of Sphecidae of Kingdom of Naples, Italy) and 1863:66 (Italy: Calabria Ulteriore: littoral of Brancaleone, valle di Bruzzano, Reggio), corrected to *Philanthus raptor siculus* by de Beaumont, 1951c:311; De-Stefani, 1895:227 (in catalog of Sicilian Hymenoptera), present correction based on geographic distribution.

As *Philanthus raptor*: A. Costa, 1867c:97 and 1869b:113 (in revision of Italian Sphecidae), corrected to *Philanthus siculus* by de Beaumont, 1953c:311.

Philanthus siculus Giordani Soika, 1944:10, ♂. Syntypes: ♂, Italy: Sicilia: Messina and Falcone (Venezia). – Grandi, 1954:236 (Italy: Sicilia). – As *Philanthus raptor siculus*: de Beaumont, 1951c:311 (new status; in revision of European *Philanthus*); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Pagliano, 1987:160 (Italy, in key to Italian Philanthini), 1988:136 (revision, Italy: Sicilia and Calabria); Schembri, 1991:178 (first record from Malta). – As *Philanthus coarctatus siculus*: Pagliano, 1988:134 (new subspecific generic assignment), 1990:95 (in catalog of Italian Sphecidae); Gayubo, Borsato, and Osella, 1991:418 (Italy: Sicilia: Gela); Negrisolò in Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna); Schmid-Egger, 2003:756 (Italy: Sicilia: Armerina, Ragusa, Vendicari); Pagliano and Negrisolò, 2005:302 (in Sphecidae Fauna of Italy); Bitsch, 2010:117 (in supplement to vol. II of Faune de France, 1997: recent records from southern Italy and Malta reported, may be a good species); Schmid-Egger, Dandria, and Xuereb, 2016:81 (in checklist of Crabronidae of Maltese Islands); Turrissi, Altadonna, Lo Cascio, Nobile, and Selis, 2020:731 (Italy: Aeolian Archipelago: island of Lipari).

25. *coronatus* (Thunberg)

Spheg coronatus Thunberg, 1784:25, sex not stated (as *coronata*, incorrect original termination). Holotype or syntypes: France: Parisiis, now Paris (depository?). – Gmelin, 1790:2733 (redescription); Turton, 1801:495 (redescription); Dalla Torre, 1897:419 (in catalog of world Hymenoptera); W. Schulz, 1912:68 (type material missing in Thunberg collection). – As *Philanthus coronatus*: Thunberg, 1815a:128 (new generic assignment, diagnostic characters), 134 (redescription), 1815b:288 (diagnostic characters); K. Strohm, 1933:336 (Germany: Baden: Württemberg: Kaiserstuhl); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Radović and Krunić, 1979:unpaginated foldout (nesting in sand, foreleg structure); Schmidt, 1979b:297 (Germany: Baden-Württemberg); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 1980:125 (Italy: Veneto); Heath and Leclercq, 1981: map 16 (distribution in Europe); Gayubo, 1982b:49 (Spain: Salamanca: Cantagallo, as *coronatus coronatus*); Dollfuss, 1983b:24 (in catalog of Sphecidae of Austria: Burgenland: Podersdorf); Józán, 1985b:62 (Hungary south of Lake Balaton), 82 (floral records), 85 (ecological and zoogeographic characteristics); Paik, 1985:203 (in list of Sphecidae of Korea); Radović, 1985:66 (sting apparatus analyzed); Westrich and Schmidt, 1985b:111 (Germany: endangered in Baden-Württemberg); Józán, 1986:374 (Hungary: Kiskunság National Park); Pagliano, 1987:159 (Italy, in key to Italian Philanthini); Schmidt and Westrich, 1987:358 (Germany: Mainz area); Tormos and Jiménez, 1987a:127 (Spain: Valencia), 1987b:317 (Spain: Valencia Province: Dehesa de El Saler); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Pagliano, 1988 (in revision of Italian Philanthinae), 1990:94 (in catalog of Italian Sphecidae); Dollfuss, 1991:211 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:418 (Italy, as *coronatus coronatus*); Day, 1991:xviii (summary of European Endangered Hymenoptera Lists); Józán, 1992c:290 (Hungary: Zselic Hills); Blagoveshchenskaya, 1994:91 (Russia: Ul'yanovsk Oblast'); Negrisolò in Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna); Scharer, 1995:31 (Germany: Bayern: Lohr); Schmid-Egger, Risch, and Niehuis, 1995:205 (summary of records from Germany: Rheinland-Pfalz Province);

Schmid-Egger, 1996a:19 (Germany: Kaiserstuhl and Tuniberg near Waltershofen); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine); Wu and Zhou, 1996a:160 (in revision in Economic Insect Fauna of China); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:290 (in Sphecidae Fauna of Western Europe); Schmidt and Schmid-Egger, 1997:25 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:525 (Austria: summary of collecting records from Burgenland); Gorobchishin, 1998a:50 (Ukraine: Kiev and surroundings); Pagliano and Scaramozzino, 1999:158 (Italy: Piemonte: Borgomale); Blösch, 2000:404 (in Sphecidae Fauna of Germany); Gayubo, González, and Torres, 2000:187 (Spain: Salamanca Province); Ljubomirov, 2000:6, 13 (Bulgaria, specimens in N. Nedelkov collection); Esenbekova and Kazenas, 2000:70 (southeastern Kazakhstan: near Alma Ata, 25 km west of Alma Ata, near Chilik, 10 km northwest of Chundzha, Zhabagly, 6 km west of Zhabagly); Vicidomini, 2000b:26 (Italy: previously recorded from Campania); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 244 (review of known biology); Ohl et al., 2001:141 (distribution in Germany by provinces); Józán, 2002:54 (Hungary: Mecsek Mountains); Kazenas, 2002a:134 (geographic distribution, collecting localities in Kazakhstan); Józán, 2003:228 (Hungary: Látányi Pusztá Nature Conservation Area); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:69 (in catalog of wasps and bees of Bayern, Germany); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: no longer endangered); Kazenas, 2004b:111 (Kazakhstan: western Tien Shan), 2004d:35 (Kazakhstan: Émba, Khar'kino); Shkuratov, 2004a:73 (Russia: Lugansk and Rostov Oblast's), 2004b:165 (Russia: Rostov Oblast': Gosudarstvennyi Muzej-Zapovednik M.A. Sholokhova); Pagliano and Negrisolo, 2005:304 (in Sphecidae Fauna of Italy); Shorenko, 2005a:168 (Ukraine: Crimea); Straka, 2005a:395 (extinct in Czech Republic); Gorobchishin, 2006:143 (Ukraine: Kyiv); Hua, 2006:281 (in list of Chinese insects, geographic distribution); Ljubomirov, 2006:542 (Bulgaria: Rhodope Mountains: previous records summarized); Kaltenpoth et al., 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Jacobs, 2007:181 (in key to Crabronidae of Germany); Józán, 2007:180 (Hungary: Zselic hills); Kazenas, 2007a:93 (Kazakhstan: Akmala Oblast': Kurgandzhin Nature Reserve and vicinity); Vepřek and Straka, 2007:209 (in catalog of Sphecidae of Czech Republic and Slovakia, known from Moravia and Slovakia only); Yildirim and Ljubomirov, 2007:119 (Turkey: Erzurum: University campus and Oltu: Sütkans); Danilov, 2008:352 (Russia: Altayskiy Kray: Barnaul area); Danilov and Tshernyshev, 2008:44 (Russia: Novosibirsk Oblast': Karasuk area); Gayubo, González, Tormos, and Asís, 2008:140 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008b:114 (Kazakhstan: foothills of Zailiskiy Alatau: sometimes found on loess cliffs), 2008c:255 (Kazakhstan: village Koktum south of Lake Alakol'); Ljubomirov and Yildirim, 2008:124 (in catalog of Crabronidae of Turkey); Zettel, Wiesbauer, and Zimmermann, 2008:137 (Austria: Burgenland: Podersdorf; first record from Niederösterreich: Hundsheimer Berg); Baños-Picón, Asís, Gayubo, and Tormos, 2009:314 (Spain: frequency of specimens collected with hand nets and Malaise traps); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Shorenko, 2009:369 (in list of Sphecidae *sensu lato* of Crimea); Bitsch, 2010:117 (in supplement to vol. II of Faune de France, 1997: recent records from Spain reported; France: first records from Isère: Arandon; Loir-et-Cher: Muides-sur-Loir, Suèvres; Loiret: Beaugency); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: very rare); Shorenko and Konovalov, 2010:30 (Ukraine: several localities); Tüzün and Yüksel, 2010:4474 (Turkey: Niğde Province); Baghirov, 2011b:155 (Russia: Altayskiy Kray: Savvushka); Józán, 2011:184 (in checklist of Sphecidae *sensu lato* of Hungary); Tischendorf, Frommer, Flügel et al., 2011:46 (Germany: extinct in Hessen, last collected in 1968); Wiesbauer and Zettel, 2011:269 (Austria: Niederösterreich: March = Morava lowland); Boillat, 2012:228 (Switzerland: in checklist of insects of Canton de Genève); Burguet in Durand and Burguet, 2012:4 (France: Puy-de-Dôme: sands Girauts-Faures in Orléat commune); Prisniy, 2012:51 (Russia: Belgorod Oblast'); Schmid-Egger and Krumm, 2012:39 (Germany: Baden-Württemberg: active population in Kaiserstuhl; prey: *Andrena*, *Colletes*, *Dasypoda*, *Lasioglossum*, all bees); Akulov and Proshchalykin, 2013:118 (Russia: Siberia: Krasnoyarsk Kray: Minusinsk, 45 km northeast of Minusinsk, and village Znamenka); Kazenas, 2013a:129-132 (color photographs of adult wasps, short information on geographic distribution and nesting

habits), 2013b:499 (southeastern Kazakhstan: 10 km northwest of Chundzha on Sharyn River); Bitsch, 2014:410 (reference to Schmid-Egger and Krumm, 2012); Kazenas, 2014a:138 (Kazakhstan: Karatau Mountain Range); Nemkov, 2014c:287 (recorded from Asiatic Russia by several authors; 45 km northeast of Minusinsk); J.-K. Kim, 2014:450 (in catalog of Sphecidae *sensu lato* of Korean Peninsula); Pagliano, 2014:102 (specimens in M. Spinola collection, Torino, are *Philanthus coronatus*, *Philanthus venustus*, *Philanthus coarctatus sicalus* and *Philanthus coarctatus raptor*); Protsenko, Fateryga, and Ivanov, 2014:39 (Crimea: Tavricheskoye in Krasnoperekop District, Tarkhankut Promontory); Yıldırım, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces, as *coronatus coronatus*); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); P. Rosa and Pagliano, 2015:104 (Italy: Lombardia and Piemonte: Parco del Ticino); Mokrousov and Popov, 2016:593 (Russia: Krasnodarskiy Kray); Arens, 2017a:639 (Greece: from Peloponnesos recorded by de Beaumont, 1965); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Dollfuss, 2017b:1249 (locality records from Bulgaria, China, France, Germany, Hungary, Italy, Kazakhstan, Kyrgyzstan, Mongolia, Portugal, Romania, Russia, Slovakia, Spain, and Syria); Shorenko, 2017:81 (in Crimea collected in June and July), 2018:131 (Crimea, including localities, habitats, and number of specimens); Eroğlu and Yüksel, 2019:5230 (recorded from Niğde Province of Turkey by de Beaumont, 1967, but not rediscovered since then); J.-K. Kim, D.-E. Kim, and H.-S. Lee, 2020:44 (in South Korea not observed since Tsuneki, 1943a); Örgel, Anlaş, and Tezcan, 2020:639 (Turkey: Manisa Province, as *coronatus coronatus*); Kaplan and Yıldırım, 2021:101 (in catalog of Crabronidae of Turkey, as *coronatus coronatus*); Malash, Edmardash, and Gadallah, 2022:59 (in catalog of Middle Eastern and North African Philanthinae); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Schmidt, 2022:283 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yıldırım, 2023:1690 (in checklist of Sphecidae *sensu lato* of Turkey, as *coronatus coronatus*); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution); Gülmez, Çubuk, and Can, 2025:186 (Turkey: Çanakkale: Kelkit River Valley); Kochetkov and Korsun, 2025:10 (Russia: Zabaikalskiy Kray: Dauriski Nature Reserve).

Philanthus coronatus Fabricius, 1790:224, sex not stated, junior secondary homonym of *Philanthus coronatus* (Thunberg, 1784). Lectotype: ♂, Italy: no specific locality (ZMUC), designated by van der Vecht, 1961a:61. Synonymized with *Philanthus coronatus* (Thunberg) by ... – Fabricius, 1793:288 (redescription), 1796:137 (in Index to his Entomologia Systematica, 1793), 1804:301 (redescription); Panzer, 1801, Heft 84:23 (in revision of German insects, illustration of habitus); Latreille, [1805]:314 (redescription); Panzer, 1806:173 (in critical review of his previous work); Thunberg, 1815a:128 (diagnostic characters), 134 (description, reference to Fabricius, 1793); Vander Linden, 1829:123 (bibliographic references, Italy: Bologna, southern Europe); Klug in Walzl, 1835:88 (in list of Hymenoptera of Andalusia); Dufour, 1841a:509 and 1841b:245 (digestive tract), 1841a:511 and 1841b:247 (male reproductive system), 1841a:512 and 1841b:248 (female reproductive system); Dahlbom, 1844:189 (in revision of Sphecidae and Pompilidae), 1845:XXIII (type material examined), 495 (in key to world *Philanthus*); Lepeletier de Saint Fargeau, 1845:36 (in revision of world Hymenoptera); Eversmann, 1849:398 (Russia: Orenburg Province and lower Volga area); F. Smith, 1856:468 (in catalog of Hymenoptera in British Museum); Schenck, 1857:153 (in revision of fossorial wasps of Germany); Taschenberg, 1858:83 (in key to Sphecidae of Germany); A. Costa, 1864c:124 (Italy: Campania: Benevento area); Taschenberg, 1866:192 (in revision of Hymenoptera of Germany); A. Costa, 1867c:96 (in revision of Italian Sphecidae); Kirchner, 1867:220 (in catalog of European Hymenoptera); Jaenicke, 1868:9 (Germany: Hessen: Büdingen); A. Costa, 1869b:112 (in revision of Italian Sphecidae), 1872a:31 (in revision of Sphecidae of Kingdom of Naples, Italy); P. Ivanov, 1872:152 (Ukraine: Khar'kiv Oblast': Kupyansk area); Dours, 1874:143 (in catalog of Hymenoptera of France); Martinez y Saez, 1874:31 (specimens from Spain: Madrid area, donated to Leon Dufour); Marquet, 1875:204 (France: Languedoc); Girard, 1879:928 (geographic distribution, on flowers of *Eryngium campestre* L., Apiaceae); Becker, 1880:153 (Russia: Sarepta, now Krasnoarmeysk south of Volgograd); Kohl, 1880:168 (Italy: Trentino–Alto Adige); Magretti, 1881:120 (Italy: Lombardia: Comasco), 271 (in list of species discussed in this paper); Marquet, 1881:189 (southern France); Yaroshevskiy, 1881:124 (Ukraine: Khar'kiv Oblast': Khar'kiv, Kupyansk); Sajó, 1882:5 (Hungary); A. Costa, 1883:57 (Italy: Sardegna: valle del Galagone near Oliena); Kohl,

1883e:665 (Switzerland); von Heyden, 1884:119 (Germany: Mombach); Kohl, 1888b:727 (Austria: Tirol, now Italy: Alto Adige); Radoszkowski, 1888a:323 (male genitalia); F. Morawitz, 1889a:151 (China or Mongolia); Kohl, 1891:363 (in checklist of world *Philanthus*); Radoszkowski, 1892:579 (reference to Radoszkowski, 1888a); Sickmann, 1894:201 (China: Hopei Province: Tientsin); De Stefani Perez, 1895:227 (in catalog of Sicilian Hymenoptera); Acloque, 1897:82 (in Sphecidae Fauna of France and Algeria); Dalla Torre, 1897:484 (in catalog of world Hymenoptera); Moccsáry, 1897:80 (Kingdom of Hungary, some localities are in today's Croatia); Flamary, 1898:38 (France: Saône-et-Loire: Mâcon area); Chyzer, 1902:33 (Hungary); de Cobelli, 1903:109 (Italy: Province of Trentino); Antiga and Bofill, 1904:22 (Spain: Cataluña Province); Vángel, 1905:167 (Hungary); Móczár and Henter, 1907:205 (Romania: Caraș-Severin: Mehadia); Schmiedeknecht, 1907:237 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Peets, 1909-1911:68 (*Philanthus coronatus* of Panzer = *Philanthus coronatus*); Graeffe, 1911:47 (Italy: Trieste area); Zavattari, 1913b:3 (Greece: Island of Rhodes); Szilády, 1914:89 (Hungary: Holdvilág); Honoré, 1919:268 (France: Seine-et-Oise: Bouray, La Ferté-Alais, Lardy, Saclas); Leininger, 1921:128 (Germany: Baden-Württemberg: Jöhligen near Durlach); Enslin, 1922c:247 (Germany: Bayern: Lohr; prey: *Andrena gwynana* (Kirby), a bee); Lauterborn, 1922:244 (Germany: Baden-Württemberg: Kaiserstuhl); Berland, 1925d:46 (in Sphecidae Fauna of France); Coulon, 1925:117 (France: Toulouse; Spain); Strohm, 1925:211 (Germany: Baden-Württemberg: Isteiner Klotz, Kaiserstuhl); Kuznetsov-Ugamskij, 1927:249 (Kazakhstan: Aulie-Ata, now Djambul, and Khumsan); A. Müller, 1930:181 (common in former Dobrogea and Bessarabia); Schmiedeknecht, 1930:698 (in keys to Hymenoptera of North and Central Europe); Bernard, 1933:61 (France: Drôme: Dieulefit); Giner Marí, 1934:131 (Spain); Grandi, 1934:129 (Italy: Emilia-Romagna: Casalecchio di Reno); Zavadil, 1934:188 (Slovakia); Gussakovskij, 1934a:13 (China: Kansu Province); Bernard, 1935:62 (France: Var: Fréjus area); Vergne, 1935:117 (France: Auvergne: Lezoux, Pont-du-Chateau); Heldmann, 1936:103 (Germany: Hessen: Bergstrasse); Zavadil, Šusterka, and Bat'a, 1937:206 (in catalog of Sphecidae of Czechoslovakia); Móczár, 1939:5 (Hungary: Jászberény); Balthasar, 1941a:105 (Czech Republic: Bzenecko area); Yasumatsu, 1942c:107 (China: Beijing; Nei Mongol: Apaka at 44°N 114.96°E); Giner Marí, 1943a:111 (in Sphecidae Fauna of Spain); Tsuneki, 1943a:15 (nesting habits); Guiglia, 1944b:10 (Italy); Deleurance, 1946b:67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); Dulac, 1947:53 (France: Saône-et-Loire Department: Creusot area); Balthasar, 1948:143 (Slovakia: Parkan); Zavadil in Zavadil and Šnoflak, 1948:165 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:12 (Portugal: Jugueiros, Valença do Minho); Scobiola, 1950:19 (Romania); de Beaumont, 1951c:303 (in revision of European *Philanthus*); Leclercq, 1951b:67 (yellow body pigments are pterines); Caruel, 1952b:101 (France: Marne Department); Cleu, 1953:50 (France: Ardèche River basin); Bischoff and Stadler, 1954:127 (Germany: Bayern: Romburg); Hertzog, 1954:100 (France: Bouches-du-Rhône: Camargue); Vergne, 1955:4 (France: Auvergne); Vogrin, 1955:32 (Yugoslavia); Ceballos, 1956:365 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:337 (France: Département des Pyrénées-Orientales); Bajári, 1957a:28 (in key to Hungarian Sphecidae); Bradley, 1957:49 (Lepelletier's specimens in M. Spinola collection in Turin); Balthasar, 1958:337 (Slovakia: Čenkov, Štúrovo); Puławski, 1958a:165 (Bulgaria: Aitos, Kurilo, Sandanski, Varna); de Beaumont, 1959a:12 (Italy); Diniz, 1959:27 (Portugal: Jugueiros, Valença do Minho); Wolf, 1959b:31 (known from Germany, but not from Nassau); Noskiewicz and Puławski, 1960:73 (in key to Polish Sphecidae, not yet found in Poland); de Beaumont, 1961a:203 (Algeria; geographic variation); van der Vecht, 1961a:61 (study of type material); Lehrer and Scutaru, 1963:287 (Romania: Moldova: Mircești in Iași District); de Beaumont, 1964c:34 (in Sphecidae Fauna of Switzerland, not recorded from Switzerland), 1965a:18 (Greece); Bonelli, 1966c:217 (Italy: Trentino-Alto Adige: Montagna); Gauss, 1966a:66 (Germany: Baden: Kaiserstuhl); de Beaumont, 1967a:278 (Turkey; variation); Gauss, 1967:551 (Germany: Baden-Württemberg); J. Heinrich, 1967:70 (Germany: Bayern: Gambach and Lohr areas); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Băneasa, Iortmac), 1967b:39 (Romania); Benedek, 1968:71 (Hungary, visiting flowers of *Eryngium campestre* L., Apiaceae); Scobiola-Palade, 1968c:382 (Romania: Budești, Frătești); Romanova, 1969:133 (Russia: North Caucasus); Schmidt, 1969:161 (Germany: Rhein-Main area); Kazenas, 1970b:366 (Kazakhstan), 1971:161 (in Kazakh-

stan found only in southeastern mountains); Schmidt, 1971b:24 (Germany: Rheinland-Pfalz: was found in Mombacher Sand, see Heldmann, 1936); Tsuneki, 1971m:15 (China: Peking, now Beijing); Atanassov, 1972a:191 (Bulgaria: Stara Planina Mountains), 1972b:32, 48 (Bulgaria: Stara Planina Mountains); Balthasar, 1972:382 (in Sphecid Fauna of Czechoslovakia); Kazenas, 1972b:124 (Kazakhstan); Simon-Thomas, 1972:177 (France: Lot-et-Garonne); Erlandsson, 1974:60 (Spain); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp., Tamaricaceae, in Kazakhstan), 111 (feeding on flowers of *Saussurea* sp., Asteraceae, in Kazakhstan); Simon Thomas, 1976:4 (France: Lot-et-Garonne: Forêt de Campet); Kazenas, 1978b:48 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:86 (France: Nièvre Department); Benedek, 1979:227 (Hungary: Bakony Hills: Felső-hegy); Preuss, 1980a:23 (Germany; endangered, nesting in dry soils); Hilchie, 1982:110 (accessory burrows reviewed); Tsuneki, 1982b:18 (known from Korea); Islamov, 1986:518; Evans and O'Neill, 1988:196 (review of nesting habits); Pagliano, 1988:137 (Italy, revision); Pádr in Šedivý, 1989a:166 (in checklist of Czechoslovakian Sphecidae); Gayubo, 1991a:128 (characteristics of species); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Shkuratov, 2000:55 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Kazenas and Esenbekova, 2001:136 (Kazakhstan: Almatinskiy Nature Reserve); Shkuratov, 2002b:139 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Rudoiskatel', 2010:148 (Russia: southern Ural Mountains). – ***As Simblephilus coronatus***: Jurine, 1807:188 (new generic assignment, listed).

ssp. *ibericus* de Beaumont

Philanthus coronatus occidentalis de Beaumont, 1951c:305, ♀, ♂. Holotype: ♀, Spain: Madrid (MNHN). Junior primary homonym of *Philanthus occidentalis* Strandtmann, 1946. – de Beaumont, 1962b:20 (Spain); Ceballos, 1964:88 (in supplement to catalog of Spanish Sphecidae); Diniz, 1966:6 (Portugal: Coimbra, Lousã, Rezende, Valença do Minho). *Philanthus coronatus ibericus* de Beaumont, 1970b:38. Substitute name for *Philanthus occidentalis* de Beaumont, 1951. – R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Gayubo, 1982b:49 (Spain: Ávila, Cáceres, and Salamanca provinces), 1983e:236 (Spain: Salamanca Province); Gayubo and Tormos, 1984:23 (Spain: Valencia); Gayubo, 1985c:172 (Spain: Valladolid: Alcazarén), 1986d:121 (Spain: Zamora Province); Gayubo and Sanza, 1986:83 (Spain: Burgos); Gayubo, Asís, and Tormos, 1990b:79 (Spain: Cáceres, Segovia, and Zamora Provinces); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Gonzáles, Gayubo, and Torres, 1998:74, 75 (Spain: Valladolid Province); Gayubo, González, Tormos, and Asís, 2009:365 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Cross, Baldock, and Wood, 2021:67 (in catalog of Sphecidae *sensu lato* of Portugal).

ssp. *orientalis* Bytinski-Salz

Philanthus coronatus orientalis Bytinski-Salz in de Beaumont and Bytinski-Salz, 1959:142, ♂. Holotype: ♂, Israel: Jerusalem (RMNH). – de Beaumont, 1969:82 (Turkey); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Ljubomirov and Yildirim, 2008:125 (in catalog of Crabronidae of Turkey); Yıldırım, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Kaplan and Yildirim, 2021:101 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:59 (in catalog of Middle Eastern and North African Philanthinae); Kaplan and Yildirim, 2023:1690 (in checklist of Sphecidae *sensu lato* of Turkey).

26. *crabroniformis* F. Smith

Philanthus crabroniformis F. Smith, 1856:474, ♂. Holotype or syntypes: ♂, USA: California: no specific locality (BMNH). – Cresson, 1862:236 (in catalog of North American Hymenoptera), 1865c:104 (original description copied); Packard, 1866:58 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:367 (in checklist of world *Philanthus*); Dalla Torre, 1897:484 (in catalog of world Hymenoptera); Viereck, 1903b:733 (California, New Mexico); Viereck and Cockerell, 1904b:143 (= *Philanthus multimaculatus*); Snow, 1906:135 (Arizona); Johnson and Ledig, 1918:24 (California: Claremont); Mickel, 1918b:388 (in catalog of Nebraskan Sphecidae); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog

- of North American Hymenoptera); Evans, 1970:498 (Wyoming: Jackson Hole, nesting habits, list of prey); Horning and Barr, 1970:105 (USA: Idaho: Craters of the Moon National Monument); Alcock, 1954a:333 (USA: Washington: Seattle), 1974b:233 (nesting habits); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 8 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Evans, 1977d:26 (male behavior); Krombein, 1979b:1722 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); O'Neill and Evans, 1982:798 (major prey: family and genus); Radović, 1985:66 (sting apparatus analyzed); Steiner, 1986:112 (references to publications on nesting habits); Evans and O'Neill, 1988:90 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:256, 257, 259 (references to publications on nest parasites *Metopia argyrocephala* (Meigen), *Phrosinella fulvicornis* (Coquillett), *Phrosinella fumosa* Allen and *Senotainia trilineata* (Wulp), miltogrammine flies); McDaniel, Schmidt, and Howard, 1992:27 (mandibular gland secretion); Evans, 1993:28 (male aggregations); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from Krombein, 1979); Dollfuss, 2017b:1250 (locality records from USA); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, Saskatchewan: no specific locality).
- Philanthus flavifrons* Cresson, 1865c:102, ♀. Lectotype: ♀, USA: Colorado: Rocky Mountains: no specific locality (ANSP), designated by Cresson, 1916:100. Synonymized with *Philanthus crabroniformis* by R. Bohart in R. Bohart and Menke, 1976:564. – Packard, 1866:55 (in key to North American *Philanthus*), 58 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:367 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); H. Smith, 1908b:357 (in revision of Nebraskan Sphecidae); Stevens, 1917:421 (North Dakota); Mickel, 1918b:388 (in catalog of Nebraskan Sphecidae); Strandtmann, 1945b:153 (in review of North American *Philanthus*), 1946:58 (in revision of North American *Philanthus*); Strickland, 1947:128 (Canada: Alberta: Lethbridge, Medicine Hat); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); G. Bohart, 1954:26 (preying on honeybee); Krombein, 1958f:197 (in supplement to catalog of North American Hymenoptera: preying on *Apis mellifera* Linnaeus); Evans, 1963c:113 (preying on honeybee reported); Stainer, 1959:66 (Canada: British Columbia: French Creek, Nanaimo); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Steiner, 1986:112 (references to publications on nesting habits). – **As *Anthophilus flavifrons***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae).
- Philanthus californicus* Cresson, 1880a:xxxii, ♂. Lectotype: ♂, USA: Colorado: no specific locality (ANSP), designated by Cresson, 1916:99 (Article 74.6). Synonymized with *Philanthus californicus* by Strandtmann, 1945b:153, and with *Philanthus crabroniformis* by R. Bohart in R. Bohart and Menke, 1976:564. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:367 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera).
- Philanthus sublimis* Cresson, 1880a:xxxii, ♂. Lectotype: ♂, USA: Colorado: no specific locality (ANSP), designated by Cresson, 1916:101. Synonymized with *Philanthus californicus* by Strandtmann, 1945b:153, and with *Philanthus crabroniformis* by R. Bohart in R. Bohart and Menke, 1976:564. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:369 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Dunning, 1898b:152 (Island of Vancouver). – **As *Anthophilus sublimis***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae).
- Liris magnificus* Provancher, 1895:130, ♂ (as *magnifica*, incorrect original termination), junior primary homonym of *Liris magnificus* Kohl, 1883. Lectotype: ♂, USA: California: Los Angeles (Laval Univ.), designated by Gahan and Rohwer, 1918:29. Synonymized with *Philanthus crabroniformis* by Krombein, 1958f:197, and also by R. Bohart in R. Bohart and Menke, 1976:564 (as new synonym).

27. *crotoniphilus* Viereck and Cockerell

Philanthus crotoniphilus Viereck and Cockerell, 1904b:145, ♂. Holotype: ♂, USA: New Mexico: Las Cruces (ANSP). – Cresson, 1928:49 (holotype in ANSP); Strandtmann, 1945b:153 (in review of North American *Philanthus*), 1946:62 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 9 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Krombein, 1979b:1722 (in catalog of North American Hymenoptera); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain); Evans and O'Neill, 1988:114 (prey: *Apis mellifera* L.); Amarante, 2002:63 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands).

28. *curvimaculatus* (Cameron)

Trachypus curvimaculatus Cameron, 1910a:166, ♀. Holotype or syntypes: ♀, “Erythrina, Red Sea”, probably Eritrea (BMNH or OXUM). – **As *Philanthus curvimaculatus***: R. Bohart and Menke, 1976:564 (new generic assignment, in checklist of world Sphecidae); Madl, 2023:258 (in catalog of Crabronidae of Eritrea).

29. *decemmaculatus* Eversmann

Philanthus decemmaculatus Eversmann, 1849:399, sex not stated. Holotype or syntypes: Russia: southern Ural Mountains: no specific locality (ZIN). – Dalla Torre, 1897:484 (in catalog of world Hymenoptera); W. Schulz, 1904b:94 (Russia: Siberia: Tomsk); Bytinski-Salz, 1956:224 (Turkey: Dinar, determination tentative); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Pulawski, 1978:187 (in key to Sphecidae of European part of USSR); Esenbekova and Kazenas, 2000:70 (southeastern Kazakhstan; no specific locality); Kazenas, 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:134 (geographic distribution, collecting localities in Kazakhstan), 2007a:93 (Kazakhstan: Akmala Oblast': Kurgandzhin Nature Reserve and vicinity); Ljubomirov and Yildirim, 2008:125 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:25 (in catalog of Crabronidae of Asiatic Russia), 2009b:143 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Rudoiskatel', 2010:148 (Russia: southern Ural Mountains); Kazenas, 2012b:170 (Kazakhstan: Korgalzhin State Nature Reserve); Prisniy, 2012:51 (Russia: Belgorod Oblast'); Yildirim, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Shorenko, 2018:131 (Crimea, including localities, habitats, and number of specimens); Kaplan and Yildirim, 2021:101 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:59 (in catalog of Middle Eastern and North African Philanthinae); Kaplan and Yildirim, 2023:1690 (in checklist of Sphecidae *sensu lato* of Turkey); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

Philanthus angustifrons Kohl, 1891:355, ♂. Holotype or syntypes: ♂, Armenia: Arax River Valley (NHMW). Synonymized with *Philanthus decemmaculatus* by Pulawski, 1978:187. – Kohl, 1891:363 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Kazenas, 2001b:51 (tentatively in checklist of Sphecidae of Kazakhstan and Central Asia).

30. *dentatus* Cameron

Philanthus dentatus Cameron, 1902d:65, ♀. Holotype or syntypes: ♀, India: Assam: Khasia Hills (OXUM). – Ramakrishna Aiyar, 1916:557 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 6 (in review of Indian *Philanthus*).

31. *depredator* F. Smith

Philanthus depredator F. Smith, 1856:470, ♂. Holotype or syntypes: ♂, India: no specific locality (BMNH). – F. Smith, 1871a:371 (in catalog of Oriental Aculeata); Cameron, 1890b:248 (India: West Bengal: Barrackpore); Kohl, 1891:363 (in checklist of world *Philanthus*); Bingham, 1897:295 (in Wasp and Bee Fauna of British India); Dalla Torre, 1897:484 (in catalog of world Hymenoptera); Rothney, 1903:105 (India: West Bengal: Barrackpore); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Dollfuss, 2017b:1250 (India: Tamil Nadu: 60 km southwest of Madurai at 9°21.6'N 77°26.6'E); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 6 (in review of Indian *Philanthus*).

32. *desertorum* (F. Morawitz)

Anthophilus desertorum F. Morawitz, 1890:607, ♀. Holotype: ♀, Turkmenistan: Repetek (ZIN). – **As *Philanthus desertorum***: Kohl, 1891:363 (new generic assignment, in checklist of world *Philanthus*); Dalla Torre, 1897:484 (in catalog of world Hymenoptera); F. Morawitz, 1897a:157 (description of ♂); Myartseva, 1963b:60 (Turkmenistan: lower Murgab River), 1965:92 (Turkmenistan: Akibay and Bayram-Ali district); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Kazenas, 1978b:46 (in key to Sphecidae of Kazakhstan and Central Asia), 1992c:28 (Turkmenistan: Repetek Nature Reserve), 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Dollfuss, 2017b:1250 (locality records from Turkey and Mongolia); Mokrousov, 2017b:16 (Russia: Kalmykia: 20 km east of Khulhuta: Davsna sands at 46.292°N 46.672°E; Uzbekistan: Baga-Abzal' 15 km north of Bukhara), 2017d:59 (South-East of European Russia: no specific locality); Kaplan and Yildirim, 2021:101 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:59 (in catalog of Middle Eastern and North African Philanthinae); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

33. *dichrous* Kohl

Philanthus dichrous Kohl, 1894:289, ♀. Syntypes: West Africa (country?): Batta and Kriby (TMP). – Dalla Torre, 1897:485 (in catalog of world Hymenoptera); Arnold, 1925:161 (in revision of southern African *Philanthus*), 1930:10 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:93 (Zaire); Leclercq, 1955i:408 (Burundi); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Dollfuss, 2017b:1250 (locality records from Central African Republic and Guinea).

ssp. abyssinicus Arnold

Philanthus dichrous race *dolosus* var. *abyssinicus* Arnold, 1925:162, ♀. The name is available because it was published before 1961 (Article 10.2 of the Code). Holotype: Ethiopia: Harar (BMNH). – Arnold, 1930:11 (in checklist of Afrotropical Sphecidae); Scott *in* Arnold, 1933a:369 (Ethiopia: Harar District); Giordani Soika, 1939c:101 (Eritrea: Asmara: Keren); Arnold, 1951:100 (Ethiopia: Gore). – **As *Philanthus dichrous abyssinicus***: R. Bohart and Menke, 1976:564 (new status, in checklist of world Sphecidae); Madl, 2023:259 (in catalog of Crabronidae of Eritrea, incorrectly regarded *abyssinicus* Arnold, 1925 s unavailable).

ssp. dolosus Kohl

Philanthus dolosus Kohl, 1894:290, ♀. Holotype or syntypes: ♀, Congo (possibly Zaire): Makuco (TMP). – Dalla Torre, 1897:485 (in catalog of world Hymenoptera). – **As *Philanthus dichrous* race *dolosus***: Arnold, 1925:161 (new status, in revision of southern African *Philanthus*), 1930:10 (in checklist of Afrotropical Sphecidae). – **As *Philanthus dichrous dolosus***: R. Bohart and Menke, 1976:564 (new status, in checklist of world Sphecidae).

34. *dimidiatus* Klug

Philanthus dimidiatus Klug, 1845:[27], p. 47, fig. 7, ♂. Holotype or syntypes: ♂, Sudan: Ambukohl on Nile west of Korti (ZMHU). – F. Smith, 1856:470 (in catalog of Hymenoptera in British Museum); Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:485 (in catalog of world Hymenoptera); Casolari and Casolari Moreno,

1980:123 (specimens in M. Spinola collection, Torino); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); D. Baker, 1997b:189 (in catalog of insect described by Klug, 1845); Pagliano, 2014:103 (specimens in M. Spinola collection, Torino, are *Philanthus dimidiatus*).

35. *dufourii* Lucas

Philanthus dufourii Lucas, 1849:258, ♀, actually ♂ (as *Dufourii*, incorrect original capitalization). Holotype: ♂, Algeria: Sétif (MNHN). – F. Smith, 1856:472 (in catalog of Hymenoptera in British Museum); Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:485 (in catalog of world Hymenoptera, as *dufourii*); de Beaumont, 1949b:187 (in revision of northwestern African *Philanthus*), 1951c:306 (in revision of European *Philanthus*), 1953g:119 (Morocco); Ceballos, 1956:365 (in catalog of Hymenoptera of Spain), 1959:229 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1961a:204 (Syria, Iran), 1967a:278 (Turkey; variation); Kazenas, 1970b:366 (Kazakhstan); R. Bohart and Menke, 1976:564 (in checklist of world Sphecidae); Kazenas, 1978b:48 (in key to Sphecidae of Kazakhstan and Central Asia); Gayubo, 1983e:236 (Spain: Salamanca Province); Gayubo and Tormos, 1984:23 (Spain: Valencia); Gayubo, 1986a:66 (Spain: Ciudad Real Province); Gayubo and Sanza, 1986:83 (Spain: Burgos); Tormos and Jiménez, 1987a:127 (Spain: Valencia); Gayubo, 1991a:129 (characteristics of species); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Tormos, Asís, and Gayubo, 1994:190, 224 (Spain: Albacete Province); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:291 (in Sphecidae Fauna of Western Europe); Ljubomirov and Yildirim, 2008:126 (in catalog of Crabronidae of Turkey); Baños-Picón, Asís, Gayubo, and Tormos, 2009:314 (Spain: frequency of specimens collected with hand nets and Malaise traps); Murai and Amr, 2011:119 (recorded from Syria by de Beaumont, 1961); Ebrahimi, 2014:47 (Iran: Markazi: Khomein: Shahābieh); Yıldırım, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:82 (Iran: known from Markazi Province); Dollfuss, 2017b:1250 (locality records from Algeria, Kyrgyzstan, and Turkey); Cross, Baldock, and Wood, 2021:67 (in catalog of Sphecidae *sensu lato* of Portugal); Kaplan and Yildirim, 2021:101 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:59 (in catalog of Middle Eastern and North African Philanthinae); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Schmidt, 2022:284 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Gülmez, Çubuk, and Can, 2025:186 (Turkey: Çanakkale: Kelkit River Valley).

Philanthus bolivari Mercet, 1914:445 and 447, ♀, ♂ (as *Bolivari*, incorrect original capitalization). Syntypes: Spain: Madrid, Ávila, and Alicante (MNCN). Synonymized with *Philanthus dufourii* by de Beaumont, 1949b:188 and 1951c:306. – Giner Marí, 1942a:70 (Spain: Valencia Province), 1943a:112 (in Sphecidae Fauna of Spain); Martin Albaladeo and Izquierdo Moya, 2006:118 (type in Museo Nacional de Ciencias Naturales, Madrid). – As *Philanthus dufourii bolivari*: Diniz, 1966:6 (new status, Portugal: Oeiras, Rezende).

36. *elegantissimus* Dalla Torre

Philanthus elegans F. Smith, 1873c:415, ♀, junior primary homonym of *Philanthus elegans* F. Smith, 1856, now in *Trachypus*. Holotype or syntypes: ♀, northern India, perhaps Pakistan: no specific locality (BMNH). – Cameron, 1890b:248 (listed); Kohl, 1891:364 (in checklist of world *Philanthus*); Bingham, 1897:297 (in Wasp and Bee Fauna of British India).

Philanthus elegantissimus Dalla Torre, 1897:485. Substitute name for *Philanthus elegans* F. Smith, 1873. – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Esenbekova and Kazenas, 2000:70 (southeastern Kazakhstan: 60 km east of Chilik); Kazenas, 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan), 2008a:105 (southeastern Kazakhstan: 15 km east of Ayak-Kalkan, 20 km south of Aydarly, 60 km east of Chilik), 2013b:499 (southeastern Kazakhstan: 60 km east of Chilik); Mokrousov and Gromenko, 2015:126 (Uzbekistan: Sundukli Desert at 38°57'45"N, 64°32'26"E); Girish Kumar, Monks, and Sheikh, 2021:3 (in key to Indian *Philanthus*), 9 (in review of Indian *Philanthus*); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

Philanthus marikovskii Kazenas, 1978a:662, ♂. Holotype: ♂, Kazakhstan: Ili River Valley: 15 km east of Ayak-kalkan (ZIN). Synonymized with *Philanthus elegantissimus* by Kazenas, 2000a:51. – Kazenas, 1978b:49 (in key to Sphecidae of Kazakhstan and Central Asia).

37. *femoralis* Arnold

Philanthus femoralis Arnold, 1946:76, ♂. Holotype: ♂, Zambia: Tupela in Mweru District (SAM). – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

38. *flagellarius* R. Turner

Philanthus flagellarius R. Turner, 1918c:460, ♀. Syntypes: ♀, Tanzania: Usangu and Linongwe districts (BMNH). – Arnold, 1925:165 (in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Dollfuss, 2017b:1251 (locality records from Central African Republic and Zimbabwe; description of ♂).

39. *flavipes* Arnold (preoccupied)

Philanthus flavipes Arnold, 1949:274, ♂. Holotype: ♂, Zambia: Abercorn, now Mbala (SAM). Junior primary homonym of *Philanthus flavipes* Fabricius, 1781, now in *Palarus* – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

40. *fossulatus* R. Turner

Philanthus fossulatus R. Turner, 1918c:459, ♀. Holotype or syntypes: ♀, Somalia: Bohotle (BMNH). – Arnold, 1925:166 (original description copied), 1930:11 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

41. *foveatus* Arnold

Philanthus foveatus Arnold, 1933b:55, ♀, ♂. Syntypes: Zaire: Burunga (MRAC). – Arnold, 1943:73 (Zaire); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

42. *fuscipennis* Guérin-Méneville

Philanthus fuscipennis Guérin-Méneville, 1844:443, sex not stated. Holotype or syntypes: Senegal: shores of Casamance River (MSNG). – F. Smith, 1856:472 (in catalog of Hymenoptera in British Museum); Kohl, 1891:364 (in checklist of world *Philanthus*); Gribodo, 1895:352 (Mozambique, redescription); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); Bingham, 1902:213 (South Africa); R. Turner, 1918c:459 (synonymy, variation); Arnold, 1925:171 (in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae); Guiglia, 1948b:180 (type material in Genova), 191 (redescription); Leclercq, 1969:1053 (Congo Brazzaville); I. Robertson, 1969:480 (Tanzania: Ukiriguru); R. Bohart and Menke, 1976:139 (in checklist of world Sphecidae), 565 (in checklist of world Sphecidae); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); S. Gess and F. Gess, 2003:129 (South Africa: visiting flowers of *Foeniculum vulgare* Mill, Apiaceae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive ‘*Streptomyces philanthi*’ symbionts); Dollfuss, 2017b:1251 (locality records from Central African Republic, Ethiopia, Guinea, Kenya, Malawi, Mali, Mozambique, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe).

Philanthus temerarius Kohl, 1894:290, ♂. Syntypes: ♂, country unknown: Batta (TMP). Synonymized with *Philanthus fuscipennis* by Leclercq, 1969:1053. – Dalla Torre, 1897:491 (in catalog of world Hymenoptera); W. Schulz, 1906:308 (Fernando Po, now Bioko, description of ♀); Schouteden, 1930:93 (Zaire). – **As *Philanthus fuscipennis* race *temerarius***: Arnold, 1925:172 (new status, in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae).

Philanthus usambarensis Stadelmann, 1897:Figure 11. – : Arnold, 1925:175 (as probable synonym of *Philanthus fuscipennis temerarius*). – R. Bohart and Menke, 1976:565 (as tentative synonym of *Philanthus fuscipennis*).

? *Philanthus undussumae* Stadelmann, 1897:55 (explanation of Figure 11).

ssp. *consimilis* Kohl

Philanthus consimilis Kohl, 1891:349, ♀, ♂. Syntypes: South Africa: Western Cape Province: Cape of Good Hope: no specific locality (NHMW, ZMHU). – Kohl, 1891:363 (in checklist of world *Philanthus*); Dalla Torre, 1897:484 (in catalog of world Hymenoptera); R. Turner, 1918c:461 (as synonym of *Philanthus fuscipennis*). – **As *Philanthus fuscipennis consimilis***: Giordani Soika, 1939c:102 (new status, Eritrea: Adi Ugri); Guiglia, 1939d:55 (Ethiopia: Sidamo: Malca Guba), 1943c:75 (Ethiopia: Gamo Gofa: Sagan – Omo region), 1950:233 (Ethiopia: Gamo Gofa: Gondaraba at 4°58'N 36°49'E); Arnold, 1951:100 (Ethiopia: Bishoftu, Jowaha); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Madl, 2023:259 (in catalog of Crabronidae of Eritrea).

Philanthus reticulatus Cameron, 1908a:270, ♀. Holotype or syntypes: ♀, Tanzania: Mount Kilimanjaro: Kibonoto (NRS). Synonymized with *Philanthus fuscipennis* by R. Turner, 1918c:461 and with *Philanthus fuscipennis consimilis* by Bohart and Menke, 1976:565.

ssp. *laetus* Gribodo (preoccupied)

Philanthus fuscipennis var. *laetus* Gribodo, 1895:353, ♂, junior primary homonym of *Philanthus laetus* Fabricius, 1793, now in *Cerceris*. Holotype: ♂, Mozambique: Lourenço Marquês, now Maputo (Mus. Genova). – Penati and Mariotti, 2015: 73 (in list of Hymenoptera described by G. Gribodo). – **As *Philanthus fuscipennis laetus***: R. Bohart and Menke, 1976:565 (new status, in checklist of world Sphecidae).

43. *genalis* Kohl

Philanthus genalis Kohl, 1891:349, ♀, ♂. Syntypes: Egypt: Sinai: Tor (NHMW) and Libyan Desert: no specific locality (ZMHU). – Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); Mochi, 1939a:99 (in revision of Egyptian *Philanthus*); de Beaumont, 1956a:184 (Libya), 1961a:202 (diagnostic characters); Pulawski, 1967c:387 (Sudan: Khor Musa Pasha south of Wadi Halfa); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Al-Houty, 1989:162 (Kuwait: Abdelli, Jal Al-Zor, Sobiya, Sulabiya); Dollfuss, 1989:11 (type material in NHMW); Guichard, 1991a:338 (Jordan), 1994a:209 (United Arab Emirates); Roche and Zalut, 1994:117 (Egypt: Sinai Peninsula); Gadallah, 1996:70 (in revision of Egyptian *Philanthus*); Al-Houty, 1997:161 (Kuwait: no specific locality); Roche, 2007a:126 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Schmid-Egger, 2011b:569 (recorded from United Arab Emirates by Guichard, 1991a), 2014:591 (United Arab Emirates), 592 (color photographs of female); Dollfuss, 2017b:1252 (Egypt: Dahshur and Wadi el Tih); Gadallah, 2020b:67 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:60 (in catalog of Middle Eastern and North African Philanthinae), 2023:158 (in key to Egyptian *Philanthinus* and *Philanthus*), 165 (in revision of Egyptian *Philanthinus* and *Philanthus*).

44. *gibbosus* (Fabricius)

Vespa gibbosa Fabricius, 1775:370, sex not stated. Holotype: ♂, North America: no specific locality (ZMUC). – Fabricius, 1781:466 (redescription), 1787:292 (redescription), 1793:275 (redescription), 1804:261 (redescription); W. Schulz, 1912:82 (is a *Philanthus*, single male of Fabricius in Kiel Museum). – **As *Anthophilus gibbosus***: Dahlbom, 1844:192 (new generic assignment, in revision of Sphecidae and Pompilidae), 1845:497 (in key to *Anthophilus*). – **As *Philanthus gibbosus***: Klug, 1846:42 (new generic assignment, belongs to subsection *Anthophilus* of *Philanthus*; as *nodosus*, a lapsus), Taschenberg, 1875:403 (Illinois); Kohl, 1891:367 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); H. Smith, 1908b:358 (in revision of Nebraskan Sphecidae); J. Smith, 1910:678 (in new list of insects of New Jersey); Mickel, 1918b:389 (in catalog of Nebraskan Sphecidae); Washburn, 1919:219 (in list of Hymenoptera of Minnesota); Reinhard, 1924:363 (number of generations, nesting habits, description of larva and cocoon); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); E. Reinardt,

1929b:94 and 117 (nesting habits); Peckham, 1934b:260 (Missouri: St. Albans and St. Louis; digging reported); Krombein, 1936:94 (New York: Buffalo, gregarious nesting), 98 (floral records); Brimley, 1938:447 (North Carolina: statewide); Strandtmann, 1945b:153 (in review of North American *Philanthus*), 1946:72 (in revision of North American *Philanthus*); Dreisbach, 1947:142, 143 (in key to *Philanthus* of Michigan), 144 (Michigan: locality records); Strickland, 1947:128 (Canada: Alberta: Lethbridge, Medicine Hat, as *gibbosus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Krombein, 1952a:95 (USA: Virginia: Westmoreland State Park; prey: *Augochloropsis cuprea* (Smith), a halictid bee); K. Cooper, 1953:34 (Massachusetts: Penikese Island); Krombein, 1953b:124 (visiting flowers of *Pluchea* sp., Asteraceae), 133 (North Carolina: Kill Devil Hills), 1956a:43 (prey: *Halictus versatus* Robertson, a halictid bee); Evans, 1957b:82 (description of larva); Evans and Lin, 1959:124 (nesting habits); Evans and Linsley, 1960:32 (casual member of sleeping aggregation at Southwest Research Station, Arizona); Evans, 1963c:113 (comparison of behavior with *Philanthus politus* and *Ph. solivagus*); Krombein, 1963f:277 (Maryland: Plummers Island near Washington, D.C.); Kurczewski and Kurczewski, 1963:148 (Pennsylvania: Presque Isle State Park); Cazier and Mortenson, 1965a:174 (nesting habits); Wray, 1967:123 (North Carolina: Kill Devils Hills); N. Lin, 1968:10 (sleeping inside nests); Alcock, 1970:218 (male behavior); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); Evans, 1973b:302 (burrow sharing and transfer); Alcock, 1954a:333 (USA: Washington: Seattle); Alcock, 1974b:241 (nesting habits, comparison with *Philanthus crabroniformis*); Barrows and Snyder, 1974:314 (list of prey: halictine bees); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 9 (in revision of *Philanthus* of California); Evans, 1975a:264 (slow colonizer of new habitats), Hurd and Linsley, 1975:117 (Arizona: Cochise County: Douglas; on flowers of *Larrea tridentata* (De Candolle) Coville, Zygophyllaceae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); C. Ward et al., 1977:156 (associated with mesquite (*Prosopis glandulosa* Torr.), Fabaceae); L. Davis, 1978:217 (North Carolina: Kill Devil Hills, data from Krombein, 1953a); N. Lin, 1978b:234 (defending individual hunting territories, hunting behavior); Krombein, 1979b:1722 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Finnamore, 1982:237 (in Sphecid Fauna of southern Quebec); O'Neill and Evans, 1982:798 (major prey: family and genus); Packer, 1985:293 (Mexico; prey: *Halictus hesperus* Smith, a halictid bee; nest), 297 (short review of nesting habits); Parks, 1986:35 (California: Torrey Pines State Reserve); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Steiner, 1986:112 (references to publications on nesting habits); Evans and O'Neill, 1988:32 (male behavior, burrow sharing, nesting habits, nest structure, natural enemies); Spofford, Kurczewski, and Downes, 1989:256, 257, 259 (references to publications on nest parasites *Hilarella hilarella* (Zetterstedt), *Metopia argyrocephala* (Meigen), *Phrosinella fulvicornis* (Coquillett), *Senotainia trilineata* (Wulp), and *Senotainia* sp. near *trilineata* (Wulp), miltogrammine flies), 257, 261 (nest parasites: *Phrosinella aurifacies* Downes, a miltogrammine fly, and undetermined species of Miltogrammini); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County); Spofford and Kurczewski, 1990:747, 748, 751 (nest parasites: *Phrosinella aurifacies* Downes, *Senotainia trilineata* (Van der Wulp), and unknown species of Miltogrammini, Sarcophagidae), 1992:1000 (species of miltogrammine parasites listed), 1002 (counter-cleptoparasitic behavior: freeze-stop and face-off, diversionary flight), 1003 (chasing flight), 1005 (post-larvipositional counter-cleptoparasitic behavior: clean prey); Ahlstrom, 1995:113 (in checklist of insects of North Carolina); Hanson and Menke, 1995:649 (extends south to El Salvador); Kurczewski, 1998d:250 (pine barrens in upstate New York); Melo, 2000:98 (nest usurpation and temporary association with nest owner); Skevington et al., 2001:128 (Canada: Ontario: Lambton County); Amarante, 2002:63 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Ohl and Linde, 2003:151 (number of ovarioles); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Kaltenpoth, Götter, Herzner, and Strohm, 2005:478 (presence of streptomycetes bacteria in female antennal glands); Giles and Ascher, 2006:231 (New York: Black Rock Forest Preserve); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007:46 (Mexico: Tamaulipas); Pagliano, 2014:104 (specimens in M. Spinola collection, Torino, are *Philanthus gibbosus*);

- Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from R. Bohart and Grissell, 1977 and Krombein, 1979); Dollfuss, 2017b:1252 (USA: locality records); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, Manitoba, Ontario, Quebec, first records from New Brunswick and Saskatchewan: no specific locality).
- Philanthus punctatus* Say, 1824:342, ♂. Holotype or syntypes: ♂, USA: Pennsylvania: no specific locality (destroyed). Synonymized with *Philanthus gibbosus* by Strandtmann, 1945b:154. – F. Smith, 1856:474 (in catalog of Hymenoptera in British Museum); Le Conte, 1859a:231 (original description copied); Cresson, 1862:236 (in catalog of North American Hymenoptera), 1865c:100 (in revision of North American Philanthinae); Packard, 1866:55 (in key to North American *Philanthus*), 58 (bibliographic references, geographic distribution); Cresson, 1873:227 (Texas); Snow, 1881:95 (in checklist of Hymenoptera of Kansas: Douglas County: no specific locality); Cresson, 1887:281 (in catalog of North American Hymenoptera); C. Robertson, 1894:457 (visiting flowers of *Solidago nemoralis* Ait., Asteraceae), 460 (visiting flowers of *Aster paniculatus* Lam., Asteraceae), 1896:73 (visiting flowers of *Polygonum hydropiperoides* Michx., Polygonaceae); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); Dunning, 1897:69 (Connecticut), 1898b:152 (recognition characters given by Cockerell, 1898); G. Peckham and E. Peckham, 1898:109 (nesting habits); Bridwell, 1899:209 (Kansas: no specific locality); Adlerz, 1904:138 (known prey: halictids); G. Peckham and E. Peckham, 1905:154 (several specimens present in one nest, nest construction and structure, preying on halictids); Snow, 1906:135 (Arizona); Rohwer, 1916b:673 (in catalog of Hymenoptera of Connecticut; New Haven, North Haven, Prospect, Westbrook); Washburn, 1919:219 (in list of Hymenoptera of Minnesota); Britton, 1920:339 (in checklist of insects of Connecticut); Rau, 1922:21 (USA: Missouri: Silica); Rohwer *in* Viereck, 1925:673 (in key to Sphecidae of Connecticut); Rau, 1938b:542 (sleeping habits); Strickland, 1947:128 (Canada: Alberta: Medicine Hat); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Steiner, 1986:112 (references to publications on nesting habits). – **As *Anthophilus punctatus***: J. Smith, 1900:520 (new generic assignment, in list of insects of New Jersey); Viereck, 1903d:120 (Maryland: College Park).
- Cheilopogonus punctiger* Westwood, 1835a:441, sex not stated. Syntypes: USA: Indiana: New Harmony (originally in "Mus. Soc. Nat. Hist., Belfast", now apparently destroyed: R. Bohart and Grissell, 1975:10). Synonymized with *Philanthus gibbosus* by Strandtmann, 1945b:153. – Cresson, 1862:237 (in catalog of North American Hymenoptera).
- Anthophilus gibbosus* Dahlbom, 1844:192, ♀, ♂, junior secondary homonym of *Philanthus gibbosus* Fabricius, 1775. Synonymized with *Philanthus gibbosus* Fabricius by Strandtmann, 1946:72. – Dahlbom, 1845:497 (in key); Amarante, 2005a:13 (correction to his 2002 catalog).
- Philanthus xanthostigma* Cameron, 1891a:131, ♀. Lectotype: ♀, Mexico: Guerrero: Chilpancingo (BMNH), designated by R. Bohart and Grissell, 1975:10. Synonymized with *Philanthus gibbosus* (Fabricius) by R. Bohart and Grissell, 1975:10 and by R. Bohart *in* R. Bohart and Menke, 1976:565. – Kohl, 1891:370 (in checklist of world *Philanthus*); Dalla Torre, 1897:494 (in catalog of world Hymenoptera). – **As *Pseudanthophilus xanthostigma***: Ashmead, 1899d:297 (tentative new generic assignment, in checklist of North American Crabronidae).
- Philanthus maculifrons* Cameron, 1891a:132, ♂. Holotype or syntypes: ♂, Mexico: Guanajuato: Jiral (BMNH). Synonymized with *Philanthus gibbosus* (Fabricius) by R. Bohart *in* R. Bohart and Menke, 1976:565. – Kohl, 1891:368 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera). – **As *Pseudanthophilus maculifrons***: Ashmead, 1899d:297 (tentative new generic assignment, in checklist of North American Crabronidae).
- Philanthus punctatus* var. *cockerelli* Dunning, 1897:69. Lectotype: ♂, USA: New Mexico: Las Cruces (ANSP), designated by Cresson, 1928:49. Synonymized with *Philanthus gibbosus* by Strandtmann, 1945b:154. – Dunning, 1898b:152 (recognition); Cockerell, 1899a:141 (New Mexico); Viereck and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico); Snow, 1906:9 (Arizona: Oak Creek 20 mi. southwest of Flagstaff, as *punctatus cockerelli*).

Philanthus chilopsidis Cockerell, 1899a:141. Not available: published as synonym of *Philanthus punctatus* var. *cockerelli* (Article 11.6). Synonymized with *Philanthus gibbosus* (Fabricius) by R. Bohart and Grissell, 1975:10, and by R. Bohart in R. Bohart and Menke, 1976:565.

Anthophilus melanaspis Cameron, 1905l:377, ♀. Holotype or syntypes: ♀, Mexico: no specific locality (BMNH). Synonymized with *Philanthus gibbosus* (Fabricius) by R. Bohart and Grissell, 1975:10, and by R. Bohart in R. Bohart and Menke, 1976:566.

Anthophilus maculiventris Cameron, 1905l:377, ♀. Holotype or syntypes: ♀, Mexico: no specific locality (BMNH). Synonymized with *Philanthus gibbosus* (Fabricius) by R. Bohart and Grissell, 1975:10, and by R. Bohart in R. Bohart and Menke, 1976:566.

45. *glaber* Kohl

Philanthus glaber Kohl, 1891:348, ♀. Holotype: ♀, Russia: Siberia: no specific locality (ZMHU). – Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Mokrousov, 22017b:16 (Russia: Altai Republic: 12 km southeast of Kosh-Agach at 49.91°N 88.76°E; China: Nei Mongol: Huang He valley between Denkou and Baotou and Alashan, Dingyuanqing, now Bayanhot).

Philanthus rubriventris Kazenas, 1970b:366, ♀. Holotype: ♀, Kazakhstan: Alma-Ata Oblast': near Ili (ZIN). Synonymized with *Philanthus glaber* by Mokrousov, 2017b:16. – Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp. Tamaricaceae, and *Euphorbia* spp., Euphorbiaceae in Kazakhstan), 111 (feeding on flowers of *Berberis iliensis*, Berberidaceae, in Kazakhstan); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Kazenas, 1978b:49 (in key to Sphecidae of Kazakhstan and Central Asia); Esenbekova and Kazenas, 2000:70 (southeastern Kazakhstan: 3 km northeast and 15 km southeast of Borandysu, 10 km northwest of Chundzha); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan), 2008a:106 (southeastern Kazakhstan: Bartogay, 3 km northeast and 15 km southeast of village Borandysu, 11 km northwest of Chundza, Kapchagay), 2013a:134 (color photograph of adult wasp, short information on geographic distribution), 2013b:499 (southeastern Kazakhstan: 3 km northeast and 15 km southwest of Borandysu, 11 km northwest of Chundzha on Sharyn River).

Philanthus kaszabi Tsuneki, 1971l:418, ♀. Holotype: ♀, Mongolia: Uvs Aymag: Bagnuur (TMB). Synonymized with *Philanthus glaber* by Mokrousov, 2017b:16. – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:467 (in key to Sphecidae of Russian Far East); Nemkov, 2008b:25 (in catalog of Crabronidae of Asiatic Russia), 2009b:143 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Dollfuss, 2017b:1253 (Mongolia: locality records, description of ♂).

46. *gloriosus* Cresson

Philanthus gloriosus Cresson, 1865c:86, ♀. Lectotype: ♀, USA: Colorado: no specific locality (ANSP), designated by Cresson, 1916:100. – Packard, 1866:54 (in key to North American *Philanthus*), 55 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:368 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); Bridwell, 1899:209 (Kansas: no specific locality); Cockerell, 1899a:141 (New Mexico); Viereck and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico); H. Smith, 1908b:359 (in revision of Nebraskan Sphecidae); Mickel, 1918b:386 (in catalog of Nebraskan Sphecidae); Strandtmann, 1945b:152 (in review of North American *Philanthus*), 1946:31 (in revision of North American *Philanthus*); Strickland, 1947:128 (Canada: Alberta: Medicine Hat, as *gloriosum*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); R. Bohart and Grissell, 1975:5, 7 (in key to North American *Philanthus*), 11 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera); G. Ferguson, 1984a:291 (in revision of *Philanthus zebratus* species group); Menke, 1986c:35 (Utah: Emery County: San Rafael Desert); Amarante, 2002:63 (in catalog

of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Dollfuss, 2017b:1252 (Cuba: no specific locality); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, Saskatchewan: no specific locality).

Philanthus insignatus Banks, 1913b:421, ♀. Holotype: ♀: Texas: Alpine (AMNH). Synonymized with *Philanthus gloriosus* by Strandtmann, 1945:152.

47. *gwaaiensis* Arnold

Philanthus gwaaiensis Arnold, 1929c:407, ♂. Holotype: ♂, Zimbabwe: Gwaai (SAM). – Arnold, 1930:11 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

48. *hellmanni* (Eversmann)

Anthophilus hellmanni Eversmann, 1849:400, ♀, ♂ (as *Hellmanni*, incorrect original capitalization). Syntypes: "in campis transuralensibus" = Kazakhstan: no specific locality (ZIN). – Radoszkowski, 1888a:326 (redescription, male genitalia, ♀ = *Mellinus sabulosus*); Ed. André, 1889:250 (in revision of Sphecidae of Europe and Algeria), 21* (bibliographic references); F. Morawitz, 1889a:153 (China: Kukuhotu, description of ♂); Radoszkowski, 1892:579 (reference to Radoszkowski, 1888a); Sickmann, 1894:201 (China: Hopei Province: Kalgan). – **As *Philanthus hellmanni*:** Kohl, 1891:364 (new generic assignment, in checklist of world *Philanthus*); F. Morawitz, 1893b:420 (Tajikistan: Khimartob in Yagnob River valley); Dalla Torre, 1897:487 (in catalog of world Hymenoptera); Yasumatsu, 1942c:107 (China: Nei Mongol: Apaka at 44°N 114.96°E); Tsuneki, 1971l:417 (Mongolia), 1971m:15 (China: Nei Mongol: Apaka); Kazenas, 1978b:46 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:186 (in key to Sphecidae of European part of USSR); Kazenas, 1980e:82 (Russia: Primorskiy Kray); Nemkov, 1986:108 (Russia: Irkutsk Oblast'), 1992b:250 (Russia: Far East: Natalino near Khingan Nature Reserve); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:467 (in key to Sphecidae of Russian Far East); Wu and Zhou, 1996a:161 (in revision in Economic Insect Fauna of China); Kazenas, 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan); Hua, 2006:281 (in list of Chinese insects, geographic distribution); Baghirov, 2007:93 (Russia: southwestern Siberia, as *hellmanni*); Danilov, 2008:352 (Russia: Altayskiy Kray: Barnaul area); Nemkov, 2008b:25 (in catalog of Crabronidae of Asiatic Russia), 2009b:143 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:238 (Russia: Primorskiy Kray: Lazovsky Nature Reserve); Baghirov, 2011b:155 (Russia: Altayskiy Kray: Savvushka; Altay Republic: Aktash, Chike-Taman, Kosh-Agach); Nemkov, 2012c:447 (in catalog of Crabronidae of Russian Far East); Mokrousov, 2015a:538 (south-eastern European Russia); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Dollfuss, 2017b:1252 (Mongolia: locality records); Jacobs and Liebig, 2018:145 (Russia: Irkutsk Oblast': Sarma).

spp. sibiricus Radoszkowski

Philanthus Hellmanni ♂: Eversmann, 1849:400 (segmento abdominis primo rufo). Corrected to *Philanthus sibiricus* by Radoszkowski, 1888a:325.

Philanthus sibiricus Radoszkowski, 1888a:325, ♀. Holotype or syntypes: ♀, Russia: Vladivostok (Kraków?). – Kohl, 1891:364 (as new synonym of *Philanthus hellmanni*). – **As *Philanthus hellmanni* var. *sibiricus*:** Dalla Torre, 1897:487 (new status, in catalog of world Hymenoptera); – **As *Philanthus hellmanni sibiricus*:** R. Bohart and Menke, 1976:565 (new status, in checklist of world Sphecidae).

49. *histrion* Fabricius

Philanthus histrion Fabricius, 1804:301, sex not stated. Holotype or syntypes: ♀, Senegal: no specific locality (ZMUC). – Thunberg, 1815b:289 (diagnostic characters), 297 (redescription); Taschenberg, 1875:404 (redescription); Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); Bingham, 1902:213 (South Africa); R. Turner, 1918c:463 (synonymy, range: East Africa from Harar to Natal, Angola); Arnold, 1925:147 (in revision of southern African *Philanthus*), 1930:10 (in checklist of Afrotropical Sphecidae); Schouteden,

1930:93 (Zaire); Guiglia, 1932:126 (Ethiopia: Harer); Scott *in* Arnold, 1933a:369 (Ethiopia: Hawash); Guiglia, 1939d:54 (Ethiopia: Sidamo: Neghelli, now Negele); Arnold, 1960a:83 (South Africa: Drakensberg Mountains); van der Vecht, 1961a:61 (study of type material); Leclercq, 1962a:397 (Tanzania: Mount Hanang, color variation); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); S. Gess, 1996:277 (floral records); S. Gess and F. Gess, 2003:129 (South Africa: visiting flowers of *Foeniculum vulgare* Mill., Apiaceae, and *Helichrysum* sp., Asteraceae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive ‘*Streptomyces philanthi*’ symbionts); Dollfuss, 2017b:1252 (locality records from Cameroon, Kenya, Malawi, Mozambique, South Africa, Tanzania, Zambia, and Zimbabwe).

Philanthus schoenherri Dahlbom, 1845:496, ♀, ♂ (as *Schönherri*, incorrect original capitalization and diacritic mark). Syntypes: South Africa: Cape Province (Eastern or Western?): no specific locality (Lund). Synonymized with *Philanthus histrio* by Kohl, 1891:364, synonymy confirmed by W. Schulz, 1912:94.

Philanthus formosus F. Smith, 1856:471, ♂. Holotype or syntypes: ♂, South Africa: Cape Province: Cape of Good Hope (BMNH). Synonymized with *Philanthus histrio* by Kohl, 1891:364.

Philanthus flavolineatus Cameron, 1908:271, ♀. Syntypes: Tanzania: Mount Kilimanjaro: Kibonoto (NRS). Synonymized with *Philanthus histrio* by R. Turner, 1913:744 and 1918c:463.

Philanthus trichocephalus Cameron, 1910:146, ♂. Holotype or syntypes: ♂, South Africa: Mpumalanga: Middleburg (TMP). Synonymized with *Philanthus histrio* by Brauns, 1917:240 (as *trichiocephalus*).

ssp. *distinctus* Arnold

Philanthus histrio distinctus Arnold, 1951:100, ♂. Holotype: ♂, Ethiopia: Debra Sina (BMNH). – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

ssp. *eritreanus* Bischoff

Philanthus flavolineatus eritreanus Bischoff, 1915b:156, ♂. Syntypes: Eritrea: no specific locality (ZMHU). – Arnold, 1925:175 (unknown to author). – As *Philanthus histrio eritreanus*: R. Bohart and Menke, 1976:565 (new subspecific generic assignment, in checklist of world Sphecidae); Madl, 2023:259 (in catalog of Crabronidae of Eritrea).

50. *impatiens* Kohl

Philanthus impatiens Kohl, 1891:359, ♀. Holotype or syntypes: ♀, South Africa: Western Cape Province: Cape of Good Hope area (NHMW). – Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:487 (in catalog of world Hymenoptera); Arnold, 1925:153 (description of ♂, in revision of southern African *Philanthus*), 1930:10 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW).

51. *inversus* Patton

Philanthus inversus Patton, 1879d:355, ♀. Lectotype: ♀, USA: northwestern Kansas: no specific locality (ANSP), designated by R. Bohart and Grissell, 1975:11. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:368 (in checklist of world *Philanthus*); Dalla Torre, 1897:487 (in catalog of world Hymenoptera); Bridwell, 1899:209 (Kansas: no specific locality); H. Smith, 1908b:358 (in revision of Nebraskan Sphecidae); Mickel, 1918b:388 (in catalog of Nebraskan Sphecidae); Strandtmann, 1945b:153 (in review of North American *Philanthus*), 1946:66 (in revision of North American *Philanthus*); Strickland, 1947:128 (Canada: Alberta: Lethbridge, Medicine Hat, as *inversum*); Burks *in* Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 11 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera); O'Neill and Evans, 1982:792-800 (prey use); McCorquodale, 1986:1623 (flight characteristics as defense against *Senotainia trilineata*); Evans and O'Neill, 1988:112 (nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:259 (reference to publication on nest parasite *Senotainia trilineata* (Wulp),

a miltogrammine fly); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Ratzlaff, 2016:28 (Canada: British Columbia: from R. Bohart and Grissell, 1975); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, first record from Saskatchewan: no specific locality).

52. *kohlui* F. Morawitz

Philanthus kohlui F. Morawitz, 1890:605, ♂ (as *Kohlui*, incorrect original capitalization). Syntypes: ♂, Turkmenistan: Dort-kuyu (ZIN). – Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:487 (in catalog of world Hymenoptera); Myartseva, 1963b:60 (Turkmenistan: lower Murgab River), 1965:92 (Turkmenistan: Akibay and Bayram-Ali district), 1971b:179 (occurs only in deserts of Turkmenistan); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Kazenas, 1992c:28 (Turkmenistan: Repetek Nature Reserve), 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan); Yildirim and Ljubomirov, 2005:1806 (first record from Turkey: Erzincan, Kahramanmaraş, and Malatya provinces); Ljubomirov and Yildirim, 2008:126 (in catalog of Crabronidae of Turkey); Yildirim, 2012:77 (Turkey: Iğdır: Karakoyunlu: Taşburun; Tunceli: Mazgirt: Lalaycı); Yildirim, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); Mokrousov and Gromenko, 2015:126 (Uzbekistan: Sundukli Desert at 38°57'45"N 64°32'26"E and 5 km north of Mubarek at 39°18'31"N 65°8'20"E); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:20 (Turkey: Tunceli: Çiçekli); Dollfuss, 2017b:1253 (Kazakhstan: locality records, color variation); Kaplan and Yildirim, 2021:102 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:60 (in catalog of Middle Eastern and North African Philanthinae); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

53. *kokandicus* Radoszkowski

Philanthus kokandicus Radoszkowski, 1877:52, ♀, ♂ (as *Kokandicus*, incorrect original capitalization). Syntypes: Kyrgyzstan: Shakhimardan (ZMMU). – Radoszkowski, 1888a:325 (male genitalia); Kohl, 1891:353 (redescription), 364 (in checklist of world *Philanthus*); Radoszkowski, 1892:579 (reference to Radoszkowski, 1888a); Dalla Torre, 1897:488 (in catalog of world Hymenoptera); Gussakovskij, 1935:445 (Tajikistan); Myartseva, 1972a:91 (Turkmenistan); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Kazenas, 1978b:48 (in key to Sphecidae of Kazakhstan and Central Asia); Islamov, 1986:518 (Uzbekistan: Surkhandarya and Tashkent Oblast's); Nazarova, 1998:42 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan); Nazarova, 2005:94 (alfalfa fields in southwestern Tajikistan); Yildirim and Ljubomirov, 2005:1806 (first record from Turkey: Bitlis, Erzurum, and Kars provinces); Ljubomirov and Yildirim, 2008:127 (in catalog of Crabronidae of Turkey); Yildirim, 2012:77 (Turkey: Erzurum: Oltu); Yildirim, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); Dollfuss, 2017b:1254 (Uzbekistan: locality records); Kaplan and Yildirim, 2021:102 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:60 (in catalog of Middle Eastern and North African Philanthinae: Turkey); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

54. *komarowi* F. Morawitz

Philanthus komarowi F. Morawitz, 1890:603, ♀ (as *Komarowi*, incorrect original capitalization). Holotype or syntypes: ♀, Transcaspi: no specific locality (ZIN). – Kohl, 1891:362 (redescription), 364 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera, as *komarowii*); nec Morice, 1911:93 (= *Philanthus ammochrysus*); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Kazenas, 1978b:48 (in key to Sphecidae

of Kazakhstan and Central Asia), 1992c:28 (Turkmenistan: Repetek Nature Reserve), 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia); Malash, Edmardash, and Gadallah, 2022:61 (in catalog of Middle Eastern and North African Philanthinae: Algeria, probably in error); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

55. *laticeps* Arnold

Philanthus laticeps Arnold, 1925:160, ♀. Holotype: ♀, Nigeria: Lafia (BMNH). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Diniz, 1964b:23 (Guinea Bissau, redescription); Dollfuss, 2017b:1254 (Uganda: southwest of Hioma Rwerda).

56. *lepidus* Cresson

Philanthus lepidus Cresson, 1865c:92, ♂. Holotype: ♂, USA: Colorado: Rocky Mountains: no specific locality (ANSP). – Packard, 1866:55 (in key to North American *Philanthus*), 56 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:368 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera); Cresson, 1916:101 (holotype in ANSP); Stevens, 1917:421 (North Dakota); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); Strandtmann, 1945b:155 (in review of North American *Philanthus*), 1946:97 (in revision of North American *Philanthus*); Dreisbach, 1947:143, 144 (in key to *Philanthus* of Michigan), 145 (Michigan: locality records); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Kurczewski and Kurczewski, 1963:148 (Pennsylvania: Presque Isle State Park); Evans, 1964c:142 (nesting habits), 1966b:466 (illustration of nest entrance); R. Bohart and Grissell, 1975:6, 7 (in key to North American Philanthinae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); Finnamore, 1982:239 (in Sphecidae Fauna of Southern Quebec); Hilchie, 1982:110 (accessory burrows reviewed); O'Neill and Evans, 1982:798 (major prey: family and genus); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Evans and O'Neill, 1988:169 (nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:257, 261 (nest parasites: *Phrosinella aurifacies* Downes, a miltogrammine fly, and undetermined species of Miltogrammini), 259, 260 (references to publications on nest parasites *Senotainia trilineata* (Wulp), *Senotainia* sp. near *trilineata* (Wulp), and *Senotainia vigilans* Allen, miltogrammine flies); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County); Spofford and Kurczewski, 1990:747, 748, 751 (nest parasites: *Phrosinella aurifacies* Downes, *Senotainia trilineata* (Van der Wulp), and unknown species of Miltogrammini, Sarcophagidae), 1992:1000 (species of miltogrammine parasite listed), 1002 (counter-cleptoparasitic behavior: diversionary flight); Ahlstrom, 1995:113 (in checklist of insects of North Carolina); Kurczewski, 1998d:250 (pine barrens in upstate New York); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario), 31 (distribution within Ontario), 70 (first record from Ontario: list of localities); Kaltenpoth et al., 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Manitoba Ontario, Quebec: no specific locality).

Philanthus carolinensis Banks, 1913b:422, ♀. Holotype or syntypes: ♀, USA: North Carolina: Southern Pines (AMNH or MCZ). Synonymized with *Philanthus lepidus* by Strandtmann, 1945b:155. – Brimley, 1938:447 (North Carolina: Harnett County, Southern Pines).

Philanthus carolinensis var. *reductus* Banks, 1921:18, sex not stated. Syntypes: USA: Maryland: Chesapeake Bay; and North Carolina: Black Mountain: no specific locality (MCZ). Synonymized with *Philanthus lepidus* by Strandtmann, 1945b:155. – Brimley, 1938:447 (North Carolina: statewide).

As *Philanthus pulcher* (part): Skevington et al., 2001:128 (Canada: Ontario: Lambton County), corrected to *Philanthus lepidus* by Buck, 2004:76.

57. *levini* R. Bohart

Philanthus levini R. Bohart, 1972:398, ♀, ♂. Holotype: ♂, USA: California: Los Angeles County: 3 mi. southwest of Pearlblossom (UCD). – R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 12 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera).

58. *limatus* Bingham

Philanthus limatus Bingham, 1909:180, ♀. Syntypes: ♀, Uganda: Mubuku Valley in eastern Ruwenzori (BMNH). – Arnold, 1925:175 (unknown to author), 1943:73 (Zaire); Leclercq, 1955i:409 (Burundi, Rwanda, redescription); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

Philanthus ruandanus Bischoff, 1915a:473, ♂. Holotype: ♂, southwestern Rwanda: tropical forest (ZMHU). Synonymized with *Philanthus limatus* by Leclercq, 1955i:407. – Arnold, 1925:175 (unknown to author).

59. *lingyuanensis* Yasumatsu

Philanthus lingyuanensis Yasumatsu, 1935a:14, 24, ♂. Holotype: ♂, China: Liaoning: Lingyuan (depository?) – Tsuneki, 1967e:2 (China: Manchuria); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Hua, 2006:281 (in list of Chinese insects, geographic distribution); Nagase, 2006b:2 (specimen collected by First Scientific Expedition to Manchoukou, 1933, now part of eastern China).

60. *loefflingi* Dahlbom

Philanthus loefflingi Dahlbom, 1845:495, ♀ (as *Loefflingi*, incorrect original termination). Holotype or syntypes: ♀, South Africa: Kwazulu Natal: Port Natal, now Durban (Lund). – Gribodo, 1881b:250 (Ethiopia: kingdom of Scioa = Schioa: Let-Marefia, redescription); Kohl, 1891:351 (redescription), 365 (in checklist of world Philanthinae); Dalla Torre, 1897:488 (in catalog of world Hymenoptera); Cameron, 1908a:269 (Tanzania: Mount Kilimanjaro); W. Schulz, 1911b:172 (Gribodo's specimens are a different species); R. Turner, 1918c:463 (synonymy); Arnold, 1925:149 (in revision of southern African *Philanthus*, as *Loefflingi*), 1930:10 (in checklist of Afrotropical Sphecidae, as *Loefflingi*); Schouteden, 1930:93 (Zaire, as *Loflingi*); Guiglia, 1932:126 (Ethiopia: Harer, Let-Marefia), 1939a:199 (Ethiopia: Gonder, as *Loefflingi*); de Beaumont, 1967b:505 (South Africa: KwaZulu-Natal); Bonelli, 1976:227 (nesting in sandy soil, as *loefflingi*); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); F. Gess, 1981:21 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown; nesting in friable soils; as *loefflingi*); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains, as *loefflingi*); Guichard, 1994a:210 (South Yemen, as *loefflingi*); S. Gess and F. Gess, 2003:129 (South Africa: visiting flowers of *Foeoniculum vulgare* Mill., Apiaceae, *Maytenus linearis* (L. f.), Celastraceae, and *Acacia karoo* Hayne, Fabaceae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 2007 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts, as *loefflingi*); Dollfuss, 2017b:1254 (locality records from Central African Republic, Kenya, Malawi, Nigeria, South Africa, Tanzania, Uganda, Yemen, Zambia, and Zimbabwe); Gadallah, 2020b:67 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:61 (in catalog of Middle Eastern and North African Philanthinae).

Philanthus innominatus Bingham, 1902:212, ♀. Holotype or syntypes: ♀, South Africa: Pretoria (BMNH). Synonymized with *Philanthus loefflingi* by R. Turner, 1918c:463.

ssp. meneliki Arnold

Philanthus loefflingi var. *meneliki* Arnold, 1925:150, ♂ (as *Meneliki*, incorrect original capitalization). Syntypes: Ethiopia: Harar (BMNH). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae), 1933a:354 (Ethiopia: Doukam and Harar District), 1951:100 (Ethiopia: Bishoftu). – As *Philanthus loefflingi meneliki*: R. Bohart and Menke, 1976:565 (new status, in checklist of world Sphecidae).

61. *madagascariensis* Brèthes

Philanthus petiolatus de Saussure, 1892:538, ♀, ♂ (incorrectly referred to as published in de Saussure, 1891), junior primary homonym of *Philanthus petiolatus* Spinola, 1842 (now in *Trachypus*). Syntypes: Madagascar: Imerina Province: no specific locality (MHNG). – Dalla Torre, 1897:489 (in catalog of world Hymenoptera).

Philanthus madagascariensis Brèthes, 1910:277. Substitute name for *Philanthus petiolatus* de Saussure, 1892 (incorrectly referred to as published in de Saussure, 1891). – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Leclercq, 1990b:120 (Madagascar); Pulawski, 2003b:799 (in checklist of Malagasy Sphecidae); Madl, 2014a:1005 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records); Dollfuss, 2017b:1255 (Madagascar: Antananarivo: Manankazo).

Philanthus ranavalonae Arnold, 1945:16 (as *Ranavalonae*, incorrect original capitalization). Unnecessary substitute name for *Philanthus petiolatus* de Saussure, 1892. – Arnold, 1945:16 (redescription, Madagascar); Leclercq, 1962b:209 (Madagascar, variation).

62. *major* Kohl

Philanthus major Kohl, 1891:352, ♂, ♀. Syntypes: South Africa: QuaZulu-Natal: Port Natal, now Durban (NHMW) and Cape of Good Hope (NHMW, ZMHU). – Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera); Arnold, 1925:166 (original description translated into English), 1930:11 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Dollfuss, 2017b:1255 (Ethiopia: Illubabor: 15 km southwest of Bedele).

63. *melanderi* Arnold

Philanthus melanderi Arnold, 1925:156, ♀, ♂ (authorship attributed to Brauns; as *Melanderi*, incorrect original capitalization). Holotype: sex not stated, South Africa: Eastern Cape Province: Willowmore (TMP). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae), 1935a:499 (South Africa: Kalahari); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); S. Gess, 1996:282 (floral records); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntype in Bulawayo Museum); S. Gess and F. Gess, 2003:130 (as *melanderi* complex, Namibia, South Africa: visiting flowers of *Galenia populosa* (Eckl. and Zeyh.) Sond., Aizoaceae, *Athanasia* sp., Asteraceae, *Euclea crispa* (Thunb.) Guerke, Ebenaceae, *Chamaesyce glanduligera* (Pax) Koutnik, Euphorbiaceae, *Indigofera* sp., Fabaceae, and *Limeum argute-carinatum* Wawra and Peyr., Molluginaceae); Dollfuss, 2017b:1255 (South Africa: locality records).

64. *michelbacheri* R. Bohart

Philanthus michelbacheri R. Bohart, 1972:400, ♀, ♂. Holotype: ♂, USA: Mexico: Baja California Norte: Rancho Santa Margarita 28 mi. south of El Arco (CAS). – R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae).

65. *minor* Kohl

Philanthus minor Kohl, 1891:358, ♀. Holotype: ♀, Egypt: no specific locality (ZMHU). – Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera); Mochi, 1939a:96 (in revision of Egyptian *Philanthus*, as *minor* Handlirsch); de Beaumont, 1949b:190 (in revision of northwestern African *Philanthus*); nec de Beaumont, 1953a:173 (= *Philanthus schultzei*); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Guichard, 1994a:210 (United Arab Emirates, Egypt, Tunisia, Chad, Mali, Sudan, Mauritania, variation discussed); Gadallah, 1996:72 (in revision of Egyptian *Philanthus*); Roche, 2007a:127 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Schmid-Egger, 2011b:569 (United Arab Emirates: north of Ajman, Mahafiz), 2014:591 (United Arab Emirates: Mahafiz); Dollfuss, 2017b:1255 (locality records from Morocco and Tunisia); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Ben Khedher, Yildirim, and Braham, 2021b:3 (recorded from Tunisia by Dollfuss, 2017b); Malash, Edmardash, and Gadallah, 2022:61 (in catalog of Middle Eastern and North African Philanthinae),

2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 165 (in revision of Egyptian *Philanthinus* and *Philanthus*).

66. *mongolicus* F. Morawitz

Philanthus mongolicus F. Morawitz, 1889:151, ♀, ♂. Syntypes: China: Ta-wan, Djin-tasy, Balk-noor in Ordos (ZIN). – Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Kazenas, 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan); Hua, 2006:281 (in list of Chinese insects, geographic distribution); Dollfuss, 2017b:1255 (Mongolia: locality records).

67. *multimaculatus* Cameron

Philanthus multimaculatus Cameron, 1891a:133, ♂. Lectotype: ♂, Mexico: Veracruz: Atoyac (BMNH), designated by R. Bohart and Grissell, 1975:12 (Article 74b). – Kohl, 1891:368 (in checklist of world *Philanthus*); Dalla Torre, 1897:488 (in catalog of world Hymenoptera, misspelled as *multiannulatus*); Dunning, 1898b:154 (locality records); Cockerell, 1899a:141 (New Mexico); Alcock, 1975a:222 (nesting habits), 1975f:889 (male territorial behavior); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 12 (in revision of *Philanthus* of California); Hurd and Linsley, 1975:117 (on flowers of *Larrea tridentata* (De Candolle) Coville, Zygophyllaceae; New Mexico: Hidalgo County: Lordsburg); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Kumar, Lavigne, Lloyd, and Pfadt, 1976:51 (USA: Colorado: Pawnee National Grassland); Krombein, 1979b:1723 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); O'Neill and Evans, 1982:798 (major prey: family and genus); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain); Rust, Menke, and Miller, 1985:47 (California: Channel Islands); Parks, 1986:35 (Torrey Pines State Reserve); Evans and O'Neill, 1988:105 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:259, 260 (references to publications on nest parasites *Senotainia trilineata* (Wulp), *Senotainia* sp. near *trilineata* (Wulp), and *Senotainia* sp., miltogrammine flies); Blades and Maier, 1996:72 (Canada: British Columbia: Osoyoos - Mount Kobau area at 119°40'W 49°05'N); Amarante, 2002:63 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Blösch, 2006:58 (males and females spend nights in the same galleries); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from Krombein, 1979); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia: no specific locality). – **As *Pseudanthophilus multimaculata* [sic]:** Ashmead, 1899d:297 (tentative new generic assignment, in checklist of North American Crabronidae). – **As *Anthophilus multimaculatus*:** Rohwer, 1917a:244 (new generic assignment, California: Santa Barbara).

Philanthus anna Dunning, 1897:68, ♀. Lectotype: ♀, USA: Colorado: no specific locality (ANSP), designated by R. Bohart and Grissell, 1975:12. Synonymized with *Philanthus multimaculatus* by Dunning, 1898b:154, by R. Bohart and Grissell, 1975:12, and by R. Bohart in R. Bohart and Menke, 1976:565 (as new synonym). – Strandtmann, 1945b:153 (in review of North American *Philanthus*, as *annae*), 1946:53 (in revision of North American *Philanthus*, as *annae*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Cazier and Mortenson, 1965a:197 (nesting habits); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); Horning and Barr, 1970:105 (USA: Idaho: Craters of the Moon National Monument); S. Frommer, 1988:94 (California: Riverside County: Deep Canyon).

Philanthus annae Dunning, 1898b:154. Unjustified emendation of *Philanthus anna* 1897. – Cockerell, 1899a:141 (New Mexico). – Strickland, 1947:128 (Canada: Alberta: Lethbridge).

Philanthus cleomae Dunning, 1898b:152, ♀. Lectotype: ♀, USA: California: San Bernardino County: no specific locality (ANSP), designated by R. Bohart and Grissell, 1975:12. Synonymized with *Philanthus annae* by Strandtmann, 1945b:153, and with *Philanthus multimaculatus* by R. Bohart and Grissell, 1975:12, and R. Bohart in R. Bohart and

Menke, 1976:565 (as new synonym). – Cockerell, 1899a:141 (New Mexico); Johnson and Ledig, 1918:24 (California: Claremont, as *cleome*).

Philanthus subversus Banks, 1915:405, ♂. Lectotype: ♂, USA: Arizona: Palmerlee (MCZ), designated by R. Bohart and Grissell, 1975:12. Synonymized with *Philanthus annae* by Strandtmann, 1945b:153, and with *Philanthus multimaculatus* by R. Bohart and Grissell, 1975:12, and R. Bohart in R. Bohart and Menke, 1976:565 (as new synonym).

Philanthus yakima Banks, 1919:85, ♀. Holotype or syntypes: ♀, USA: Washington: Yakima (MCZ). Synonymized with *Philanthus annae* by Strandtmann, 1945b:153, and with *Philanthus multimaculatus* by R. Bohart in R. Bohart and Menke, 1976:565.

As *Philanthus crabroniformis*: Viereck and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico), corrected to *Philanthus annae* by Strandtmann, 1945b:153.

68. *namaqua* Arnold

Philanthus namaqua Arnold, 1925:159, ♀ (authorship attributed to Brauns). Holotype: ♀, South Africa: Northern Cape Province: Port Nolloth. – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

69. *nasalis* R. Bohart

Philanthus nasalis R. Bohart, 1972:401, ♂, ♂. Holotype: ♂, USA: California: Contra Costa County: Antioch (UCD). – R. Bohart and Grissell, 1975:6, 8 (in key to North American *Philanthus*), 13 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera); Powell, 1981:55 (USA: California: Antioch).

70. *natalensis* Arnold

Philanthus natalensis Arnold, 1925:152, ♀ (authorship attributed to Brauns). Holotype: ♀, South Africa: KwaZulu-Natal: Durban (TMP). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

71. *neomexicanus* Strandtmann

Philanthus neomexicanus Strandtmann, 1946:53, ♀, ♂. Holotype: ♂, USA: New Mexico: Mesilla Park (USNM). – Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Muma, 1952:28 (paratype in UNL); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 14 (in revision of *Philanthus* of California); Hurd and Linsley, 1975:117 (Arizona: Cochise County: Portal; on flowers of *Larrea tridentata* (De Candolle) Coville, Zygophyllaceae); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera); Gambino, 1985:226 (California: Point Reyes; prey including syrphid *Sphaerophoria cylindrica* (Say)); Evans and O'Neill, 1988:138 (Gambino, 1985, observations reported); Frommer, 1988:94 (California: Riverside County: Deep Canyon); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae).

72. *nepalensis* Bingham

Philanthus nepalensis Bingham, 1908:356, ♂. Holotype: ♂, Nepal: Katmandu (BMNH). – Bingham, 1908:357 (in key separating *Philanthus punjabensis* and *P. nepalensis*); Ramakrishna Aiyar, 1916:557 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:565; Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 10 (in review of Indian *Philanthus*).

73. *nigritus* Gravenhorst

Philanthus nigritus Gravenhorst, 1807:278, sex not stated (as *nigrita*, incorrect original termination). Holotype or syntypes: origin unknown, probably Germany (destroyed?). – Dalla Torre, 1897:489 (in catalog of world Hymenoptera); W. Schulz, 1912b:50 (original description copied); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

74. *nigrohirtus* R. Turner

Philanthus nigrohirtus R. Turner, 1918c:461, ♀, ♂. Syntypes: Kenya, Rwanda, Uganda (BMNH). – Arnold, 1925:164 (in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae), 1943:73 (Zaire); Leclercq, 1955i:408 (Burundi); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Dollfuss, 2017b:1255 (locality records from Benin, Central African Republic, Ethiopia, Kenya, Malawi, Mozambique, Zambia, and Zimbabwe).

ssp. calvus R. Turner

Philanthus nigrohirtus subsp. *calvus* R. Turner, 1918c:462, ♀, ♂. Syntypes: Zambia: Luangwa Valley (BMNH). – Arnold, 1925:165 (in revision of southern African *Philanthus*); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae). – **As *Philanthus nigrohirtus* race *calvus***: Arnold, 1930:11 (new status, in checklist of Afrotropical Sphecidae).

75. *nitidus* Magretti

Philanthus nitidus Magretti, 1884c:595, ♀, ♂. Syntypes: Sudan: Dar el Salaam; Ethiopia: Atbara River near Metemma (MSNG). – Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); W. Schulz, 1911b:170 (redescription); Guiglia, 1939b: (Ethiopia: Lake Tana: Barentu, color variation); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Madl, 2023:259 (in catalog of Crabronidae of Eritrea). – **As *Philanthus stygius* ssp. *nitidus***: Guiglia, 1943c:75 (new status, Ethiopia: Gamo Gofa: Sagan – Omo region). – **As *Philanthus stygius* var. *nitidus***: Guiglia, 1950:232 (new status, Ethiopia: Gamo Gofa: Caschei).

76. *nobilis* Kohl

Philanthus nobilis Kohl, 1891:354, sex not stated. Syntypes: Azerbaijan: Helenendorf, now Khanlar; and Armenia: Arax River valley (NHMW). – Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); Kazenas, 1970b:366 (Kazakhstan); R. Bohart and Menke, 1976:1891 (in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Kazenas, 2001b:52 (tentatively in checklist of Sphecidae of Kazakhstan and Central Asia).

77. *notatulus* F. Smith

Philanthus notatulus F. Smith, 1862:57, ♀. Holotype or syntypes: ♀, Indonesia: Sulawesi: Menado (BMNH). – F. Smith, 1863b:136 (known from Sulawesi), 1871a:370 (in catalog of Oriental Aculeata); Cameron, 1890b:248 (in catalog of Oriental Sphecidae, as *notatullus*); Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); von Schulthess, 1935:305 (Indonesia: Flores:Kelimotoe, Sulawesi: Menado, determination tentative); van der Vecht, 1966:425 (species definition, subspecies), 430 (description of subspecies *notatulus notatulus*); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Dollfuss, 2017b:1256 (locality records from Indonesia, Laos, Malaysia, and Thailand).

ssp. concinnus Bingham

Philanthus concinnus Bingham, 1896c:442, ♀. Holotype or syntypes: ♀, Burma: Tenasserim: no specific locality (BMNH). – Bingham, 1897:442 (in Wasp and Bee Fauna of British India); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino, probably not identical with Bingham's species); Pagliano, 2014:103 (specimens in M. Spinola collection, Torino, are *Philanthus coarctatus coarctatus*). – **As *Philanthus notatulus concinnus***: van der Vecht, 1966:426 (new status, redescription); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Pham, Kumar and Danilov, 2015:1596 (in list of Sphecidae *sensu lato* of Vietnam); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 11 (in review of Indian *Philanthus*).

Philanthus angustatus R. Turner, 1919f:394, ♂. Holotype: ♂, Vietnam: Tonkin: Chapa (BMNH). Tentatively synonymized with *Philanthus notatulus concinnus* by Bohart and Menke, 1976:565.

ssp. *formosanus* Tsuneki

Philanthus formosanus Tsuneki, 1973f:40, ♀. Holotype: ♀, Taiwan: Chiai Prefecture: Chuchi (T. Morota coll.). – Murota, 1973b:117 (Taiwan); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Porter, Stange, and Wang, 1999:14 (in checklist of Sphecidae of Taiwan). – **As *Philanthus notatulus formosanus***: Tsuneki, 1974, Hymenopt. Comm., 1:28 (new status, in Japanese), 1975:35 (new status); R. Bohart and Menke, 1976:628 (in checklist of world Sphecidae); Tsuneki, 1984b:50 (Philippines: Luzon: Baguio City); Hua, 2006:281 (in list of Chinese insects, geographic distribution).

ssp. *javanus* van der Vecht

Philanthus notatulus javanus van der Vecht, 1966:427, ♀, ♂. Holotype: ♀, Indonesia: East Java: Blawan Estate in Idjen Mountains (RMNH). – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

ssp. *wegneri* van der Vecht

Philanthus notatulus wegneri van der Vecht, 1966:430, ♀. Holotype: ♀, Indonesia: Lesser Sunda Islands: West Flores: Rane Mese (Basel). – R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae).

78. *nursei* (Bingham)

Trachypus nursei Bingham, 1898a:108, ♀, ♂. Syntypes: Yemen: Lahej and Shaik Othman (BMNH). – **As *Philanthus nursei***: R. Bohart and Menke, 1976:565 (new generic assignment, in checklist of world Sphecidae); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:61 (in catalog of Middle Eastern and North African Philanthinae).

79. *occidentalis* Strandtmann

Philanthus occidentalis Strandtmann, 1946:66, ♀, ♂. Holotype: ♂, USA: California: Inyo County: Lone Pine (CAS). – Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 14 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Krombein, 1979b:1723 (in catalog of North American Hymenoptera).

80. *oraniensis* Arnold

Philanthus oraniensis Arnold, 1925:152, ♀ (authorship attributed to Brauns). Holotype: ♀, South Africa: Free State: Bloemfontain (TMP). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae)

81. *ordinarius* Bingham

Philanthus ordinarius Bingham, 1896c:441, ♀. Holotype or syntypes: ♀, Burma: Tenasserim: no specific locality (BMNH). – Bingham, 1897:296 (in Wasp and Bee Fauna of British India); Iwata and Yoshikawa, 1961:399 (Thailand); Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 11 (in review of Indian *Philanthus*).

82. *pacificus* Cresson

Philanthus pacificus Cresson, 1880a:xxxii, ♂. Lectotype: ♂, USA: Nevada: no specific locality (ANSP), designated by Cresson, 1916:101. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:368 (in checklist of world *Philanthus*); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); Cockerell, 1899a:141 (New Mexico); Viereck, 1903b:733 (New Mexico); Viereck and Cockerell, 1904b:144 (in revision of *Philanthus* of New Mexico); H. Smith, 1908b:355 (in revision of Nebraskan Sphecidae); Stevens, 1917:421 (North Dakota); Mickel, 1918b:387 (in catalog of Nebraskan Sphecidae); Evans, 1970:501 (Wyoming: Jackson Hole, nesting habits, list of prey); R. Bohart and Grissell, 1975:6, 7 (full species status, in key to North American *Philanthus*), 15 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Krombein, 1979b:1724 (in catalog of North American Hymenoptera); O'Neill and Evans, 1982:798 (major prey: family and genus); Rust,

Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain; as *pacificus pacificus*); Rust, Menke, and Miller, 1985:47 (California: Channel Islands); Evans and O'Neill, 1988:129 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:259 (reference to publication on nest parasite *Senotainia trilineata* (Wulp), a miltogrammine fly); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from R. Bohart and Grissell, 1975); Dollfuss, 2017b:1256 (Washington: Benton County: Prosser); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, Manitoba, Northwest Territories, Saskatchewan, Yukon Territory: no specific locality); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: British Columbia: no specific locality. – **As *Anthophilus pacificus***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae); Rohwer, 1917a:244 (California: Alameda and Santa Barbara Counties). – **As *Philanthus politus pacificus***: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:86 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Powell and Chemsak, 1959a:115 (nesting habits); Horning and Barr, 1970:106 (USA: Idaho: Craters of the Moon National Monument); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey).

ssp. *arizonae* Dunning

Philanthus arizonae Dunning, 1898b:155, ♂. Holotype: ♂, USA: Arizona: Phoenix (ANSP). – Strandtmann, 1946:86 (as synonym of *Philanthus pacificus*); R. Bohart and Grissell, 1975:15 (as synonym of *Philanthus pacificus*). – **As *Philanthus pacificus arizonae***: R. Bohart in R. Bohart and Menke, 1976:566 (new status, in checklist of world Sphecidae); Krombein, 1979b:1724 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); Parks, 1986:35 (Torrey Pines State Reserve); Amarante, 2002:64 (in catalog of Neotropical Crabronidae).

Anthophilus hirticeps Cameron, 1905l:376, ♂. Lectotype: ♂, Mexico: no specific locality (BMNH), designated by R. Bohart and Grissell, 1975:15 (Article 74b). Synonymized with *Philanthus pacificus* by R. Bohart and Grissell, 1975:15 and with *Philanthus pacificus arizonae* by R. Bohart in R. Bohart and Menke, 1976:566.

Philanthus assimilis Banks, 1913b:422, ♀. Lectotype: ♀, USA: California: Shasta (AMNH), designated by R. Bohart and Grissell, 1975:15 (Article 74b). Synonymized with *Philanthus politus pacificus* by Strandtmann, 1945b:154, and with *Philanthus pacificus arizonae* by R. Bohart in R. Bohart and Menke, 1976:566.

83. *pallidus* Klug

Philanthus pallidus Klug, 1845:[28], plate 47, fig. 8, ♂. Holotype or syntypes: ♂, Sudan: Ambukohl on Nile west of Korti (ZMHU). – F. Smith, 1856:470 (in catalog of Hymenoptera in British Museum); Kohl, 1891:362 (redescription), 365 (in checklist of world *Philanthus*); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); Arnold, 1925:174 (Kohl's 1891 description translated into English), 1930:11 (in checklist of Afrotropical Sphecidae); Scott in Arnold, 1933a:369 (described from Ethiopia); Guiglia, 1939a:199 (Eritrea: Massawa = Mitsi'wa); Mochi, 1939a:98 (in revision of Egyptian *Philanthus*); Giner Marí, 1945b:362 (Morocco: Western Sahara: Tisla); de Beaumont, 1949b:188 (in revision of northwest African *Philanthus*), 1953a:173 (Mauritania); de Beaumont and Bytinski-Salz, 1959:146 (Israel); de Beaumont, 1961a:205 (geographic distribution); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Roche, 1981:5 (in checklist of Sphecidae of United Arab Emirates); Guichard, 1994a:211 (Arabian Peninsula); Gadallah, 1996:72 (in revision of Egyptian *Philanthus*); D. Baker, 1997b:189 (in catalog of insect described by Klug, 1845); Gadallah and Assery, 2004a:219 (in key to Sphecidae of Jeddah Region, Saudi Arabia); Gadallah and Assery, 2004a:232 (in catalog of Sphecidae of Saudi Arabia); Roche, 2007a:127 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Schmid-Egger, 2011b:569 (United Arab Emirates: north of Ajman, Mahafiz), 572 (color photograph of female); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:359 (in new catalog of Sphecidae of Saudi Arabia);

Ebrahimi, 2014:47 (Iran: Hormozgān: Bandar-e Lengeh); Schmid-Egger, 2014:591 (United Arab Emirates); S. Gess and Roosenschoon, 2016:106 (Dubai Desert Conservation Reserve, visiting flowers of *Calotropis procera* (Aiton) W.T. Aiton, Apocynaceae, and of *Centaurea pseudosinaica* Czerep., Asteraceae); Dollfuss, 2017b:1256 (Egypt: Wadi el Tih); Jahantigh, Rakhshani. Mokhtari, and Ramroodi, 2017:82 (Iran: known from Hormozgan Province); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:61 (in catalog of Middle Eastern and North African Philanthinae); Madl, 2023:259 (in catalog of Crabronidae of Eritrea); Malash, Edmardash, and Gadallah, 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 170 (in revision of Egyptian *Philanthinus* and *Philanthus*); Gadallah and Abu El-Ghiet, 2024:91 (Saudi Arabia: Jazan Province: Abu Arish, Beish).

As *Philanthus schultzei*: Guichard, 1980:230 (Oman), corrected to *Philanthus pallidus* by Guichard, 1994a:211.

84. *parkeri* G. Ferguson

Philanthus parkeri G. Ferguson, 1983a:58, ♀, ♂. Holotype: ♂, USA: Utah: Emery County: 2 mi. north of Goblin Valley State Preserve (USNM). – Stubblefield, 1985:5 (prey: bees and *Pluto*); Evans and O'Neill, 1988:112 (Stubblefield, 1985 observations reported); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts).

85. *pilifrons* Cameron

Philanthus pilifrons Cameron, 1908:271, ♀ (March). Syntypes: ♀, Tanzania: Mount Kilimanjaro: Kibonoto (NRS). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae). – As synonym of *Philanthus ugandicus*: R. Turner, 1918c:463 (color variation), Arnold, 1925:150 (as synonym of *Philanthus ugandicus*); Dollfuss, 2017b:1256 (locality records from Cameroon and Zimbabwe).

Philanthus ugandicus Magretti, 1908:188, ♀. Holotype or syntypes: ♀, Kenya: Rift Valley Province: Naivasha (MNHN). Synonymized with *Philanthus pilifrons* by R. Turner, 1918c:463. – R. Turner, 1918c:463 (synonymy); Arnold, 1925:150 (in revision of southern African *Philanthus*), 1930:10 (in checklist of Afrotropical Sphecidae), 1933a:354 (Ethiopia: Wachacha Ravine near Addis Ababa, between Jem-Jem and Addis Ababa, Mount Zukwala), 1951:100 (Ethiopia: Addis Ababa, Dessie, and Zuquala); Leclercq, 1955i:408 (Burundi); de Beaumont, 1967b:505 (South Africa: KwaZulu-Natal).

ssp. *xanthogaster* Cameron

Philanthus xanthogaster Cameron, 1908a:269, ♀. Holotype or syntypes: ♀, Tanzania: Mount Meru lowlands: Ngare na nyuki (NRS). – As *Philanthus ugandicus* var. *xanthogaster*: Arnold, 1925:151 (new status, description of ♂), 1930:10 (in checklist of Afrotropical Sphecidae). – As *Philanthus pilifrons xanthogaster*: R. Bohart and Menke, 1976:566 (new status, new subspecific generic assignment, in checklist of world Sphecidae).

86. *politus* Say

Philanthus politus Say, 1824:113, sex not stated. Holotype or syntypes: Pennsylvania: no specific locality (destroyed). – Klug, 1846:42 (belongs to subsection *Anthophilus* of *Philanthus*); F. Smith, 1856:474 (in catalog of Hymenoptera in British Museum); Le Conte, 1859a:113 (original description copied), 232 (reference to original description); Cresson, 1862:236 (in catalog of North American Hymenoptera), 1865c:94 (in revision of North American Philanthinae); Packard, 1866:55 (in key to North American *Philanthus*), 56 (bibliographic references, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Provancher, 1888:417 (in addition to Sphecidae Fauna of Quebec: Ontario: Ottawa); Kohl, 1891:369 (in checklist of world *Philanthus*); Robertson, 1894:460 (visiting flowers of *Aster paniculatus* Lam., Asteraceae); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); Dunning, 1897:69 (Connecticut); Viereck and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico); H. Smith, 1908b:356 (in revision of Nebraskan Sphecidae); J. Smith, 1910:678 (in new list of insects of New Jersey); Rohwer, 1916b:673, 675 (in catalog of Hymenoptera of Connecticut); Mickel, 1918b:387 (in catalog of Nebraskan Sphecidae);

- Rau and Rau, 1918:109 (nesting habits); Britton, 1920:339 (in checklist of insects of Connecticut); Rau, 1922:21 (USA: Missouri: Silica); Rohwer in Viereck, 1925:673, 675 (in key to Sphecidae of Connecticut; Poquonock); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); Brimley, 1938:447 (North Carolina: Aberdeen, Biltmore, Bryson City, Cruso, Fairmont, Harnett County, Hendersonville, Laurel Hill, Overhills, Swannanoa); Strandtmann, 1945b:154 (in review of North American *Philanthus*), 1946:77 (in revision of North American *Philanthus*); Dreisbach, 1947:142, 143 (in key to *Philanthus* of Michigan), 145 (Michigan: locality records); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Evans, 1957b:84 (description of larva); Evans and Lin, 1959:116 (nesting habits, as *politus politus*); Evans, 1963c:113 (comparison of behavior with *Philanthus gibbosus* and *solivagus*), fig. 17 after p. 134 (photograph of female at her nest); Kurczewski and Kurczewski, 1963:148 (Pennsylvania: Presque Isle State Park); Evans, 1975a:264 (slow colonizer of new habitats); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Krombein, 1979b:1724 (in catalog of North American Hymenoptera, nesting sites, list of prey); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Finnamore, 1982:240 (in Sphecid Fauna of Southern Quebec); O'Neill and Evans, 1982:798 (major prey: family and genus); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Evans and O'Neill, 1988:112 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:257, 259, 260 (nest parasites: *Phrosinella aurifacies* Downes and *Sphenometopia tergata* (Coquillett), miltogrammine flies, references to publications on nest parasites *Phrosinella fulvicornis* (Coquillett), *Senotainia trilineata* (Wulp), and *Senotainia vigilans* Allen, miltogrammine flies); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County); Spofford and Kurczewski, 1990:747, 748, 749, 750 (nest parasites: *Phrosinella aurifacies* Downes, *Senotainia trilineata* (Van der Wulp), *Senotainia vigilans* Allen, and *Sphenometopa tergata* (Coquillett), Sarcophagidae), 1992:1000 (species of miltogrammine parasites listed), 1002 (counter-cleptoparasitic behavior: freeze-stop and face-off, diversionary flight); Ahlstrom, 1995:113 (in checklist of insects of North Carolina); Kurczewski, 1998d:250 (pine barrens in upstate New York); Sugar et al., 1998:16 (Canada: southern Ontario); Skevington et al., 2001:128 (Canada: Ontario: Lambton County); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Kaltenpoth et al., 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Pagliano, 2014:104 (specimens in M. Spinola collection, Torino, are *Philanthus politus*); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, Manitoba, Ontario, Quebec, Saskatchewan: no specific locality). – **As *Anthophilus politus***: Dahlbom, 1844:190 (new generic assignment, in revision of Sphecidae and Pompilidae), 1845:496 (in key to *Anthophilus*); Ashmead, 1899d:297 (in checklist of North American Crabronidae); J. Smith, 1900:520 (in list of insects of New Jersey); Harrington, 1902:222 (Canada: Ontario: Ottawa).
- Philanthus dubius* Cresson, 1865c:96, ♂. Lectotype: ♂, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1916:100. Synonymized with *Philanthus politus* by Packard, 1866:56. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:367 (in checklist of world *Philanthus*, may be a synonym of *Philanthus politus*); Dalla Torre, 1897:485 (in catalog of world Hymenoptera); Dunning, 1897:69 (Connecticut); J. Smith, 1910:678 (in new list of insects of New Jersey); Rohwer, 1916b:673, 674 (in catalog of Hymenoptera of Connecticut); Washburn, 1919:219 (in list of Hymenoptera of Minnesota); Britton, 1920:339 (in checklist of insects of Connecticut); Rohwer in Viereck, 1925:673, 674 (in key to Sphecidae of Connecticut; Hartford, New Haven). – **As *Anthophilus dubius***: Ashmead, 1899d:297 (new generic assignment, in checklist of North American Crabronidae); J. Smith, 1900:520 (in list of insects of New Jersey); Harrington, 1902:222 (Canada: Ontario: Ottawa).
- Philanthus texanus* Banks, 1913b:421, ♀, ♂. Syntypes: ♂, USA: Texas: Fedor County: Lee (AMNH). Synonymized with *Philanthus politus* by R. Bohart in R. Bohart and Menke, 1976:566. – **As *Philanthus politus texanus***: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:80 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera).

As *Philanthus pulcher* (part): Skevington et al., 2001:128 (Canada: Ontario: Lambton County), corrected to *Philanthus politus* by Buck, 2004:76.

87. *promontorii* Arnold

Philanthus promontorii Arnold, 1925:147, ♂ (authorship attributed to Brauns). Holotype: ♂, South Africa: Gauteng: Johannesburg (SAM). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae), 1960a:83 (South Africa: Drakensberg Mountains); R. Bohart and Menke, 1976:56 (in checklist of world Sphecidae).

88. *psyche* Dunning

Philanthus psyche Dunning, 1896b:287, ♀. Holotype: ♀, USA: New Mexico: Las Cruces (ANSP). – Cockerell, 1899a:141 (New Mexico); Viereck and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico); H. Smith, 1908b:355 (in revision of Nebraskan Sphecidae); Mickel, 1918b:387 (in catalog of Nebraskan Sphecidae); Cresson, 1928:49 (holotype in ANSP); Strickland, 1947:128 (Canada: Alberta: Medicine Hat); R. Bohart and Grissell, 1975:6, 7 (full species status, in key to North American *Philanthus*); R. Bohart in R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Krombein, 1979b:1724 (in catalog of North American Hymenoptera); O'Neill, 1979:19 (territorial behavior in males); Spofford, Kurczewski, and Downes, 1989:258 (reference to publication on nest parasite *Senotainia rufiventris* (Coquillett), a miltogrammine fly); Gwynne and O'Neill, 1980:220-223 (male territoriality results in higher predation by Asilidae); O'Neill and Evans, 1982:798 (major prey: family and genus); Evans and O'Neill, 1988:112 (male behavior, nesting habits, natural enemies); K. O'Neill and J. O'Neill, 1988:15 (thermal stress and microhabitat selection); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Matthews and Matthews, 2005:65 (Nebraska: Keith County; nesting habits); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, Manitoba, Saskatchewan: no specific locality). – As *Philanthus politus psyche*: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:89 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator).

Philanthus punctinudus Viereck and Cockerell, 1904b:144, ♂. Holotype: ♂, USA: New Mexico: San Marcial (ANSP). Synonymized with *Philanthus politus psyche* by Strandtmann, 1945b:154. – Cresson, 1928:49 (holotype in ANSP).

Philanthus hermosus Banks, 1913b:421, ♀. Holotype or syntypes: ♀, USA: New Mexico: no specific locality (AMNH). Synonymized with *Philanthus politus psyche* by Strandtmann, 1945b:154.

89. *pulawskii* Malash, Edmardash, and Gadallah

Philanthus pulawskii Malash, Edmardash, and Gadallah, 2023:184, ♀. Holotype: Egypt: Marsa Matrouh Governorate: El Hammam at 30°51'21"N 29°21'18"E (Department of Entomology, Faculty of Science, Cairo University, Ghiza, Egypt). – Malash, Edmardash, and Gadallah, 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*).

90. *pulchellus* Spinola

Philanthus pulchellus Spinola, 1843b:XXXVI, sex not stated. Holotype or syntypes: Spain and Portugal: no specific localities (ZMHU). – Dalla Torre, 1897:489 (in catalog of world Hymenoptera); de Beaumont, 1951c:313 (as nomen nudum); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae, not nomen nudum); Gayubo, 1982b:50 (Spain: Salamanca: Horcajo de Montemayor, Peromingo, Valdefuentes de Sangusín, Valdelacasa), 1982e:109 (Spain: Cádiz Province), 1983a:125 (prey: *Halictus* sp., a halictid bee), 1983e:236 (Spain: Salamanca Province), 1984c:382 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:23 (Spain: Valencia); Gayubo, 1985c:172 (Spain: Almería: El Alquíbar; Valladolid: Traspinedo), 1986a:66 (Spain: Ciudad Real Province), 1986b:41 (Spain: Andalucía), 1986d:121 (Spain: Zamora Province); Gayubo and Sanza, 1986:84 (Spain: Burgos); Gayubo and Tormos, 1986a:14

(Spain: Castellón de la Plana), 1986b:7 (Spain: Valencia); Tormos and Jiménez, 1987a:127 (Spain: Valencia); Asís and Jiménez, 1988:275 (Spain: Castellón Province); Gayubo, 1991a:130 (characteristics of the species and relevant taxonomic problems); Gayubo and Torres, 1991:Table I and p. 81 (Spain: Salamanca; effects of urban pressure); Torregrosa, Gayubo, Tormos, and Asís, 1993:20 (Spain: Alicante Province); Tormos, Asís, and Gayubo, 1994:190, 224 (Spain: Albacete Province); Asís, Tormos, and Gayubo, 1996a:452 (nesting habits, description of mature larva); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:291 (in Sphecidae Fauna of Western Europe); Gonzáles, Gayubo, and Torres, 1998:74, 75 (Spain: Valladolid Province); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Gayubo, and Torres, 1999:356 (Spain: Valladolid: Viana de Cega); Gayubo, González, and Torres, 2000:187 (Spain: Salamanca Province); Drewes, 2003:141 (Spain: Tarragona); Magdalou, 2006b:110 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer), 2006c:8 (France: Pyrénées-Orientales: Réserve Naturelle du Mas-Larrieu); Baños-Picón, Asís, Gayubo, and Tormos, 2009:314 (Spain: frequency of specimens collected with hand nets and Malaise traps); Gayubo, González, Tormos, and Asís, 2009:365 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Polidori, García, and Nieves-Aldrey, 2012:280 (study of female antennal sensillae); 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); Dollfuss, 2017b:1256 (locality records from France, Portugal and Spain); Magdalou, 2017:16 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Mas Larrieu); Cross, Baldock, and Wood, 2021:67 (in catalog of Sphecidae *sensu lato* of Portugal); Malash, Edmardash, and Gadallah, 2022:62 (in catalog of Middle Eastern and North African Philanthinae); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Schmidt, 2022:284 (in revision of Sphecidae *sensu lato* of Europe).

Philanthus sieboldti Dahlbom, 1845:496, ♀, ♂ (as *Sieboldti*, incorrect original capitalization). Syntypes: "Europa meridionalis et Marocco" (Lund). Synonymized with *Philanthus pulchellus* by Bohart and Menke, 1976:566. – nec Eversmann, 1849:399 (= *Philanthus venustus*); nec Costa, 1860:5 (= *Philanthus coarctatus siculus*); Sichel, 1861:752 (Italy: Sicilia, probably *Philanthus coarctatus siculus*); Coulon, 1925:117 (France: Marseille; Spain; as *sieboldi*); de Beaumont, 1951c:313 (in revision of European *Philanthus*); Ceballos, 1956:365 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:337 (France: Département des Pyrénées-Orientales); Nouvel and Ribaut, 1958:9 (France: Pyrénées-Orientales: Banyuls-sur-Mer area); Ceballos, 1959:228 (in supplement to catalog of Spanish Sphecidae); Diniz, 1959:27 (Portugal: eight localities); Suárez, 1959:54 (Spain: Almería Province); de Beaumont, 1962b:20 (Spain); Ceballos, 1964:88 (in supplement to catalog of Spanish Sphecidae); Diniz, 1966:6 (Portugal: eighteen localities); Balthasar, 1972:383 (in Sphecidae Fauna of Czechoslovakia: not yet found in the country); Erlandsson, 1974:61 (France, Spain).

Philanthus andalusiacus Kohl, 1888:140, ♀, ♂. Syntypes: Spain: Andalusia: no specific locality (NHMW). Synonymized with *Philanthus sieboldti* by de Beaumont, 1951c:313. – Kohl and Handlirsch, 1889:279 (Turkmenistan, probably a misidentification); Kohl, 1891:363 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Antiga and Bofill, 1904:22 (Spain: Cataluña Province); Dusmet y Alonso, 1931:7 (Portugal: Mitra, as *andalusicus*); Bischoff, 1933:5 (Morocco: Marrakech, Tanger); Giner Marí, 1934:131 (Spain), 1943a:114 (in Sphecidae Fauna of Spain); de Andrade, 1949:12 (Portugal).

As *Philanthus venustus* var. *raptor*: Berland, 1925:46 (in Sphecidae Fauna of France), corrected to *Philanthus sieboldi* by de Beaumont, 1951c:313.

91. *pulcher* Dalla Torre

Philanthus pulchellus Cresson, 1865c:93, ♂, junior primary homonym of *Philanthus pulchellus* Spinola, 1842. Lectotype: ♂, USA: Colorado: Rocky Mountains: no specific locality (ANSP), designated by Cresson, 1916:101. – Packard, 1866:55 (in key to North American *Philanthus*), 56 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:369 (in checklist of world *Philanthus*); Viereck

and Cockerell, 1904b:144 (in revision of *Philanthus* of New Mexico). – **As *Anthophilus pulchellus***: Hart, 1907:255 (new generic assignment, Illinois).

Philanthus pulcher Dalla Torre, 1897:489. Substitute name for *Philanthus pulchellus* Cresson. – Mickel, 1918b:387 (in catalog of Nebraskan Sphecidae); Strickland, 1947:128 (Canada: Alberta: Medicine Hat, as *pulchrum*); Evans, 1966c:35 (nesting habits, prey), 1970:496 (Wyoming: Jackson Hole, nesting habits, list of prey); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 16 (as full species, in revision of *Philanthus* of California); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Kumar, Lavigne, Lloyd, and Pfadt, 1976:51 (USA: Colorado: Pawnee National Grassland); Evans, 1977d:26 (male behavior), 1978:32 (mating behavior), 1979b:33 (male mating strategies); Krombein, 1979b:1724 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); Gwynne and O'Neill, 1980:220-223 (male territoriality results in higher predation by Asilidae); O'Neill and Evans, 1982:798 (major prey: family and genus); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain); O'Neill, 1885:2188 (egg and prey size; size sexual dimorphism); Evans and O'Neill, 1988:115 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:256, 257, 259 (references to publications on nest parasites *Metopia argyrocephala* (Meigen), *Phrosinella fulvicornis* (Coquillett), *Phrosinella fumosa* Allen, and *Senotainia trilineata* (Wulp), miltogrammine flies); McDaniel, J. Schmidt, and Howard, 1992:27 (mandibular gland secretion); Finnamore, 1997:894 (expected to occur in Yukon); nec Skevington et al., 2001:128 (= *Philanthus lepidus* and *politus*); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Kaltenpoth et al., 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from R. Bohart and Grissell, 1975); Dollfuss, 2017b:1257 (USA: locality records from Florida and Washington); Ratzlaff, 2018:116 (Canada: first record from Yukon: Pelly Crossing); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, Manitoba, Northwest Territories, Saskatchewan, Yukon Territory: no specific locality). – **As *Philanthus politus pulcher***: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:81 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera).

Philanthus clarconis Viereck, 1906:206, ♀. Holotype: ♀, USA: Kansas: Clark County: no specific locality (Kansas Univ.). Synonymized with *Philanthus politus pulcher* by Strandtmann, 1945b:154. – LaBerge, 1956:527 (holotype in Snow Entomological Museum, Kansas Univ.).

92. *pulcherrimus* F. Smith

Philanthus pulcherrimus F. Smith, 1856:469, ♀, ♂. Syntypes: India: no specific locality (BMNH). – F. Smith, 1871a:370 (in catalog of Oriental Aculeata); Cameron, 1890b:248 (listed); Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:489 (in catalog of world Hymenoptera); Bingham, 1908:356 (India: Jullundur, Ferozepore, Agra); Maxwell-Lefroy, 1909:209 (India: preying on bees, mainly halictids, *Ceratina* and *Apis*); Dutt, 1912:228 (preying on bees); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Evans and O'Neill, 1988:197 (Dutt, 1912 observations reported); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 11 (in review of Indian *Philanthus*).

93. *punjabensis* Nurse

Philanthus punjabensis Nurse, 1902:86, ♀. Syntypes: ♀, India: Punjab: Ferozepore, now Firozpur (BMNH). – Bingham, 1908:357 (in key separating *Philanthus punjabensis* and *P. nepalensis*); Ramakrishna Aiyar, 1916:557 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 11 (in review of Indian *Philanthus*).

94. radamae Arnold

Philanthus radamae Arnold, 1945:17, ♀, ♂. (as *Radamae*, incorrect original capitalization). Syntypes: Madagascar: Behara, Bekily (MNHN). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Leclercq, 1990b:120 (Madagascar); Hancock, Chahwanda, and Mhlana, 1995:39 (syntypes in Bulawayo Museum); Pulawski, 2003b:799 (in checklist of Malagasy Sphecidae); Madl, 2014a:1005 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records).

95. ramakrishnae R. Turner

Philanthus ramakrishnae R. Turner, 1918b:361, ♀. Holotype or syntypes: ♀, India: Karnataka: Bababuddin Hills (BMNH). – van der Vecht, 1966:421 (description of ♂); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Dollfuss, 2017b:1257 (India: Tamil Nadu: Pakyra in Nilgiri Hills); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 16 (in review of Indian *Philanthus*).

96. reinigi Bischoff

Philanthus reinigi Bischoff, 1930a:217, ♀. Holotype: ♀, Tajikistan: Pamir: Maz (ZMHU). – Gussakovskij, 1940:84 (Tajikistan: Hissar Range), 1952:276 (redescription, description of ♂); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Kazenas, 1978b:46 (in key to Sphecidae of Kazakhstan and Central Asia); Esenbekova and Kazenas, 2000:70 (southeastern Kazakhstan: 10 km southwest of Alma Ata); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:136 (Kazakhstan: Almatinskiy Nature Reserve); Kazenas, 2002a:135 (geographic distribution, collecting localities in Kazakhstan); Yildirim and Ljubomirov, 2005:1806 (first record from Turkey: Erzurum: Ilıca. Tortum; Kars: Sarıkamış), 2007:119 (Turkey: Erzurum: Ilıca: Rizekent, and Tortum); Kazenas, 2008a:106 (southeastern Kazakhstan: Zailiyskiy Alatau: 7-8 km south of Talgar, Pravyy Talgar River, 10 km southwest of Alma Ata), 2008b:115 (Kazakhstan: foothills of Zailiyskiy Alatau: nesting in loess cliffs); Ljubomirov and Yildirim, 2008:127 (in catalog of Crabronidae of Turkey); Yildirim, 2012:77 (Turkey: Erzurum: Tortum: Aksu); Kazenas, 2013a:132, 133 (color photographs of adult wasps, short information on geographic distribution and nesting habits); Yildirim, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); Mokrousov and Gromenko, 2015:126 (Uzbekistan: 5 km south of village Karlik at 39°2'27"N 65°20'29"E); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:20 (Turkey: Tunceli: Pülümür: Dağyolu); Dollfuss, 2017b:1257 (Kyrgyzstan: Arashan River valley at 42°28'N 78°32'E); Kaplan and Yildirim, 2021:102 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:62 (in catalog of Middle Eastern and North African Philanthinae: Turkey); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution).

97. rubidus Arnold (preoccupied)

Philanthus abyssinicus Arnold, 1932:7, ♀. Holotype: ♀, Ethiopia: Dire-Daua District (Zool. Mus. Hamburg, destroyed in World War II). Junior primary homonym of *Philanthus dichrous abyssinicus* Arnold, 1925.

Philanthus rubidus Arnold, 1946:82. Substitute name for *Philanthus abyssinicus* Arnold, 1932. Junior primary homonym of *Philanthus rubidus* Jurine, 1807, now in *Cerceris*. – Arnold, 1951:100 (Ethiopia: River Errer near Harar); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Dollfuss, 2017b:1257 (locality records from Kenya and Tanzania).

98. rugosifrons Arnold

Philanthus rugosifrons Arnold, 1949:273, ♂. Holotype: ♂, Zambia: Abercorn, now Mbala (SAM). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlana, 1995:39 (paratype in Bulawayo Museum).

99. *rugosus* Kohl

Philanthus rugosus Kohl, 1891:357, ♂, ♀. Syntypes: South Africa: Western Cape Province: Cape of the Good Hope: no specific locality (ZMHU). – Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Arnold, 1925:167 (in revision of southern African *Philanthus*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); S. Gess, 1996:273, 280, 281 (floral records); Hancock, Chahwanda, and Mhlanga, 1995:39 (specimens in Bulawayo Museum); S. Gess and F. Gess, 2003:130 (South Africa: visiting flowers of *Athanasia trifurcata* (L.) L., Asteraceae); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Dollfuss, 2017b:1257 (locality records from Ethiopia and South Africa).

100. *rutilus* Spinola

Philanthus rutilus Spinola, 1839:488, ♀, ♂. Lectotype: ♂, Egypt: no specific locality (Torino), designated by de Beaumont, 1952e:49. – Spinola, 1843b: XXXVI (represented in Berlin Museum under the name *Philanthus byssinus*). – A. Costa, 1875:19 (Egypt: near Ghiza pyramids); Kohl, 1891:356 (redescription), 365 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Morice, 1911:93 (Algeria: Biskra; as *rutilans*); Storey, 1916:107 (Egypt: Maadi, as *rutilans*); Mellor, 1928:129 (Egypt, as *rutilans*); Mochi, 1939a:92 (in revision of Egyptian *Philanthus*); de Beaumont, 1949b:181 (in revision of northwest African *Philanthus*), 1956a:183 (Libya; Chad: Tibesti), 1960b:229 (Libya), 1961a:201 (geographic variation); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Casolari and Casolari Moreno, 1980:122 (specimens in M. Spinola collection, Torino); Guichard, 1994a:209 (Arabian Peninsula); Gadallah, 1996:70 (in revision of Egyptian *Philanthus*); Roche, 2007a:126 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Schmid-Egger, 2011b:569 (United Arab Emirates: north of Ajman, Um al-Quwain), 572 (color photograph of male); Pagliano, 2014:99 (specimens in M. Spinola collection, Torino, including lectotype, are *Philanthus rutilus*); Dollfuss, 2017b:1257 (Egypt: Gebel Elba; Israel: Nahal Lavan 4 km northwest of Beer Milka at 30°57'33"N 34°22'21"E); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:62 (in catalog of Middle Eastern and North African Philanthinae), 2023:158 (in key to Egyptian *Philanthinus* and *Philanthus*), 172 (in revision of Egyptian *Philanthinus* and *Philanthus*).

Philanthus byssinus Spinola, 1843b:XXXVI, sex not stated, origin unknown, specimen(s) in Berlin Museum, as junior synonym of *Philanthus rutilus*. Not available: first proposed as a junior synonym (Article 11.6).

Philanthus pachecoi Giner Marí, 1945b:370, ♂. Holotype: ♂, Morocco: Western Sahara: Tisla (MNCN). Synonymized with *Philanthus rutilus* by de Beaumont, 1961a:202. – Giner Marí, 1945b:362 (Morocco: Western Sahara: Tisla), 1947:21 (Western Sahara, description of ♀). – As *Philanthus rutilus pachecoi*: de Beaumont, 1949b:182 (new status, in revision of northwest African *Philanthus*), 1953a:173 (Mauritania); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae).

101. *sanbornii* Cresson

Philanthus sanbornii Cresson, 1865c:89, ♀, ♂ (as *Sanbornii*, incorrect original capitalization). Lectotype: ♀, USA: Massachusetts: no specific locality (ANSP), designated by Cresson, 1916:101. – Packard, 1866:54 (in key to North American *Philanthus*), 56 (bibliographic reference, geographic distribution); Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:369 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Dunning, 1897:69 (Massachusetts), 1998b:152 (individual variation); H. Smith, 1908b:359 (in revision of Nebraskan Sphecidae), 678 (in new list of insects of New Jersey); Rohwer, 1916b:673, 674 (in catalog of Hymenoptera of Connecticut); Stevens, 1917:421 (North Dakota); Britton, 1920:339 (in checklist of insects of Connecticut); Rohwer in Viereck, 1925:673, 674 (in key to Sphecidae of Connecticut; New Haven, Putnam, Waterbury); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); Brimley, 1938:447 (North Carolina: Wilmington); Strandtmann, 1945b:152 (in review of North American *Philanthus*), 1946:37 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Evans, 1955b:47 (preying on honeybees); Krombein, 1958f:197 (list of prey); R. Bohart and Grissell, 1975:5, 7 (in key to

North American *Philanthus*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Krombein, 1979b:1725 (in catalog of North American Hymenoptera, incorrectly states “south to New Jersey”); O'Neill and Evans, 1982:798 (major prey: family and genus); Kurczewski and Miller, 1983:199-206 (nesting and prey); G. Ferguson, 1984a:294 (in revision of *Philanthus zebratus* species group); Evans and O'Neill, 1988:70 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:256, 259 (references to publications on nest parasites *Metopia argyrocephala* (Meigen), *Phrosinella fulvicornis* (Coquillett), and *Senotainia trilineata* (Wulp), miltogrammine flies); Stubblefield, Seger, Wenzel, and Heisler, 1993:397 (prey species heterogeneity); Ahlstrom, 1995:113 (in checklist of insects of North Carolina); Deyrup and Eisner, 2003:522 (Floridian populations are red-marked); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Dollfuss, 2017b:1257 (Michigan: Gratiot County; New York: Areola); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland; Canada: Alberta, Manitoba, Ontario, Saskatchewan, first record from Quebec: no specific locality). – **As *Epiphilanthus Sandborni* [sic]**: Ashmead, 1899d:294 (new generic assignment, type species of new genus *Epiphilanthus*), 296 (in checklist of North American Crabronidae). – **As *Ococletes sanborni***: Mickel, 1918b:390 (new generic assignment, in catalog of Nebraskan Sphecidae); Dreisbach, 1947:144 (Michigan: locality records). – **As *Anthophilus sanborni***: J. Smith, 1900:520 (new generic assignment, in list of insects of New Jersey). *Philanthus scutellaris* Cresson, 1880a:xxxiv, B. Lectotype: ♂, USA: Kansas: no specific locality (ANSP), designated by Cresson, 1916:101 (Article 74b). Synonymized with *Philanthus sanbornii* by Strandtmann, 1945b:152. – Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:369 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Bridwell, 1899:209 (Kansas: no specific locality). – **As *Ococletes scutellaris***: Mickel, 1918b:390 (new generic assignment, in catalog of Nebraskan Sphecidae). *Philanthus eurynome* W. Fox, 1890:107, ♀. Holotype: ♀, USA: Florida: no specific locality (ANSP), designated by Cresson, 1928:49. Synonymized with *Philanthus sanbornii* by R. Bohart in R. Bohart and Menke, 1976:566. – Cresson, 1928:49 (holotype in ANSP); Dalla Torre, 1897:485 (in catalog of world Hymenoptera); Strandtmann, 1945b:152 (in review of North American *Philanthus*), 1946:34 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Evans and Lin, 1959:128 (nesting habits); Krombein, 1967:413 (reference to Evans and Lin, 1959). *Philanthus trumani* Dunning, 1897:70, ♀, actually ♂ (Dunning, 1898b:152). Holotype: ♂, USA: South Dakota: Brookings County: no specific locality (depository?). Synonymized with *Philanthus sanbornii* by Dunning, 1898b:152. *Philanthus magdalenae* Strandtmann, 1945:152. Name created in synonymy of *Philanthus sanbornii*, authorship incorrectly attributed to Viereck (a mistake for Magdalena Mountains, the collection locality of Viereck, 1906:240). Not available: first proposed as a junior synonym (Article 11.6). – Strandtmann, 1946:37 (as synonym of *Philanthus sanbornii*). – LaBerge, 1956:527 (holotype of *Philanthus magdalenae* Viereck, 1906, in Snow Entomological Museum).

102. *schulthessi* Maidl

Philanthus schulthessi Maidl, 1924:242, ♀. Syntypes: ♀, Sudan: Tuti Island near Khartum (NHMW). – de Beaumont, 1956a:184 (Chad: Tibesti; diagnostic characters), 1961a:205 (redescription); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); nec Guichard, 1980:230 (= *Philanthus pallidus*); Dollfuss, 1989:11 (type material in NHMW), 2017b:1258 (Egypt: Marsa Matruh); Malash, Edmardash, and Gadallah, 2022:63 (in catalog of Middle Eastern and North African Philanthinae), 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 172 (in revision of Egyptian *Philanthinus* and *Philanthus*).

As *Philanthus minor* subsp.: de Beaumont, 1953a:173 (Mauritania), corrected to *Philanthus schulthessi* by de Beaumont, 1956a:184.

ssp. nigrinus Bytinski-Salz

Philanthus schulthessi nigrinus Bytinski-Salz in de Beaumont and Bytinski-Salz, 1959:150, ♀. Holotype: ♀, Israel: Revivim (originally H. Bytinski-Salz coll., now Tel Aviv Univ.). – R. Bohart and Menke, 1976:566 (in checklist of

world Sphecidae); Malash, Edmardash, and Gadallah, 2022:63 (in catalog of Middle Eastern and North African Philanthinae).

103. *schusteri* R. Bohart

Philanthus schusteri R. Bohart, 1972:02, ♀, ♂. Holotype: ♂, USA: California: Imperial County: Palo Verde (UCD). – R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*), 16 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Krombein, 1979b:1725 (in catalog of North American Hymenoptera).

104. *sculpturatus* Gayubo

Philanthus sculpturatus Gayubo, 1991a:130, ♀, ♂. Holotype: ♀, Spain: Huelva: Torre de la Higuera (S.F. Gayubo coll.). – Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:292 (in Sphecid Fauna of Western Europe); Gayubo, González, de la Nuez, Asís, and Tormos, 2006:211 (Portugal: Algarve: Quarteira); Bitsch, 2010:117 (in supplement to vol. II of Faune de France, 1997: recent record from Portugal reported); Cross, Baldock, and Wood, 2021:67 (in catalog of Sphecidae *sensu lato* of Portugal); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Schmidt, 2022:285 (in revision of Sphecidae *sensu lato* of Europe).

105. *serrulatae* Dunning

Philanthus serrulatae Dunning, 1898b:154, ♂ (not ♀). Holotype: ♂, USA: Colorado: Denver (ANSP). – nec R. Bohart and Grissell, 1975:6, 7, 17 (= *Philanthus boharti*); R. Bohart in R. Bohart and Menke, 1976:566 (resurrected status, in checklist of world Sphecidae); Krombein, 1979b:1725 (in catalog of North American Hymenoptera); G. Ferguson, 1983a:56 (synonymy, distribution); O'Neil, 1885:2188 (egg and prey size; sexual dimorphism in size); Evans and O'Neill, 1988:154 (male behavior, nesting habits); Amarante, 2002:64 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae). – **As *Philanthus politus serrulatae***: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:83 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera).

As *Philanthus albifrons*: H. Smith, 1908b:356 (in revision of Nebraskan Sphecidae), corrected to *Philanthus siouxensis* by Mickel, 1916a:406.

Philanthus siouxensis Mickel, 1916a:406, ♀. Holotype: ♀, USA: Nebraska: Harison (UNL). Synonymized with *Philanthus serrulatae* by R. Ferguson, 1983a:56. – Mickel, 1918a:325 (correction to original description), 1918b:387 (in catalog of Nebraskan Sphecidae); Muma, 1952:22 (holotype in UNL), 28 (paratypes in UNL); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart in R. Bohart and Menke, 1976:566 (new status, in checklist of world Sphecidae); Kumar, Lavigne, Lloyd, and Pfadt, 1976:51 (USA: Colorado: Pawnee National Grassland); Krombein, 1979b:1725 (in catalog of North American Hymenoptera); Amarante, 2002:64 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Amarante, 2005a:13 (correction to his 2002 catalog). – **As *Philanthus politus siouxensis***: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:91 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera).

106. *sicarius* F. Smith

Philanthus sicarius F. Smith, 1856:472, ♀. Holotype or syntypes: ♀, Equatorial Guinea: Fernando Póo, now Bioko: no specific locality (BMNH). – Radoszkowski, 1881:207 (Angola); Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Arnold, 1925:170 (original description copied, description of ♂), 1930:11 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Dollfuss, 2017b:1258 (locality records from Central African Republic, South Arica, and Zambia).

107. *soikai* de Beaumont

Philanthus soikai de Beaumont, 1961a:206, ♀. Holotype: ♀, Algeria: between Oran and Mostaganem (Lausanne). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Dollfuss, 2017b:1258 (locality records from Morocco and Tunisia); Ben Khedher, Yildirim, and Braham, 2021b:3 (recorded from Tunisia by Dollfuss, 2017b); Malash, Edmardash, and Gadallah, 2022:63 (in catalog of Middle Eastern and North African Philanthinae).

108. *solivagus* Say

Philanthus solivagus Say, 1837:383, ♂. Holotype or syntypes: ♂, USA: Indiana: no specific locality (lost). – F. Smith, 1856:473 (in catalog of Hymenoptera in British Museum); Le Conte, 1859b:764 (original description copied); Cresson, 1862:237 (in catalog of North American Hymenoptera), 1865c:103 (original description copied); Packard, 1866:57 (description of ♀); Provancher, 1883b:641 (in revision of Canadian Hymenoptera); Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:369 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Dunning, 1897:69 (redescription); Howard, 1901:... (... as *solidagus*, a lapsus); J. Smith, 1910:678 (in new list of insects of New Jersey); Faull, 1913:384 (Canada: Toronto region); Rohwer, 1916b:673, 675 (in catalog of Hymenoptera of Connecticut); Stevens, 1917:421 (North Dakota, as *solvivagus*); Mickel, 1918b:386 (in catalog of Nebraskan Sphecidae); Britton, 1920:339 (in checklist of insects of Connecticut); Rohwer in Viereck, 1925:673, 675 (in key to Sphecidae of Connecticut; Hartford, New Haven, Rockville, Stafford); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae); A. Brown, 1934:264 (Canada: Ontario: Timagami); Krombein, 1936:98 (New York: Buffalo; floral records); Strandtmann, 1945b:151 (in review of North American *Philanthus*), 1946:24 (in revision of North American *Philanthus*); Dreisbach, 1947:142, 143 (in key to *Philanthus* of Michigan), 145 (Michigan: locality records); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Ristich, 1956:272 (*Senotainia trilineata* (van der Wulp), a sarcophagid, is nest parasite, eggs are laid on prey carried by wasp); Evans, 1957b:83 (description of larva); Evans and Lin, 1959:120 (nesting habits); Evans, 1963c:112 (prey selection, comparison of behavior with *Philanthus gibbosus* and *politus*); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Krombein, 1979b:1725 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); Finnamore, 1982:241 (in Sphecid Fauna of southern Quebec); O'Neill and Evans, 1982:798 (major prey: family and genus); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Evans and O'Neill, 1988:179 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:257, 259 (nest parasite: *Phrosinella aurifacies* Downes, a miltogrammine fly, references to publications on nest parasites *Phrosinella fulvicornis* (Coquillett) and *Senotainia trilineata* (Wulp), miltogrammine flies); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County); Spofford and Kurczewski, 1990:747, 748, 751 (nest parasites: *Phrosinella aurifacies* Downes, *Senotainia trilineata* (Van der Wulp), and unknown species of Miltogrammini, Sarcophagidae), 1992:1000 (species of miltogrammine parasites listed), 1002 (counter-cleptoparasitic behavior: freeze-stop and face-off); Kurczewski, 1998d:250 (pine barrens in upstate New York); Wcislo, 1998:181 (proportions of antennae in relations to parasitic/non-parasitic behavior); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, Manitoba, Nova Scotia, Ontario, Quebec, Saskatchewan, first record from New Brunswick: no specific locality), . – **As *Epiphilanthus solivagus***: Ashmead, 1899d:296 (new generic assignment, in checklist of North American Crabronidae); Harrington, 1902:222 (Canada: Ontario: Ottawa). – **As *Anthophilus solivagus***: J. Smith, 1900:520 (new generic assignment, in list of insects of New Jersey).

109. *sparsipunctatus* Arnold

Philanthus sparsipunctatus Arnold, 1946:80, ♀, ♂. Syntypes: Zambia: Abercorn, now Mbala (SAM). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntype in Bulawayo Museum).

110. *spiniger* Thunberg

Philanthus spiniger Thunberg, 1815:133, sex not stated. Holotype or syntypes: origin unknown (type lost: W. Schulz, 1912:69; de Beaumont, 1950c:321). – Thunberg, 1815a:128 (diagnostic characters), 1815b:288 (diagnostic characters); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); W. Schulz, 1912:69 (type material lost); de Beaumont, 1950c:321 (type lost, unrecognizable from the description, probably not a *Cerceris*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae, as tentative member of *Philanthus*).

111. *stecki* W. Schulz

Philanthus stecki W. Schulz, 1906:309, ♀. Holotype: ♀, Equatorial Guinea: Fernando Po, now Bioko (depository?). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae).

112. *strigosus* R. Turner

Philanthus strigosus R. Turner, 1918c:464, ♀, ♂. Syntypes: South Africa: Gauteng: Johannesburg, and Lesotho: between Matsekuwa and Mafetang (BMNH). – Arnold, 1925:169 (in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae).

113. *stygius* Gerstaecker

Philanthus stygius Gerstaecker in Peters, 1858:509, ♂. Holotype or syntypes: ♂, Mozambique: no specific locality (ZMHU). – Kohl, 1891:365 (in checklist of world *Philanthus*); Gribodo, 1895:351 (Mozambique, redescription); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Bischoff, 1912:225 (description of ♀; Zaire: north of Lake Edward, foothills of Ruwenzori); Arnold, 1925:163 (in revision of southern African *Philanthus*), 1930:11 (in checklist of Afrotropical Sphecidae), 1943:74 (Zaire); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Dollfuss, 2017b:1258 (locality records from Central African Republic, Ghana, Kenya, Nigeria, Tanzania, Zambia, and Zimbabwe).

Philanthus stygius Gerstaecker, 1862:472, ♂. Objective synonym of *Philanthus stygius* Gerstaecker, 1858.

ssp. *atronitens* Arnold

Philanthus stygius race *atronitens* Arnold, 1925:163, ♂, ♀. Syntypes: Zimbabwe: Khami Ruins and Sawmills (SAM). – Arnold, 1930:11 (in checklist of Afrotropical Sphecidae); Guiglia, 1943c:75 (Ethiopia: Gamo Gofa: Sagan–Omo region). – As *Philanthus stygius forma atronitens*: Guiglia, 1950:232 (new status, Ethiopia: Gamo Gofa: Caschei). – As *Philanthus stygius atronitens*: R. Bohart and Menke, 1976:566 (new status, in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlana, 1995:39 (syntype in Bulawayo Museum).

114. *subconcolor* (Bingham)

Trachypus subconcolor Bingham, 1898a:107, ♀. Holotype or syntypes: ♀, Yemen: Shaikh Othman (BMNH). – As *Philanthus subconcolor*: R. Bohart and Menke, 1976:566 (new generic assignment, in checklist of world Sphecidae); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:63 (in catalog of Middle Eastern and North African Philanthinae).

115. *sulphureus* F. Smith

Philanthus sulphureus F. Smith, 1856:469, ♂. Holotype or syntypes: ♂, northern India: no specific locality (BMNH). – F. Smith, 1871a:370 (in catalog of Oriental Aculeata); Walker, 1871:28 (Egypt: Sinai Peninsula: Wadi Feiran); Cameron, 1890b:248 (listed), 298 (redescription); Kohl, 1891:365 (in checklist of world *Philanthus*); Dalla Torre, 1897:490 (in catalog of world Hymenoptera); Innes Bey, 1912:192 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected at Wadi Feiran, Sinai Peninsula); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection); Gadallah, 1996:75 (in revision of Egyptian *Philanthus*, occurrence in Egypt questionable); Roche, 2007a:141 (Walker, 1871, record from Sinai is questionable); Pagliano, 2014:103 (specimens in M. Spinola collection, Torino, are *Philanthus*

sulphureus); Girish Kumar, Monks, and Sheikh, 2021:3 (in key to Indian *Philanthus*), 17 (in review of Indian *Philanthus*); Malash, Edmardash, and Gadallah, 2022:63 (in catalog of Middle Eastern and North African Philanthinae).

116. *sumptuosus* R. Turner

Philanthus sumptuosus R. Turner, 1917e:178, ♀, ♂. Syntypes: India: Bihar: Pusa (BMNH). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 18 (in review of Indian *Philanthus*).

117. *taantes* Gribodo

Philanthus taantes Gribodo, 1895:353, ♂ (as *Taantes*, incorrect original capitalization). Holotype: ♂, Mozambique: Lourenço Marquês, now Maputo (MSNG). – Arnold, 1925:175 (unknown to the author); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Penati and Mariotti, 2015:121 (in list of Hymenoptera described by G. Gribodo).

118. *tarsatus* H. Smith

Philanthus tarsatus H. Smith, 1908b:356, ♀. Holotype: ♀, USA: Nebraska: Sioux County: Glen (Univ. Nebraska). – Mickel, 1918b:388 (in catalog of Nebraskan Sphecidae); Muma, 1952:22 (holotype in UNL), 28 (paratype in UNL); LaBerge, 1956:528 (paratype in Snow Entomological Museum); R. Bohart and Grissell, 1975:6, 7 (in key to North American *Philanthus*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae, as new status by R. Bohart); Krombein, 1979b:1725 (in catalog of North American Hymenoptera); Evans and O'Neill, 1988:151 (male behavior); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands). – *As Philanthus politus tarsatus*: Strandtmann, 1945b:154 (new status, in review of North American *Philanthus*), 1946:93 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera).

119. *tenellus* Arnold

Philanthus tenellus Arnold, 1925:158, ♂. Holotype: ♂, Zimbabwe: Bulawayo (SAM). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae), 1932:9 (description of ♀); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlana, 1995:39 (syntypes in Bulawayo Museum).

120. *triangulum* (Fabricius)

Vespa ruspatrix Linnaeus, 1767:951, sex not stated. Holotype: ♀, Africa: no specific locality, probably Algeria (Linnean Society, London). Suppressed by International Commission on Zoological Nomenclature, 1990, Opinion 1578. – Gmelin, 1790:2758 (redescription); Christ, 1791:241 (redescription, as *ruspatrix*); de Saussure, 1855:105 (not a vespid); Day, 1979:71 (study of holotype; possibility of suppression of the name in favor of *triangulum*); Day and Fitton, 1978:194 (recuration of Linnean type material); Pulawski, 1988b:34 (petition to ICZN to suppress the name). – *As Philanthus ruspatrix*: Menke, 1986b:21 (new generic assignment, quotation of Day, 1979:71); Vikberg, 1986:78 (Finland).

Vespa triangulum Fabricius, 1775:373, sex not stated. Holotype: ♀, Denmark: Hafniae, now Copenhagen (ZMUC), see van der Vecht, 1961a:61. Synonymized with *Philanthus ruspatrix* by Day, 1979:71 and 80. Conserved by International Commission on Zoological Nomenclature, 1990, Opinion 1578. – Fabricius, 1781:469 (redescription), 1787:294 (redescription); Gmelin, 1790:2758 (redescription); Christ, 1791:236 (redescription); van der Vecht, 1961a:61 (study of type); Pulawski, 1988b:34 (petition to ICZN to conserve the name). – *As Simblephilus triangulum*: Jurine, 1807:188 (new generic assignment, listed). – *As Philanthus triangulum*: Fabricius, 1790:224 (new generic assignment, redescription), 1793:289 (redescription), 1796:137 (in Index to his Entomologia Systematica, 1793), 1804:302 (redescription); Thunberg, 1815a:127 (diagnostic characters), 131 (redescription), 1815b:288 (diagnostic characters); Germar, 1817:262 (Dalmatia: Spalatro, now Croatia: Split); Vander Linden, 1829:124 (bibliographic references, Belgium: Bruxelles, large part of Europe, discussion of synonymy); Shuckard, 1837a:246 (in revision of British Aculeata); von Siebold, 1839:53 (Germany: Danzig, now Poland: Gdańsk); Herrich-Schaeffer, 1840:296 (Germany: Bayern: Regensburg area); Dufour, 1841a:509 and 1841b:245 (digestive tract), 1841a:511 and

1841b:247 (male reproductive system), 1841a:512 and 1841b:248 (female reproductive system); Dahlbom, 1842a:16 (in review of Scandinavian aculeates), 1844:187 (in revision of Sphecidae and Pompilidae), 1845:XXIII (type material examined), 495 (in key to world *Philanthus*); Lepeletier de Saint Fargeau, 1845:35 (in revision of world Hymenoptera); Eversmann, 1849:398 (Russia: Orenburg province and lower Volga area); von Kiesenwetter, 1849:89 (Germany: Kingdom of Saxony: common everywhere); Wissmann, 1849:13 (Germany: Kingdom of Hannover: Hannover, Hedemünden, Lüneburg, and Munden); F. Smith, 1851c:43 (Great Britain: Byfleet, Heron Court Hants, Isle of Wight, Pegwell Bay, Snaresbrook); Wesmael, 1852:268 (Belgium); Belke, 1853:433 (Ukraine: Kamieniec Podolski); Kirschbaum, 1853:46 (Germany: Herzogtum Nassau: Mainz-Mombach); F. Smith, 1853:66 (in checklist of British Hymenoptera); Kirchner, 1854:312 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); Fabre, 1856a:139 (France: Vaucluse: Avignon area); F. Smith, 1856:468 (in catalog of Hymenoptera in British Museum); Kawall, 1857:24 (Kurland, now Latvia); Ruthe and Stein, 1857:314 (Germany: Berlin area); Schenck, 1857:144 (Germany: in revision of fossorial wasps of Nassau Region); F. Smith, 1857d:41 (Great Britain: Isle of Wight: Sandown Bay), 1858c:187 (in review of British Aculeata, redescription); Taschenberg, 1858:83 (in key to Sphecidae of Germany); Belke, 1859:70 (Ukraine: Kamieniec Podolski); Funk, 1859:58 (Germany: Bayern: Bamberg); Six, 1859:17 (Netherlands: Driebergen); A. Costa, 1860:3 (Italy: in revision of Sphecidae of Kingdom of Naples); Schenck, 1860:147 (Germany: Nassau Region); von Frauenfeld, 1861:103 (Croatia: Dalmatia: no specific locality); Schenck, 1861:142 (Germany: Wiesbaden, rarely collected); Sichel, 1861:752 (Italy: Sicilia); Brischke, 1862:102 (Germany: Preussen Province, now Poland: Pomorze Region); A. Costa, 1863:66 (Italy: Calabria Ulteriore: no specific locality), 1864c:124 (Italy: Campania: Benevento area); Siła-Nowicki, 1864:54 (Poland: Tatry Mountains, Ukraine: Drancza hill near Brody, Pieniaki in Zlochiv District); 1865:54 (western Ukraine: Galicia region: no specific locality); Taschenberg, 1866:191 (in revision of Hymenoptera of Germany); A. Costa, 1867c:96 (in revision of Italian Sphecidae); Jaennicke, 1867:147 (Germany: Hessen: Frankfurt area); Kirchner, 1867:220 (in catalog of European Hymenoptera); Schenck, 1867a:354 (Germany: Nassau Region); Dietrich, 1868:363 (Switzerland: Zurich Canton); Jaennicke, 1868:9 (Germany: Hessen: Kelsterbach); Wierzejski, 1868 (Poland: Kraków; Ukraine: Drańca, Janów, Pieniaki); A. Costa, 1869b:112 (in revision of Italian Sphecidae); Palma, 1869:44 (Italy: Sicilia settentrionale); von Aichinger, 1870:316 (Austria: Tirol); Thomson, 1870:241 (in revision of Swedish wasps); F. Smith, 1871b:19 (in catalog of British Aculeata); P. Ivanov, 1872:152 (Ukraine: Kharkov Oblast': Kupyansk area); Beletskiy, 1873:80 (Ukraine: vicinity of Khar'kov); Dours, 1874:142 (in catalog of Hymenoptera of France); Martinez y Saez, 1874:31 (specimens from Spain: Madrid area, donated to Léon Dufour); Mocsáry, 1874:120 (Siebenbürgen, now Romania: Transylvania: no specific locality); Thomson, 1874:214 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:260 (Poland: Kraków; Ukraine: L'viv and Podole Region); Marquet, 1875:204 (France: Haute-Garonne: Toulouse); Taschenberg, 1875:404 (Germany: Halle; Italy: La Spezia; Egypt: no specific locality); Beuthin, 1876:231 (Germany: Hamburg area); Frivaldszky, 1876:354 (Hungary: Temes Komitat: Grebenáč, now in Timiș District in Romania); Schlechtendal, 1876:54 (Germany: Sachsen: Zwickau); Schmiedeknecht, 1876:186 (Germany: Thüringen: Rothensteiner Felsen); Radoszkowski, 1877:52 (Uzbekistan: Obburden); Girard, 1878:242 (France: Calvados: Lion-sur-Mer, coastal sand dunes); Girard, 1879:925 (morphology and habits); Kohl, 1880:167 (Austria: Tirol, and Italy: Trentino–Alto Adige); E. Saunders, 1880:277 (in revision of British Aculeata); Magretti, 1881:119 (Italy: Lombardia), 271 (in list of species discussed in this paper); Marquet, 1881:189 (southern France); J. Pérez, 1881:V (hunting habits); E. Saunders, 1881:165 (Portugal: São Marcos de Serra); Yaroshevskiy, 1881:124 (Ukraine: Khar'kiv Oblast': Khar'kiv, Kupyansk); De Stefani Perez, 1882:39 (Italy: Sicilia: Sciacca); Sajó, 1882:5 (Hungary); A. Costa, 1883:57 (Italy: Sardegna: Cagliari); Kohl, 1883e:665 (Switzerland); von Heyden, 1884:119 (Germany: Frankfurt am Main area); Wüstnei, 1886:40 (Germany: Schleswig-Holstein); Gasperini, 1887:16 (Dalmatia: Brusije on Lesina Island and Spalato, now Croatia: Brusje on Hvar Island and Split); Brischke, 1888b:98 (Germany: Preussen Province, now Poland: Pomorze Region); Cuní y Martorell, 1888:164 (Spain: Barcelona); Radoszkowski, 1888a:324 (male genitalia); Kohl, 1891:365 (in checklist of world *Philanthus*); Bezzi, 1892:123 (Italy: Lombardia: Provincia di Pavia: vicinity of Pavia); Radoszkowski, 1892:579

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Br., Brassicaceae, in Kazakhstan); Simon Thomas, 1974:56 (Netherlands: Limburg: Tienray); Simon Thomas and Veenendaal, 1974b:3 (France); Benedek, 1975:251 (Hungary; onion pollination); Lomholdt, 1975b:31 (Denmark: Island of Anholt), 1975c:183 (in Sphecidae Fauna of Fennoscandia and Denmark); Piek and Nijo, 1975:199-201 (venom causing neuromuscular block in honeybee); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Simon Thomas, 1976:3 (France: Lot-et-Garonne: Forêt de Campet); Simon Thomas and Simon Thomas, 1976:1-23 (Egypt: Dakhla oasis; nesting habits); Georgiou, 1977:191 (Cyprus); Haeseler, 1977a:23 (northwestern Germany), 1977b:289-292 (northwestern Germany); Kolesnikov, 1977:317 (Russia: Bryansk Oblast); Cruysbergh, 1978:97 (Netherlands); Erlandsson, 1978b:131-134 (Sweden); Guichard, 1978:270 (Greece); Haeseler, 1978b:63 (Germany: Niedersachsen: a bog near Oldenburg); Kazenas, 1978b:46 (in key to Sphecidae of Kazakhstan and Central Asia); Leclercq, 1978b:map 1193 (distribution in Belgium); Marion, 1978:86 (France: Nièvre Department); Petit, 1978:86 (Belgium: Knokke); Pulawski, 1978:186 (in key to Sphecidae of European part of USSR); Simon Thomas and Simon Thomas, 1978:450-456 (nesting habits); Simon Thomas and Veenendaal, 1978:3-8 (underground activity); Schwammlberger, 1978:416 (Germany: Württemberg); Benedek, 1979:227 (Hungary: Bakony Hills); Islamov and Kazenas, 1979:64 (Uzbekistan: floral records); Lefebvre, 1979:11 (in checklist of Sphecidae of Netherlands), 33 (Netherlands: distribution map); May and Piek, 1979:685 (venom causes neuromuscular block in locust skeletal muscle); Radović and Krunic, 1979:unpaginated foldout (nesting in sand, foreleg structure); Richards, 1979:402 (British Channel Islands); Schmidt, 1979a:54 (Germany: Ost-Holstein), 1979b:298 (Germany: Baden-Württemberg); Schwammlberger, 1979:114 (Germany: Nordrhein-Westfalen: Gildehauser Venn Nature Reserve); Simon Thomas, 1979:139 (can the species become an apicultural plague in Netherlands?); Borg-Karlson and Tengö, 1980:828 (pyrazines as marking volatiles); Casolari and Casolari Moreno, 1980:122 (specimens in M. Spinola collection, Torino); Dathe, 1980:208 (Russia: northern Caucasus: Teberda); Pagliano, 1980:124 (Italy: Piemonte, Sicilia); Piek, Mantel, and Jas, 1980:345 (venom causes ion-channel block in insect muscle fiber membrane); Richards, 1980:83 (in key to Sphecidae of British Isles); Simon Thomas and Simon Thomas, 1980a:106 (history of outbreaks damaging apiculture in northwestern Europe, nesting habits); 1980b:97 (population outbreak in Dakhla oasis, Egypt), 1980c (nesting habits, methods of protecting honeybee hives); Wollin, 1980:107 (Sweden); Dollfuss and Ressler, 1981:324 (Austria: Niederösterreich: Scheibbs District); Gess, 1981:21 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown; nesting in clayey friable soils); Haeseler, 1981:52 (Germany: Friesian Island: Island Amrum); Heath and Leclercq, 1981:map 17 (distribution in Europe); Józán, 1981:304 (Hungary: Hortobágy National Park); Woydak, 1981:39 (Germany: Westfalen: Hamm); Brugge, 1982: (Netherlands: Island of Texel); Clark, Donaldson, Gratton, Lambert, Piek, Ramsey, Spanjer, and Userwood, 1982:105 (block of locust muscle glutamate receptors by δ -philanthotoxin); Donath, 1982:212 (Germany: Cottbus Bezirk); Dunbar and Piek, 1982:79-84 (action of venom on insect visceral muscle); Gayubo, 1982b:50 (Spain: Ávila, Cáceres, and Salamanca provinces), 1982e:109 (Spain: Cádiz Province); Leclercq, 1982a:125 (Belgium: Liège); Piek, 1982:311 (effects and components of venom); Piek, Spanjer, Veldsema-Currie, van Groen, de Haan, and Mantel, 1982:159-164 (effect of venom on cockroach abdominal ganglia); Silvestre de Sacy, 1982:4 (France: Côte-du-

Nord: Paimpol area); Skibińska, 1982:123 (Poland: Warszawa area); van Marle, Piek, Lind, and van Weeren-Kramer, 1982:343 (venom reducing glutamate uptake in nerve endings of locusts muscles); Dollfuss, 1983a:76 (Austria: endangered in Niederösterreich), 77 (Austria: endangered in Burgenland), 78 (Austria: endangered in Oberösterreich and Salzburg area), 79 (Austria: endangered in Kärnten and Steiermark), 80 (Austria: endangered in Tirol), 1983b:24 (in catalog of Sphecidae of Austria); Gayubo, 1983a:125 (prey: workers of *Apis mellifera* Linnaeus), 1983e:236 (Spain: Salamanca Province); Lefeber, 1983a:85 (Netherlands: Waddendistrict: Island of Texel, record deleted in reprint); Piek, Buitenhuis, Veldsema-Currie, and Mantel, 1983:153-159 (venom contains acetylcholine, but no histamine); Riemann, 1983:83 (Germany: Bremen-Daverden area); Schmidt and Westrich, 1983:125 (Greece); Burger, de Goffau, and Ulenberg, 1984:147 (Netherlands); Chevin and Silvestre de Sacy, 1984:10 (France: Yvelines Department); Gayubo, 1984c:382 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:23 (Spain: Valencia); Haack, Tscharntke, and Vidal, 1984:132 (Germany: Hamburg area); Janzon and Svensson, 1984:183 (Sweden: Island of Öland); Lefeber, 1984:29 (Netherlands: Maastricht); Piek, Hue, Pelhate, David, Spanjer, and Veldsema-Currie, 1984:297-306 (philanthotoxin blocking postsynaptic membrane); Schmidt and Westrich, 1984:240 (Germany: Rheinland-Pfalz: Bad Münster); Archer, 1985b:156 (Britain: Suffolk); H. Chevin and S. Chevin, 1985:39 (France: Aude); de Man, 1985:23 (Netherlands); Eiroa and Novoa, 1985:23 (Spain: Pontevedra: Barra beach near Cangas); Gayubo, 1985a:489 (prey: *Apis mellifera* Linnaeus), 1985c:172 (Spain: four localities; Portugal: Villanova); Haeseler, 1985c:571 (Germany: Friesian Islands); Józán, 1985b:62 (Hungary south of Lake Balaton), 82 (floral records), 85 (ecological and zoogeographic characteristics); Koster, 1985:75 (Netherlands: common along railways); Lefeber, 1985:87 (Netherlands: southern Limburg); Nilsson, 1985:43 (Sweden); Plachter, 1985:60 (Germany: Bayern: lower Brombach valley); Radović, 1985:66 (sting apparatus analyzed); Scobiola-Palade, 1985:95 (Romania: delta of Danube); Brechtel, 1986:57 (Germany: Südpfalz); Gayubo, 1986a:66 (Spain: Ciudad Real Province), 1986b:41 (Spain: Andalucía), 1986d:122 (Spain: Zamora Province), 1986f:1002 (prey); Gayubo and Sanza, 1986:84 (Spain: Burgos, Soria); Gayubo and Tormos, 1986a:19 (Spain: Castellón de la Plana); Islamov, 1986:518 (Uzbekistan: Tashkent Oblast); Józán, 1986:374 (Hungary: Kiskunság National Park); Piek, 1986b:190 (morphological and physiological differences between *Philanthus triangulum triangulum* and *P. triangulum abdelcader*); Piek and Mantel, 1986:433 (differences in venom between Dutch and Egyptian populations); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey), 222 (chemistry of venom), 235 (treatment with high concentration of venom does not change the electrical activity of nerve cord of *Schistocerca gregaria* Forsskål, Acrididae), 236 (venom very active on locomotor system of honeybee, even when introduced into haemolymph); Steiner, 1986:112 (references to publications on nesting habits); Pagliano, 1987:159 (Italy, in key to Italian Philanthinae); Scobiola-Palade, 1987:65 (Romania: Dobrogea); Schmidt and Westrich, 1987:358 (Germany: Mainz area); Tormos and Jiménez, 1987a:127 (Spain: Valencia Province), 1987b:317 (Spain: Valencia Province: Dehesa de El Saler); Veenendaal, 1987:169 (nest parasite: *Hedychrum rutilans* Dahlbom, Chrysididae); Asís and Jiménez, 1988:276 (Spain: Castellón Province); Chevin, 1988:16 (France: La Manche Department); Dollfuss, 1988:19, 30 (Austria: Bisamberg near Vienna; Niederösterreich: Oberweiden); Düweke, 1988:689 (Germany: Baden-Württemberg: Kaiserstuhl); Evans and O'Neill, 1988:192 (review of male behavior, nesting habits, and natural enemies); Karsai, 1988:101 (Hungary: Kiskunság National Park); H. Kollar, 1988:23 (nesting at foot of loess cliffs); Kowalczyk, 1988a:45 (Poland: Rogów), 1988b:64 (Poland: environs of Łódź); Pagliano, 1988:138 (in revision of Italian Philanthinae); Pulawski, 1988:34 (petition to ICZN to preserve name); Riemann, 1988:223 (Germany: Bremen area); Wolf, 1988b:143 (Germany: Rheinland-Westfalen); Al-Houty, 1989:162 (Kuwait); Archer, 1989b:232 (Great Britain: Suffolk); Borsato, 1989:201 (Italy: Lombardia: Busatello marsh); Hamon, 1989:45 (support of petition to ICZN to preserve name); Jacobs, 1989:28 (Germany: Mecklenburg-Vorpommern); Józán, 1989:102 (Hungary: Tihany Natural Reserve); Lomholdt, 1989:45 (support of petition to ICZN to preserve name); Pádr in Šedivy, 1989a:166 (in checklist of Czechoslovakian Sphecidae); Scobiola-Palade, 1989:87 (Romania: delta of Danube); Spofford, Kurczewski, and Downes, 1989:259, 261 (references to publications on nest parasites *Senotainia trilineata* (Wulp), a miltogrammine

fly, and undetermined species of Miltogrammini); Weiffenbach, 1989:107 (Germany: Hessen: Gießen area); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Gayubo, Asís, and Tormos, 1990b:80 (Spain); Jacobs and Oehlke, 1990:215 (new records from Democratic Germany); Kuznetzova, 1990:18 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Schmidt, McDaniel, and Simon Thomas, 1990:2135 (chemistry of male mandibular gland secretions); Kowalczyk, 1990:290 (Poland: Góry Świętokrzyskie); Pagliano, 1990:95 (in catalog of Italian Sphecidae); Riemann and Melber, 1990:120 (northwestern Germany: *Calluna*-meadows); Rohe, 1990:1049 (Germany: Rheinland-Pfalz: Lenneberg forest); Schwammberger and Priesner, 1990:553 (Austria: Kärnten); Day, 1991:xviii (summary of European Endangered Hymenoptera Lists); Archer, 1991a:34 (Great Britain: Isle of Wight); Chinin, 1991:111 (Russia: Samara Oblast'); Dollfuss, 1991:212 (in key to Sphecidae of North and Central Europe); Gayubo, 1991a:127 (characteristics of species); Gayubo, Borsato, and Osella, 1991:419 (Italy); Gayubo and Torres, 1991:Table I and p. 81 (Spain: Salamanca; effects of urban pressure); Guichard, 1991a:338 (Jordan); Idriss, 1991:95 (action of philanthotoxin on frog and locust muscles); Jacobs, 1991:46 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtalldünen); Jakubzik, 1991:74 (Germany: Köln); Józán, 1991:605 (Hungary: Bátorliget Nature Reserve); Karst and Piek, 1991:479 (action of philanthotoxins); Karst, Piek, Van Marle, Lind, and Weeren-Kramer, 1991:471 (action of philanthotoxins); Kowalczyk, 1991a:89, 99, 101 (Poland: Łódź), 1991b:120 (Poland: Augustów Forest); Kuhlmann et al., 1991:92 (Germany: Senne Region); Negrisolo, 1991:323 (Italy: Gorizia, Trieste, and Venezia provinces); Schembri, 1991:177 (Malta); Benson, Schürmann, Kaufmann, Gsell, and Piek, 1992:267 (action of philanthotoxins); H.-J. Schulz, 1991:30 (Germany: Oberlausitz: 5 km southwest of Wittichenau); Budrys, 1992:29 (in list of Sphecidae of Lithuania); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Gayubo, Borsato, and Osella, 1992:290 (Greece, Spain); Gunnardo, 1992:59 (Sweden: Varmländ); Harvey and Payne, 1992:185 (Great Britain: Essex: new sites); Haeseler, 1992:354 (possibly not native on Frisean Islands); Józán, 1992a:230 (Hungary: Béda-Karapanca Protected Area), 1992c:290 (Hungary: Zselic Hills); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Archer, 1993:46 (Great Britain: Channel Islands); Else, 1993a:163 (southern England); Gorobchishin, 1993:47 (Ukraine: Kanev Nature Reserve); Kuhlmann, 1993:76 (Germany: known from Westfalen); Luchetti, 1993:105 (Italy: Sardegna: Maddalena archipelago); Piek, 1993:104 (venom blocks central neural system of honeybee prey, prey paralysis by peripheral effect on muscle contraction); Schubert and Schönlitzer, 1993:264 (facial fovea not found); Torregrosa, Gayubo, Tormos, and Asís, 1993:20 (Spain: Alicante Province); Wiśniowski, 1993a:98 (Poland: in checklist of Sphecidae of Białowieża Primeval Forest); Archer, 1994b:104 (British Channel Islands); Blagoveshchenskaya, 1994:91 (Russia: Ul'yanovsk Oblast'); Gayubo and Borsato, 1994:219 (Italy: Valle d'Aosta, Liguria, Veneto, Toscana, Sardegna); Gess and Gess, 1994:100 (visiting flowers of *Aspalathus linearis* (Burm.), Fabaceae); Guichard, 1994a:209 (Arabian Peninsula); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Theunert, 1994c:49 (Germany: summary of records from Niedersachsen and Bremen); Tormos, Asís, and Gayubo, 1994:190, 225 (Spain: Albacete Province); Baumgarten, 1995:35 (parasite: *Hedychrum rutilans*, a chrysidid); Else, 1995a:24 (records from southern England for 1993), 1995b:205 (records from southern England for 1994); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Krasnobayev et al., 1995:139 (Russia: Zhiguli Hills northwest of Samara); Negrisolo, 1995a:18 (visiting flowers of *Eryngium maritimum* L., Apiaceae), 19 (visiting flowers of *Echinophora spinosa* L., Apiaceae, Germany: Bayern: Mainfranken); Schmid-Egger, Risch, and Niehuis, 1995:187 (color photograph), 205 (summary of records from Germany: Rheinland-Pfalz Province); Yeo and Corbet, 1995:41 (in field guide to British solitary wasps); Archer, 1996a:59 (Great Britain: Channel Islands); Arens, 1996:442 (Germany: Bayern: Bayreuth area); Blösch, 1996:7 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Fowles, 1996:15 (Great Britain: Red Data Book species recorded from Wales), 36 (Great Britain: in checklist of aculeates of Wales); Gadallah, 1996:69 (in revision of Egyptian *Philanthus*); S. Gess, 1996:269, 294 (floral records); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Harvey and Plant, 1996:81 (Great Britain: summary of records from Essex); Jakubzik, 1996:253 (Germany: Nordrhein-Westfalen: Köln); Jakubzik and Cölln, 1996b:400 (Germany: Rheinland-Pfalz); Kuhlmann, 1996:220 (Portugal: Serra de Estrela); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Pawlikowski

and Kruszyński, 1996:87 (Poland: Toruń Basin); Ruinet, 1996:109 (nesting and preying, using sun for navigation); Saure, 1996:503 (Germany: Berlin-Pankow: sewage irrigation field); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: not endangered); Tischendorf, 1996:47 (Germany: Hessen: near Bensheim); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); von der Dunk and Amon, 1996:41 (Germany: Bayern: Altdorf sand dunes east of Nürnberg); Witt, 1996:106 (Germany: Brandenburg); Woydak, 1996:98 (Germany: Westfalen: summary of distribution and nesting habits); Wu and Zhou, 1996a:162 (in revision in Economic Insect Fauna of China); Al-Houty, 1997:161 (Kuwait: no specific locality); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:292 (in Sphecidae Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland); Dörfel, 1997:71 (nesting habits described for general public); Else in R. Edwards, 1997:86 (Great Britain and Ireland: distribution, status, habitat, flight period, prey, nesting habits, flowers visited, map of distribution in Great Britain by Archer and Roberts); Hansen, 1997:189 (southeastern Norway, first country records); Madl, 1997:821 (Madagascar: Island of Nosy Boraha), 822 (in checklist of Nosy Boraha Sphecidae); Nazarova and Shomirsaidov, 1997:24 (Tajikistan: fruit tree orchards in Vakhsh River valley); Petit, 1997:351 (Belgium: Liège Province: Lanaye: colonization of new habitat); Schmidt and Schmid-Egger, 1997:26 (in checklist of German Sphecidae); Strohm and Linsenmair, 1997a:423 (more sons are produced when prey is restricted), 1997b:23 (minimum prey number to produce a daughter is three; smaller females produce more sons); Archer, 1998b:158 (Great Britain: Lincolnshire: Gibraltar Point National Nature Reserve); F. Burger, Saure, and Oehlke, 1998:29 (Germany: in list of Sphecidae of Brandenburg); Dollfuss, Gusenleitner, and Bregant, 1998:525 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km west-southwest of Hamburg); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); Gorobchishin, 1998a:50 (Ukraine: Kiev and surroundings); Haeseler and Ritzau, 1998:51 (Germany: Bremen: Steller Heide); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); Józán, 1998:312 (Hungary: Duna-Dráva National Park); Lefebvre, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); Nazarova, 1998:42 (Tajikistan: Tigrovaya Balka Nature Reserve); Petit, 1998a:109 (Belgium: Bassenge, visiting flowers of *Polygonum cuspidatum* Siebold and Zucc., Polygonaceae); N. Schneider and Wahis, 1998:22 (Luxemburg: sandstone quarries); H.-J. Schulz, 1998c:113 (Germany: Lausitz: former military training area near Mücka); Strohm and Linsenmair, 1998:330 (females produce more sons than daughters, regardless of weather conditions); van der Smissen, 1998:67 (Germany: Niedersachsen, Schleswig-Holstein); K. Weber, 1998:147 (Germany: Bayern: Bamberg area); Anan'eva and Kochetkov, 1999:6 (Russia: Ryazan Oblast: no specific locality); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Herrmann, 1999:7 (Germany: Niedersachsen: Oldenburg area; habitats size); Ljubomirov, 1999b:57 (Bulgaria: Mount Vitosha near Sofia); Mandery, 1999:106 (Germany: Bayern: Coburg area); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:111 (in catalog of Belgian aculeates); Petit, 1999:111 (Netherlands: Kruispolder, Nieuw-Namen); Riemann, 1999:835 (Germany: Niedersachsen: sand pits near Bremen); H.-J. Schulz, 1999:193 (Germany: Sachsen: city of Görlitz); M. Schwarz, 1999:88 (Austria: Oberösterreich: city of Linz area); Skibińska, 1999:96 (in Białowieża Primeval Forest, Poland, not recorded since Bischoff, 1925); Tüzün, Gülmez, and Bağrıaçık, 1999:385 (Turkey: Aegean Region); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:405 (in Sphecidae Fauna of Germany); Cartier, 2000a:74 (France: Hauts-de-Seine: Rueil-Malmaison); Cölln and Jakubzik, 2000:226 (Germany: Rheinland-Pfalz: Gönnersdorf); Dressler, 2000:33 (Germany: Hessen: Darmstadt area); Esenbekova and Kazenas, 2000:70 (southeastern Kazakhstan: six localities); Gayubo, González, and Torres, 2000:187 (Spain: Salamanca Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:110 (Greece); Gibbs, 2000:4, 13 (Great Britain: Bristol: Troopers Hill); Grace, Yates, and Triplet, 2000:12, 20 (Great Britain: East Sussex: Rye Bay area); Jacobs, 2000:9 (Germany: Land Mecklenburg-Vorpommern: not endangered); R. Jones, 2000:181 (Great Britain: central London); Józán, 2000:113 (Hungary: Bakony Mountains); Kuhlmann, 2000:64 (Germany: Hessen: Diemel River valley); Ljubomirov, 2000:6, 13 (Bulgaria, specimens in N. Nedelkov collection); M. Mader and Chalwatzis, 2000:60 (Germany: Hessen: Oderwald Mountains); Mokrousov, 2000b:32

(Russia: Nizhniy Novgorod Oblast'); Moore, 2000:201 (nest sharing); Nachtigall, 2000:6 (wing bending and folding during flight without or with prey); Neumeyer, 2000:99 (Switzerland: Basel); Pijfers, 2000:5 (Netherlands: Twente Region); Schmalz, 2000:20 (Germany: Hessen: Fulda area); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); M. Schwarz, 2000:9 (Austria: Oberösterreich: city of Linz area); Shkuratov, 2000:55 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Strohm, 2000a:184 (factors affecting body size and fat content), 2000b:52 (preserving prey against fungi); Strohm and Lechner, 2000:183 (male size does not affect territorial behavior and nesting habits traits); Strohm and Linsenmair, 2000:173 (allocation of parental investment); Vicidomini, 2000b:26 (Italy: previously recorded from Campania); Basset, 2001:85 (France: Département de Gironde); Ivanov and Ljubomirov, 2001:213 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia), 244 (review of known biology); Kazenas and Esenbekova, 2001:136 (Kazakhstan: Almatinskiy Nature Reserve); Mazzucco, 2001:203 (Austria: Niederösterreich: Steinfeld); Ohl et al., 2001:141 (distribution in Germany by provinces); Reemer and van der Meer, 2001:16 (Netherlands: along Almelo-Nordhorn canal); Shkuratov, 2001:17 (prey: honeybee); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Strohm and Linsenmair, 2001:198 (preserving prey against fungus infestation); Strohm, Laurien-Kehnen, and Bordon, 2001:50 (spatial and temporal strategies against *Hedychrum rutilans* (Dahlbom), Chrysididae); Strømgaard, Andersen, Krogsgaard-Larsen, and Jaroszewski, 2001:317 (structure of the most active fraction of the venom of *Philanthus triangulum*, originally known as δ -philanthotoxin, now renamed philanthotoxin-433°); Tüzün, 2001:44 (Turkey); van der Smissen, 2001:63 (Germany: Schleswig-Holstein: not endangered); Zettel, Gross, and Mazzucco, 2001:80 (Austria: Wien); Archer, 2002b:130 (Great Britain: Watsonian Yorkshire: distribution map), 2002d:11 (Great Britain: Worcestershire: Hartlebury Common 17 km north of Worcester); Archer and Edwards, 2002:103 (Great Britain: West Sussex: Ambersham and Iping commons); Beavis, 2002:112 (Great Britain: Kent: Tunbridge Wells area); Bieri, 2002:78 (Liechtenstein); Herrmann and Zinnert, 2002:26 (Germany: Baden-Württemberg: Bettenberg near Konstanz); Józán, 2002:54 (Hungary: Mecsek Mountains); Kazenas, 2002a:136 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:155 (Poland: Kampinos National Park near Warszawa); Litt, 2002:166 (Belgium); Lukáš, 2002:191 (Slovakia: Hájníca hill near Trenčianske Bohuslavice); Reemer and van der Meer, 2002:Bijlage 5 (Netherlands: Gelderland: Zaltbommel area); C. Schlüter, 2002:141 (Germany: Niedersachsen: anthropogenic habitats in Ammerland District); Shlyakhtenok and Skibinska, 2002:35 (Belorussia: no specific locality); Söderman and Vikberg, 2002:54 (in list of Aculeata of Finland); Strohm and Marliani, 2002:52 (cost of parental investment); Vischer, 2002:289 (Germany: Sachsen-Anhalt: vineyards in Saale-Unstrut area); von der Dunk and Amos, 2002:159 (Germany: Bayern: Schwaig near Nürnberg); Ziska, 2002:9 (Germany: Berlin-Köpenick: Krumme Lake); Cölln, Esser, and Jakubzik, 2003:63 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:141 (Croatia, France, Germany, Italy, Morocco, Spain: miscellaneous locality records); Flügel, 2003:9 (Germany: Hessen: Knüllwald); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); S. Gess and F. Gess, 2003:130 (Namibia, South Africa: visiting flowers of *Galenia sarcophylla* Fenzl, Aizoaceae, *Calicorema capitata* (Moq.) 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Mey. ex Sond. and *Zygophyllum stapfii* Schinz, Zygophyllaceae); Gorobchishin, 2003:48 (Ukraine: Kiev: botanical garden); Haeseler, 2003:340 (Germany: Niedersachsen: Island of Harriersand near Bremen); Herzner, Schmitt, Linsenmair, and Strohm, 2003:237 (flagellar sensillae in female and male); Józán, 2003:228 (Hungary: Látványi Pusztá Nature Conservation Area); Lukáš, 2003:73 (Slovakia: Bratislava: old fruit orchard); Mandery, Kraus, Voith, Wickl,

Scheuchl, Schubert, and Warncke, 2003:69 (Germany: in catalog of wasps and bees of Bayern); Pulawski, 2003b:799 (in checklist of Malagasy Sphecidae); Reemer, 2003:62 (Netherlands: Gelderland: Zaltbommel area); Schmid-Egger, 2003:756 (Italy: Sicilia: Vendicari; Malta: Ramla); H.-J. Schulz, 2003:8 (Germany: active colony in the city of Görlitz); Strohm and Daniels, 2003:749 (female reproductive success depends on density on inner mitochondrial membranes); Tischendorf and Treiber, 2003:121 (Germany: Hessen: 15 km southwest of Frankfurt am Main: nesting under high power lines); von der Dunk and Niedling, 2003:181 (Germany: Bayern: Zeckern north of Erlangen); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Archer, 2004a:47 (Great Britain: Worcestershire: Devils Spittleful Nature Reserve), 2004e:76 (Great Britain: Yorkshire: Dandall Beat Wood, southern Washlands, Pollington quarry), 2004h:44 (Great Britain: Watsonian West Norfolk: Roydon Common); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Gadallah and Assery, 2004a:218 (Saudi Arabia: in key to Sphecidae of Jeddah Region), 232 (in catalog of Sphecidae of Saudi Arabia: south and west of Jeddah, Obhor), 2004b:1398 (skeletal parts of sting apparatus); Gorobchishin, 2004:34 (Ukraine: Zaporiz'ka Oblast': Obitichna Kosa Nature Reserve); Gorobchishin and Protsenko, 2004:40 (Ukraine: Kherson Oblast': Chernomorskiy Nature Reserve); Hellrigl, 2004a:174 (Italy: Trentino-Alto Adige, as Südtirol: Vahr; Vinschgau = Val Venosta: Sigmundskron near Bozen = Bolzano, Staben); Kaltenpoth, Strohm, and Gadau, 2004:589 (primer sequences for 14 polymorphic microsatellite loci); Kazenas, 2004b:111 (Kazakhstan: western Tien Shan), 2004d:35 (Kazakhstan: shores of Ural River); Klein and Lefebvre in Peeters, van Achterberg, et al., 2004:416 (in Wasp and Ant Fauna of Netherlands); Litt, 2004:222 (Switzerland: Valais: Varone); Majzlan and Deván, 2004:30 (Slovakia: Sekule), 33 (Slovakia: Malacky-Široké); Nazarova, 2004:108 (Tajikistan: Badakhshan Region: Rushan District: villages Dasht and Visav in Bartang River valley); Protsenko and Gorobchishin, 2004:108 (Ukraine: Kiev: floral records); Raemakers, van den Eijnde, and Kleukers, 2004:292 (Netherlands: Tungelerwalle near Weert); Reissmann, 2004:1 (male territorial pheromones); Shkuratov, 2004a:73 (Russia: Rostov Oblast'), 2004b:165 (Russia: Rostov Oblast': Gosudarstvennyi Muzei-Zapovednik M.A. Sholokhova); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Tannert and von der Dunk, 2004:135 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Wiśniowski, 2004:52 and 63 (in checklist of Polish Sphecidae); Archer, 2005c:57 (Great Britain: Suffolk County); Blösch, 2005:5 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Burger, 2005:35 (Germany: Thüringen); Cheeseborough, 2005:17 (Great Britain: Shropshire County: Lyth Hill near Shrewsbury); Cruz-Sánchez, Gayubo, González, and Torres, 2005:221 (Spain: Salamanca: San Martín del Castañar); Ebrahimi, 2005:130 (in key to selected Iranian Sphecidae); Fuhrmann, 2005:89 (Germany: Nordrhein-Westfalen: Grubengelände Littfeld Nature Reserve); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Hallin, 2005:16 (Sweden: Örebro County: Hällefors); Herzner, Schmitt, Linsenmair, and Strohm, 2005:1411 (male pheromone contains long-chain alcohol (Z)-11-eicosen-1-ol, also found in cuticle of honeybee); Jacob and Remacle, 2005:62 (Belgium: Luxembourg Province: quarry Haut des Loges in Vance); Jacobs, 2005a:449 (Bulgaria: Arkutino near Burgas, Michurin, Plovdiv, Primorsko); Kaltenpoth, 2005:329 (bacteria cultivated in female antennal glands are used to protect honeybee prey from fungal infestation); Kaltenpoth, Göttler, Herzner, and Strohm, 2005:475 (females cultivate a new species of bacterium *Streptomyces* in specialized antennal glands and apply them to nest cell prior to oviposition; bacterium protects cocoon from fungal infestation); Kofler, 2005:184 (Austria: Tirol: Lienz District: city of Lienz, Untergaimberg in Gaimberg Common); Kowalczyk and Kurzac, 2005:106 (Poland: Botanical Garden in Łódź); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Landeck, Wöhler, and Landgraf, 2005:18 (Germany: Lausitz Region: visiting flowers of *Reseda luteola* Linnaeus, Resedaceae); Mandery, 2005:174 (Germany: Bayern: Hainberg Nature Reserve near Nürnberg); Mokrousov and Selivanova, 2005:754 (Russia: Voronezh Oblast'); Nazarova, 2005:94 (alfalfa fields in southwestern Tajikistan); Pagliano and Negrisolo, 2005:304 (in Sphecidae Fauna of Italy); Pijfers, 2005:49 (Netherlands: Twente: Noordelijke Manderheide); Riemann and Hohmann, 2005:564 (Germany: Niedersachsen: city of Bremen and adjacent area); Saure, 2005:18 (Germany: Berlin); Schmalz, 2005:58 (references to XIXth century authors); Shorenko, 2005a:168 (Ukraine: Crimea), 2005b:99

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Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Gayubo, González, Tormos, and Asís, 2009:365 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:625 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:263 (Bulgaria: Maleshevska Planina); Józán, 2009:167 (Croatia); Kowalczyk, Kurzac, and Nadolski, 2009:63 (Poland: between Warta and Widawka rivers); Mokrousov, Antropov, Ruchin, and Bugayev, 2009:79 (Russia: Republic of Mordovia); Nemkov, 2009b:143 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Kaltenpoth, Schmitt, and Strohm, 2009:219 (hydrocarbons in antennal gland secretion of females); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:72 (Norway: locality records); Ruchin, Antropov, and Shibayev, 2009:170 (Russia: Republic of Mordovia); Shorenko, 2009:369 (in list of Sphecidae *sensu lato* of Crimea); Szczepko and Wiśniowski, 2009:71 (Poland: Spała Landscape Park); Vago, 2009:front cover (France: Pas-de-Calais: Wissant); van Diemen, 2009:49 (Netherlands: airbase Gilze-Rijen); Archer, 2010a:52 (Great Britain: Watsonian Nottinghamshire: Spalford Warren), 2010b:99 (Great Britain: Watsonian Staffordshire: Cannock Chase Country Park); Bitsch, 2010:117 (in supplement to vol. II of Faune de France, 1997: recent biological observations reported; two Italian subspecies reported; recent records from France reported); Burguet *in* Durand and Burguet, 2010:40 (France Département d'Ardèche: Ardèche Gorges); Esser, Fuhrmann, and Venne, 2010:38 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Falk, 2010:94 (Great Britain: heathland sites in West Midlands region); Ghazi-Soltani, Ebrahimi, Iranipour, and Pour Abad, 2010:801 (Iran: East Azerbaijan: several localities); Ghazi-Soltani, Khaghaninia, and Shahim, 2010:638 (Iran: East Azerbaijan: Horand Forests); Hable, Krauss,

von der Dunk, and Wickl, 2010:28 (Germany: Bayern: Sulz- and Ottmaringer Tal); Johansson, 2010:121 (Sweden: Småland: upper Emå river valley); Kroiss, Lechner, and Strohm, 2010:295 (male territoriality and mating system); Mokrousov, 2010a:63 (Russia: Nizhniy Novgorod Oblast', Chuvash Republic, Republic of Mordovia: no specific localities), 2010c:108 (Russia: Chuvash Republic: State Nature Reserve "Prisurskiy"); Polidori, Bevacqua, and Andrietti, 2010:12 (females prey in mornings and evenings when activity of nest parasite *Hedychrum rutilans* Dahlbom, Chrysidae, decreases); Rudoiskatel', 2010:147 (Russia: central and southern Ural Mountains); Saure, 2010a:88 (Germany: Berlin-Reinickendorf: Baumberge), 2010b:175 (Germany: Berlin-Reinickendorf: airport Tempel and Flughafensee Protected Area); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: relatively common); Shorenko and Kononov, 2010:30 (Ukraine: many localities); Smetana, Roller, Beneš, Bogusch, Dvořák, Holý, Karas, Macek, Straka, Šima, Tyrner, Vepřek, and Zeman, 2010:102 (Western Slovakia: recorded from Borská nížina); 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Kaltenpoth, Showers Corneli, Dunn, Weiss, Strohm, and Seger, 2012:2 (accelerated evolution of mitochondrial genome); Polidori, García, and Nieves-Aldrey, 2012:280 (study of female antennal sensillae); Prisniy, 2012:52 (Russia: Belgorod Oblast'); Saure, 2012b:230 (Germany: Berlin-Spandau: Spandauer Forst); Shibayev and Polumordvinov, 2012:278 (Russia: Penza Oblast'); Strumia, Pagliano, and Gayubo, 2012:57 (Italy: Toscana: Riserva di San Rossore); Tripotin, 2012:23 (France: Seine-Maritime: estuary of Seine River); Yildirim, 2012:77 (Turkey: Adana, Bayburt, and Erzurum provinces); Zettel, 2012:78 (Austria: Niederösterreich: Golitsch, Mittelberg, and Windmühle); Akulov and Proshchalykin, 2013:118 (Russia: Siberia: Krasnoyarsk Kray: Krasnoyarsk, Minusinsk,

and 12 km east of Minusinsk); Archer, 2013b:119 (Great Britain: Leicestershire: suburban garden in Leicester); Flügel, 2013a:120 (Germany: Brandenburg: Pimpinellenberg near Oderberg); El-Hawagry, Khalil, Sharaf, Fadl, and Aldawood, 2013:65 (Saudi Arabia: Al-Baha Province: Jebel El-Baher); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:359 (in new catalog of Sphecidae of Saudi Arabia); Kazenas, 2013a:135, 136 (color photographs of adult wasps, short information on geographic distribution and nesting habits); Koehler, Doubský, and Kaltenpoth, 2013:1 (symbiont-mediated antibiotic production provides efficient long-term protection of offspring); Mokrousov, Ruchin, and Egorov, 2013:203 (Russia: Republic of Mordovia: Mordovian State Nature Reserve); Pankov, 2013:231 (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); Saure, 2013:21 (Berlin: Treptow-Köpenick: Gosener Wiesen); A. Scholz and Liebig, 2013:26 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Shlyakhtenok, 2013:238 (in annotated catalog of aculeate wasps of Belorussia); Vieira, Oliveira, Brewster, and Gayubo, 2013:20 (Portugal: Douro International Natural Park); Wiśniowski and Szczepko, 2013:47 (Poland: Kampinos National Park near Warszawa); Zettel, Zimmermann, and Wiesbauer, 2013:14 (Austria: Wien: Donaupark); Baldock, 2014:360 (Spain: Island of Mallorca); Dunford, Turbyville, and Leavengood, 2014:10 (listed as medically important in Afghanistan); Ebrahimi, 2014:48 (Iran: Alborz, Ardebil, Āzarbāijān-e Gharbi, Āzarbāijān-e Sharghi, Esfahān, Fārs, Gilān, Golestān, Hormozgān, Markazi, Māzandarān, and Tehrān provinces); Flügel, 2014:255 (Brandenburg: Hangelsberger Heide); U. Frommer, 2014:28 (Germany: Hessen: Lorch); Ghahari, Hayat, Lavigne, and Ostovan, 2014:1385 (prey of asilid fly *Aneomochtheus macropygus* Tsakas), 1408 (prey of asilid fly *Saropogon platynotus* (Loew)); Hellqvist, Abenius, and Norén, 2014:94 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Józán, 2014:133 (Croatia: Meka Draga: Kruševo); Kazenas, 2014a:138 (Kazakhstan: Karatau Mountain Range); Madl, 2014a:1006 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records); Mokrousov and Vafin, 2014:60 (Russia: Republic of Tatarstan); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Pagliano, 2014:99, 100 (specimens in M. Spinola collection, Torino, are *Philanthus tiangulum*); Protsenko, Fateryga, and Ivanov, 2014:39 (Crimea: many localities); Ruchin and Antropov, 2014:38 (Russia: Republic of Mordovia); Schmid-Egger, 2014:591 (United Arab Emirates); Yıldırım, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Archer, 2015:202 (Great Britain: English coastal sand dunes); Atbaei, Fallahzadeh, and Ljubomirov, 2015:20 (Iran: Fars Province, as *triangulum triangulum*); Koçak and Kemal, 2015:149 (in checklist of Hymenoptera of Turkey); Lett, 2015:5 (France: Loir-et-Cher: Gièvre); Mokrousov and Egorov, 2015:426 (Russia: Republic of Mordovia: Nature State Reserve Prisuskiy); Rezaei and Fallahzadeh, 2015:14 (Iran: Fars: Kaftarak at 29°34'N 52°41'E); P. Rosa and Pagliano, 2015:105 (Italy: Lombardia and Piemonte: Parco del Ticino); Samin, Bagriacik, and Monaem, 2015:197 (Iran: Ilam: Abdanan; Kermanshah: Kermanshah; and Khorasan: Sabzevar); Saure, 2015:15 (Germany: Berlin-Lichterfelde); Schedl, 2015:948 (Austria: Tirol: Innsbruck: Botanical Garden); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine and Seine-Maritime Department: Anneville-Ambourville); Voigt, 2015:70 (Germany: Schleswig-Holstein: Sorgwohld area); Bleidorn, Gerth, Hopfe, et al., 2016:10 (Germany: Sachsen: Trages circa 20 km south of Leipzig); Cölln and Jakubzik, 2016:18 (Germany: Rheinland-Pfalz: Vulkaneifel District); Else, Bolton, and Broad, 2016:49 (in checklist of Aculeata of Great Britain and Ireland: England, Wales); Engl, Bodenstein, and Stroh, 2016:271 (fungi, particularly *Aspergillus flavus*, are constant threat to larval provision); Kemal and Koçak, 2016:33 (Turkey: Van: in list of Pterygota of Artos Mountain); Mokrousov and Popov, 2016:593 (Russia: Abkhazia, Adygea, Krasnodarskiy Krai); Reemer and Peeters, 2016:10 (Netherlands: Hulshorsterzand); Sadeghi, Fallahzadeh, Ostovan, Ljubomirov, and Hesami, 2016:431 (Iran: Fars Province); Saure, 1916c:205 (Germany: center of Berlin: Großer Tiergarten Park); A. Scholz, 2016:72 (Germany: Sachsen: Kleinraschützer Heide); U. Sörensen, 2016:427 (Germany: Schleswig-Holstein: der Ochsenweg south of Leck); Stolle and Saure, 2016:925 (Germany: in list of Sphecidae *sensu lato* of Sachsen-Anhalt); Yıldırım, Ljubomirov, Özbek, and Yüksel, 2016:21 (Turkey: Adıyaman, Aydın, Bayburt, Erzurum, Ordu, Şanlı, Trabzon, and Tunceli provinces); Arens, 2017a:638 (Greece: Peloponnesos);

Burguet and Durand, 2017:9 (France: Puy-de-Dôme: basin of river Crouël); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Dollfuss, 2017b:1258 (locality records from Afrotropical Region: Benin, Cameroon, Central African Republic, Ethiopia, Guinea, Kenya, Madagascar, Malawi, Mali, Mozambique, Namibia, Senegal, South Africa, Tanzania, Zambia, and Zimbabwe; and Palearctic Region: Albania, Algeria, Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, Finland, France, Germany, Greece, Hungary, Iran, Iraq, Israel, Italy, Jordan, Kyrgyzstan, Montenegro, Morocco, Oman, Pakistan, Portugal, Romania, Saudi Arabia, Slovakia, Spain, Sudan, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Ukraine, and Yemen); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:82 (Iran: known from Alborz, Ardabil, East Azerbaijan, Fars, Golestan, Guilan, Hormozgan, Isfahan, Kermanshah, Lorestan, Markazi, Mazandaran, Qazvin, South Khorasan, Tehran, and West Azerbaijan provinces); Magdalou, 2017:16 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane, Julols, Mas Larrieu); Shorenko, 2017:81 (in Crimea collected in May through November); Twerd, Krzyżyński, Waldon-Rudzionek, and Olszewski, 2017:6 (Poland: Inowrocław and Janikowo: nesting in postindustrial soda ash dumping sites); Jacobi and Suárez, 2018:20 (Canary Islands: first record from Island of Fuerteventura); Kemal and Koçak, 2018:34 (Turkey: in list of pterygot insects of Van Province); Kraus and Wickl, 2018: (Germany: Bayern: Nürnberg); Shorenko, 2018:131 (Crimea, including localities, habitats, and number of specimens); Ben Khedher, Yildirim, Braham, and Chaaban, 2019:193 (known from Tunisia: Tozeur Province); Carminati, Mora, and Cretin, 2019:27 (France: in list of Sphecidae *sensu lato* of Franche-Comté); Mokrousov, Proshchalykin, Aliyev, and Maharramov, 2019:15 (Azerbaijan: Nakhichevan Autonomous Republic); Olszewski and Kowalczyk, 2019:108 (northern Poland: Pomorze Gdańskie = Gdańsk Pomerania); Ruchin and Antropov, 2019a:13245 (Russia: Mordovia State Nature Reserve); Shorenko, 2019:211 (among the commonest sphecids species in Crimea); Weiser, 2019:10 (Germany: Baden-Württemberg: Schwetzingen Hardt: colonization of deforested area); Yalnız and Tüzün, 2019:16 (Turkey: Adana Province: no specific locality, as *triangulum triangulum*); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Ghaderipour, Khayrandish, Madjdzadeh, Ebrahimi, and Schmid-Egger, 2020:120 (Iran: Kerman); Kareem, Al-Khshemawee, Al-Husseinawy, 2020:3748 (Iran: Wasit Province: Al Kut; detailed description); Kejval, Blažej, and Erhart, 2020:118 (western Czech Republic); J.-K. Kim, D.-E. Kim, and H.-S. Lee, 2020:42 (first record from South Korea: many localities); Örgel, Anlaş, and Tezcan, 2020:639 (Turkey: Manisa Province); Saure, 2020:277 (Germany: Sachsen-Anhalt: sand dunes); Shorenko, 2020:51 (Crimea: Karadag Nature Reserve); Cross, Baldock, and Wood, 2021:67 (in catalog of Sphecidae *sensu lato* of Portugal); Gadallah, Abu el-Ghiet, and Edmardash, 2021:1718 (Saudi Arabia: Jazan Province); Girish Kumar, Monks, and Sheikh, 2021:2 (in key to Indian *Philanthus*), 19 (in review of Indian *Philanthus*); Kaplan and Yildirim, 2021:102 (in catalog of Crabronidae of Turkey); Olszewski, Wiśniowski, and Ljubomirov, 2021:99 (in commented list of Sphecidae *sensu lato* of Poland); Saure, 2021:83 (Germany: Brandenburg: Nature Reserve Ferbitzer Bruch near Potsdam); Can, 2022a:222 (supernumerary vein in forewing, incomplete 1r-m crossvein); Jakubzik and Cölln, 2022:11 (Germany: Rheinland-Pfalz: Moselle River valley between Drohn and Kattenes); Malash, Edmardash, and Gadallah, 2022:64 (in catalog of Middle Eastern and North African Philanthinae); Olszewski and 15 coauthors, 2022:2 (predicted range extension in Europe as result of climate warming); Pytel-Huta, Skyrpan, Tsaryk, Shydlovskyy, and Khamar, 2022:54 (western Ukraine); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Schmidt, 2022:286 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Langfeld, 2023:61 (Germany: Mecklenburg-Vorpommern: Baltic island Greifswalder Oie); Yildirim, Anlaş, and Tezcan, 2023:1943 (Turkey: Ankara, İzmir, and Manisa provinces); Gadallah and Abu El-Ghiet, 2024:91 (Saudi Arabia: Jazan Province: Abu Arish, Fayfa); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution); Pytel-Huta and Franchuk, 2024:88 (Ukraine: Rivno Nature Reserve); Gülmez, Çubuk, and Can, 2025:186 (Turkey: Çanakkale: Kelkit River Valley, as *triangulum triangulum*).

Vespa fasciata Geoffroy in Fourcroy, 1785:433, sex not stated. Holotype or syntypes: France: Paris area (destroyed). Synonymized with ...

Sphex apifalco Christ, 1791:270, [♀]. Syntypes: ♀, Germany: one region mentioned is Elevische, currently unused name, located in Nordrhein-Westfalen near Kleve (destroyed). New synonym based on the description of damage to apiculture.

Sphex scutellatus maculatus Christ, 1791:287, ♀, ♂ (as *scutellata maculata*, incorrect original termination). Syntypes: Germany: no specific locality (lost). Synonymized with *Philanthus triangulum* by ... – Turton, 1801:483, 492 (redescription).

Vespa limbata Olivier, 1792:... Synonymized with *Philanthus triangulum* by Vander Linden, 1829:124 (or an earlier author?).

Crabro androgynus Rossi, 1792:138, sex not stated. Holotype or syntypes: Italy: Toscana: Pisa area (destroyed). Synonymized with *Philanthus apivorus* by Spinola, 1806:96. – Curtis, 1829:pl.273 (illustration); Guérin-Ménéville, 1835:pl. 71, Fig. 8 (illustrations of various morphological details), 1844:442 (explanations of his 1835 figure, *androgynus* is a junior synonym of *triangulum*).

Philanthus pictus Panzer, 1797, Heft 47:23, [♂]. Holotype or syntypes: ♂, Austria: Carinthia [= Kärnten]: no specific locality (depository?). Synonymized with *Philanthus apivorus* by Panzer, 1806:173 and with *Philanthus triangulum* by Herrich-Schaeffer, 1840:296. – Fabricius, 1804:302 (redescription); Thunberg, 1815b:289 (diagnostic characters), 295 (redescription); Dahlbom, 1845:XXIV (specimens in collection Fabricius examined); Peets, 1909-1911:68 (*Philanthus pictus* of Panzer = *Philanthus triangulum*). – **As *Simblephilus pictus***: Jurine, 1807:188 (new generic assignment, listed).

Philanthus discolor Panzer, 1799, Heft 63:18, [♂]. Holotype or syntypes: ♂, Germany: Bayern: Nürnberg: “Horti nostri botanici” [= Our botanical gardens] (depository?). Synonymized with *Philanthus apivorus* by Panzer, 1806:173. – von Siebold, 1839:53 (Germany: Danzig, now Poland: Gdańsk); Peets, 1909-1911:68 (*Philanthus discolor* of Panzer = *Philanthus triangulum*). – **As *Philanthus triangulum* var. *discolor***: Kirschbaum, 1853:46 (new status, Germany: Herzogtum Nassau: Mainz-Mombach and Weilburg). – **As *Simblephilus discolor***: Jurine, 1807:188 (new generic assignment, listed).

Philanthus apivorus Latreille, 1799:50, sex not stated. Syntypes: France: Paris area (lost). Synonymized with *Philanthus pictus* by Fabricius, 1804:302 and with *Philanthus triangulum* by Lepeletier de Saint Fargeau, 1845:34. – Latreille, [1805]:314 (redescription); Spinola, 1806:95 (Italy: Liguria); Guérin-Ménéville, 1828a:367 (in Dictionnaire classique d’histoire naturelle); Ghiliani, 1842:25 (listed from Italy: Sicilia after Fabricius); de Saussure, 1854:8 (belongs to a section with sessile gaster); Lucas, 1867:288 (nesting habits); Pérez, 1880:V (preying on honeybee); Laboulbène, 1895:180 (preying on *Apis mellifera*); Acloque, 1897:82 (in Sphecidae Fauna of France and Algeria); Dusmet y Alonso, 1906:7 (Spain); Ferton, 1910:15t5 (sand closure of nest cell); Dusmet y Alonso, 1915:87 (Spain: Aragón); Coulon, 1925:117 (France, Spain, Romania); Lhéritier, 1946:28 (Morocco: Marrakech, preying on honeybee, nocturnal resting sites); Diniz, 1959:27 (Portugal: Porto); Casolari and Casolari Moreno, 1980:122 (specimens in M. Spinola collection, Torino); Pagliano, 2014:99, 100 (specimens in M. Spinola collection, Torino, are *Philanthus triangulum*).

Philanthus allionii Dahlbom, 1845:495, ♀ (as *Allionii*, incorrect original capitalization). Holotype or syntypes: ♀, Prussia: no specific locality (depository?). Synonymized with *Philanthus triangulum* by Kohl, 1891:366. – von Kiesenwetter, 1849:89, footnote (Spain); Gasperini, 1887:16 (Dalmatia: Island of Lissa, now Croatia: Island of Vis); Dalla Torre, 1897:492 (in catalog of world Hymenoptera, as *allwini*); de Beaumont, 1953h:197 (type material not represented in Dahlbom’s collection in Lund). – **As *Philanthus triangulum* var. *allionii***: Sichel, 1861:752 (new status, Italy: Sicilia).

ssp. *abdelcader* Lepeletier

Philanthus abdelcader Lepeletier, 1845:33, ♀, ♂ (as *Abdelcader*, incorrect original capitalization). Syntypes: Algeria: Oran (M. Spinola collection, Torino). – Lucas, 1849:257 (Algeria: Alger, Bône, now Annaba, Constantine, La Calle, now El Kala, Oran; original description copied with modifications; as *A’bd-el-K’âder*); Belke, 1859:70 (Ukraine: Kamieniec Podolski, as *abdelender*); Walker, 1871:28 (Egypt: Heliopolis; and Hor Tamanib; as *abdelkader*); A.

Costa, 1875:13 (Egypt, as *abdelkader*), 18 (Egypt: between Fayum and Nile, as *abdelkader*); Lucas, 1880:CXXXVII (Egypt: Ramlé near Alexandria); Girard, 1881:CXXVIII (Algeria: Palestro; pest of honeybee); Kohl, 1891:366 (as synonym of *Philanthus triangulum*); Acloque, 1897:82 (in Sphecidae Fauna of France and Algeria, as *abd-el-kader*); Innes Bey, 1912:102 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected at Heliopolis, Egypt, as *Abd el Kader*); Roth, 1917:63 (nesting habits, as *abdelkader*), 1924:124 (Algeria: Nemours, now Ghazaouet); Lhéritier, 1946:28 (Morocco: Marrakech, prey, nocturnal resting sites, as *Abd-el-Kader*); Bradley, 1957:49 (Lepeletier's specimens in M. Spinola collection, Torino); Al-Ali, 1977:100 (Iraq: Baghdad); Casolari and Casolari Moreno, 1980:122 (specimens in M. Spinola collection, Torino, as *abdel-kader*); Pagliano, 2014:100 (specimens in M. Spinola collection, Torino, are *Philanthus triangulum abdelcader*). – **As *Trachypus abdel-kader***: Casolari and Casolari Moreno, 1980:122 (new generic assignment, specimens in M. Spinola collection); Pagliano, 2014:99 (specimen in M. Spinola collection, Torino, is *Philanthus triangulum abdelcader*). – **As *Philanthus diadema* var. *abdelkader***: Gribodo, 1880:400 (new status, Tunisia); A. Costa, 1893b:8 (Tunisia); Graeffe, 1906:455 (Tunisia: Tunis area); von Schulthess in Friederichs, 1918a:48 (Madagascar: Antananarivo). – **As *Philanthus triangulum* var. *abdelkader***: von Schulthess, 1909:441 (Libya: Dernah); Mochi, 1939a:90 (in revision of Egyptian *Philanthus*). – **As *Philanthus triangulum* f. *abdelkader***: Balthasar, 1954b:279 (new status, Palestine: Jerusalem and Jericho). – **As *Philanthus triangulum abdelcader***: von Schulthess, 1914:286 (new status, Cameroon, as *Philanthus triangulum* var. *Abdelkader*); Guiglia, 1934b:295 (Libya: bibliography and summary of locality records, as *abdelkader*); de Beaumont, 1949b:180 (in revision of northwest African *Philanthus*), 1950f:396 (Algeria, Morocco), 1953g:118 (Morocco), 1956a:183 (Libya); Guiglia, 1957:144 (Italy: Isole Pelagie); de Beaumont and Bytinski-Salz, 1959:141 (Israel); de Beaumont, 1960b:229 (Libya); Guiglia, 1960:360 (Italy: Isole Pelagie: Lampedusa); Derwesh, 1965:71 (Iraq: no specific locality); de Beaumont, 1966:211 (Egypt: Abukir); Krombein, 1969a:8 (preying on honeybee in Egypt); Myartseva, 1972a:91 (Turkmenistan); Abdul Rassoul, 1976:31 (Iraq: Sulaimaniya: Sitak, as *abdelkader*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Guichard, 1980:230 (Oman); Roche and Zalut, 1994:117 (Egypt: Sinai Peninsula); Pagliano, 1990:95 (in catalog of Italian Sphecidae: Island of Lampedusa); Negrisola in Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna: Sicilia); Pagliano and Scaramozzino, 1995:730 (Italy: Island of Lampedusa); Pagliano, 2003b:129 (Italy: Island of Pantelleria); Roche, 2007a:125 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Smit and de Boer, 2008:897 (first record from Canary Islands: Tenerife: Costa Adeje near Los Christianos); Ben Khedher, Yildirim, and Braham, 2021b:3 (Tunisia: many localities); Malash, Edmardash, and Gadallah, 2022:64 (in catalog of Middle Eastern and North African Philanthinae), 2023:158 (in key to Egyptian *Philanthinus* and *Philanthus*), 178 (in revision of Egyptian *Philanthinus* and *Philanthus*).

ssp. *bimaculatus* Magretti

Philanthus triangulum var. *bimaculatus* Magretti, 1908:188, ♂ (as *bimaculatum*, incorrect original termination). Syntypes: Kenya: Nairobi and Lumbwa (MNH). – **As *Philanthus triangulum bimaculatus***: R. Bohart and Menke, 1976:566 (new status, in checklist of world Sphecidae).

ssp. *diadema* (Fabricius)

Crabro diadema Fabricius, 1781:471, sex not stated. Holotype or syntypes: South Africa: Cape of Good Hope (BMNH, Banks coll.). – Fabricius, 1787:297 (redescription), 1790:225 (redescription); Olivier, 1792:517 (redescription); Fabricius, 1793:289 (redescription). – **As *Sphex diadema***: Thunberg, 1791:126 (new generic assignment, specimens donated to Academia Upsaliensis). – **As *Simblephilus diadema***: Jurine, 1807:188 (new generic assignment, in list of *Simblephilus*) and pl. 10, Fig. 18 (illustration of habitus); Frei-Gessner, Kohl, and Kriechbaumer, 1882:393 (Jurine's specimens are *Philanthus triangulum*). – **As *Philanthus diadema***: Fabricius, 1790:224 (new generic assignment, redescription), 1793:289 (redescription), 1796:137 (in Index to his Entomologia Systematica, 1793), 155 (here incorrectly in *Sphex*); Coquebert, 1804:96 (original description copied), pl. XXII, Fig. 1 (Fabrician type illustrated); Fabricius, 1804:302 (redescription); Panzer, 1806:173 (is probably a variety of *Philanthus pictus*); Thunberg, 1815a:127

(diagnostic characters), 129 (redescription), 1815b:287 (diagnostic characters); Dahlbom, 1845:XXIV (study of type material), 495 (in key to world *Philanthus*); von Kiesenwetter, 1849:88, footnote (Italy: Sicilia); F. Smith, 1856:471 (in catalog of Hymenoptera in British Museum); Walker, 1871:28 (Egypt: Cairo, Heliopolis); Radoszkowski, 1876b:137 (Egypt); Girard, 1879:928 (morphology and habits); Gribodo, 1884a:8 (Egypt: Cairo); de Saussure, 1892:534 (Madagascar); Friese, 1900:268 (Madagascar: Nosy-Be); W. Schulz, 1911b:170 (Gribodo's specimen from Somalia is *Philanthus triangulum*); Innes Bey, 1912:102 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected at Cairo, Egypt); Schouteden, 1930:93 (Zaire); Skaife, 1953:335 (preying on honeybee); Casolari and Casolari Moreno, 1980:122 (specimens in M. Spinola collection, Torino); Pagliano, 2014:99, 100 (specimens in M. Spinola collection, Torino, are *Philanthus triangulum diadema*). – **As *Philanthus triangulum* var. *diadema***: Taschenberg, 1875:404 (new status, Egypt); Gribodo, 1894c:129 (Mozambique: Magnarra River), 1895:351 (Mozambique); Dalla Torre, 1897:493 (in catalog of world Hymenoptera); Magretti, 1898:52 (Somalia: Daua); Bingham, 1902:212 (South Africa, Malawi); Cameron, 1908a:269 (Tanzania: Mount Kilimanjaro and Mount Meru), 1910:145 (South Africa: Transvaal); Bischoff, 1912:225 (Zaire: Kassenge at Lake Edward); Gribodo, 1924b:48 (Libya: Cirene); Arnold, 1925:144 (in revision of southern African *Philanthus*); Zanon, 1926:90 (Libya: Fueihat 15 km south of Benghazi, as *triangolum*); Guiglia, 1928:499 (Somalia), 1929:396 (Libya: Cirenaica: Cirene), 1932:125 (Eritrea: Cheren); Arnold, 1930:10 (in checklist of Afrotropical Sphecidae); Scott in Arnold, 1933a:369 (Ethiopia: Harar District); Bischoff, 1933:5 (Morocco); Guiglia, 1938b:8 (Italy: Sardegna); Giordani Soika, 1939c:101 (Eritrea: Adi Caie); Guiglia, 1939a:199 (Ethiopia, Eritrea), 1939b:90 (Ethiopia: Lake Tana: Bahar-Dar), 1940b:287 (Somalia), 1943c:75 (Ethiopia: Gamo Gofa: Sagan – Omo region), 1944a:145 (Cyprus: Cherkas), 1950:232 (Ethiopia: Gamo Gofa: Asile); Pittioni, 1950:21 (Cyprus); Leclercq, 1955i:408 (Burundi); I. Robertson, 1969:480 (Tanzania: Ukiriguru). – **As *Philanthus triangulum diadema***: Guiglia, 1934b:296 (new status, Libya: bibliography and summary of locality records); van der Vecht, 1961a:61 (discussion of type material); de Beaumont, 1967b:505 (South Africa: KwaZulu-Natal); Bonelli, 1976:228 (nesting habits); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Steiner, 1986:112 (references to publications on nesting habits); Pagliano, 1990:95 (in catalog of Italian Sphecidae: Sardegna?); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna); van Vondel, 1995:25 (specimens from Cameroon in Natuurmuseum Rotterdam); S. Gess, 1996:280 (floral records); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Malash, Edmardash, and Gadallah, 2022:65 (in catalog of Middle Eastern and North African Philanthinae); Madl, 2023:259 (in catalog of Crabronidae of Eritrea).

Philanthus frontalis Gerstaecker in Peters, 1858:509, ♀. Holotype or syntypes: ♀, Mozambique: no specific locality (ZMHU). Synonymized with *Philanthus triangulum* var. *diadema* by Arnold, 1925:144. – Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:486 (in catalog of world Hymenoptera); Magretti, 1906:20 (Eritrea).

Philanthus frontalis Gerstaecker, 1862:473, ♀. Objective synonym of *Philanthus frontalis* Gerstaecker, 1858.

Philanthus transversus Cameron, 1910:147, ♂. Holotype or syntypes: ♂, South Africa: Transvaal: no specific locality (TMP). Synonymized with *Philanthus triangulum diadema* by Brauns, 1917:241.

ssp. *obliteratum* Pic

Philanthus triangulum v. nov. *obliteratum* Pic, 1917:2, sex not stated (as *obliteratus*, incorrect original termination). Syntypes: Algeria and Egypt: no specific localities (originally M. Pic collection, now MNHN?). – **As *Philanthus triangulum obliteratus***: R. Bohart and Menke, 1976:566 (new status, in checklist of world Sphecidae); Gadallah, 1996:70 (in revision of Egyptian *Philanthus*, unknown to author); Roche, 2007a:126 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Malash, Edmardash, and Gadallah, 2022:65 (in catalog of Middle Eastern and North African Philanthinae, as *obliteratus*).

121. *tricinctus* Gimmerthal (preoccupied)

Philanthus tricinctus Gimmerthal, 1836:448, sex not stated (as *tri-cincus*, incorrect original hyphenation), junior primary homonym of *Philanthus tricinctus* Spinola, 1805, and of *Philanthus tricinctus* Thunberg, 1815 (both now in *Cerceris*). Holotype or syntypes: Liefland, now Latvia: no specific locality (depository unknown). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae).

122. *tricolor* Fairmaire

Philanthus tricolor Fairmaire, 1858:265, sex not stated. Holotype or syntypes: Gabon: no specific locality (MNHN?). – Dalla Torre, 1897:493 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:101 (specimens in M. Spinola collection, Torino, are *Philanthus tricolor*).

123. *turneri* Arnold

Philanthus turneri Arnold, 1925:155, ♀, ♂ (as *Turneri*, incorrect original capitalization). Syntypes: South Africa: Western Cape Province: Ceres (BMNH). – Arnold, 1930:10 (in checklist of Afrotropical Sphecidae); de Beaumont, 1967b:505 (South Africa: Western Cape Province: Swartberpas); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); S. Gess and F. Gess, 2003:131 (determination tentative, Namibia: visiting flowers of *Limeum argute-carinatum* Wawra and Peyr., Molluginaceae).

124. *variegatus* Spinola

Philanthus variegatus Spinola, 1839:484, ♀, ♂. Lectotype: ♀, Egypt: no specific locality (Torino), designated by de Beaumont, 1952e:49. – Spinola, 1843b:XXXVI (represented in Berlin Museum under the name *Philanthus mystacinus*). – Magretti, 1884a:250 (Sudan), 1884c:594 (Sudan: Sawakin); Radoszkowski, 1888a:325 (male genitalia); Kohl, 1891:360 (redescription), 366 (in checklist of world *Philanthus*); Radoszkowski, 1892:579 (reference to Radoszkowski, 1888a); Vachal, 1893:CCLXV (Algeria: Biskra); Dalla Torre, 1897:493 (in catalog of world Hymenoptera); Longstaff, 1911:125 (Sudan: Khartum); Morice, 1911:93 (Algeria: Biskra); Mercet, 1914:447 (in revision of Spanish Philanthinae); von Schulthess, 1926b:212 (Algeria, Tunisia, Libya); Kruger, 1929a:21 and 1929b:56 (Libya: Cyrenaica: Bardia); Guiglia, 1934b:296 (Libya: bibliography and summary of locality records), 1936:4 (Libya: Fezzan: Gatron); Mochi, 1939a:94 (in revision of Egyptian *Philanthus*); Guiglia, 1940a:280 (Libya: Garian), 1942b:230 (Libya); de Beaumont, 1949b:183 (in revision of northwestern African *Philanthus*), 1957b:131 (northern Iran); de Beaumont and Bytinski-Salz, 1959:143 (Israel); de Beaumont, 1961a:202 (geographic variation), 1962c:221 (Arabia: El Riyadh); Myartseva, 1963b:61 (Turkmenistan: lower Murgab River), 1965:92 (Turkmenistan: Akibay and Murgab district); de Beaumont, 1967a:278 (Turkey: variation); Kazenas, 1970b:366 (Kazakhstan), 1972b:124 (Kazakhstan: Ayak-Kalkan on Ili River in Alma Ata Oblast'); Myartseva, 1972a:91 (Turkmenistan); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Kazenas, 1978b:48 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:187 (in key to Sphecidae of European part of USSR); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Guichard, 1980:230 (Oman); Al-Houty, 1989:162 (Kuwait: Abdelli, Al-Wafra, Sulabiya, as *variegatus* Dufour); Kazenas, 1992c:28 (Turkmenistan: Repetek Nature Reserve); Guichard, 1994a:210 (Arabian Peninsula); Gadallah, 1996:74 (in revision of Egyptian *Philanthus*); Al-Houty, 1997:161 (Kuwait: no specific locality); Nazarova, 1998:42 (Tajikistan: Tigrovaya Balka Nature Reserve); Esenbekova and Kazenas, 2000:71 (southeastern Kazakhstan: 5–8 km east of Bakanas, Borandysu, 3 km northeast of Borandysu, 10 km northwest of Chundzha, near landing place Dubun' on Ili River); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:136 (geographic distribution, collecting localities in Kazakhstan); Gadallah and Assery, 2004a:219 (Saudi Arabia: in key to Sphecidae of Jeddah Region), 232 (in catalog of Sphecidae of Saudi Arabia: Hadasham 120 km east of Jeddah); Kazenas, 2004b:111 (Kazakhstan: western Tien Shan); Yildirim and Ljubomirov, 2005:1806 (Turkey: Erzurum: Horasan, Tortum; Kars: Sarikamis); Hua, 2006:281 (in list of Chinese insects, geographic distribution); Roche, 2007a:127 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabroni-

- dae, as *variegatus variegatus*), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae, as *variegatus variegatus*); Ljubomirov and Yildirim, 2008:129 (in catalog of Crabronidae of Turkey); Murai and Amr, 2011:114, 120 (first record from Syria: Al Thawrah Nature Reserve at 35°51'N 28°38'E); Sakenin, Samin, Bagriacik, and Rastegar, 2011:3 (Iran: East Azerbaijan: Arasbaran); Schmid-Egger, 2011b:574 (United Arab Emirates: Jebel Hafit south of al-Ain, Wadi Bih, Wadi Hayl, Wadi Shawkah), 575 (color photographs of male and female); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:359 (in new catalog of Sphecidae of Saudi Arabia); Kazenas, 2013b:499 (southeastern Kazakhstan: Borandysu 30 km east of Chilik, 10 km northwest of Chilik, landing place Dubun' on Ili River); Ebrahimi, 2014:49 (Iran: Ardebil, Kermān, and Māzandarān provinces); Kazenas, 2014a:138 (Kazakhstan: Karatau Mountain Range); Pagliano, 2014:101 (specimens in M. Spinola collection, Torino, including lectotype, are *Philanthus variegatus* and *Philanthus* sp.); Schmid-Egger, 2014:591 (United Arab Emirates); Yildirim, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:150 (in checklist of Hymenoptera of Turkey); Danilov and Mokrousov, 2017b:255 (in catalog of Philanthinae of Russia); Dollfuss, 2017b:1265 (locality records from Algeria, Iran, Kazakhstan, Kyrgyzstan, Mali, Morocco, Syria, Tunisia, Turkey, and Turkmenistan); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:83 (Iran: known from Ardabil, East Azerbaijan, Kerman, Mazandaran, and Qazvil provinces); Mokrousov, Proshchalykin, Aliyev, and Maharramov, 2019:15 (Azerbaijan: Nakhichevan Autonomous Republic); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Rezaei, Fallahzadeh, Dousti, and Saghaei, 2020a:198 (Iran: Fars: Larestan); Kaplan and Yildirim, 2021:102 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:65 (in catalog of Middle Eastern and North African Philanthinae), 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 179 (in revision of Egyptian *Philanthinus* and *Philanthus*); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae *sensu lato* of Turkey); Gadallah and Abu El-Ghiet, 2024:91 (Saudi Arabia: Jazan Province: Abu Arish, Fayfa); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:429 (Uzbekistan: distribution).
- Philanthus mystacinus* Spinola, 1843b: XXXVI, sex not stated, origin unknown, specimen(s) in Berlin Museum, as junior synonym of *Philanthus variegatus*. Not available: first proposed as a junior synonym (Article 11.6).
- Philanthus osbecki* Dahlbom, 1845:496, ♀ (as *Osbecki*, incorrect original capitalization). Syntypes: ♀, Egypt: no specific locality (Stockholm). Synonymized with *Philanthus variegatus* by Kohl, 1891:366, synonymy confirmed by de Beaumont, 1949b:183.
- Philanthus kizilkumi* Radoszkowski, 1876b (as *Kizilkumi*, incorrect original capitalization). Nomen nudum.
- Philanthus kizilkumi* Radoszkowski, 1877:53, ♀, ♂ (as *Kizilkumi*, incorrect original capitalization). Syntypes: Kazakhstan: Bairakum, Karak, and Syr-Daria steppe (ZMMU). Synonymized with *Philanthus variegatus* by Pulawski, 1978:187. – Radoszkowski, 1886a:35 (Turkmenistan), 1888a:324 (male genitalia); Kohl, 1891:364 (in checklist of world *Philanthus*); F. Morawitz, 1891a:229 (Russia: Astrakhan Governorate); Radoszkowski, 1892:579 (reference to Radoszkowski, 1888a); Dalla Torre, 1897:487 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:565 (in checklist of world Sphecidae); Kazenas, 2001b:51 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:135 (geographic distribution, collecting localities in Kazakhstan).
- Philanthus distinguendus* Kohl, 1891:361, ♂. Syntypes: ♂, Egypt: no specific locality (NHMW). Synonymized with *Philanthus variegatus* by de Beaumont, 1949b:183. – Kohl, 1891:364 (in checklist of world *Philanthus*); Dalla Torre, 1897:485 (in catalog of world Hymenoptera); Dollfuss, 1989:11 (type material in NHMW).
- Philanthus palestinensis* Balthasar, 1954b:279, ♂. Holotype: ♂, Israel: Yarkon Esser Torchanot near Tel-Aviv (originally V. Balthasar coll., now NMPC). Synonymized with *Philanthus variegatus* by Bytinski-Salz in de Beaumont and Bytinski-Salz, 1959:143.

ssp. *ecoronatus* Dufour

- Philanthus ecoronatus* Dufour, 1854a:380, ♂. Syntypes: ♂, Algeria: Pontéba, now Oumm ed Drou (MNHN). – Dalla Torre, 1897:485 (in catalog of world Hymenoptera). – **As *Philanthus variegatus ecoronatus***: de Beaumont, 1949b:185 (new status, in revision of northwestern African *Philanthus*), 1950f:396 (Algeria), 1953g:119 (Morocco);

Balthasar, 1954b:280 (Palestine: Jericho); de Beaumont, 1956a:184 (Libya; Chad: Tibesti), 1960b:229 (Libya; variation); van der Zanden, 1967:176 (Algeria: Biskra; as *variegatus coronatus*); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Gadallah, 1996:74 (in revision of Egyptian *Philanthus*, first record from Egypt); Ben Khedher, Yildirim, and Braham, 2021b:3 (Tunisia: many localities); Malash, Edmardash, and Gadallah, 2022:66 (in catalog of Middle Eastern and North African Philanthinae), 2023:159 (in key to Egyptian *Philanthinus* and *Philanthus*), 179 (in revision of Egyptian *Philanthinus* and *Philanthus*).

Philanthus sepтрalis Radoszkowski, 1888a:323, ♀, ♂ (authorship attributed to Dufour). Syntypes: Algeria: no specific locality (Kraków?). Synonymized with *Philanthus variegatus* by Kohl, 1891:366, and with *variegatus ecoronatus* by de Beaumont, 1949b:184. – Radoszkowski, 1890b:507 (Armenia: Mount Ararat), 1892:579 (reference to Radoszkowski, 1988a); De Stefani Perez, 1895:227 (in catalog of Sicilian Hymenoptera, as *sepтрalis* Duf.).

ssp. *nabataeus* Bytinski-Salz

Philanthus variegatus nabataeus Bytinski-Salz in de Beaumont and Bytinski-Salz, 1959:144, ♀, ♂. Holotype: ♂, Israel: Revivim (originally coll. H. Bytinski-Salz, now Tel-Aviv Univ.). – Pulawski, 1967c:387 (Sudan: Khor Musa Pasha south of Wadi Halfa); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:66 (in catalog of Middle Eastern and North African Philanthinae).

125. *variolosus* Arnold

Philanthus variolosus Arnold, 1932:8, ♀. Holotype: ♀, Ethiopia: Dire-Daua District (Zool. Mus. Hamburg, destroyed in World War II). – R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Dollfuss, 2017b:1265 (locality records from Etiopia and Kenya, description of ♂).

126. *ventilabris* Fabricius

Philanthus ventilabris Fabricius, 1798:268, sex not stated. Holotype or syntypes: USA: Carolina (North or South?): no specific locality (probably the specimens in ZMUC, see van der Vecht, 1961a:62). – Coquebert, 1799:96 (original description copied), pl. XXII, Fig. 2 (Fabrician type illustrated); Fabricius, 1799:29 (in Index to his Supplementum, 1798), 1804:303 (redescription, as *ventilabris*); Thunberg, 1815b:288 (diagnostic characters, as *ventilabris*), 292 (redescription, as *ventilabris*); Say, 1828:112 (redescription); Dahlbom, 1845:XXIV (study of type material, as *ventilabris*); Klug, 1846:42 (belongs to subsection *Anthophilus* of *Philanthus*; as *ventilabris*); F. Smith, 1856:474 (in catalog of Hymenoptera in British Museum); Le Conte, 1859a:112 (reprint of Say, 1823); Cresson, 1862:237 (in catalog of North American Hymenoptera, as *ventilabris*), 1865c:98 (in revision of North American Philanthinae); Packard, 1866:55 (in key to North American *Philanthus*), 57 (bibliographic references, geographic distribution); Cresson, 1873:227 (Texas), 1875:717 (Colorado, New Mexico); Snow, 1881:95 (in checklist of Hymenoptera of Kansas: Wallace County: no specific locality); Cresson, 1887:281 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Cameron, 1891a:131 (listed, as *ventilabris*); Kohl, 1891:370 (in checklist of world *Philanthus*); C. Robertson, 1892:108 (visiting flowers of *Pycnanthemum lanceolatum* Pursh and *P. linifolium* Pursh, Lamiaceae); W. Fox, 1894c:106 (Mexico: Baja California); Robertson, 1894:454 (visiting flowers of *Solidago missouriensis* Nutt., Asteraceae), 1896:73 (visiting flowers of *Polygonum hydropiperoides* Michx., Polygonaceae); Dalla Torre, 1897:494 (in catalog of world Hymenoptera, as *ventilabris*); Dunning, 1897:69 (Illinois); Bridwell, 1899:209 (Kansas: no specific locality); Cockerell, 1899a:141 (New Mexico); Howard, 1901:p. 3, fig. 33 (..., as *ventralis*, a lapsus); Viereck, 1903d:120 (Maryland: Chestertown); Viereck and Cockerell, 1904b:144 (in revision of *Philanthus* of New Mexico); G. Peckham and E. Peckham, 1905:166 (preying on bees); H. Smith, 1908b:358 (in revision of Nebraskan Sphecidae, as *ventilabris*); J. Smith, 1910:678 (in new list of insects of New Jersey, as *ventilabris*); Rohwer, 1916b:673 (in catalog of Hymenoptera of Connecticut); Stevens, 1917:421 (North Dakota, as *ventilabris*); Mickel, 1918b:389 (in catalog of Nebraskan Sphecidae, as *ventilabris*); Washburn, 1919:219 (in list of Hymenoptera of Minnesota); Rohwer in Viereck, 1925:673 (in key to Sphecidae of Connecticut, not yet found in the State); J.Ch. Bradley, 1928:1016 (in catalog of New York Sphecidae, as *ventilabris*); Krombein, 1936:94

(New York: Buffalo, gregarious nesting, as *ventilabris*), 99 (floral records); Brimley, 1938:447 (North Carolina: Raleigh to Anson County east and south, as *ventilabris*); Strandtmann, 1945b:151 (in review of North American *Philanthus*), 1946:26 (in revision of North American *Philanthus*); Dreisbach, 1947:142, 143 (in key to *Philanthus* of Michigan, as *ventilabris*), 145 (Michigan: locality records); Strickland, 1947:128 (Canada: Alberta: Lethbridge, as *ventilabris*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); Krombein, 1953b:124 (visiting flowers of *Pluchea* sp., Asteraceae), 133 (North Carolina: Kill Devil Hills); Krombein and Evans, 1954:235 (Florida: Miami), 1955:234 (Florida); Evans and Lin, 1959:127 (nesting habits); Wray, 1967:124 (North Carolina: Kill Devils Hills); Alcock, 1975e:541 (male mating strategies); Alcock and Gamboa, 1975b:163 (nesting habits); R. Bohart and Grissell, 1975:5, 7 (in key to North American *Philanthus*), 17 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae); Kumar, Lavigne, Lloyd, and Pfadt, 1976:51 (USA: Colorado: Pawnee National Grassland); L. Davis, 1978:217 (North Carolina: Kill Devil Hills, data from Krombein, 1953b); Krombein, 1979b:1725 (in catalog of North American Hymenoptera, nesting sites, list of prey); Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection Torino, as *ventilabris*); Fennimore, 1982:242 (in Sphecidae Fauna of southern Quebec); Radović, 1985:66 (sting apparatus analyzed); Evans and O'Neill, 1988:165 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:256 (reference to publication on nest parasite *Metopia argyrocephala* (Meigen), a miltogrammine fly); Kurczewski and Acciavatti, 1990:61 (New York: Cayuga County); Ahlstrom, 1995:113 (in checklist of insects of North Carolina); Blades and Maier, 1996:72 (Canada: British Columbia: Osoyoos - Mount Kobau area at 119°40'W 49°05'N); Kurczewski, 1998d:250 (pine barrens in upstate New York); Amarante, 2002:64 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Ohl and Linde, 2003:151 (number of ovarioles); Buck, 2004:27 (Canada: in checklist of Crabronidae of Ontario); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Pagliano, 2014:104 (specimens in M. Spinola collection, Torino, as *ventilabris*, are *Philanthus ventilabris*); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from R. Bohart and Grissell, 1975 and Krombein, 1979); Dollfuss, 2017b:1266 (Florida: Leon County: Tallahassee); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, Ontario, Quebec, Saskatchewan, first record from Manitoba and New Brunswick: no specific locality). – **As *Simblephilus ventilabris***: Jurine, 1807:188 (new generic assignment, in list of *Simblephilus*). – **As *Anthophilus ventilabris* [sic]**: Dahlbom, 1845:XXIV (new generic assignment, study of type material, new generic assignment), 497 (in key to *Anthophilus*). – **As *Pseudanthophilus ventilabris***: Ashmead, 1899d:294 (new generic assignment, type species of new genus *Pseudanthophilus*), 296 (in checklist of North American Crabronidae, as *ventralis* Fabricius); J. Smith, 1900:520 (in list of insects of New Jersey); Rau and Rau, 1918:116 (nesting habits, as *ventilabris*).

Philanthus frontalis Cresson, 1865c:99, ♂, junior primary homonym of *Philanthus frontalis* Gerstaecker, 1858. Lectotype: ♂, USA: Colorado: Rocky Mountains: no specific locality (ANSP), designated by Cresson, 1916:100. Synonymized with *Philanthus ventilabris* by Burks in Muesebeck, Krombein, and Townes, 1951:1002. – Packard, 1866:5 (in key to North American *Philanthus*), 57 (bibliographic reference, geographic distribution); Cresson, 1876:207 (Utah: Spring Lake); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:367 (in checklist of world *Philanthus*); Strickland, 1947:128 (Canada: Alberta: Lethbridge, Medicine Hat). – **As *Philanthus ventilabris* var. *frontalis***: Patton, 1879d:355 (new status, USA: northwestern Kansas); Dalla Torre, 1897:494 (in catalog of world Hymenoptera); Bridwell, 1899:209 (Kansas: no specific locality); Cockerell, 1899a:141 (New Mexico), 1901:43 (visiting flowers of *Melilotus albus* Desv., Fabaceae). – **As *Philanthus ventilabris* [sic] *frontalis***: Mickel, 1918b:389 (new status, in catalog of Nebraskan Sphecidae). – **As *Pseudanthophilus frontalis***: Ashmead, 1899d:297 (tentative new generic assignment, in checklist of North American Crabronidae).

Liris rugosus Provancher, 1895:130, ♂ (as *rugosa*, incorrect original termination), junior secondary homonym of *Philanthus rugosus* Kohl, 1891. Lectotype: ♂, USA: California: Los Angeles (Laval Univ.), designated by Gahan and Rohwer, 1918:29. Synonymized with *Philanthus ventralis* by Krombein, 1958f:197.

Philanthus ventralis [sic] var. *completus* Banks, 1915:406, ♂. Holotype or syntypes: ♂, USA: California: San Diego (depository?). Synonymized with *Philanthus ventralis* by Strandtmann, 1945:152.

127. *ventralis* (Mickel)

Ococletes ventralis Mickel, 1918a:329, ♀. Holotype: ♀, California: Sacramento (UNL). – Muma, 1952:21 (holotype in UNL). – **As *Philanthus ventralis***: Strandtmann, 1945b:152 (new generic assignment, in review of North American *Philanthus*), 1946:43 (in revision of North American *Philanthus*); R. Bohart and Grissell, 1975:5, 6 (in in key to North American *Philanthus*), 18 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:566 (in checklist of world Sphecidae; as new status); Krombein, 1979b:1726 (in catalog of North American Hymenoptera); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain); G. Ferguson, 1984a:295 (in revision of *Philanthus zebratus* species group); Ratzlaff, 2016:28 (Canada: British Columbia: from R. Bohart and Grissell, 1975); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: British Columbia: no specific locality).

Philanthus strandtmanni Burks in Muesebeck, Krombein, and Townes, 1951:1002. Unnecessary substitute name for *Philanthus ventralis* Mickel, 1918, nec *Philanthus ventralis* (a lapsus) of Howard, 1901:pl. 3, fig. 33.

128. *venustus* (Rossi)

Crabro venustus Rossi, 1790:94, sex not stated. Holotype or syntypes: Italy: Etruria, now Toscana: no specific locality (destroyed). – Illiger, 1807b:131 (synonymy, redescription, is not a *Crabro*). – **As *Philanthus venustus***: Lepeletier de Saint Fargeau, 1845:37 (new generic assignment, in revision of world Hymenoptera); F. Smith, 1856:468 (in catalog of Hymenoptera in British Museum); A. Costa, 1867c:97 (in revision of Italian Sphecidae); A. Costa, 1869b:113 (in revision of Italian Sphecidae); Palma, 1869:44 (Italy: Sicilia settentrionale); A. Costa, 1872a:32 (Italy: in revision of Sphecidae of Kingdom of Naples); Dours, 1874:143 (in catalog of Hymenoptera of France); Frivaldsky, 1876:354 (Hungary: Temes Komitat: Grebenáč, now in Timiș District, Romania); Girard, 1879:928 (geographic distribution); Marquet, 1881:189 (southern France); Sajó, 1882:5 (Hungary); Kohl, 1888b:727 (Austria: Tirol, now Italy: Alto Adige), 1891:366 (in checklist of world *Philanthus*); F. Morawitz, 1891a:229 (Russia: Astrakhan'); Acloque, 1897:82 (in Sphecid Fauna of France and Algeria); Dalla Torre, 1897:493 (in catalog of world Hymenoptera); Mocsáry, 1897:80 (Kingdom of Hungary, some localities are in today's Romania); Antiga and Bofill, 1904:22 (Spain: Cataluña Province); W. Schulz, 1904b:94 (Greece: Tinos; Turkey: Amasia); Ferton, 1905:66 (nesting habits); Móczár and Henter, 1907:205 (Hungary: Hatvan, Tiszaalpár); Schmiedeknecht, 1907:236 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:120 (in catalog of French Hymenoptera); Ferton, 1910:154 (sand closure of nest cell); Dittrich, 1911b:25 (Germany: Niederschlesien: Heidelgebirge, now Czech Republic: Javoří hory, record questionable for zoogeographic reasons, see Noskiewicz and Chudoba, 1949:410); Mercet, 1914:447 (in revision of Spanish Philanthinae); Szilády, 1914:89 (Hungary: Fugad); Fahringer, 1922:179 (Turkey); Maidl, 1922:69 (Albania, Croatia); Berland, 1925d:46 (in Sphecid Fauna of France); Coulon, 1925:117 (Spain); Grandi, 1928a:13 (habits of adults, prey), 1930:340 (Italy: Toscana: Maremma); Schmiedeknecht, 1930:697 (in keys to Hymenoptera of North and Central Europe); Grandi, 1931:58 (Italy: Emilia-Romagna: Cervia); Giordani Soika, 1932a:21 (Italy: Lido di Venezia); Zavadil, 1932:96 (Czechoslovakia); Bernard, 1933:61 (France: Drôme: Dieulefit, list of prey); Nadig, 1934:33 (France: Corse: Golfe de Sagone; Italy: Sardegna: Cagliari); Zavadil, 1934:188 (Slovakia); Bernard, 1935:62 (France: Var: Fréjus area); Zavadil, Šustera, and Bat'a, 1937:206 (in catalog of Sphecidae of Czechoslovakia); Móczár, 1938c:81 (Hungary: Kőszeg Hills), 1939:5 (Hungary: Jászberény); Zavadil, 1939:121 (Czech Republic: Morava: Mutěnice); Giner Marí, 1943a:113 (in Sphecid Fauna of Spain); Timon-David, 1943:29 (France: Bouches-du-Rhône: plage de Fos); Guiglia, 1944b:10 (Italy); Deleurance, 1946b:67 (France: Bouche-du-

Rhône: Camargue: Bois des Rièges); Zavdil in Zavdil and Šnoflak, 1948:165 (in key to Sphecidae of Czechoslovakia); de Beaumont, 1950a:70 (first record from Switzerland); Scobiola, 1950:19 (first record from Romania: Agigea, Mangalia); de Beaumont, 1951c:309 (in revision of European *Philanthus*); Grandi, 1954:236 (Italy); Atanassov, 1955:202 (Bulgaria: six localities); Vogrin, 1955:32 (Yugoslavia); Bytinski-Salz, 1956:224 (Turkey: Finike, Kemer); Ceballos, 1956:366 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:337 (France: Département des Pyrénées-Orientales); Bajári, 1957a:28 (in key to Hungarian Sphecidae); Balthasar, 1958:337 (Slovakia: Čenkov); Pulawski, 1958a:165 (Bulgaria: Nesebar, mouth of Ropotamo River, Varna); de Beaumont, 1959a:12 (Italy); de Beaumont and Bytinski-Salz, 1959:151 (Israel); de Beaumont, 1960a:6 (Greece: Island of Rhodes); Noskiewicz and Puławski, 1960:73 (in key to Polish Sphecidae, not yet found in Poland); de Beaumont, 1961a:209 (geographic variation); Grandi, 1961:167 (nesting habits); Atanassov, 1962:124 (Bulgaria: Petrich area); Lehrer and Scutaru, 1963:287 (Romania: Moldova: Valea David in Iași District); Ceballos, 1964:88 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:34 (in Sphecidae Fauna of Switzerland), 1965a:18 (Greece); Roberti, Frilli, and Pizzaghi, 1965:109 (Italy: Emilia-Romagna: Bobbio in Piacenza Province); Diniz, 1966:6 (Portugal: Coimbra); Scobiola-Palade, 1966b:391 (Romania: Tulcea District: C.A. Rosetti, Periprava); Balthasar, Hrubant, and Hrubant, 1967:174 (Bulgaria: Slanchev Bryag near Nessebar); de Beaumont, 1967a:279 (Turkey; variation); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Comarova, Mangalia), 1967b:39 (Romania), 1968b:141 (Romania: Island of Letea in delta of Danube); de Beaumont, 1969:82 (Turkey); Zangheri, 1969:1700 (Italy: in catalog of flora and fauna of Romagna Region); Kazenas, 1970b:366 (Kazakhstan); Tsuneki, 1971:417 (Mongolia); Balthasar, 1972:382 (in Sphecidae Fauna of Czechoslovakia); Kazenas, 1972b:124 (Kazakhstan); Krombein, 1972b:385 (Greece; nesting habits); Scobiola-Palade, 1972a:149 (Romania: delta of Danube: Caraorman); Simon Thomas, 1972:177 (France: Landes); Erlandsson, 1974:61 (Italy); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp., Tamaricaceae, and *Euphorbia* spp., Euphorbiaceae in Kazakhstan), 111 (feeding on flowers of and *Lepidium crassifolium* W. et K., Brassicaceae, in Kazakhstan); R. Bohart and Menke, 1976:567 (in checklist of world Sphecidae); Guichard, 1978:270 (Greece); Kazenas, 1978b:49 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:86 (France); Pulawski, 1978:187 (in key to Sphecidae of European part of USSR); Radović and Krnić, 1979:unpaginated foldout (nesting in sand, foreleg structure); Pagliano, 1980:124 (Italy: Basilicata); Dollfuss, 1983b:24 (in catalog of Sphecidae of Austria: Niederösterreich: Oberweiden); Gayubo, 1983e:237 (Spain: Salamanca Province); Schmidt and Westrich, 1983:125 (Greece); Gayubo and Tormos, 1984:24 (Spain: Valencia); Chevin and Chevin, 1985:39 (France: Aude); Radović, 1985:66 (sting apparatus analyzed); Scobiola-Palade, 1985:95 (Romania: delta of Danube); Piek and Spanjer, 1986:187 (in list of Sphecidae with known prey); Steiner, 1986:112 (references to publications on nesting habits); Pagliano, 1987:159 (Italy, in key to Italian Philanthini); Asís and Jiménez, 1988:276 (Spain: Castellón Province); Dollfuss, 1988:30 (Austria: Niederösterreich: Oberweiden); Evans and O'Neill, 1988:196 (review of nesting habits); Pagliano, 1988:137 (in revision of Italian Philanthinae); Pádr in Šedivy, 1989a:166 (in checklist of Czechoslovakian Sphecidae); Pagliano, 1990:95 (in catalog of Italian Sphecidae); Dollfuss, 1991:212 (in key to Sphecidae of North and Central Europe); Gayubo, 1991a:130 (characteristics of species); Gayubo, Borsato, and Osella, 1991:419 (Italy); Negrisolo, 1991:323 (Italy: Venezia Province); Gayubo, Borsato, and Osella, 1992:290 (Greece); Blagoveshchenskaya, 1994:91 (Russia: Ul'yanovsk Oblast'); Gayubo and Borsato, 1994:220 (Italy: Toscana); Roche and Zalut, 1994:116 (Egypt: Sinai Peninsula); Gorobchishin, 1995:19 (Ukraine: Kanev Nature Reserve); Negrisolo, 1995a:18 (visiting flowers of *Eryngium maritimum* L., Apiaceae), 19 (visiting flowers of *Echinophora spinosa* L., Apiaceae), 22 (Italy: Veneto); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna); Pagliano and Pesarini, 1995:92 (Italy: Ferrara Province); Gadallah, 1996:73 (in revision of Egyptian *Philanthus*, occurrence in Egypt possible); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Voblenko, Gorobchishin, and Nesterov, 1996:15 (Ukraine: Polesye Region); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:295 (in Sphecidae Fauna of Western Europe); Celary, 1997:60 (in checklist of Animals of Poland, in error); Gorobchishin, 1998a:50 (Ukraine: Kiev and surroundings); Esenbekova and Kazenas, 2000:71 (southeastern Kazakhstan: 10 km northwest of Chundzha, near

landing place Dubun', near village Kazakhstan, 5-12 km southwest of village Kazakhstan, 30 km south-southwest of Koktal); Ljubomirov, 2000:13 (Bulgaria, specimens in N. Nedelkov collection); Shkuratov, 2000:55 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Vicedomini, 2000b:26 (Italy: previously recorded from Campania); Basset, 2001:85 (France: Département de Gironde); Józán, 2001:281 (Hungary: Somogy County); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia); Shkuratov, 2000:17 (prey: *Lasioglossum* sp., a halictid bee); Kazenas, 2002a:136 (geographic distribution, collecting localities in Kazakhstan); Drewes, 2003:141 (Spain: Tarragona); Schmid-Egger, 2003:756 (Italy: Sicilia: Armerina, Ragusa); Gorobchishin and Protsenko, 2004:40 (Ukraine: Kherson Oblast': Chernomorskiy Nature Reserve); Kazenas, 2004d:36 (Kazakhstan: Khar'kino); Shkuratov, 2004a:73 (Russia: Rostov Oblast'), 2004b:165 (Russia: Rostov Oblast': Gosudarstvennyi Muzei-Zapovednik M.A. Sholokhova); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae, in error); Wiśniowski, 2004:52 (in checklist of Polish Sphecidae: recorded from Poland by Dittich, 1911, almost certainly in error); Jacobs, 2005a:449 (Bulgaria: Arkutino, Michurin, Plovdiv, Primorsko); Shorenko, 2005a:168 (Ukraine: Crimea), 2005b:99 (Ukraine: Crimea: Karadagh Nature Reserve); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: previous records summarized); Kaltenpoth, Göttler, Herzner, and Stroh, 2005:478 (presence of streptomycetes bacteria in female antennal glands); Pagliano and Negrisolo, 2005:303 (in Sphecidae Fauna of Italy); Straka, 2005a:395 (extinct in Czech Republic); Gorobchishin, 2006:144 (Ukraine: Cherkasy Oblast': Kaniv Nature Reserve, villages Keleberda and Prokhorovka); Standfuss and Standfuss, 2006b:99 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Roche, 2007a:127 (in catalog of Egyptian Ampulicidae, Sphecidae, and Crabronidae, presence in Egypt doubtful), 2007b:8 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Vepřek and Straka, 2007:209 (in catalog of Sphecidae of Czech Republic and Slovakia, known from Moravia and Slovakia only); Yildirim and Ljubomirov, 2007:119 (Turkey: Erzurum and Kars provinces); Ljubomirov and Yildirim, 2008:129 (in catalog of Crabronidae of Turkey); Baños-Picón, Asís, Gayubo, and Tormos, 2009:314 (Spain: frequency of specimens collected with hand nets and Malaise traps); Shorenko, 2009:369 (in list of Sphecidae *sensu lato* of Crimea); Bitsch, 2010:117 (in supplement to vol. II of Faune de France, 1997: recent records from Bulgaria, Greece, and Sicilia reported); Rudoiskatel', 2010:147 (Russia: southern Ural Mountains); Shorenko and Konovalov, 2010:31 (Ukraine: several localities); Tüzün and Yüksel, 2010:4474 (Turkey: Niğde Province); van der Smissen, 2010b:386 (France: Vaucluse: Bédoin); Józán, 2011:184 (in checklist of Sphecidae *sensu lato* of Hungary); Murai and Amr, 2011:114, 120 (first record from Syria: Al Thawrah Nature Reserve at 35°51'N 28°38'E); Prisiy, 2012:52 (Russia: Belgorod Oblast'); Yildirim, 2012:77 (Turkey: Erzurum: Oltu); Kazenas, 2013b:499 (southeastern Kazakhstan: 10 km northwest of Chundzha on Sharyn River, near landing place Dubun' on Ili River, 30 km south-southwest of Koktal); Shlyakhtenok, 2013:238 (in annotated catalog of aculeate wasps of Belorussia); Protsenko, Fateryga, and Ivanov, 2014:40 (Crimea: several localities); Ruchin and Antropov, 2014:38 (Russia: Republic of Mordovia); Yildirim, Ljubomirov, and Lelej, 2014:8 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:150 (in checklist of Hymenoptera of Turkey); Mokrousov and Popov, 2016:593 (Russia: Krasnodarskiy Krai); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:21 (Turkey: Erzurum and Tunceli provinces); Arens, 2017a:639 (Greece: Peloponnesos); Danilov and Mokrousov, 2017b:256 (in catalog of Philanthinae of Russia); Dollfuss, 2017b:1266 (locality records from Austria, Bulgaria, Czech Republic, Croatia, France, Greece, Hungary, Iran, Italy, Kazakhstan, Montenegro, Slovakia, Spain, Syria, and Turkey); Shorenko, 2017:81 (in Crimea collected in June through August); Madl, 2018:943 (in catalog of Hymenoptera of Djibouti, in error); Shorenko, 2018:131 (Crimea, including localities, habitats, and number of specimens), 2020:51 (Crimea: Karadag Nature Reserve); Fresno, 2021a:82 (Spain: Valencia: no specific locality; Guipúzcoa: Irún); Kaplan and Yildirim, 2021:102 (in catalog of Crabronidae of Turkey); Malash, Edmardash, and Gadallah, 2022:67 (in catalog of Middle Eastern and North African Philanthinae); K. Schmidt and Bitsch in Bitsch, Antropov, Bouček, Dollfuss, Fernández Gayubo, and K. Can and Saboori, 2023:81 (Turkey: parasitized by larvae of mite *Leptus tridentatus* Saboori, Hakimitabar and Khademi (Trombidiformes: Erythraeidae)); Kaplan and Yildirim, 2023:1691 (in checklist of Sphecidae

sensu lato of Turkey); Madl, 2023:260 (in catalog of Crabronidae of Eritrea, in error); Medetov, Embergenov, Kholmatov, Elmurodova, Rakhimov, and Tajibaeva, 2024:428 (Uzbekistan: distribution); Gülmez, Çubuk, and Can, 2025:187 (Turkey: Çanakkale: Kelkit River Valley).

Philanthus melliniformis F. Smith, 1856:469, ♂. Holotype or syntypes: ♂, Italy: Sicilia: no specific locality (BMNH). Synonymized with *Philanthus venustus* by Kohl, 1891:366. – A. Costa, 1864c:124 (Italy: Campania: Benevento area); Kirchner, 1867:220 (in catalog of European Hymenoptera); Walker, 1871:28 (Harkeko, Djibuti: Tadjurah, Egypt: Sinai: Wadi Feiran and Mount Sinai); nec Morice, 1911:93 and von Schulthess, 1926b:212 (= *Philanthus raptor*); Innes Bey, 19912:102 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected in Sinai Peninsula and in Djibuti: Tadjurah).

As *Philanthus Siboldtii* [sic]: Eversmann, 1849:399 ("in campis Kirgisorum", now Kazakhstan), present correction based on geographic distribution.

As *Philanthus venustus raptor*: Guiglia, 1941c:160 (Italy: Calabria: Grande Sila), 1944b:11 (Italy: Calabria; as var. *raptor*); Grandi, 1954:236 (Italy: Venezia).

129. *walteri* Kohl

Philanthus walteri Kohl, 1891:361, ♂ (as *Walteri*, incorrect original capitalization). Holotype: ♂, Transcaspia: no specific locality (NHMW?). – Kohl, 1891:366 (in checklist of world *Philanthus*); Dalla Torre, 1897:494 (in catalog of world Hymenoptera); R. Bohart and Menke, 1976:567 (in checklist of world Sphecidae); Kazenas, 2001b:52 (in checklist of Sphecidae of Kazakhstan and Central Asia).

130. *weneri* Maidl

Philanthus weneri Maidl, 1933:122, ♀, ♂ (as *Weneri*, incorrect original capitalization). Syntypes: ♀, ♂, Morocco: Casablanca and Maarif near Casablanca (NHMW). – de Beaumont, 1949b:186 (in revision of northwestern African *Philanthus*), 1953g:119 (Morocco); R. Bohart and Menke, 1976:567 (in checklist of world Sphecidae); Dollfuss, 1989:11 (holotype in NHMW); Malash, Edmardash, and Gadallah, 2022:67 (in catalog of Middle Eastern and North African Philanthinae).

131. *yerburyi* Bingham

Philanthus yerburyi Bingham, 1898a:106, ♀. Syntypes: ♀, Yemen: Aden (BMNH). – R. Bohart and Menke, 1976:567 (in checklist of world Sphecidae); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Malash, Edmardash, and Gadallah, 2022:67 (in catalog of Middle Eastern and North African Philanthinae).

132. *zebratus* Cresson

Philanthus zebratus Cresson, 1880a:xxxiii, ♂. Holotype: ♂, USA: Nevada: no specific locality (ANSP). – Cresson, 1887:281 (in catalog of North American Hymenoptera); Kohl, 1891:370 (in checklist of world *Philanthus*); Dalla Torre, 1897:494 (in catalog of world Hymenoptera); Cresson, 1916:101 (holotype in ANSP); Strandtmann, 1945b:152 (in review of North American *Philanthus*), 1946:46 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera); R. Bohart and Grissell, 1975:5, 6 (in key to North American *Philanthus*), 18 (in revision of *Philanthus* of California); R. Bohart and Menke, 1976:576 (in checklist of world Sphecidae); Evans, 1977d:25 (male and female behavior), 1978:32 (mating strategy); Evans and O'Neill, 1978:1901 (alternative mating strategies); Evans, 1979b:34 (male mating strategies); Krombein, 1979b:1726 (in catalog of North American Hymenoptera, nesting sites, list of parasites and prey); Gwynne and O'Neill, 1980:220-223 (male territoriality results in higher predation by Asilidae); O'Neill and Evans, 1982:798 (major prey: family and genus), 1983:175 (body size and alternative mating tactics); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain); G. Ferguson, 1984a:297 (in revision of *Philanthus zebratus* species group); O'Neil, 1885:2188 (egg and prey size; size sexual dimorphism); Evans and O'Neill, 1988:57 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:256, 257, 259 (references to publications on nest parasites *Metopia argyrocephala* (Meigen), *Phrosinella fulvicornis* (Coquillett), *Phrosinella*

fumosa Allen, and *Senotainia trilineata* (Wulp), miltogrammine flies); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands); Nechitaylo, Westermann, and Kaltenpoth, 2014:206, 207 (physiological diversity among defensive '*Streptomyces philanthi*' symbionts); Ratzlaff, 2016:28 (Canada: British Columbia: from Banks, 1913 and Krombein, 1979); Dollfuss, 2017b:1268 (Colorado:Alamosa County: Alamosa); Buck and Bennett, 2025:221 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and Greenland: Canada: Alberta, British Columbia, Saskatchewan: no specific locality). – **As *Ococletes zebratus*** Banks, 1913b:423 (new generic assignment; British Columbia: Princeton); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (new generic assignment, in catalog of North American Hymenoptera).

Philanthus basilaris Cresson, 1880a:xxxii, ♀, ♂. Lectotype: ♀, USA: Colorado: no specific locality (ANSP), designated by Cresson, 1916:99. Synonymized with *Philanthus zebratus* by R. Bohart and Grissell, 1975:19 and R. Bohart in R. Bohart and Menke, 1976:567, synonymy confirmed by Buck and Bennett, 2025:291. – Cresson, 1887:280 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado); Kohl, 1891:366 (in checklist of world *Philanthus*); Dalla Torre, 1897:483 (in catalog of world Hymenoptera); Viereck and Cockerell, 1904b:143 (in revision of *Philanthus* of New Mexico); H. Smith, 1908b:358 (in revision of Nebraskan Sphecidae); Strandtmann, 1945b:153 (in review of North American *Philanthus*), 1946:48 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1001 (in catalog of North American Hymenoptera); Krombein, 1979:1726 (as synonym of *Philanthus zebratus*); O'Neill and Evans, 1981:553 (predation by females on conspecific males), 1982:792-800 (prey use); O'Neill, 1983a:295 (territoriality, body size, and spacing in males); O'Neill and Evans, 1983b:175 (body size and alternative mating tactics); G. Ferguson, 1984a:291 (resurrected from synonymy, in revision of *Philanthus zebratus* species group); J. Schmidt, O'Neill, Fales, McDaniel, and Howard, 1985:895 (volatiles from male mandibular glands); McDaniel, Howard, O'Neill, and J. Schmidt, 1987:227 (chemistry of male mandibular gland secretions); Evans and O'Neill, 1988:45 (male behavior, nesting habits, natural enemies); Spofford, Kurczewski, and Downes, 1989:259 (reference to publication on nest parasite *Senotainia trilineata* (Wulp), a miltogrammine fly, as *basalaris*); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Kaltenpoth et al, 2006:1405 (presence of *Streptomyces philanthi* in female antennal glands). – **As *Ococletes basilaris***: Stevens, 1917:421 (new generic assignment, North Dakota); Mickel, 1918b:390 (in catalog of Nebraskan Sphecidae). *Ococletes nitens* Banks, 1913b:423, ♂ (actually ♀: G. Ferguson, 1984a:291). Holotype: ♀, Canada: British Columbia: Princeton (MCZ). Synonymized with *Philanthus zebratus* by R. Bohart and Grissell, 1975:19 and by R. Bohart in R. Bohart and Menke, 1976:567 (as new synonym). – **As *Philanthus nitens***: Strandtmann, 1945b:152 (new generic assignment, in review of North American *Philanthus*), 1946:42 (in revision of North American *Philanthus*); Burks in Muesebeck, Krombein, and Townes, 1951:1002 (in catalog of North American Hymenoptera). – **As *Philanthus zebratus nitens***: Evans, 1966c:38 (new status, nesting habits, prey), Evans, 1970:494 (Wyoming: Jackson Hole, nesting habits, list of prey).

Ococletes illustris Mickel, 1918a:327, ♀. Holotype: ♀, California: Placer County: American River (UNL). Synonymized with *Philanthus nitens* by Strandtmann, 1945b:152 (in review of North American *Philanthus*). – Muma, 1952:21 (holotype in UNL), 27 (paratype in UNL).

sp.

Cockerell, 1901:41 (visiting flowers of *Fallugia paradoxa acuminata* Wooton, Rosaceae), 41 (visiting flowers of *Fallugia micrantha* Cockerell, Rosaceae); von Schulthess, 1914:286 (Cameroon); Storey, 1916:108 (Egypt); Mellor, 1928:129 (Egypt); Nadig, 1933:97 (Morocco); de Beaumont, 1970c:4 (Iran: Baluchistan); Horning and Barr, 1970:106 (USA: Idaho: Craters of the Moon National Monument); Kumar, Lavigne, Lloyd, and Pfadt, 1976:51 (USA: Colorado: Pawnee National Grassland); van Vondel, 1995:25 (specimens from Malawi in Natuurmuseum Rotterdam); Ruíz Cancino, Coronado Blanco, and Horta Vega, 2005:170 (Mexico: recorded from Tamaulipas State); Ljubomirov

and Yildirim, 2008:130 (in catalog of Crabronidae of Turkey); Gadallah, 2020b:68 (in list of aculeate wasps of Arabian Peninsula); Barthélémy and Guénard, 2025:35 (China: Hong Kong).

FOSSIL PHILANTHUS

annulatus Theobald

Philanthus annulatus Theobald, 1937:... France: Oligocene. – R. Bohart and Menke, 1976:567 (in checklist of world Sphecidae).

saxigenus Rohwer

Philanthus saxigenus Rohwer, 1909h:535, sex not stated. Holotype: Colorado: Florissant (Colorado Univ.). Age: Oligocene. – R. Bohart and Menke, 1976:567 (in checklist of world Sphecidae).

NOMINA NUDA IN PHILANTHUS

Philanthus cruentatus: Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:100 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus dregiei: Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:100 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus duponti: Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:104 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus egregius Kohl: Kohl, 1891:364 (in checklist of world *Philanthus*); Dollfuss, 1989:11 (type material in NHMW).

Philanthus erratus Harris. Catalogue of the insects of Massachusetts, 2nd edition. – Cresson, 1962:236 (in catalog of North American Hymenoptera).

Philanthus facialis: Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:100 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus honestus: Casolari and Casolari Moreno, 1980:122 (specimens in M. Spinola collection, Torino); Pagliano, 2014:100 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus [sic] *hystrix* Klug: A. Costa, 1864a:61 (one specimen from Cape of Good Hope, South Africa, in Napoli Museum).

Philanthus impunctuatus Harris. Catalogue of the insects of Massachusetts, 2nd edition. – Cresson, 1962:236 (in catalog of North American Hymenoptera).

Philanthus latreillei: Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:103 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus maculigerus Dufour: Martinez y Saez, 1874:3 (specimens from Spain, Madrid area, donated to Leon Dufour); Ceballos, 1956:365 (in catalog of Hymenoptera of Spain).

Philanthus mexicanus Spinola: Pagliano, 2014:103 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus mystacinus Spinola, 1843b:XXXVI (specimens in Berlin Museum).

Philanthus obsoletus Harris. Catalogue of the insects of Massachusetts, 2nd edition. – Cresson, 1962:236 (in catalog of North American Hymenoptera).

Philanthus pulchellus Klug in Waltl, 1835:88 (in list of Hymenoptera of Andalusia).

Philanthus regulus: Casolari and Casolari Moreno, 1980:123 (specimens in M. Spinola collection, Torino); Pagliano, 2014:101 (specimens in M. Spinola collection, Torino, are *Philanthus* sp.).

Philanthus viatus Harris. Catalogue of the insects of Massachusetts, 2nd edition. – Cresson, 1862:237 (in catalog of North American Hymenoptera).

SPECIES DESCRIBED IN *PHILANTHUS* AND TRANSFERRED TO OTHER GENERA

- abdominalis* Fabricius, 1804 = *Cerceris*
- albofasciatus* Thunberg, 1815 = *Cerceris albofasciata* (Rossi, 1815)
- algericus* Thunberg, 1815 = *Cerceris sabulosa algerica* (Thunberg)
- analis* Fabricius, 1804 = *Hylaeus variegatus* (Fabricius, 1798), Apidae (W. Schulz, 1912:90).
- angelae* Kohl, 1891 = *Pseudoscolia*
- araxis* Kohl, 1891 = *Pseudoscolia*
- asuncionis* Strand, 1910 = *Trachypus elongatus* (Fabricius, 1804)
- ater* Fabricius, 1793 = *Panurgus calcaratus* (Scopoli, 1763), Apidae, in Dalla Torre, 1896
Fabricius, 1793:292, sex not stated. Holotype or syntypes: Italy: no specific locality (depository?). –
Fabricius, 1796:137 (in Index to his Entomologia Systematica, 1793); Thunberg, 1815a:127 (diagnostic characters, 128 (redescription), 1915b:237 (diagnostic characters), 238 (reference to *Myrmosa* of Panzer (perhaps identical to *Myrmosa atra* Panzer, 1801 = *Mutilla melanocephala* Fabricius, 1793 nec Schrank, 1781; see Richards, 1935:159 for nomenclature).
- auritus* Fabricius, 1794 = *Cerceris arenaria* (Linnaeus, 1758)
- bicolor* Thunberg, 1815a:131 = *Ceramius*, Vespoidea (W. Schulz, 1912:68).
- biguttatus* Thunberg, 1815 = *Cerceris rybyensis* (Linnaeus, 1771)
- canaliculatus* Say, 1823 = *Eucerceris canaliculata*
- circularis* Fabricius, 1804 = *Cerceris*
- colon* Thunberg, 1815 = *Cerceris rybyensis* (Linnaeus, 1771)
- clypeatus* Thunberg, 1815 = *Lestica clypeata* (Schreber, 1759)
- dewitzi* Kohl, 1889 = *Pseudoscolia*
- dissectus* Fabricius, 1804 = *Cerceris*
- diversicornis* F. Morawitz, 1894 = *Pseudoscolia*
- egregius* Taschenberg, 1875 = *Trachypus patagonensis* (de Saussure, 1854)
- elegans* F. Smith, 1856 = *Trachypus petiolatus* Spinola, 1842
- emarginatus* Panzer, 1799 = *Cerceris sabulosa* (Panzer, 1799)
- eximius* F. Morawitz, 1894 = *Philanthinus quattuordecimpunctatus* (F. Morawitz, 1888)
- flavidus* Taschenberg, 1875 = *Trachypus*
- flavipes* Fabricius, 1787:295, sex not stated. Holotype or syntypes: Italy: no specific locality (depository?). –
Fabricius, 1793:290 (redescription), 1796:137 (in Index to his Entomologia Systematica, 1793),
1804:304 (redescription); Thunberg, 1815a:127 (diagnostic characters), 131 (redescription), 1815b:289
(diagnostic characters), 298 (redescription) = ?
- frigidus* F. Smith, 1856 = *Aphilanthops*
- gomezi* Strand, 1910 = *Trachypus elongatus* (Fabricius, 1804)
- indicus* Thunberg, 1815 = *Cerceris*
- harringtoni* Provancher, 1888 = *Hoplisoides placidus nebulosus* (Packard, 1867)
- hortorum* Panzer, 1799 = *Cerceris rybyensis hortorum* (Panzer)
- indicus* Thunberg, 1815 = *Cerceris*
- interruptus* Panzer, 1799 = *Cerceris*
- interstinctus* Fabricius, 1798 = *Cerceris*
- laetus* Fabricius, 1793 = *Cerceris laeta* (Fabricius)
- laticinctus* Cresson, 1865 = *Clypeadon*
- lyautei* von Schulthess, 1924 = *Pseudoscolia*
- lunulatus* Thunberg, 1815 = *Cerceris bucculata* A. Costa, 1860

macula Fabricius, 1804 = *Cerceris*
marginipennis Cameron, 1890 = *Eucerceris canaliculata* (Say, 1823)
mendozae Dalla Torre, 1897 = *Trachypus petiolatus* (Spinola, 1842)
minimus von Schulthess, 1924 = *Pseudoscolia dewitzi* Kohl, 1889
nigriceps Bingham, 1896 = *Psaenythia* (Apidae), probably from Brazil and not India (Vardy in Menke, 1993, Sphecos 25:22).
ornatus Fabricius, 1790 = *Cerceris rybyensis* (Linnaeus, 1771)
patagonensis de Saussure, 1854 = *Trachypus*
punctifrons Cameron, 1890 = *Eucerceris*
pygmaeus Thunberg, 1815 = *Cerceris* ? *sabulosa* (Panzer, 1799)
quadricinctus Panzer, 1799 = *Cerceris*
quadrifasciatus Panzer, 1799 = *Cerceris*
quadrifasciatus Thunberg, 1815 = *Cerceris quadrifasciata* (Panzer, 1799)
quinquemaculatus Fabricius, 1793 = *Mellinus arvensis* (Linnaeus, 1758)
rubidus Jurine, 1807 = *Cerceris*
ruficornis Fabricius, 1793 = *Cerceris*
sabulosus Panzer, 1799 = *Cerceris*
semicinctus Panzer, 1797 = *Cerceris rybyensis* (Linnaeus, 1771)
sexpunctatus Fabricius, 1793 = *Cerceris fimbriata* (Rossi, 1790)
simplicicornis F. Morawitz, 1894 = *Pseudoscolia*
sinaiticus Mochi, 1939 = *Pseudoscolia*
soikae Mochi, 1939 = *Pseudoscolia*
spiniger Thunberg, 1815 = currently included in *Cerceris*, but interpretation questionable
terminalis Taschenberg, 1875 = *Trachypus terminalis* (Fabricius, 1804)
tricinctus Spinola, 1805 = *Cerceris*
tricinctus Thunberg, 1815 = *Cerceris quadrifasciata* (Panzer, 1799)
trifidus Fabricius, 1804 = *Cerceris ruficornis* (Fabricius, 1793)
variegatus F. Morawitz, 1889 (as *Anthophilus*), junior secondary homonym of *Philanthus variegatus* Spinola, 1839 = *Pseudoscolia simplicicornis* F. Morawitz, 1894.
vertilabris Fabricius, 1804 = misspelling of *ventilabris* Fabricius, 1798
zonatus Say, 1823 = *Eucerceris zonata*

UNRECOGNIZABLE NAME IN PHILANTHUS

Philanthus cornutus: Gistel, 1848:142 (Germany, description).