

Last updated: 5 July 2010

## TACHYSPHEX

*Tachysphex* Kohl, 1883a:166. Type species: *Tachysphex filicornis* Kohl, 1883 [= *Tachytes fugax* Radoszkowski, 1877], designated by Bingham, 1897:192.

*Schistosphex* Arnold, 1922:137. Type species: *Schistosphex breijeri* Arnold, 1922 [= *Tachysphex marshalli* R. Turner, 1917], by original designation and monotypy.

*Atelosphex* Arnold, 1923a:177. Type species: *Atelosphex miscophoides* Arnold, 1923 [= *Tachysphex brevipennis* Mercet, 1909], by original designation and monotypy.

Revisions: Arnold, 1923a, 1924 (southern African species); Pulawski, 1971 (Palearctic Region), 1974a (Neotropical Region), 1977a (Australian Region), 1988 (North America); Krombein and Pulawski, 1994 (Sri Lanka); Pulawski, 2007a (Africa including Madagascar and Arabian Peninsula).

Keys: Alayo Dalmau, 1976:7 (Cuba); Hinrichsen and Saure, 1997:31 (females of black German species).

Nesting habits: Alcock, 1980b.

Review of biology: Kazenas, 2001b:153.

Biological monograph: Kurczewski, 2010 (North American, Central American, and Caribbean species).

### 1. *aborigenus* Pulawski

*Tachysphex aborigenus* Pulawski, 1977a:312, ♀, ♂. Holotype: ♀, Australia: Western Australia: Perth (BMNH). – Cardale, 1985:238 (in catalog of Australian Sphecidae).

### 2. *aburi* Pulawski

*Tachysphex aburi* Pulawski, 2007a:79, ♀, ♂. Holotype: ♀, Ghana: Aburi ca 35 km N Accra (CAS).

### 3. *acanthophorus* Pulawski

*Tachysphex acanthophorus* Pulawski, 1982b:39, ♀, ♂. Holotype: ♀, USA: Arizona, Cochise County: Willcox (UCD). – Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:187 (in revision of Nearctic *Tachysphex*); Amarante, 2002:34 (in catalog of Neotropical Crabronidae).

### 4. *actites* Pulawski

*Tachysphex actites* Pulawski in Krombein and Pulawski, 1994:81, ♀, ♂. Holotype: ♀, Thailand: Rayong Province: Ko Samet Island (CAS).

### 5. *acutemarginatus* Strand

*Tachysphex acutemarginatus* Strand, 1910a:162, ♀. Holotype: ♀, Paraguay: Asunción (ZMHU). – Pulawski, 1974a:51 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Amarante, 1993:19 (ne. Brazil), 2002:34 (in catalog of Neotropical Crabronidae).

### 6. *acutus* (Patton)

*Larra acuta* Patton, 1881:390, ♀. Syntypes: USA: Connecticut: New Haven County: Waterbury (destroyed). Neotype: ♀: Connecticut: Lichtfield County: Colebrook, August 1918, W. M. Wheeler (MCZ), designated by Pulawski, 1988a:34. – Patton, 1881:388 (listed); Kohl, 1885:240 (in checklist of World *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera). – **As *Tachysphex acutus***: W. Fox, 1894a:521 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:677 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); H. Smith, 1908:380 (in revision of Nebraskan Sphecidae); J. Smith, 1910:683; F. Williams, 1914a:171 (in revision of Larrinae of Kansas, as *acuta*); Rohwer, 1916b:687 (in catalog of Hymenoptera of Connecticut); Mickel, 1918b:423 (in catalog of Nebraskan Sphecidae);

Robertson, 1928:71, 92, 121, 128, 163, 195, 201 (floral records); Brimley, 1938:443 (North Carolina: Fayetteville); Rau, 1938b:543 (sleeping habits, as *acuta*); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1627 (in catalog of North American Hymenoptera); Finnamore, 1982:101 (in Sphecid Fauna of Southern Quebec); Pulawski, 1988a:34 (in revision of Nearctic *Tachysphex*); Kurczewski, 1989:44 (nesting habits); Kurczewski and Acciavatti, 1990:60 (New York: Cayuga County); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Kurczewski, 1998d:250 (pine barrens in upstate New York), 1998e:252 (the original type material might have been *Tachysphex*, current usage recommended); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada).

*Tachysphex bruesi* Rohwer, 1911b:577, ♀. Holotype: ♀, USA: Wisconsin: Milwaukee County: no specific locality (USNM). Synonymized with *Tachysphex acutus* by G. Bohart in Muesebeck et al., 1951:950.

As *Tachysphex laevifrons*: Harrington, 1902:221 (Canada: Ontario: Ottawa), corrected to *Tachysphex acutus* by Buck, 2004:75.

As *Tachysphex sepulcralis*: Krombein, 1958a:52 (USA: West Virginia: Lost River State Park), corrected to *Tachysphex acutus* by Pulawski, 1988a:34.

### 7. *adjunctus* Kohl

*Tachysphex adjunctus* Kohl, 1885a:362, ♂. Holotype: ♂, Spain: no specific locality (NHMW). – Kohl, 1885a:356 (in key to Palearctic *Tachysphex*); Dalla Torre, 1897:677 (in catalog of world Hymenoptera); Antiga and Bofill, 1904:10 (in catalog of Catalanian Hymenoptera); Mercet, 1910b:165 (listed from Spain, as *rufipes* var. *adjunctus*); Gribodo, 1924a:267 (Libya: Bir Gandula, determination tentative); Guiglia, 1934b:303 (Libya: bibliography and summary of locality records); de Beaumont, 1936a:196 (in revision of French *Tachysphex*); Giner Marí, 1943a:141 (in Sphecid Fauna of Spain, as *spoliatus* var. *adjunctus*); de Beaumont, 1947c:669 (in key to Mediterranean species of *bicolor* group), 1950f:405 (Algeria), 1953b:14 (variation), 1955a:182 (Morocco); Ceballos, 1956:375 (in catalog of Hymenoptera of Spain), 378 (as *spoliatus* var. *adjunctus*); de Beaumont, 1956a:198 (Libya); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1960b:238 (Libya), 1962b:26 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 (Portugal: Rezende, Seixal, Sines); Pulawski, 1971:210 (in revision of Palearctic *Tachysphex*); Erlandsson, 1974:70 (Spain); R. Bohart and Menke, 1976:272 (listed); Gayubo, 1982a:100 (N Spain: Sierra de Béjar), 1982f:250 (Spain: Cádiz Province: San Roque); Gayubo and Tormos, 1984:14 (Spain: Valencia); Gayubo, 1984b:83 (Spain: Salamanca Province); Gayubo and Tormos, 1986a:12 (Spain: Castellón de la Plana); Asís and Jiménez, 1988:271 (Spain: Castellón Province); Gayubo and Mingo, 1988:77 (Spain); Dollfuss, 1989:13 (type material in NHMW); Gayubo, Asís, and Tormos, 1990a:17 (Spain); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); González, Gayubo, and Torres, 1998, 1999:355 (Spain: Valladolid: Viana de Cega); K. Schmidt and Bitsch in Bitsch et al., 2001:237 (in Sphecid Fauna of Western Europe); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

As *Tachysphex denisi* de Beaumont, 1936a:197, ♀ only, corrected to *Tachysphex adjunctus* by de Beaumont, 1953b:14.

### 8. *adventus* Pulawski

*Tachysphex adventus* Pulawski, 1974a:32, ♀, ♂. Holotype: ♂, Brazil: Mato Grosso: Fazenda Itaquerê, Boa Esperanca do Sul (São Paulo Mus.). – R. Bohart and Menke, 1976:272 (listed); Amarante, 1993:19 (ne. Brazil); Amarante, 2002:34 (in catalog of Neotropical Crabronidae).

### 9. *aemulus* Kohl

*Tachysphex aemulus* Kohl, 1906a:216, ♀, ♂. Syntypes: Yemen: Aden: Ras Fartak; Socotra: Abd el Kuri (NHMW). – R. Bohart and Menke, 1976:272 (listed); Dollfuss, 1989:13 (type material in NHMW); Seyoum and Pulawski, 2001:323 (potential control agent of acridid pests in Ethiopia; Ethiopia: Sidamo: 20 km N Moyale at 3°41'N 38°53'E, 35 km N Moyale at 3°43'N 38°50'E, 120 km N Moyale at 4°09'N 38°16'E); Pulawski, 2007a:81 (in revision of African *Tachysphex*).

*Tachysphex liriformis tenax* Pulawski, 1971:311, ♀, ♂. Holotype: ♀, Israel: Jerusalem (H. Bytinski-Salz coll.). Synonymized with *Tachysphex aemulus* by Pulawski, 2007a:81– de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel). – R. Bohart and Menke, 1976:274 (listed); Guichard, 1980:227 (Oman).

### 10. *aequalis* W. Fox

*Larra rufitarsis* Cameron, 1889a:50, ♂, junior secondary homonym of *Tachysphex rufitarsis* (Spinola, 1851). Holotype: ♂, Mexico: Sinaloa: Presidio near Mazatlán (BMNH). Synonymized with *Tachysphex aequalis* by Bohart and Menke, 1976:272 and with *Tachysphex mundus* by Pulawski in Krombein, 1979b: ... – Dalla Torre, 1987:672 (in catalog of world Hymenoptera); Ashmead, 1899d:249 (in checklist of North American Crabronidae, as *rubritarsis*).

*Tachysphex aequalis* W. Fox, 1894a:517, ♂. Lectotype: ♂, USA: Washington: no specific locality (ANSP), designated by Cresson, 1928:43. – Dalla Torre, 1897:677 (in catalog of world Hymenoptera); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Horning and Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); R. Bohart and Menke, 1976:272 (listed); Pulawski in Krombein, 1979b:1632 (as new synonym of *Tachysphex mundus*); Pulawski, 1988a:172 (revised status, in revision of Nearctic *Tachysphex*); Amarante, 2002:34 (in catalog of Neotropical Crabronidae). – **As *Tachysphex mundus aequalis***: Rust, Menke, and Miller, 1985:46 (new status, California: Channel Islands).

*Tachysphex opwanus* Rohwer, 1911b:574, ♂. Holotype: ♂, USA: Colorado: Jefferson County: Golden (USNM). Synonymized with *Tachysphex aequalis* by G. Bohart in Muesebeck et al., 1951:950 and with *Tachysphex mundus* by Pulawski in Krombein, 1979b:1632.

*Tachysphex washingtoni* Rohwer, 1917b:172, ♀. Holotype: ♀, USA: Washington State: Columbia River: Grand Coulee (USNM). Synonymized with *Tachysphex aequalis* by G. Bohart in Muesebeck et al., 1951:950 and with *Tachysphex mundus* by Pulawski in Krombein, 1979b:1632.

### 11. *aethiopicus* Arnold

*Tachysphex Panzeri* var. *aethiopicus* Arnold, 1923a:167, ♀, ♂. Syntypes: Zimbabwe: no specific locality (SAM). – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae), 1951:157 (Ghana: Labadi); Hancock, Chahwanda, and Mhlanga, 1995:40 (syntype in Bulawayo Museum). – **As *Tachysphex aethiopicus***: Pulawski in Bohart and Menke, 1976:272 (full species status); Gess, 1981:19 (South Africa; nesting in friable soils); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:83 (in revision of African *Tachysphex*).

### 12. *aethiops* (Cresson)

*Larrada aethiops* Cresson, 1865b:465, ♀ (as *Aethiops*, incorrect original capitalization). Lectotype: ♀, USA: Colorado Territory: no specific locality (ANSP), designated by Cresson, 1916:95. – **As *Larra aethiops***: Patton, 1879:354 (new combination, USA: nw. Kansas), 1881:389; Kohl, 1885a:240 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado); Bridwell, 1899:209 (Kansas: no specific locality). – **As *Tachysphex aethiops***: W. Fox, 1894a:529 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:677 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Bridwell, 1899:208; Rohwer, 1908a:223 (Colorado); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Krombein, 1958c:188; Evans, 1970:489 (Wyoming: Jackson Hole, preying on immature grasshoppers), 497; Horning and

Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); Elliott and Kurczewski, 1973:80 (Alberta: near Whitecourt); Evans, 1973c:149 (nesting habits); Steiner, 1973:23; Alcock, 1974a:329 (nesting behavior); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1627 (in catalog of North American Hymenoptera); Finnamore, 1982:103 (in Sphecidae Fauna of Southern Quebec); O'Brien, 1987:71 (Michigan: Upper Peninsula; nesting habits); Pulawski, 1988a:26 (in revision of Nearctic *Tachysphex*); Finnamore, 1997:888 (Canada: Yukon); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada).

### 13. *agilis* (F. Smith)

*Tachytes agilis* F. Smith, 1856:301, ♂. Holotype or syntypes: ♂, South Africa: Kwazulu Natal: Port Natal, now Durban (BMNH). – Radoszkowski, 1881:210 (Angola); Dalla Torre, 1897:686 (in catalog of world Hymenoptera). – **As *Tachysphex agilis***: R. Turner, 1917d:43 (new combination); Arnold, 1923a:175 (listed); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:88 (in revision of African *Tachysphex*).

### 14. *agnus* Pulawski

*Tachysphex agnus* Pulawski, 1971:152, ♀, ♂. Holotype: Tunisia: Djerba (RMNH). Paratypes: Algeria, Israel, Turkey. – de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); R. Bohart and Menke, 1976:272 (listed); Dollfuss, 1989:13 (paratype in NHMW); Pulawski, 2007a:90 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:199 (in catalog of Crabronidae of Turkey).

### 15. *alayo* Pulawski

*Tachysphex alayo* Pulawski, 1974a:84, ♀, ♂. Holotype: ♀, Cuba: Oriente: Juraguá near Guantanamo (USNM). – Alayo Dalmau, 1976:7 (in key to Cuban *Tachysphex*), 22 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1632 (in catalog of North American Hymenoptera); Elliott, Kurczewski, Claflin, and Salbert, 1979:356 (Bahama Islands: San Salvador Island, prey); Pulawski, 1988a:198 (in revision of Nearctic *Tachysphex*); Snelling, 1992:14 (British Virgin Islands: Guana and Mona Islands), 1993:18 (British Virgin Islands: Guana Island), 19 (British Virgin Islands: Mona Island); Amarante, 2002:31 (in catalog of Neotropical Crabronidae); Genaro, 2004a:19 (nesting habits); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra and Nipe-Sagua-Baracoa mountains); Genaro, 2006:55 (in checklist of Cuban Sphecidae and Crabronidae; also: Florida, Bahamas, Isla de la Juventud, Little Cayman, Hispaniola, Mona, Jamaica, Guana Island, Puerto Rico, Virgin Islands).

### 16. *albocinctus* (Lucas)

*Tachytes albocinctus* Lucas, 1849:250, ♀ (as *albo cincta*, incorrect original division and termination, spelled *albo-cincta* on line 20 and plate 14). Holotype or syntypes: ♀, Algeria: La Calle (MNHN). – F. Smith, 1856:300 (in catalog of Hymenoptera in British Museum); Magretti, 1884c:588 (Eritrea or Sudan: Doka, Khor Gergabb); Kohl, 1885:399 (listed); Dalla Torre, 1897:687 (in catalog of world Hymenoptera); Bingham, 1898a:104 (Yemen: Aden). – **As *Tachysphex albocinctus***: Kohl, 1885a:393 (tentative new combination, original description copied); de Beaumont, 1940b:172 (new combination, in revision of *Tachysphex* of Egypt, 1947a:182 (in new revision of *Tachysphex* of Egypt), 1950f:405 (Algeria), 1955a:181 (Morocco), 1956a:197 (Libya); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1960b:238 (Libya), 1962b:25 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 (Portugal: nine localities); de Beaumont, 1965a:65 (Greece: Crete: Canea), 1966:212 (Egypt: Amrye near Alexandria); Pulawski, 1971:427 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:13 (Israel); Erlandsson, 1974:70 (Spain); R. Bohart and Menke, 1976:272 (listed); Kazenas, 1978b:114, 127 (in key to Sphecidae of Kazakhstan and Central Asia); Gess, 1981:19 (South Africa: 18 km WNW Grahamstown; nesting in friable soils; nest structure, prey); Gayubo, 1982f:251 (Spain: Cádiz Province: Palmones, Puerto de Santa María, San Enrique de Guadiaro, San Roque), 1984c:362 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:15 (Spain: Valencia); Gayubo and Tormos, 1986a:12 (Spain: Castellón de la Plana); Asís, Gayubo, and Tormos, 1987:15 (larva); Tormos and Jiménez, 1987b:316

- (Spain: Valencia Province: Dehesa de El Saler); Asís and Jiménez, 1988:271 (Spain: Castellón Province); Gayubo and Mingo, 1988:77 (Spain); Asís, Gayubo, and Tormos, 1989a:234 (male behavior, nest, prey); Gayubo, Asís, and Tormos, 1990a:17 (Spain); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Krombein and Pulawski, 1994:13 (summary nesting habits), 100 (in revision of Sri Lankan *Tachysphex*); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 156 (review of known biology); K. Schmidt and Bitsch *in* Bitsch et al., 2001:238 (in Sphecidae Fauna of Western Europe); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Straka, 2005:275 (Turkey: Adana: Çiçekli 25 km N Adana, Karataş 48 km S Adana; Antalya; Göynük 25 km SW Antalya); Pulawski, 2007a:92 (in revision of African *Tachysphex*); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:200 (in catalog of Crabronidae of Turkey, as *albocincta*); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero, as *albocincta*); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park, as *albocincta*).
- Tachytes ruficrus* Dufour, 1854a:378, sex not indicated. Holotype or syntypes: Algeria: Pontéba, now Oumm ed Drou (MNHN). Synonymized with *Tachysphex albocinctus* by de Beaumont, 1940b:172 who studied types. – **As *Tachysphex ruficrus***: Kohl, 1885a:397 (tentative new combination, original description copied); Dalla Torre, 1897:685 (new combination, in catalog of world Sphecidae).
- Tachysphex syriacus* Kohl, 1888a:146, ♂. Holotype or syntypes: ♂, Syria: no specific locality (NHMW). Synonymized with *Tachysphex albocinctus* by de Beaumont, 1940b:172. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Morice, 1911:100 (Algeria: Biskra; La Calle, Le Tarf, Médéa; description of ♀); Arnold, 1923a:152 (Zimbabwe; redescription); Bristowe, 1925:280 (Somalia: Hargeisa; nest and prey); Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); Nadig, 1933:79 (Morocco; comparison with *heliopolites*); Arnold, 1935a:498 (South Africa: Kalahari); Guiglia, 1943c:76 (Ethiopia: Gamo Gofa: Sagan–Omo region), 1950:252 (Ethiopia: Gamo Gofa: Caschei); Dollfuss, 1989:13 (type material in NHMW).
- As *Tachysphex heliopolites*: Morice, 1897:306 (♂ only), corrected to *Tachysphex albocinctus* by de Beaumont, 1940b:172.
- Tachysphex mantiraptor* Ferton, 1912a:360, ♀, ♂. Lectotype: ♀, Algeria: La Calle, now El Kala (MNHN), designated by Pulawski, 2007a:92. Synonymized with *Tachysphex albocinctus* by de Beaumont, 1940a:172. – Ferton, 1912a:360 (nesting habits and prey), 402 (review of structural and behavioral characters), 1923:124 (nest, prey); E. Nielsen, 1933:293 (summary of nesting habits);
- Tachysphex peculator* Nurse, 1909:515, ♂. Syntypes: ♂, India: Gujarat: Deesa (BMNH). Synonymized with *Tachysphex syriacus* by R. Turner, 1917e:198, synonymy confirmed by Pulawski *in* Krombein and Pulawski, 1994:101. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897). – **As *Tachysphex albocinctus peculator***: Pulawski, 1971:431 (new status); R. Bohart and Menke, 1976:272 (listed).
- Tachysphex argyrius* Gussakovskij, 1933b:280, ♀, ♂ (♂ = *Tachysphex grandissimus*). Lectotype: ♀, Iran: mountains S Bampur (ZIN), designated by Pulawski, 1971:432. Synonymized with *Tachysphex albocinctus peculator* by Pulawski, 1971:431. – Gussakovskij, 1952:237 (description of ♂). – **As *Tachysphex albocinctus argyrius***: Myartseva, 1972a:78 (new satatus, Turkmenistan).
- Tachysphex dusmeti* Giner Marí, 1934:133 and 142, ♀, ♂. Syntypes: Spain: Valencia: Dehesa and Bétera (MNCN). Synonymized with *Tachysphex albocinctus* by de Beaumont, 1950d:18. – Giner Marí, 1943a:139 (in Sphecidae Fauna of Spain), 1945b:360 (e. Morocco: Muley Rechid; as *Tachytes*); de Andrade, 1949:15 (Portugal: Évora, Vale de Gaio); nec de Beaumont, 1947a:184 and 1950f:405 (Algeria, corrected to *Tachysphex nubilipennis* by de Beaumont, 1950d:18); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Diniz, 1959:29 (Portugal: Evora, Vale de Gaio).
- Tachysphex nubilipennis* de Beaumont, 1950d:18, ♀, ♂. Lectotype: ♂, Egypt: Siwa oasis: El Arig (BMNH), designated by Pulawski, 2007a:93. Synonymized with *Tachysphex albocinctus* by Pulawski, 2007a:93. – de Beau-

mont, 1955a:181 (Morocco); Pulawski, 1971:434 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed).

As *Tachytes etruscus*: Bischoff, 1933:5 (Morocco: Rabat), corrected to *Tachysphex albocinctus* by Pulawski, 1962b:407.

NOTE: Arnold (1923a:152) synonymized *Tachytes nigroannulatus* Bischoff with *Tachysphex syriacus*, but subsequently (1927:117) recognized that *nigroannulatus* is a valid species in *Tachytes*.

### 17. *alpestris* Rohwer

*Tachysphex foxii* var. *alpestris* Rohwer, 1908a:223, ♀. Holotype: ♀, USA: Colorado: Teller County: Florissant (USNM). – As *Tachysphex alpestris*: G. Bohart in Muesebeck et al., 1951:950 (new status, in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1630 (in catalog of North American Hymenoptera); Elliott and Kurczewski, 1985:294 (prey); Rust, Menke, and Miller, 1985:46 (California: Channel Islands); Pulawski, 1988a:151 (in revision of Nearctic *Tachysphex*); Finnamore, 1997:888 (Canada: Yukon); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario), 46 (first record from Ontario: list of localities, some specimens are intermediate to *Tachysphex terminatus*); Amarante, 2005a:10 (correction to his 2002 catalog); Kurczewski, 2009:8 (review of known behavioral information), 81-86 (discussion of nesting behavior).

As *Tachysphex terminatus* (present correction based on geographic distribution): Rohwer, 1917a:244 (...), G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); Horning and Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); also Evans, 1970:491 (Wyoming: Jackson Hole, nesting habits), corrected to *Tachysphex alpestris* by Kurczewski and Evans, 1986:270.

### 18. *ambiguus* Arnold

*Tachysphex ambiguus* Arnold, 1923a:156, ♀, ♂. Holotype: ♀, Zimbabwe: Bulawayo (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:91 (Zaire: Lubumbashi); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:101 (in revision of African *Tachysphex*).

### 19. *ambositrae* Leclercq

*Tachysphex ambositrae* Leclercq, 1967b:67, ♀. Holotype: ♀, Madagascar: Ambositra (MNHN). – R. Bohart and Menke, 1976:272 (listed); Pulawski, 2003b:797 (in checklist of Malagasy Sphecidae), 2007a:104 (in revision of African *Tachysphex*).

### 20. *ampijoroa* Pulawski

*Tachysphex ampijoroa* Pulawski, 2007a:688, ♀, ♂. Holotype: ♂. Madagascar: Mahajanga: Ampijoroa (= Ankarafantsika) National Park at 16°19.16'S 46°48.8'E (CAS).

### 21. *amplus* W. Fox

*Tachysphex amplus* W. Fox, 1894a:522, ♀, ♂. Lectotype: ♀, USA: Nevada: no specific locality (ANSP), designated by Cresson, 1928:43. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cockerell, 1899a:143 (New Mexico); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Gittins, 1960:136 (Idaho); Krombein, 1967c:392 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1627 (in catalog of North American Hymenoptera); Rust, Menke, and Miller, 1985:46 (California: Channel Islands); Pulawski, 1988a:115 (in revision of Nearctic *Tachysphex*); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex gillettei* Rohwer, 1911b:571, ♀. Holotype: ♀, USA: Colorado: Rocky Ford (USNM). Synonymized with *Tachysphex amplus* by G. Bohart in Muesebeck et al., 1951:950.

*Tachysphex neomexicanus* Rohwer, 1911b:575, ♀. Holotype: ♀, USA: New Mexico: Rio Ruidoso in White Mts. (USNM). Synonymized with *Tachysphex amplus* by G. Bohart in Muesebeck et al., 1951:950.

## 22. *anceps* Arnold

*Tachysphex anceps* Arnold, 1945:102, ♀. Holotype: ♀, Madagascar: Bekily (MNHN). – R. Bohart and Menke, 1976:272 (listed); Pulawski, 2003b:797 (in checklist of Malagasy Sphecidae), 2007a:105 (in revision of African *Tachysphex*).

## 23. *angelicus* Pulawski

*Tachysphex angelicus* Pulawski, 1988a:33, ♀, ♂. Holotype: ♀, USA: California: San Diego County: 1 mi S Del Mar (CAS).

## 24. *angustatus* Pulawski

As *Tachysphex nitidus*: Gussakovskij, 1934a:10 (Mongolia), corrected to *Tachysphex angustatus* by Pulawski, 1971:170.

*Tachysphex angustatus* Pulawski, 1967a:405, ♀, ♂. Holotype: ♂, Turkmenistan: Ashgabat (coll. W.J. Pulawski). Paratypes: Kazakhstan, Uzbekistan, Tajikistan, Turkey. – Pulawski, 1971:170 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Kazenas, 1978b:122, 132 (in key to Sphecidae of Kazakhstan and Central Asia); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Hensen and van Ooijen, 1987:12 (Turkey); Nazarova, 1998:40 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:65 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:248 (Turkey: Malatya: Kale; Urfa: Halfeti); T. Li, Li, and Cai, 2008:142 (first record from China); Ljubomirov and Yildirim, 2008:200 (in catalog of Crabronidae of Turkey).

## 25. *angustus* Arnold

*Tachysphex hermia* var. *angustus* Arnold, 1924:54, ♂. Syntypes: ♂, Zimbabwe: Bulawayo (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – As *Tachysphex hermia angustus*: R. Bohart and Menke, 1976:274 (new status, listed). – As *Tachysphex angustus*: Pulawski, 2007a:107 (full species status, in revision of African *Tachysphex*).

## 26. *antennatus* W. Fox

*Tachysphex antennatus* W. Fox, 1894a:516, ♀. Holotype: ♀, USA: Texas: no specific locality (ANSP). – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Rohwer, 1911b:580 (in key); Cresson, 1928:43 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Elliott and Kurczewski, 1985:293 (prey); Kurczewski and Kurczewski, 1987:408 (nesting habits; nest founded under stones); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:72 (in revision of Nearctic *Tachysphex*); Spofford and Kurczewski, 1992:997 (species of miltogrammine parasites listed); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario), 46 (first record from Ontario: list of localities).

*Tachysphex sculptiloides* F. Williams, 1914a:166, ♀. Holotype: ♀, USA: Kansas: Barton County: no specific locality (Kansas Univ). Synonymized with *Tachysphex antennatus* by Pulawski in Krombein, 1979b:1628. – G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); LaBerge, 1956:528 (holotype in Snow Entomological Museum); Arnaud, 1970:33 (citation); R. Bohart and Menke, 1976:276 (listed).

*Tachysphex nigrocaudatus* F. Williams, 1914a:167, ♀, ♂. Holotype: ♀, USA: Kansas: Rush County: no specific locality (Kansas Univ). Synonymized with *Tachysphex antennatus* by Pulawski in Krombein, 1979b:1628. – Mickel, 1918b:424 (in catalog of Nebraskan Sphecidae); Brimley, 1938:443 (North Carolina: Aberdeen, Raleigh);

G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Museum); Arnaud, 1970:32 (citation); R. Bohart and Menke, 1976:275 (listed).

### 27. *anthracinus* Pulawski

*Tachysphex anthracinus* Pulawski in Krombein and Pulawski, 1994:31, ♀, ♂. Holotype: Sri Lanka: Mannar District: Kondachchi (USNM).

### 28. *antillarum* Pulawski

*Tachysphex antillarum* Pulawski, 1974a:44, ♀, ♂. Holotype: ♀, Puerto Rico: Isla Verde (USNM). – Alayo Dalmau, 1976:7 (in key to Cuban *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Pulawski, 1988a:149 (in revision of Nearctic *Tachysphex*); Genaro and Sánchez, 1992b:218 (nesting and prey in Cuba); Sánchez and Genaro, 1992b:150 (Cuba: La Habana: Güines); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra); Genaro, 2006:55 (in checklist of Cuban Sphecidae and Crabronidae; also: Isla de la Juventud and Puerto Rico); Kurczewski, 2009:7 (review of known behavioral information), 81-86 (discussion of nesting behavior).

### 29. *anubis* Pulawski

*Tachysphex anubis* Pulawski, 1964:98, ♀, ♂. Holotype: ♀, Egypt: Abu Rawash NW Cairo (originally W. Pulawski coll., now CAS). – Pulawski, 1971:196 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:110 (in revision of African *Tachysphex*).

### 30. *apakensis* Tsuneki

*Tachysphex apakensis* Tsuneki, 1971m:20, ♀, ♂. Holotype: ♀, China: Inner Mongolia: Apaka (originally K. Tsuneki coll., now USNM). – R. Bohart and Menke, 1976:272 (listed); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

### 31. *apicalis* W. Fox

*Tachysphex apicalis* W. Fox, 1893c:53, ♀, ♂. Lectotype: ♀, USA: southern Florida: no specific locality (ANSP), designated by Cresson, 1928:43. – W. Fox, 1894a:521 (in revision of North American Larrinae); Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); W. Schulz, 1906:212 (correction to Dalla Torre: page number); Rohwer, 1916b:687 (in catalog of Hymenoptera of Connecticut); Britton, 1920:340; Brimley, 1938:443 (North Carolina: Aberdeen); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Krombein and Evans, 1954:232, 1955:231 (Florida: Miami); Evans, 1964b:288 (larva); Krombein, 1964c:15 (nest, prey); Kurczewski, 1966c:436-453 (comparative male behavior); Krombein, 1967c:392 (in catalog of North American Hymenoptera); Kurczewski and Snyder, 1968:30, 31 (nesting in cliffs); Kurczewski, 1971:114 (in key to Floridan species); Pulawski, 1974a:48 (in revision of Neotropical *Tachysphex*); Alayo Dalmau, 1976:22 (Cuba: Oriente: Santiago de Cuba, Tortuguilla); R. Bohart and Menke, 1976:272 (listed); Rust, Menke, and Miller, 1985:46 (California: Channel Islands); Parks, 1986:34 (California: Torrey Pine State Reserve, as *aspicalis*); Pulawski, 1988a:164 (in revision of Nearctic *Tachysphex*); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Kurczewski, 2000c:114 (locality records from North and South Carolina, nest and prey); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Ohl and Linde, 2003:150 (number of ovarioles); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario), 47 (first record from Ontario: Windsor); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra and Nipe-Sagua-Baracoa mountains); Genaro, 2006:55 (in checklist of Cuban Sphecidae and Crabronidae; also: North America, Mexico, Hawaii). – **As *Tachysphex apicalis apicalis***: Pulawski in Krombein, 1979b:1630 (in catalog of North American Hymenoptera); Kurczewski, 2009:65 (review of known behavioral information, field observations), 81-86 (discussion of nesting behavior).

*Tachysphex fumipennis* W. Fox, 1894a:518, ♀. Lectotype: ♀, USA: Florida: St. John's County: near St. Augustine (ANSP), designated by Cresson, 1928:44. Synonymized with *Tachysphex apicalis* by G. Bohart in Muesebeck et



al., 1951:950. – Dalla Torre, 1897:680 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae, as *fuscipennis*).

*Tachysphex fusus* W. Fox, 1894:519, ♀, ♂. Lectotype: ♀, USA: Texas: no specific locality (ANSP), designated by Cresson, 1928:44. Synonymized with *Tachysphex apicalis* by Pulawski, 1988:164. – Dalla Torre, 1897:680 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cockerell, 1899a:144 (New Mexico); F. Williams, 1914a:172 (in revision of Larrinae of Kansas), 201 (nesting habits); Rohwer, 1916b:687 (in catalog of Hymenoptera of Connecticut, as *fuscus*); Stevens, 1917:422 (North Dakota: Dickinson); Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); Rau and Rau, 1918:149 (as *fuscus*); F. Williams, 1931:239, 1932b:17 (Hawaii: Oahu); Brimley, 1938:443 (North Carolina: Raleigh), Salisbury; F. Williams, 1940:367 (Hawaii: Oahu); Fullaway and Krauss, 1945:36 (as *fuscus*); Strickland, 1947:129 (Canada: Alberta: Medicine Hat, Vermilion; as *fuscus*); G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); Yoshimoto, 1960:331 (Hawaiian Islands: Oahu; as *fuscus*); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Kurczewski and Snyder, 1968:30, 31 (nesting in cliffs); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); R. Bohart and Menke, 1976:274 (listed). – **As *Tachysphex apicalis fusus***: Pulawski in Krombein, 1979b:1630 (new status, in catalog of North American Hymenoptera); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Blow Sand Mountains); Elliott and Kurczewski, 1985:294 (nesting habits); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Kurczewski, 2009:76 (review of known behavioral information, field observations), 81-86 (discussion of nesting behavior).

*Tachysphex foxii* Rohwer, 1908a:222, ♀. Holotype: ♀, USA: Colorado: Boulder County: Boulder (USNM). Synonymized with *Tachysphex fusus* by G. Bohart in Muesebeck et al., 1951:951.

### 32. *apoctenus* Pulawski

*Tachysphex apoctenus* Pulawski, 1974a:33, ♀, ♂. Holotype: ♂, Argentina: Tucumán: Horco Molle (MCZ). – R. Bohart and Menke, 1976:272 (listed); Dollfuss, 1989:13 (paratype in NHMW); Amarante, 2002:34 (in catalog of Neotropical Crabronidae).

### 33. *apricus* Pulawski

*Tachysphex apricus* Pulawski, 1982b:29. ♀, ♂. Holotype: ♂, USA: California: San Diego Co: Borrego Valley (UCD). – Elliott and Kurczewski, 1985:293 (prey: *Parabacillus hesperus* Hebard); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:94 (in revision of Nearctic *Tachysphex*).

### 34. *araucanus* Pulawski

*Tachysphex araucanus* Pulawski, 1974a:15, ♀, ♂. Holotype: ♀, Chile: Coquimbo: El Tofo (AMNH). – R. Bohart and Menke, 1976:272 (listed); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Amarante, 2002:34 (in catalog of Neotropical Crabronidae).

### 35. *argentatus* Gussakovskij

*Tachysphex argentatus* Gussakovskij, 1952:242. ♀, ♂ (♀ = *Tachysphex erythrophorus*). Lectotype: ♂, Tajikistan: Stalinabad, now Dushanbe (ZIN), designated by Pulawski, 1967a:398. – Pulawski, 1967a:398 (Turkey, description of ♀), 1971:369 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); R. Bohart and Menke, 1976:272 (listed); Kazenas, 1978b:115, 128 (in key to Sphecidae of Kazakhstan and Central Asia); Nazarova, 1998:40 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:65 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:273 (Turkey: Batman: Kozluk); Pulawski, 2007a:112 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:201 (in catalog of Crabronidae of Turkey).

As *Tachytes rufiventris*: Magretti, 1884c:587 (Sudan: Kassala; Eritrea: Kor Cheru), corrected to *Tachysphex argentatus* by Pulawski, 2007a:112.

As *Tachysphex julliani*: Pulawski, 1964:95 (Egypt: Maadi), corrected to *Tachysphex argentatus* by Pulawski, 1971:369.

### 36. *argenteiceps* Arnold

*Tachysphex argenteiceps* Arnold, 1959:328, ♂. Holotype: ♂, Tanzania: Itumba in Rukwa Valley (BMNH). – R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:115 (in revision of African *Tachysphex*).

### 37. *argentifrons* Arnold

*Tachysphex argentifrons* Arnold, 1924:58, ♀, ♂ (♀ = *Tachysphex melanius*). Lectotype: ♂, South Africa: Cape Province: Algoa Bay (TMP), designated by Pulawski, 2007a:120. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:272 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:120 (in revision of African *Tachysphex*).

As *Tachysphex hippolyta*: de Beaumont, 1967b:509 (South Africa: Cape Province), corrected to *Tachysphex argentifrons* by Pulawski, 2007a:120.

### 38. *arizonac* Pulawski

*Tachysphex arizonac* Pulawski, 1982b:30, ♀, ♂. Holotype: ♂, USA: Arizona: Cochise County: 2 mi NE Portal (UCD). – Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:129 (in revision of Nearctic *Tachysphex*); Amarante, 2002:34 (in catalog of Neotropical Crabronidae, as *arizonae*).

### 39. *armatus* Pulawski

*Tachysphex armatus* Pulawski, 1982b:40, ♀, ♂. Holotype: ♀, USA: Nevada: Clark County: Sandy (UCD). – Pulawski, 1988a:191 (in revision of Nearctic *Tachysphex*).

### 40. *ashmeadii* W. Fox

*Tachysphex ashmeadii* W. Fox, 1894a:509, ♀ (as *Ashmeadii*, incorrect original capitalization). Holotype: ♀, USA: California: San Diego (ANSP). – Dalla Torre, 1897:678 (in catalog of world Hymenoptera, as *ashmeadis*); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cresson, 1928:43 (holotype in ANSP); Strickland, 1947:129 (Canada: Alberta: Medicine Hat); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Gittins, 1960:136 (Idaho); Krombein, 1967:392 (in catalog of North American Hymenoptera); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1631 (in catalog of North American Hymenoptera); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Sand Mountain); Elliott and Kurczewski, 1985:293 (nesting habits); Parks, 1986:34 (California: Torrey Pine State Reserve); Kurczewski, 1987a:122 (nesting habits); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:141 (in revision of Nearctic *Tachysphex*); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex posterus* W. Fox, 1894a:510, ♀. Holotype: ♀, USA: Washington: no specific locality (ANSP). Synonymized with *Tachysphex ashmeadii* by R. Bohart in Bohart and Menke, 1976:272. – Dalla Torre, 1897:684 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cresson, 1928:45 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera).

*Tachysphex spinosus* W. Fox, 1894a:511, ♀. Holotype: ♀, USA: California: Los Angeles County: no specific locality (USNM). Synonymized with *Tachysphex ashmeadii* by G. Bohart in Muesebeck et al., 1951:950. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Blow Sand Mountains).

*Tachysphex spissatus* W. Fox, 1894a:514, ♂. Holotype: ♂, USA: California: no specific locality (ANSP). Synonymized with *Tachysphex ashmeadii* by G. Bohart, 1951:950. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae, as *pissatus*); Cresson, 1928:46 (holotype in ANSP).

*Larra rufipes* Provancher, 1895:129, ♀, junior secondary homonym of *Tachysphex rufipes* (F. Smith, 1858), of *Tachysphex rufipes* (Aichinger, 1870), and of *Tachysphex rufipes* (Reed, 1894). Holotype: ♀, USA: California: Los Angeles (Laval Univ. Quebec). Synonymized with *Tachysphex ashmeadii* by G. Bohart in Muesebeck et al., 1951:950. – Ashmead, 1899d:249 (in checklist of North American Crabronidae); Gahan and Rohwer, 1917:433 (type examined).

*Tachysphex propinquus* Viereck, 1904:87, ♀. Holotype: ♀, USA: Arizona: Pinal County: Florence (ANSP). Synonymized with *Tachysphex ashmeadii* by Pulawski in Krombein, 1979b:1632. – Snow, 1906:8 (...); Viereck, 1906:235 (...); F. Williams, 1914a:162 (in revision of Larrinae of Kansas), 202 (nesting habits); Mickel, 1918b:425 (in catalog of Nebraskan Sphecidae); Cresson, 1928:45 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Krombein, 1961a:82 (visiting flowers of mat euphorbia, *Euphorbia albomarginata*); Lavigne and Pfadt, 1966:31 (Wyoming; preying on grasshoppers *Agenotettix deorum* and *Cordidllacris occipitalis*); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Alcock and Gamboa, 1975b:164 (nesting habits); R. Bohart and Menke, 1976:276 (listed).

#### 41. *asinus* Arnold

*Tachysphex asinus* Arnold, 1923:166, ♀. Holotype: ♀, Zimbabwe: Sawmills (SAM). – Arnold, 1924:66 (description of ♂), 1930:3 (in checklist of Afrotropical Sphecidae), 1935a:497 (South Africa: Kalahari); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:124 (in revision of African *Tachysphex*).

#### 42. *asmara* Pulawski

*Tachysphex asmara* Pulawski, 2007a:128, ♀, ♂. Holotype: ♀, Eritrea: Asmara (CAS). Paratype: Ethiopia: Shewa: Ambo.

#### 43. *aterrimus* Arnold

*Tachysphex aterrimus* Arnold, 1924:56, ♀, ♂. Syntypes: Zimbabwe: Bulawayo, Matopos, Sawmills, Victoria Falls; South Africa: Cape Province: Willowmore (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:272 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:130 (in revision of African *Tachysphex*).

#### 44. *atlanteus* de Beaumont

*Tachysphex atlanteus* de Beaumont, 1955a:177, ♀, ♂. Holotype: Morocco: Tafraout (Lausanne). – Pulawski, 1971:341 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:133 (in revision of African *Tachysphex*).

#### 45. ? *atratus* (Lepelletier de Saint Fargeau, 1845)

*Tachytes atratus* Lepelletier de Saint Fargeau, 1845:245, ♀, ♂. Syntypes: Italy: Piemonte: no specific locality (originally coll. Serville, now?). – Dalla Torre, 1897:687 (in catalog of world Hymenoptera). – As *Tachysphex atratus*: Kohl, 1885a:393 (tentative new combination, original description copied); Balthasar, 1972:272 (in Sphecid Fauna of Czechoslovakia: original description translated into German); R. Bohart and Menke, 1976:257 (listed, may be a *Liris*).

#### 46. *aureopilosus* Tsuneki

*Tachysphex aureopilosus* Tsuneki, 1972e:385, ♀, ♂. Holotype: ♀, Mongolia: Zavhan Aymag: 15 km W Somon Songino (TMB). – R. Bohart and Menke, 1976:272 (listed).

**47. aureorufoniger Pulawski**

*Tachysphex aureorufoniger* Pulawski, 2007a:135, ♂. Holotype: ♂, Zambia: Eastern Province: E side of Luangwa bridge at 14°59'S 30°13'E (CAS). Paratypes: Tanzania: Morogoro: 128 road km NW Morogoro.

**48. auriceps Cameron**

*Tachysphex auriceps* Cameron, 1889c:145, ♀, ♂. Lectotype: ♀, India: Maharashtra: Poona, now Pune (OXUM), designated by Pulawski in Krombein and Pulawski, 1994:82. – Bingham, 1897:194 (redescription); Dalla Torre, 1897:678 (in catalog of world Hymenoptera); nec Giner Mari, 1945c:856 (= *Tachysphex panzeri*); R. Bohart and Menke, 1976:272 (listed); Krombein and Pulawski, 1994:82 (in revision of Sri Lankan *Tachysphex*).

**49. auropilosus R. Turner**

*Tachysphex auropilosus* R. Turner, 1917b:321, ♀. Lectotype: ♀, Kenya: Simba (BMNH), designated by Pulawski, 2007a:136. – Arnold, 1923a:173 (original description copied), 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:272 (listed).

**50. austriacus Kohl**

*Tachysphex austriacus* Kohl, 1892:215, ♀. Holotype: ♀, Austria: Vienna area (NHMW). – Kohl, 1893a:32 (Austria: Niederösterreich: Wien: Türkenschanze, redescription); Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Schmiedeknecht, 1907:232 (in key to Hymenoptera of Central Europe), 1930:693 (in keys to Hymenoptera of North and Central Europe); Zavadil, Šusterka, and Bat'a, 1937:201 (in catalog of Sphecidae of Czechoslovakia); Zavadil in Zavadil and Šnoflak, 1948:150 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Franz, 1949:13 (Austria: Hohe Tauern); Vogrin, 1955:37 (Yugoslavia: Krapina); Pulawski, 1971:62 (as new synonym of *Tachysphex pompiliformis*); Balthasar, 1972:264 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Dollfuss, 1989:13 (type material in NHMW); Straka, 2004:1107 (resurrected from synonymy, redescription, comparison with *Tachysphex pompiliformis*); Reder, 2005:954 (Germany: Rheinland-Pfalz: Eisenberg, Worms); Wiesner, 2006:237 (Germany: first record from Brandenburg: Mallnow, Libbenichen); Jacobs, 2007:96, 99, 100 (in key to Crabronidae of Germany); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia), 222 (resurrected from synonymy by Straka, 2004); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: rare).

*Tachysphex pompiliformis* forma *tenebricosus* K. Schmidt in Bitsch, Dollfuss, Bouček, K. Schmidt, Schmid-Egger, Gayubo, Antropov, and Barbier, 2001:267, ♀, ♂, not available (infrasubspecific name, Article 1.3.4). Syntypes: Germany: Rhein River valley between Mannheim and Bingen. Synonymized with *Tachysphex austriacus* by Straka, 2004:1110.

**51. bara Pulawski**

*Tachysphex bara* Pulawski, 2007a:139, ♀, ♂. Holotype: ♀, Madagascar: Fianarantsoa: Isalo National Park at 22°36'S 45°10'E (CAS).

**52. barkeri Arnold**

*Tachysphex barkeri* Arnold, 1923:158, ♀, (as *Barkeri*, incorrect original capitalization). Holotype: ♀, South Africa: Natal: Umbogintwini (Durban Mus.). – Arnold, 1929c:385 (variation), 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:142 (in revision of African *Tachysphex*).

*Tachysphex braunsi* var. *debilis* Arnold, 1924:64, ♂, junior primary homonym of *Tachysphex debilis* Pérez, 1907 [a junior synonym of *Tachytes argyreus* (F. Smith)], and of *Tachysphex debilis* R. Turner, 1908. Holotype: ♂, South Africa: Transvaal: Piet Retief (TMP). Synonymized with *Tachysphex barkeri* by Pulawski, 2007a:142

*Tachysphex braunsi* var. *Boer* Arnold, 1929:387. Substitute name for *Tachysphex debilis* Arnold. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – As ***Tachysphex braunsi boer***: R. Bohart and Menke, 1976:272 (new status, listed).

As *Tachysphex diabolicus*: de Beaumont, 1967b:509 (South Africa: Natal), corrected to *Tachysphex barkeri* by Pulawski, 2007a:142

### 53. *beaumonti* Pulawski

*Tachysphex beaumonti* Pulawski, 1971:104, ♀, ♂. Holotype: ♂, Turkmenistan: Tedzhen (W.J. Pulawski coll.). Paratypes: Kazakhstan. – R. Bohart and Menke, 1976:272 (listed); Kazenas, 1978b:118, 133 (in key to Sphecidae of Kazakhstan and Central Asia); Nazarova, 1998:40 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:65 (geographic distribution, collecting localities in Kazakhstan); T. Li, Li, and Cai, 2008:142 (first record from China).

### 54. *beidzimiao* Tsuneki

*Tachysphex beidzimiao* Tsuneki, 1971m:26, ♂. Holotype: ♂, China: Inner Mongolia: Apaka (originally K. Tsuneki coll., now USNM). – Nuhn and Menke, 1994:25 (holotype transferred to USNM); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

### 55. *belfragei* (Cresson)

*Larrada belfragei* Cresson, 1873:215, ♀ (as *Belfragei*, incorrect original capitalization). Holotype: ♀, USA: Texas: Bosque County: no specific locality (USNM). – Patton, 1881:389 (...); Cresson, 1916:95 (type in USNM). – **As *Larra belfragei***: Kohl, 1885a:242 (new combination, in checklis of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera). – **As *Tachysphex belfragei***: W. Fox, 1894a:509 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:678 (in catalog of world Hymenoptera, as *belfragii*); Ashmead, 1899d:250 (in checklist of North American Crabronidae); H. Smith, 1908:381 (in revision of Nebraskan Sphecidae); F. Williams, 1914a:164 (in revision of Larrinae of Kansas); Mickel, 1918b:421 (in catalog of Nebraskan Sphecidae); Robertson, 1928:121, 128, 163, 199, 203 (floral records); G. Bohart *in* Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Krombein, 1958:188 (...), 1967:392 (...); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1632 (in catalog of North American Hymenoptera); Pulawski, 1988a:180 (in revision of Nearctic *Tachysphex*); Ahlstrom, 1995:109 (in checklist of insects of North Carolina).

*Tachytes minimus* W. Fox, 1892:248, ♂. Lectotype: ♂, USA: Texas: no specific locality (ANSP), designated by Cresson, 1928:45. Synonymized with *Tachysphex belfragei* by R. Bohart *in* Bohart and Menke, 1976:272. – Bridwell, 1899:209 (Kansas: no specific locality); Brimley, 1938:443 (North Carolina: Raleigh), 1942:35 (deleted from list of North Carolina insects). – **As *Tachysphex minimus***: W. Fox, 1892e:248 (new combination, in revision of North American species), 1894a:532 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); J. Smith, 1900:518; H. Smith, 1908:381 (in revision of Nebraskan Sphecidae); J. Smith, 1910:683; F. Williams, 1914a:173 (in revision of Larrinae of Kansas); Mickel, 1918b:424 (in catalog of Nebraskan Sphecidae); Brimley, 1938:443 (North Carolina: Raleigh); Krombein, 1939:139 (New York: Long Island); G. Bohart *in* Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); Krombein and Evans, 1954:232 (Florida: Arcadia), 1955:231 (Florida: Arcadia); Kurczewski, 1971:114 (in key to Floridan species).

### 56. *bemba* Pulawski

*Tachysphex bemba* Pulawski, 2007a:145, ♀, ♂. Holotype: ♀, Zambia: Northern Province: 54 road km NE Serenje at 13°05'S 30°35'E (CAS). Paratypes: Namibia: Keetmanshoop and Okahandja Districts.

### 57. *bengalensis* Cameron

*Tachysphex bengalensis* Cameron, 1889c:144, ♀. Lectotype: ♀, India: "Bengal: Tirhoot" = Bihar: Muzalfarpur (OXUM), designated by Pulawski, 1975a:311. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); R. Turner, 1917e:198 (Bingham's 1897 interpretation of this species is incorrect); Krombein and Pulawski, 1994:58 (in revision of Sri Lankan *Tachysphex*); S. Gupta, 1995:86 (India: Uttar Pradesh); Wu and Zhou, 1996a:90 (in revision in Economic Insect Fauna of China). – **Nec following authors** (= *Tachysphex morosus*):

Bingham, 1897:193, F. Williams, 1928a:92, Krombein, 1949b:382, 393; Iwata and Yoshikawa, 1961:399; Tsuneki, 1963c:7; Iwata, 1964b:369; Baltazar, 1966:329; Tsuneki, 1967b:49, Haneda, 1971b:30; Ohl and Linde, 2003:150; Li and He, 2004:1100. Nec Yasumatsu, 1940b:97 (= *Tachysphex nigricolor*).

*Tachysphex brevitarsis* Kohl, 1901c:783, ♀. Syntypes: Sri Lanka: Badurelia (NHMW). Synonymized with *Tachysphex bengalensis* by Pulawski, 1975a:311. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897); Dollfuss, 1989:13 (type material in NHMW).

### 58. *bipustulosus* Arnold

*Tachysphex bituberculatus* Arnold, 1923a:162, ♀, junior primary homonym of *Tachysphex bituberculatus* Cameron, 1905. Holotype: ♀, Zimbabwe: Bulawayo or Khami Ruins (SAM), not examined. – Arnold, 1924:61 (description of ♂), 1930:3 (in checklist of Afrotropical Sphecidae).

*Tachysphex bipustulosus* Arnold, 1949:275. Substitute name for *Tachysphex bituberculatus* Arnold. – R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:147 (in revision of African *Tachysphex*).

### 59. *bituberculatus* Cameron

*Tachysphex bituberculatus* Cameron, 1905c:223, ♀. Holotype or syntypes: ♀, India: Assam: Khasia Hills (OXUM, Rothney coll.). – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); nec Weber, 1948:203 and Yoshimoto, 1960:331 (= *Tachysphex morosus*); Baltazar, 1966:329 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:272 (listed); Krombein and Pulawski, 1994:79 (in revision of Sri Lankan *Tachysphex*).

### 60. *blattivorus* Gussakovskij

*Tachysphex blattivorus* Gussakovskij, 1952:244, ♀, ♂. Lectotype: ♀, Tajikistan: Mikoyanabad, now Kabadian (ZIN), designated by Pulawski, 1971:236. – Pulawski, 1971:234 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Kazenas, 1978b:117, 129 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Gayubo, Tormos, and Asís, 1993a:203 (first record from Spain: Valencia: Porta Coeli); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province: Viana de Cega); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 156 (review of known biology); Gayubo, González, Tormos, and Asís, 2002:84 (distribution in Iberian Peninsula), 2002a:65 (geographic distribution, collecting localities in Kazakhstan), 2004b:103 (Kazakhstan: western Tien Shan); Gayubo, González, de la Nuez, Asís, and Tormos, 2006:208 (Spain: Huesca: Ainsa; Zamora: Cabañas de Aliste); Baños-Picón, Gayubo, Asís, and González, 2007a:255, 258 (Spain: Zamora: Cabañas de Aliste); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 141 (Salamanca: El Maillo).

### 61. *bohartorum* Pulawski

*Tachysphex bohartorum* Pulawski, 1982b:30, ♀, ♂. Holotype: ♀, USA: California: Nevada County: Boca (UCD). – Pulawski, 1988a:51 (in revision of Nearctic *Tachysphex*).

**62. *bostryx* Pulawski**

*Tachysphex bostryx* Pulawski, 2007a:150, ♀, ♂. Holotype: ♀, Ethiopia: Sidamo: 63 km S Yabelo at 4°22'N 38°17'E (CAS). Paratypes: Kenya, Tanzania.

**63. *bouceki* Straka**

*Tachysphex bouceki* Straka, 2005:249, ♀, ♂. Holotype: ♂, Turkey: Kayseri: 7 km NW Develi (OÖLM).

**64. *brachypus* Pulawski**

*Tachysphex brachypus* Pulawski, 2007a:152, ♀, ♂. Holotype: ♀, Zambia: Southern Province: 7 km SW Kalomo at 17°02'S 26°26'E (CAS). Paratypes: Malawi, Namibia, South Africa, Zimbabwe.

**65. *brasilianus* Pulawski**

*Tachysphex brasilianus* Pulawski, 1974a:95, ♀, ♂. Holotype: ♂, Brazil: Paraiba: Mun. Soledade, Joazeirinho (Kansas Univ.). – R. Bohart and Menke, 1976:272 (listed); Amarante, 2002:34 (in catalog of Neotropical Crabronidae).

**66. *braunsi* Arnold**

*Tachysphex braunsi* Arnold, 1923a:150, ♂, ♀ (as *Braunsi*, incorrect original capitalization). Lectotype: ♀, South Africa: Eastern Cape Province: Willowmore (SAM), designated by Pulawski, 2007a:154. – Arnold, 1924:64 (additional description; nesting in the ground), 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:272 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:154 (in revision of African *Tachysphex*).

**67. *breviceps* Pulawski**

*Tachysphex breviceps* Pulawski, 1974a:24, ♀, ♂. Holotype: ♂, Argentina: Jujuy: Volcán (MCZ). – R. Bohart and Menke, 1976:272 (listed); Dollfuss, 1989:13 (paratype in NHMW); Amarante, 2002:34 (in catalog of Neotropical Crabronidae).

**68. *brevicornis* Pulawski**

*Tachysphex brevicornis* Pulawski, 1977a:263, ♂. Holotype: ♂, Australia: Northern Territory: Bessie Spring 8 km ESE Cape Crawford (ANIC). – Cardale, 1985:238 (in catalog of Australian Sphecidae).

**69. *brevipecten* de Beaumont**

*Tachysphex brevipecten* de Beaumont, 1955:177, ♀, ♂. Holotype: ♀, Morocco: Marrakech: Oued Tensift (LAUSANNE). – de Beaumont, 1956a:197 (Libya), 1960b:238 (Libya); Pulawski, 1971:336 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:272 (listed); Dollfuss, 1989:13 (paratype in NHMW); Guichard, 1991a:339 (Jordan); Pulawski, 2007a:157 (in revision of African *Tachysphex*).

**70. *brevipennis* Mercet**

*Tachysphex brevipennis* Mercet, 1909b:197, ♀, ♂. Syntypes: Spain: Escorial (MNCN). – Mercet, 1910b:165 (listed from Spain); Giner Mari, 1934:133 (Spain: Balearic Islands: Ibiza), 1943a:138 (in Sphecid Fauna of Spain); de Beaumont, 1947c:671 (redescription); de Andrade, 1949:16 (Portugal); Ceballos, 1956:375 (in catalog of Hymenoptera of Spain); Diniz, 1959:29 (Portugal: Cascais, Lisboa, Trafaria); de Beaumont, 1962b:26 (Spain); Diniz, 1964a:6 (Portugal: nine localities); Suárez, 1969:31 (Spain: Almería Province); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Pulawski, 1971:240 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Guichard, 1978:271 (first record from Greece: Kalambaka); Gayubo, 1982a:100 (N Spain: Sierra de Béjar), 1982f:251 (Spain: Cádiz Province: Arcos de la Frontera, Los Barrios, Cortijo de Ahojiz, Puerto de Santa María, San Roque), 1984b:83 (Spain: Salamanca Province), 1984c:363 (Portugal: El Algarve Province); Gayubo, 1986c:32 (Spain: Zamora Province); Gayubo and Sanza, 1986:43 (Spain: Burgos); Gayubo and Tormos, 1986a:12 (Spain: Castellón de la Plana); Asís and Jiménez, 1988:2711 (Spain: Castellón Province); Gayubo and Mingo, 1988:77 (Spain); Dollfuss, 1989:13 (type material in NHMW); Gayubo, Asís, and Tormos,

1990a:17 (Spain); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); Gonzáles, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); K. Schmidt and Bitsch *in* Bitsch et al., 2001:239 (in Sphecid Fauna of Western Europe); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Pulawski, 2007a:159 (in revision of African *Tachysphex*); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:201 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Pagliano, 2009:183 (Italy: recorded from Sicilia by Krombein and Pulawski, 1994).

*Tachysphex minutus* Nurse, 1909:516, ♀, ♂. Lectotype: ♂, India: Gujarat: Deesa (BMNH), designated by Pulawski, 1975a:311. Synonymized with *Tachysphex brevipennis* by Pulawski, 2007a:159. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); Pulawski, 1975a:311 (diagnostic characters); R. Bohart and Menke, 1976:275 (listed); Krombein and Pulawski, 1994:85 (in revision of Sri Lankan *Tachysphex*); K. Schmidt and Bitsch *in* Bitsch et al., 2001:257 (in Sphecid Fauna of Western Europe); Straka, 2005:270 (Turkey: Hatay: Antakya).

*Tachysphex lilliputianus* R. Turner, 1917e:198, ♂. Holotype: ♂, India: Bihar: Pusa (BMNH). Synonymized with *Tachysphex minutus* by Pulawski, 1975a:311.

*Tachysphex fulvicornis* R. Turner, 1918b:363, ♀. Holotype: ♀, India: West Bengal: Chapra (BMNH). Synonymized with *Tachysphex brevipennis* by Pulawski, 2007a:159. – R. Bohart and Menke, 1976:273 (listed); Guichard, 1980:227 (Oman); Roche, 1981:2 (in checklist of Sphecidae of United Arab Emirates); Krombein and Pulawski, 1994:87 (in revision of Sri Lankan *Tachysphex*).

*Atelosphex miscophoides* Arnold, 1923a:178, ♀. Holotype: ♀, South Africa: Cape Province: Willowmore (SAM). Synonymized with *Tachysphex brevipennis* by Pulawski, 2007a:159. – Arnold, 1924:72 (description of ♂, South Africa), 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex miscophoides***: R. Bohart and Menke, 1976:275 (new combination, listed).

*Atelosphex lugubris* Arnold, 1924:72, ♀. Holotype: ♀, Zimbabwe: Sawmills (SAM). Synonymized with *Tachysphex minutus* by Pulawski *in* Krombein and Pulawski, 1994:85. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae), 1951:157 (Ghana: Accra). – **As *Tachysphex lugubris***: R. Bohart and Menke, 1976:274 (new combination, listed).

*Tachysphex imperfectus* de Beaumont, 1940b:178, ♀. Syntypes: Egypt: Cairo area: Kerdassa (A. Alfieri coll., now in USNM?) and Gebel Asfar (A. Mochi coll.). Holotype illegally designated (should be lectotype) by de Beaumont, 1947a:210: ♀, Algeria: Biskra (OXUM). Synonymized with *Tachysphex fulvicornis* by Pulawski, 1975a:312. – de Beaumont, 1947a:210 (in new revision of *Tachysphex* of Egypt); Balthasar, 1954b:269 (Palestine: Wadi el Kelt near Jericho); de Beaumont, 1955a:187 (Morocco), 1960b:241 (Libya); Pulawski, 1971:248 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province).

*Tachysphex rugosus* Gussakovskij, 1952:245, ♀, ♂. Lectotype: ♂, Tajikistan: Mikoyanabad, now Kabadian (ZIN), designated by Pulawski, 1971:244. Synonymized with *Tachysphex minutus* by Pulawski *in* Krombein and Pulawski, 1994:85. – Pulawski, 1971:243 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); Pulawski, 1974c:715 (prey: grasshopper *Omocestus petraeus* (Brisout)); R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:111, 124 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:214 (in key to Sphecidae of European part of former USSR); Roche, 1981:3 (in checklist of Sphecidae of United Arab Emirates); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 160 (review of known biology), 2002a:74 (geographic distribution, collecting localities in Kazakhstan).



*Tachysphex heterochromus* de Beaumont, 1955a:187, ♀, ♂. Holotype: ♀, Morocco: Port Lyautey, now Kenitra (Lausanne). Synonymized with *Tachysphex brevipennis* by Pulawski, 2007a:159. – Pulawski, 1971:250 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed).

As *Tachysphex* sp.: Pulawski, 1958a:181 (Bulgaria: mouth of Ropotamo River), corrected to *Tachysphex rugosus* by Pulawski, 1971:243.

*Tachysphex rhodius* de Beaumont, 1960a:19, ♀, ♂. Holotype: ♀, Greece: Rhodes Island: Kamiros (RMNH). Synonymized with *Tachysphex rugosus* by Pulawski, 1971:243. – de Beaumont, 1965a:53 (Greece); Pulawski, 1967a:408 (Turkey).

*Tachysphex sinaiticus* Pulawski, 1964:108, ♀. Holotype: ♀, Egypt: Sinai Peninsula: Feiran oasis (originally W.J. Pulawski coll., now CAS). Synonymized with *Tachysphex brevipennis* by Pulawski, 2007a:160. – Pulawski, 1971:245 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); R. Bohart and Menke, 1976:276 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula).

As *Tachysphex* aff. *rhodius*: Pulawski, 1967a:408, corrected to *Tachysphex rugosus* by Pulawski, 1971:243.

*Tachysphex quadrifurci* Pulawski, 1971:246, ♀, ♂. Holotype: ♂, Turkmenistan: Ashkhabad (W.J. Pulawski coll.). Synonymized with *Tachysphex minutus* by Pulawski in Krombein and Pulawski, 1994:85. – R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:111, 124 (in key to Sphecidae of Kazakhstan and Central Asia); Guichard, 1991a:340 (Jordan); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia).

*Tachysphex convexus* Pulawski, 1971:248, ♀. Holotype: ♀, Turkmenistan: Murgab (ZIN). Paratype: Kazakhstan: Tartugay 75 km SE Kzyl-Orda. Synonymized with *Tachysphex brevipennis* by Pulawski, 2007a:160. – R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:111 (in key to Sphecidae of Kazakhstan and Central Asia); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:66 (geographic distribution, collecting localities in Kazakhstan).

### 71. *brevipes* Pulawski

*Tachysphex brevipes* Pulawski, 1971:238, ♀. Holotype: ♀, Uzbekistan: Altyn-Kul 20 km W Andizhan (ZIN). – R. Bohart and Menke, 1976:272 (listed); Kazenas, 1978b:117 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia).

### 72. *brinckerae* R. Turner

*Tachysphex brinckerae* R. Turner, 1917b:323, ♀. Holotype: ♀, South Africa: Gauteng: Pretoria (BMNH). – Arnold, 1923:173 (original description copied), 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:272 (listed); Pulawski, 2007a:168 (in revision of African *Tachysphex*).

*Tachysphex consanguineus* Arnold, 1924:67, ♀, ♂. Lectotype: ♂, South Africa: North-West Province: Lichtenburg (TMP), designated by Pulawski, 2007a:168. Synonymized with *Tachysphex brinckerae* by Pulawski, 2007a:168. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:273 (listed).

### 73. *brullii* (F. Smith)

*Tachytes bicolor* Brullé, 1833:373, ♀. Holotype: ♀, Greece: Koubeh Forest (MNHN). – As *Tachysphex bicolor*: Kohl, 1885a:394 (new combination, original description copied); Dalla Torre, 1897:678 (in catalog of world Hymenoptera); W. Schulz, 1911a:68 (new combination); de Beaumont, 1947c:666 (study of holotype), 669 (in key to Mediterranean species of *bicolor* group); Nouvel and Ribaut, 1953:179 (France: recorded from Hautes-Pyrénées: Barèges, by Berland, 1925); de Beaumont, 1954a:57 (Italy), 1954e:90 (Italy); Grandi, 1954:238 (Italy); Steiner, 1955:139 (France: Dordogne); Grandi, 1957:389 (Italy); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1959a:27 (Italy: Sicilia: Monte Etna); Noskiewicz and Pulawski, 1960:121, 124 (in key to Polish Sphecidae, not yet found in Poland); Grandi, 1962:96 (Italy); de Beaumont, 1964c:75 (in Sphecid Fauna of Switzerland), 1965a:48 (Greece); Pulawski, 1967a:400 (Turkey); Scobiola-Palade, 1967b:43 (Romania); Suárez, 1969:31 (Spain: Almería Province); Oehlke, 1970:712 (not recorded from Democratic Germany); Pulawski, 1971:203 (in revision of Palearctic *Tachysphex*); Simon Thomas, 1972:181 (France:

Gironde, Landes, Lot-et-Garonne), 1976:5 (France: Lot-et-Garonne); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Kazenas, 1978b:117, 133 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre, Pyrénées-Orientales, and Vendée Departments); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Tormos and Jiménez, 1987a:125 (Spain: Valencia); Kuznetzova, 1990:20 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area), 1995:104 (Hungary: projected Duna-Dráva National Park); Ljubomirov and Yildirim, 2008:202 (in catalog of Crabronidae of Turkey); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina).

*Tachytes brullii* F. Smith, 1856:296 (as *Brullii*, incorrect original capitalization). Substitute name for *Tachytes bicolor* Brullé, 1833, secondary junior homonym of *Tachytes bicolor* (Fabricius, 1804) F. Smith, 1856, now in *Larra*. – **As *Tachysphex brullii***: R. Bohart and Menke, 1976:272 (new combination, listed); Pagliano, 1980:127 (Italy: Piemonte); Dollfuss, 1983a:75 (endangered in Niederösterreich, Austria), 80 (endangered in Tirol, Austria), 1983b:10 (in catalog of Sphecidae of Austria); Chevin and Chevin, 1985:39 (France: Aude); Gayubo and Mingo, 1988:77 (Spain); Jacobs and Oehlke, 1990:163 (unknown from Democratic Germany); Pagliano, 1990:102 (in catalog of Italian Sphecidae); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Negrisolo *in* Minelli, Ruffò, and La Posta, 1995b:9 (in catalog of Italian fauna); Shkuratov, 1998a:97 (Russia: Rostov Oblast'); Ljubomirov, 1999b:49 (Bulgaria: Mt. Vitosha near Sofia); Pagliano and Scaramozzino, 1999:162 (Italy: Piemonte: Borgomale); Blösch, 2000:227 (in Sphecid Fauna of Germany); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:239 (in Sphecid Fauna of Western Europe); Zettel, Gross, and Mazzucco, 2001:72 (Austria: Wien); Shkuratov, 2002b:140 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Drewes, 2003:142 (Turkey: Kars: Soganli W Sarikamis); Gayubo, Özbek, and Yıldırım, 2003:88 (Turkey: Erzurum: Palandöken, Çat, Pasinler, Rabat); Ebrahimi, 2005:124 (in key to selected Iranian Sphecidae); Jacobs, 2005a:451 (Bulgaria: Asenovgrad, Arkutino near Burgas, Topolovgrad, Troyanska Planina S Troyan); Pagliano and Negrisolo, 2005:363 (in Sphecid Fauna of Italy); Shorenko, 2005a:164 (Ukraine: Crimea); Straka, 2005:268 (Turkey: Erzurum: Tekederesi 15 km SW Erzurum, as *brullii brullii*); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: Yurukovo Village, as *brullii brullii*); Magdalou, 2006a:7, 10 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Jacobs, 2007:94, 98 (in key to Crabronidae of Germany, not yet found in Germany); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia);.

*Tachytes spoliatus* Giraud, 1863a:24, ♀ (as *spoliata*, incorrect original termination). Syntypes: ♀, France: Hautes-Alpes: Narreirou near Vallouise (MNHN). Synonymized with *Tachysphex bicolor* by de Beaumont, 1947c:666 and 1953b:14. – Kirchner, 1867:216 (in catalog of European Hymenoptera); Dours, 1874:139 (in catalog of Hymenoptera of France); Kohl, 1880:179 (Austria: Tirol, and Italy: Trentino-Alto Adige), 233 (preying on larval tettigoniids, redescription); Radoszkowski, 1893a:62 (Turkmenistan); Chyzer, 1902:33 (Hungary). – **As *Tachysphex spoliatus***: Kohl, 1883e:671 (new combination, Switzerland), 1885a:397 (original description copied); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Berland, 1925d:120 (in Sphecid Fauna of France), 1932a:23 (France: Var Department; utilizing old charcoal preparation sites for nesting); Giner Marí, 1934:133 (Spain: Montarco); Vergne, 1935:118 (France: Auvergne: Besse); de Beaumont, 1936a:195 (in revision of French *Tachysphex*), 1936c:8 (specimen in coll. A. Costa); Zavadil, Šusterka, and Bat'a, 1937:201 (in catalog of Sphecidae of Czechoslovakia); Balthasar, 1941a:105 (Czech Republic: Bzenecko area); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Giner Marí, 1943a:140 (in Sphecid Fauna of Spain); Guiglia, 1944b:27 (Italy); Balthasar, 1948:142 (Slovakia: Streda); Zavadil *in* Zavadil and Šnoflak, 1948:150, 152 (in key to Sphecidae of Czechoslovakia); de Beaumont, 1953b:14 (*Tachysphex spoliatus* is a junior synonym of *bicolor*); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Bajári, 1957a:51, 55 (in key to

Hungarian Sphecidae); Diniz, 1959:29 (Portugal: Mata da Trafaria); Balthasar, 1972:266 (in Sphecid Fauna of Czechoslovakia); Józán, 1983:99 (Hungary), 1985a:181 (Hungary), 1985b:57 (Hungary S Lake Balaton), 78 (floral records), 83 (ecological and zoogeographic characteristics); Pádr *in* Šedivy, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Pádr, 1990:74 (Czech Republic: Praha area).

*Tachytes brullei* Kirchner, 1867:215 (emendation of *Tachytes brullii*, as *Brulléi*, incorrect capitalization and diacritic mark).

*Tachytes rufipes* Aichinger, 1870:330, ♀. Holotype: ♀, Austria: Innsbruck (depository?). Synonymized with *Tachysphex bicolor* by Kohl, 1880:233, W. Schulz, 1911a:68 and de Beaumont, 1947c:666. – Aichinger, 1870:320 (listed). – **As *Tachysphex rufipes***: Kohl, 1885a:352 and 355 (in key to Palearctic *Tachysphex*), 379 (new combination, in revision of Palearctic *Tachysphex*), 1893a:32 (Austria: Niederösterreich); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Kingdom of Hungary, some localities are in today's Croatia and Romania); Ferton, 1899:336 (stinging prey just behind mouth), 340 (prey capture), 1901a:99 (preying on tettigoniids); de Cobelli, 1903:111 (Italy: Province of Trentino: Dietropozzo, Rovereto); Adlerz, 1904:137 (known prey: tettigoniids); Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); Šusterka, 1909:35 (Czech Republic: vicinity of Praha); Mantero, 1905:73 (Italy: Toscana: Isola del Giglio); Schmiedeknecht, 1907:232, 234 (in key to Hymenoptera of Central Europe); Mercet, 1910b:165 (listed from Spain); Dubois, 1920:88 (specimen in coll. Wesmael); Maidl, 1922:70 (Albania, Croatia); Ferton, 1923:85 (prey paralyzing); von Schulthess, 1926b:214 (Tunisia, determination tentative); Schmiedeknecht, 1930:694, 695 (in keys to Hymenoptera of North and Central Europe); Bischoff, 1931:9 (Spain); Dusmet y Alonso, 1931:7 (Portugal: Mitra, determination tentative); Vogrin, 1955:37 (Yugoslavia); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Hagieni).

*Tachytes montanus* Radoszkowski, 1886a:31, ♂, junior secondary homonym of *Tachysphex montanus* (Cresson, 1865). Holotype: ♂, Caucasus: no specific locality (Inst. Zool. Kraków). Synonymized with *Tachysphex spoliatus* by de Beaumont, 1936b:614. – Radoszkowski, 1892:590 (reference to Radoszkowski, 1886). – **As *Tachysphex montanus***: Dalla Torre, 1897:465 (new combination, in catalog of world Hymenoptera).

*Tachytes monticola* Dalla Torre, 1897:681. Substitute name for *Tachytes montanus* (Radoszkowski, 1886).

#### **ssp. galileus de Beaumont**

*Tachysphex galileus* de Beaumont, 1947c:667, ♀. Holotype: ♀, Israel: Galilea (BMNH). – **As *Tachysphex bicolor galileus***: Pulawski, 1967a:401 (new status, Turkey), 1971:209 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); R. Bohart and Menke, 1976:273 (listed); Straka, 2005:268 (Turkey: Kütahya: 30 km N Kütahya); Yildirim and Ljubomirov, 2005:1796 (Turkey: Dutçu, Pasinler), 2007a:119 (Turkey: Erzurum, Kars, and Konya provinces); Ljubomirov and Yildirim, 2008:202 (in catalog of Crabronidae of Turkey).

#### **74. bruneiceps Arnold**

*Tachysphex bruneiceps* Arnold, 1923a:153, ♀, ♂. Lectotype: ♀, Zimbabwe: Sawmills (SAM), designated by Pulawski, 2007a:171. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae), 1945:97 (Madagascar), 1951:155 (Ethiopia: River Hawash); Leclercq, 1960a:98 (Madagascar), 1961d:109 (Madagascar); R. Bohart and Menke, 1976:273 (listed); Leclercq, 1990b:117 (Madagascar: Tamatave); Hancock, Chahwanda, and Mhlanga, 1995:40 (syntypes in Bulawayo Museum); Madl, 1997:821 (in checklist of Nosy Boraha Sphecidae); Pulawski, 2003b:797 (in checklist of Malagasy Sphecidae); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:171 (in revision of African *Tachysphex*).

#### **75. buccalis Pulawski**

*Tachysphex buccalis* Pulawski, 1977a:280, ♂. Holotype: ♂, Australia: South Australia: Mt. Davies in Tomkinson Range (ANIC). – Cardale, 1985:239 (in catalog of Australian Sphecidae).

**76. buyssoni Morice**

*Tachysphex buyssoni* Morice, 1897:307, ♀, ♂. Lectotype: ♀, Egypt: Koubbeh near Cairo (OXUM), designated by Pulawski, 1971:295. – Kruger, 1929a:21 and 1929b:56 (Libya: Cyrenaica: Giarabub); nec Guiglia, 1932d:475 (= *Tachysphex costae*); Guiglia, 1934b:304 (Libya: bibliography and summary of locality records); de Beaumont, 1940b:164 (in revision of *Tachysphex* of Egypt); Honoré, 1942:55 (listed); de Beaumont, 1947a:158 (in new revision of *Tachysphex* of Egypt), 1956a:196 (Chad: Tibesti), 1961e:4 (Iraq); Pulawski, 1971:293 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); R. Bohart and Menke, 1976:273 (listed); Dollfuss, 1989:13 (type material in NHMW); Roche and Zalat, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:173 (in revision of African *Tachysphex*).

**77. caliban Arnold**

*Tachysphex Panzeri* var. *caliban* Arnold, 1923a:169, ♀, ♂ (as *Caliban*, incorrect original capitalization). Lectotype: ♂, Zimbabwe: Sawmills (SAM), designated by Pulawski, 2007a:175. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae), 1935a:497 (South Africa: Kalahari); Bohart and Menke, 1976:275 (as synonym of *Tachysphex panzeri pantheri*); Hancock, Chahwanda, and Mhlanga, 1995:40 (syntype in Bulawayo Museum). – **As *Tachysphex caliban***: Pulawski, 2007a:175 (new status, in revision of African *Tachysphex*).

**78. calidus Pulawski**

*Tachysphex calidus* Pulawski, 2007a:178, ♀, ♂. Holotype: ♂, Namibia: Karibib District: Khan River 23 km N Karibib at 21°47'S 157°E (CAS). Paratypes: Botswana, Burkina Faso, Ethiopia, Kenya, Mali, Mauritania, South Africa, Tanzania, Yemen.

**79. camptopygus Pulawski**

*Tachysphex camptopygus* Pulawski, 2007a:183, ♀, ♂. Holotype: Namibia: Karibib District: Khan River 23 km N Karibib at 21°47'S 157°E (CAS).

**80. capensis (de Saussure)**

*Tachytes capensis* de Saussure, 1867:71, ♂. Holotype or syntypes: ♂, South Africa: Cape Province: Cape of Good Hope (NHMW). – Kohl, 1985:400 (listed). – **As *Tachysphex capensis***: Dalla Torre, 1897:678 (new combination, in catalog of world Hymenoptera); Arnold, 1923a:174 (listed); R. Bohart and Menke, 1976:273 (listed); Dollfuss, 1989:13 (type in NHMW); Pulawski, 2007a:187 (in revision of African *Tachysphex*).

*Tachysphex tuckeri* Arnold, 1923:172, ♂ (as *Tuckeri*, incorrect original capitalization). Holotype: ♂, South Africa: Cape Province: Montagu (SAM). Synonymized with *Tachysphex capensis* by Pulawski, 2007a:187. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed).

**81. carinatus Pulawski**

*Tachysphex carinatus* Pulawski, 2007a:191, ♀, ♂. Holotype: ♀, Tanzania: Coast Region: 17 km E Chalinze at 6°39.2'S 38°30.2'E (CAS). Paratype: Zimbabwe.

**82. carli de Beaumont**

*Tachysphex carli* de Beaumont, 1947c:673, ♀, ♂. Holotype: ♀, Morocco: Tanger (MHNG). Paratype: Gibraltar. – Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Pulawski, 1971:251 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:273 (listed); Gayubo, 1982f:251 (Spain: Cádiz Province: Alcalá de los Gazules, Palmones, San Roque); K. Schmidt and Bitsch in Bitsch et al., 2001:240 (in Sphecid Fauna of Western Europe); Gayubo, González, Tormos, and Asís, 2002:84 (distribution in Iberian Peninsula); Gayubo, González, Tormos, and Asís, 2002:84 (in Spain known from Badajoz and Cádiz provinces); Gayubo, González, de la Nuez, Asís, and Tormos, 2006:208 (Spain: Sevilla: Cazalla de la Sierra).

**83. *cavatus* Pulawski**

*Tachysphex cavatus* Pulawski, 2007a:192, ♂. Holotype: ♂, Madagascar: Mahajanga Province: Parc National d'Ankarafantsika: Station Forestière Ampijoroa 40 km NW Andranofasika at 16°19'15"S 46°48'38"E (CAS).

**84. *changi* Tsuneki**

*Tachysphex changi* Tsuneki, 1967b:53, ♂, ♀. Holotype: ♂, Taiwan: Chiayi Prefecture: Chuchi (originally K. Tsuneki coll., now USNM). – Haneda, 1971b:30 (Taiwan); Tsuneki, 1971h:20 (Japan: Ryukyu Islands); Haneda, 1972a:4 (Taiwan); Tano, 1972:24 (Japan: Ryukyu Islands); R. Bohart and Menke, 1976:273 (listed); Krombein, 1981, *Spolia Zeylanica*: 123 (Sri Lanka); Tsuneki, 1982g:60 (known from the Ryukyu archipelago), 1983a:68, 69 (in key); Krombein and Pulawski, 1994:53 (in revision of Sri Lankan *Tachysphex*); Porter, Stange, and Wang, 1999:9 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

*Tachysphex nambui* Tsuneki, 1973a:5, ♀. Holotype: ♀, Ryukyu Islands: Iriomote Island: Komi (T. Nambu coll.). Synonymized with *Tachysphex changi* by Tsuneki, 1983a:60. – R. Bohart and Menke, 1976:275 (listed); Tsuneki, 1982g:60 (known from the Ryukyu archipelago); Yamane, Ikudome, and Terayama, 1999:518 (in Identification Guide to Crabronidae of Nansei = Ryukyu Islands, Japan).

**ssp. *luzonicus* Tsuneki**

*Tachysphex changi luzonicus* Tsuneki, 1983a:60, ♂. Holotype: ♂, Philippines: Luzon: Laguna Province: Los Baños (originally K. Tsuneki coll., now?). – Tsuneki, 1983a:68, 69 (in key); Nuhn and Menke, 1994:27 (holotype not transferred to USNM, possibly returned to T. Murota, the collector); Menke, 1995:14 (type still in K. Tsuneki collection); Tano, 1995:45 (holotype in K. Tsuneki collection).

**85. *cheops* de Beaumont**

*Tachysphex cheops* de Beaumont, 1940b:163, ♀, ♂. Holotype: ♀, Egypt: Cairo-Suez road (originally A. Mochi coll., now Entomological Society of Egypt?). – Honoré, 1942:55 (listed); de Beaumont, 1947a:158 (in new revision of *Tachysphex* of Egypt), 1950d:17 (Egypt: Siwa oasis), 1953a:175 (Mauritania), 1966:212 (Egypt: Agami near Alexandria); Pulawski, 1971:291 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); R. Bohart and Menke, 1976:273 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:194 (in revision of African *Tachysphex*).

As *Tachysphex panzeri*: Guiglia, 1940:289 fig. 1 (Libya), corrected to *Tachysphex cheops* by Pulawski, 1971:291.

**86. *chephren* de Beaumont**

*Tachysphex chephren* de Beaumont, 1940:164, ♀, ♂. Holotype: ♀, Egypt: Wadi Hoff near Cairo (originally A. Alfieri coll., now USNM). – de Beaumont, 1947a:165 (in new revision of *Tachysphex* of Egypt); Pulawski, 1971:311 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); R. Bohart and Menke, 1976:273 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:197 (in revision of African *Tachysphex*).

**87. *chiastotrichus* Pulawski**

*Tachysphex chiastotrichus* Pulawski in Krombein and Pulawski, 1994:52, ♀, ♂. Holotype: ♀, Sri Lanka: Hambantota District: Palatupana (USNM).

**88. *circulans* Pulawski**

*Tachysphex circularis* Pulawski, 1977a:224, ♀, ♂. Holotype: ♀, Australia: Western Australia: Yallingup (BMNH). – Cardale, 1985:239 (in catalog of Australian Sphecidae).

**89. *clarconis* Viereck**

*Tachysphex clarconis* Viereck, 1906:211, ♀. Holotype: ♀, USA: Kansas: Clark County: no specific locality (Kansas Univ.). – F. Williams, 1914a:173 (in revision of Larrinae of Kansas); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Mu-

seum)R. Bohart and Menke, 1976:273 (listed); Krombein, 1979b:1631 (in catalog of North American Hymenoptera); Elliott and Kurczewski, 1985:294 (nesting habits); Rust, Menke, and Miller, 1985:46 (California: Channel Islands), 53 (color forms); Pulawski, 1988a:147 (in revision of Nearctic *Tachysphex*); Kurczewski, 2009:6 (review of known behavioral information), 81-86 (discussion of nesting behavior).

*Tachysphex plesius* Rohwer, 1917a:245, ♀ (as *plesia*, incorrect original termination). Holotype: ♀, USA: California: Eldorado County: Tahoe (USNM). Synonymized with *Tachysphex clarconis* by Pulawski in Krombein, 1979b:1631. – G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:275 (listed).

*Tachysphex* sp. near *linsleyi*: Evans, 1970:490 (Wyoming: Jackson Hole, nesting habits), corrected to *Tachysphex clarconis* by Kurczewski and Evans, 1986:720.

### 90. *claripes* Arnold

*Tachysphex diabolicus* var. *claripes* Arnold, 1924:51, ♂, ♀. Lectotype: ♀, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:199. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex diabolicus claripes***: R. Bohart and Menke, 1976:273 (new status, listed). – **As *Tachysphex claripes***: Pulawski, 2007a: 199 (full species status, in revision of African *Tachysphex*).

*Tachysphex diabolicus* var. *trifasciatus* Arnold, 1924:51, ♀, ♂. Lectotype: ♀, South Africa: Eastern Cape Province: Algoa Bay near Port Elizabeth (TMP), designated by Pulawski, 2007a:199. Synonymized with *Tachysphex claripes* by Pulawski, 2007a:199. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex diabolicus trifasciatus***: R. Bohart and Menke, 1976:273 (new status, listed).

### 91. *clypeatus* Arnold

*Tachysphex clypeatus* Arnold, 1947:147, ♂, ♀. Lectotype: ♀, Northern Rhodesia: Abercorn, now Zambia: Mbala (SAM), designated by Pulawski, 2007a:204. – R. Bohart and Menke, 1976:273 (listed); Pulawski, 2007a: 204 (in revision of African *Tachysphex*).

### 92. *clypedentalis* T. Li, Li, and Cai

*Tachysphex clypedentalis* T. Li, Li, and Cai, 2008:140 and 146, ♀. Holotype: ♀, China: Nei Mongol: Uxin Qi County: Ordos City (YUNNAN AGRICULTURAL UNIVERSITY, KUNMIN).

### 93. *cockerellae* Rohwer

*Tachysphex cockerellae* Rohwer, 1914:518, ♂ Holotype: ♂, Guatemala: Amatitlán (USNM). – Krombein, 1967c:393 (in catalog of North American Hymenoptera); Pulawski, 1974a:88 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:273 (listed); Krombein, 1979b:1632 (in catalog of North American Hymenoptera); Elliott and Kurczewski, 1985:296 (prey); Pulawski, 1988a:204 (in revision of Nearctic *Tachysphex*); Cambra and Santos, 2000:56 (first record from Panama: Provincia de Chiriquí: Las Layas; Provincia de Panamá: Puerto Caimito); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

### 94. *cocopa* Pulawski

*Tachysphex cocopa* Pulawski, 1988a:191, ♀, ♂. Holotype: ♀, Mexico: Sonora: SW part of Isla Tiburón (CAS). – Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

### 95. *conceptus* Pulawski

*Tachysphex conceptus* Pulawski, 1974a:29, ♀, ♂. Holotype: ♂, Chile: Concepción (MCZ). – R. Bohart and Menke, 1976:273 (listed); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Dollfuss, 1989:13 (paratype in NHMW); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

As *Tachysphex rufitarsis*: Brèthes, 1913:149 (...), corrected to *Tachysphex conceptus* by Pulawski, 1974a:29.

**96. *conclusus* Nurse**

*Tachysphex conclusus* Nurse, 1903a:517, ♀, ♂. Syntypes: India: Gujarat: Deesa; and Rajasthan: Mount Abu (BMNH). – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:273 (listed); Krombein and Pulawski, 1994:84 (in revision of Sri Lankan *Tachysphex*).

**97. *confrater* Pulawski**

*Tachysphex confrater* Pulawski, 1971:123, ♀. Syntypes: ♀, Turkmenistan: Uch-Adji (ZIN). – R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:123 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia).

**98. *congoensis* Arnold**

*Tachysphex ambiguus* var. *congoensis* Arnold, 1924:53, ♀. Holotype: ♀, Zaire: Lubumbashi (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:91 (Zaire: Lubumbashi). – **As *Tachysphex ambiguus congoensis***: R. Bohart and Menke, 1976:272 (new status, listed). – **As *Tachysphex congoensis***: Pulawski, 2007a:205 (full species status, in revision of African *Tachysphex*).

**99. *consocius* Kohl**

*Tachysphex consocius* Kohl, 1892:217, ♀. Holotype: ♀, Azerbaijan: Helenendorf, now Khanlar (NHMW). – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Pulawski, 1971:185 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:275 (in Sphecid Fauna of Czechoslovakia); Erlandsson, 1974:71 (Italy); R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:121, 131 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Guichard, 1980:227 (Oman); Pagliano, 1980:128 (Italy: Lazio); Gayubo, 1982a:100 (N Spain: Sierra de Béjar), 1982f:251 (Spain: Cádiz Province: Palmones, Zahora); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Schmidt and Westrich, 1983:123 (Greece); Gayubo, 1984b:84 (Spain: Salamanca Province), 1984c:363 (Portugal: El Algarve Province); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Gayubo, 1986c:32 (Spain: Zamora Province); Gayubo and Sanza, 1986:44 (Spain: Burgos); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Gayubo and Mingo, 1988:77 (Spain); Asís, Gayubo, and Tormos, 1989a:236 (nest and prey); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Gayubo, Asís, and Tormos, 1990a:17 (Spain); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1992:281 (France: Corse); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Krombein and Pulawski, 1994:10 (nesting habits), 28 (in revision of Sri Lankan *Tachysphex*); Tormos, Asís, and Gayubo, 1994:188, 204 (Spain: Albacete Province); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Nazarova, 1998:40 (Tajikistan: Tigrovaya Balka Nature Reserve); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Ivanov and Ljubomirov, 2001:211 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitosha near Sofia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:241 (in Sphecid Fauna of Western Europe); Seyoum and Pulawski, 2001:323 (potential control agent of acridid pests in Ethiopia; Ethiopia: Gamo Gofa: 58 km NNE Arba Minch at 6°24'N 37°45'E, W shore of Lake Chamo at 5°56'N 37°32'E, 49 km SE Sodo at 6°29'N 37°40'E, Harerge: 37 km SE Jijiga at 9°11'N 43°05'E, 43 km SE Jijiga at 9°09'N 43°08'E, Sidamo: 35 km N Moyale at 3°43'N 38°50'E; prey: early stage nymph of an acridid); Kazenas, 2002a:66 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:140 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Gayubo, Özbek, and Yıldırım, 2003:88 (Turkey: Erzurum: Yni-versity campus); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ven-

torrillo in Sierra de Guadarrama); Schmid-Egger, 2003:758 (Italy: Sicilia: Piano); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:451 (Bulgaria: Michurin, Krasnovo near Hissarya); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan); Pagliano and Negrisol, 2005:375 (in Sphecid Fauna of Italy); Shoreenko, 2005a:164 (Ukraine: Crimea); Straka, 2005:251 (Turkey: İçel: Büyükeçeli; *consocius* sensu Pulawski and Krombein, 1994, is a complex of species); Ljubomirov, 2006:543 (Greece: Rhodope Mountains: previous records by Schmidt and Westrich, 1983, reported); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Baños-Picón, Gayubo, Asís, and González, 2007a:255, 258 (Spain: Zamora: Cabañas de Aliste); Pulawski, 2007a:207 (in revision of African *Tachysphex*); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Slovakia); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:203 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina).

*Tachysphex cabrerai* Mercet, 1909b:196, ♀, ♂ (as *Cabrerai*, incorrect original capitalization). Syntypes: Spain: Madrid (MNCN). Synonymized with *Tachysphex consocius* by Pulawski, 1971:185. – Mercet, 1910b:165 (listed); de Beaumont, 1936a:209 (in revision of French *Tachysphex*), 1940b:176 (in revision of *Tachysphex* of Egypt); Honoré, 1942:55 (Egypt); Giner Mari, 1943:138 (in Sphecid Fauna of Spain); de Beaumont, 1947a:201 (in new revision of *Tachysphex* of Egypt), 1947b:393 (Cyprus); de Andrade, 1949:15 (Portugal); de Beaumont, 1950d:20 (Egypt: Siwa oasis); Pittioni, 1950:25 (Cyprus); de Beaumont, 1954a:59 (Italy), 1954e:91 (Italy); Grandi, 1954:238 (Italy), nec 238 (*cabrerai* var. ? = *Tachysphex grandii*); de Beaumont, 1955a:184 (Morocco); Ceballos, 1956:375 (in catalog of Hymenoptera of Spain); de Beaumont, 1956a:199 (Libya); Grandi, 1957:389 (Italy); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958a:181 (Bulgaria: Aitos, Sozopol); Diniz, 1959:29 (Portugal: Cascais, Lisboa, Paço do Rei, Trafaria); Suárez, 1959:58 (Spain: Almería Province); de Beaumont, 1960a:19 (Greece: Rhodes Island), 1960b:239 (Libya), 1961c:50 (Greece: Crete Island), 1962b:26 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:6 (Portugal: thirteen localities); Pulawski, 1964:95 (Egypt: Abu Rawash, Dahshur, Ghiza, Maadi, Kom Osheim); de Beaumont, 1965a:51 (Greece), 1966:212 (Egypt: Amrye near Alexandria); Pulawski, 1967a:408 (Turkey); de Beaumont, 1970a:401 (Afghanistan); Georghiou, 1977:192 (Cyprus); Dollfuss, 1989:13 (type material in NHMW).

*Tachysphex minutulus* Arnold, 1923a:160, ♀, ♂. Lectotype: ♂, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:207. Synonymized with *Tachysphex consocius* by Pulawski in Bohart and Menke, 1976:273. – Arnold, 1924:57 (correction to original description), 1930:3 (in checklist of Afrotropical Sphecidae).

*Tachysphex grandii* de Beaumont, 1965a:51, ♀, ♂. Holotype: ♂, Italy: Bologna: Gaibola (Bologna). Synonymized with *Tachysphex consocius* by Pulawski in Krombein and Pulawski, 1994:28. – Pulawski, 1967a:408 (Turkey), 1971:182 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:277 (in Sphecid Fauna of Czechoslovakia); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:121, 131 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Gayubo, 1982a:102 (N Spain: Sierra de Béjar), 1982f:252 (Spain: Cádiz Province: Guadiaro); Dollfuss, 1983a:76 (endangered in Niederösterreich, Austria), 1983b:10 (in catalog of Sphecidae of Austria); Gayubo, 1984b:96 (Spain: previously recorded from Salamanca Province), 1984c:364 (Portugal: El Algarve Province), 1986c:33 (Spain: Zamora Province); Gayubo and Sanza, 1986:45 (Spain: Burgos); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Dollfuss, 1987:21 (Austria: Niederösterreich: St. Christofen); Gayubo, 1987a:112 (Spain: Ciudad Real Province); Gayubo



and Mingo, 1988:79 (Spain); Karsai, 1988:100 (Hungary: Kiskunság National Park); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivy, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Gayubo, Asís, and Tormos, 1990a:17 (Spain); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Gusenleitner, 1992:685 (Austria: Steiermark: Therme Loipersdorf); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Dollfuss, 1994:100 (endangered in Austria); Tormos, Asís, and Gayubo, 1994:188, 205 (Spain: Albacete Province); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Ljubomirov, 1999b:49 (Bulgaria: Mt. Vitosha near Sofia); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Zettel, Gross, and Mazzucco, 2001:72 (Austria: Wien); Kazenas, 2002a:68 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Straka, 2005:252 (valid species, diagnosis, locality records from Europe, Turkey, and Kazakhstan); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia), 222 (listed from Bohemia, Moravia, and Slovakia by Straka, 2005; specimens published as *Tachysphex tarsinus* by Vepřek, 2000 include *Tachysphex grandii*).

As *Tachysphex cabrerai* var. ? : Grandi, 1954:238 (Italy), corrected to *Tachysphex grandii* by ...

As *Tachysphex* species 1 (part) and 3 (part): van Noort, Prinsloo, and Compton, 2000:348 (Namibia), corrected to *Tachysphex consocius* by Pulawski, 2007a:208.

### 100. *contrarius* Pulawski

*Tachysphex contrarius* Pulawski, 1977a:241, ♀, ♂. Holotype: ♀, Western Australia: Kalamunda, 30 km E Perth (BMNH). – Cardale, 1985:239 (in catalog of Australian Sphecidae); McCorquodale and Thomson, 1989:94 (prey: nymph of *Laxta*, a blattid).

### 101. *coquilletti* Rohwer

*Tachysphex coquilletti* Rohwer, 1911b:572, ♀, ♂. Holotype: ♀, California: Los Angeles County: no specific locality (USNM). – G. Bohart *in* Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Krombein, 1961a:81 (visiting flowers of mat euphorbia, *Euphorbia albomarginata*); Kurczewski, 1966:317 (prey); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Alcock and Gamboa, 1975b:164 (nesting habits); Hurd and Linsley, 1975:116 (Arizona: Cochise County: Portal, and Pinal County: Casa Grande; on flowers of *Larrea tridentata* (De Candolle) Coville, Zygophyllaceae); R. Bohart and Menke, 1976:273 (listed); Krombein, 1979b:1632 (in catalog of North American Hymenoptera); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:200 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex dentatus* F. Williams, 1914a:169, ♀. Holotype: ♀, Kansas: Morton County: no specific locality (Kansas Univ). Synonymized with *Tachysphex coquilletti* by G. Bohart *in* Muesebeck et al., 1951:950. – LaBerge, 1956:527 (holotype in Snow Entomological Museum); Arnaud, 1970:332 (...).

### 102. *coriaceus* (A. Costa)

As *Tachysphex nigripennis*: A. Costa, 1867b:85 (in revision of Italian Sphecidae), corrected to *Tachysphex coriaceus* by de Beaumont, 1936c:5.

*Tachytes coriaceus* A. Costa, 1867b:95, ♂ (as *coriacea*, incorrect original termination). Holotype: ♂, Italy: Campania: Portici (NAPOLI). – As *Tachysphex coriaceus*: Kohl, 1885a:394 (new combination, original description copied); Dalla Torre, 1897:678 (in catalog of world Hymenoptera); de Beaumont, 1936c:5 (redescription), 1954a:57 (It-

aly), 1954e:91 (Italy); Grandi, 1954:239 (Italy), 1957:389 (Italy); Zangheri, 1969:1704 (Italy: in catalog of flora and fauna of Romagna Region); Pulawski, 1971:232 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:268 (in Sphecid Fauna of Czechoslovakia: Slovakia: Kamenica nad Hronom); R. Bohart and Menke, 1976:273 (listed); Pulawski, 1978:216, 218 (in key to Sphecidae of European part of former USSR); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Negrisol *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Majzlan, Rychlík, and Deván, 1999:146 (Slovakia: Čenkovská Step Nature Reserve); Ivanov and Ljubomirov, 2001:211 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); K. Schmidt and Bitsch *in* Bitsch et al., 2001:242 (in Sphecid Fauna of Western Europe; first record from Spain); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Pagliano and Negrisol, 2005:363 (in Sphecid Fauna of Italy); Straka, 2005:269 (first record from Turkey: Bursa: Çagliyan); Standfuss and Standfuss, 2006b:97 (first record from Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Slovakia); Pagliano, 2009:183 (Italy: Piemonte: Macra; Sardegna: Platamona; France: Corse: Travo).

*Tachysphex coriaceus* A. Costa, 1867c:39. Objective synonym of *Tachysphex coriaceus* A. Costa, 1867b:95.

*Tachysphex reiseri* Kohl, 1901c:777, ♀ (as *Reiseri*, incorrect original capitalization). Holotype (or syntypes): ♀, Bosnia and Herzegovina: Fojnica near Tješilo (NHMW). Synonymized with *Tachysphex coriaceus* by de Beaumont, 1936c:5. – Grandi, 1935a:110 (Italy); Dollfuss, 1989:13 (type material in NHMW).

### 103. *costae* (De Stefani Perez)

*Tachytes costae* De Stefani Perez, 1882:42, ♀ (as *Costae*, incorrect original capitalization). Syntypes: ♀, Italy: Sicilia: Sciacca (depository unknown). – De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera). – **As *Tachysphex costae***: Kohl, 1885a:352 and 354 (in key to Palearctic *Tachysphex*), 365 (new combination, in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ferton, 1901b:680 (found in Marseille area, France, but not in Corsica); Adlerz, 1904:137 (known prey: nymphs of *Gryllus campestris* according to Lichtenstein); Antiga and Bofill, 1904:10 (in catalog of Catalanian Hymenoptera); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (listed from Spain); Morice, 1911:102 (Algeria: Biskra); Berland, 1925d:120 (in Sphecid Fauna of France); von Schulthess, 1929:135 (Greece: Astypalaia); Grandi, 1930:318 (nesting habits), 327 (description of mature larva), and 341 (Italy: Toscana: Maremma), 1931:47 (reference to previous observations); Guiglia, 1932d:475 (Libya: 20 km S Gialo); Nadig, 1933:78 (Morocco: Goundafa); E. Nielsen, 1933:294 (summary of nesting habits); Giner Mari, 1934:134 (Spain); Grandi, 1934:59 (nest in cavities made by insects other than ants, mantid prey, description of mature larva); Guiglia, 1934b:304 (Libya: bibliography and summary of locality records); Nadig, 1934:32 (France: Corse: Ajaccio; Italy: Sardegna: Cagliari, Iglesias); Bernard, 1935:65 (France: Var: Fréjus area); de Beaumont, 1936a:198 (in revision of French *Tachysphex*), 1936c:8 (specimen in coll. A. Costa), 1940b:170 (in revision of *Tachysphex* of Egypt, not found in Egypt); Guiglia, 1940a:291 (Libya: El-Hag), 1942b:234 (Libya); Giner Mari, 1943:140 (in Sphecid Fauna of Spain); Guiglia, 1943b:71 (Albania: Kopliku); Giordani Soika, 1944:9 (Italy: Sicilia: Taormina); Guiglia, 1944b:27 (Italy); Deleurance, 1945:25 (nesting habits); Giner Mari, 1945b:360 (e. Morocco: Muley Rechid); de Beaumont, 1947a:175 (in new revision of *Tachysphex* of Egypt: not found in Egypt; Libya: Cyrenaica), 1947b:391 (Cyprus); Guiglia, 1948c:201 (Italy: Sardinia: Villasalto); de Andrade, 1949:15 (Portugal); Pittioni, 1950:25 (Cyprus); de Beaumont, 1954a:55 (Italy), 1954e:91 (Italy), 1955a:181 (Morocco); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); de Beaumont, 1956a:197 (Libya); Morel, Nouvel, and Ribaut, 1956:338 (France: Département des Pyrénées-Orientales); de Beaumont, 1958b:61 (Algeria: Tassili des Ajjer); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958a:180 (Bulgaria: Aitos, Nesebar, Sandanski, Sozopol); Ceballos, 1959:229 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1959a:27 (Italy); Diniz,

1959:29 (Portugal: Cruz Quebrada, Vale de Gaio); Grandi, 1959b:287 (Italy: Livorno: Quercianella); de Beaumont, 1960a:16 (Greece: Rhodes Island), 1960b:238 (Libya), 1961c:49 (Greece: Crete Island); Grandi, 1961:194 (nesting habits), 506 (larva); de Beaumont, 1962b:25 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 Portugal: Monchique, Rezende, Sines, Trafaria); de Beaumont, 1965a:48 (Greece), 1966:212 (Egypt: Amrye near Alexandria); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Pulawski, 1967a:397 (Turkey); Evans, 1968c:119 (discussion of larval descriptions by Grandi); Königsmann, 1971:106 (Spain: Gerona: Palamós); Pulawski, 1971:400 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:270 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); Erlandsson, 1974:71 (France, Italy, Malta, Spain); R. Bohart and Menke, 1976:273 (listed); Simon Thomas, 1976:5 (France: Lot-et-Garonne); Georghiou, 1977:192 (Cyprus); Guichard, 1978:271 (Greece); Kazenas, 1978b:115, 127 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:215, 229 (in key to Sphecidae of European part of former USSR); Pagliano, 1980:128 (Italy: Toscana); Gayubo, 1982a:101 (N Spain: Sierra de Béjar), 1982f:251 (Spain: Cádiz Province: Puente Mayorga), 1984c:363 (Portugal: El Algarve Province), 1985c:168 (Spain: Valladolid: Valladolid); 1986c:32 (Spain: Zamora Province); Gayubo and Tormos, 1986a:12 (Spain: Castellón de la Plana); Gayubo, 1987a:111 (Spain: Ciudad Real Province); Asís and Jiménez, 1988:271 (Spain: Castellón Province); Gayubo and Mingo, 1988:78 (Spain); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:401 (Italy: Toscana, Sicilia); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Schembri, 1991:180 (Malta); Gayubo, Borsato, and Osella, 1992:281 (Greece: Eubea); Pagliano and Scaramozzino, 1995:731 (Italy: Island of Lampedusa); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Wu and Zhou, 1996a:8 (in revision in Economic Insect Fauna of China); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 156 (review of known biology); K. Schmidt and Bitsch *in* Bitsch et al., 2001:244 (in Sphecid Fauna of Western Europe); Kazenas, 2002a:66 (geographic distribution, collecting localities in Kazakhstan); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:451 (Bulgaria: Melnik); Pagliano and Negrisolo, 2005:369 (in Sphecid Fauna of Italy); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Straka, 2005:274 (Turkey: Kayseri: Hisarcik 10 km S Kayseri); Yildirim and Ljubomirov, 2005:1796 (Turkey: Erzurum: Tortum); Hua, 2006:282 (in list of Chinese insects, geographic distribution); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Pulawski, 2007a:218 (in revision of African *Tachysphex*); Shorenko, 2007b:258 (Ukraine: Crimea: Otuzy valley); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:203 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

*Tachysphex laticeps* Arnold, 1924:58, ♀, ♂. Lectotype: ♀, Zimbabwe: Sawmills (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:274 (listed). Synonymized with *Tachysphex costae* by Pulawski, 2007a:219.

*Tachysphex zarudnyi* Gussakovskij, 1933b:284, ♀. Holotype: ♀, Iran: Khorassan: Khulut-s-Langher (ZIN). Synonymized with *Tachysphex costae* by Pulawski, 1971:400 and 404.

*Tachysphex tadjikicus* Gussakovskij, 1952:239, ♀. Holotype: ♀, Tajikistan: Stalinabad, now Dushanbe (ZIN). Synonymized with *Tachysphex costae* by Pulawski, 1971:400 and 404.

*Tachysphex costai canariensis* de Beaumont, 1968a:261, ♀, ♂. Holotype: ♀, Canary Islands: Gran Canaria: Maspalomas (BMNH). Synonymized with *Tachysphex costae* by Pulawski, 2007a:219. – Pulawski, 1971:406 (in re-

vision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:273 (listed); Báez and Ortega, 1978:192 (Canary Islands); Wolf, 1980:73 (Canary Islands); Hohmann, La Roche, Ortega, and Barquín, 1993:232 (detailed locality records from Canary Islands).

*Tachysphex costai fertoni* Pulawski, 1971:406, ♀, ♂. Holotype: ♀, Algeria: La Calle (MNHN). Synonymized with *Tachysphex costae* by Pulawski, 2007a:219. – R. Bohart and Menke, 1976:273 (listed).

As *Tachysphex fluctuatus*: Móczár, 1938a:80 (Hungary: Pótharasz puszta), corrected to *Tachysphex costai* by Pulawski, 1971:401.

As *Tachysphex fluctuatus* (corrected to *Tachysphex costai fertoni* by Pulawski, 1971:406): Ferton, 1912a:399 (Algeria: Mascara and La Calle; nesting habits); Grandi, 1931:47 (reference to Ferton, 1912); Cros, 1936:355 (nesting habits).

As *Tachysphex buyssoni*: Guiglia, 1932b:475 (Libya: Gialo), corrected to *Tachysphex costai* by Guiglia, 1940:291.

As *Lyrops leucozona* (a manuscript name): Pagliano, 2008:546 (specimen in M. Spinola collection, Torino).

As *Lyrops panzeri*: Pagliano, 2008:549 (one specimen in M. Spinola collection, Torino).

Le Tachyte manticide: Fabre, 1886:229 (preying on mantids), 233 (list of prey, nesting in small vertical cliffs, carrying prey in flight). Synonymized with *Tachysphex costae* by Berland, 1923a:174. – Adlerz, 1904:137 (known prey: mantids, as *Tachysphex manticida*); de Gaulle, 1908:121 (in catalog of French Hymenoptera, as *Tachytes manticida*).

#### 104. *coxalis* Pulawski

*Tachysphexcoxalis* Pulawski, 2007a:225, ♀, ♂. Holotype: ♀, Mali: 40 km SW Segou (CAS). Paratype: Niger.

#### 105. *crassiformis* Viereck

*Tachysphex crassiformis* Viereck, 1906:210, ♀. Holotype: ♀, USA: Kansas: Hamilton County: no specific locality (Kansas Univ.). – F. Williams, 1914a:168 (in revision of Larrinae of Kansas); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Museum) R. Bohart and Menke, 1976:273 (listed); Krombein, 1979b:1627 (in catalog of North American Hymenoptera); Kurczewski, 1987b:720 (nesting habits); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:75 (in revision of Nearctic *Tachysphex*); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex wheeleri* Rohwer, 1911b:579, ♀. Holotype: ♀, USA: Texas: Lee County: no specific locality (USNM). Synonymized with *Tachysphex crassiformis* by Pulawski in Krombein, 1979b:1628. – G. Bohart in Muesebeck et al., 1951:953 (in catalog of North American Hymenoptera); Krombein, 1967c:394 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:277 (listed).

*Tachysphex plenoculiformis* F. Williams, 1914a:167, ♀. Holotype: ♀, USA: Kansas: Ness County: no specific locality (Kansas Univ.). Synonymized with *Tachysphex crassiformis* by Pulawski in Krombein, 1979b:1628. – F. Williams, 1914:201 (nesting habits); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Museum); Arnaud, 1970:32; R. Bohart and Menke, 1976:275 (listed).

*Tachysphex* n. sp.: Krombein, 1949:267 and 1953a:330, 1953b:132, corrected to *Tachysphex crassiformis* by Pulawski, 1988a:75.

*Tachysphex* sp. No. 4: Krombein and Evans, 1955:231, corrected to *Tachysphex crassiformis* by Pulawski, 1988a:75.

*Tachysphex boharti* Krombein, 1963b:177, ♀, ♂. Holotype: ♀, USA: North Carolina: Dare County: Kill Devil Hills (USNM). Synonymized with *Tachysphex crassiformis* by Pulawski in Krombein, 1979b:1628. – Krombein, 1967c:392 (in catalog of North American Hymenoptera); Wray, 1967:123 (...); Kurczewski, 1971:114 (in key to Floridan species); R. Bohart and Menke, 1976:272 (listed).

*Tachysphex gibbus* Pulawski, 1974:20, ♀, ♂, junior primary homonym of *Tachysphex gibbus* Kohl, 1885. Holotype: ♀, El Salvador: Quezaltepeque (UCD). Synonymized with *Tachysphex crassiformis* by Pulawski in Krombein, 1979b:1628. – R. Bohart and Menke, 1976:274 (listed).

#### 106. *crassipes* Arnold

*Tachysphex crassipes* Arnold, 1923a:157, ♀, ♂. Lectotype: ♀, Zimbabwe: Matobo (SAM), designated by Pulawski, 2007a:227. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:273 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a: 227 (in revision of African *Tachysphex*).

*Tachysphex crassipes* var. *claripennis* Arnold, 1924:53, ♀. Holotype: ♀, Zimbabwe: Essexvale (SAM). Synonymized with *Tachysphex crassipes* by Pulawski, 2007a:227. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – As *Tachysphex crassipes claripennis*: R. Bohart and Menke, 1976:273 (new status, listed).

#### 107. *crenulatus* W. Fox

*Tachysphex crenulatus* W. Fox, 1894a:512, ♀. Holotype: ♀, USA: California: no specific locality (ANSP). – Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Cresson, 1928:44 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:273 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Pulawski, 1988a:65 (in revision of Nearctic *Tachysphex*).

#### 108. *crinitus* Pulawski

*Tachysphex crinitus* Pulawski in Krombein and Pulawski, 1994:49, ♀. Holotype: ♀, Sri Lanka: Monaragala District: Nilgala (CNC).

#### 109. *crocodilus* Pulawski

*Tachysphex crocodilus* Pulawski, 1971:373, ♀, ♂. Holotype: ♀, Egypt: Kom Osheim on Cairo-Fayum road (USNM). – R. Bohart and Menke, 1976:273 (listed); Pulawski, 2007a:230 (in revision of African *Tachysphex*).

#### 110. *ctenophorus* Pulawski

*Tachysphex ctenophorus* Pulawski, 1971:101, ♀, ♂. Holotype: ♂, Kazakhstan: Ilektykol Lake, left shore of Terisakan River (ZIN). Paratypes: Russia (Sarepta), Siberia (Troitskosavsk). – R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:119, 133 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Nemkov in Nemkov, Kazenas, Budryns, et Antropov, 1995:410 (in key to Sphecidae of Russian Far East); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:66 (geographic distribution, collecting localities in Kazakhstan); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia), 2009b:78 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

#### 111. *cubanus* Pulawski

*Tachysphex cubanus* Pulawski, 1974a:17, ♀, ♂. Holotype: ♀, Cuba: Oriente: Ciudadmar (USNM). – Alayo Dalmau, 1976:7 (in key to Cuban *Tachysphex*), 22 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:273 (listed); Pulawski, 1988a:77 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra and Nipe-Sagua-Baracoa mountains); Genaro, 2006:55 (in checklist of Cuban Sphecidae and Crabronidae; also: Jamaica).

#### 112. *curvipes* Pulawski

*Tachysphex curvipes* Pulawski, 2007a:232, ♀, ♂. Holotype: ♂, Egypt: Sina (= Sinai): 51 km SE Nakhl (CAS).

#### 113. *denisi* de Beaumont

*Tachysphex denisi* de Beaumont, 1936a:197, ♀, ♂ (♀ = *Tachysphex adjunctus*). Holotype: ♂, Algeria: Oran (NHMW). – de Beaumont, 1947c:669 (in key to Mediterranean species of *bicolor* group), 1953b:14 (description of ♀, diag-

nostic characters), 1955a:183; Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); de Beaumont, 1956a:198 (Libya); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1960b:239 (Libya), 1962b:26 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Pulawski, 1971:229 (in revision of Palearctic *Tachysphex*); Erlandsson, 1974:71 (Spain); R. Bohart and Menke, 1976:273 (listed); Gayubo, 1982a:101 (N Spain: Sierra de Béjar), 1983a:123 (prey: blattids *Phyllodromica subaptera* (Rambur) and *Phyllodromica carpetana* Bolívar); Gayubo and Tormos, 1984:15 (Spain: Valencia); Gayubo, 1984b:84 (Spain: Salamanca Province), 1985c:168 (Spain: Alicante: Villajoyosa); Gayubo and Tormos, 1986a:12 (Spain: Castellón de la Plana); Gayubo and Mingo, 1988:78 (Spain); Hohmann, La Roche, Ortega, and Barquín, 1993:233 (first record from Canary Islands: Fuerteventura); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province), 1999:355 (Spain: Valladolid: Viana de Cega); K. Schmidt and Bitsch *in* Bitsch et al., 2001:245 (in Sphecid Fauna of Western Europe); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

#### 114. *depressiventris* R. Turner

*Tachysphex depressiventris* R. Turner, 1916b:256, ♀. Lectotype: ♀, Australia: Western Australia: Yallingup (BMNH), designated by Pulawski, 1977a:270. – R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:273 (listed); Evans, Matthews and Pulawski, 1976:441 (nesting habits); Pulawski, 1977a:270 (in revision of Australian *Tachysphex*); Alcock, 1980b:259 (nest, prey: nymphal cockroaches); Cardale, 1985:239 (in catalog of Australian Sphecidae); McCorquodale and Thomson, 1989:94 (prey: a blattellid nymph); Naumann, 1993:186 (Australia: Queensland: Heathlands area in Cape York).

#### 115. *descendentis* Mercet

*Tachysphex descendentis* Mercet, 1909b:198, ♀. Syntypes: Spain: Madrid and Alicante (MNCN). – Mercet, 1910b:165 (listed from Spain); Giner Mari, 1943a:142 (in Sphecid Fauna of Spain); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Pulawski, 1971:192 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:273 (listed); Gayubo, 1982a:101 (N Spain: Sierra de Béjar), 1982f:252 (Spain: Cádiz Province: Acalá de los Gazules), 1984b:96 (Spain: previously recorded from Salamanca Province), 1987a:112 (Spain: Ciudad Real Province); Gayubo and Mingo, 1988:78 (Spain); Gayubo, Asís, and Tormos, 1990a:17 (Spain); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); K. Schmidt and Bitsch *in* Bitsch et al., 2001:246 (in Sphecid Fauna of Western Europe: status unclear); Baños-Picón, Gayubo, Asís, and González, 2007a:255, 258 (Spain: Zamora: Cabañas de Aliste); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

#### 116. *deserticola* de Beaumont

*Tachysphex deserticola* de Beaumont, 1940:173, ♀. Holotype: ♀, Egypt: Kharga oasis (Ministry of Agriculture of Egypt). – Honoré, 1942:55 (Egypt, listed); de Beaumont, 1947a:193 (in new revision of *Tachysphex* of Egypt); Pulawski, 1964:95 (Egypt: Abu Rawash, Dahshur, Kom Osheim, Saqqara); Osborn and Krombein, 1969:16 (NW Sudan: Gebel 'Uweinat: Wadi Ain el Brins); Pulawski, 1971:385 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:273 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:234 (in revision of African *Tachysphex*).

**117. *desertorum* F. Morawitz**

*Tachysphex desertorum* F. Morawitz, 1894:342, ♀. Holotype or syntypes: ♀, Turkmenistan: Serax (ZIN). – Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Pulawski, 1971:376 (in revision of Palearctic *Tachysphex*); Kazenas, 1972b:161 (Kazakhstan); Myartseva, 1972a:78 (Turkmenistan); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp. in Kazakhstan); R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:115, 128 (in key to Sphecidae of Kazakhstan and Central Asia); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:66 (geographic distribution, collecting localities in Kazakhstan); Pulawski, 2007a:237 (in revision of African *Tachysphex*).

*Tachysphex abjectus* Kohl, 1901c:782, ♂. Holotype: ♂, Transcaspia: Bala-Ishem (NHMW). Synonymized with *Tachysphex desertorum* by Pulawski, 1971:376. – de Beaumont, 1936b:614 (China: Tsaidam), 1940b:173 (in revision of *Tachysphex* of Egypt); Honoré, 1942 (Egypt); de Beaumont, 1947a:190 (in new revision of *Tachysphex* of Egypt), 1958b:61 (Algeria: Tassili des Ajjer), 1960b:239 (Libya), 1961e:5 (Iraq); Dollfuss, 1989:12 (type material in NHMW).

*Tachysphex julliani nigripes* Tsuneki, 1972e:391, ♀, junior primary homonym of *Tachysphex nigripes* Pulawski, 1967. Holotype: ♀, Mongolia: Bayanhongor Aymag: oasis Ehingol 90 km NE border post Tsaganbulag (TMB). Synonymized with *Tachysphex desertorum* by Pulawski, 2007a:237. – R. Bohart and Menke, 1976:274 (listed)

**118. *detritus* Arnold**

*Tachysphex schönlandi* var. *detritus* Arnold, 1924:69, ♂. Holotype: ♂, South Africa: Cape Province: Willowmore (TMP). – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex schoenlandi detritus***: R. Bohart and Menke, 1976:276 (new status, listed). – **As *Tachysphex detritus***: Pulawski, 2007a:240 (full species status, in revision of African *Tachysphex*).

*Tachysphex maidli* de Beaumont, 1940:169, ♀, ♂. Holotype: ♀, Egypt: Sinai: El Arish (originally A. Alfieri coll., Cairo, now USNM). Synonymized with *Tachysphex detritus* by Pulawski, 2007a:240. – Honoré, 1942:56 (Egypt); de Beaumont, 1947a:175 (in new revision of *Tachysphex* of Egypt), 1950f:405 (Algeria), 1955a:181 (Morocco); Pulawski, 1971:414 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:13 (Israel); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:115, 127 (in key to Sphecidae of Kazakhstan and Central Asia); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia).

*Tachysphex simillimus* Gussakovskij, 1952:235, ♀, ♂ (♂ = *Tachysphex erythropus*). Lectotype: ♀, Tajikistan: Ayvaj (ZIN), designated by Pulawski, 1971:414 and 416. Synonymized with *Tachysphex maidli* by Pulawski, 1971:415.

*Tachysphex* species 2 (part): van Noort, Prinsloo, and Compton, 2000:348 (Namibia), corrected to *Tachysphex detritus* by Pulawski, 2007a:241.

**119. *diabolicus* Arnold**

*Tachysphex diabolicus* Arnold, 1923a:149, ♀, ♂. Lectotype: ♀, Zimbabwe: Sawmills (SAM), designated by Pulawski, 2007a:243. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); de Beaumont, 1967b:509 (South Africa: Natal); R. Bohart and Menke, 1976:273 (listed); Pulawski, 2007a:243 (in revision of African *Tachysphex*).

*Tachysphex diabolicus* var.  *analis* Arnold, 1924:51, ♀. Holotype: ♀, South Africa: Cape Province: Algoa Bay (TMP). Synonymized with *Tachysphex diabolicus* by Pulawski, 2007a:243. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex diabolicus analis***: R. Bohart and Menke, 1976:273 (new status, listed).

**120. *diadelus* Pulawski**

*Tachysphex diadelus* Pulawski in Krombein and Pulawski, 1994:70, ♀, ♂. Holotype: ♀, Sri Lanka: Monaragala District: Angunakolapelessa (USNM).

**121. dignus Kohl**

*Tachysphex dignus* Kohl in Kohl and Handlirsch, 1889:278, ♂. Holotype: ♂, Turkmenistan: Nukhur in Kopet-Dagh (Georgia State Museum, Tbilisi?). – Dalla Torre, 1897:679 (in catalog of world Hymenoptera, as *digenus*); Pulawski, 1967a:398 (Turkey, description of ♀); de Beaumont, 1970c:15 (Iran: Baluchistan); Pulawski, 1971:357 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:115, 128 (in key to Sphecidae of Kazakhstan and Central Asia); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); Gayubo, Özbek, and Yıldırım, 2003:88 (Turkey: Erzincan: Üzümlü); Straka, 2005:273 (Turkey: Adana: Boztahta 45 km N Adana; Adiyaman: Nemrut dag; Eskişehir: Sakariilica 30 km N Eskişehir); Pulawski, 2007a:246 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:203 (in catalog of Crabronidae of Turkey).

As *Tachytes incertus* (corrected to *Tachysphex dignus* by Pulawski, 1971:357): Radoszkowski, 1886a:33 (male genitalia), 1891:590 (reference to Radoszkowski, 1886a); de Beaumont, 1936b:615 (specimens in Radoszkowski collection, as *Tachysphex*).

**122. discrepans R. Turner**

*Tachysphex discrepans* R. Turner, 1915:555, ♀. Lectotype: ♀, Australia: Tasmania: Eaglehawk Neck (BMNH), designated by Pulawski, 1977a:264. – R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:273 (listed); Pulawski, 1977a:264 (in revision of Australian *Tachysphex*); Cardale, 1985:239 (in catalog of Australian Sphecidae).

**123. dissimulatus Pulawski**

*Tachysphex dissimulatus* Pulawski, 2007a:248, ♀, ♂. Holotype: ♂, Zimbabwe: Kami Ruins (CAS). Paratypes: Botswana, Namaibia, South Africa.

**124. diversilabris Arnold**

*Tachysphex diversilabris* Arnold, 1960b:83, ♀, ♂. Lectotype: ♂, South Africa: Kwazulu-Natal: Drakensberg Mts.: Fire Lookout in Cathedral Peak Forestry (SAM), designated by Pulawski, 2007a:251. – R. Bohart and Menke, 1976:273 (listed).

**125. dolosus Arnold**

*Tachysphex Panzeri* var. *dolosus* Arnold, 1923a:171, ♀, ♂. Syntypes: Zimbabwe: Sawmills (SAM). – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – As *Tachysphex panzeri dolosus*: R. Bohart and Menke, 1976:275 (new status, listed). – As *Tachysphex dolosus*: Pretorius, 2005:116 (full species status, use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:254 (in revision of African *Tachysphex*).

**126. dominicanus Pulawski**

*Tachysphex dominicanus* Pulawski, 1988a:79, ♀, ♂. Holotype: ♂, Dominican Republic: Distrito Nacional: Haina (CAS). Paratype: Cuba: Oriente: La Farola near Baracoa. – Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra); Genaro, 2006:55 (in checklist of Cuban Sphecidae and Crabronidae; also: Hispaniola, first record from Navassa Island).

**127. drymobius Pulawski**

*Tachysphex drymobius* Pulawski in Krombein and Pulawski, 1994:57, ♀, ♂. Holotype: ♀, Sri Lanka: Galle District: Kanneliya Jungle (USNM) – Krombein in Krombein and Pulawski, 1994:11 (nesting habits).

**128. dzinghis Tsuneki**

*Tachysphex dzinghis* Tsuneki, 1972e:390, ♀. Holotype: ♀, Mongolia: Bayanhongor Aymag: Ekhingol oasis (TMB). – R. Bohart and Menke, 1976:273 (listed).



**129. ebeninus Arnold**

*Tachysphex ebeninus* Arnold, 1929c:385, ♀, ♂. Syntypes: Zimbabwe: Redbank, Nyamandhlovu (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:273 (listed); Pulawski, 2007a:258 (in revision of African *Tachysphex*).

**130. eldoradensis Rohwer**

*Tachysphex eldoradensis* Rohwer, 1917a:245, ♀. Holotype: ♀, USA: California: Eldorado County: Tahoe (USNM). – G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:273 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Pulawski, 1988a:46 (in revision of Nearctic *Tachysphex*).

**131. erectus Pulawski**

*Tachysphex erectus* Pulawski, 2007a:261, ♂. Holotype: ♂, South Africa: Northern Cape Province: Geogap (= Hester Malan) Nature Reserve (AMG).

**132. erythrophorus Dalla Torre**

*Tachysphex erythrogaster* Cameron, 1889c:143, ♀, junior secondary homonym of *Tachysphex erythrogaster* (A. Costa, 1882). Holotype or syntypes: ♀, India: Maharashtra: Pune (OXUM). – Bingham, 1897:195 (redescription); Nurse, 1909:14 (description of ♂); Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897).

*Tachysphex erythrophorus* Dalla Torre, 1897:679. Substitute name for *Tachysphex erythrogaster* Cameron, 1889. – R. Bohart and Menke, 1976:273 (listed); Roche, 1981:2 (in checklist of Sphecidae of United Arab Emirates); Krombein and Pulawski, 1994:76 (in revision of Sri Lankan *Tachysphex*); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); Pulawski, 2007a:262 (in revision of African *Tachysphex*).

*Tachysphex latissimus* R. Turner, 1917e:199, ♀, ♂. Lectotype: ♀, India: Bihar: Pusa (BMNH), designated by Pulawski, 1975a:310. Synonymized with *Tachysphex erythrophorus* by Pulawski, 1975a:310.

As *Tachysphex* No. 18 (part, other specimens = *Tachysphex gujaraticus*): de Beaumont, 1940b:178 (Egypt), corrected to *Tachysphex pectoralis* by Pulawski, 1971:126.

As *Tachysphex argentatus*: Gussakovskij, 1952:242 (♀ only), corrected to *Tachysphex pectoralis* by Pulawski, 1971:126.

*Tachysphex pectoralis* Pulawski, 1964:101, ♀, ♂. Holotype: ♀, Egypt: Abou Rawash NW Cairo (originally W.J. Pulawski coll., now CAS). Synonymized with *Tachysphex erythrophorus* by Pulawski, 1975a:310. – Pulawski, 1971:126 (in revision of Palearctic *Tachysphex*); Kazenas, 1978b:122, 129 (in key to Sphecidae of Kazakhstan and Central Asia).

**133. erythropus (Spinola)**

*Lyrops erythropus* Spinola, 1839:479, "♀" = ♂. Lectotype: ♂, Egypt: no specific locality (Torino), designated by de Beaumont, 1952e:48. – Casolari and Casolari Moreno, 1980:113 (specimens in M. Spinola collection, Torino); Pagliano, 2008:547 (lectotype in M. Spinola collection, Torino). – **As *Larrada erythropus***: F. Smith, 1856:281 (new combination, in catalog of Hymenoptera in British Museum). – **As *Tachytes erythropus***: A. Costa, 1867b:84 and 1867c:28 (new combination, in revision of Italian Sphecidae); Kohl, 1883d:226 (*Tachytes erythropus* of A. Costa, 1867 = *Lyrops fluctuata*, synonymy impossible for geographic reasons). – **As *Tachysphex erythropus***: Kohl, 1883a:175 (new combination, comparison with *T. graecus*), 1885a:394 (original description copied); Dalla Torre, 1897:679 (in catalog of world Hymenoptera); de Beaumont, 1952e:47 (study of type material), 1955a:181 (Morocco), 1956a:197 (Libya); Grandi, 1957:389 (Libya: Tripolitania: Wadi Kaam); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1960a:16 (Greece: Rhodes Island), 1960b:238 (Libya); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1965a:48 (Greece), 1966:212 (Egypt: Amrye near Alexandria); Myartseva, 1965:77 (Turkmenistan: Akibay; Bayram-Ali district); Pulawski, 1967a:397 (Turkey),

- 1971:408 (in revision of Palearctic *Tachysphex*); Myartseva, 1972a:78 (Turkmenistan); Kazenas, 1972b:161 (Kazakhstan); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); Krombein, 1974b:452 (Egypt: Gebel 'Uweinat); R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:115, 127 (in key to Sphecidae of Kazakhstan and Central Asia); Guichard, 1980:227 (Oman); Roche, 1981:2 (in checklist of Sphecidae of United Arab Emirates); Gayubo, 1982f:252 (Spain: Cádiz Province: Algododnales, Bosque, San José del Valle), 1984c:363 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:15 (Spain: Valencia); Islamov, 1986:525 (Uzbekistan: Tashkent Oblast'); Gayubo, 1987a:112 (Spain: Ciudad Real Province); Tormos and Jiménez, 1987a:125 (Spain: Valencia); Asís and Jiménez, 1988:271 (Spain: Castellón Province); Gayubo and Mingo, 1988:78 (Spain); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Gayubo and Borsato, 1994:207 (Italy: Sicilia); Krombein and Pulawski, 1994:95 (in revision of Sri Lankan *Tachysphex*); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Pagliano and Scaramozzino, 1995:732 (Italy: Island of Pantelleria); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:246 (in Sphecid Fauna of Western Europe); Kazenas, 2002a:67 (geographic distribution, collecting localities in Kazakhstan); Jacobs, 2005a:451 (first record from Bulgaria: Melnik); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan); Pagliano and Negrisoló, 2005:369 (in Sphecid Fauna of Italy); Straka, 2005:274 (Turkey: Adana: Karataş 48 km S Adana; Bursa: Çaglian); Pulawski, 2007a:265 (in revision of African *Tachysphex*); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:204 (in catalog of Crabronidae of Turkey); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Pagliano, 2009:183 (Italy: Sardegna: lake Baratz).
- Tachytes maracandica* Radoszkowski, 1877:26, ♂ (as *Maracandica*, incorrect original capitalization and termination). Lectotype: ♂, Uzbekistan: Durman-kul (ZMMU), designated by Pulawski, 1971:411. Synonymized with *Tachysphex erythropus* by Pulawski, 1971:408 and 411. – Magretti, 1884c:588 (Sudan: Khor el Langhebb); Radoszkowski, 1887a:44 (China: Tsaidam region: no specific locality); nec Radoszkowski, 1886a:32, 1892:590, and de Beaumont, 1936b:612 (= *Tachysphex persa confinis*). – **As *Tachysphex maracandicus***: Kohl, 1885a:396 (tentative new combination, original description copied); Dalla Torre, 1897:681 (in catalog of world Hymenoptera).
- Tachytes flavogeniculatus* Taschenberg, 1880:778, ♂. Lectotype: ♂, Ethiopia: no specific locality (Halle), designated by Pulawski *in* Krombein and Pulawski, 1994:97. Synonymized with *Tachysphex erythropus* by Pulawski *in* Krombein and Pulawski, 1994:97. – **As *Tachysphex flavogeniculatus***: Kohl, 1885:402 (new combination, listed); Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Arnold, 1923:174 (listed); R. Bohart and Menke, 1976:273 (listed).
- Tachysphex heliopolites* Morice, 1897:306, ♂, ♀ (♂ = *Tachysphex albocinctus*). Lectotype: ♀, Egypt: Zeitun near Cairo (OXUM), designated by Pulawski, 1971:411. Synonymized with *Tachysphex mantivorus* by de Beaumont, 1947a:172. – Mercet, 1910b:165 (listed from Spain); von Schulthess, 1926b:215 (Tunisia, as *helioplites*); Giner Mari, 1943a:139 (in Sphecid Fauna of Spain); Nadig, 1933:79 (comparison with *syriacus*); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain).
- Tachysphex inventus* Nurse, 1903a:516, ♂. Lectotype: ♂, India: Gujarat: Deesa (BMNH), designated by Pulawski, 1975a:313. Synonymized with *Tachysphex erythropus* by Pulawski, 1975a:313. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897).
- Tachysphex mantivorus* de Beaumont, 1940:169, ♀, ♂ (as *mantivora*, incorrect original termination). Lectotype: ♀, Greece: no specific locality (NHMW), designated by de Beaumont, 1947:175. Synonymized with *Tachysphex erythropus* by de Beaumont, 1952e:47. – de Beaumont, 1947a:172 (in new revision of *Tachysphex* of Egypt); de Andrade, 1949:16 (Portugal: Trafaria, Vale de Gaio); de Beaumont, 1950d:18 (Egypt: Siwa oasis), 1950f:405 (Algeria: Tindouf); Balthasar, 1954b:269 (Palestine: Dead Sea and Wadi el Kelt near Jericho); Bytinski-Salz,

1956:226 (Turkey: Kemer); Diniz, 1959:29 (Portugal: Trafaria, Vale de Gaio), 1964a:5 (Portugal: Pegões, Trafaria, Vale de Gaio).

As *Tachysphex fluctuatus* (collectively corrected to *Tachysphex mantivorus* by de Beaumont, 1940:169): Kohl, 1885a:350 and 353 (in key to Palearctic *Tachysphex*), 365 (in revision of Palearctic *Tachysphex*); nec F. Morawitz, 1894:342 (= *Tachysphex sordidus*); W. Schulz, 1904b:102 (Greece: Epirus); von Schulthess, 1909:441 (Libya: Tripoli); Mercet, 1910b:165 (listed from Spain); Morice, 1911:101 (Algeria: Biskra, Bône); Dusmet, 1915:87 (Spain: Aragón); von Schulthess, 1926b:215 (Libya); Kruger, 1929a:21 and 1929b:56 (Libya: Cyrenaica: Giarabub, es Scegga, now Shatib ash Ahaqqah, as *finctuosus*); nec Grandi, 1931:47 = *Tachysphex costae fertoni*; Guiglia, 1932d:474 (Libya: Cufra, Es-Sahabi, Gialo); Gussakovskij, 1933b:280 (Iran); Nadig, 1933:79 (Morocco: Marrakech); Guiglia, 1934b:303 (Libya: bibliography and summary of locality records); Gussakovskij, 1935:426 (Tajikistan: Kulab); de Beaumont, 1936b:614 (Caucasus, Transcaspia), 1936c:8 (specimens in coll. A. Costa); Rungs, 1936:24; nec Móczár, 1938:80 (= *Tachysphex costae*); Guiglia, 1939c:187 (Libya Fezzan: Elbarkat, Gat, Tunin), 1940a:292 (Libya: El-Hag), 1942b:234 (summary of Libyan records); Honoré, 1942:56 (Egypt); Giner Mari, 1943a:139 (in Sphecid Fauna of Spain), 1947:25 (Western Sahara); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River); Balthasar, 1972:274 (in Sphecid Fauna of Czechoslovakia: can be expected in the country).

As *Tachytes sericea*, present correction: De-Stefani, 1886:171 (Italy: Sicilia: Monti di Renda near Palermo), 1895:226 (in catalog of Sicilian Hymenoptera).

As *Tachysphex simillimus* ( $\sigma$  only): Gussakovskij, 1952:235, corrected to *Tachysphex erythropus* by Pulawski, 1971:409.

#### 134. *erythrurus* Pulawski

*Tachysphex erythrurus* Pulawski, 2007a:271, ♀, ♂. Holotype: ♀, Kenya: Rift Valley Province: Marich Pass Field Studies Centre at 1°32.2'N 35°27.4'E (CAS). Paratypes: Tanzania.

#### 135. *eucalypticus* Pulawski

*Tachysphex eucalypticus* Pulawski, 1977a:251, ♀, ♂. Holotype: ♀, Australia: Victoria: 5-15 mi S Rainbow (ANIC). – Cardale, 1985:239 (in catalog of Australian Sphecidae).

#### 136. *eucharistus* Pulawski

*Tachysphex eucharistus* Pulawski in Krombein and Pulawski, 1994:47, ♀, ♂. Holotype: ♀, Sri Lanka: Mannar District: 0.8 km NE Kokmotte Bungalow in Wilpattu National Park (USNM).

#### 137. *eurystoma* Pulawski

*Tachysphex eurystoma* Pulawski, 2007a:273, ♀, ♂. Holotype: ♂, South Africa: Kwzulu-Natal: Weenen (BMNH).

#### 138. *euxinus* Pulawski

*Tachysphex euxinus* Pulawski, 1958a:178, ♀, ♂. Holotype: ♀, Bulgaria: Akhtopol (originally W.J. Pulawski coll., now CAS). Paratypes: Bulgaria: Nesebar, Sozopol – Pulawski, 1965a:401 (Turkey), 1971:199 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:269 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); R. Bohart and Menke, 1976:273 (listed); Pulawski, 1978:217, 220 (in key to Sphecidae of European part of former USSR); K. Schmidt and Bitsch in Bitsch et al., 2001:247 (in Sphecid Fauna of Western Europe); Jacobs, 2005a:451 (Bulgaria: Melnik); Straka, 2005:268 (Turkey: Bursa: Çağliyan, 10 km S Karacabey; Kütahya: Simav); Ljubomirov and Yildirim, 2008:204 (in catalog of Crabronidae of Turkey).

**139. excavatus Pulawski**

*Tachysphex excavatus* Pulawski, 2007a:275, ♀, ♂. Holotype: ♂, Senegal: Ndangane 45 air km SE Mbour (CAS). Paratypes: Burkina Faso, Mauritania, Niger.

**140. excelsus R. Turner**

*Tachysphex excelsus* R. Turner, 1917b:320, ♀. Lectotype: ♀, China: Tibet: Gyangtse (BMNH), designated by Pulawski, 1975a:310. – R. Bohart and Menke, 1976:273 (listed); K. Schmidt and Bitsch *in* Bitsch et al., 2001:247 (in Sphecidae Fauna of Western Europe; first records from Italy and Spain); Gayubo, González, Tormos, and Asis, 2002:84 (distribution in Spain); Yildirim and Ljubomirov, 2005:1796 (Turkey: Erzurum: Ilıca); Hua, 2006:282 (in list of Chinese insects, geographic distribution); Ljubomirov and Yildirim, 2008:205 (in catalog of Crabronidae of Turkey).

*Tachysphex mysticus* Pulawski, 1971:81, ♀, ♂. Holotype: ♀, Mongolia: Ulan Baator (ZIN). Paratypes: Spain (Sierra Nevada), France (Basses Alpes), Russia (Altai), Pakistan). Synonymized with *Tachysphex excelsus* by Pulawski, 1975a:310. – Kazenas, 1978b:120, 134 (in key to Sphecidae of Kazakhstan and Central Asia).

**141. excisus Arnold**

*Tachysphex dimidiatus* de Saussure, 1892:483, ♂, junior secondary homonym of *Tachysphex dimidiatus* (Panzer, 1809), which is a junior synonym of *Tachysphex pompiliformis* (Panzer, 1809). Holotype: ♂, Madagascar: Beza-nozano: Anosibé (MHNG). – Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Leclercq, 1960a:98 (Madagascar), 1961d:111 (Madagascar).

*Tachysphex dimidiatus* var. *excisus* Arnold, 1945:104, ♀, ♂. Lectotype: ♂, Madagascar: Behara, Bekily (MNHN), designated by Pulawski, 2007a:278. Tentatively synonymized with *Tachysphex dimidiatus* de Saussure by Menke *in* Bohart and Menke, 1976:273, and definitely by Pulawski, 2007a:278. – Leclercq, 1960:198 (Madagascar). – **As *Tachysphex excisus***: Menke *in* Bohart and Menke, 1976:273 (full species status); Leclercq, 1990b:117 (Madagascar: Ihosy, Tamatave, Tsimbazaza); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

**142. eximius Pulawski**

*Tachysphex eximius* Pulawski, 1971:124, ♀. Holotype: ♀, Turkmenistan: Uch-Adzhi (ZIN). – R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:122 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia).

**143. fanuiensis Cheesman**

*Tachysphex fanuiensis* Cheesman, 1928a:174, ♀, ♂. Syntypes: Tuamotu Archipelago: Fakarava; Society Islands: Tahiti, Raiatea, and Bora Bora (BMNH). – F. Williams, 1932a:150 (...), 1945:446 (New Caledonia, preying on cockroaches); R. Bohart and Menke, 1976:273 (listed); Pulawski, 1977a:290 (revision), 292 (description; as *fanuiensis fanuiensis*); Cardale, 1985:239 (in catalog of Australian Sphecidae); Naumann, 1998:186 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E).

**ssp. corallinus Pulawski**

*Tachysphex fanuiensis corallinus* Pulawski, 1977a:295, ♀, ♂. Holotype: ♀: Australia: Queensland: Heron Island, off Gladstone (ANIC). – Cardale, 1985:239 (in catalog of Australian Sphecidae); Naumann, 1993:186 (Australia: Queensland: Heathlands area in Cape York).

**ssp. howeanus Pulawski**

*Tachysphex fanuiensis howeanus* Pulawski, 1977a:294, ♀, ♂. Holotype: ♀, Australia: Lord Howe Island (ANIC). – Cardale, 1985:239 (in catalog of Australian Sphecidae).

**144. fasciatus Morice**

*Tachysphex fasciatus* Morice, 1897:306, ♀. Holotype: ♀, Egypt: Zeitun near Cairo (OXUM). – nec de Beaumont, 1940b:178 (= *Tachysphex pseudofasciatus*); Honoré, 1942:55 (listed from Egypt); nec de Beaumont, 1947a:207

(♀ = *Tachysphex pseudofasciatus*, ♂ = *Tachysphex speciosissimus*); nec Pulawski, 1971:118 (= *Tachysphex pseudofasciatus*); R. Bohart and Menke, 1976:273 (listed); Pulawski, 2007a:292 (in revision of African *Tachysphex*).

#### 145. *ferrugineus* Pulawski

*Tachysphex* sp.: Romanova, 1969:134 (Russia: North Caucasus). Corrected to *Tachysphex ferrugineus* by Pulawski, 1971:70.

*Tachysphex ferrugineus* Pulawski, 1971:401, ♀, ♂. Holotype: ♂, Turkey: Trabzon: Boztepe (BMNH). – Pulawski, 1971:70 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:273 (listed); Kazenas, 1978b:120, 134 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch in Bitsch et al., 2001:248 (in Sphecid Fauna of Western Europe); Kazenas, 2002a:67 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:252 (Turkey: Artvin: Damar; Trabzon: Boztepe); Ljubomirov and Yildirim, 2008:205 (in catalog of Crabronidae of Turkey).

#### 146. *flavofimbriatus* Arnold

*Tachysphex fluctuatus* var. *flavofimbriatus* Arnold, 1945:97, ♂. Holotype: ♂, Madagascar: Bekily (MNHN). – Leclercq, 1960a:98 (Madagascar: Bekily). – **As *Tachysphex fluctuatus flavofimbriatus***: R. Bohart and Menke, 1976:276 (new status, listed); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae). – **As *Tachysphex flavofimbriatus***: Pulawski, 2007a:283 (full species status, in revision of African *Tachysphex*).

*Tachysphex villosus* Arnold, 1947:164, ♀. Holotype: ♀, Madagascar: Bekily (MNHN). Synonymized with *Tachysphex flavofimbriatus* by Pulawski, 2007a:283. – R. Bohart and Menke, 1976:277 (listed); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

#### 147. *foliaceus* Pulawski

*Tachysphex foliaceus* Pulawski, 1977a:267, ♀, ♂. Holotype: ♀, Australia: Northern Territory: Cooper Creek 11 km SE Nimbuwah Rock (ANIC). – Cardale, 1985:240 (in catalog of Australian Sphecidae).

#### 148. *formosanus* Tsuneki

*Tachysphex formosanus* Tsuneki, 1971h:16, ♀, ♂. Holotype: ♀, Taiwan: Taitung Prefecture: Taoyeh (originally originally K. Tsuneki coll., now Hyogo Mus., now USNM). – Tsuneki, 1971h:21 (Japan: Ryukyu Islands); Haneda, 1972a:4 (Taiwan); Tano, 1972:24 (Japan: Ryukyu Islands); Murota, 1973b:118 (Taiwan); R. Bohart and Menke, 1976:273 (listed); Tsuneki, 1977c:6 (Taiwan), 1982g:60 (known from the Ryukyu archipelago), 1983a:67 (in key); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Hashimoto and Nakanishi, 1997:29 (holotype transferred to Hyogo Mus.); Porter, Stange, and Wang, 1999:9 (in checklist of Sphecidae of Taiwan); Yamane, Ikudome, and Terayama, 1999:500 (in Identification Guide to Crabronidae of Nansei = Ryukyu Islands, Japan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

#### 149. *fortior* R. Turner

*Tachysphex fortior* R. Turner, 1908:486, ♀. Holotype: ♀, Australia: Western Australia: no specific locality (BMNH). – R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:273 (listed); Pulawski, 1977a:220 (in revision of Australian *Tachysphex*); Cardale, 1985:240 (in catalog of Australian Sphecidae).

#### 150. *frigidus* Pulawski

*Tachysphex frigidus* Pulawski, 2007a:285, ♀, ♂. Holotype: ♀, Namibia: Lüderitz District: Grosse Bucht at 26°41'S 15°10'E (AMG).

#### 151. *fugax* (Radoszkowski)

*Tachytes fugax* Radoszkowski, 1877:30, ♂. Holotype: ♂, Uzbekistan: Samarkand (ZMMU). – Dalla Torre, 1897:690 (in catalog of world Hymenoptera); de Beaumont, 1936b:619 (interpretation of the species). – **As *Tachysphex fu-***

*gax*: Kohl, 1885:394 (tentative new combination, original description copied); Pulawski, 1971:178 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); Erlandsson, 1974:71 (Malta); Frilli and Pizzaghi, 1975:76 (Italy: Badagnano in Piacenza Province); R. Bohart and Menke, 1976:273 (listed); Báez and Ortega, 1978:192 (Canary Islands); Kazenas, 1978b:122, 132 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Guichard, 1980:227 (Oman); Wolf, 1980:73 (Canary Islands); Pagliano, 1980:127 (Italy: Lazio); Gess, 1981:19 (South Africa: 18 km WNW Grahamstown; nesting in friable soils; 2-celled nests, prey: Lentulidae grasshoppers); Gayubo, 1982a:101 (N Spain: Sierra de Béjar), 1982f:252 (Spain: Cádiz Province); Rodgers and Homewood, 1982:234 (Tanzania: Usambara Mountains); Schmidt and Westrich, 1983:123 (Greece); Gayubo, 1984b:84 (Spain: Salamanca Province), 1985a:487 (nests establish in flat area) Gayubo, 1985c:168 (Spain: Valladolid: San Miguel de Arroyo); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Gayubo, 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:40 (Spain: Segovia and Valladolid Provinces; floral records); Gayubo and Sanza, 1986:44 (Spain: Burgos); Hensen and van Ooijen, 1987:12 (Turkey); Gayubo and Mingo, 1988:78 (Spain); Dollfuss, 1990:122 (Central African Republic); Gayubo, Asís, and Tormos, 1990a:17 (Spain); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:402 (Italy: Toscana); Gayubo and Torres, 1991:Table I and p. 81 (Spain: Salamanca; effects of urban pressure); Schembri, 1991:180 (Malta); Józán, 1992c:289 (first record from Hungary: Zselic Hills); Hohmann, La Roche, Ortega, and Barquín, 1993:233 (detailed locality records from Canary Islands); Luchetti, 1993:106 (Italy: Sardegna: Maddalena archipelago); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Roche and Zalát, 1994:115 (Egypt: Sinai Peninsula); Gayubo and Borsato, 1994:207 (Italy: Toscana); Tormos, Asís, and Gayubo, 1994:188, 204 (Spain: Albacete Province); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Negrisoló, 1995a:23 (Italy: Veneto); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Gusenleitner, 1998:498 (first record from Austria: Steiermark: Sernau SW Gamlitz); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Kazenas, 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:249 (in Sphecid Fauna of Western Europe); Seyoum and Pulawski, 2001:324 (potential control agent of acridid pests in Ethiopia; Ethiopia: Gamo Gofa: 49 km SE Sodo at 6°29'N 37°40'E, Harerge: 37 km SE Jijiga at 9°11'N 43°05'E, Sidamo: 16 km N Moyale at 3°39'N 38°57'E, 22 km N Moyale at 3°40'N 38°55'E, 35 km N Moyale at 3°43'N 38°50'E, 4 km E Yabelo at 4°53'N 38°09'E); Kazenas, 2002a:67 (geographic distribution, collecting localities in Kazakhstan); Drewes, 2003:142 (Croatia: Mošćenska Draga); Gayubo, Özbek, and Yıldırım, 2003:89 (Turkey: Trabzon: Kadirga Yalası); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Pagliano and Negrisoló, 2005:375 (in Sphecid Fauna of Italy); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Straka, 2005:252 (Turkey: Bursa: Çagliyan); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Pulawski, 2007a:287 (in revision of African *Tachysphex*); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008a:101 (Southeastern Kazakhstan: near Alma Ata and 5 km SW village Kazakhstan in Ili River valley); Ljubomirov and Yıldırım, 2008:206 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Pagliano, 2009:184 (Italy: Liguria: Garlenda).

*Tachysphex filicornis* Kohl, 1883a:169, ♀. Lectotype: ♀, France: Marseille (NHMW), designated by Pulawski, 1971:181. Synonymized with *Tachysphex fugax* by Pulawski, 1971:178. – Kohl, 1883e:670 (Switzerland), 1885a:349 and 354 (in key to Palearctic *Tachysphex*), 369 (in revision of Palearctic *Tachysphex*); Dalla Torre,

1897:679 (in catalog of world Hymenoptera); Bingham, 1898a:104 (Yemen: Aden); Ferton, 1901b:680 (found in Marseille area, France, but not in Corsica); Antiga and Bofill, 1904:10 (in catalog of Catalonian Hymenoptera); Saunders, 1904:604 (Spain: Mayorca); Schmiedeknecht, 1907:231, 233 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (listed from Spain); Graeffe, 1911:45 (Italy: Trieste area); Morice, 1911:101 (Algeria: Alger, Biskra); Dusmet, 1915:87 (Spain: Aragón); R. Turner, 1917b:321 (Ethiopia: Harar; Zimbabwe: Harare); Arnold, 1923a:159 (Zimbabwe, South Africa; redescription); Ferton, 1923:333 (known from continental France but not found in Corsica); Arnold, 1924:57 (South Africa, variation); Berland, 1925d:118 (in Sphecidae Fauna of France); Grandi, 1928:14 (Italy); Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); Grandi, 1930:341 (Italy: Toscana: Maremma); Schmiedeknecht, 1930:692, 694 (in keys to Hymenoptera of North and Central Europe); Bernard, 1933:62 (France: Drôme: Dieulefit); Nadig, 1933:79 (Morocco: Ifrane); Giner Mari, 1934:133 (Spain); Bernard, 1935:64 (France: Var: Fréjus area); Richards, 1935a:164 (*Tachysphex filicornis* is the type species of the genus); de Beaumont, 1936a:208 (in revision of French *Tachysphex*), 1936b:619 (interpretation of the species); Giordani Soika, 1939b:73 (Italy: Lido di Venezia); de Beaumont, 1940b:176 (in revision of *Tachysphex* of Egypt); Honoré, 1942:55 (Egypt); Giner Mari, 1943a:137 (in Sphecidae Fauna of Spain); de Beaumont, 1947a:201 (in new revision of *Tachysphex* of Egypt); Zavadil and Šnoflak, 1948:148, 152 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:15 (Portugal); de Beaumont, 1950f:406 (Algeria); nec Heldmann, 1953:112 (= *Tachysphex nitidus*); de Beaumont, 1954a:60 (Italy), 1954e:91 (Italy); Grandi, 1954:179 (nesting habits), 239 (Italy); de Beaumont, 1955a:183 (Morocco); Steiner, 1955:138 (France: Dordogne); Vogrin, 1955:37 (Yugoslavia); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:338 (France: Département des Pyrénées-Orientales); Grandi, 1957:389 (Italy: Sardegna); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Compte Sart, 1959:133 (Spain: Mayorca); de Beaumont, 1959a:29 (Italy: Lazio: Ostia); Diniz, 1959:29 (Portugal: Lisboa, Paço de Rei, Seixal, Vale de Gaio); Suárez, 1959:58 (Spain: Almería Province); Vogrin, 1955:37 (Croatia); Wolf, 1959b:24 (Heldmann's 1953 record from Nassau, Germany is doubtful); Grandi, 1961:201 (nesting habits); de Beaumont, 1962b:26 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:6 (Portugal: seventeen localities); de Beaumont, 1965a:50 (Greece); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); de Beaumont, 1967b:509 (South Africa: Cape Province), 1968a:263 (Canary Islands: Tenerife); Schmidt, 1969:164 (Heldmann's record from Germany actually refers to *Tachysphex nitidus*); Simon Thomas, 1969a:120 (Canary Islands: Tenerife); Zangheri, 1969:1704 (Italy: in catalog of flora and fauna of Romagna Region); Königsman, 1971:106 (Spain: Gerona: Palamós); Balthasar, 1972:271 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Simon Thomas, 1972:182 (France: Gironde); Báez and Ortega, 1978:192 (Canary Islands); Dollfuss, 1989:13 (lectotype in NHMW).

*Tachysphex micromegas* de Saussure, 1892:481, ♀, ♂. Lectotype: ♀, Madagascar: no specific locality (MHNG), designated by Pulawski, 2007a:288. Synonymized with *Tachysphex fugax* by Pulawski, 2007a:288. – Dalla Torre, 1897:681 (in catalog of world Hymenoptera); R. Turner, 1911b:370 (Seychelles Islands); Arnold, 1945:102 (redescription); 1960a:98 (Madagascar, comparison with *Tachysphex perniger*), Leclercq, 1961d:111 (Madagascar); R. Bohart and Menke, 1976:274 (listed); Leclercq, 1990b:118 (Madagascar: faunal records); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

*Tachysphex sikorae* de Saussure, 1892: pl. 27, fig. 2 (as *Sikorae*, incorrect original capitalization). Objective synonym of *Tachysphex micromegas*. Synonymized with *Tachysphex micromegas* by Menke in Bohart and Menke, 1976:274.

*Tachysphex filicornis excerptus* R. Turner, 1917b:321, sex not indicated. Holotype of syntypes: Zimbabwe: Salisbury, now Harare (BMNH). Synonymized with *Tachysphex filicornis* by Arnold, 1923a:160 ("can hardly be maintained"). – As *Tachysphex fugax excerptus*: R. Bohart and Menke, 1976:273 (new subspecific combination, listed).

**152. *fulgidus* Arnold**

*Tachysphex fulgidus* Arnold, 1924:67, ♀, ♂. Lectotype: ♀, South Africa: Eastern Cape Province: Willowmore (TMP), designated by Pulawski, 2007a:297. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:273 (listed); Pulawski, 2007a:297.

**153. *fulviantennatus* Tsuneki**

*Tachysphex fulvicornis* Tsuneki, 1972e:393, ♀, junior primary homonym of *Tachysphex fulvicornis* R. Turner, 1918. Holotype: ♀, Mongolia: Bayanhongor Aymag: Ehin-gol oasis (TMB).

*Tachysphex fulviantennatus* Tsuneki, 1976e:434. Substitute name for *Tachysphex fulvicornis* Tsuneki, 1972. – R. Bohart and Menke, 1976:273 (listed).

**154. *fulvitorsis* (A. Costa)**

*Tachytes fulvitorsis* A. Costa, 1867b:86, ♀. Holotype: ♀, Italy: Campania: Napoli area (NAPOLI). – nec A. Costa, 1883:57 (= *Tachysphex fulvitorsis erythrogaster*); Baldini, 1894:63 (Italy: Modena area). – **As *Tachysphex fulvitorsis***: Costa, 1883:57 (new combination); Kohl, 1885a:395 (new combination, original description copied); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); de Beaumont, 1936c:6 (study of type); Zavadil, Šusterka, and Baťa, 1937:202 (in catalog of Sphecidae of Czechoslovakia); Zavadil, 1939:121 (Czech Republic: Morava: Čejč); Balthasar, 1941b:112 (Czech Republic: eastern Moravia); Carl and de Beaumont, 1947:68 (Switzerland: Graubünden = Grisons Canton: Swiss National Park); Guiglia, 1948c:202 (Italy: Sardegna: Villasalto); Zavadil in Zavadil and Šnoflak, 1948:151, 153 (in key to Sphecidae of Czechoslovakia); Noskiewicz and Chudoba, 1949:423 (Poland: Dolny Śląsk: Mirków near Oleśnica); Benno, 1951:15 (...); de Beaumont, 1953b:15 (France: Corse), 1954a:62 (Italy), 1954e:91 (Italy); Grandi, 1954:239 (Italy); de Beaumont, 1955a:186 (Morocco); Steiner, 1955:139 (France: Dordogne); Bytinski-Salz, 1956:226 (Turkey: Kalkan); Bajári, 1957a:53, 54 (in key to Hungarian Sphecidae); Grandi, 1957:389 (Italy); Benno, 1958b:12 (in review of Dutch Sphecidae); de Beaumont, 1958c:205 (Swiss National Park); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958a:181 (Bulgaria: Aitos, Achtopol, Nesebar, Sandanski, Sozopol, Varna); de Beaumont, 1959a:28 (Italy: Lazio: Roma); Wolf, 1959b:24 (Germany: Nassau); de Beaumont, 1960a:18 (Greece: Rhodes Island); Noskiewicz and Pulawski, 1960:123, 125 (in key to Polish Sphecidae); de Beaumont, 1961c:50 (Greece: Crete Island), 1962b:26 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae, as *fulvitorsis*); de Beaumont, 1964c:76 (in Sphecid Fauna of Switzerland); Diniz, 1964a:6 (Portugal: twelve localities); de Beaumont, 1965a:49 (Greece); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg: Nördliches Rheinvorland); J. Heinrich, 1967:75 (Germany: Bayern: Unterfranken District); Niedl and Deneš, 1967:81 (Czech Republic: Třeboň area); Pulawski, 1967a:405 (Turkey); Scobiola-Palade, 1967b:43 (Romania); Schmidt, 1969:163 (...); Lelclercq, 1970c:map 36 (distribution in Belgium); Oehlke, 1970:712 (Democratic Germany); Dathe, 1971:234, 237 (Germany: Berlin Zoological Garden; phenology); Königsmann, 1971:106 (Spain: Gerona: Palamós); nec Lefebvre, 1971a:17 (= *Tachysphex pompiliformis*); Oehlke, 1971:... (...); Pulawski, 1971:90 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:35 (Germany: Mainz area); Balthasar, 1972:265 (in Sphecid Fauna of Czechoslovakia); Myartseva, 1972a:78 (Turkmenistan); Scobiola-Palade, 1972:150 (Romania: delta of Danube: Caraorman); de Beaumont, Bytinski-Salz, and Pulawski, 1973:7 (Israel); Lefebvre, 1973:153 (Netherlands); Erlandsson, 1974:71 (Spain); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp. in Kazakhstan), 112 (feeding on flowers of *Sal-sola laricifolia* Turcz., Chenopodiaceae, in Kazakhstan); R. Bohart and Menke, 1976:273 (listed); Lomholdt, 1976:249 (in Sphecid Fauna of Fennoscandia and Denmark); Guichard, 1978:271 (Greece); Kazenas, 1978b:118, 133 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Lefebvre, 1979:11 (in checklist of Sphecidae of Netherlands), 69 (Netherlands: distribution map); Kazenas, 1980e:89 (Russia: Primorskiy Krai); Pagliano, 1980:128 (Italy: Lazio); Gayubo, 1982a:102 (N Spain: Sierra de Béjar), 1982f:252 (Spain: Cádiz Prov-



ince: Arcos de la Frontera, Facinas, Palmones); Dollfuss, 1983b:10 (in catalog of Sphecidae of Austria); Gayubo, 1984b:84 (Spain: Salamanca Province), 1984c:364 (Portugal: El Algarve Province); Schmidt and Westrich, 1984:240 (Germany: Rheinland-Pfalz: Bad Münster); Gayubo and Tormos, 1984:15 (Spain: Valencia); Chevin and Chevin, 1985:39 (France: Aude); Eiroa and Novoa, 1985:23 (Spain: Pontevedra: Barra beach near Cangas); Józán, 1985b:57 (Hungary S Lake Balaton), 83 (ecological and zoogeographic characteristics); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Westrich and Schmidt, 1985a:117 (Germany: Baden-Württemberg), 1985b:112 (Germany: endangered in Baden-Württemberg); Gayubo, 1986b:38 (Spain: Andalucía), 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:40 (Spain: Valladolid Province; floral records); Gayubo and Sanza, 1986:44 (Spain: Burgos, Segovia); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Józán, 1986:370 (Hungary: Kiskunság National Park); Gayubo, 1987a:112 (Spain: Ciudad Real Province); Scobiola-Palade, 1987:65 (Romania: Dobrogea); Tormos and Jiménez, 1987b:316 (Spain: Valencia Province: Dehesa de El Saler); Schmidt and Westrich, 1987:363 (Germany: Mainz area); Gayubo and Mingo, 1988:79 (Spain); Karsai, 1988:99 (Hungary: Kiskunság National Park); Jacobs, 1989:11 (Germany: Mecklenburg-Vorpommern); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Gayubo, Asís, and Tormos, 1990a:17 (Spain); Jacobs, 1990:10 (Germany: Rostock area); Jacobs and Oehlke, 1990:163 (new records from Democratic Germany); Pádr, 1990:74 (Czech Republic: Praha area); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Dollfuss, 1991:105 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:402 (Italy: Lazio); Guichard, 1991a:339 (Jordan); Jacobs, 1991:46, 47 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtaldünen); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on *Platycleis intermedia* (Aud.Serv.)); Negrisolo, 1991:318 (Italy: Udine and Venezia Provinces); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Gayubo, Borsato, and Osella, 1992:282 (Greece: Tymphristos); Józán, 1992c:289 (Hungary: Zselic Hills); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Dollfuss, 1994:101 (endangered in Austria); Tormos, Asís, and Gayubo, 1994:188, 204 (Spain: Albacete Province); Negrisolo, 1995a:23 (Italy: Veneto); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:410, 412 (in key to Sphecidae of Russian Far East); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:24 (Austria: Niederösterreich: Marchfeld, Oberweiden; Croatia: Island of Krk; Germany: Bayern: Kahl, Lohr); Schmid-Egger, Risch, and Niehuis, 1995:211 (summary of records from Germany: Rheinland-Pfalz Province); Gusenleitner, 1996a:7 (Austria: Steiermark); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Celary, 1997:58 (in checklist of Animals of Poland); Schnee, 1997:99 (Germany: Sachsen); Schmidt and Schmid-Egger, 1997:29 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); Kulik, 1998:132 (Germany: Niedersachsen; prey: *Metrioptera roeseli*); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); van der Smissen, 1998:69 (Germany: Niedersachsen: Laasche, Neu Darchau); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Majzlan, Rychlík, and Deván, 1999:146 (Slovakia: Čenkovská Step Nature Reserve); Pauly, 1999:109 (in catalog of Belgian aculeates); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:228 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:106 (Greece); Jacobs, 2000:12, 17 (Germany: Land Mecklenburg-Vorpommern: vulnerable); Schmid-Egger, 2000b:276, 281 (Germany: Baden-Württemberg: shores of Rhine River); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Cungs and Jakubzik, 2001:122, 123 (Luxembourg); Ivanov and Ljubomirov, 2001:211 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001:28 (in checklist of Sphe-

cidae of Kazakhstan and Central Asia), 157 (review of known biology); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitosha near Sofia); Mazzucco, 2001:203 (Austria: Niederösterreich: Steinfeld); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch in Bitsch et al., 2001:250 (in Sphecid Fauna of Western Europe); Zettel, Gross, and Mazzucco, 2001:72 (Austria: Wien); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavalero); Kazenas, 2002a:67 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:140 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Shlyakhtenok and Skibinska, 2002:33 (Belarus': no specific locality); Ziska, 2002:9 (Germany: Berlin-Köpenick: Krumme Lake); Greece: Delphi); Gayubo, Özbek, and Yıldırım, 2003:89 (Turkey: Bilecik and Samsun Provinces); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Schmid-Egger, 2003:7; Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:193, 196 (Germany: Bayern: Bamberg, recently collected, not extinct); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Skibińska in Bogdanowicz, Chudzicka, Piliupik, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: in red list of Sphecidae); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:451 (Bulgaria); Pagliano and Negrisola, 2005:376 (in Sphecid Fauna of Italy); Reder, 2005:954 (Germany: Rheinland-Pfalz: seven localities); Shorenko, 2005a:164 (Ukraine: Crimea); Straka, 2005:252 (Turkey: five localities); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Yıldırım and Ljubomirov, 2005:1796 (Turkey: Palandöken, Oltu); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Baños-Picón, Gayubo, Asís, and González, 2007a:256, 258 (Spain: Zamora: Cabañas de Aliste); Jacobs, 2007:95, 100 (in key to Crabronidae of Germany); Kazenas, 2007a:90 (Kazakhstan: Akmala Oblast': Kurgandzhin Nature Reserve and vicinity); Kowalczyk and Nadolski, 1007:284 (Łódź: railway areas); Pulawski, 2007a:299 (in revision of African *Tachysphex*); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia); Danilov and Tshernyshev, 2008:43 (Russia: Novosibirsk Oblast': Karasuk area); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008b:112 (Kazakhstan: foothills of Zailiskiy Alatau: occurring among others on loess cliffs); Ljubomirov and Yıldırım, 2008:206 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Nemkov, 2009b:78 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Pagliano, 2009:184 (Italy: Molise: Mafalda; recorded from Trentiono-Alto Adige by Kohl, 1880); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: rare).

*Tachytes fulvitaris* A. Costa, 1867b:30, ♀. Objective synonym of *Tachytes fulvitaris* A. Costa, 1867a.

*Tachytes acrobates* Kohl, 1878:705, ♀. Lectotype: ♀, Austria: Tirol: Zams (NHMW), designated by Pulawski, 2007a:299. Synonymized with *Tachysphex fulvitaris* by de Beaumont, 1936a:203, 1936b:617, and 1936c:6. – Kohl, 1880:180 (Austria: Tirol, and Italy: Trentino-Alto Adige), 234 (description of ♂), 233 (preying on Hemiptera, an observation not confirmed by subsequent authors), 234 (description of ♂). – **As *Tachysphex acrobates***: Kohl, 1883e:671 (new combination, Switzerland), 1885a:353 and 355 (in key to Palearctic *Tachysphex*), 390 (in revision of Palearctic *Tachysphex*); Gasperini, 1887:16 (recorded from Dalmatia, now Croatia, by Kohl, 1885a), 1889:69 (Dalmatia: Spalato, now Croatia: Split); Kohl, 1893a:32 (Austria: Niederösterreich: Wien: Türken-

schanze); Dalla Torre, 1897:677 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Kingdom of Hungary, some localities are now in Romania and Slovakia); Ferton, 1901a:100 (nesting habits); Adlerz, 1904:137 (known prey: nymphal Hemiptera, in error, nymphs of *Decticus*, a terrigoniid); Antiga and Bofill, 1904:11 (in catalog of Catalonian Hymenoptera); Kohl, 1905c:233 (Turkey: Kayseri: Erciyes Dağı); Moczar and Henter, 1907:205 (Romania: Caraş-Severin: Mehadia); Schmiedeknecht, 1907:233, 234 (in key to Hymenoptera of Central Europe); Mercet, 1910b:165 (listed from Spain); Schmiedeknecht, 1907:233, 234 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Šusterka, 1909:35 (Czech Republic: vicinity of Praha); Mercet, 1910b:165 (listed from Spain); Graeffe, 1911:45 (Italy: Trieste area); Ferton, 1912a:388 (Algeria: La Calle; prey: tettigoniid larva); Schirmer, 1912:167 (Germany: Berlin area); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:39 (Germany: Lower Elbe region, not found but can be expected); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Ferton, 1923:316 (nest and prey identical in Algeria and Corsica), 320 (preys exclusively on tettigoniid larvae); ; Berland, 1925d:121 (in Sphecidae Fauna of France); Hémon, 1926:199 (France: Finistère: Fouesnant; as *acrobatus*); Benoist, 1928:410 (France: Basses-Alpes: Saint-Pons); Bouwman, 1928b:25, 26 (in key to *Tachysphex* of Netherlands, not yet found in Netherlands); Grandi, 1929:288 (Italy: Toscana: valle della Limentra); Schmiedeknecht, 1930:694, 695 (in keys to Hymenoptera of North and Central Europe); Grandi, 1931:59 (Italy: Emilia-Romagna: Cervia); Bernard, 1933:62 (France: Drôme: Dieulefit), 1934b:250 (prey: *Metrioptera tessellata*); Grandi, 1934:129 (Italy: Lazio: Acilia); Jansson, 1934:290 (Sweden); Bernard, 1935:65 (France: Var: Fréjus area; prey: *Merotropis tessellata*); de Beaumont, 1936a:203 (in revision of French *Tachysphex*); Noskiewicz, 1936:158 (Poland: Podole Region: Sinków, now Ukraine); Goebel, 1937:51 (...); Hedicke, 1930:XI (...); Jansson, 1934:290 (...); Kuntze and Noskiewicz, 1938:65, 243, 408 (...); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Paul, 1941:46 (...); Schneid, 1941:1045 (Germany: Bayern: Bamberg area); Blüthgen, 1942:10 (Germany: Sachsen: known from Saal Valley but not from Kyffhäuser); Guiglia, 1942a:60 (Greece: Rhodes Island: Villanova); J. Perkins, 1942:200 (Sweden: Skåne: Löderup); Verhoeff, 1942:37 (...); Giner Marí, 1943a:143 (in Sphecidae Fauna of Spain); Guiglia, 1944b:28 (Italy); Deleurance, 1946b:63 (nest open during provisioning, prey: locustids), 67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); Cavro, 1950:35 (France: Département du Nord); Leininger, 1953:18 (Germany: Baden-Württemberg); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg Nature Reserve), Hertzog, 1954:101 (France: Bouches-du-Rhône: Camargue); Tjeder, 1954:67 (Sweden: eastern Skåne: Löderup); Ceballos, 1956:375 (in catalog of Hymenoptera of Spain); Zirngiebl, 1957:183 (Germany: Rheinland-Pfalz: Birkenheide).

*Tachytes strigosus* Mocsáry, 1879:126, ♀. Syntypes: ♀, Hungary: Budapest (TMB). Synonymized with *Tachysphex acrobates* by Kohl, 1885a:390.

*Tachytes erythrogaster* A. Costa, 1882a:197, sex not indicated (as *erythrogastra*, incorrect original termination). Holotype or syntypes: Italy: Sardegna: Cagliari (Napoli). Synonymized with *Tachytes fulvitaris* by A. Costa, 1884b:246 and 1885a:17. – A. Costa, 1883:57 (Italy: Sardegna: Cagliari), 90 (redescription), 1885:17 (as synonym of *Tachytes fulvitaris*). – **As *Tachysphex erythrogaster***: Kohl, 1885a:394 (new combination, original description copied); Dalla Torre, 1897:679 (in catalog of world Hymenoptera); de Beaumont, 1936c:7. – **As *Tachysphex fulvitaris erythrogaster***: Pulawski, 1971:95 (new status; revision); Erlandsson, 1974:71 (Italy); R. Bohart and Menke, 1976:273 (listed); Bonelli, 1988:86 (prey and nest); Pagliano, 1990:103 (in catalog of Italian Sphecidae); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna: Sardinia); Pagliano and Negrisolo, 2005:377 (in Sphecidae Fauna of Italy). – **As *Tachysphex fulvitaris forme erythrogaster***: K. Schmidt and Bitsch in Bitsch et al., 2001:251 (new status, in Sphecidae Fauna of Western Europe).

*Tachytes erythrogaster* A. Costa, 1884a:334, sex not indicated (as *erythrogastra*, incorrect original termination). Objective synonym of *Tachytes erythrogaster* A. Costa, 1882a.

*Tachytes dubius* Radoszkowski, 1886a:31, ♂. Syntypes: Russia: Orenburg; Turkmenistan: Askhabad; and Caucasus: no specific locality (Kraków). Synonymized with *Tachysphex acrobates* by de Beaumont, 1936a:204, 1936b:617,

and 1936c:6. – Radoszkowski, 1892:590 (reference to Radoszkowski, 1886). – **As *Tachysphex dubius***: Dalla Torre, 1897:679 (new combination, in catalog of world Hymenoptera); Antiga and Bofill, 1904:11 (in catalog of Catalonian Hymenoptera); Grandi, 1930: 341 (Italy: Toscana: Maremma); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain).

As *Tachysphex caucasicus* (Radoszkowski, 1886): Kohl, 1888a:143 (♂ only; ♀ = *Tachysphex stachi*).

*Tachysphex bipunctatus* F. Morawitz, 1891:207, ♀. Holotype: ♀, western Kazakhstan: Ryn-Peski (ZIN). Synonymized with *Tachysphex fulvitaris* by Pulawski, 1971:90. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera).

### 155. *fuscispina* Pulawski

*Tachysphex fuscispina* Pulawski, 1971:286, ♀. Holotype: ♀, Turkmenistan: Ashgabat (ZIN). – R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:112 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:28 (in checklist of Sphecidae of Kazakhstan and Central Asia).

### 156. *gagates* Arnold

*Tachysphex gagates* Arnold, 1940:119, ♀. Holotype: ♀, Zimbabwe: Kami (SAM). – R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:302 (in revision of African *Tachysphex*).

### 157. *galapagensis* Rohwer

*Tachysphex galapagensis* Rohwer, 1924:173, ♀, ♂. Holotype: ♀, Galapagos Islands: Albemarle Island (USNM). – F. Williams, 1926:355 (reference to original description); Linsley and Usinger, 1966:177 (in checklist of insects of Galapagos Islands); Pulawski, 1974a:46 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Pulawski, 1988a:147 (in cladistic analysis); Amarante, 2002:35 (in catalog of Neotropical Crabronidae), 2005a:10 (correction to his 2002 catalog).

### 158. *galeatus* Pulawski

*Tachysphex galeatus* Pulawski, 1977a:223, ♀, ♂. Holotype: ♀, Australia: Queensland: 15 mi W Bowen (ANIC); Cardale, 1985:240 (in catalog of Australian Sphecidae).

### 159. *gastrotrichus* Pulawski

*Tachysphex gastrotrichus* Pulawski, 2007a:304, ♀, ♂. Holotype: ♂, Namibia: Swakopmund District: 10 km E Swakopmund at Swakop River (CAS).

### 160. *gegen* Tsuneki

*Tachysphex gegen* Tsuneki, 1971m:31, ♂. Holotype: ♂, China: Inner Mongolia: Apaka (originally K. Tsuneki coll., now Hyogo Mus.). – R. Bohart and Menke, 1976:274 (listed); Hashimoto and Nakanishi, 1997:29 (holotype transferred to Hyogo Mus.); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

### 161. *geniculatus* (Spinola)

*Lyrops geniculata* Spinola, 1839:480, ♀. Holotype: ♀, Egypt: no specific locality (Torino). – de Beaumont, 1952e:48 (study of holotype). – Casolari and Casolari Moreno, 1980:113 (specimens in M. Spinola collection, Torino). – **As *Larrada geniculata***: F. Smith, 1856:281 (new combination, in catalog of Hymenoptera in British Museum). – **As *Tachysphex geniculatus***: Kohl, 1885a:395 (tentative new combination, original description copied); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); de Beaumont, 1952c:190 (Algeria: Hoggar); Pulawski, 1964:88 (Egypt: Abu Rawash, Abydos, Ghiza, Luxor, Maadi, Saqqara, Tell-el-Amarna, Wadi Digla, redescription), 1971:346 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Guichard, 1991a:339 (Jordan); Pulawski, 2007a:306 (in revision of African *Tachysphex*).

As *Tachysphex* No. 8: de Beaumont, 1940b:168, synonymized with *Tachysphex geniculatus* by Pulawski, 1971:346.

**162. *georgii* Arnold**

*Tachysphex georgii* Arnold, 1940:122, ♀ (as *Georgii*, incorrect original capitalization). Holotype: ♀, South Africa: Western Cape Province: George (TMP). – R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:309 (in revision of African *Tachysphex*).

**163. *gessianus* Pulawski**

*Tachysphex gessianus* Pulawski, 2007a:312, ♀, ♂. Holotype: ♀, South Africa: Eastern Cape Province: Hilton Farm 18 km WNW Grahamstown (AMG).

**164. *glaber* Kohl**

*Tachysphex glaber* Kohl, 1906a:217, ♀. Syntypes: ♀, Yemen: Abd el Kuri Island (NHMW). – R. Bohart and Menke, 1976:274 (listed); Dollfuss, 1989:13 (type material in NHMW); Pulawski, 2007a:314 (in revision of African *Tachysphex*).

**165. *glabrior* F. Williams**

*Tachysphex glabrior* F. Williams, 1914a:170, ♀, ♂. Holotype: ♀, USA: Kansas: Phillips County: no specific locality (Kansas Univ.). – Mickel, 1918b:423 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Museum); Arnaud, 1970:32; R. Bohart and Menke, 1976:275 (as new synonym of *Tachysphex mundus* by R. Bohart); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Pulawski, 1988a:112 (in revision of Nearctic *Tachysphex*); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Amarante, 2002:35 (in catalog of Neotropical Crabronidae, as *glabrior*), 2005a:10 (correction to his 2002 catalog).

**166. *gracilicornis* Mercet**

*Tachysphex gracilicornis* Mercet, 1909b:194, ♀, ♂. Syntypes: Morocco: Melilla (MNCN). – Nadig, 1933:78 (Morocco: Goundafa; diagnostic characters); de Beaumont, 1940b:165 (in revision of *Tachysphex* of Egypt), 1947a:165 (Egypt, Algeria, Morocco; in new revision of *Tachysphex* of Egypt), 1955a:178 (Morocco), 1956a:196 (Libya), 1960b:237 (Libya); Pulawski, 1971:305 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:315 (in revision of African *Tachysphex*).

*Tachysphex eduardi* Morice in E. Saunders, 1910:527, ♂, ♀ (as *Eduardi*, incorrect original capitalization). Syntypes: Algeria: Biskra (OXUM). Synonymized with *Tachysphex gracilicornis* by de Beaumont, 1947a:165. – Morice, 1911:103 (Algeria: Biskra, Bône); von Schulthess, 1926:215 (Tunisia: Gafsa, as *Edwardi*).

*Tachysphex gracilicornis baal* Pulawski, 1971:307, ♀, ♂. Holotype: ♀, Israel: Beersheba (originally H. Bytinski-Salz coll., now Tel Aviv Univ.). Synonymized with *Tachysphex gracilicornis* by Pulawski, 2007a:315. – de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); R. Bohart and Menke, 1976:274 (listed).

**167. *gracilitarsis* Morice**

*Tachysphex gracilitarsis* Morice in E. Saunders, 1910:572, ♀. Lectotype: ♀, Algeria: Biskra (OXUM), designated by Pulawski, 1971:335. – Morice, 1911:103 (Algeria: Biskra); von Schulthess, 1926b:214 (Tunisia: Kairouan, Sfax; Libya: Dernah); Guiglia, 1934b:304 (Libya: bibliography and summary of locality records); Giner Marí, 1945b:362 (Morocco: Western Sahara: Al Aiun, determination?); de Beaumont, 1947c:663 (as *Tachysphex pygidialis* ssp. *gracilitarsis*; redescription); Pulawski, 1971:334 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Gayubo, 1982a:102 (N Spain: Sierra de Béjar); , 1984b:96 (Spain: previously recorded from Salamanca Province); Gayubo and Mingo, 1988:79 (Spain); K. Schmidt and Bitsch in Bitsch et al., 2001:251 (in Sphecid Fauna of Western Europe); Pulawski, 2007a:318 (in revision of African *Tachysphex*).

**168. *graecus* Kohl**

*Tachysphex graecus* Kohl, 1883a:174, ♀, ♂ (as *graeca*, incorrect original termination). Lectotype: ♀, Greece: Corfu Island: no specific locality (NHMW), designated by Pulawski, 1971:219. – Kohl, 1885a:349 and 356 (in key to Palearctic *Tachysphex*), 362 (in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); Morice, 1921:824 (Iraq: Amara); von Schulthess, 1926b:215 (Tunisia: Kairouan, determination tentative); de Beaumont, 1947c:665 (belongs to a separate species group), 1965a:48 (Greece); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Pulawski, 1971:216 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:273 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); R. Bohart and Menke, 1976:274 (listed); Dollfuss, 1989:13 (lectotype in NHMW); K. Schmidt and Bitsch in Bitsch et al., 2001:253 (in Sphecidae Fauna of Western Europe); Gayubo, Özbek, and Yıldırım, 2003:89 (Turkey: İzmir: Selçuk); Straka, 2005:269 (Turkey: Antalya: Göynük 25 km SW Antalya; Eskişehir: Sakariilica 30 km N Eskişehir; Içel: Büyükeçeli); Yıldırım and Ljubomirov, 2005:1796 (Turkey: Erzincan); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Ljubomirov and Yıldırım, 2008:207 (in catalog of Crabronidae of Turkey); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina).

**169. *grandissimus* Gussakovskij**

*Tachysphex grandissimus* Gussakovskij, 1933b:282, ♀, ♂ (♂ = *Tachysphex sordidus*). Lectotype: ♀, Iran: Bampur-Kaskin (ZIN), designated by Pulawski, 1971:422. – de Beaumont, 1940b:169 (in revision of *Tachysphex* of Egypt); Honoré, 1942:56 (Egypt); de Beaumont, 1947a:177 (in new revision of *Tachysphex* of Egypt), 1950d:18 (Egypt: Siwa oasis); Gussakovskij, 1952:238 (Tajikistan, Turkmenistan; description of ♂); Balthasar, 1954b:269 (Palestine: Wadi el Kelt near Jericho); de Beaumont, 1955a:181 (Morocco), 1960b:238 (Libya); Pulawski, 1971:420 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:13 (Israel); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:114, 126 (in key to Sphecidae of Kazakhstan and Central Asia); Roche, 1981:2 (in checklist of Sphecidae of United Arab Emirates); Al-Houty, 1989:164 (Kuwait: Abdelli, Sulabiya); Krombein and Pulawski, 1994:98 (in revision of Sri Lankan *Tachysphex*); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); Pulawski, 2007a:319 (in revision of African *Tachysphex*).

As *Tachysphex argyrius* (♂ only): Gussakovskij, 1933b:280 (Iran), corrected to *Tachysphex grandissimus* by Gussakovskij, 1952:237.

**170. *gryllivorus* Pulawski**

*Tachysphex gryllivorus* Pulawski in Krombein and Pulawski, 1994:34, ♀, ♂. Holotype: Sri Lanka: Anuradhapura District: Padaviya (USNM). – Krombein and Pulawski, 1994:10 (nesting habits).

**171. *gujaraticus* Nurse**

*Tachysphex gujaraticus* Nurse, 1909:516, ♀, ♂. Lectotype: ♀, India: Gujarat: Deesa (BMNH), designated by Pulawski, 1975a:310. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:274 (listed); Krombein and Pulawski, 1994:20 (in revision of Sri Lankan *Tachysphex*); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan, as *gujartiacus*); Pulawski, 2007a:323 (in revision of African *Tachysphex*).

As *Tachysphex* No. 18 (part, other specimens = *Tachysphex erythrophorus*): de Beaumont, 1940b:178 (Egypt), corrected to *Tachysphex laniger* by Pulawski, 1971:129.

*Tachysphex laniger* Pulawski, 1964:105, ♀, ♂. Holotype: ♀, Egypt: Abu Rawash NW Cairo (originally W.J. Pulawski coll., now CAS). Synonymized with *Tachysphex gujaraticus* by Pulawski, 1975a:310. – Pulawski, 1971:129 (in

revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); Kazenas, 1978b:123, 129 (in key to Sphecidae of Kazakhstan and Central Asia); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia).

### 172. *gussakovskii* Pulawski

*Tachysphex gussakovskii* Pulawski, 1971:106, ♀, ♂. Holotype: ♀, Kazakhstan: Baigakum (ZIN). Paratypes: Turkmenistan. – Myartseva, 1972a:79 (Turkmenistan; as *gussakovskii*); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:123, 129 (in key to Sphecidae of Kazakhstan and Central Asia); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on *Calliptamus barbarus cephalotes* F.W.); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:68 (geographic distribution, collecting localities in Kazakhstan, as *gussakovskii*).

### 173. *hadronyx* Pulawski

*Tachysphex hadronyx* Pulawski, 2007a:326, ♀, ♂. Holotype: ♀, Namibia: Swakopmund District: 63 km NE Swakopmund at 22°24'S 15°02'E (CAS).

### 174. *haematopus* Pulawski

*Tachysphex haematopus* Pulawski in Krombein and Pulawski, 1994:37, ♀, ♂. Holotype: ♀, Sri Lanka: Mannar District: 0.8 km NE Kokmotte Bungalow in Wilpattu National Park (USNM).

### 175. *harpax* Arnold

*Tachysphex harpax* Arnold, 1923a:161, ♀. Holotype: ♀, Zimbabwe: Sawmills or South Africa: Transvaal: Platriver (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:329 (in revision of African *Tachysphex*).

*Tachysphex unguiculatus* Arnold, 1924:63, ♀, ♂. Lectotype: ♀, South Africa: EasternCape Province: Willowmore (TMP), designated by Pulawski, 2007a:329. Synonymized with *Tachysphex harpax* by Pulawski, 2007a:329. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed).

*Tachysphex verho*, Pulawski, 1971:220, ♀, ♂. Holotype: ♀, Israel: Bat Yam (RMNH). Paratypes: Syria. Synonymized with *Tachysphex harpax* by Pulawski, 2007a:329. – de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); R. Bohart and Menke, 1976:277 (listed).

### 176. *helveticus* Kohl

*Tachysphex helveticus* Kohl, 1885a:374, ♀. Syntypes: France: no specific locality, and Switzerland: Valais: Sierre (NHMW). – Kohl, 1885a:351 (in key to Palearctic *Tachysphex*), 1888b:729 (Austria: Tirol, now Italy: Alto Adige), 1893:32 (Austria: Niederösterreich); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); de Cobelli, 1903:111 (Italy: Province of Trentino: Alle Sarche); W. Schulz, 1904b:102 ("Akbes"); Schmiedeknecht, 1907:231 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Šustera, 1909:34 (Czech Republic: vicinity of Praha); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); M. Müller, 1921:168 (Germany: Berlin area; Sachsen: Neumark); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Berland, 1925d:119 (in Sphecidae Fauna of France); Schmiedeknecht, 1930:693 (in keys to Hymenoptera of North and Central Europe); de Beaumont, 1936a:207 (in revision of French *Tachysphex*); Goebel, 1937:42 (Poland: Poznań District: Poznań-Dębina); Zavadil, 1937a:73 (eastern Slovakia); Zavadil, Šustera, and Bat'a, 1937:201 (in catalog of Sphecidae of Czechoslovakia); Giordani Soika, 1939b:73 (first record from Italy: Lido di Venezia: Alberoni); Baťa, 1944b:91 (Czech Republic: Veselí); Guiglia, 1944b:26 (Italy; redescription); nec de Beaumont, 1947a:200 (= *Tachysphex helveticus aegyptiacus*); Zavadil in Zavadil and Šnoflak, 1948:149, 151 (in key to Sphecidae of Czechoslovakia); Noskiewicz and Chudoba, 1949:422 (Poland: Górny Śląsk: Bytom area); Sanders, 1949:98 (first record from Netherlands: Kessel and Spar); Sanders, 1950:47 (Netherlands: Oudenrijn, diagnostic characters); Leininger, 1951:118 (Germany: Baden-Württemberg: Graben, Rastatt, Sandhausen); Baťa, 1952:167 (Czech Republic); Fahlander, 1953:64 (Sweden:

Boh, Tjärno, Sydkoster); de Beaumont, 1954a:60 (Italy); Grandi, 1954:239 (Italy); Kjellander, 1954b:247 (Sweden); Puławski, 1954:106 (Poland: Błędów); Hellén, 1955a:122 (Finland, comparison with *Tachysphex nitidus*); Teschner, 1955:57 (Germany: Nordrhein-Westfalen: Hohe Ward near Münster); Vogrin, 1955:37 (Yugoslavia); Hellén, 1956:45 (recorded from Finland); Bajári, 1957a:50, 54 (in key to Hungarian Sphecidae), 1957b:135 (first record from Hungary); Zirngiebl, 1957:183 (Germany: Rheinland-Pfalz: Birkenheide, Dürkheimer Bruch); Balthasar, 1958:337 (Slovakia: Čenkov); Benno, 1958b:12 (in review of Dutch Sphecidae); Puławski, 1958a:181 (Bulgaria: Varna); de Beaumont, 1959a:29 (Italy: Lazio: Acilia); Valkeila, 1959a:182 (Finland: Bromarf); Wolf, 1959b:24 (Germany: Nassau); Noskiewicz and Puławski, 1960:124, 125 (in key to Polish Sphecidae); Valkeila, 1962b:66 (southwestern Finland); de Beaumont, 1964c:77 (in Sphecid Fauna of Switzerland); de Diniz, 1964a:6 (Portugal: Lisboa); Beaumont, 1965a:50 (Greece); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); J. Heinrich, 1967:75 (Germany: Bayern: Unterfranken District); Niedl and Deneš, 1967:81 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:42 (Romania); Benedek, 1968:73 (Hungary, visiting flowers of *Pastinaca sativa* L.); Pulawski, 1967a:408 (Turkey); Scobiola-Palade, 1968b:142 (Romania: Island of Letea in delta of Danube); Benedek, 1969a:84 (Hungary; marshy meadow); Gauss and Perraudin, 1970:360 (Germany: Baden-Württemberg: Graben, Rastatt, Sandhausen); Haeseler, 1970:74 (Germany: Niedersachsen: Pevestorf, Schleswig-Holstein: Lauenburg); Leclercq, 1970c:map 33 (distribution in Belgium); Oehlke, 1970:712 (Democratic Germany); Dathe, 1971:234 (Germany: Berlin Zoological Garden; phenology), 238 (Germany: Berlin); Pulawski, 1971:172 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:36 (Germany: Mainz area); Balthasar, 1972:271 (in Sphecid Fauna of Czechoslovakia); Bonelli, 1972:6 (nesting habits); Kazenas, 1972b:162 (Kazakhstan); Krombein, 1972b:384 (Greece: Crete; prey: *Calliptamus italicus* (Linnaeus)); Hoop, 1973:48 (Germany: Schleswig-Holstein: Segrahner Berg); Erlandsson, 1974:72 (Italy); Kazenas, 1974b:110 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, in Kazakhstan); R. Bohart and Menke, 1976:274 (listed); Eck, 1976:90 (Democratic Germany); Lomholdt, 1976:251 (in Sphecid Fauna of Fennoscandia and Denmark); Haeseler, 1977a:25 (Germany: Niedersachsen: Badener Berg 18 km SE Bremen); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Guichard, 1978:271 (Greece); Kazenas, 1978b:122, 132 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Schmidt, 1977/78:55 (Germany); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 70 (Netherlands: distribution map); Petit, 1980:43 (Belgium: Aayen); Donath, 1982:213 (Germany: Cottbus Bezirk); Dollfuss, 1983a:77 (endangered in Burgenland, Austria), 80 (endangered in Steiermark, Austria), 1983b:10 (in catalog of Sphecidae of Austria); Riemann, 1983:85 (Germany: Bremen-Daverden area); Haack, Tschamtker, and Vidal, 1984:133 (Germany: Hamburg area); Gayubo, 1985c:168 (Spain: Cantabria: Santoña); Józán, 1985b:57 (Hungary S Lake Balaton), 83 (ecological and zoogeographic characteristics); Riemann, 1985:21 (Germany: Niedersachsen); Westrich and Schmidt, 1985b:112 (Germany: endangered in Baden-Württemberg); Józán, 1986:370 (Hungary: Kiskunság National Park); Nemkov, 1986:97 (Russia: Siberia: Irkutsk Oblast'); Vikberg, 1986:76 (Finland); Riemann, 1987b:44 (Germany: Niedersachsen: Nature Reserve Dünengebiet near Neumühlen); Schmidt and Westrich, 1987:364 (Germany: Mainz area); Dollfuss, 1988:24 (Austria: Niederösterreich: Oberweiden); Gayubo and Mingo, 1988:79 (Spain); Karsai, 1988:100 (Hungary: Kiskunság National Park); Kowalczyk, 1988b:65 (Poland: environs of Łódź); Dollfuss, 1989:13 (lectotype in NHMW); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Jacobs and Oehlke, 1990:164 (new records from Democratic Germany); Pagliano, 1990:104 (in catalog of Italian Sphecidae); Schwammberger and Priesner, 1990:539 (Austria: Kärnten); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:402 (Italy: Piemonte: Settimo); Jacobs, 1991:46, 47 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtalidünen); Kowalczyk, 1991a:90, 99, 102 (Poland: Łódź); H.-J. Schulz, 1991:30 (Germany: Oberlausitz: 5 km SW Wittichenau); van der Smissen, 1991:97 (nw. Germany); Guichard, 1991a:340 (Jordan); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Gayubo, Borsato, and Osella, 1992:282 (Turkey); Józán, 1992b:173 (Hun-



gary: Boronka-melléki Protected Area); Kuhlmann, 1993:76 (Germany: recorded from Westfalen by Teschner, 1955); Luig, 1993:44 (Estonia); van der Smissen, 1993:130 (nw. Germany); Dollfuss, 1994:102 (endangered in Austria); Theunert, 1994c:51 (summary of records from Niedersachsen and Bremen, Germany); Gorobchishin, 1995:17 (Ukraine: Kanev Nature Reserve); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:410, 412 (in key to Sphecidae of Russian Far East); Scharrer, 1995:24 (Germany: Bayern: Kahl); Schmid-Egger, Risch, and Niehuis, 1995:211 (summary of records from Germany: Rheinland-Pfalz Province); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Jakubzik, 1996:253 (Germany: Köln); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast', as *helveticus helveticus*); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Celary, 1997:58 (in checklist of Animals of Poland); Hinrichsen and Saure, 1997:31 (recognition characters); Schmidt and Schmid-Egger, 1997:29 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Flügel, 1998:60 (Germany: Brandenburg: Unteres Odertal National Park); Haeseler and Ritzau, 1998:51 (Germany: Bremen: Harriersand Island in Weser River and Steller Heide); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); van der Smissen, 1998:69 (Germany: Niedersachsen, Schleswig-Holstein); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); Majzlan, Rychlík, and Deván, 1999:146 (Slovakia: Čenkovská Step Nature Reserve); Pauly, 1999:109 (in catalog of Belgian aculeates); Wickl, 1999a:108 (Germany: Bayern: Oberpfalz area); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:228 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Jacobs, 2000:12, 17 (Germany: Land Mecklenburg-Vorpommern: vulnerable); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 157 (review of known biology); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitoshka near Sofia); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch *in* Bitsch et al., 2001:253 (in Sphecidae Fauna of Western Europe); Szczepko and Kowalczyk, 2001:188 (Poland: Kampinos National Park near Warszawa); Tischendorf, 2001:30 (Germany: Hessen: Kühkopf-Knoblochsaue Nature Reserve); Kazenas, 2002a:68 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:153 (Poland: Kampinos National Park near Warszawa); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Shlyakhtenok and Skibinska, 2002:33 (Belarus': no specific locality); Venne and Bleidorn, 2002:10 (Germany: Nordrhein-Westfalen: Moosheide Nature Reserve); Drewes, 2003:142 (Germany: Bayern: Erlangen); Haeseler, 2003:340, 346 (Germany: Niedersachsen: Harriersand Island near Bremen); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:196 (Germany: Bayern: strongly endangered); Dathe and Blank, 2004:181 (Germany: Nordrhein-Westfalen, addition to Ohl et al., 2001); Esser, Jakubzik, and Sonnenburg, 2004:18 (Germany: Nordrhein-Westfalen); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Szczepko and Kowalczyk, 2004:126 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Pagliano and Negrisoló, 2005:377 (in Sphecidae Fauna of Italy); Riemann and Hohmann, 2005:565 (Germany: Niedersachsen: city of Bremen and adjacent area); Straka, 2005:255 (Turkey: Kayseri: Sultanhani); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Jacobs, 2007:96, 101 (in key to Crabronidae of Germany); Saure, 2007:83 (in checklist of Aculeata of Brandenburg

Land, Germany); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia); Danilov, 2008:349 (Russia: Altayskiy Kray: Barnaul area); Ljubomirov and Yildirim, 2008:208 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Nemkov, 2009b:78 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Pagliano, 2009:184 (Italy: Sardegna: lake Baratz); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: rare).

### **ssp. *aegyptiacus* Morice**

*Tachysphex aegyptiacus* Morice, 1897:306, ♀, ♂. Lectotype: ♂, Egypt: Cairo area: Choubra (OXUM), designated by Pulawski, 2007a:335. – Storey, 1916:110 (Egypt); Honoré, 1942:55. – **As *Tachysphex helveticus* var. *aegyptiacus***: de Beaumont, 1940b:176 (new status). – **As *Tachysphex helveticus aegyptiacus***: de Beaumont, 1947a:200 (new status, in new revision of *Tachysphex* of Egypt); Pulawski, 1971:177 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a: 335 (in revision of African *Tachysphex*).

### **ssp. *quadrifasciatus* Pulawski**

*Tachysphex helveticus quadrifasciatus* Pulawski, 1971:176, ♀, ♂. Holotype: ♀, Cyprus: Zakaki (W.J. Pulawski coll.). Paratypes: Jordan, Tajikistan. – R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:122 (in key to Sphecidae of Kazakhstan and Central Asia).

### **177. *hermia* Arnold**

*Tachysphex hermia* Arnold, 1924:53, ♀, ♂ (as *Hermia*, incorrect original capitalization). Lectotype: ♀, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:338. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:338 (in revision of African *Tachysphex*).

### **178. *hippolyta* Arnold**

*Tachysphex hippolyta* Arnold, 1924:59, ♀ (as *Hippolyta*, incorrect original capitalization). Holotype: ♀, Zimbabwe: Sawmills (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); nec de Beaumont, 1967b:509 (= *Tachysphex argentifrons*); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:340 (in revision of African *Tachysphex*).

*Tachysphex viarius* Arnold, 1947:149, ♂. Holotype: Zimbabwe: Vumba Mts. (SAM). Synonymized with *Tachysphex hippolyta* by Pulawski, 2007a:340. – R. Bohart and Menke, 1976:277 (listed).

### **179. *hopi* Pulawski**

*Tachysphex hopi* Pulawski, 1988a:47, ♀, ♂. Holotype: ♀, USA: Arizona: Apache County: Canyon de Chelly (CAS).

### **180. *horus* de Beaumont**

*Tachysphex horus* de Beaumont, 1940b:168, ♀, ♂ (♂ = *Tachysphex luxuriosus*). Holotype: ♀, Egypt: Heliopolis (Ministry of Agriculture of Egypt). – de Beaumont, 1947a:171 (in new revision of *Tachysphex* of Egypt, ♂ = *Tachysphex luxuriosus*), nec 1956a:197 (= *Tachysphex luxuriosus*); Pulawski, 1964:91 (Egypt: Abu Rawash, Ghiza, Maadi, Saqqara; redescription); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); R. Bohart and Menke, 1976:274 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:343 (in revision of African *Tachysphex*).

### **181. *hostilis* Kohl**

*Tachysphex hostilis* Kohl, 1901c:779, ♀. Holotype: ♀, Turkmenistan: Bolshyie Balkhany (NHMW). – Pulawski, 1971:113 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:123, 129 (in key to Sphecidae of Kazakhstan and Central Asia); Dollfuss, 1989:13 (type material in NHMW); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of

Kazakhstan and Central Asia), 2002a:69 (geographic distribution, collecting localities in Kazakhstan), 2008a:101 (Southeastern Kazakhstan: Ili River valley: 35 km N Chilik).

**182. *huchiti* Pulawski**

*Tachysphex huchiti* Pulawski, 1988a:126, ♀, ♂. Holotype: ♂, Mexico: Baja California Sur: Los Bariles (CAS).

**183. *humilis* Straka**

*Tachysphex humilis* Straka, 2005:255, ♀, ♂. Holotype: ♂, Jordan: Petra (OÖLM).

**184. *hurdi* R. Bohart**

*Tachysphex hurdi* R. Bohart, 1962a:33, ♂, ♀. Holotype: ♂, USA: California: Ventura County: Hungry Valley 5 mi S Gorman (CAS). – Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:274 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Pulawski, 1988a:108 (in revision of Nearctic *Tachysphex*); Ruiz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

**185. *hypoleius* (F. Smith)**

*Tachytes hypoleius* F. Smith, 1856:302, ♀. Holotype or syntypes: ♀: Australia: Western Australia: Swan River (BMNH). – Froggatt, 1892:218 (in catalog of Australian Hymenoptera); Dalla Torre, 1897:690 (in catalog of world Hymenoptera). – **As *Tachysphex hypoleius***: R. Turner, 1908:492 (new combination, redescription), 1916b:254 (in key); R. Bohart and Menke, 1976:274 (listed); Pulawski, 1977a:235 (in revision of Australian *Tachysphex*); Cardale, 1985:240 (in catalog of Australian Sphecidae).

**186. *iaphetes* Pulawski**

*Tachysphex iaphetes* Pulawski, 2007a:345, ♀. Holotype: ♀, Kenya: Rift Valley Province: Archer's Post (CAS).

**187. *ibi* Pulawski**

*Tachysphex ibi* Pulawski, 2007a:347, ♀, ♂. Holotype: ♀, South Africa: Eastern Cape Province: Belmont Valley 10 km E Grahamstown (AMG).

**188. *idiotrichus* Pulawski**

*Tachysphex idiotrichus* Pulawski, 1982b:31, ♀, ♂. Holotype: ♀, USA: Arizona: Cochise County: Southwest Research Station 5 mi W Portal (UCD). – Pulawski, 1988a:85 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**189. *idzekii* Tsuneki**

*Tachysphex idzekii* Tsuneki, 1971m:22, ♀. Holotype: ♀, China: Inner Mongolia: Apaka (originally originally K. Tsuneki coll., now Hyogo Mus., now USNM). – R. Bohart and Menke, 1976:274 (listed); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Hashimoto and Nakanishi, 1997:29 (holotype transferred to Hyogo Mus.); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

**190. *imbellis* R. Turner**

*Tachysphex imbellis* R. Turner, 1908:485, ♀. Holotype: ♀, Australia: Queensland: Mackay (BMNH). – R. Turner, 1916b:254 (in key); R. Bohart and Menke, 1976:274 (listed); Pulawski, 1977a:249 (in revision of Australian *Tachysphex*); Cardale, 1985:240 (in catalog of Australian Sphecidae).

*Tachysphex adelaidae* R. Turner, 1910b:425, ♀. Holotype: ♀, Australia: South Australia: Adelaide (BMNH). Synonymized with *Tachysphex imbellis* by Pulawski, 1977a:249. – R. Turner, 1916b:254 (in key).

**191. *incanus* de Beaumont**

*Tachysphex incanus* de Beaumont, 1940:173, ♀, ♂. Lectotype: ♀, Mauritania: Mederdra (MNHN), designated by Pulawski, 2007a:349 (type locality erroneously placed in southern Algeria in original description, corrected to

Mauritania by de Beaumont, 1947a:192). – de Beaumont, 1947a:192 (Mauritania, possibly also Libya; in new revision of *Tachysphex* of Egypt); Puławski, 1971:372 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Puławski, 2007a:349 (in revision of African *Tachysphex*).

### 192. *incertus* (Radoszkowski)

*Tachytes panzeri* varietas *geniculata* A. Costa, 1867b:87, sex not indicated, junior secondary homonym of *Tachysphex geniculatus* (Spinola, 1839). Holotype or syntypes: Italy: Napoli area, Sicilia, or Sardegna (Napoli). Synonymized with *Tachysphex pygidialis* by de Beaumont, 1936c:7.

*Tachytes panzeri* varietas *geniculata* A. Costa, 1867c:31. Objective synonym of *Tachytes panzeri* varietas *geniculata* A. Costa, 1867b.

*Tachytes incertus* Radoszkowski, 1877:28, ♀, ♂ (as *incerta*, incorrect original termination). Lectotype: ♀, Uzbekistan: Kyzil-Kum (ZMMU), designated by Puławski, 1971:321. – Nec Radoszkowski, 1886a:33 and 1892:590 (= *Tachysphex dignus*). – **As *Tachysphex incertus***: Kohl, 1885a:395 (tentative new combination, original description copied); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); F. Morawitz, 1893b:410 (Tajikistan: Veshab in Zeravshan River valley); Kohl in Dalla Torre, 1897:680 (new combination, in catalog of world Hymenoptera); nec de Beaumont, 1936b:615 (= *Tachysphex dignus*); Gussakovskij, 1952:241 (Tajikistan); Puławski, 1958a:178 (Bulgaria: Kurilo, mouth of Ropotamo River, Sandanski, Varna); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River) 1965:77 (Turkmenistan: Akibay; Murgab district); Puławski, 1967a:397 (Turkey); Romanova, 1969:134 (Russia: North Caucasus: Gheorghevsk, as *insertus*); de Beaumont, 1970a:401 (Afghanistan); Puławski, 1971:318 (in revision of Palearctic *Tachysphex*); Kazenas, 1972b:162 (Kazakhstan); Myartseva, 1972a:79 (Turkmenistan); Scobiola-Palade, 1972:150 (Romania: delta of Danube: Caraorman); de Beaumont, Bytinski-Salz, and Puławski, 1973:11 (Israel); Erlandsson, 1974:72 (France, Greece, Italy, Spain, Yugoslavia); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp. and *Statice gmelini* Willd., Plumbaginaceae, in Kazakhstan), 110 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, and *Nitraria schoberi* L., Zygophyllaceae, in Kazakhstan), 111 (feeding on flowers of *Lepidium crassifolium* W. et K., Brassicaceae, in Kazakhstan), 112 (feeding on flowers of *Salsola laricifolia* Turcz., Chenopodiaceae, and *Gallium* sp., Rubiaceae, in Kazakhstan); R. Bohart and Menke, 1976:274 (listed); Guichard, 1978:271 (Greece); Kazenas, 1978b:113, 125 (in key to Sphecidae of Kazakhstan and Central Asia); Puławski, 1978:215, 219 (in key to Sphecidae of European part of former USSR); Guichard, 1980:227 (Oman); Pagliano, 1980:128 (Italy: Liguria); Gayubo, 1982a:103 (N Spain: Sierra de Béjar), 1982f:252 (Spain: Cádiz Province), 1983a:123 (prey: nymph of Gomphocerinae acridid); Schmidt and Westrich, 1983:123 (Greece); Gayubo, 1984b:84 (Spain: Salamanca Province), 1984c:364 (Portugal: El Algarve Province), 1985c:168 (Spain: Toledo: Corchuela); Gayubo and Tormos, 1984:15 (Spain: Valencia); Józán, 1985b:57 (Hungary S Lake Balaton), 83 (ecological and zoogeographic characteristics); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Gayubo, 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:41 (Spain: Segovia Province; floral records); Gayubo and Sanza, 1986:45 (Spain: Burgos); Gayubo and Tormos, 1986a:17 (Spain: Castellón de la Plana); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Józán, 1986:370 (Hungary: Kiskunság National Park); Gayubo, 1987a:112 (Spain: Ciudad Real Province); Tormos and Jiménez, 1987a:125 (Spain: Valencia), 1987b:316 (Spain: Valencia Province: Dehesa de El Saler); Asís and Jiménez, 1988:271 (Spain: Castellón Province); Gayubo and Mingo, 1988:79 (Spain); Gayubo, Asís, and Tormos, 1990a:18 (Spain); Pagliano, 1990:104 (in catalog of Italian Sphecidae); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:402 (Italy: Toscana, Lazio); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Guichard, 1991a:339 (Jordan); Gayubo, Borsato, and Osella, 1992:282 (Greece); Negrisolo and Pagliano, 1993:94 (Italy: Sardegna; as *incertus incertus*); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Gayubo and Borsato, 1994:207 (Italy: Lombardia); Tormos, Asís, and Gayubo, 1994:188, 205 (Spain: Albacete Province); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Gorobchishin,

1996:53 (Ukraine: Kanev Nature Reserve); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Schmidt and Schmid-Egger, 1997:29 (Schneid's, 1941, record from Germany cannot be confirmed); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Pagliano and Scaramozzino, 1999:162 (Italy: Piemonte: Borgomale); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:106 (Greece); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Basset, 2001:85 (France: Département de Gironde); Ivanov and Ljubomirov, 2001:211 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 157 (review of known biology); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitosha near Sofia); Ohl et al., 2001:142 (recorded from Germany but not occurring there); K. Schmidt and Bitsch in Bitsch et al., 2001:254 (in Sphecidae Fauna of Western Europe); Kazenas, 2002a:69 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Drewes, 2003:142 (Croatia: Šibenik); Gayubo, Özbek, and Yıldırım, 2003:89 (Turkey: many localities); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (occurrence in Bayern, Germany, not confirmed); Schmid-Egger, 2003:758 (Italy: Sicilia: Ferla 30 km W Siracusa); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Nazarova, 2004:106 (Tajikistan: Badakhshan Region: Rushan District in Shakh dara River valley, villages Visav and Siponch in Bartang River valley); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Ebrahimi, 2005:124 (in key to selected Iranian Sphecidae); Jacobs, 2005a:451 (Bulgaria: Melnik); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan); Pagliano and Negrisol, 2005:371 (in Sphecidae Fauna of Italy); Shoreenko, 2005a:163 (Ukraine: Crimea), 2005b:98 (Ukraine: Crimea: Karadagh Nature Reserve); Straka, 2005:271 (Turkey: many localities); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: Satovcha Village, as *incertus incertus*); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Jacobs, 2007:94, 98 (in key to Crabronidae of Germany, not yet found in Germany); Kazenas, 2007a:90 (Kazakhstan: Akmala Oblast': Kurgandzhin Nature Reserve and vicinity); Pulawski, 2007a:352 (in revision of African *Tachysphex*); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia, known from Slovakia only); Yıldırım and Ljubomirov, 2007:119 (Turkey: Erzurum: Oltu); Danilov, 2008:349 (Russia: Altayskiy Krai: Barnaul area); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008b:112 (Kazakhstan: foothills of Zailiskiy Alatau: occurring among others on loess cliffs); T. Li, Li, and Cai, 2008:142 (first record from China); Ljubomirov and Yıldırım, 2008:208 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park, as *incerta*); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Pagliano, 2009:184 (Italy: Molise: Guardialfiera, as *incertus incertus*).

*Tachysphex pygidialis* Kohl, 1883a:176, ♂, ♀. Lectotype: ♀, France: Marseille (NHMW), designated by Pulawski, 1971:321. Synonymized with *Tachysphex incertus* by F. Morawitz, 1893b:410 and Gussakovskij, 1952:240. – Kohl, 1885a:351 and 356 (in key to Palearctic *Tachysphex*), 360 (in revision of Palearctic *Tachysphex*); Gasperini, 1887:15 (Dalmatia: Brusije and Ragusa, now Croatia: Brusje on Hvar Island and Dubrovnik); Kohl and Handlirsch, 1889:278 (Turkmenistan: Pul-i-Hatun); F. Morawitz, 1891a:207 (Russia: Astrakhan); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Kingdom of Hungary, some localities are in today's Croatia and Romania); Bingham, 1898a:104 (Yemen: Aden); Ferton, 1901b:680 (found in Marseille area, France, but not in Corsica); Antiga and Bofill, 1904:10 (in catalog of Catalanian Hymenoptera); E. Saunders, 1904c:635 (Spain); W. Schulz, 1904b:102 (Bosnia and Herzegovina: Hvar Island, as Lesina); Schmiedeknecht, 1907:232, 234 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenop-

- tera); Mercet, 1910b:165 (listed from Spain, as *pigidialis*); Graeffe, 1911:45 (Italy: Trieste area); Morice, 1911:102 (Algeria); Dusmet, 1915:87 (Spain: Aragón); Maidl, 1922:70 (Croatia); Ferton, 1923:333 (known from continental France but not found in Corsica); Berland, 1925d:119 (in Sphecid Fauna of France); von Schulthess, 1926b:215 (Tunisia); Schmiedeknecht, 1930:693, 695 (in keys to Hymenoptera of North and Central Europe); Nadig, 1933:79 (Morocco: Goundafa, Ifrane); Bernard, 1935:65 (France: Var: Fréjus area); Grandi, 1935a:110 (Italy); de Beaumont, 1936a:193 (in revision of French *Tachysphex*), 1936c:7 (specimens in coll. A. Costa), 1940b:164 (in revision of *Tachysphex* of Egypt), corrected to *Tachysphex incertus nattereri* by Pulawski, 1971:323; Guiglia, 1940a:290 (Libya: Gadames); Honoré, 1940:56 (Egypt); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Schneid, 1941:1045 (Germany: Bayern: Bamberg area, record not confirmed by subsequent workers); Guiglia, 1942b:234 (Libya; as *pigidialis*); Honoré, 1942:56 (Egypt), corrected to *Tachysphex incertus nattereri* by Pulawski, 1971:323; Giner Mari, 1943a:140 (in Sphecid Fauna of Spain); Guiglia, 1944b:27 (Italy); Deleurance, 1946b:63 (habits as in *Tachysphex panzeri*), 67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); de Beaumont, 1947a:163 (in new revision of *Tachysphex* of Egypt), corrected to *Tachysphex incertus nattereri* by Pulawski, 1971:323, 1947b:391 (Cyprus), 1947c:663 (geographic variation); Zavadil in Zavadil and Šnoflak, 1948:150, 152 (in key to Sphecidae of Czechoslovakia); Ceballos, 1949:102 (Spain); de Andrade, 1949:15 (Portugal); nec de Beaumont, 1950d:18 (= *Tachysphex sericans gracilis*); de Beaumont, 1950f:405 (Algeria: Sidi Ferruch); Pittioni, 1950:25 (Cyprus); Scobiola-Palade, 1951:274 (first record from Romania: Budești, Făurei in Galați Region); Balthasar, 1952:66 (Slovakia); de Beaumont, 1952c:189 (Algeria: Hoggar); Balthasar, 1954b:269 (Palestine: Jerusalem; also Slovakia); de Beaumont, 1954a:55 (Italy), 1954e:90 (Italy); Grandi, 1954:240 (Italy); de Beaumont, 1955a:178 (Morocco); Vogrin, 1955:37 (Yugoslavia); Bytinski-Salz, 1956:226 (Turkey: Karapınar, Kasalba, Seki); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Bajári, 1957a:51, 55 (in key to Hungarian Sphecidae); de Beaumont, 1957b:137 (n. Iran); Grandi, 1957:390 (Italy); Nouvel and Ribaut, 1958:14 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1959a:27 (Italy); Diniz, 1959:29 (Portugal: Estoril, Lisboa); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1960a:16 (Greece: Rhodes Island), 1960c:171 (Afghanistan), 1961b:275 (Afghanistan); Atanassov, 1962:124 (Bulgaria: Petrich area); de Beaumont, 1962b:25 (Spain); Scobiola, 1963:825 (Romania: Letea); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 (Portugal: Aljustrel, Coimbra, Estoril, Évora, Lisboa, Rezende); de Beaumont, 1965a:47 (Greece); Myartseva, 1965:78 (Turkmenistan: Akibay); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Scobiola-Palade, 1967a:162 (Romania: Constanța District: Comarova), 1967b:42 (Romania), 1968b:142 (Romania: Island of Letea in delta of Danube), 1968c:385 (Romania: Budești); Königsmann, 1971:107 (Spain: Gerona: Palamós); Atanassov, 1972a:191 (Bulgaria: Stara Planina Mountains), 1972b:32, 50 (Bulgaria: Stara Planina Mountains); Balthasar, 1972:268 (in Sphecid Fauna of Czechoslovakia); Georghiou, 1977:192 (Cyprus); Józán, 1981:304 (Hungary: Hortobágy National Park); Dollfuss, 1989:13 (lectotype in NHMW); Pádr in Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae).
- As *Tachytes panzeri*: Radoszkowski, 1886a:33 (male genitalia) and 1891:590 (reference to Radoszkowski, 1886a), corrected to *Tachysphex incertus* by Pulawski, 1971:318.
- Tachysphex nattereri* Kohl, 1888a:144, ♀, ♂ (as *Nattereri*, incorrect original capitalization; ♂ = *Tachysphex palopterus*). Lectotype: ♀, "Sudan": no specific locality, but Egypt according to locality label, as reported by Maidl, 1933b:126, designated by Pulawski, 2007a:352. Synonymized with *Tachysphex incertus* by Pulawski, 2007a:352. – Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Arnold, 1923a:175 (listed); Maidl, 1933b:126 (Morocco); Dollfuss, 1989:13 (lectotype in NHMW). – As *Tachysphex pygidialis nattereri*: de Beaumont, 1947c:663 (new status, in revision of Egyptian *Tachysphex*); Pulawski, 1964:84 (Egypt: Abu Rawash, Dahshur, Ghiza, Kom Osheim, Luxor, Maadi). – As *Tachysphex incertus nattereri*: Pulawski, 1971:323 (new subspecific combination, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed).
- Tachysphex rufiventralis* Ferton, 1905:68, ♀. Holotype: ♀, France: Corse: Bonifacio (MNHN). Synonymized with *Tachysphex incertus* by Pulawski, 2007a:352– Ferton, 1909:407 (France: Corse: Bonifacio); de Beaumont,

1936a:194 (in revision of French *Tachysphex*). – **As *Tachysphex pygidialis* var. *rufiventralis***: Guiglia, 1938b:9 (new status, Italy: Sardegna). – **As *Tachysphex pygidialis rufiventralis***: de Beaumont, 1947c:663 (new status, re-description), 1953b:14 (status of name). – **As *Tachysphex incertus rufiventralis***: Pulawski, 1971:322 (new subspecific combination, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Pagliano, 1990:104 (in catalog of Italian Sphecidae); Negrisola in Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); K. Schmidt and Bitsch in Bitsch et al., 2001:255 (in Sphecid Fauna of Western Europe); Pagliano and Negrisola, 2005:371 (in Sphecid Fauna of Italy).

As *Tachysphex pygidialis* ssp. *algira*: de Beaumont, 1947c:664, corrected to *Tachysphex incertus kallipygus* by Pulawski, 1971:323.

*Tachysphex incertus kallipygus* Pulawski, 1971:323, ♀, ♂. Holotype: ♀, Algeria: Arba (LAUSANNE). Synonymized with *Tachysphex incertus* by Pulawski, 2007a:352, – R. Bohart and Menke, 1976:274 (listed).

As *Lyrops panzeri*: Pagliano, 2008:549 (one specimen specimen in M. Spinola collection, Torino).

### 193. *inconspicuus* (W. F. Kirby)

*Tachytes inconspicuus* W. F. Kirby, 1890:540, ♀, ♂. Lectotype: ♀, Brazil: Fernando de Noronha Island (BMNH), designated by Pulawski, 1974a:74. – **As *Tachysphex inconspicuus***: Pulawski, 1974a:74 (new combination; in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Pulawski, 1988a:193 (in revision of North American *Tachysphex*); Callan, 1991a:8 (Trinidad), 1993:42 (nest, prey, parasite: *Timulla eriphyla* Mickel); Amarante, 1993:19 (ne. Brazil); Cambra, 1993:16 (Peru: Pakitza, 11°57'S, 71°17'W); Cambra and Santos, 2000:56 (Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies); Buys, 2006c:1277 (description of larva), 2007b:327 (nesting habits).

*Tachysphex blatticidus* F. Williams, 1941:197, ♀, ♂. Holotype: ♀, Trinidad and Tobago: Trinidad: St. Augustine (BMNH). Synonymized with *Tachysphex inconspicuus* by Pulawski, 1974a:74. – Callan, 1942:18 (Trinidad: St. Augustine, parasite *Timulla eriphyla* Mickel, a mutillid, prey: *Chorisoneura* sp., a blattid), 1950:205 (preys on cockroaches), 1954:24 (Venezuela: Paria Peninsula: Cristóbal Colón; prey: adult *Chorisoneura* sp., a blattid).

### 194. *indicus* Pulawski

*Tachysphex indicus* Pulawski in Krombein and Pulawski, 1994:74, ♀, ♂. Holotype: ♀, India: Tamil Nadu: Coimbatore (CAS). Paratypes: Sri Lanka. – Krombein and Pulawski, 1994:12 (nesting habits).

### 195. *inextricabilis* Pulawski

As *Tachysphex luxuriosus* (♂ only), corrected to *Tachysphex inextricabilis* by Pulawski, 1971:353; de Beaumont, 1940b:167 (in revision of African *Tachysphex*), 1947a:353 (in new revision of *Tachysphex* of Egypt); Pulawski, 1964:93 (Egypt).

As *Tachysphex seth* (♀ only): Pulawski, 1964:92, corrected to *Tachysphex inextricabilis* by Pulawski, 1971:353.

*Tachysphex inextricabilis* Pulawski, 1971:353, ♀, ♂. Holotype: ♂, Egypt: Kom Oshim on Cairo – Fayum road (originally W.J. Pulawski coll., now CAS). – de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:356 (in revision of African *Tachysphex*).

### 196. *instructus* Nurse

*Tachysphex striolatus* Cameron, 1908b:305, ♀, junior primary homonym of *Tachysphex striolatus* Cameron, 1903. Lectotype: ♀, India: Gujarat: Deesa (BMNH), designated by Pulawski in Krombein and Pulawski, 1994:80.

*Tachysphex instructus* Nurse, 1909:514. Substitute name for *Tachysphex striolatus* Cameron, 1908. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:274 (listed); Krombein and Pulawski, 1994:80 (revision).

**197. *insulsus* Arnold**

*Tachysphex insulsus* Arnold, 1945:104, ♀, ♂. Syntypes: Madagascar: Antanimora, Bekily (MNHN). – R. Bohart and Menke, 1976:274 (listed); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae), 2007a:358 (in revision of African *Tachysphex*).

*Tachysphex crassicornis* Arnold, 1945:105, ♀, ♂. Lectotype: ♀, Madagascar: Bekily (MNHN), designated by Pulawski, 2007a:358. Synonymized with *Tachysphex insulsus* by Pulawski, 2007a:358. – R. Bohart and Menke, 1976:273 (listed); Leclercq, 1990b:117 (Madagascar: Bekily); Pulawski, 2003b:797 (in checklist of Malagasy Sphecidae).

**198. *iridipennis* (F. Smith)**

*Tachytes iridipennis* F. Smith, 1873:57, ♀. Holotype: ♀, Brazil: Amazonas: Ega, now Tefé (BMNH). – Dalla Torre, 1897:691 (in catalog of world Hymenoptera). – **As *Tachysphex iridipennis***: Pulawski, 1974a:80 (new combination; in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Pulawski, 1988a:196 (in revision of Nearctic *Tachysphex*); Callan, 1991a:8 (Trinidad); Amarante, 1993:19 (ne. Brazil); Callan, 1993:43 (prey); Cambra and Santos, 2000:56 (Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies).

**199. *irregularis* Pulawski**

*Tachysphex irregularis* Pulawski, 1982b:31, ♀, ♂. Holotype: ♀, USA: California: Lassen County: Hallelujah Junction (UCD). – Pulawski, 1988a:55 (in revision of Nearctic *Tachysphex*).

**200. *isis* de Beaumont**

*Tachysphex isis* de Beaumont, 1940b:171, ♀, ♂. Holotype: ♀, Egypt: Wadi Rishrash (originally A. Alfieri coll., Cairo, now Entomological Society of Egypt?). – de Beaumont 1947a:179 (in new revision of *Tachysphex* of Egypt); Pulawski, 1971:395 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:362 (in revision of African *Tachysphex*).

**201. *jujuyensis* Brèthes**

*Tachysphex jujuyensis* Brèthes, 1913:146, ♀. Holotype: ♀, Argentina: Jujuy (MACN). – Pulawski, 1974a:54 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Genise, 1990:27 (type material in MACN); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**202. *julliani* Kohl**

*Tachysphex julliani* Kohl, 1883a:177, ♂, ♀ (as *Julliani*, incorrect original capitalization). Lectotype: sex not indicated, France: Marseille (NHMW), designated by Dollfuss, 1979:13. – Kohl, 1885a:352 and 355 (in key to Palearctic *Tachysphex*), 384 (in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); Ferton, 1897:111 (prey), 1901a:100 (nesting habits), 1901b:680 (found in Marseille area, France, but not in Corsica); Adlerz, 1904:137 (known prey: mantids); Antiga and Bofill, 1904:11 (in catalog of Catalonian Hymenoptera); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (listed from Spain); Morice, 1911:102 (Algeria: Biskra); Ferton, 1912a:402 (review of structural and behavioral characters); Berland, 1923a:174 (preying on mantid *Ameles decolor*), 1923b:288 (France: locality records); Ferton, 1923:127 (preying on young mantids), 333 (known from continental France but not found in Corsica); Berland, 1924:90 (France: Var: Callian), 1925d:120 (in Sphecid Fauna of France); Grandi, 1934: 341 (Italy: Toscana: Maremma); Berland, 1932a:23 (France: Var Department; utilizing old charcoal preparation sites for nesting); Bernard, 1933:62 (France: Drôme: Dieulefit); Giner Mari, 1934:133 (Spain); Bernard, 1935:65 (France: Var: Fréjus area); de Beaumont, 1936a:199 (in revision of French *Tachysphex*), 1940b:172 (Egypt; revision; specimens may actually be *Tachysphex argentatus*); Giner Mari, 1943a:141 (in Sphecid Fauna of Spain); de Beaumont, 1947a:188 (in new



revision of *Tachysphex* of Egypt; specimens may actually be *Tachysphex argentatus*, 1947b:391 (Cyprus); de Andrade, 1949:16 (Portugal); Pittioni, 1950:25 (Cyprus); de Beaumont, 1954a:56 (Italy), 1954e:91 (Italy), 1955a:182 (Moroccan forms); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); de Beaumont, 1956a:197 (Libya); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1959a:27 (Italy); Diniz, 1959:29 (Portugal: Évora, Paço de Rei, Vale de Gaió); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1960a:18 (Greece: Rhodes Island), 1960b:238 (Libya), 1961c:50 (Greece: Crete Island), 1962b:25 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 (Portugal: eight localities); nec Pulawski, 1964:95 (= *Tachysphex argenteus*); de Beaumont, 1965a:48 (Greece); Pulawski, 1967:398 (Turkey); Königsmann, 1971:106 (Spain: Gerona: Palamós); Pulawski, 1971:360 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:273 (in Sphecidae Fauna of Czechoslovakia: may be expected in the country); Kazenas, 1972b:162 (Kazakhstan); Myartseva, 1972a:79 (Turkmenistan); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); R. Bohart and Menke, 1976:274 (listed); Georghiou, 1977:192 (Cyprus); Kazenas, 1978b:117, 128 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Guichard, 1980:227 (Oman); Pagliano, 1980:128 (Italy: Lazio); Gayubo, 1982a:103 (N Spain: Sierra de Béjar), 1982f:253 (Spain: Cádiz Province: Algodonales, Puerto de Santa María, San Roque), 1984b:85 (Spain: Salamanca Province), 1984c:365 (Portugal: El Algarve Province); Gayubo and Tormos, 1984:15 (Spain: Valencia); Gayubo, 1986b:38 (Spain: Andalucía), 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:41 (Spain: Segovia Province; floral records); Gayubo and Sanza, 1986:46 (Spain: Burgos, Segovia); Gayubo and Tormos, 1986a:12 (Spain: Castellón de la Plana); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Asís and Jiménez, 1988:272 (Spain: Castellón Province); Gayubo and Mingo, 1988:80 (Spain); Dollfuss, 1989:13 (lectotype in NHMW); Pagliano, 1990:104 (in catalog of Italian Sphecidae); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Tormos, Asís, and Gayubo, 1994:188, 205 (Spain: Albacete Province); Negrísolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Gayubo, García, Torres, and González, 1999:89 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 158 (review of known biology); K. Schmidt and Bitsch *in* Bitsch et al., 2001:255 (in Sphecidae Fauna of Western Europe); Kazenas, 2002a:69 (geographic distribution, collecting localities in Kazakhstan); Schmid-Egger, 2003:758 (Italy: Sicilia: Bronte); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Pagliano and Negrísolo, 2005:370 (in Sphecidae Fauna of Italy); Shoreenko, 2005a:164 (Ukraine: Crimea); Straka, 2005:273 (Turkey: four localities); Yildirim and Ljubomirov, 2005:1796 (Turkey: Kahramanmaraş: Tömek: Malatya: Kale); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Tomarchio and Turrisi, 2006:956 (Italy: Sicilia: Mount Etna); Pulawski, 2007a:364 (in revision of African *Tachysphex*); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:209 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Pagliano, 2009:184 (Italy: Piemonte: Bonvicino; recorded from Sicilia by Tomarchio and Turrisi, 2006).

*Tachysphex semenovi* Gussakovskij, 1933b:281, ♀. Lectotype: ♀, Iran: Kerman: Khunikaka (ZIN), designated by Pulawski, 1971:364. Synonymized with *Tachysphex julliani* by Pulawski, 1971:360.

As *Tachysphex julliani* Kohl No. 1: de Beaumont, 1955a:182 (Morocco) and 1956a:197 (Libya), synonymized with *Tachysphex julliani africanus* by Pulawski, 1971:365.

*Tachysphex julliani africanus* Pulawski, 1971:365, ♀, ♂. Holotype: ♂, Morocco: Ijoukak (LAUSANNE). Synonymized with *Tachysphex julliani* by Pulawski, 2007a:365. – R. Bohart and Menke, 1976:274 (listed).

As *Lyrops leucozona* (a manuscript name): Pagliano, 2008:546 (specimen in M. Spinola collection, Torino).

### 203. *kalaharicus* Arnold

*Tachysphex sericeus* race *kalaharicus* Arnold, 1924:72, ♀. Holotype: ♀, Botswana: Palapye Road (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – As *Tachysphex sericeus kalaharicus*: R. Bohart and Menke, 1976:276 (new status, listed). – As *Tachysphex kalaharicus*: Pulawski, 2007a:369 (full species status, in revision of African *Tachysphex*).

*Tachysphex scabrosus* Arnold, 1929c:386, ♂. Holotype: ♂, Zimbabwe: Shiloh (SAM). Synonymized with *Tachysphex kalaharicus* by Pulawski, 2007a:369. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed).

### 204. *karasi* Straka

*Tachysphex karasi* Straka, 2005:258, ♀, ♂. Holotype: ♂, Turkey: Sivas: Tuzlagozu (OÖLM). Paratypes: Bulgaria.

### 205. *karoo* Pulawski

*Tachysphex karoo* Pulawski, 2007a:374, ♀, ♂. Holotype: ♂, South Africa: Western Cape Province: 5 km W Robertson (CAS).

### 206. *kaszabi* Tsuneki

*Tachysphex kaszabi* Tsuneki, 1972e:387, ♂. Holotype: ♂, Mongolia: Zavhan Aymag: Somon Nömrög (TMB). – R. Bohart and Menke, 1976:274 (listed).

### 207. *khoikhoi* Pulawski

*Tachysphex khoikhoi* Pulawski, 2007a:375, ♀, ♂. Holotype: ♀, South Africa: Northern Cape Province: Geogap (= Hester Malan) Nature Reserve near Kraaiwater at 29°37'S 18°00'E (AMG).

### 208. *kodairai* Tsuneki

*Tachysphex kodairai* Tsuneki, 1971m:27, ♂. Holotype: ♂, China: Inner Mongolia: Apaka (originally originally K. Tsuneki coll., now Hyogo Museum or USNM). – R. Bohart and Menke, 1976:274 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Hashimoto and Nakanishi, 1997:29 (holotype transferred to Hyogo Mus.); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

### 209. *krombeini* Kurczewski

*Tachysphex* sp. No. 3: Krombein and Evans, 1954:233, 1955:231. Corrected to *Tachysphex krombeini* by ...

*Tachysphex krombeini* Kurczewski, 1971:111, ♂, ♀. Holotype: ♂, USA: Florida: Desoto County: Arcadia (USNM). – R. Bohart and Menke, 1976:274 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Kurczewski, 1987b:717 (nesting habits); Pulawski, 1988a:70 (in revision of Nearctic *Tachysphex*).

### 210. *krombeiniellus* Pulawski

*Tachysphex krombeiniellus* Pulawski, 1982b:41, ♀, ♂. Holotype: ♀, USA: Florida: Levy County: no specific locality (USNM). – Noonan, 1984:7 (2 paratypes in Milwaukee Public Museum); Pulawski, 1988a:181 (in revision of Nearctic *Tachysphex*).

### 211. *lacertosus* Arnold

*Tachysphex lacertosus* Arnold, 1944:25, ♀. Holotype: ♀, Zimbabwe: Kami (SAM). – R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:378 (in revision of African *Tachysphex*).

*Tachysphex arenarius* Arnold, 1947:149, ♂. Holotype: ♂, Zimbabwe: Bembesi (SAM). Synonymized with *Tachysphex lacertosus* by Pulawski, 2007a:378. – R. Bohart and Menke, 1976:272 (listed).

**212. *laevifrons* (F. Smith)**

*Larrada laevifrons* F. Smith, 1856:291, ♀. Holotype or syntypes: ♀, USA: Florida: Duval County: St. John's Bluff, now in Jacksonville (BMNH). – Cresson, 1862:237 (in catalog of North American Hymenoptera). – **As *Larra laevifrons***: Patton, 1881:389 (new combination, ...); Kohl, 1885a:245 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); Provancher, 1887:267 (description of ♂); W. Fox, 1894a:482 (unidentified species, original description copied); Dalla Torre, 1897:669 (in catalog of world Hymenoptera, as *levifrons*). – **As *Tachysphex laevifrons***: Ashmead, 1899d:250 (tentative new combination, in checklist of North American Crabronidae); nec Harrington, 1902:221 (= *Tachysphex acutus*); G. Bohart, 1951:951 (in catalog of North American Hymenoptera); Krombein, 1958c:188 (...); Kurczewski, 1966b:439 (...), 445 (...); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Kurczewski, 1971:114 (in key to Floridan species); R. Bohart and Menke, 1976:274 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Kurczewski, 1987b:717 (nesting habits); Pulawski, 1988a:56 (in revision of Nearctic *Tachysphex*); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Kurczewski, 2000c:114 (locality records from North and South Carolina), 117 (nest and prey).

*Tachysphex leensis* Rohwer, 1911b:578, ♀. Holotype: ♀, USA: Texas: Lee County: no specific locality (USNM). Synonymized with *Tachysphex laevifrons* by Pulawski in Krombein, 1979b:1628. – G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:274 (listed).

*Tachysphex consimiloides* F. Williams, 1914a:164, ♀. Holotype: ♀, USA: Kansas: Barton County: no specific locality (Kansas Univ.). Synonymized with *Tachysphex leensis* by G. Bohart in Muesebeck et al., 1951:951. – LaBerge, 1956:527 (holotype in Snow Entomological Museum); Arnaud, 1970:32.

**213. *lagunaensis* Tsuneki**

*Tachysphex lagunaensis* Tsuneki, 1983a:58, ♀, ♂ (*brullii* group). Holotype: ♂, Philippines: Luzon, Laguna Province: Pagsanjan (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1983a:68, 69 (in key); Krombein and Pulawski, 1994:83 (in revision of Sri Lankan *Tachysphex*; Laos, Thailand; type lost); Nuhn and Menke, 1994:27 (holotype not transferred to USNM, possibly returned to T. Tano, the collector); Menke, 1995:14 (type still in K. Tsuneki collection); Tano, 1995:45 (holotype in K. Tsuneki collection, as *lagunensis*); Hashimoto and Nakanishi, 1997:29 (holotype transferred to Hyogo Mus.).

**214. *lamellatus* Pulawski**

*Tachysphex lamellatus* Pulawski, 1982b:32, ♀, ♂. Holotype: ♂, Mexico: Sonora: Alamos (CAS). – Pulawski, 1988a:130 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**215. *laticauda* Gussakovskij**

*Tachysphex laticauda* Gussakovskij, 1933b:281, ♀. Lectotype: ♀, Iran: Kerman: Galinchah-Dakodo (ZIN), designated by Pulawski, 1971:432.–Gussakovskij, 1952:236 (Tajikistan, Turkmenistan; description of ♂); de Beaumont, 1970c:15 (Iran: Baluchistan); de Beaumont, Bytinski-Salz, and Pulawski, 1973:13 (Israel); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:114, 127 (in key to Sphecidae of Kazakhstan and Central Asia); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 158 (review of known biology), 2002a:70 (geographic distribution, collecting localities in Kazakhstan).

**216. *latifrons* Kohl**

*Tachysphex latifrons* Kohl, 1884a.:373, ♀. Syntypes: ♀, Turkey: Brussa, now Bursa (NHMW). – Kohl, 1885a:353 (in key to Palearctic *Tachysphex*), 381 (in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); de Beaumont, 1947c:667 (redescription), 668 (in key to Mediterranean species of *bicolor* group), 1957b:137 (n. Iran), 1965a:48 (Greece); Pulawski, 1965a:401 (Turkey); Kazenas, 1971:161 (in Kazakhstan found only in southeastern mountains); Pulawski, 1971:213 (in revision of Palearctic *Tachysphex*); Kazenas,

1972b:162 (Kazakhstan); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:118, 133 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Gorobchishin, 1994:21 (first record from Ukraine); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:256 (in Sphecidae Fauna of Western Europe); Kazenas, 2002a:70 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:269 (Turkey: Adiyaman: Nemrut dag near Karadut; Antalya: 10 km N Akseki); Yildirim and Ljubomirov, 2005:1796 (Turkey: Kars: Sarikamiş); T. Li, Li, and Cai, 2008:142 (first record from China); Ljubomirov and Yildirim, 2008:209 (in catalog of Crabronidae of Turkey).

*Tachysphex cyrenaicus* de Beaumont, 1947a:195, ♀. Holotype: ♀, Libya: Cyrenaica: no specific locality (NHMW). Synonymized with *Tachysphex latifrons* by Pulawski, 1971:213 and 216. – de Beaumont, 1947c:668 (in key to Mediterranean species of *bicolor* group), 1956a:198 (Libya; description of ♂); Dollfuss, 1989:13 (holotype in NHMW).

### 217. *limatus* Arnold

*Tachysphex limatus* Arnold, 1924:53, ♀. Holotype: ♀, South Africa: Cape Province: Willowmore (TMP). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:380 (in revision of African *Tachysphex*).

### 218. *lindbergi* de Beaumont

*Tachysphex lindbergi* de Beaumont, 1956d:3, ♀. Holotype: ♀, Cabo Verde Islands: Santo Antão: Chã de Morte (Zool. Mus. Helsinki). – Pulawski, 1971:166 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Erlandsson, 1978a:205 (Madeira); Simon Thomas and Wiering, 1993:404 (description of ♂); Smit, 2000:175 (Madeira); Pulawski, 2007a: 382 (in revision of African *Tachysphex*).

*Tachysphex* sp.: Groh, 1982:260 (Cape Verde Islands), corrected to *Tachysphex lindbergi* by Simon Thomas and Wiering, 1993:405.

### 219. *linsleyi* R. Bohart

*Tachysphex linsleyi* R. Bohart, 1962a:35, ♂, ♀. Holotype: ♂, USA: Nevada: Churchill County: 1 mi W Eastgate (CAS). – Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:274 (listed); Krombein, 1979:1931 (in catalog of North American Hymenoptera); Pulawski, 1988a:153 (in revision of Nearctic *Tachysphex*); Ruiz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Kurczewski, 2009:8 (review of known behavioral information), 81-86 (discussion of nesting behavior).

### 220. *liriformis* Pulawski

*Tachysphex liriformis* Pulawski, 1967a:395, ♀, ♂. Holotype: ♂, Tajikistan: Kondara 35 km N Dushanbe (ZIN). – Pulawski, 1971:309 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel). – R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:112, 125 (in key to Sphecidae of Kazakhstan and Central Asia); Dollfuss, 1989:13 (paratype in NHMW; as *tizifonnis*); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); Straka, 2005:271 (Turkey: Eskişehir: Sakariliica 30 km N Eskişehir; Kayseri: 140 km S Kayseri); Ljubomirov and Yildirim, 2008:210 (in catalog of Crabronidae of Turkey).

### 221. *longipalpis* de Beaumont

*Tachysphex longipalpis* de Beaumont, 1940b:166, ♀, ♂. Holotype: ♀, Egypt: Ghiza (originally A. Alfieri collection, now USNM). – Honoré, 1942:56 (listed); de Beaumont, 1947a:160 (in new revision of *Tachysphex* of Egypt); Pulawski, 1964:83 (Egypt: Ghiza), 1971:299 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:112, 125 (in key to Sphecidae of Kazakhstan and Central Asia); Nazarova, 1998:41 (Ta-

jikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); Pulawski, 2007a:385 (in revision of African *Tachysphex*).

**ssp. simplex Pulawski**

*Tachysphex longipalpis simplex* Pulawski, 1971:302, ♀, ♂. Holotype: ♂, Turkmenistan: Krasnovodsk (ZIN). Paratypes: Israel, Iran. – de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:387.

**222. longipes Pulawski**

*Tachysphex longipes* Pulawski, 2007a:388, ♀, ♂. Holotype: ♀, Namibia: Karibib District: 55 km SW Usakos (CAS).

**223. lucillus Pulawski**

*Tachysphex lucillus* Pulawski, 1971:281, ♀, ♂. Holotype: ♂, Turkmenistan: Repetek (ZIN). – R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:113, 125 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:70 (geographic distribution, collecting localities in Kazakhstan), 2008a:101 (Southeastern Kazakhstan: Ili River valley: 35 km N and 60 km E Chilik).

**224. luctuosus Arnold**

*Tachysphex Schönlandi* var. *luctuosus* Arnold, 1924:69, ♂. Holotype: ♂, South Africa: Cape Province: Willowmore (TMP). – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex schoenlandi luctuosus***: R. Bohart and Menke, 1976:276 (new status, listed). – **As *Tachysphex luctuosus***: Pulawski, 2007a:390 (full species status, in revision of African *Tachysphex*).

**225. luxuriosus Morice**

*Tachysphex luxuriosus* Morice, 1897:307, ♀. Holotype: ♀, Egypt: Koubbah near Cairo (OXUM). – de Beaumont, 1940b:167 (Egypt; revision; nec ♂ = *Tachysphex inextricabilis*); Honoré, 1942:56 (Egypt; listed); de Beaumont, 1947a:169 (in new revision of *Tachysphex* of Egypt; ♂ = *Tachysphex inextricabilis*), 1956a:197 (Libya), 1960b:238 (Libya); Pulawski, 1964:94 (Egypt; redescription; nec ♂ = *Tachysphex inextricabilis*); Osborn and Krombein, 1969:16 (nw Sudan: Gebel 'Uweinat: Wadi Ain el Brins); Pulawski, 1971:351 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); R. Bohart and Menke, 1976:274 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:393 (in revision of African *Tachysphex*).

As *Tachysphex horus* (♂ only): de Beaumont, 1940b:168 (in revision of *Tachysphex* of Egypt), 1947a:171 (in new revision of *Tachysphex* of Egypt), and 1956a:197 (Libya), corrected to *Tachysphex luxuriosus* by Pulawski, 1971:351.

*Tachysphex seth* Pulawski, 1964, ♀, ♂ (♀ = *Tachysphex inextricabilis*). Holotype: ♂: Egypt: Fayum Province: Kom Osheim (originally W. Pulawski coll, now CAS). Synonymized with *Tachysphex luxuriosus* by Pulawski, 1971:351.

**226. mackayensis R. Turner**

*Tachytes australis* de Saussure, 1867:68, ♂, junior primary homonym of *Tachytes australis* de Saussure, 1854. Lectotype: ♂, Australia: New South Wales: Sydney (NHMW), designated by Pulawski, 1977a:297. – de Saussure, 1869:57 (Australia: Cape York); Froggatt, 1892:218 (in catalog of Australian Hymenoptera); R. Turner, 1910a:348 (in key to Australian *Tachytes*, interpretation questionable). – **As *Tachysphex australis***: R. Bohart and Menke, 1976:272 (new combination, listed); R. Turner, 1916c:306 (new combination); Dollfuss, 1989:13 (lectotype in NHMW).

*Tachysphex mackayensis* R. Turner, 1908:487, ♀. Holotype: ♀, Australia: Queensland: Mackay (BMNH). Synonymized with *Tachytes australis* de Saussure, 1867, by Pulawski, 1977a:297. – R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:274 (listed); Evans, Matthews and Pulawski, 1976:442 (prey: juvenile *Ellipsoidion*, a

blattellid); Pulawski, 1977a:297 (in revision of Australian *Tachysphex*); Cardale, 1985:240 (in catalog of Australian Sphecidae); McCorquodale and Thomson, 1989:94 (Evans et al., 1976, cited); Pagliano, 2003a:508 (Australia: Northern Territory: Batchelor).

### 227. *maculipennis* Pulawski

*Tachysphex maculipennis* Pulawski, 1977a:324, ♀, ♂. Holotype: ♀, Australia: Western Australia: 13 mi NE Geraldton (ANIC); Cardale, 1985:240 (in catalog of Australian Sphecidae); Naumann, 1998:186 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E).

### 228. *magnaemontis* Hensen

*Tachysphex magnaemontis* Hensen in Hensen and Ooijen, 1987:13, ♀. Holotype: ♀, Turkey: Bursa: Mt. Uludag 30 km S Bursa (coll. R. V Hensen). – Straka, 2005:260 (reference to Hensen, 1987); Ljubomirov and Yildirim, 2008:211 (in catalog of Crabronidae of Turkey).

### 229. *malkovskii* Pulawski

*Tachysphex malkovskii* Pulawski, 1971:72, ♀, ♂. Holotype: Kazakhstan: Mangyshlak Peninsula: Kamysta 90 km E Tauchik (ZIN). – R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:120, 135 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:70 (geographic distribution, collecting localities in Kazakhstan).

### 230. *marshalli* R. Turner

*Tachysphex marshalli* R. Turner, 1917f:293, ♀, ♂. Syntypes: Zimbabwe: Salisbury, now Harare (BMNH). – Arnold, 1923a:149 (original description copied), 1930:2 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:274 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:395 (in revision of African *Tachysphex*).

*Schistosphex breijeri* Arnold, 1922:137, ♀. Holotype: ♀, South Africa: Kraaifontein [probably Kraaifontein in former Transvaal, locality of unknown location] (TMP). Synonymized with *Tachysphex marshalli* by Pulawski, 2007a:395. – Arnold, 1930:2 (in checklist of Afrotropical Sphecidae, as *Breyeri*). – **As *Tachysphex breijeri***: Menke in Bohart and Menke, 1976:271 (illustration of pygidial plate), 272 (new combination, listed).

*Tachysphex marshalli* var. *terrificus* Arnold, 1935a:497, ♀. Holotype: ♀, Botswana: Kaotwe (TMP). Synonymized with *Tachysphex marshalli* by Pulawski, 2007a:395– **As *Tachysphex marshalli terrificus***: R. Bohart and Menke, 1976:274 (new status, listed).

### 231. *mashona* Arnold

*Tachysphex Oberon* var. *mashona* Arnold, 1929c:387, ♀. Holotype: Zimbabwe: Penkrige (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex oberon mashona***: R. Bohart and Menke, 1976:275 (new status, listed). – **As *Tachysphex mashona***: Pulawski, 2007a:399 (full species status, in revision of African *Tachysphex*).

*Tachysphex Oberon* var. *halophilus* Arnold, 1940:120, ♀. Holotype: ♀, South Africa: Transvaal: Saltpan near Pretoria, now Tswaing (TMP). Synonymized with *Tachysphex mashona* by Pulawski, 2007a:399. – **As *Tachysphex oberon halophilus***: R. Bohart and Menke, 1976:275 (new status, listed).

### 232. *mauretanus* Pulawski

*Tachysphex mauretanus* Pulawski, 1971:366, ♀, ♂. Holotype: ♂, Morocco: Marrakech (LAUSANNE). – R. Bohart and Menke, 1976:274 (listed); Pulawski, 2007a:402 (in revision of African *Tachysphex*).

As *Tachysphex julliani* Kohl No. 2: de Beaumont, 1955a:182 (Morocco), synonymized with *Tachysphex mauretanus* by Pulawski, 1971:366.

**233. maurus Rohwer**

*Tachysphex maurus* Rohwer, 1911b:575, ♀, ♂. Lectotype: ♂, USA: Texas: Lee County: Fedor (USNM), designated by Pulawski, 1988a:177. – G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:274 (listed); Krombein, 1979b:1632 (in catalog of North American Hymenoptera); Pulawski, 1988a:177 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

**234. maximus Pulawski**

*Tachysphex maximus* Pulawski, 1977a:287, ♀, ♂. Holotype: ♀, Australia: New South Wales: 40 mi N Broken Hill (ANIC). – Cardale, 1985:241 (in catalog of Australian Sphecidae).

**235. maya Pulawski**

*Tachysphex maya* Pulawski, 1988a:186, ♀, ♂. Holotype: ♂, Mexico: Chiapas: Villa Flores (UCD). – Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**236. mediterraneus Kohl**

*Tachysphex mediterraneus* Kohl, 1883a:173, ♀ (as *mediterranea*, incorrect original termination). Lectotype: ♀, Italy: Sicilia: Valsavoja, now Lentini Diramazione (NHMW), designated by Dollfuss, 1989:13. – **As *Tachysphex mediterraneus***: Kohl, 1885a:350 (in key to Palearctic *Tachysphex*), 371 (new combination, in revision of Palearctic *Tachysphex*), 1893a:32 (Austria: Niederösterreich: Bisamberg, record not confirmed by subsequent authors); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ferton, 1901a:99 (Corsica, nest and prey); Adlerz, 1904:137 (known prey: *Oecanthus pellucens*, a gryllid); Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); Ferton, 1908:558 (Corsica, nest and prey); Mercet, 1910b:165 (listed from Spain); Morice, 1911:101 (Algeria: Philippeville, now Skikda); Ferton, 1912a:388 and 398 (Algeria: La Calle; nest and prey); Adlerz, 1916:110 (nesting habits); Ferton, 1923:86 (preying on *Oecanthus pellucens*, like *Isodontia splendidula*), 128 (nest, prey: *Oecanthus pellucens*, nest temporary closure prey paralyzing, orientation flights), 171 (nesting habits), 315 (nest and prey identical in Algeria and Corsica), 320 (preys exclusively on *Oecanthus pellucens*); Berland, 1925d:118 (in Sphecid Fauna of France); Grandi, 1930:316 (nesting habits, description of ♂) and 341 (Italy: Toscana: Maremma); E. Nielsen, 1933:293 (summary of nesting habits); Grandi, 1934:61 (nest entrance closed when the female goes hunting, prey: *Oecanthus pellucens* Scopoli), 129 (Italy), 1935:110 (Italy: Emilia-Romagna: Cervia); de Beaumont, 1936a:210 (in revision of French *Tachysphex*, description of ♂); Grandi, 1937:333 (Italy); Giner Marí, 1943:137 (in Sphecid Fauna of Spain); de Beaumont, 1947b:393 (Cyprus); de Andrade, 1949:15 (Portugal: Vale de Gaio); Pitoni, 1950:25 (Cyprus); de Beaumont, 1953a:175 (Mauritania), 1954a:58 (Italy), 1954e:91 (Italy); Grandi, 1954:239 (Italy); de Beaumont, 1955a:183 (Morocco); Bytinski-Salz, 1956:226 (Turkey: Kasaba); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Bajári, 1957a:50, 54 (in key to Hungarian Sphecidae), 1957b:135 (first record from Hungary: Szigetszentmiklós and Simontornyá); Nouvel and Ribaut, 1958:13 (France); Pulawski, 1958a:181 (Bulgaria: Aitos, mouth of Ropotamo River, Sandanski); Diniz, 1959:29 (Portugal: Vale de Gaio); de Beaumont, 1960a:18 (Greece: Rhodes Island); Grandi, 1961:199 (nesting habits); de Beaumont, 1962b:26 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 (Portugal: Carcavelos, Évora, Portimão, Troia, Vale de Gaio); Pulawski, 1964:95 (Egypt: Ghiza; diagnostic character); de Beaumont, 1965a:48 (Greece); Roberti, Frilli, and Pizzaghi, 1965:110 (Italy: Emilia-Romagna: Bobbio in Piacenza Province); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Pulawski, 1967a:401 (Turkey); Königsman, 1971:106 (Spain: Gerona: Palamós); Pulawski, 1971:255 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:272 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); Erlandsson, 1974:72 (Italy, Yugoslavia); R. Bohart and Menke, 1976:274

(listed); Georghiou, 1977:192 (Cyprus); Kazenas, 1978b:118, 127 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Pagliano, 1980:128 (Italy: Abruzzo); Gayubo, 1982a:103 (N Spain: Sierra de Béjar), 1982f:253 (Spain: Cádiz Province: Arcos de la Frontera, Puerto de Santa María, San Roque, Zahora); Dollfuss, 1983b:10 (in catalog of Sphecidae of Austria); Gayubo, 1984b:85 (Spain: Salamanca Province); Józán, 1985b:57 (recorded from Simontornya by Bajári, 1957), 83 (ecological and zoogeographic characteristics); Gayubo, 1986c:33 (Spain: Zamora Province); Gayubo and Sanza, 1986:46 (Spain: Burgos, Segovia); Gayubo and Tormos, 1986a:17 (Spain: Castellón de la Plana); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Asís and Jiménez, 1988:272 (Spain: Castellón Province); Dollfuss, 1988:12 (Austria: questionable record of Kohl, 1893); Gayubo and Mingo, 1988:80 (Spain); Dollfuss, 1989:13 (lectotype in NHMW); Pagliano, 1990:104 (in catalog of Italian Sphecidae); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:402 (Italy: Liguria, Lazio); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on *Platycleis* sp.); Negrisolo, 1991:318 (Italy: Venezia Province); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Gayubo and Borsato, 1994:208 (Italy: Toscana); Krombein and Pulawski, 1994:11 (summary of nesting habits), 41 (in revision of Sri Lankan *Tachysphex*); Tormos, Asís, and Gayubo, 1994:188, 205 (Spain: Albacete Province); Negrisolo, 1995a:23 (Italy: Veneto); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); Gayubo, González, and Torres, 2000:184 (Spain: Salamanca Province); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 158 (review of known biology); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); K. Schmidt and Bitsch *in* Bitsch et al., 2001:256 (in Sphecid Fauna of Western Europe); Shkuratov, 2001:17 (prey: *Oecanthus pellucens* Scop); Kazenas, 2002a:70 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Drewes, 2003:142 (Spain: no specific locality); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Pagliano, 2003b:131 (Italy: Island of Pantelleria); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:103 (Kazakhstan: western Tien Shan); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Pagliano and Negrisolo, 2005:374 (in Sphecid Fauna of Italy); Straka, 2005:270 (Turkey: Adana: 45 km N Adana, 48 km S Adana; Bursa: Kurşunlu; Kayseri: 7 km NW Develi); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Pulawski, 2007a: 404 (in revision of African *Tachysphex*); Shorenko, 2007b:258 (Ukraine: Crimea: Kerch); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:211 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

*Tachysphex collaris* Kohl, 1898b:100, ♀. Syntypes: ♀, Waboniland [= Kenya: Coast Province]: no specific locality (NHMW). Synonymized with *Tachysphex mediterraneus* by Pulawski *in* Krombein and Pulawski, 1994:41. – Arnold, 1923:175 (listed), 177 (original description translated into English), 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex mediterraneus collaris***: Pulawski, 1971:257 (new status); R. Bohart and Menke, 1976:274 (listed); Dollfuss, 1989:13 (type material in NHMW).

*Tachysphex lanatus* Arnold, 1947:151, ♀, ♂. Synonymized with *Tachysphex mediterraneus* by Pulawski *in* Krombein and Pulawski, 1994:41. Lectotype: Zambia: Abercorn, now Mbala (SAM), designated by Pulawski, 2007a:405. – R. Bohart and Menke, 1976:274 (listed).



**237. melanius Pulawski**

*Tachysphex argentifrons* Arnold, 1924:58, ♀ only.

*Tachysphex melanius* Pulawski, 2007a:409, ♀, ♂. Holotype: ♀, South Africa: Eastern Cape Province: Algoa Bay (TMP).

**238. melas Kohl**

*Tachysphex melas* Kohl, 1898b:100, ♀. Lectotype: ♀, Mongolia: Irkut (NHMW), designated by Pulawski, 1971:78. – Pulawski, 1971:76 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Kazenas, 1978b:119, 135 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218 (in key to Sphecidae of European part of former USSR); Nemkov, 1986:97 (Russia: Siberia: Irkutsk Oblast': Angarsk); Dollfuss, 1989:13 (lectotype in NHMW); Guichard, 1991a:339 (Jordan); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:410, 412 (in key to Sphecidae of Russian Far East); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:70 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Straka, 2005:260 (first record from Turkey: Adiyaman: Nemrut dag near Karadut); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia), 2009b:79 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

**ssp. eatoni E. Saunders**

*Tachysphex eatoni* E. Saunders, 1910:525, ♀. Holotype: ♀, Algeria: Biskra (BMNH). – Morice, 1911:102 (Algeria: Biskra). – **As *Tachysphex melas eatoni***: Pulawski, 1971:79 (new status, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:274 (listed).

**239. melas Pulawski (preoccupied)**

*Tachysphex melas* Pulawski, 2007a:409, ♀, ♂. Holotype: ♀, South Africa: Eastern Cape Province: Algoa Bay (TMP).

**240. mendozanus Brèthes**

*Tachysphex mendozanus* Brèthes, 1913:148, ♀, ♂. Syntypes: Argentina: Mendoza: Chacras de Coria (MACN). – Pulawski, 1974a:96 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:274 (listed); Genise, 1990:27 (type material in MACN); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**241. menkei Pulawski**

*Tachysphex menkei* Pulawski, 1982b:41, ♀, ♂. Holotype: ♀, USA: California: San Diego County: Borrego Valley (UCD). – Pulawski, 1988a:184 (in revision of Nearctic *Tachysphex*).

**242. mesembrius Pulawski**

*Tachysphex mesembrius* Pulawski, 2007a:412, ♀, ♂. Holotype: ♀, South Africa: Eastern Cape Province: Venterstad Region (SAM).

**243. micans (Radoszkowski)**

*Tachytes micans* Radoszkowski, 1877:29, ♀, ♂. Syntypes: Kazakhstan: Kyzil-Kum Desert (ZMMU). – Radoszkowski, 1886a:34 (male genitalia). – **As *Tachysphex micans***: Kohl, 1885a:396 (tentative new combination, original description copied), 1888a:143 (new combination, redescription); Radoszkowski, 1892:590 (reference to Radoszkowski, 1886); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); de Beaumont, 1936b:610 (redescription; specimens in Radoszkowski collection, Kraków), 1940b:164 (in revision of African *Tachysphex*), 1947a:159 (in new revision of *Tachysphex* of Egypt), 1955a:176 (Morocco), 1956a:196 (Libya); Grandi, 1957:389 (Libya: Tripolitania: Wadi Kaam); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River); Pulawski, 1964:83 (Egypt: Abu Rawash, Dahshur), 1971:282 (in revision of Palearctic *Tachysphex*); Myartseva, 1972a:79 (Turkmenistan); Tsuneki, 1972e:383 (Mongolia); R. Bohart and Menke, 1976:274 (listed); Kazenas,

1978b:112, 124 (in key to Sphecidae of Kazakhstan and Central Asia); Guichard, 1980:227 (Oman); Roche, 1981:2 (in checklist of Sphecidae of United Arab Emirates); Roche and Zalat, 1994:115 (Egypt: Sinai Peninsula); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on *Sphingonotus decorus* (Germ.) and *Leptopternis gracilis* (Ev.); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 158 (review of known biology), 2002a:71 (geographic distribution, collecting localities in Kazakhstan); Pulawski, 2007a:414 (in revision of African *Tachysphex*).

As *Tachysphex vestitus*: Maidl, 1924:236 (Sudan), corrected to *Tachysphex micans* by Pulawski, 1971:283.

#### 244. *miniatus* Arnold

*Tachysphex Panzeri* var. *miniatus* Arnold, 1924:70, ♀. Lectotype: ♀, Zimbabwe: Sawmills (SAM), designated by Pulawski, 2007a:418. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – As *Tachysphex miniatus*: Arnold, 1947:147 (new status, description of ♂); R. Bohart and Menke, 1976:275 (listed); Pulawski, 2007a:418 (in revision of African *Tachysphex*).

#### 245. *mirandus* Pulawski

*Tachysphex mirandus* Pulawski, 1982b:32, ♀, ♂. Holotype: ♀, California: San Bernardino County: Palm Springs (USNM). – Pulawski, 1988a:102 (in revision of Nearctic *Tachysphex*).

#### 246. *miwok* Pulawski

*Tachysphex miwok* Pulawski, 1988a:67, ♀, ♂. Holotype: ♂, USA: California: San Francisco County: San Francisco (CAS).

#### 247. *mkomazi* Pulawski

*Tachysphex mkomazi* Pulawski, 2007a:420, ♀, ♂. Holotype: ♀, Tanzania: Tanga Region: 2 km NE Mkomazi at 4°37.8'S 38°05.5'E (CAS).

#### 248. *mocsaryi* Kohl

*Tachysphex mocsaryi* Kohl, 1884a:367, ♀ (as *Mocsáryi*, incorrect original capitalization and diacritic mark). Syn-types: ♀, Hungary: no specific locality (NHMW). – Kohl, 1885a:351 (in key to Palearctic *Tachysphex*), 359 (in revision of Palearctic *Tachysphex*); Kohl and Handlirsch, 1889:278 (Turkmenistan); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Hungary); Schmiedeknecht, 1907:232 (in keys to Hymenoptera of Central Europe), 1930:693 (in keys to Hymenoptera of North and Central Europe); Gussakovskij, 1935:427 (Tajikistan: Gushary); de Beaumont, 1947c:664 (description of ♂), 1961b:275 (Afghanistan); Zavadil in Zavadil and Šnoflak, 1948:150 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Bajári, 1957a:52, 55 (in key to Hungarian Sphecidae); de Beaumont, 1962b:25 (Spain), 39 (comments); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Scobiola Palade, 1966b:392 (Romania: Tulcea District: C.A. Rosetti, Periprava; as *mócsaryi*); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Pulawski, 1967a:394 (Turkey); Scobiola-Palade, 1967a:161 (Romania: Constanța District: Canaraua Fetei), 1968b:142 (Romania: Island of Letea in delta of Danube); Pulawski, 1971:312 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:269 (in Sphecid Fauna of Czechoslovakia: may be expected in the country); Myartseva, 1972a:79 (Turkmenistan); Scobiola-Palade, 1972:150 (Romania: delta of Danube: Caraorman; as *mocsaryi*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); Scobiola-Palade, 1974:145 (Romania: Sărăturile sandbank in Danube delta); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:113, 126 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:214, 219 (in key to Sphecidae of European part of former USSR); Józán, 1983:99 (Hungary), 1985b:57 (Hungary S Lake Balaton), 83 (ecological and zoogeographic characteristics); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Islamov, 1986:527 (Uzbekistan: Tashkent Oblast'); Józán, 1986:370 (Hungary: Kiskunság National Park); Gayubo and Mingo, 1988:80 (Spain); Dollfuss, 1989:13 (lectotype in NHMW); Pádr in Šedivy, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Józán, 1992b:173 (Hungary: Boronka-melléki Pro-

ected Area), 1995:104 (Hungary: projected Duna-Dráva National Park); Ivanov and Ljubomirov, 2001:211 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:258 (in Sphecidae Fauna of Western Europe); Kazenas, 2002a:71 (geographic distribution, collecting localities in Kazakhstan), 2004b:103 (Kazakhstan: western Tien Shan); Ebrahimi, 2005:124 (in key to selected Iranian Sphecidae); Straka, 2005:271 (Turkey: Adiyaman: Nemrut dag); Yildirim and Ljubomirov, 2005:1796 (Turkey: Balıkesir: Ayvalık); Pulawski, 2007a:422 (in revision of African *Tachysphex*); Shorenko, 2007b:258 (Ukraine: Crimea: Feodosiya, Kerch); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia), 222 (does not occur in the area); Ljubomirov and Yildirim, 2008:212 (in catalog of Crabronidae of Turkey); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina).

*Tachysphex algirus* Kohl, 1892:215, ♀ (as *algira*, incorrect original termination). Holotype or syntypes: ♀, Algeria: Oran (NHMW). Synonymized with *Tachysphex mocsaryi* by Pulawski, 2007a:422. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Mercet, 1910b:165 (listed from Spain); nec de Beaumont, 1947c:664 (as *pygidialis* ssp. *algira* = *Tachysphex incertus kallipygus*); Ceballos, 1956:375 (in catalog of Hymenoptera of Spain); – **As *Tachysphex mocsaryi algirus***: Pulawski, 1971:315 (new status, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed).

*Tachysphex mocsaryi maroccanus* de Beaumont, 1947c:665, ♀, ♂ (as *maroccana*, incorrect original termination). Holotype: sex not indicated, Morocco: Mogador area (BMNH). Synonymized with *Tachysphex mocsaryi algirus* by Pulawski, 1971:315. – de Beaumont, 1950f:405 (Algeria), 1955a:178 (Morocco).

#### 249. *moczari* Tsuneki

*Tachysphex moczari* Tsuneki, 1972e:388, ♂. Holotype: ♂, Mongolia: Central Aymag: Tosgoni-ovoo N Ulan Baator (TMB). – R. Bohart and Menke, 1976:275 (listed); Nemkov *in* Nemkov, Kazenas, Budryš, et Antropov, 1995:412 (in key to Sphecidae of Russian Far East); T. Li, Li, and Cai, 2008:142 (description of ♀, first record from China); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia), 2009b:79 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

#### 250. *modestus* Arnold

*Tachysphex modestus* Arnold, 1924:61, ♀, ♂. Syntypes: Zimbabwe: Bulawayo; South Africa: Transvaal: Lichtenburg; Orange Free State: Bothaville; Cape Province: Algoa Bay (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:275 (listed); Gess, 1981:17 (South Africa; nesting in modified preexisting cavity), 54 (nesting in preexisting cavities is probably facultative); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:426 (in revision of African *Tachysphex*).

*Tachysphex punctiventris* Arnold, 1924:65, ♂. Holotype: ♀, Zimbabwe: Bulawayo or Filabusi (SAM). Synonymized with *Tachysphex modestus* by Pulawski, 2007a:426. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae), 1947:150 (description of ♀); R. Bohart and Menke, 1976:276 (listed).

*Tachysphex dicksoni* Arnold, 1962:849, ♀. Holotype: ♀, South Africa: Cape Province: Cape Town: Lions Head (SAM). Synonymized with *Tachysphex modestus* by Pulawski, 2007a:426. – R. Bohart and Menke, 1976:273 (listed).

#### 251. *montanus* (Cresson)

*Larrada montana* Cresson, 1865b:465, ♀. Lectotype: ♀, USA: Colorado: no specific locality (ANSP), designated by Cresson, 1916:96. – Cresson, 1876:208 (Colorado: Plains). – **As *Larra montana***: Patton, 1881:389 (new combination, ...); Kohl, 1885a:246 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado). – **As *Tachysphex montanus***: W. Fox, 1894a:523 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); G. Bohart *in* Muese-

beck et al., 1951:951 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Horning and Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); R. Bohart and Menke, 1976:275 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera); Pulawski, 1988a:25 (in revision of Nearctic *Tachysphex*).

*Tachysphex inusitatus* W. Fox, 1894a:524, ♂. Holotype: ♂, USA: Colorado: no specific locality (ANSP). Synonymized with *Tachysphex montanus* by G. Bohart in Muesebeck et al., 1951:951. – Dalla Torre, 1897:680 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cresson, 1928:45 (holotype in ANSP).

*Tachysphex compactus* W. Fox, 1894a:528, ♂. Holotype: ♂, Canada: British Columbia: Vancouver (ANSP). Synonymized with *Tachysphex montanus* by G. Bohart in Muesebeck et al., 1951:951. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); nec Harrington, 1902:221 (= *Tachysphex pompiliformis*); Cresson, 1928:44 (holotype in ANSP). – **As *Hoplilus compactus* [sic]**: Ashmead, 1899:328 (new combination, in checklist of North American Crabronidae).

*Tachysphex triquetrus* W. Fox, 1894a:528, ♀. Holotype: ♀, USA: Nevada: no specific locality (ANSP). Synonymized with *Tachysphex montanus* by Pulawski in Krombein, 1979b:1628. – Dalla Torre, 1897:686 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae, as *triquetrus*); Cresson, 1928:46 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:953 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:277 (listed).

### 252. *montivagus* Arnold

*Tachysphex georgii* race *montivagus* Arnold, 1944:26, ♀. Holotype: ♀, Lesotho: Mamathes (SAM). – **As *Tachysphex georgii montivagus***: R. Bohart and Menke, 1976:274 (new status, listed). – **As *Tachysphex montivagus***: Pulawski, 2007a:430 (full species status, in revision of African *Tachysphex*).

### 253. *morawitzi* Pulawski

*Tachysphex morawitzi* Pulawski, 1971:86, ♀, ♂. Holotype: ♂, Tajikistan: Khrebet Petra Velikogo (ZIN). Paratypes: Tajikistan: Pamir and Kazakhstan: Tien Shan Mts. – Kazenas, 1971:161 (in Kazakhstan found only in southeastern mountains, an endemic of Tien Shan Range), 1972b:162 (Kazakhstan); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:119, 134 (in key to Sphecidae of Kazakhstan and Central Asia); Islamov, 1986:527 (Uzbekistan: Tashkent Oblast'); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:71 (geographic distribution, collecting localities in Kazakhstan); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Yildirim and Ljubomirov, 2005:1796 (first record from Turkey: Bayburt, Erzincan, and Erzurum provinces); Ljubomirov and Yildirim, 2008:212 (in catalog of Crabronidae of Turkey).

### 254. *morosus* (F. Smith)

*Tachytes morosus* F. Smith, 1858b:18, ♀. Holotype or syntypes: Indonesia: Sulawesi: no specific locality (BMNH). – Maindron, 1879:179 (nesting habits); Dalla Torre, 1897:691 (in catalog of world Hymenoptera); Rudow, 1912:46 (description of nest). – **As *Tachysphex morosus***: R. Bohart and Menke, 1976:275 (new combination, listed); Krombein and Pulawski, 1994:9 (nesting habits), 22 (in revision of Sri Lankan *Tachysphex*); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

*Tachysphex tinclipennis* Cameron, 1904f:301, ♀. Holotype: ♀, India: Assam: Khasia Hills (OXUM). Synonymized with *Tachysphex morosus* by Pulawski in Krombein and Pulawski, 1994:24. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897); Pulawski, 1975a:311 (interpretation of the species); R. Bohart and Menke, 1976:277 (listed); Tsuneki, 1977j:269 (Taiwan; as *Tachysphex nigricolor tinclipennis*, new status), 1983a:64 (Philippines; redescription; as full species), 68 (in key).

*Tachysphex lihyuetanus* Tsuneki, 1971h:15, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Lihyuetan (originally K. Tsuneki coll., now USNM). Synonymized with *Tachysphex tinclipennis* by Tsuneki, 1983a:64. – Nuhn and

Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:9 (in checklist of Sphecidae of Taiwan).

As *Tachysphex bengalensis*: Bingham, 1897:193 (revision; India, Burma), corrected by R. Turner, 1917e:198; F. Williams, 1928a:92 (Philippines, revision), corrected to *Tachysphex tinctipennis* by Pulawski, 1975a:311, and authors who followed F. Williams's interpretation: Krombein, 1949b:382 in key to Micronesian Sphecidae, 393 (Mariana and Caroline Islands); Iwata and Yoshikawa, 1961:399 (Thailand); Tsuneki, 1963c:7 (Thailand; redescription); Iwata, 1964:369 (nesting habits in Thailand), 1965:107 (number of oocytes); Baltazar, 1966:329 (in catalog of Hymenoptera of Philippines); Tsuneki, 1967b:49 (Taiwan; *japonicus* regarded as junior synonym), 1976b:54 (Philippines; as *bengalensis bengalensis*); Haneda, 1971b:30 (Taiwan); Ohl and Linde, 2003:150 (number of ovarioles); Li and He, 2004:1100 (in hymenopterous fauna of Zhejiang Province, China).

As *Tachysphex bituberculatus*: Weber, 1948:203 (introduced to Hawaii), corrected to *Tachysphex bengalensis* by Krombein, 1949b:393; Yoshimoto, 1960:331 (Hawaiian Islands: Oahu).

### **ssp. *titidzimaensis* Tsuneki**

*Tachysphex tinctipennis titidzimaensis* Tsuneki, 1984a:4, ♂, ♀. Holotype: ♂, Ogasawara (= Bonin) Islands: Chichidzima: Mount Chuoh (originally K. Tsuneki coll., now Hyogo Mus.). – Tano, 1994a:5 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.).

### **255. *multifasciatus* Pulawski**

*Tachysphex multifasciatus* Pulawski in Evans, Matthews and Pulawski, 1976:443, ♀, ♂. Holotype: ♂, Australia: Queensland: Mt. Isa (ANIC). – Pulawski, 1977a:318 (in revision of Australian *Tachysphex*); Cardale, 1985:241 (in catalog of Australian Sphecidae).

### **256. *mundus* W. Fox**

*Tachysphex exsectus* W. Fox, 1894a:526, ♀, ♂. Lectotype: ♀, USA: Montana: no specific locality (ANSP), designated by Cresson, 1928:44. Synonymized with *Tachysphex mundus* by Pulawski in Krombein, 1979b:1632. – Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae, as *excatus*); G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:273 (listed); Hilchie, 1982:106 (prey of *Philanthus albopilosus*). – As *Tachysphex mundus exsectus*: Elliott and Kurczewski, 1985:296 (prey).

*Tachysphex mundus* W. Fox, 1894a:531, ♀, ♂. Lectotype: ♀, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1928:45. – Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); H. Smith, 1908:380 (in revision of Nebraskan Sphecidae); Stevens, 1917:422 (North Dakota: Bismarck); Mickel, 1918:424 (in catalog of Nebraskan Sphecidae); Robertson, 1928:121, 128, 135; G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:275 (listed); Krombein, 1979b:1632 (in catalog of North American Hymenoptera); Kurczewski, 1979:641 (nesting habits); Pulawski, 1988a:169 (in revision of Nearctic *Tachysphex*); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Amarante, 2005a:10 (correction to his 2002 catalog).

*Tachysphex johnsoni* Rohwer, 1911b:573, ♀. Holotype: ♀, USA: Colorado: Washington County: Cope (USNM). Synonymized with *Tachysphex aequalis* by G. Bohart in Muesebeck et al., 1951:950, and with *Tachysphex mundus* by Pulawski in Krombein, 1979b:1632. – G. Bohart, 1951:950 (as synonym of *Tachysphex aequalis*).

**257. *musciiventris* Pulawski**

*Tachysphex musciiventris* Pulawski, 1982:33, ♀, ♂. Holotype: ♀, USA: California: San Diego County: Borrego (UCD). – Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:88 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**258. *mycerinus* de Beaumont**

*Tachysphex mycerinus* de Beaumont, 1940b:166, ♀, ♂. Holotype: ♀, Egypt: Cairo (Ministry of Agriculture of Egypt). – Honoré, 1942:297 (listed); de Beaumont, 1947a:166 (in new revision of *Tachysphex* of Egypt), 1955a:176 (Morocco); Pulawski, 1964:88 (Egypt: Dahshur, Ghiza, Maadi, Kom Osheim), 1971:297 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Roche, 1981:2 (in checklist of Sphecidae of United Arab Emirates); Pulawski, 2007a:432 (in revision of African *Tachysphex*).

**259. *mzingeli* Pulawski**

*Tachysphex mzingeli* Pulawski, 2007a:435, ♀, ♂. Holotype: ♂, Zimbabwe, Bulawayo airport at 20°00'S 28°38'E (CAS). Paratypes: Botswana, Namibia, South Africa, Tanzania.

**260. *namaqua* Pulawski**

*Tachysphex namaqua* Pulawski, 2007a:437, ♀, ♂. Holotype: ♀, South Africa: Western Cape Province: Knersvlakte (SAM).

**261. *naranhun* Tsuneki**

*Tachysphex naranhun* Tsuneki, 1971m:29, ♂. Holotype: ♂, Inner Mongolia: Apaka (originally K. Tsuneki coll., now USNM). – R. Bohart and Menke, 1976:275 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM).

**262. *nasalis* F. Morawitz**

*Tachysphex nasalis* F. Morawitz, 1893c:412, ♂. Holotype: ♂, Tajikistan: Yagnob River valley: Shakh-sara (ZIN). – Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Pulawski, 1971:84 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:119, 133 (in key to Sphecidae of Kazakhstan and Central Asia); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:71 (geographic distribution, collecting localities in Kazakhstan), 2008a:101 (Southeastern Kazakhstan: near Sarkand in foothills of Dzhungarian Alatau); Ljubomirov and Yildirim, 2008:212 (in catalog of Crabronidae of Turkey).

*Tachysphex mongolicus* Kohl, 1898b:99, ♀. Holotype: ♀, n. Mongolia: no specific locality (NHMW). Synonymized with *Tachysphex nasalis* by Pulawski, 1971:84. – Pulawski, 1967a:403 (Turkey).

*Tachysphex abditus* Kohl, 1898b:101, ♀. Holotype: ♀, n. Mongolia: no specific locality. Synonymized with *Tachysphex nasalis* by Pulawski, 1971:84.

**263. *nefarius* Pulawski**

*Tachysphex nefarius* Pulawski, 1977a:327, ♀. Holotype: ♀, Australia: Queensland: Biggenden (ANIC). – Cardale, 1985:241 (in catalog of Australian Sphecidae).

**264. *nigerrimus* (F. Smith)**

*Tachytes nigerrimus* F. Smith, 1856:302, ♀ (referring to White and Butler MS name *Larra nigerrima*). Holotype or syntypes: ♀, New Zealand: no specific locality (BMNH). – White and Butler, 1874:27 and plate 7 (here as *Astata nigerrima*); Hutton, 1881:102 (...); W.F. Kirby, 1881a:40 (in checklist of Hymenoptera of New Zealand), 1884b:69 (in checklist of Hymenoptera of New Zealand); Dalla Torre, 1897:692 (in catalog of world Hymenoptera); Hutton, 1904:98 (...); W. Schulz, 1906:212 (correction to Dalla Torre: F. Smith is the author of the name); Miller, 1955:35 (preys on cockroaches); Gourlay, 1964:49 (prey: *Cutilia truncata* Brunn., a cockroach). – As *Tachysphex nigerrimus*: R. Turner, 1908:491 (new combination); Gourlay, 1930:7 (preys upon *Cutilia truncata* Brunner von Wattenwyl, a blattid, now in *Calolampra*); Hudson, 1950:57 (...); Valentine, 1967:1146 (...; as *nigerrimus*); Miller, 1971:26 (...); R. Bohart and Menke, 1976:275 (listed); Ferro et al., 1977:20, 24 (common

name in New Zealand: black cockroach hunter); Pulawski, 1977a:308 (New Zealand; revision); Callan, 1979:34 (New Zealand; review of available information; prey: *Celatoblatta peninsularis* Johns); Miller, 1984:26 (...); Valentine and Walker, 1991:40 (in catalog of New Zealand Hymenoptera); Harris, 1994:28 (in Fauna of New Zealand, nest and prey).

*Tachytes sericops* F. Smith, 1856:302, "♀" = ♂. Holotype or syntypes: ♂, New Zealand: Auckland (BMNH). Synonymized with *Tachysphex nigerrimus* by Pulawski, 1975a:311. – Hutton, 1881:103 (...); W.F. Kirby, 1881a:40 (in checklist of Hymenoptera of New Zealand), 1884b:69 (in checklist of Hymenoptera of New Zealand); Cameron, 1898a:46 (New Zealand: Greymouth), 1901e:220 (known from New Zealand). – **As *Tachysphex sericops***: Kohl, 1885:401 (new combination, listed); Dalla Torre, 1897:694 (in catalog of world Hymenoptera).

*Tachytes depressus* de Saussure, 1867:69, ♀. Holotype or syntypes: ♀, New Zealand: no specific locality (NHMW). Synonymized with *Tachysphex nigerrimus* by Pulawski, 1975a:311. – W.F. Kirby, 1881a:40 (in checklist of Hymenoptera of New Zealand), 1884b:69 (in checklist of Hymenoptera of New Zealand); Cameron, 1898a:46 (New Zealand: Greymouth); Hutton, 1904:98 (...); Dollfuss, 1989:13 (holotype in NHMW). – **As *Tachysphex depressus***: Kohl, 1885:401 (new combination, listed); Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Kirkaldy, 1910:131 (*depressus* is a species of *Tachysphex*).

*Tachytes helmsi* Cameron, 1888b:182, ♀ (as *Helmsi*, incorrect original capitalization). Holotype or syntypes: ♀, New Zealand: Greymouth (depository?). Synonymized with *Tachysphex nigerrimus* by Pulawski, 1975a:311. – Cameron, 1898:46 (New Zealand: Greymouth). – **As *Tachysphex helmsi***: Dalla Torre, 1897:680 (new combination, in catalog of world Hymenoptera); Kirkaldy, 1910:131 (*helmsi* is a species of *Tachysphex*).

### 265. *nigricolor* (Dalla Torre)

*Larrada nigricans* F. Smith, 1873:192, sex not indicated, junior primary homonym of *Larrada nigricans* Walker, 1871. Lectotype: ♀, Japan: Nagasaki (BMNH), designated by Pulawski, 1975a:310. – **As *Larra nigricans***: Kohl, 1885a:246 (new combination, in checklist of world *Larra*), 260 (original description copied).

*Larra nigricolor* Dalla Torre, 1897:670. Substitute name for *Larrada nigricans* F. Smith, 1873. – **As *Tachysphex nigricolor***: Pulawski, 1975a:310 (new combination, discussion of species identity); R. Bohart and Menke, 1976:275 (listed); Tsuneki, 1977c:22 (Taiwan); Kazenas, 1980e:89 (Russia: Primorskiy Krai; first record from Soviet Union; as *nigrilor*); Tsuneki, 1982b:15 (known from Korea), 1982f:46 (Okinawa), 1982g:60 (known from the Ryukyu archipelago), 1983a:64-67 (taxonomy), 68 (in key), 1984a:4 (Ogasawara = Bonin Islands); Nemkov, 1992b:245 (Russia: Far East: Khingan Nature Reserve); Takahashi 1993:3 (Japan: Hachijo-Jima Island); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:410 (in key to Sphecidae of Russian Far East); Porter, Stange, and Wang, 1999:9 (in checklist of Sphecidae of Taiwan); Yamane, Ikudome, and Terayama, 1999:517 (in Identification Guide to Crabronidae of Nansei = Ryukyu Islands, Japan); Haneda, 2003:4 (Japan: Nagasaki Prefecture: Tsushima, as *nigricolor nigricolor*); Haneda and Tano, 2003:11 (Japan: Nagasaki Prefecture: Tsushima, as *nigricolor nigricolor*); Kurokawa, 2003:61 (Japan: city of Fukui: Egamichou, as *nigricolor nigricolor*); Tano, Kurokawa, Murota, and Nozaka, 2003:31 (Japan: Nagasaki Prefecture: Tsushima, as *nigricolor nigricolor*); Ohl and Linde, 2003:151 (number of ovarioles); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:32 (Japan: Gifu Prefecture, as *nigricolor nigricolor*); Suda, 2004:40 (Japan: Yamanashi Prefecture, as *nigricolor nigricolor*); Haneda, Inoue, Nozaka, Tano, Kurokawa, and H. and T. Murota, 2005:64 (Japan: Fukui Prefecture: Mount Monju, as *nigricolor nigricolor*); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:47 (Japan: Gifu Prefecture, as *nigricolor nigricolor*); Negoro, Haneda, and Tano, 2005:46 (Japan: Toyama Prefecture, as *nigricolor nigricolor*); Haneda, Nozaka, Tano, Kurokawa and Murota, 2006:22 (Japan: Toyama Prefecture, as *nigricolor nigricolor*); Hua, 2006:282 (in list of Chinese insects, geographic distribution); Haneda, Nozaka, Tano, Kurokawa, Murota, and Murota, 2007:53 (Japan: Kagoshima Prefecture: Amami Oshima Islands); Nemkov, 2007b:70 (Russia: Kuril Islands: Kunashir Island); Ohkusa, 2007:34 (Japan: central Honshu: Aichi Prefecture, as *nigricolor ni-*

*nigricolor*); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia), 2009b:79 (in new catalog of Spheciidae and Crabronidae of Asiatic Russia), 2009c:237 (Russia: Primorskiy Kray: Lazovsky Nature Reserve).

*Tachysphex japonicus* Iwata, 1933c:47, ♀, ♂. Holotype: ♀, Japan: Honshu: Ikeda, Settsu (Entomol. Lab. Kyoto Imper. Univ.). Synonymized with *Tachysphex nigricolor* by Pulawski, 1975a:311. – Sibuya, 1933:51 (nesting habits); Tsuneki, 1948d:52 (nesting habits); Yasumatsu, 1950, Iconogr. Ins. Japonic.: 1476 (Japan); Miyamoto, 1959:33 (visiting flowers of *Gallium verum* L., Rubiaceae), 34 (visiting flowers of *Torilis anthriscus* Gmel., Apiaceae); Tsuneki, 1962a:4 (Ryukyu Islands: Amami Oshima Islands); Tsuneki and Shimoyama, 1963:48 (Japan: Towada Prefecture); Tano, 1964:38 (Japan: Kyushu: Yakushima Island); Tsuneki, 1964l:63 (key), 1966g:14 (Okinawa), 1967b:49 (*Tachysphex japonicus* is a synonym of *bengalensis*); Haneda, 1968a:43 (Japan); Itami, 1968a:15 (Japan: Yamagata Prefecture: foot of Mount Iide); Pulawski, 1971:162 (in revision of Palearctic *Tachysphex*). – **As *Tachysphex bengalensis japonicus***: Tsuneki, 1967b:52 (new status, redescription), 53 (new combination); Haneda, 1968b:55 (Japan: Nagano Prefecture: Ina District); Itami, 1969:48 (Japan: Niigata Prefecture); Tsuneki, 1969c:4 (nesting habits), 1969k:64 (Japan: Mount Hyonoson), 1971h:12 (Taiwan; geographic variation), 1971m:29 (China: Peking); Yamada, 1971:35 (Japan: Aichi Prefecture); Haneda, 1972a:4 (Taiwan); Murota, 1973a:102 (Ryukyu Islands: Amami Oshima Islands), 1973b:118 (Taiwan); Suda, 1973:121 (Japan: Yamanashi Prefecture); Tsuneki, 1973a:7 (Ryukyu Islands; distribution); Nambu, 1973d:150 (Japan: Saitama Prefecture), 1975b:62 (Japan: Saitama Prefecture).

As *Tachysphex bengalensis*: Yasumatsu, 1940b:97 (Botel Tobago), corrected to *Tachysphex nigricolor* by Tsuneki, 1983a:67; Tsuneki, 1967...49 (...), corrected to *Tachysphex japonicus* by Pulawski, 1971:162.

#### **spp. lanhsuensis Tsuneki**

*Tachysphex nigricolor lanhsuensis* Tsuneki, 1977c:6, ♀. Holotype: ♀: Taiwan: Lan-Hsu Island: Hungtou (originally K. Tsuneki coll., now Hyogo Mus.). – Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

#### **spp. yaeyamanus Tsuneki**

*Tachysphex bengalensis yaeyamanus* Tsuneki, 1971h:20, ♀, ♂. Holotype: ♂, Ryukyu Islands: Ishigaki Island: Mt. Banna (originally K. Tsuneki coll., now USNM). – Tano, 1972:24 (Japan: Ryukyu Islands, as *bengalensis yaeyamanus*); R. Bohart and Menke, 1976:272 (listed), 628 (the subspecies should be transferred to *Tachysphex tinctipennis*); Nuhn and Menke, 1994:26 (holotype transferred to USNM). – **As *Tachysphex nigricolor yaeyamanus***: Tsuneki, 1982e:28 (new subspecific combination, Ryukyu Islands: Iriomote Island), 1982f:47 (Ryukyu Islands: Ishigaki Island), 1982g:60 (known from the Ryukyu archipelago).

#### **266. niloticus Pulawski**

*Tachysphex niloticus* Pulawski, 1964:90, ♀, ♂. Holotype: ♂, Egypt: Abu Rawash NW Cairo (originally W. Pulawski coll., now CAS). – Pulawski, 1971:348 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Pulawski, 2007a:439 (in revision of African *Tachysphex*).

#### **267. nitidior de Beaumont**

*Tachysphex nitidus* variété C de Beaumont, 1936a:207 (in revision of French *Tachysphex*), 1936c:8 (specimen in coll. A. Costa).

*Tachysphex nitidior* de Beaumont, 1940:175, ♀, ♂. Syntypes: Egypt: Wadi Hoff near Cairo (coll. A. Mochi, now?), Ezbet el Nakhl (coll. A. Alfieri, now?). – de Beaumont, 1947a:199 (in new revision of *Tachysphex* of Egypt), 1950d:20 (Egypt: Siwa oasis), 1953b:15 (*Tachysphex nitidus* forme C is synonym of *nitidior*), 1954a:59 (Italy), 1954e:91 (Italy); Grandi, 1954:239 (Italy); de Beaumont, 1955a:184 (Morocco); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer area); Pulawski, 1958a:181 (Bulgaria: Aitos); de Beaumont, 1959a:28 (Italy); Suárez, 1959:58 (Spain: Almería Province); de Beaumont, 1960a:18 (Greece: Rhodes Island), 1960b:239 (Libya), 1961c:50 (Greece: Crete Island), 1962b:26



(Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:77 (in Sphecid Fauna of Switzerland); Diniz, 1964a:6 (Portugal: Cascais, Évora, Lisboa, Rezende); de Beaumont, 1965a:50 (Greece); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Heinrich, 1967:75 (Germany: Bayern: Kahl, Karlstadt, and Miltenberg; as *nitidor*); Pulawski, 1967a:405 (Turkey), 1971:167 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:276 (in Sphecid Fauna of Czechoslovakia: can be expected in the country); Tsuneki, 1972e:393 (Mongolia); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); Erlandsson, 1974:72 (Italy, Malta); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:122, 131 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Pagliano, 1980:127 (Italy: Piemonte); Gayubo, 1982a:103 (N Spain: Sierra de Béjar), 1984b:85 (Spain: Salamanca Province), 1984c:365 (Portugal: El Algarve Province), 1986c:33 (Spain: Zamora Province); Gayubo and Sanza, 1986:46 (Spain: Burgos); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Gayubo and Mingo, 1988:80 (Spain); Gayubo, Asís, and Tormos, 1990a:18 (Spain); Pagliano, 1990:104 (in catalog of Italian Sphecidae); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Schembri, 1991:180 (Malta); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Gayubo and Borsato, 1994:208 (Italy: Veneto); Tormos, Asís, and Gayubo, 1994:188, 205 (Spain: Albacete Province); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Schmidt and Schmid-Egger, 1997:29 (the only German record by J. Heinrich, 1967, and Pulawski, 1971, is questionable); K. Weber, 1998:151 (the only record from Germany is a misidentification of *obscuripennis*); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); Ljubomirov, 1999b:50 (Bulgaria: Mt. Vitosha near Sofia); Blösch, 2000:229 (in Sphecid Fauna of Germany); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Ivanov and Ljubomirov, 2001:212 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001:29 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Ohl et al., 2001:142 (recorded from Germany but not occurring there); K. Schmidt and Bitsch *in* Bitsch et al., 2001:259 (in Sphecid Fauna of Western Europe); Kazenas, 2002a:72 (geographic distribution, collecting localities in Kazakhstan); Gayubo, Özbek, and Yildirim, 2003:89 (Turkey: Erzurum: University campus; Kars: Sarıkamış; Tokat: Tokat); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 occurrence in Bayern, Germany, not confirmed); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:451 (Bulgaria: Banya near Hissarya); Pagliano and Negrisoló, 2005:378 (in Sphecid Fauna of Italy); Straka, 2005:260 (Turkey: Bitlis: Bitlis; Gaziantep: Gaziantep; Kayzeri: Develi); Yildirim and Ljubomirov, 2005:1797 (Turkey: Erzurum: Olur, Şenkaya, Tortum); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Baños-Picón, Gayubo, Asís, and González, 2007a:256, 258 (Spain: Zamora: Cabañas de Aliste); Jacobs, 2007:96, 101 (in key to Crabronidae of Germany, not yet found in Germany); Kazenas, 2007a:91 (Kazakhstan: Akkala Oblast': Kur-gandzhin Nature Reserve and vicinity); Pulawski, 2007a:441 (in revision of African *Tachysphex*); Yildirim and Ljubomirov, 2007:120 (Turkey: Erzurum: Oltu); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:213 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina).

**268. nitidissimus de Beaumont**

As *Tachysphex* No. 11: de Beaumont, 1940b:176, corrected to *Tachysphex nitidissimus* by Pulawski, 1971:154.

As *Tachysphex* No. 14: de Beaumont, 1940b:177, corrected to *Tachysphex nitidissimus* by Pulawski, 1971:154.

*Tachysphex nitidissimus* de Beaumont, 1952c:192, ♀, ♂. Holotype: ♂, Algeria: Hoggar: Idjef Méléne near Hirhafok (Lausanne). – de Beaumont, 1958b:62 (Algeria: Tassili des Ajjer); Pulawski, 1964:95 (Egypt: Maadi, Sinai Peninsula: Oasis Feiran); de Beaumont, 1965a:49 (Greece; diagnostic characters); Pulawski, 1967a:405 (Turkey), 1971:154 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:121, 131 (in key to Sphecidae of Kazakhstan and Central Asia); Guichard, 1980:228 (Oman), 1991a:339 (Jordan); Roche and Zalat, 1994:115 (Egypt: Sinai Peninsula); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch in Bitsch et al., 2001:259 (in Sphecid Fauna of Western Europe); Kazenas, 2002a:72 (geographic distribution, collecting localities in Kazakhstan); Gayubo, Özbek, and Yildirim, 2003:89 (Turkey: Erzurum: Tortum); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Straka, 2005:260 (Turkey: many localities); Yildirim and Ljubomirov, 2005:1797 (Turkey: Erzincan); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Pulawski, 2007a:446 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:213 (in catalog of Crabronidae of Turkey).

*Tachysphex consocius mookonis* Tsuneki, 1972e:392, ♀. Holotype: ♀, Mongolia: Hovd Aymag: 45 km NNE Somon Bulgan (TMB). Synonymized with *Tachysphex nitidissimus* by Pulawski in Krombein and Pulawski, 1994:28. – R. Bohart and Menke, 1976:273 (listed).

**269. nitidus (Spinola)**

*Astata nitida* Spinola, 1805:17, sex not indicated. Lectotype: ♀, Italy: Liguria: no specific locality (Turin), designated by de Beaumont, 1952e:43. – Spinola, 1806:18 (revision). – **As *Tachytes nitidus***: Spinola, 1808:76 (new combination); Vander Linden, 1829:26 (bibliographic references, Italy: Liguria, interpretation of species); Aurivillius, 1904:266 (in revision of Swedish Sphecidae); Jansson, 1922:24 (Sweden: Öland Island); Friese, 1926:162 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Roller, 1936:315 (Austria: loess cliffs at Bisamberg near Vienna). – **As *Larrada nitida***: F. Smith, 1856:275 (new combination, in catalog of Hymenoptera in British Museum); Taschenberg, 1870:2 (Portugal); Dours, 1874:140 (in catalog of Hymenoptera of France); Girard, 1879:954 (example of *Larrada*). – **As *Larra nitida***: Casolari and Casolari Moreno, 1980:112 (new combination, specimens in M. Spinola collection, Torino). – **As *Tachysphex nitidus***: Kohl, 1885a:350 (new combination, in key to Palearctic *Tachysphex*), 372 (new combination, in revision of Palearctic *Tachysphex*); Gasperini, 1887:15 (Dalmatia: Spalato, now Croatia: Split); Kohl and Handlirsch, 1889:278 (Turkmenistan: Tahta-Bazar); Alfken, 1893:120 (Germany: Friesian Islands: Juist Island); Kohl, 1893a:32 (Austria: Niederösterreich); F. Morawitz, 1893a:111 (Russia: Karelian Isthmus), 1893b:410 (Tajikistan: Turush-Darya Pass); Krieger, 1894:11 (Germany: Kingdom of Saxony); Borries, 1897:67 (citation of Kohl, 1885:373); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Kingdom of Hungary, some localities are in today's Croatia); de Cobelli, 1903:111 (Italy: Province of Trentino; Rovereto: Trento Levico); E. Saunders, 1904c:603 (Spain: Mayorca); W. Schulz, 1904b:102 (Austria); Kubes, 1905:85 (Czech Republic: Kolín); Mantero, 1905:73 (Italy: Toscana: Isola del Giglio); Mortimer, 1905:261 (Great Britain: Wales: Aberdovey); Vángel, 1905:166 (Hungary); Móczár and Henter, 1907:205 (Hungary: Tiszaalpár); Schmiedeknecht, 1907:231, 233 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (listed from Spain); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Mantero, 1911:74 (Italy: Sardegna: Isola dell'Asinara); Schirmer, 1912:167 (Germany: Berlin area); Kohl, 1913b:15 (Russia: Voronezh Oblast: Valuyki at 50°14'N 38°08'E); Alfken, 1914:281 (NW Germany); Dusmet, 1915:87 (Spain: Aragón); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); Łoziński, 1920:121 (Poland: Kraków); Strand, 1920:14 (Germany: Mecklenburg-Vorpommern:

Rostock); A. Wagner, 1920:39 (Germany: Lower Elbe region); Maidl, 1922:70 (Croatia); Alfken, 1924:425 (Germany: Memmert Island); Chevalier, 1924c:73 (nesting habits); Berland, 1925d:117 (in Sphecidae Fauna of France); Bischoff, 1925:301 (Latvia: Wezkukkul; Poland: Garbacz near Białowieża); Coulon, 1925:121 (France: Evreux; Spain); K. Strohm, 1925:211 (Germany: Baden-Württemberg: Kaiserstuhl), 1926:74 (reference to Lauterborn, 1925); Carpentier, Crèvecoeur, and Maréchal, 1926:353 (Belgium: Loën); Hémon, 1926:199 (France: Finistère: Fouesnant); von Schulthess, 1926b:214 (Tunisia); Grandi, 1927:204 (nesting habits); Benoist, 1928:409 (France: Basses-Alpes: Barcelonnette); Bouwman, 1928b:26 (in revision of Sphecidae of Netherlands); A. Müller, 1930:181 (Jaila in former Dubrudsha or Bessarabia, may be in Ukraine, Moldova, or Rumania); Schmiedeknecht, 1930:693, 695 (in keys to Hymenoptera of North and Central Europe); Dusmet y Alonso, 1931:7 (Portugal: Évora); Grandi, 1931:57 (Italy: Toscana: Vallata delle Pozze near Le Mandriole); Bondroit, 1932:37 (Belgium: Solbosch); Bernard, 1933:62 (France: Drôme: Dieulefit); Masi, 1933:196 (Italy: Toscana: Isola di Capraia, as *nitidulus*); E. Nielsen, 1933:294 (summary of nesting habits); Giner Mari, 1934:133 (Spain); Guiglia, 1934b:304 (Libya: bibliography and summary of locality records); nec Gussakovskij, 1934a:10 (= *Tachysphex angustatus*); Jansson, 1934:290 (Sweden); Nadig, 1934:32 (France: Corse: Ajaccio, Bastia, Cap Corse); Bernard, 1935:64 (France: Var: Fréjus area); Forsius in Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Gussakovskij, 1935:427 (Tajikistan: Kulab); Richards, 1935a:163 (*Tachysphex unicolor* of British authors is synonymized with *nitidus* by continental authors); Vergne, 1935:118 (France: Auvergne: Ambert, Les Martres-d'Artières, Lezoux); Drogoszewski, 1936:130 (Poland: Łowicz); Dulac, 1937:13 (France: Saône-et-Loire: Saint-Laurent d'Andenay); Struve, 1937:150 (Germany: Island of Borkum); Zavadil, Šusterka, and Ba'a, 1937:201 (in catalog of Sphecidae of Czechoslovakia); nec Gussakovskij, 1938:7 (= *Tachysphex tarsinus*); Móczár, 1938c:80 (Hungary: Kőszeg Hills); Molitor, 1938:445 (color recognition); Guichard, 1938:72 (Great Britain: Norfolk coast); A. Wagner, 1938a:122 (northwestern Germany); Móczár, 1939:4 (Hungary: Jászberény); de Graham, 1941:99 (Great Britain: Lincolnshire); Schneid, 1941:1044 (Germany: Bayern: Bamberg area); Alfken, 1942:231 (Germany: Niedersachsen: Lüneburger Heide); Audcent, 1942:25 (parasite: *Sphecapata conica* Fallén); Yasumatsu, 1942c:112 (China: Nei Mongol: Apaka at 44°N 114.96°E); Boyd, 1943:162 (Great Britain: eastern Dorset); Móczár, 1943a:58 (Hungary: Nagykörös, as *nitidulus*); Spooner, 1943:70 (Great Britain: Ilesington near Dorchester); Ba'a, 1944b:91 (Czech Republic: Veselí); Móczár, 1947b:90 (Hungary: Siebenbürgen: Gyimesbükk, now Romania: Transylvania: Ghimeș-Făget); Balthasar, 1948:142 (Slovakia: Kovačov, Parkan); Zavadil in Zavadil and Šnoflak, 1948:149, 151 (in key to Sphecidae of Czechoslovakia); Chambers, 1949:223 (Great Britain: Bedfordshire); Cavro, 1950:35 (France: Département du Nord); Szulczewski, 1950:108 (Poland: Wielkopolski National Park 15 km S Poznań); Caruel, 1951:100 (France: Marne Department); Cleu, 1953:50 (France: Ardèche River basin); Nouvel and Ribaut, 1953:179 (France: Haute-Garonne: Saint-Béat); Hertzog, 1954:101 (France: Bouches-du-Rhône: Camargue); Macko and Noskiewicz, 1954:180 (Poland: Dolny Śląsk: Stolec at 50°35'N 16°53'E); Teschner, 1955:57 (Germany: Nordrhein-Westfalen: Hohe Ward near Münster); Vogrin, 1955:37 (Yugoslavia); Bytinski-Salz, 1956:226 (Turkey: Ulu Dagħ); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales); Bajári, 1957a:51 (in key to Hungarian Sphecidae); Zirngiebl, 1957:183 (Germany: Rheinland-Pfalz: Birkenheide, Landau, Leisstadt); Benno, 1958b:11 (in review of Dutch Sphecidae); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Noskiewicz and Puławski, 1960:124, 125 (in key to Polish Sphecidae); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Evans, 1968c:119 (discussion of larval descriptions by Grandi); Hoop, 1961:66 (Germany: Schleswig-Holstein: Reher Kratt); Valkeila, 1962b:66 (southwestern Finland); Hoop, 1963a:73 (Germany: Schleswig-Holstein: Reher Kratt); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River); Babiy, 1964:114 (Austria: not found in Land Salzburg); de Beaumont, 1964c:76 (in Sphecidae Fauna of Switzerland); Diniz, 1964a:6 (Portugal: fifteen localities); Valkeila, Brander, and Käpylä, 1964:75 (Finland: Southern Finland: Forssa); Bonelli, 1966c:218 (Italy: Trentino-Alto Adige: Piazzöl); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg); Hoop, 1967a:39 (Germany:

Schleswig-Holstein: Lehmrade, Sarnekow); Benedek, 1969b:421 (Hungary: Csopak, collected in vicinity of aphid *Hyalopteritena pruni* (Geoffroy)); Bonelli, 1969b:168 (nesting habits); Lefeber, 1969c:233 (Netherlands: St. Pietersberg = Montagne Saint Pierre); Romanova, 1969:134 (Russia: North Caucasus); Babiý, 1970:19 (Austria: Land Salzburg); Gauss and Perraudin, 1970:360 (Germany: Baden-Württemberg: Bodensee area); Hoop, 1970:60 (Germany: Schleswig-Holstein: Heidkate, Krusendorf, Pelzerhaken, Weißenhaus, Wendtorfer sluice); Leclercq, 1970c:map 32 (distribution in Belgium); Oehlke, 1970:713 (Democratic Germany); Valetta, 1971:46 (Malta); Balthasar, 1972:270 (in Sphecida Fauna of Czechoslovakia); Haeseler, 1972:155, 200 (Germany: Schleswig-Holstein; anthropogenic habitats); Simon Thomas, 1974:57 (Netherlands: Limburg); R. Bohart and Menke, 1976:275 (listed); Eck, 1976:91 (Democratic Germany); Lomholdt, 1976:250 (in Sphecida Fauna of Fennoscandia and Denmark); Simon Thomas and Wiering, 1976:109 (Netherlands); Haeseler, 1976b:72 (Germany: Friesian Islands: Amrum Island); Schmidt, 1977/78:55 (Germany); Guichard, 1978:271 (Greece); Haeseler, 1978c:195 (Germany: Friesian Islands: Borkum Island); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Schwammberger, 1978:417 (Germany: Württemberg); Lefeber, 1979:11 (in checklist of Sphecidae of Netherlands), 71 (Netherlands: distribution map); Schwammberger, 1979:115 (Germany: Nordrhein-Westfalen: Gildehauser Venn Nature Reserve); Guichard, 1980:227 (Oman); Pagliano, 1980:128 (Italy: Lazio); Petit, 1980:43 (Luxemburg: Grevenmacher); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Haeseler, 1981:52 (Germany: Friesian Island: Amrum Island); Axelsson, 1982:79 (Sweden); Skibińska, 1982:123 (Poland: Warszawa area); Dollfuss, 1983b:10 (in catalog of Sphecidae of Austria); Józán, 1983:99 (Hungary); Lefeber, 1983a:84 (Netherlands: Waddendistrict: northern coast sand dunes); Riemann, 1983:85 (Germany: Bremen-Daverden area); Haack, Tschardtke, and Vidal, 1984:133 (Germany: Hamburg area); Janzon and Svensson, 1984:183 (Sweden: Öland Island); Veenendaal, 1984:19 (Netherlands: Amsterdam); Haeseler, 1985c:571 (Germany: Friesian Islands); Józán, 1985a:181 (Hungary), 1985b:57 (Hungary S Lake Balaton), 78 (floral records), 83 (ecological and zoogeographic characteristics); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Westrich and Schmidt, 1985b:112 (Germany: endangered in Baden-Württemberg); Józán, 1986:370 (Hungary: Kiskunság National Park); Vikberg, 1986:76 (Finland); Lomholdt, 1987:93 (Denmark: western Jutland: Skallingen Peninsula); Riemann, 1987b:44 (Germany: Niedersachsen: Nature Reserves Dünengebiet near Neumühlen and Voßberge); Schmidt and Westrich, 1987:364 (Germany: Mainz area); Chevin, 1988:15 (France: La Manche Department); Dollfuss, 1988:12, 24 (Austria: Bisamberg near Vienna; Niederösterreich: Oberweiden); Haeseler, 1988:211 (Germany: Friesian Islands); Karsai, 1988:100 (Hungary: Kiskunság National Park); Nilsson, 1988:98 (Sweden); Kowalczyk, 1988b:65 (Poland: environs of Łódź); Riemann, 1988:223 (Germany: Bremen area); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Al-Houty, 1989:164 (Kuwait: Abdelli, Umm Al-Rumam, Jal Al-Zor); Jacobs, 1989:12 (Germany: Mecklenburg-Vorpommern); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Scobiola-Palade, 1989:87 (Romania: delta of Danube); Skibińska, 1989b:291 (Poland: moist meadow in Warszawa area); Jacobs and Oehlke, 1990:127 (in key); Jacobs and Oehlke, 1990:164 (new records from Democratic Germany); Kowalczyk, 1990:291 (Poland: Góry Świętokrzyskie); Pádr, 1990:74 (Czech Republic: Praha area); Pagliano, 1990:104 (in catalog of Italian Sphecidae); von der Heide and Witt, 1990:64 (Germany: Niedersachsen); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:106 (in key to Sphecidae of North and Central Europe); Jacobs, 1991:46 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtaldünen); Józán, 1991:603 (Hungary: Bátorliget Nature Reserve); Kowalczyk, 1991a:99, 102 (Poland: Łódź); Kuhlmann et al., 1991:92 (Germany: Senne Region); Negrisolo, 1991:318 (Italy: Gorizia and Trieste Provinces); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Józán, 1992a:229 (Hungary: Béda-Karapanca Protected Area), 1992b:173 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Kuhlmann, 1993:76 (Germany: known from Westfalen); Luig, 1993:44 (Estonia); Józán, 1993:413 (Hungary: Bükk National Park); Negrisolo and Pagliano, 1993:94 (Italy: Sardegna); Wiśniowski, 1993a:97 (Poland: in checklist of Sphecidae of Białowieża Primeval Forest); Blagoveshchenskaya, 1994:87 (Rus-

sia: Ul'yyanovsk Oblast'); Roche and Zalat, 1994:115 (Egypt: Sinai Peninsula); Theunert, 1994c:51 (summary of records from Niedersachsen and Bremen, Germany); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Gorobchishin, 1995:17 (Ukraine: Kanev Nature Reserve); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Scharrer, 1995:24 (Germany: Bayern: Kahl); Schmid-Egger, Risch, and Niehuis, 1995:211 (summary of records from Germany: Rheinland-Pfalz Province); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Jakubzik, 1996:253 (Germany: Köln); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Woydak, 1996:38 (Germany: Westfalen: summary of distribution and nesting habits); Celary, 1997:58 (in checklist of Animals of Poland); Hinrichsen and Saure, 1997:32 (recognition characters); Petit, 1997:351 (Belgium: Liège Province: Lanaye: colonization of new habitat); Schmidt and Schmid-Egger, 1997:30 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km WSW Hamburg); Flügel, 1998:61 (Germany: Brandenburg: Unteres Odertal National Park); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Petit, 1998b:260 (Bassenge, Lanaye); van der Smissen, 1998:69 (Germany: Mecklenburg-Vorpommern, Niedersachsen, Schleswig-Holstein); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); Archer, 1999a:9 (Great Britain: Lancashire); Herrmann, 1999:7 (Germany: Niedersachsen: Oldenburg area; habitats size); Kuhlmann, Wolf, and Woydak, 1999:569 (strongly endangered in Nordrhein-Westfalen State of Germany); Pauly, 1999:109 (in catalog of Belgian aculeates); Wickl, 1999a:108 (Germany: Bayern: Oberpfalz area); Blösch, 2000:229 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Jacobs, 2000:12 (Germany: Land Mecklenburg-Vorpommern: not endangered); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch *in* Bitsch et al., 2001:261 (in Sphecidae Fauna of Western Europe); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Szczepko and Kowalczyk, 2001:188 (Poland: Kampinos National Park near Warszawa); Zettel, Gross, and Mazzucco, 2001:72 (Austria: Wien); Archer, 2002b:111 (Great Britain: Watsonian Yorkshire: distribution map); Archer and Edwards, 2002:102 (Great Britain: West Sussex: Ambersham and Iping commons); Kazenas, 2002a:72 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:153 (Poland: Kampinos National Park near Warszawa); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Shlyakhtenok and Skibinska, 2002:33 (Belarus': no specific locality); Esser and Jakubzik, 2003:291 (Germany: Nordrhein-Westfalen: Niederrheinisches Tiefland); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Haeseler, 2003:340 (Germany: Niedersachsen: Harriersand Island near Bremen); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:196 (Germany: Bayern: endangered); Abenius, 2004:40 (Sweden: Norrbottens: Luleå area); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Nazarova, 2004:106 (Tajikistan: Badakhshan Region: villages Langar and Sebzor in Shakh dara River valley); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Szczepko and Kowalczyk, 2004:126 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Pagliano and Negrisoló, 2005:379 (in Sphecidae Fauna of Italy); Reder, 2005:954 (Germany: Rheinland-Pfalz: Eisenberg, Monsheim); Riemann and Hohmann, 2005:566 (Germany: Niedersachsen: city of Bremen and adjacent area); Shorenko, 2005a:164 (Ukraine: Crimea); Theunert, 2005a:18 (Germany: in

checklist of Sphecidae of Niedersachsen and Bremen); Archer, 2007a:151 (Great Britain: Norfolk: Thetford Warren Lodge), 2007d:152 (Great Britain: Watsonian Yorkshire); Jacobs, 2007:97, 100 (in key to Crabronidae of Germany); Kowalczyk and Nadolski, 1007:284 (Łódź: railway areas); Pulawski, 2007a:449 (in revision of African *Tachysphex*); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia, known only from Bohemia and Moravia), 222 (Bohemia: Srni near Česká Lipa, Moravia: Bzenec); Archer, 2008a:144 (Great Britain: Cumbria: North Walney Nature Reserve and Sandscale Haws); Danilov and Tshernyshev, 2008:43 (Russia: Novosibirsk Oblast: Karasuk area); Haeseler, 2008:309 (Germany: Friesian Islands); Ljubomirov, 2008:256 (Locality records from La Palma, Canary Islands); Ljubomirov and Yildirim, 2008:214 (in catalog of Crabronidae of Turkey); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: rare).

*Tachytes ibericus* de Saussure, 1867:68, ♀. Holotype or syntypes: ♀, Gibraltar (NHMW). Synonymized with *Tachysphex nitidus* by Kohl, 1885:372. – Kazenas, 1978b:121, 122, 132 (in key to Sphecidae of Kazakhstan and Central Asia). – **As *Tachysphex nitidus ibericus***: Pulawski, 1972:817 (new status); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); R. Bohart and Menke, 1976:275 (listed); Báez and Ortega, 1978:192 (Canary Islands); Wolf, 1980:73 (Canary Islands); Hohmann, La Roche, Ortega, and Barquín, 1993:234 (detailed locality records from Canary Islands); K. Schmidt and Bitsch *in* Bitsch et al., 2001:262 (in Sphecid Fauna of Western Europe).

Nec *Tachysphex nitidus* of following authors (= *Tachysphex unicolor*): Sickmann, 1893:84; Antiga and Bofill, 1904:10 (in catalog of Catalonian Hymenoptera); Morice, 1911:102; Birula, 1912:543; Dubois, 1921:208, 209; Lauterborn, 1925:355; Carpentier, Crèvecoeur and Maréchal, 1926:353; Grandi, 1928a:21, 1928d:300; Giordani Soika, 1932a:22; Guiglia, 1932d:474; Bischoff, 1933:4; Nadig, 1933:79; Giner Mari, 1934:133; Grandi, 1935a:110; Crèvecoeur and Maréchal, 1936:252; de Beaumont, 1936a:205 and 206 (*Tachysphex nitidus* variété A), 1936c:8, 1940b:175; Goebel, 1937:42; Guiglia, 1941c:166; Leclercq, 1941b:12; Guiglia, 1942:60; Giner Mari, 1943a:136; Giordani Soika, 1944:9; Guiglia, 1944b:25; de Beaumont, 1947a:197 (in new revision of *Tachysphex* of Egypt); Guiglia, 1948c:201; de Andrade, 1949:14; de Beaumont, 1950f:404 (Algeria), 1951h:33, 1953b:15; Móczár, 1953:310; Bischoff and Stadler, 1954:126; de Beaumont, 1954a:58, 1954e:91; Grandi, 1954:239; Aerts, 1955:63; de Beaumont, 1955a:183; Steiner, 1955:138; Bytinski-Salz, 1956:226; de Beaumont, 1956a:199; Grandi, 1957:389; Pulawski, 1958a:181; Compte Sart, 1959:133; de Beaumont, 1959a:28; Suárez, 1959:57; Wolf, 1959b:24; de Beaumont, 1960b:239, 1962b:26; Erlandsson, 1963:66; Richards, 1964:25; Fæster, 1965:192; B. Klug, 1965:132; de Beaumont, 1966:212; Scobiola-Palade, 1966b:392; J. Heinrich, 1967:75; Niedl and Deneš, 1967:81; Pulawski, 1967a:405; Scobiola-Palade, 1967b:42; de Beaumont, 1968a:262; Scobiola-Palade, 1968b:142, 1968c:384; Benedek, 1969a:84 (Hungary; marshy meadow); Dathe, 1969:439; de Beaumont, 1970a:401; Leclercq, 1970; Grandi, 1971:202, 503; Königsmann, 1971:107; Pulawski, 1971:139; Schmidt, 1971b:36; Tsuneki, 1971m:31; Wolf, 1971:374; Scobiola-Palade, 1972:150; Tsuneki, 1972e:392; Simon Thomas, 1972:182; de Beaumont, Bytinski-Salz, and Pulawski, 1973:8; Wolf, 1973:41; Erlandsson, 1974:72; Scobiola-Palade, 1974:145; Simon Thomas, 1976:5; Kolesnikov, 1977:318; Báez and Ortega, 1978:192; Kazenas, 1978b:121, 132; Marion, 1978:88; Schembri, 1991:180.

As *Larra unicolor*: Dahlbom, 1832:55, corrected to *Tachysphex ibericus borealis* by Pulawski, 1971:148; Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino), present correction.

As *Tachytes unicolor* (corrected to *Tachysphex ibericus borealis* by Pulawski, 1971:148 if not indicated otherwise): Shuckard, 1837a:90 (in revision of British Aculeata); F. Smith, 1849b:2550 (preying on grasshoppers); Wissmann, 1849:12 (Germany: Kingdom of Hannover: Hedemünden and Münden); Wesmael, 1952:84 (Belgium, correction to Dahlbom's description); F. Smith, 1856:297 (in catalog of Hymenoptera in British Museum), 1857a:34 (Great Britain); Schenck, 1861:143 (Germany: Hessen: Weiburg); Brischke, 1862:100 (Germany: Prussen Province, now Poland: Pomorze Region); Taschenberg, 1866:201 (in revision of Hymenoptera of Germany), 1870:12 (Germany: Halle); Thomson, 1870:242 (in revision of Swedish wasps) and, 1874:220 (in revision of Hymenoptera of

Scandinavia), present correction based on geographic distribution; Sickmann, 1883:86 (Germany: Niedersachsen: Wellingholthausen), present correction based on geographic distribution; Nevinson, 1900:62 (Great Britain: Wales: Criccieth, Towyn), present correction based on geographic distribution; Carr, 1901:15 (Great Britain: Lincolnshire: Skegness); Thornley, 1901b:63 (Great Britain: Lincolnshire: Skegness); R. Bradley, 1902:267 (Great Britain: North Wales); E. Saunders, 1902b:143 (Great Britain: Jersey Island); E. Saunders, 1907a:67 (Great Britain: Porthcawl); Hallett, 1912:94 (Great Britain: Glamorgan County), present correction based on geographic distribution. – **As *Tachysphex unicolor***: Morice, 1900c:210 (new combination, Great Britain: Surrey: Cobham); E. Saunders, 1903b:17 (Great Britain: North Wales); Adlerz, 1904:44 (nesting habits); Luff, 1907:39 (Great Britain: Island of Guernsey); Bouwman, 1916:205 (nesting habits); Hallett, 1916:221 (Great Britain: South Wales: Porthcawl), present correction based on geographic origin; Spooner, 1934:278 (Great Britain: Devon: Braunton Burrows, present correction based on geographic distribution); Hallett, 1939:17 (Great Britain: Wales: no specific locality), present correction based on geographic origin; Richards, 1979:397 (British Channel Islands); Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino), present correction.

As *Tachysphex filicornis*: Heldmann, 1953:112 (Germany: Hessen: Eberstädter Düne near Darmstadt), corrected to *Tachysphex nitidus* by Schmidt, 1969:164.

*Tachysphex ibericus borealis* Pulawski, 1971:148, ♀, ♂. Holotype: ♀, Netherlands: Norwijk a. Z. (RMNH). Synonymized with *Tachysphex nitidus* by Pulawski, 1972:817. – Lomholdt, 1972:122 (Denmark: Læsø Island); Oehlke, 1972:136 (Germany: Hiddensee Island); Oehlke and Wudowenz, 1974:421 (paratypes in DEI); Lomholdt, 1975b:31 (Denmark: Anholt Island).

As *Tachysphex* sp. aff. *nitidus*: de Beaumont, 1968a:263 (Canary Islands: Fuertaventura), corrected to *Tachysphex ibericus* by Pulawski, 1971:147.

### 270. *noar* Pulawski

*Tachysphex noar* Pulawski in Krombein and Pulawski, 1994:68, ♀, ♂. Holotype: ♀, Sri Lanka: Mannar District: 0.8 km NE Kokmotte in Wilpattu National Park (USNM).

### 271. *nonakai* Tsuneki

*Tachysphex nonakai* Tsuneki, 1971m:23, ♀. Holotype: ♀, China: Inner Mongolia: Apaka (originally K. Tsuneki coll., now USNM). – R. Bohart and Menke, 1976:275 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Hua, 2006:283 (in list of Chinese insects, geographic distribution).

### 272. *notogoniaeformis* Nadig

*Tachysphex notogoniaeformis* Nadig, 1933:80, ♂. Holotype: ♂, Morocco: Tizi n'Tichka (originally coll. Nadig, now ZURICH). – de Beaumont, 1947c:662 (redescription), 1950f:405 (Algeria), 1955a:178 (description of female, Morocco); Pulawski, 1971:307 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Pulawski, 2007a:452 (in revision of African *Tachysphex*).

### 273. *novarae* (de Saussure)

*Tachytes novarae* de Saussure, 1867:69, ♀. Holotype or syntypes: ♀ India: Nicobar Islands: Nonkonis (NHMW). – Cameron, 1889c:135 (generic assignment uncertain). – **As *Tachysphex novarae***: Kohl, 1885:405 (new combination); R. Bohart and Menke, 1976:275 (listed); Tsuneki, 1976b:54 (Philippines; redescription); Pulawski, 1977a:300 (in revision of Australian *Tachysphex*); Tsuneki, 1982a:34 (Bismarck Archipelago), 1983a:56 (Philippines; redescription), 68, 69 (in key), 1983c:41 (New Guinea: Kwaransan, Berlin-Hafen); Cardale, 1985:241 (in catalog of Australian Sphecidae); Dollfuss, 1989:13 (holotype in NHMW; as *novarri*); Naumann, 1993:186 (Australia: Queensland: Heathlands area in Cape York).

As *Tachysphex* sp. ? : F. Williams, 1936:128 (...), corrected to *Tachysphex novarae* by Pulawski, 1977a:300.

**274. *oasicola* Pulawski**

*Tachysphex oasicola* Pulawski, 1988a:113, ♀, ♂. Holotype: ♂, USA: New Mexico: Roosevelt County: Oasis State Park (CAS).

**275. *oberon* Arnold**

*Tachysphex oberon* Arnold, 1923a:161, ♀ (as *Oberon*, incorrect original capitalization). Holotype: ♀, Zimbabwe: Sawmills (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:275 (listed); Pulawski, 2007a:454 (in revision of African *Tachysphex*).

**276. *obscuripennis* (Schenck)**

*Tachytes obscuripennis* Schenck, 1857:190, ♂. Holotype: ♂, Germany: Mombach (Mus. Wiesbaden). – Kirchner, 1867:216 (in catalog of European Hymenoptera); Schenck, 1867a:356 (Germany: Nassau Region); W. Schulz, 1911a:68 (type not found in Zool. Mus. Marburg Univ.); Schmidt, 1971a:62 (study of type). – **As *Tachysphex obscuripennis***: Kohl, 1885a:396 (tentative new combination, original description copied); Leclercq, 1970c:map 33 (distribution in Belgium); Oehlke, 1970:713 (Democratic Germany); Pulawski, 1971:223 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:35 (Germany: Mainz area); Balthasar, 1972:266 (in Sphecidae Fauna of Czechoslovakia); R. Bohart and Menke, 1976:275 (listed); Leclercq, Gaspar, Lajoinie, and Thirion, 1976:178 (Belgium: Chaumont-Gistoux); Lomholdt, 1976:246 (in Sphecidae Fauna of Fennoscandia and Denmark); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Benedek, 1979:231 (Hungary: Bakony Hills: Hódos-ér); Lefeber, 1979:12 (in checklist of Sphecidae of Netherlands), 72 (Netherlands: distribution map); Richards, 1979:397 (British Channel Islands); Pagliano, 1980:127 (Italy: Piemonte); Richards, 1980:43, 44 (in key to Sphecidae of British Isles); Gayubo, 1982a:105 (N Spain: Sierra de Béjar), 1982f:253 (Spain: Cádiz Province: San Roque); Dollfuss, 1983a:76 (endangered in Niederösterreich, Austria), 77 (endangered in Burgenland, Austria), 78 (endangered in Oberösterreich, Austria), 80 (endangered in Steiermark, Austria), 80 (endangered in Tirol, Austria), 1983b:10 (in catalog of Sphecidae of Austria); Józán, 1983:99 (Hungary); Lefeber, 1983a:84 (Netherlands: Waddendistrict: northern coast sand dunes); Riemann, 1983:84 (Germany: Bremen-Daverden area); Gayubo, 1984b:85 (Spain: Salamanca Province); Gayubo and Tormos, 1984:15 (Spain: Valencia); Haack, Tscharncke, and Vidal, 1984:133 (Germany: Hamburg area); Schmidt and Westrich, 1984:240 (Germany: Rheinland-Pfalz: Bad Münster); Chevin and Chevin, 1985:39 (France: Aude); Józán, 1985a:181 (Hungary), 1985b:57 (Hungary S Lake Balaton), 78 (floral records), 83 (ecological and zoogeographic characteristics); Nilsson, 1985:43 (Sweden); Riemann, 1985:22 (Germany: Niedersachsen); Brechtel, 1986:60 (Germany: Südpfalz: Lauterwiesen, Sandbuckel); Gayubo and Sanza, 1986:47 (Spain: Segovia; as *obscuripennis obscuripennis*); Józán, 1986:370 (Hungary: Kiskunság National Park); Vikberg, 1986:76 (Finland); Riemann, 1987b:44 (Germany: Niedersachsen: Nature Reserves Dünengebiet near Neumühlen and Voßberge); Schmidt and Westrich, 1987:364 (Germany: Mainz area); Chevin, 1988:15 (France: La Manche Department); Dollfuss, 1988:12 (Austria: Bisamberg); Nilsson, 1988:98 (Sweden); Gayubo and Mingo, 1988:80 (Spain, as *obscuripennis obscuripennis*); Karsai, 1988:100 (Hungary: Kiskunság National Park); Riemann, 1988:223 (Germany: Bremen area); Jacobs, 1989:12 (Germany: Mecklenburg-Vorpommern); Pádr in Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus: Berezinskiy Nature Reserve); Jacobs and Oehlke, 1990:165 (new records from Democratic Germany); Pádr, 1990:74 (Czech Republic: Praha area); Pagliano, 1990:105 (in catalog of Italian Sphecidae); Schwammbeger and Priesner, 1990:539 (Austria: Kärnten); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:107 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:402 (Italy: Emilia, Sicilia); Jacobs, 1991:46 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtaldünen); Kowalczyk, 1991b:120 (Poland: Augustów Forest); H.-J. Schulz, 1991:30 (Germany: Oberlausitz: 5 km SW Wittichenau); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Kuhlmann, 1993:76 (Germany: recorded from Westfalen



by Teschner, 1955); Luig, 1993:44 (Estonia); Archer, 1994b:104 (British Channel Islands); Dollfuss, 1994:102 (endangered in Austria); Gayubo and Borsato, 1994:208 (Italy: Toscana); Kowalczyk, 1994:74 (Poland: Łągiewniki forest in Łódź); Theunert, 1994c:51 (summary of records from Niedersachsen and Bremen, Germany); Tormos, Asís, and Gayubo, 1994:188, 205 (Spain: Albacete Province); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Negrisoló, 1995a:23 (Italy: Veneto); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Scharrer, 1995:24 (Germany: Bayern: Kahl, Lohr); Schmid-Egger, Risch, and Niehuis, 1995:211 (summary of records from Germany: Rheinland-Pfalz Province); Skibińska, 1995:423, 425 (Poland: pine forest in Białowieża Primeval Forest); Archer, 1996a:58 (Great Britain: Channel Islands); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Blösch, 1996:4 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Jakubzik, 1996:253 (Germany: Köln); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: may be endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region, as *obcuripennis*); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Woydak, 1996:38 and 104 (Germany: Westfalen: not found since 1893); Celary, 1997:58 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:30 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km WSW Hamburg); Flügel, 1998:61 (Germany: Brandenburg: Unteres Odertal National Park); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); van der Smissen, 1998:69 (Germany: Niedersachsen, Schleswig-Holstein); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Pagliano and Scaramozzino, 1999:162 (Italy: Piemonte: Borgomale); Herrmann, 1999:7 (Germany: Niedersachsen: Oldenburg area; habitats size); Pauly, 1999:109 (in catalog of Belgian aculeates); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:229 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:106 (Greece); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Gonzáles, Gayubo, and Tormos, 2000:19 (Andorra: Santa Coloma); Jacobs, 2000:12 (Germany: Land Mecklenburg-Vorpommern: not endangered); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); Ivanov and Ljubomirov, 2001:212 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitoshka near Sofia); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch *in* Bitsch et al., 2001:262 (in Sphecidae Fauna of Western Europe); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Szczepko and Kowalczyk, 2001:188 (Poland: Kampinos National Park near Warszawa); Zettel, Gross, and Mazzucco, 2001:72 (Austria: Wien); Kowalczyk, Szczepko, and Świątek, 2002:153 (Poland: Kampinos National Park near Warszawa); Shlyakhtenok and Skibinska, 2002:33 (Belarus: no specific locality); Gayubo, Özbek, and Yıldırım, 2003:89 (Turkey: Artvin: Yusufeli; Erzurum: Tortum); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Schmid-Egger, 2003:758 (Italy: Sicilia: Milo); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Esser, Jakubzik, and Sonnenburg, 2004:18 (Germany: Nordrhein-Westfalen); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Szczepko and Kowalczyk, 2004:126 (Poland: Kampinos National Park near Warszawa); vWiśniowski, 2004:44 and 60 (in

checklist of Polish Sphecidae); Blösch, 2005:4 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:452 (Bulgaria: Krasново and Zvechen near Hissarya, Plovdiv); Kofler, 2005:172 (Austria: Tirol: Lienz District: Ainet, city of Lienz, Lorenzhof in St. Johann Common, Tassenbach in Strassen Common); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Pagliano and Negrisoló, 2005:363 (in Sphecidae Fauna of Italy); Riemann and Hohmann, 2005:565 (Germany: Niedersachsen: city of Bremen and adjacent area); Straka, 2005:269 (Turkey: Erzincan: 15 km W Refahiye; Sivas: 20 km E Gürün); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Vepřek, 2006:511 (Czech Republic: Kokořinsko area); Archer, 2007e:79 (Great Britain: extinct or vagrant); Baños-Picón, Gayubo, Asís, and González, 2007a:256, 258 (Spain: Zamora: Cabañas de Aliste); Jacobs, 2007:95, 99 (in key to Crabronidae of Germany); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:202 (in catalog of Sphecidae of Czech Republic and Slovakia); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:215 (in catalog of Crabronidae of Turkey); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: relatively common).

*Tachytes obscuripennis* Scheck, 1860:148. Nomen nudum

*Tachytes lativalvis* Thomson, 1870:242, ♂, ♀. Syntypes: central Sweden (LUND). Synonymized with *Tachysphex obscuripennis* by Schmidt, 1971a:62. – Thomson, 1874:219 (in revision of Hymenoptera of Scandinavia); E. Saunders, 1882:87 (Great Britain: Deal), 1883c:136 (Great Britain: Deal and Sandhills); Westerlund, 1893:25 (Russia: Karelian Republic: northern shore of Lake Ladoga); Aurivillius, 1904:266 (in revision of Swedish Sphecidae); Jansson, 1922:24 (Sweden: Öland Island). – **As *Tachysphex lativalvis***: Kohl, 1883e:670 (new combination, Switzerland), 1885a:352 and 355 (in key to Palearctic *Tachysphex*), 382 (in revision of Palearctic *Tachysphex*), 1888b:728 (Austria: Tirol, now Italy: Alto Adige), 1893:32 (Austria: Niederösterreich); F. Morawitz, 1893a:111 (Russia: Karelian Isthmus); Sickmann, 1893:84 (Germany: Niedersachsen: Iburg); Krieger, 1894:11 (Germany: Kingdom of Saxony); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Hungary: Budapest); Ferton, 1901b:680 (found in Marseille area, France, but not in Corsica); E. Saunders, 1902b:143 (Great Britain: Jersey Island); Adlerz, 1904:50 (nesting habits); Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); Mortimer, 1905:261 (Great Britain: Wales: Aberdovey); Adlerz, 1906:29 (Sweden; nesting habits); Schmiedeknecht, 1907:233 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (listed from Spain); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:45 (Italy: Trieste area); nec Morice, 1911:102 (= *Tachysphex obscuripennis gibbus*); Kohl, 1912:63 (Austria: Südtirol: Bad Ratzes, now Italy: Trentino–Alto Adige: Razzes); Schirmer, 1912:167 (Germany: Berlin area); Ferton, 1914:103 (earlier record of hemipterous prey was in error); Bouwman, 1916:202 (preying on cockroaches); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); Dubois, 1920:88 (first record from Belgium: no specific locality); A. Wagner, 1920:39 (Germany: Lower Elbe region); Dubois, 1921c:208, 209 (in key to Belgian Sphecidae); Ferton, 1923:333 (known from continental France but not found in Corsica); Leininger, 1924:121 (Germany: Baden-Württemberg: Friedrichstal, Waldkirch); Berland, 1925d:121 (in Sphecidae Fauna of France); Bischoff, 1925:301 (Latvia: Wezkukkul); Coulon, 1925:121 (Spain); Hémon, 1926:199 (France: Finistère: Fouesnant); Benoist, 1928:410 (France: Alpes-Maritimes, Basses-Alpes); Bouwman, 1928b:26 (in revision of Sphecidae of Netherlands); Grandi, 1928d:295 (prey), 296 (description of egg and larva), 1929:288 (Italy: Toscana: valle della Limentra); Schmiedeknecht, 1930:694, 695 (in keys to Hymenoptera of North and Central Europe); Dusmet y Alonso, 1931:7 (Portugal: Mitra); Grandi, 1931:57 (Italy: Toscana: Vallata delle Pozze near Le Mandriole); Maneval,

1932:95 (nesting habits); Maidl, 1933b:125 (Morocco: Agadir); E. Nielsen, 1933:294 (summary of nesting habits); Giner Marí, 1934:134 (Spain); Grandi, 1934:60 (labrum of mature larv illustrated); Jansson, 1934:290 (Sweden); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Harttig, 1935:5 (Germany: Niedersachsen: Kirchseelte); Crèvecoeur and Maréchal, 1936:252 (in catalog of Belgian Hymenoptera); de Beaumont, 1936a:200 (in revision of French *Tachysphex*), 1936c:8 (specimen in coll. A. Costa); Goebel, 1937:42 (Poland: Poznań District: Kobylopol, Strzeszyn); Zavadil, Šusterka, and Bat'a, 1937:201 (in catalog of Sphecidae of Czechoslovakia); A. Wagner, 1938a:122 (northwestern Germany); Giordani Soika, 1939b:73 (Italy: Lido di Venezia); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Schneid, 1941:1044 (Germany: Bayern: Bamberg area); J. Perkins, 1942:200 (Sweden: Skåne: Degaberga and Löderup); Giner Marí, 1943a:141 (in Sphecidae Fauna of Spain); Guiglia, 1944b:28 (Italy); Balthasar, 1945:115 (Czech Republic: southeastern Morava Region); de Beaumont, 1947c:670 (probable synonym of *Tachytes obscuripennis*); Zavadil *in* Zavadil and Šnoflak, 1948:149, 152 (in key to Sphecidae of Czechoslovakia); Cavro, 1950:35 (France: Département du Nord); Caruel, 1951:100 (France: Marne Department, as *lativentris*); Cleu, 1953:50 (France: Ardèche River basin); de Beaumont, 1953b:15 (variation); Nouvel and Ribaut, 1953:178 (France: Haute-Garonne: Saint-Béat); de Beaumont, 1954a:91 (Italy); Aerts, 1955:63 (Germany: Rheinland); de Beaumont, 1955a:183 (Morocco); Steiner, 1955:138 (France: Dordogne); Teschner, 1955:57 (Germany: Nordrhein-Westfalen: Hohe Ward near Münster); Vergne, 1955:5 (France: Auvergne); Vogrin, 1955:37 (Yugoslavia); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain); Stadler and Glässel, 1956:111 (Germany: Bayern: Romberg Nature Reserve); Morel, Nouvel, and Ribaut, 1956:338 (France: Département des Pyrénées-Orientales); Bajári, 1957a:52, 55 (in key to Hungarian Sphecidae); Grandi, 1957:389 (Italy); Benno, 1958b:12 (in review of Dutch Sphecidae); de Beaumont, 1958c:205 (Swiss National Park); de Beaumont, 1959a:28 (Italy); Diniz, 1959:29 (Portugal: Mitra); Wolf, 1959b:24 (Germany: Nassau); Noskiewicz and Puławski, 1960:122, 124 (in key to Polish Sphecidae); Grandi, 1961:192 (nesting habits), 499 (larva); Valkeila, 1962b:66 (southwestern Finland); Hoop, 1963b:7 (Germany: Schleswig-Holstein:Lehmrade, Wahlstedt); de Beaumont, 1964c:76 (in Sphecidae Fauna of Switzerland); Diniz, 1964a:5 (Portugal: Porto); Bonelli, 1966c:218 (Italy: Trentino–Alto Adige: Pestini near Cavalese, Razzes); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg); J. Heinrich, 1967:75 (Germany: Bayern: Unterfranken District); Hoop, 1967a:39 (Germany: Schleswig-Holstein: Salemer Moor, as *livalvis*); Niedl and Deneš, 1967:81 (Czech Republic: Třeboň area); Benedek, 1968:73 (Hungary, visiting flowers of *Angelica silvestris* L., as *livalvis*); Bonelli, 1968b:50 (Italy: Trentino–Alto Adige: Piazzöl); Evans, 1968c:119 (discussion of larval descriptions by Grandi); Benedek, 1969a:83 (Hungary; marshy meadow); Romanova, 1969:134 (Russia: North Caucasus); Kofler, 1972:107 (Austria: eastern Tirol); Simon Thomas, 1972:181 (France); Lefeber, 1973:153 (Netherlands: Budel; Belgium: Gruitrode); Simon Thomas, 1976:5 (France: Lot-et-Garonne); Marion, 1978:88 (France: Nièvre Department); Kowalczyk, 1991a:105 (Poland: Łódź); Delarze, 1992:68 (Switzerland: Valais: Les Folatères); Pawlikowski and Kruszyński, 1996:87 (Poland: Toruń Basin).

As *Tachytes panzeri*: Aichinger, 1870:320 (Austria: Tirol), corrected to *Tachysphex livalvis* by Kohl, 1888b:728.

### **ssp. gibbus Kohl**

*Tachysphex livalvis* Thomson var. *gibbus* Kohl, 1885a:383, ♀ (as *gibba*, incorrect original termination). Syntypes: France, Spain: Barcelona (NHMW). – Kohl, 1885a:350 (in key to Palearctic *Tachysphex*); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ferton, 1901a:100 (blattid prey); Adlerz, 1904:137 (known prey: immature blattids *Ectobia livida*); Schmiedeknecht, 1907:231 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera, as var. *gibbus*); Mercet, 1910b:165 (listed from Spain, as *livalvis* var. *gibba*); Dusmet, 1915:87 (Spain: Aragón); Berland, 1925d:121 (in Sphecidae Fauna of France, as var. *gibba*); Schmiedeknecht, 1930:693 (in keys to Hymenoptera of North and Central Europe, as var. *gibba*); Grandi, 1934:129 (Italy); Grandi, 1935a:110 (Italy: Emilia-Romagna: Cervia, as *livalvis gibbus*); Bernard, 1935:65 (France: Var: Fréjus area); Móczár, 1938:64 (Hungary; as var. *gibba*); Giner Marí, 1943a:141 (in Sphecidae Fauna

of Spain, as *latalvis* var. *gibba*); Guiglia, 1944b:28 (Italy; as var. *gibba*); Deleurance, 1946b:63 (prey: *Ectobius lividus*, nest vertical), 67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges, as var. *gibba*); de Andrade, 1949:16 (Portugal; as *latalvis gibba*); de Beaumont, 1953b:15 (diagnostic characters; as *latalvis* ssp. *gibba*), 1954e:91 (Italy); Grandi, 1954:239 (Italy); Ceballos, 1956:376 (in catalog of Hymenoptera of Spain, as *gibba*); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales, as *gibba*); Grandi, 1957:389 (Italy); Compte Sart, 1959:133 (Spain: Mayorca; as var. *gibba*); Diniz, 1959:29 (Portugal: Cascais, Mata de Leiria, as var. *gibba*); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:5 (Portugal: Azenhas do Mar, Carcavelos, Cascais, Rezende, Sines, Troia); Königsmann, 1971:106 (Spain: Gerona: Palamós; as var. *gibbus*); Simon Thomas, 1972:181 (France: Landes: Onesse; Lot-et-Garonne: Durance; as *latalvis gibba*; specimen from Onesse is actually *Tachysphex panzeri*); Simon Thomas and Veenendaal, 1974b:4 (France; as *latalvis gibba*), 1976:5 (France: Lot-et-Garonne; as *latalvis gibba*). – **As *Tachysphex obscuripennis gibbus***: Pulawski, 1971:228 (new status, in revision of Palearctic *Tachysphex*); Erlandsson, 1974:73 (Spain); R. Bohart and Menke, 1976:275 (listed); Pagliano, 1980:127 (Italy: Campania); Schmidt and Westrich, 1983:123 (first record from Greece); Gayubo, 1984c:365 (Portugal: El Algarve Province), 1986c:33 (Spain: Zamora Province); Gayubo and Sanza, 1986:47 (Spain: Burgos, Segovia); Gayubo and Mingo, 1988:80 (Spain); Pagliano, 1990:105 (in catalog of Italian Sphecidae); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); K. Schmidt and Bitsch *in* Bitsch et al., 2001:263 (in Sphecid Fauna of Western Europe); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Pagliano and Negrisoló, 2005:368 (in Sphecid Fauna of Italy); Shorenko, 2005a:164 (Ukraine: Crimea); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Tomarchio and Turrisi, 2006:956 (Italy: first record from Sicilia: Mount Etna); Shorenko, 2007b:257 (Ukraine: Crimea: Feodosiya, Kerch, Shchelkino village in Leninskiy District); Pagliano, 2009:184 (Italy: recorded from Sicilia by Tomarchio and Turrisi, 2006).

As *Tachysphex*: Ferton, 1894:216 (...), corrected to *Tachysphex obscuripennis gibbus* by Pulawski, 1971:229.

*Tachysphex philippi* S. Saunders, 1910:524, ♀. Holotype: ♀, Algeria: Philippeville (OXUM). Synonymized with *Tachysphex latalvis gibbus* by de Beaumont, 1947c:670. – Morice, 1911:102 (Algeria: Philippeville); von Schulthess, 1926b:215 (Morocco: Marrakech).

As *Tachysphex latalvis*: Morice, 1911:102 (Algeria), corrected to *Tachysphex obscuripennis gibbus* by Pulawski, 1971:228.

### 277. *obscurus* Pulawski

*Tachysphex mocsaryi obscurus* Pulawski, 1971:315, ♂. Holotype: ♂, Canary Islands: Gran Canaria: San Augustin (H. Wolf collection, Plettenberg). – Báez and Ortega, 1978:192 (Canary Islands). – **As *Tachysphex obscurus***: Pulawski, 1974b:299 (description of ♀; full species status); R. Bohart and Menke, 1976:275 (listed); Wolf, 1980:73 (Canary Islands); Hohmann, La Roche, Ortega, and Barquín, 1993:236 (detailed locality records from Canary Islands).

### 278. *occidentalis* Pulawski

*Tachysphex occidentalis* Pulawski, 1982b:34, ♀, ♂. Holotype: ♂, USA: California: Inyo County: 12 mi E Lone Pine (UCD). – Elliott and Kurczewski, 1985:293 (prey); Pulawski, 1988a:91 (in revision of Nearctic *Tachysphex*).

### 279. *octodentatus* Arnold

*Tachysphex octodentatus* Arnold, 1924:62, ♀, ♂. Syntypes: Zimbabwe: Sawmills and Khami (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:275 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:458 (in revision of African *Tachysphex*).

*Tachysphex octodentatus* var. *inermis* Arnold, 1924:63, ♀. Lectotype: ♀, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:458. Synonymized with *Tachysphex octodentatus* by Pulawski, 2007a:458. – **As *Tachysphex octodentatus inermis***: R. Bohart and Menke, 1976:275 (new status, listed).

*Tachysphex tridentatus* Arnold, 1924:55, ♂, ♀. Lectotype: ♂, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:458. Synonymized with *Tachysphex octodentatus* by Pulawski, 2007a:458. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed).

**280. omoi Guiglia**

*Tachysphex omoi* Guiglia, 1943c:72, ♀. Holotype: ♀, Ethiopia: Gamo Gofa: Gondaraba = Condaraba at 4°58'N, 36°49'E (MSNG). – R. Bohart and Menke, 1976:275 (listed); Pulawski, 2007a:461 (in revision of African *Tachysphex*).

*Tachysphex omoi* Guiglia, 1950:252, ♀. Objective synonym of *Tachysphex omoi* Guiglia, 1943.

**281. onager Pulawski**

*Tachysphex onager* Pulawski, 2007a:463, ♀, ♂. Holotype: ♀, Tanzania: Morogoro Region: 62 road km SW Morogoro at 7°02.5'S 37°15.3'E (CAS). Paratypes: Malawi.

**282. opacus F. Morawitz**

*Tachysphex opacus* F. Morawitz, 1893b:410, ♂. Holotype: ♂, China: Sinkiang Uighur: Artuch 20 km N Kashgar (ZIN). – Dalla Torre, 1897:682 (in catalog of world Hymenoptera); Pulawski, 1971:79 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:119, 134 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:72 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:261 (Turkey: Bitlis: Ahlat; Nevşehir: Ürgüp; Sivas: Gürün).

**283. opata Pulawski**

*Tachysphex opata* Pulawski, 1988a:106, ♀, ♂. Holotype: ♂, USA: Arizona: Cochise County: Portal (CAS).

**284. orestes Pulawski**

*Tachysphex orestes* Pulawski, 1988a:31, ♀. Holotype: ♀, USA: California: Placer County: Carnelian Bay (CAS).

**285. osiris de Beaumont**

*Tachysphex osiris* de Beaumont, 1940b:170, ♀, ♂. Lectotype: ♀, Sudan: Nabardi [= Bir Um-Nabardi, 160 km SE Wadi Halfa] (BMNH), designated by de Beaumont, 1947a:179. – de Beaumont, 1947a:178 (in new revision of *Tachysphex* of Egypt), 1950d:18 (Egypt: Siwa oasis), 1958b:61 (Algeria: Tassili des Ajjer); Pulawski, 1971:422 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:465 (in revision of African *Tachysphex*).

**286. ovambo Pulawski**

*Tachysphex ovambo* Pulawski, 2007a:467, ♀, ♂. Holotype: ♀, Angola: 16 km NE Moçamedes, now Namibe (BMNH).

**287. oxychelus Pulawski**

*Tachysphex oxychelus* Pulawski in Krombein and Pulawski, 1994:38, ♀, ♂. Holotype: ♀, Sri Lanka: Mannar District: Kondachchi-Silavaturai (USNM).

**288. pacificus R. Turner**

*Tachysphex pacificus* R. Turner, 1908:491, ♀. Holotype: ♀, Australia: Victoria: Melbourne (BMNH). – R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:275 (listed); Pulawski, 1977a:245 (in revision of Australian *Tachysphex*); Cardale, 1985:241 (in catalog of Australian Sphecidae).

**289. paiute Pulawski**

*Tachysphex paiute* Pulawski, 1988a:80, ♀, ♂. Holotype: ♀, USA: California: Inyo County: Antelope Springs (CAS).

**290. *paloaterus* (Dahlbom)**

*Tachytes paloaterus* Dahlbom, 1845:470, ♂ (as *paloatera*, incorrect original termination). Lectotype: ♂, Egypt: no specific locality (NRS), designated by Pulawski, 2007a:470. – Kohl, 1885:405 (in checklist of world *Tachytes*). – **As *Tachysphex paloaterus***: Kohl, 1885a:396 (new combination, original description copied); Dalla Torre, 1897:682 (in catalog of world Hymenoptera); de Beaumont, 1940:165 (in revision of *Tachysphex* of Egypt); Honoré, 1942:56 (listed); de Beaumont, 1947a:162 (in new revision of *Tachysphex* of Egypt), 1950f:405 (Algeria: Laghouat), 1955a:176 (Morocco; description of ♀); Pulawski, 1964:83 (Egypt: Dahshur, Ghiza, Kom Osheim, Maadi, Saqqara; characteristics of ♀), 1971:338 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); R. Bohart and Menke, 1976:275 (listed); Guichard, 1980:227 (Oman); Pulawski, 2007a:470 (in revision of African *Tachysphex*).

As *Tachysphex nattereri*: Kohl, 1888a:144 (♂ only), corrected to *Tachysphex paloaterus* by Pulawski, 1971:323 and 338.

*Tachysphex* No. 1: de Beaumont, 1940:166, ♀, Egypt. Synonymized with *Tachysphex paloaterus* by de Beaumont, 1955a:176.

**291. *panzeri* (Vander Linden)**

*Tachytes panzeri* Vander Linden, 1829:22, ♂, ♀ (♀ = *Tachysphex pseudopanzeri*). Syntypes: Spain: no specific locality (lost). Neotype: ♂, Spain: Toledo (RMNH), designated by Pulawski, 1971:262. – Dahlbom, 1843:125 (in revision of Sphecidae and Pompilidae), 1845:470 (in key); Eversmann, 1849:386 (Russia: Orenburg province), corrected to *Tachysphex panzeri sareptanus* by Pulawski, 1971:272; Wesmael, 1852:84 (Belgium: Ostende); F. Smith, 1856:296 (in catalog of Hymenoptera in British Museum); Kawall, 1857:24 (Kurland, now Latvia); Ruthe and Stein, 1857:313 (Germany: Berlin area); Schenck, 1857:190 (in revision of fossorial wasps of Nassau Region, Germany); Taschenberg, 1858:84 (in key to Sphecidae of Germany); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:149 (Germany: Nassau Region); Brischke, 1862:99 (Germany: Preussen Province, now Poland: Pomorze Region); Taschenberg, 1866:201 (in revision of Hymenoptera of Germany); A. Costa, 1867b:86 and 1867c:30 (in revision of Italian Sphecidae); Kirchner, 1867:216 (in catalog of European Hymenoptera); Palma, 1867:38 (Italy: Sicilia settentrionale); Schenck, 1867a:356 (Germany: Nassau Region); Wierzejski, 1868:116 (Ukraine: Podole Region: Sinów); nec Aichinger, 1870:320 (= *Tachysphex obscuripennis*); Dours, 1874:139 (in catalog of Hymenoptera of France: Montpellier, Saint-Séver); Wierzejski, 1874:257 (Ukraine: Podole Region: Sinkov); Becker, 1880:153 (Russia: Sarepta, now Krasnoarmeysk S Volgograd); Marquet, 1881:179 (southern France); A. Costa, 1882b:22 (Italy: Sardegna), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Destefani, 1882:38 (Italy: Sicilia: Sciacca); A. Costa, 1883:57 (Italy: Sardegna), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Friese, 1883:202 (Germany: Thüringen: Kahla); A. Costa, 1885a:17 (...), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Fabre, 1886:227 (nesting in soil, preying on acridids, experiments with removing prey from nest entrance); Brischke, 1888a:54 (Germany: Hela Peninsula, now Poland: Hel Peninsula), 1888b:97 (Germany: Preussen Province, now Poland: Pomorze Region), 1889:204 (Germany: Steegen E Danzig, now Poland: Stegna E Gdańsk); F. Morawitz, 1891:207 (Kazakhstan: Ryn-Peski); Radoszkowski, 1892:590 (reference to Radoszkowski, 1886); Meunier, 1896:273 (Belgium: Bruxelles area); Cuní y Martorell, 1897:331 (Spain: Cataluña: villa de Calella); von Heyden, 1905:80 (Germany: Hessen: Frankfurt); Friese, 1926:162 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); G. Carpenter, 1930b:300 (nest closure). – **As *Lyrops panzeri***: Casolari and Casolari Moreno, 1980:113 (new combination, specimens in M. Spinola collection, Torino); Pagliano, 2008:549 (specimens in M. Spinola collection, Torino). – **As *Tachysphex panzeri***: Kohl, 1883a:177 (new combination, comparison with *Tachysphex pygidialis*), 1883e:671 (Switzerland, record not confirmed by subsequent authors), 1884a:368 (redescription), 1885a:351 and 356 (in key to Palearctic *Tachysphex*), 356 (in revision of Palearctic *Tachysphex*); nec Radoszkowski, 1886a:33 and 1891:590 (= *Tachysphex incertus*); Gasperini, 1887:15 recorded from Dalmatia,

now Croatia, by Kohl, 1885a); F. Morawitz, 1891a:207 (western Kazakhstan: Ryn-Peski), corrected to *Tachysphex panzeri sareptanus* by Pulawski, 1971:272; A. Costa, 1893b:6 (Tunisia); Dalla Torre, 1897:682 (in catalog of world Hymenoptera); Ferton, 1897:106 (Corsican population have red gaster); Mocsáry, 1897:77 (Kingdom of Hungary, one locality is in today's Romania); Bingham, 1898a:104 (Yemen: Aden); Ferton, 1899:341 (prey capture), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Adlerz, 1904:137 (known prey: adult acridids); Antiga and Bofill, 1904:10 (in catalog of Catalanian Hymenoptera); E. Saunders, 1904c:635 (Spain); Ferton, 1905:70, 94 (position of egg on prey), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Kubes, 1905:85 (Czech Republic: Kolín); Mantero, 1905:73 (Italy: Toscana: Isola del Giglio); Vángel, 1905:166 (Hungary); Graeffe, 1906:455 (Tunisia: Tunis area); Móczár and Henter, 1907:205 (Hungary: Tiszaalpár); Schmiedeknecht, 1907:232, 234 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mantero, 1909:74 (Italy: Asinara Island), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Mercet, 1910b:165 (listed from Spain); Zavattari, 1910:3 (Italy: Isola d'Elba: Portoferraio); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:45 (Italy: Trieste area); Mantero, 1911:74 (Italy: Sardegna: Isola dell'Asinara); Morice, 1911:104 (Algeria); Zavattari, 1911:3 (Italy: Piemonte: Valle del Maira); Schirmer, 1912:167 (Germany: in Berlin area not collected since Ruthe and Stein, 1857); Bischoff, 1913b:119 (Botswana: Koca-Sekuma, certainly in error); Storey, 1916:110 (Egypt), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); Stöckhert, 1919:41 (Germany: Franken); A. Wagner, 1920:39 (Germany: Lower Elbe region, not found but can be expected); Gribodo, 1921:6 (Libya: Cyrenaica: Ghemines, determination uncertain); Dubois, 1921c:208, 209 (in key to Belgian Sphecidae); Enslin, 1922c:246 (Germany: Bayern: Erlangen and Nürnberg); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Arnold, 1923a:167 (diagnosis); Ferton, 1923:86 (prey paralyzing), 291 (prey easily found when removed from nest entrance by author), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Arnold, 1924:72 (variation); Berland, 1925d:119 (in Sphecid Fauna of France); Bischoff, 1925:301 (Latvia: Wezkukkul; Poland: Grajewo area); Coulon, 1925:121 (Spain; Morocco: Tanger); Strohm, 1925:211 (Germany: Baden-Württemberg: Hecklingen); Hémon, 1926:199 (France: Finistère: Fouesnant); von Schulthess, 1926b:214 (Tunisia, Libya); Dusmet y Alonso, 1927:25 (Spain: Cataluña: Poblet and Tarragona); Grandi, 1927:199 (nesting habits); Benoist, 1928:410 (France: Basses-Alpes: Bayasse-Saint-Louis); Bouwman, 1928b:27 (in revision of Sphecidae of Netherlands); Grandi, 1928a:22 (prey, prey carrying); Schmiedeknecht, 1930:693, 695 (in keys to Hymenoptera of North and Central Europe); Guiglia, 1932d:474 (Libya: Gialo); Bernard, 1933:62 (France: Drôme: Dieulefit); Gussakovskij, 1933:284, correctly 384 (Iran: Kerman: Bampur – Kaskin), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Nadig, 1933:78 (Morocco); Bernard, 1934b:250 (prey: *Dociostaurus genei*); Giner Marí, 1934:133 (Spain); Grandi, 1934:61 (nest structure, prey: *Dociostaurus guenei* (Ocsk.)), 129 (Italy: Toscana: San Vincenzo); Guiglia, 1934b:303 (Libya: bibliography and summary of locality records); Maidl, 1934:64 (Greece: Aegean Islands: Milos); Nadig, 1934:32 (Italy: Sardegna: Cagliari); Bernard, 1935:64 (France: Var: Fréjus area; prey: *Dociostaurus genei*); Gussakovskij, 1935:427 (Tajikistan: Kulab); Crèvecoeur and Maréchal, 1936:252 (in catalog of Belgian Hymenoptera); de Beaumont, 1936a:192 (in revision of French *Tachysphex*), 1936c:7 (specimens in coll. A. Costa); Drogoszewski, 1936:130 (Poland: Łowicz); Goebel, 1937:42 (Poland: Poznań District: Kobylepole); Zavadil, Šustera, and Bat'a, 1937:201 (in catalog of Sphecidae of Czechoslovakia); Móczár, 1938:80 (Hungary: Pótharasz puszta); Giordani Soika, 1939b:73 (Italy: Lido di Venezia); Móczár, 1939:4 (Hungary: Jászberény); de Beaumont, 1940b:163 (in revision of *Tachysphex* of Egypt), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Guiglia, 1940a:289 (Libya: Gheddahia, Wadi el-Hadd), nec fig. 1 (= *Tachysphex cheops*); Schneid, 1941:1045 (Germany: Bayern: Bamberg area); Guiglia, 1942b:233 (Libya); Honoré, 1942:54 (Egypt), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Giner Marí, 1943a:140 (in Sphecid Fauna of Spain); Guiglia, 1943c:76 (Ethiopia: Gamo Gofa: Sagan – Omo region, determination unreliable for geographic reasons), 1943d:92 (Albania: Scutari); Timon-David, 1943:29 (France: Bouches-du-Rhône: plage de

Fos); Guiglia, 1944b:27 (Italy); Deleurance, 1946b:63 (list of prey), 67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); Arnold, 1947:147 (redefinition of species); de Beaumont, 1947a:156 (in new revision of *Tachysphex* of Egypt), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; de Beaumont, 1947b:391 (Cyprus), corrected to *Tachysphex panzeri cyprius* by Pulawski, 1971:272; Guiglia, 1948c:201 (Italy: Sardegna: Cagliari), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:270; Zavadil in Zavadil and Šnoflak, 1948:150, 152 (in key to Sphecidae of Czechoslovakia); de Andrade, 1949:15 (Portugal); Niesiołowski, 1950:225 (Poland: Lubasz 40 km N Tarnów); Pittioni, 1950:24 (Cyprus), corrected to *Tachysphex panzeri cyprius* by Pulawski, 1971:272; de Andrade, 1949:15 (Portugal); Guiglia, 1950:254 (Ethiopia: Gamo Gofa: Gondaraba at 4°58'N 36°49'E, determination tentative); Pittioni, 1950:24 (Cyprus); Szulczewski, 1950:108 (Poland: Wielkopolski National Park 15 km S Poznań); Scobiola-Palade, 1951:274 (first record from Romania: several localities); de Beaumont, 1952c:189 (Algeria: Hoggar), corrected to *Tachysphex panzeri oraniensis* and to *Tachysphex panzeri pulverosus* by Pulawski, 1971:273; Móczár, 1953:310 (Hungary); Balthasar, 1954d:182 (Slovakia); de Beaumont, 1954a:55 (Italy), 1954e:90 (Italy); Grandi, 1954:240 (Italy); Hertzog, 1954:101 (France: Bouches-du-Rhône: Camargue); Atanassov, 1955:201 (Bulgaria: Belovo and Yundola in Rhodopi Mts.); de Beaumont, 1955a:173 (Morocco: geographic and individual variation), 176 (forme saharienne, synonymized with *Tachysphex panzeri pulverosus* by Pulawski, 1971:274); Vogrin, 1955:37 (Yugoslavia); Bytinski-Salz, 1956:226 (Turkey: Kalkan, Karapınar, Kemer); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); de Beaumont, 1956a:196 (Libya), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Morel, Nouvel, and Ribaut, 1956:338 (France: Département des Pyrénées-Orientales); Bajári, 1957a:51, 55 (in key to Hungarian Sphecidae); de Beaumont, 1957b:136 (n. Iran); Grandi, 1957:389 (Italy); Benno, 1958b:12 (in review of Dutch Sphecidae); de Beaumont, 1958b:61 (Algeria: Tassili des Ajjer), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Nouvel and Ribaut, 1958:14 (France: Pyrénées-Orientales: Banyuls-sur-Mer area); Pulawski, 1958a:178 (Bulgaria: Aitos, Burgas, mouth of Ropotamo River, Sandanski, Sozopol, Varna); Suárez, 1959:57 (Spain: Almería Province); Wolf, 1959b:24 (Germany: Nassau); de Beaumont, 1960a:14 (Greece: Rhodes Island; diagnostic characters), 1960b:237 (Libya), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Noskiewicz and Pulawski, 1960:121, 124 (in key to Polish Sphecidae); de Beaumont, 1961c:49 (Greece: Crete Island); Grandi, 1961:205 (nesting habits); de Beaumont, 1962b:25 (Spain); Scobiola, 1963:825 (Romania: Letea, Periprava in Danube delta); Babiý, 1964:114 (Austria: Land Salzburg); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:4 (Portugal: twenty localities); de Beaumont, 1965a:47 (Greece); Roberti, Frilli, and Pizzaghi, 1965:110 (Italy: Emilia-Romagna: Bobbio in Piacenza Province); de Beaumont, 1966:212 (Egypt: Amrye near Alexandria); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg: Vorbergzone); J. Heinrich, 1967:75 (Germany: Bayern: Kahl); Pulawski, 1967a:393 (Turkey); Scobiola-Palade, 1968b:142 (Romania: Island of Letea in delta of Danube), 1968c:385 (Romania: București, Budești, Giurgiu); Benedek, 1969a:83 (Hungary: marshy meadow); Leclercq, 1970:map 37 (distribution in Belgium: found on coast only); Oehlke, 1970:714 (Democratic Germany); Königsmann, 1971:107 (Spain: Gerona: Palamós); Pulawski, 1971:262 (revision); Schmidt, 1971b:34 (Germany: Mainz area); Valetta, 1971:46 (Malta); Balthasar, 1972:267 (in Sphecid Fauna of Czechoslovakia); Myartseva, 1972a:79 (Turkmenistan); Scobiola-Palade, 1972:150 (Romania: delta of Danube: Caraorman); Simon Thomas, 1972:182 (France); de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); Haeseler, 1973:54 (Germany: Niedersachsen: Pevestorf 72 km SE Lauenburg); Lefeber, 1973:153 (Netherlands: Vogelenzang); Erlandsson, 1974:73 (France, Italy); Simon Thomas and Veenendaal, 1974b:4 (France); R. Bohart and Menke, 1976:275 (listed); Lefeber, 1976:151 (Netherlands: Maasduintjes between Bergen and Wellse Hut); Simon Thomas, 1976:5 (France: Lot-et-Garonne); Georghiou, 1977:192 (Cyprus); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Guichard, 1978:271 (Greece); Kazenas, 1978b:113, 126 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:214, 219 (in key to Sphecidae of European part of former USSR); Lefeber, 1979:12 (in checklist of Sphecidae of Netherlands), 73 (Netherlands: distribution map); Guichard, 1980:227 (Oman); Pagli-



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*Lyrops rufiventris* Spinola, 1839:479, ♀. Holotype or syntypes: ♀, France: Corse: no specific locality (not in Torino, probably lost: see de Beaumont, 1952e:47; not listed by Casolari and Casolari Moreno, 1980). Synonymized with *Tachytes panzeri* by A. Costa, 1884b:246 and 1885a:17. – **As Larrada rufiventris**: F. Smith, 1856:280 (new com-

bination, in catalog of Hymenoptera in British Museum). – **As *Tachytes rufiventris***: A. Costa, 1867b:87 and 1867c:31 (new combination, in revision of Italian Sphecidae), 1882b:22 and 34 (Italy: Sardegna), 1883:57 (Italy: Sardegna); nec Magretti, 1884c:587 (= *Tachysphex argentatus*); Dalla Torre, 1897:693 (in catalog of world Hymenoptera); W. Schulz, 1906:212 (correction to Dalla Torre: described from Corsica, not Egypt). – **As *Tachysphex rufiventris***: Kohl, 1885:356 (new combination, tentative new synonym of *Tachysphex panzeri*); Stadelmann, 1897:255 (new combination). – **As *Tachysphex panzeri rufiventris***: Pulawski, 1971:270 (new status, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Pagliano, 1990:105 (in catalog of Italian Sphecidae); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Pagliano and Negrisolo, 2005:373 (in Sphecid Fauna of Italy).

*Tachytes oraniensis* Lepeletier de Saint Fargeau, 1845:253, ♀, ♂ (as *Oraniensis*, incorrect original capitalization). Syntypes: Algeria: Oran (MNHN). Synonymized with *Tachysphex panzeri* by Kohl, 1884a:368. – Lucas, 1849:249 (Algeria: Oran, original description copied with modifications); Dours, 1874:139 (in catalog of Hymenoptera of France: Montpellier); Radoszkowski, 1877:29 (Uzbekistan: Samarkand and Syr-Daria area), corrected to *Tachysphex panzeri pulverosus* by Pulawski, 1971:275; Acloque, 1897:93 (in Sphecid Fauna of France and Algeria). – **As *Larrada oraniensis***: Walker, 1871:21 (new combination, Djibouti: Tajura); Innes Bey, 1912:111 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected in Tajura). – **As *Tachytes panzeri* var. *oraniensis***: Pérez, 1907:496 (new status, Bahrain); Mantero, 1911:74 (Italy: Sardegna: Isola dell'Asinara). – **As *Tachysphex oraniensis***: Kohl, 1884a:368 (new combination). – **As *Tachysphex panzeri* var. *oraniensis***: Kohl, 1885a:351 and 356 (in key to Palearctic *Tachysphex*); nec Medina, 1896:107 (= *Tachysphex pseudopanzeri*); Dalla Torre, 1897:683 (in catalog of world Hymenoptera); nec de Gaulle, 1908:121 (= *Tachysphex pseudopanzeri*); von Schulthess, 1909:441 (Libya: Ain Sarah, Benghazi, DernahGherran, Tripoli); nec Mercet, 1910b:165 (= *Tachysphex pseudopanzeri*); Morice, 1911:104 (Algeria: Biskra); Maidl, 1913:560 (Egypt: El Wasta); Guiglia, 1932d:474 (Libya: Gialo); Maidl, 1933b:121 (Morocco); Nadig, 1933:78 (Morocco); Guiglia, 1940a:290 (Libya: Beni Ulid); Giner Mari, 1945b:362 (Morocco: Western Sahara: El Aiun); nec Ceballos, 1956:377 (= *Tachysphex pseudopanzeri*). – **As *Tachysphex panzeri* forme *oraniensis***: de Beaumont, 1955a:174 (new status, Morocco). – **As *Tachysphex panzeri oraniensis***: W. Schulz, 1905b:45 (new status, Algeria: Biskra); Mantero, 1909:74 (...), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:271; Kruger, 1929a:21 and 1929b:56 (Libya: Cyrenaica: Giarabub, Tobruk); Guiglia, 1934b:303 (Libya: bibliography and summary of locality records); Nadig, 1934:32 (Italy: Sardegna: Cagliari, Iglesias), corrected to *Tachysphex panzeri rufiventris* by Pulawski, 1971:271; Guiglia, 1942b:234 (Libya); de Beaumont, 1966:212 (Egypt: Agami near Alexandria); Pulawski, 1971:273 (in revision of Palearctic *Tachysphex*); Tsuneki, 1972e:383 (Mongolia); R. Bohart and Menke, 1976:275 (listed).

*Tachytes aurifrons* Lucas, 1849:246, ♀. Syntypes: Algeria: La Calle (MNHN). Synonymized with *Tachysphex panzeri* by Kohl, 1884a:368 (tentatively) and by de Beaumont, 1947c:662 (definitely). – F. Smith, 1856:300 (in catalog of Hymenoptera in British Museum); Dalla Torre, 1897:687 (in catalog of world Hymenoptera); Marquet, 1875:203 (France: Hérault: Sète; Haute-Garonne: Toulouse); Magretti, 1906:15 (Eritrea).

*Tachytes discolor* Frivaldszky, 1877:351, ♂. Syntypes: Hungary: Budapest, also Grebenác in Temes Komitat, now in Timiș District in Romania (lost). Neotype: ♂, Hungary: Budapest-Rákos (TMB), designated by Pulawski in Krombein and Pulawski, 1994:63. Synonymized with *Tachysphex panzeri* by Kohl, 1883d:226. – Chyzer, 1902:33 (Hungary). – **As *Tachysphex panzeri* var. *discolor***: Dalla Torre, 1897:683 (new combination, new status, in catalog of world Hymenoptera); Morice, 1911:104 (Algeria: Biskra); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar).

*Tachytes pulverosus* Radoszkowski, 1886a:32, ♀, ♂. Lectotype: ♂, Uzbekistan: Samarkand (Kraków), designated by de Beaumont, 1936b:610 ("qui doit être considéré comme type"). Synonymized with *Tachysphex panzeri* by Pulawski in Krombein and Pulawski, 1994:63. – Radoszkowski, 1892:570 (reference to Radoszkowski, 1886). – **As *Tachysphex pulverosus***: Kohl in Dalla Torre, 1897:684 (new combination, in catalog of world Hymenoptera); de

- Beaumont, 1936b:610. – *As Tachysphex panzeri pulverosus*: Pulawski, 1971:274 (new status, revision); R. Bohart and Menke, 1976:275 (listed).
- Tachytes ceylonicus* Cameron, 1900a:21, ♂ (as *ceylonica*, incorrect original termination). Holotype or syntypes: ♂, Sri Lanka: no specific locality (OXUM). Synonymized with *Tachysphex panzeri* by Pulawski, 1975a:312. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897).
- Tachytes aurifrons* Cameron, 1900a:23, "♀", actually ♂, junior primary homonym of *Tachytes aurifrons* Lucas, 1849. Lectotype: ♂, Sri Lanka: Trincomalli (BMNH), designated by Pulawski, 1975a:312. Synonymized with *Tachysphex panzeri* by Pulawski, 1975a:312. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897).
- Tachysphex ablatius* Nurse, 1909:516, ♀. Lectotype: ♀, India: Gujarat: Deesa (BMNH), designated by Pulawski, 1975a:312. Synonymized with *Tachysphex panzeri pulverosus* by Pulawski, 1975a:312. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897).
- Tachysphex panzeri fortunatus* de Beaumont, 1968a:261, ♀, ♂. Holotype: ♀, Canary Islands: Gran Canaria: Maspalomas (BMNH). Synonymized with *Tachysphex panzeri* by Pulawski in Krombein and Pulawski, 1994:63. – Pulawski, 1971:270 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Báez and Ortega, 1978:192 (Canary Islands); Wolf, 1980:73 (Canary Islands); Gayubo, 1986f:999 (prey: acridid *Sphingonotus rubescens rubescens* (Walker)); Hohmann, La Roche, Ortega, and Barquín, 1993:237 (detailed locality records from Canary Islands).
- Tachysphex panzeri cyprius* Pulawski, 1971:272, ♀, ♂. Holotype: ♀, Cyprus: Limassol (W.J. Pulawski coll.). Synonymized with *Tachysphex panzeri* by Pulawski in Krombein and Pulawski, 1994:63. – R. Bohart and Menke, 1976:275 (listed).
- Tachysphex panzeri sareptanus* Pulawski, 1971:272, ♀, ♂. Holotype: ♀, Russia: Sarepta, now Krasnoarmeysk (ZIN). Synonymized with *Tachysphex panzeri* by Pulawski in Krombein and Pulawski, 1994:63. – Kazenas, 1972b:162 (Kazakhstan), 1974b:109 (feeding on flowers of *Tamarix* sp., *Statice gmelini* Willd., Plumbaginaceae, and *Cynanchum sibiricum* Willd., Asclepiadaceae, in Kazakhstan), 110 (feeding on flowers of *Euphorbia* spp., Euphorbiaceae, in Kazakhstan), 111 (feeding on flowers of *Lepidium crassifolium* W. et K., Brassicaceae, and *Gypsophila trichotoma* Wend., Caryophyllaceae, in Kazakhstan); R. Bohart and Menke, 1976:275 (listed).
- As *Tachysphex auriceps*: Giner Mari, 1945c:856 (India: Maharashtra: Varsoba near Bombay), corrected to *Tachysphex panzeri* by Krombein and Pulawski, 1994:63.
- As *Tachysphex lativalvis gibba*: Simon Thomas, 1972:181 (France: Landes: Onesse), corrected to *Tachysphex panzeri* by Simon Thomas and Veenendaal, 1974:4.
- As *Lyrops tricolor*: Pagliano, 2008:548 (part of specimens in M. Spinola collection, Torino).

### 292. *papago* Pulawski

*Tachysphex papago* Pulawski, 1982b:35, ♀, ♂. Holotype: ♀, USA: Arizona: Santa Cruz County: Nogales (BMNH). – Pulawski, 1988a:137 (revision).

### 293. *paucispina* Pulawski

*Tachysphex paucispina* Pulawski, 1977a:230, ♀. Holotype: ♀, Australia: Western Australia: Dongara (BMNH). – Cardale, 1985:241 (in catalog of Australian Sphecidae).

### 294. *paulus* Pulawski

*Tachysphex paulus* Pulawski, 2007a:480, ♀, ♂. Holotype: ♀, Namibia: Otjivarongo District: 18 km NE Kalkfeld at 20°45'S 16°16'E (CAS).

### 295. *pauillus* W. Fox

*Tachysphex pauillus* W. Fox, 1894a:530, ♀. Holotype: ♀, USA: California: no specific locality (ANSP). – Dalla Torre, 1897:683 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crab-

ronidae); Cresson, 1928:45 (holotype in ANSP); G. Bohart *in* Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:275 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Rust, Menke, and Miller, 1985:46 (California: Channel Islands); Kurczewski and Evans, 1986:720 (correct name for *nigrrior* of Evans, 1970); Pulawski, 1988a:42 (in revision of Nearctic *Tachysphex*).

*Tachysphex nigrrior* W. Fox, 1894a:530, ♀, ♂. Lectotype: ♀, USA: Washington: no specific locality (ANSP), designated by Cresson, 1928:45. Synonymized with *Tachysphex paucillius* by Pulawski *in* Krombein, 1979b:1629. – Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); G. Bohart *in* Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Evans, 1970:489 (Wyoming: Jackson Hole, nesting habits), 497; R. Bohart and Menke, 1976:275 (listed).

### 296. *pechumani* Krombein

*Tachysphex tarsatus* subsp. *pechumani* Krombein, 1938c:468, ♀. Holotype: ♀, of New Jersey: Ocean County: Manahawkin (USNM). – **As *Tachysphex pechumani***: G. Bohart *in* Muesebeck et al., 1951:952 (new status, in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Kurczewski, Elliott and Vasey, 1970:1594 (redescription of ♀, description of ♂); R. Bohart and Menke, 1976:275 (listed); Kurczewski and Elliott, 1978:765-780 (nesting habits); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Pulawski, 1988a:50 (in revision of Nearctic *Tachysphex*); Spofford and Kurczewski, 1992:997 (species of miltogrammine parasites listed); Kurczewski, 1998c:242 (current and past distribution, imperiled status, protection recommendations), 2000a:1 (postulated postpleistocene history and current distribution in southern Ontario), 2000b:41 (first record from Indiana: Porter County: Township of Pine); Skevington et al., 2001:128 (Canada: Ontario: Lambton County); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada), 74 (Ontario: additional localities); Moan and Tramer, 2008:67 (ecological observations); Kurczewski, 2008a:1 (geographic distribution and paleobiogeography), 2008b:33 (nesting habits).

### 297. *pectinatus* Pulawski

*Tachysphex pectinatus* Pulawski, 1974a:69, ♀, ♂. Holotype: ♀, Argentina: Chubut: 13 km N Puerto Madryn (UCD). – R. Bohart and Menke, 1976:275 (listed); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

### 298. *pekingensis* Tsuneki

*Tachysphex pekingensis* Tsuneki, 1971m:24, ♀. Holotype: ♀, China: Peking (originally K. Tsuneki coll., now USNM). – R. Bohart and Menke, 1976:275 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM).

### 299. *pentheri* Cameron

*Tachysphex pentheri* Cameron, 1905f:212, ♂ (as *Pentheri*, incorrect original capitalization). Lectotype: ♂, South Africa: Cape Province: Grahamstown (AMG according to original description, now TMP), designated by Pulawski, 2007a:482. – Arnold, 1923a:176 (a variety of *panzeri*, but owing to the loss of the type the status of the species cannot be settled), 175 (listed), 176 (original description copied), 1930:4 (in checklist of Afrotropical Sphecidae); Seyoum and Pulawski, 2001:324 (potential control agent of acridid pests in Ethiopia; numerous locality records from Harerge and Sidamo provinces); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:482 (in revision of African *Tachysphex*). – **As *Tachysphex panzeri pentheri***: R. Bohart and Menke, 1976:275 (new status, listed); Gess, 1981:20 (South Africa: Cape Province: 18 km WNW Grahamstown; nesting in friable soils).

*Tachysphex Panzeri* var. *nanus* Arnold, 1924:71, ♀, ♂. Lectotype: ♂, South Africa: Eastern Cape Province: Willowmore (TMP). Synonymized with *Tachysphex pentheri* by Pulawski, 2007a:482. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex panzeri nanus***: R. Bohart and Menke, 1976:275 (new status; listed).

As *Tachysphex panzeri* var. *caliban* (♀ only): Arnold, 1923:169, corrected to *Tachysphex pentheri* bt Pulawski, 2007a:482.

*Tachysphex Panzeri* var. *zavattarii* Guiglia, 1939:74, ♀ (as *Zavattarii*, incorrect original capitalization). Holotype: ♀, Ethiopia: Sidamo: Neghelli = Negele in Boran area (MSNG). Synonymized with *Tachysphex pentheri* by Pulawski, 2007a:458. – As *Tachysphex panzeri zavattarii*: R. Bohart and Menke, 1976:275 (new status; listed).

### 300. *perniger* Arnold

*Tachysphex perniger* Arnold, 1947:166, ♀, ♂. Lectotype: ♀, Madagascar: Antsirabe (MNHN), designated by Pulawski, 2007a:491. – Leclercq, 1960a:98 (comparison with *Tachysphex micromegas*), 99 (Madagascar); R. Bohart and Menke, 1976:275 (listed) Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

### 301. *persa* Gussakovskij

*Tachysphex persa* Gussakovskij, 1933b:285, ♀. Holotype: ♀, Iran: Kerman: Sardag: Chakh-i-Zaman (ZIN). – Pulawski, 1971:328 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel); R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:113, 125 (in key to Sphecidae of Kazakhstan and Central Asia); Hensen and van Ooijen, 1987:14 (Turkey); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:73 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:272 (Turkey: references to Pulawski, 1971 and Hensen and van Ooijen, 1987, as *persa persa*); Ljubomirov and Yildirim, 2008:216 (in catalog of Crabronidae of Turkey).

### *ssp. catharinae* Pulawski

*Tachysphex catharinae* Pulawski, 1964:86, ♀, ♂. Holotype: ♂, Egypt: Sinai Peninsula: Saint Catherine Monastery (originally W.J. Pulawski coll., now CAS). – As *Tachysphex persa catharinae*: Pulawski, 1971:331 (new status, in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:11 (Israel; as *persa forme catharinae*); R. Bohart and Menke, 1976:275 (listed); Roche and Zalot, 1994:115 (Egypt: Sinai Peninsula).

### *ssp. confinis* Gussakovskij

*Tachysphex confinis* Gussakovskij, 1952:241, ♀, ♂. Lectotype: ♂, Tajikistan: Ayvaj (ZIN), designated by Pulawski, 1971:334. – As *Tachysphex persa confinis*: Pulawski, 1971:333 (new status, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed).

As *Tachysphex maracandicus* (corrected to *Tachysphex persa confinis* by Pulawski, 1971:409): Radoszkowski, 1886a:32 (Turkmenistan, male genitalia), 1891:590 (reference to Radoszkowski, 1886a); de Beaumont, 1936b:612 (...).

### *ssp. nigripes* Pulawski

*Tachysphex nigripes* Pulawski, 1967a:397, ♀, ♂. Holotype: ♂, Kazakhstan: Kokchetau (ZIN). Paratypes: Tajikistan, Turkey. – As *Tachysphex persa nigripes*: Pulawski, 1971:332 (new status, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); K. Schmidt and Bitsch in Bitsch et al., 2001:265 (in Sphecidae Fauna of Western Europe); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitosha near Sofia); Straka, 2005:272 (Turkey: Kayseri: 120 km S Kayseri; Kütahya: 30 km N Kuthya); Yildirim and Ljubomirov, 2005:1797 (Turkey: Konya: Sille; Niğde: Ulukışla); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Ljubomirov and Yildirim, 2008:216 (in catalog of Crabronidae of Turkey); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina).

### 302. *persistans* R. Turner

*Tachysphex persistans* R. Turner, 1916b:256, ♀. Holotype: ♀, Australia: Western Australia: Yallingup (BMNH). – R. Turner, 1916b:254 (in key); R. Bohart and Menke, 1976:275 (listed); Pulawski, 1977a:283 (in revision of Australian *Tachysphex*); Cardale, 1985:241 (in catalog of Australian Sphecidae); McCorquodale and Thomson, 1989:94 (prey: adult Blattidae).

**303. *peruanus* Pulawski**

*Tachysphex peruanus* Pulawski, 1986:95, ♀, ♂. Holotype: ♀, Peru: Lambayeneque Province: Lambayeneque (UCD). – Pulawski, 1988a:147 (in cladistic analysis); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**304. *picnic* van Ooijen**

*Tachysphex picnic* van Ooijen in Hensen and van Ooijen, 1987:15, ♀. Holotype: Turkey: Bursa: Uludag 15 km S Bursa (coll. P.D.J. van Ooijen). – Straka, 2005:270 (Turkey: reference to Hensen and van Ooijen); Ljubomirov and Yildirim, 2008:217 (in catalog of Crabronidae of Turkey).

**305. *pilosellus* Pulawski**

*Tachysphex pilosellus* Pulawski, 1971:303, ♀, ♂. Holotype: ♂, Baygakum near Chiili (Zil). Paratypes: Turkmenistan. – R. Bohart and Menke, 1976:275 (listed); Kazenas, 1978b:112, 124 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:73 (geographic distribution, collecting localities in Kazakhstan), 2008a:101 (Southeastern Kazakhstan: Ili River valley: 15 km E Ayak-Kalkan, near Dubun', and Dzhusandala Desert).

**306. *pilosulus* R. Turner**

*Tachysphex pilosulus* R. Turner, 1908:488, ♀, ♂. Lectotype: ♀, Australia: Queensland: Cape York (BMNH), designated by Pulawski, 1977a:320. – Montague, 1914:649 (Australia: Western Australia: Monte Bello Islands, identification tentative); R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:275 (listed); Evans, Matthews and Pulawski, 1976:443 (nesting habits); Pulawski, 1977a:320 (in revision of Australian *Tachysphex*); Alcock, 1980b:259 (nest, prey); Cardale, 1985:241 (in catalog of Australian Sphecidae); Naumann, 1993:186 (Australia: Queensland: Heathlands area in Cape York), 1998:186 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); Pagliano, 2003a:508 (Australia: Northern Territory and Queensland).

**307. *pinal* Pulawski**

*Tachysphex pinal* Pulawski, 1988a:81, ♀, ♂. Holotype: ♀, USA: of Arizona: Pinal County: Boyce Thompson Arboretum (CAS).

**308. *pisonoides* (Reed)**

*Larrada pisonoides* Reed, 1894:632, ♀, ♂. Lectotype: ♂, Chile: Valparaiso (MCZ), designated by Pulawski, 1974a:61. – *As Larra pisonoides*: Kohl in Dalla Torre, 1897:672 (new combination, in catalog of world Hymenoptera). – *As Tachysphex pisonoides*: Herbst, 1921c:114 (new combination); Jaffuel and Piri6n, 1926:376 (Chile: valle de Marga Marga); Janvier, 1928:95 (nesting habits, larvae of Hemiptera recorded as prey, almost certainly in error); Gazulla and Ruiz Pereira, 1929:300 (Chile: Hacienda de "Las Mercedes"); Pulawski, 1974a:61 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:275 (listed); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**309. *pisonopsis* Pulawski**

*Tachysphex pisonopsis* Pulawski, 1974a:59, ♀, ♂. Holotype: ♀, Chile: Valparaiso: Valparaiso (MCZ). – R. Bohart and Menke, 1976:275 (listed); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**310. *platypus* Pulawski**

*Tachysphex platypus* Pulawski, 1977a:253, ♀. Holotype: ♀, Australia: Western Australia: Marchagee (ANIC). – Cardale, 1985:242 (in catalog of Australian Sphecidae).

**311. *platystethus* Pulawski**

*Tachysphex platystethus* Pulawski, 2007a: 493, ♀, ♂. Holotype: ♀, Madagascar: Toliara (= Tuléar) Province: 12 km SE Toliara at 23°25'S 43°45'E (CAS).

**312. *pleuralis* Pulawski**

*Tachysphex pleuralis* Pulawski, 1977a:279, ♂. Holotype: ♂, Australia: Northern Territory: McArthur River 48 km SSE Borrooloola (ANIC). – Cardale, 1985:242 (in catalog of Australian Sphecidae).

**313. *plicosus* (A. Costa)**

*Tachytes pilicosus* A. Costa 1867b:83 and 1867c:27, ♀ (as *plicosus*, incorrect original termination). Holotype: ♀, Italy, Calabria: vallata dell'Aspromonte (NAPOLI). – **As *Tachysphex pilicosus***: Kohl, 1885a:396 (new combination, original description copied); Dalla Torre, 1897:684 (in catalog of world Hymenoptera); de Beaumont, 1936a:211 (*plicosus* is the valid name for *gallicus*), 1936c:7 (study of Costa's specimens); Giordani Soika, 1939b:73 (Italy: Lido di Venezia); de Beaumont, 1940b:174 (in revision of *Tachysphex* of Egypt); Honoré, 1942 (55 (Egypt); Guiglia, 1943b:71 (Albania: Kopluku); de Beaumont, 1947a:203 (in new revision of *Tachysphex* of Egypt), 1954a:58 (Italy); Grandi, 1954:240 (Italy); de Beaumont, 1959a:28 (Italy: Sicilia: Monte Etna); Pulawski, 1971:258 (in revision of Palearctic *Tachysphex*); Erlandsson, 1974:73 (France, Yugoslavia); Evans, 1974:719 (larva); Pulawski, 1974c:715 (Bulgaria, nest and prey); R. Bohart and Menke, 1976:276 (listed); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Pagliano, 1980:128 (Italy: Abruzzo); Rodgers and Homewood, 1982:234 (Tanzania: Usambara Mountains); Hensen and van Ooijen, 1987:16 (Turkey); Pagliano, 1990:105 (in catalog of Italian Sphecidae); Dollfuss, 1991:107 (in key to Sphecidae of North and Central Europe); Gayubo and Borsato, 1994:208 (Italy: Piemonte); Krombein and Pulawski, 1994:11 (nesting habits), 43 (in revision of Sri Lankan *Tachysphex*); Negrisolino in Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); K. Schmidt and Bitsch in Bitsch et al., 2001:266 (in Sphecid Fauna of Western Europe); Gayubo, González, Tormos, and Asís, 2002:86 (distribution in Iberian Peninsula); Drewes, 2003:142 (Croatia: Mošćenicka Draga); Pagliano and Negrisolino, 2005:374 (in Sphecid Fauna of Italy); Straka, 2005:270 (Turkey: reference to Pulawski, 1971, and Hensen and van Ooijen, 1987); Gayubo, González, de la Nuez, Asís, and Tormos, 2006:208 (Spain: Madrid: Tres Cantos; Salamanca: Saucelle; Sevilla: Cazalla de la Sierra); Pulawski, 2007a:495 (in revision of African *Tachysphex*); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 142 (detailed list of localities); Ljubomirov and Yildirim, 2008:217 (in catalog of Crabronidae of Turkey); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

*Tachytes pilicosus* A. Costa 1867c: 27, ♀ (as *plicosus*, incorrect original termination). Objective synonym of *Tachytes pilicosus* A. Costa, 1867a.

*Tachysphex gallicus* Kohl, 1883a:167, ♀ (as *gallica*, incorrect original termination). Syntypes: ♀, France: Marseille (NHMW). Synonymized with *Tachysphex pilicosus* by de Beaumont, 1936a:211 and 1936c:7. – Kohl, 1885a:349 (in key to Palearctic *Tachysphex*), 377 (in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:680 (in catalog of world Hymenoptera); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Berland, 1925b:119 (in Sphecid Fauna of France); de Beaumont, 1936a:211 (revision); Grandi, 1937:332 (Italy); Balthasar, 1972:274 (in Sphecid Fauna of Czechoslovakia: can be expected in the country); Dollfuss, 1989:13 (type material in NHMW).

*Tachysphex striolatus* Cameron, 1903b:126, ♀ (as *striolata*, incorrect original termination). Holotype or syntypes: ♀, India: Barrackpore 20 km N Calcutta (OXUM). Synonymized with *Tachysphex pilicosus* by Pulawski, 1971:460. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897).

*Tachysphex egregius* Arnold, 1924:66, ♂. Holotype: ♂, Zimbabwe: Bulawayo (TMP). Synonymized with *Tachysphex pilicosus* by Pulawski in Krombein and Pulawski, 1994:44. – Arnold, 19303 (in checklist of Afrotropical Sphecidae), 1929c:384 (description of ♀, South Africa: Cape Province: Lady Gray), 1951:155 (Ghana: Labadi; Mali: Tillembeya); R. Bohart and Menke, 1976:273 (listed).



**314. *politus* Pulawski**

*Tachysphex politus* Pulawski, 1977a:277, ♀. Holotype: ♀, Australia: New South Wales: 40 mi N Broken Hill (ANIC). – Cardale, 1985:242 (in catalog of Australian Sphecidae).

**315. *pompiliformis* (Panzer)**

*Larra pompiliformis* Panzer, 1805:pl. 13, ♀. Holotype: ♀, Germany: no specific locality (Zool. Samml. Bayer. Staates, Munich, Germany). – Jurine, 1807:145 (in reclassification of Hymenoptera and Diptera); Spinola, 1808:173 (Italy: Genova area). – **As *Tachytes pompiliformis***: Vander Linden, 1829:23 (new combination, bibliographic references, Belgium: Bruxelles, Germany, Italy, variation); Shuckard, 1837a:89 (in revision of British Aculeata); von Siebold, 1839:48 (Germany: Danzig, now Poland: Gdańsk); Herrich-Schaeffer, 1840:297 (Germany: Bayern: Regensburg area); Dahlbom, 1843:130 (in revision of Sphecidae and Pompilidae), 1845:469 (in key); Lepeletier de Saint Fargeau, 1845:252 (in revision of world Hymenoptera); F. Smith, 1849a:2373 (Great Britain: Devonshire), 1856:295 (in catalog of Hymenoptera in British Museum); Schenck, 1857:195 (in revision of fossorial wasps of Germany); Taschenberg, 1858:84 (in key to Sphecidae of Germany), 1866:201 (in revision of Hymenoptera of Germany); A. Costa, 1867b:85 and 1867c:28 (in revision of Italian Sphecidae); Kirchner, 1867:216 (in catalog of European Hymenoptera); Schenck, 1867a:356 (known from Germany); Taschenberg, 1870:111 (Germany: Halle); Lichtensteni, 1873:CXXII (nesting in ground, prey: *Chortippus* spp., an acridid); H. Müller, 1873:466 (the name *Sphex pectinipes*, actually a pompilid, is incorrectly used for this species); Dours, 1874:139 (in catalog of Hymenoptera of France); Marquet, 1875:203 (France: Languedoc); Radoszkowski, 1876b:135 (Egypt, record certainly incorrect), 1877:25 (Uzbekistan: Samarkand; Kazakhstan: Karak near Bairakum); Girard, 1879:954 (morphology and habits); Gribodo, 1881a:74 (Italy: Calabria: Castello di Palizzi); W.F. Kirby, 1884a:408 (Cape Verde Islands: St. Vincent; may actually be *Tachysphex lindbergi*); Radoszkowski, 1892:590 (reference to Radoszkowski, 1886:fig. 30); Baldini, 1894:63 (Italy: Modena area); Acloque, 1897:93 (in Sphecid Fauna of France and Algeria); Cuní y Martorell, 1897:331 (Spain: Cataluña: villa de Calella). – **As *Lyrope pompiliformis***: Casolari and Casolari Moreno, 1980:113 (new combination, specimens in M. Spinola collection, Torino); Pagliano, 2008:548, 549 (specimens in M. Spinola collection, Torino). – **As *Tachysphex pompiliformis***: Kohl, 1885:388 (new combination, as synonym of *T. pectinipes* of Kohl); Dalla Torre, 1897:683 (in catalog of world Hymenoptera); Hémon, 1926:199 (France: Finistère: Fouesnant); Richards, 1935:163 (*Sphex pectinipes*, a pompilid, is incorrectly used for this species); Guichard, 1938:72 (Great Britain: Norfolk coast), 1939a:42 (Great Britain: southern Cornwall: Polperro); de Graham, 1941:99 (Great Britain: Lincolnshire); J. Perkins, 1942:200 (Sweden: southern Skåne); Spooner, 1942:110 (Great Britain: Bedfordshire: Warren); Boyd, 1943:162 (Great Britain: eastern Dorset); Spooner, 1943:70 (Great Britain); de Beaumont, 1947a:203 (records from Egypt questionable; in new revision of *Tachysphex* of Egypt); Guichard and Yarrow, 1948:89 (Great Britain: London: Hampstead Heath); Leclercq, 1948:205 (*Tachysphex pompiliformis* is the correct name, not *pectinipes*); de Andrade, 1949:16 (Portugal: Serra da Cabreira); Chambers, 1949:223 (Great Britain: Bedfordshire); Cavo, 1950:35 (France: Département du Nord); Richards, 1950:79 (Great Britain: Wales: Pembrokeshire: Cwm-yr-Eglwys); de Beaumont, 1951h:33 (Switzerland: Neuchâtel area); Richards, 1952:142 (Great Britain: Anglesea); Nouvel and Ribaut, 1953:178 (France: Haute-Garonne: Saint-Béat, Hautes-Pyrénées: Cautejets, Orédon); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg); de Beaumont, 1954a:61 (Italy), 1954e:91 (Italy); Grandi, 1954:179 (prey: *Chortippus* sp.), 240 (Italy); de Beaumont, 1955a:186 (Morocco); Steiner, 1955:138 (France: Dordogne); Aerts, 1955:63 (Germany: Rheinland); Leclercq, 1956i:132 (Luxembourg); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales); Grandi, 1957:346 (prey: *Stenobothrus lineatus* Panzer), 389 (Italy), 390 (Italy: Abruzzi; ssp.?.); Yeo, 1957:19 (Great Britain: Middlesex, now in London); Benno, 1958b:12 (in review of Dutch Sphecidae); de Beaumont, 1958c:205 (Swiss National Park); Nouvel and Ribaut, 1958:14 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958a:180 (Bulgaria: Kniazhevo near Sofia, Kurilo); Ceballos, 1959:229 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1959a:28

(Italy); Diniz, 1959:29 (Portugal: Serra da Cabreira); Suárez, 1959:58 (Spain: Almería Province); Wolf, 1959b:24 (Germany: Nassau); Noskiewicz and Puławski, 1960:123, 125 (in key to Polish Sphecidae); Grandi, 1961:207 (nesting habits), 505 (larva); Hoop, 1961:66 (Germany: Schleswig-Holstein); de Beaumont, 1962b:26 (Spain); Grandi, 1962:96 (Italy); Mal'kovskiy, 1962:342 (reducing populations of the grasshopper *Doclostaurus kraussi* Ingen in Mangyshlak Peninsula, Kazakhstan); Valkeila, 1962b:66 (southwestern Finland); Erlandsson, 1963:66 (Denmark: Bornholm Island); Felton, 1963:177 (Great Britain: Kent County); Hoop, 1963a:73 (Germany: Schleswig-Holstein: Reher Kratt); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:76 (in Sphecid Fauna of Switzerland); Diniz, 1964a:6 (Portugal: eleven localities); Evans, 1964b:289 (discussion of Grandi's, 1961, description of larva); Valkeila, Brander, and Kämpylä, 1964:75 (Finland: Southern Finland: Forssa, Näyte, Tammela); de Beaumont, 1965a:49 (Greece); Kazenas, 1964:108 (Kazakhstan: Mangyshlak, preying on *Doclostaurus kraussi* Ingen); Bonelli, 1966b:20 (nesting habits), 1966c:218 (Italy: Trentino–Alto Adige: five localities); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg); J. Heinrich, 1967:75 (Germany: Bayern: Unterfranken District); Pulawski, 1967a:401 (Turkey); Scobiola-Palade, 1967b:42 (Romania); Yarrow, 1967:63 (Great Britain: Cornwall: Isles of Scilly); Bonelli, 1968b:50 (Italy: Trentino–Alto Adige: Castello di Fiemme, Cavalese); Leclercq, 1968b:39 (Great Britain: Kent); Parré, 1968:123 (Germany: Sachsen-Anhalt: Staßfurt); Scobiola-Palade, 1968b:142 (Romania: Island of Letea in delta of Danube), 1968c:385 (Romania: Bucureşti, Budeşti, Giurgiu); Wolf, 1968:11 (Germany: Nordrhein-Westfalen: Siegen, inhabitant of forest edge); Bonelli, 1969d:50 (nesting habits); Romanova, 1969:134 (Russia: North Caucasus); Zangheri, 1969:1703 (Italy: in catalog of flora and fauna of Romagna Region); Babiş, 1970:19 (Austria: *pompiliformis* is the correct name for *pectinipes*); Gauss and Perraudin, 1970:360 (Germany: Baden-Württemberg: Bodensee area); Hoop, 1970:60 (Germany: Schleswig-Holstein: Wendtorfer sluice); Leclercq, 1970c:map 31 (distribution in Belgium); Lefeber and Petit, 1970:130 (Belgium: Plombières); Oehlke, 1970:714 (Democratic Germany); Dathe, 1971:234 (Germany: Berlin Zoological Garden; phenology); Königsmann, 1971:107 (Spain: Gerona: Palamós); Leclercq, 1970:map 31 (distribution in Belgium); Pulawski, 1971:62 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:35 (Germany: Mainz area); Stritt, 1971a:104 (Germany: Baden-Württemberg: Karlsruhe); Tsuneki, 1971m:24 (China: Inner Mongolia: Apaka); Wolf, 1971:374 (Italy: Trentino–Alto Adige: Alpi Siusi); Haeseler, 1972:155, 170, 200 (Germany: Schleswig-Holstein; antropogenic habitats); Kofler, 1972:107 (Austria: eastern Tirol); Lomholdt, 1972:122 (Denmark: Læsø Island); Myartseva, 1972a:79 (Turkmenistan); Oehlke, 1972:137 (Germany: Hiddensee Island); Scobiola-Palade, 1972:150 (Romania: delta of Danube: Caraorman); Tsuneki, 1972e:383 (Mongolia); Simon Thomas, 1972:182 (France); Wolf, 1973:41 (Germany: Siegerländer Hüttensand); Erlandsson, 1974:73 (Italy, Spain); Frilli and Pizzaghi, 1975:76 (Italy: Carpaneto in Piacenza Province); Lefeber, 1975b:120 (Netherlands: Schiepersberg); Lomholdt, 1975b:31 (Denmark: Anholt Island); R. Bohart and Menke, 1976:276 (listed); Haeseler, 1976b:72 (Germany: Friesian Islands: Amrum Island); Leclercq, Gaspar, Lajoinie, and Thirion, 1976:178 (Belgium: Chaumont-Gistoux); Lomholdt, 1976:248 (in Sphecid Fauna of Fennoscandia and Denmark); Merisuo, 1976b:212 (female with abnormal midfemur); Simon Thomas, 1976:5 (France: Lot-et-Garonne); Simon Thomas and Wiering, 1976:109 (Netherlands); Guichard, 1977:252 (Great Britain: Surrey); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Schmidt, 1977:96 (Germany: Schwarzwald); Guichard, 1978:271 (Greece); Marion, 1978:88 (France: Nièvre Department); Petit, 1978:86 (Belgium: Vance); Pulawski, 1978:217, 221 (in key to Sphecidae of European part of former USSR); Schmidt, 1977/78:55 (Germany); Haeseler, 1978b:63 (Germany: Niedersachsen: a bog near Oldenburg), 1978c:195 (Germany: Friesian Islands: Borkum Island); Kazenas, 1978b:120, 135 (in key to Sphecidae of Kazakhstan and Central Asia); Schwammlberger, 1978:417 (Germany: Württemberg); Benedek, 1979:231 (Hungary: Bakony Hills); Lefeber, 1979:12 (in checklist of Sphecidae of Netherlands), 74 (Netherlands: distribution map); Richards, 1979:397 (British Channel Islands); Schwammlberger, 1979:115 (Germany: Nordrhein-Westfalen: Gildehauser Venn Nature Reserve); Jacob-Remacle and Leclercq, 1980:193 (Belgium: gardens in Liège); Kazenas, 1980e:89 (Russia: Primorskiy Krai); Pagliano, 1980:127 (Italy: Piemonte); Petit, 1980:43 (Belgium: Saeftinge, Côte St.-

Germain; Luxembourg: Boulaide, Helmsange, Hoscheid, Lipperscheid, Pintsch, Rospsort, Rumelange); Richards, 1980:43, 44 (in key to Sphecidae of British Isles); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Haeseler, 1981:52 (Germany: Friesian Island: Amrum Island); Nelson, 1981:145 (Great Britain: Isle of Man); Schmidt, 1981:162, 164, 170, 185, 202 (Germany: Baden-Württemberg); Woydak, 1981:41 (Germany: Westfalen: Hamm); Haeseler, 1981:52 (Germany: Amrum Island); Nelson, 1981:145 (Great Britain: Isle of Man); Axelsson, 1982:79 (Sweden); Gayubo, 1982a:106 (N Spain: Sierra de Béjar), 1982f:253 (Spain: Cádiz Province: Zahora); Leclercq, 1982a:124 (Belgium: Liège); Donath, 1982:213 (Germany: Cottbus Bezirk); Skibińska, 1982:120, 123 (Poland: Mazovian Voivodship: Wola Mrokowska); Tsuneki, 1982b:15 (North Korea: Hakugan); Dollfuss, 1983b:10 (in catalog of Sphecidae of Austria); Józán, 1983:99 (Hungary); Lefeber, 1983a:84 (Netherlands: Waddendistrict: northern coast sand dunes and Western Friesian Islands); Riemann, 1983:84 (Germany: Bremen-Daverden area); Schmidt and Westrich, 1983:123 (Greece); Steinmann, 1983:164 (Switzerland: Graubünden Canton, nesting next to wood buildings); Archer, 1984:25 (Great Britain: York); Gayubo, 1984b:86 (Spain: Salamanca Province), 1984c:366 (Portugal: El Algarve Province); Haack, Tscharrntke, and Vidal, 1984:133 (Germany: Hamburg area); Janzon and Svensson, 1984:183 (Sweden: Öland Island); Lefeber, 1984:29 (Netherlands: Maastricht); Schmidt and Westrich, 1984:240 (Germany: Rheinland-Pfalz: Bad Münster); Veenendaal, 1984 (Netherlands: Amsterdam); Archer, 1985d:50 (Great Britain: Yorkshire: Pomporcali near Leeds); Haeseler, 1985c:571 (Germany: Friesian Islands); Józán, 1985a:181 (Hungary), 1985b:57 (Hungary S Lake Balaton), 78 (floral records), 83 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Scobiola-Palade, 1985:96 (Romania: delta of Danube); Brechtel, 1986:60 (Germany: Südpfalz: Lauterwiesen); Gayubo, 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:43 (Spain: Segovia Province); Gayubo and Sanza, 1986:48 (Spain: Segovia); Gayubo and Tormos, 1986a:17 (Spain: Castellón de la Plana); Islamov, 1986:526 (Uzbekistan: Tashkent Oblast'); Józán, 1986:370 (Hungary: Kiskunság National Park); Nemkov, 1986:97 (Russia: Siberia: Irkutsk Oblast'); Skibińska, 1986b:160 (Poland: Warszawa: gardens); Hensen and van Ooijen, 1987:16 (Turkey); Vikberg, 1986:76 (Finland); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Lomholdt, 1987:93 (Denmark: western Jutland: Skallingen Peninsula); Packer, 1987:37 (Great Britain: Isle of Wight); Riemann, 1987a:340 (Germany: Niedersachsen: Bremen area), 1987b:45 (Germany: Niedersachsen: Nature Reserve Voßberge); Schmidt and Westrich, 1987:364 (Germany: Mainz area); Archer, 1988b:27 (Great Britain: Yorkshire: Strensall Common); Asís and Jiménez, 1988:272 (Spain: Castellón Province); Chevin, 1988:15 (France: La Manche Department); Dollfuss, 1988:12, 24 (Austria: Bisamberg near Vienna; Niederösterreich: Oberweiden); Gayubo and Mingo, 1988:81 (Spain); Haeseler, 1988:211 (Germany: Friesian Islands); Karsai, 1988:100 (Hungary: Kiskunság National Park); Kowalczyk, 1988a:45 (Poland: Rogów), 1988b:65 (Poland: environs of Łódź); Kurczewski and O'Brien, 1988:173 (nesting habits); Pulawski, 1988a:20 (in revision of Nearctic *Tachysphex*); Riemann, 1988:223 (Germany: Bremen area); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Archer, 1989a:131, 133 (Great Britain: York: found before and after coniferization); Jacobs, 1989:12 (Germany: Mecklenburg-Vorpommern); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:95 (Belarus': Berezinskiy Nature Reserve); Weiffenbach, 1989:107 (Germany: Hessen: Gießen area); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Jacobs and Gayubo, Asís, and Tormos, 1990a:18 (Spain); Kuznetzova, 1990:20 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Nash, Boston, and Nelson, 1990:248 (Ireland: Down County); Oehlke, 1990:165 (new records from Democratic Germany); Pagliano, 1990:105 (in catalog of Italian Sphecidae); Rohe, 1990:1050 (Germany: Rheinland-Pfalz: Lenneberg forest); Schwammberger and Priesner, 1990:540 (Austria: Kärnten); von der Heide and Witt, 1990:64 (Germany: Niedersachsen); Dollfuss, 1991:107 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:403 (Italy); Jacobs, 1991:46 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtalidünen); Jakubzik, 1991:75 (Germany: Köln); Józán, 1991:603 (Hungary: Bátorliget Nature Reserve); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on three species of acridids); Kowalczyk, 1991a:90, 97, 99, 102, 105, 107 (Poland: Łódź), 1991b:120 (Poland: Augustów Forest); Kuhlmann et al., 1991:92

(Germany: Senne Region); Negrisolo, 1991:318 (Italy: Venezia Province); H.-J. Schulz, 1991:31 (Germany: Oberlausitz: 5 km SW Wittichenau); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Gayubo, Borsato, and Osella, 1992:282 (France, Greece); Józán, 1992a:229 (Hungary: Béda-Karapanca Protected Area), 1992b:173 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Nemkov, 1992b:245 (Russia: Far East: 40 km SSW Svobodnyi near Khingan Nature Reserve); N. Schneider, 1992:179 (Luxembourg); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Wolf, 1992a:29 (a gynandromorph); Archer, 1993a:45 (Great Britain: Channel Islands); Gorobchishin, 1993:46 (Ukraine: Kanev Nature Reserve); Kuhlmann, 1993:76 (Germany: known from Westfalen); Luig, 1993:44 (Estonia); Simon Thomas and Wiering, 1993:405 (Kirby's 1884 record from Cabe Verde Islands is probably in error); Sorg and Wolf, 1993:60 (Germany: Rheinland-Westfalen: Nature Reserve Die Spey); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Wiśniowski, 1993a:97 (Poland: in checklist of Sphecidae of Białowieża Primeval Forest); Gayubo and Borsato, 1994:209 (Italy: Veneto); Kowalczyk, 1994:74 (Poland: Łagiewniki forest in Łódź); Theunert, 1994c:51 (summary of records from Niedersachsen and Bremen, Germany); Tormos, Asís, and Gayubo, 1994:188, 207 (Spain: Albacete Province); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Archer, 1995a:23 (Great Britain: Yorkshire: frequency); Gorobchishin, 1995:17 (Ukraine: Kanev Nature Reserve); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Negrisolo, 1995a:23 (Italy: Veneto); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:410, 412 (in key to Sphecidae of Russian Far East); Papp and Józán, 1995:146 (Hungary: Sikfökút oak forest); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:24 (Germany: Bayern: Aschaffenburg, Kahl, Karlstadt, Lohr, Obernau); Schmid-Egger, Risch, and Niehuis, 1995:212 (summary of records from Germany: Rheinland-Pfalz Province); Shlyakhtenok, 1995:194 (Belarus: Berezinsky Nature Reserve); Skibińska, 1995:423, 425 (Poland: pine forest in Białowieża Primeval Forest); Archer, 1996a:58 (Great Britain: Channel Islands); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Blösch, 1996:4 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Doronin, 1996:18 (Latvia: Riga, nest parasitized by *Euchrum roseum* Rossi, a chrysidid); Flügel, 1996:524 (Germany: Freizeitpark Marienfelde S Berlin); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Harvey and Plant, 1996:68 (Great Britain: summary of records from Essex); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996b:401 (Germany: Rheinland-Pfalz); Minoranskiy and Shkuratov, 1996:81 (Russia: Rostov Oblast'); Pawlikowski and Kruszyński, 1996:87 (Poland: Toruń Basin); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: not endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Woydak, 1996:39 (Germany: Westfalen: summary of distribution and nesting habits); Wu and Zhou, 1996a:89 (in revision in Economic Insect Fauna of China); Archer, 1997a:49 (Great Britain: Yorkshire: Cave Wold); Celary, 1997:58 (in checklist of Animals of Poland); Fimmamore, 1997:888 (Canada: Yukon); Petit, 1997:351 (Belgium: Liège Province: Lanaye: colonization of new habitat); Riemann, 1997:50 (Germany: Achim 14 km SE Bremen); Schmidt and Schmid-Egger, 1997:30 (in checklist of German Sphecidae); Stoyanov and Ljubomirov, 1997:26 (Bulgaria: Rila Mountains); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km WSW Hamburg); Flügel, 1998:61 (Germany: Brandenburg: Unteres Odertal National Park); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Haeseler and Ritzau, 1998:51 (Germany: Bremen: Harriersand Island in Weser River and Steller Heide); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); Lefebvre, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); Mauss and Schindler, 1998:136 (Germany: Schleswig-Holstein: Nordfriesland District); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); van der Smissen, 1998:69 (Germany: Mecklenburg-Vorpommern, Niedersachsen, Schleswig-Holstein); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); Archer, 1999a:9 (Great Britain: Lancashire); Cölln and Jakubzik, 1999:29 (Germany: Rheinland-Pfalz: Keuper-Scharren SW Hungerburg); Er-

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power lines); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wiśniowski *in* Dylewska and Wiśniowski, 2003:151 (Poland: Ojców National Park); Archer, 2004:47 (Great Britain: Worcestershire: Devils Spittleful Nature Reserve); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada); Dorow, 2004a:127 (Germany: Hessen: Schönbuche Nature Reserve); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Hellrigl, 2004a:174 (Italy: Trentino-Alto Adige, as Südtirol: Vinschgau = Val Venosta: Schlanders); Jakubzik, Niehuis, and Cölln, 2004:458 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Salzmann-Wandeler and Rezbanyai-Reser, 2004:27 (central Switzerland); Straka, 2004:1109 (comparison with *Tachysphex austriacus*); Schneider and Carrières, 2004:98 (Luxemburg: Bon-Pays Region); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Szczepko and Kowalczyk, 2004:126 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Beavis, 2005:194 (Great Britain: Islands of Scilly); Blösch, 2005:4 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Dubitzky, Blank, and Schöntzer, 2005:276 (Germany: Bayern: area north of Dachau); Ebrahimi, 2005:123 (in key to selected Iranian Sphecidae); Fuhrmann, 2005:89 (Germany: Nordrhein-Westfalen: Grubengelände Littfeld Nature Reserve); Gregory and Wright, 2005:140 (Great Britain: Shotover Hill 5 km E Oxford); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Jacobs, 2005a:452 (Bulgaria); Jakubzik and Cölln, 2005:63 (Germany: Rheinland-Pfalz: Bausenberg near Niederzissen); Kofler, 2005:173 (Austria: Tirol: Lienz District: several localities); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Nazarova, 2005:93 (alfalfa fields in southwestern Tajikistan); Nemkov, 2005a:147 (Russia: Sakhalin Island); Pagliano and Negrisola, 2005:379 (in Sphecidae Fauna of Italy); Riemann and Hohmann, 2005:566 (Germany: Niedersachsen: city of Bremen and adjacent area); Shorenko, 2005a:164 (Ukraine: Crimea), 2005b:98 (Ukraine: Crimea: Karadagh Nature Reserve); Straka, 2005:261 (Turkey: five localities); Theunert, 2005a:19 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Yildirim and Ljubomirov, 2005:1797 (Turkey); Archer, 2006a:20 (Great Britain: Lincolnshire: Rauceby Warren Nature Reserve), 2006c:217 (Great Britain: Staffordshire: Highgate Common); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); Gadoum and Barbier, 2006:42 (France: départements of Val-d'Oise and Yvelines: Parc Naturel Régional du Vexin Français: Guernes); Hua, 2006:283 (in list of Chinese insects, geographic distribution); Magdalou, 2006a:7, 10 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane), 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Baños-Picón, Gayubo, Asís, and González, 2007a:256, 258 (Spain: Zamora: Cabañas de Aliste); Archer, 2007a:151 (Great Britain: Norfolk: Thetford Warren Lodge), 2007c:152 (Great Britain: South Devon coast); Vepřek, 2006:511 (Czech Republic: Kokořínsko area); Dorow, 2007:263 (Germany: Hessen: Niddahänge Forest Reserve); Guldmond, Pijfers, and den Belder, 2007:203 (Netherlands: Gelderland: dairy farm in de Graafschap); Jacobs, 2007:96, 100 (in key to Crabronidae of Germany); Kazenas, 2007a:91 (Kazakhstan: Akkala Oblast': Kurgandzhin Nature Reserve and vicinity); Kowalczyk and Nadolski, 2007:284 (Łódź: railway areas); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Venne, Bleidorn, and Lauterbach, 2007:303 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia); Yildirim and Ljubomirov, 2007:120 (Turkey: Erzurum: Aşkale, Pınakapan, and Pasinler); Archer, 2008a:144 (Great Britain: Cumbria: North Walney Nature Reserve, Sandscale Haws, and Lindisfarne Nature Reserve); Danilov, 2008:349 (Russia: Altayskiy Krai: Barnaul area); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Haeseler, 2008:309 (Germany: Friesian Islands); Kazenas, 2008b:112 (Kazakhstan: foothills of Zailiskiy Alatau: sometimes found on loess cliffs); Ljubomirov and Yildirim, 2008:217 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia);

Archer, 2009:24 (Great Britain: Yorkshire: Sheffield); Donie, 2009:10 (Germany: Niedersachsen: Oldenburg); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Nemkov, 2009b:79 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:237 (Russia: Primorskiy Krai: Lazovsky Nature Reserve); Pagliano, 2009:184 (Italy: Sardegna: lake Baratz; France: Corse: Cargese); Archer, 2010:52 (Great Britain: Watsonian Nottinghamshire: Spalford Warren); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: relatively common).

*Tachytes nigripennis* Spinola, 1808:260, ♀. Holotype or syntypes: ♀, Italy: "prope Genuam" (lost: de Beaumont, 1952e:44). Synonymized with *Tachysphex pompiliformis* by Pulawski, 1971:62. – Vander Linden, 1829:22 (bibliographic references, Italy: Genova); Dahlbom, 1843:126 (in revision of Sphecidae and Pompilidae), 1845:470 (in key); F. Smith, 1856:296 (in catalog of Hymenoptera in British Museum); Ruthe and Stein, 1857:313 (Germany: Berlin area); Schenck, 1857:194 (in revision of fossorial wasps of Germany); A. Costa, 1858:19 (Italy: Campania: Monti Partenii in Benevento Region); Taschenberg, 1858:84 (in key to Sphecidae of Germany); Brischke, 1862:100 (Germany: Preussen Province, now Poland: Pomorze Region); Taschenberg, 1866:201 (in revision of Hymenoptera of Germany); nec Costa, 1867b:85 and 1867c:29 (= *Tachysphex coriaceus*); Kirchner, 1867:216 (in catalog of European Hymenoptera); Schenck, 1867a:356 (known from Germany); Dours, 1874:139 (in catalog of Hymenoptera of France); Brischke, 1888b:97 (Germany: Preussen Province, now Poland: Pomorze Region); Dalla Torre, 1897:692 (in catalog of world Hymenoptera); von Heyden, 1905:81 (Germany: Hessen: Frankfurt); de Beaumont, 1952e:44 (not found in the Spinola collection, Torino). – **As *Tachysphex nigripennis***: Kohl, 1883e:671 (new combination, Switzerland), 1885a:353 and 355 (in key to Palearctic *Tachysphex*), 389 (in revision of Palearctic *Tachysphex*); Gasperini, 1887:16 (recorded from Dalmatia, now Croatia, by Kohl, 1885a); Dalla Torre, 1897:681 (in catalog of world Hymenoptera); Ferton, 1901a:100 (prey), 1901b:680 (found in Marseille area, France, but not in Corsica); Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); Kubes, 1905:85 (Czech Republic: Kolín); W. Schulz, 1905b:45 (Algeria: no specific locality); Schmiedeknecht, 1907:233, 234 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (listed from Spain); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); W. Schulz, 1911a:68 (Schenck's material of 1857:194 not found in Zool. Mus. Marburg Univ.); Birula, 1912:543 (Ukraine: Zhytomyr Oblast': Radomyshl'); Schirmer, 1912:167 (Germany: Berlin area); Torka, 1913:35 (Germany: Provinz Posen, now Poland: Poznań Region); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); A. Wagner, 1920:39 (Germany: Lower Elbe region, not found but can be expected); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Ferton, 1923:333 (known from continental France but not found in Corsica); Berland, 1925d:122 (in Sphecid Fauna of France); Bischoff, 1925:301 (Latvia: Wezkukkul); Schmiedeknecht, 1930:694, 695 (in keys to Hymenoptera of North and Central Europe); Guiglia, 1932d:475 (Libya: Gialo); Balles, 1934:20 (Germany: Baden-Württemberg: Achern, Fautenbach, Gamshurst, Oberachern, Ortenberg); Giner Marí, 1934:133 (Spain); Grandi, 1934:129 (Italy: Toscana: Taviano); Guiglia, 1934b:304 (Libya: bibliography and summary of locality records); Bernard, 1935:65 (France: Var: Fréjus area); de Beaumont, 1936a:203 (in revision of French *Tachysphex*); Goebel, 1937:42 (Poland: Poznań District: Poznań-Dębina, Strzeszyn); Zavadil, Šusterka, and Bat'a, 1937:203 (in catalog of Sphecidae of Czechoslovakia); Koornneeff, 1939:130 (Netherlands: Rhenen, misspelled *nigricornis*, comparison with *Tachysphex pectinipes*); Balthasar, 1941b:112 (Czech Republic: eastern Moravia); Schneid, 1941:1045 (Germany: Bayern: Bamberg area); Balthasar, 1943:42 (Czech Republic: Moravia: Zlin area); Giner Marí, 1943a:142 (in Sphecid Fauna of Spain); Zavadil in Zavadil and Šnoflak, 1948:151, 153 (in key to Sphecidae of Czechoslovakia); Ceballos, 1949:102 (Spain); de Andrade, 1949:15 (Portugal); Cavro, 1950:35 (France: Département du Nord); Scobiola-Palade, 1951:274 (first record from Romania: Dumbrăveni and Sighișoara in Sibiu Region);

Móczár, 1953:310 (Hungary); de Beaumont, 1954a:62 (Italy); Grandi, 1954:239 (Italy); Aerts, 1955:63 (Germany: Rheinland); Vogrin, 1955:37 (Yugoslavia); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales); Bajári, 1957a:53, 55 (in key to Hungarian Sphecidae), 1957b:134 (first record from Hungary); Grandi, 1957:389 (Italy); Benno, 1958b:12 (in review of Dutch Sphecidae); Nouvel and Ribaut, 1958:13 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Diniz, 1959:29 (Portugal: nine localities); Wolf, 1959b:24 (Germany: Nassau); Diniz, 1964a:6 (Portugal: eleven localities); Tsuneki, 1964l:63 (in key); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg); J. Heinrich, 1967:75 (Germany: Bayern: Kahl); Benedek, 1968:73 (Hungary, visiting flowers of *Angelica silvestris* L.), 1969a:83 (Hungary; marshy meadow); Suárez, 1969:31 (Spain: Almería Province; determination?); Zangheri, 1969:1704 (Italy: in catalog of flora and fauna of Romagna Region); Königsmann, 1971:107 (Spain: Gerona: Palamós); Schmidt, 1971b:35 (Germany: Mainz area); Balthasar, 1972:264 (in Sphecid Fauna of Czechoslovakia); Schmidt, 1977/78:55 (is a variety of *Tachysphex pompiliformis*); Pádr in Šedivy, 1989a:168 (in checklist of Czechoslovakian Sphecidae).

*Larra dimidiata* Panzer, 1809:pl. 13, ♀. Holotype or syntypes: ♀, Germany: no specific locality (Zool. Samml. Bayer. Staates, Munich, Germany). Synonymized with *Tachytes pompiliformis* by Herrich-Schaeffer, 1840:297.

*Larra jokischiana* Panzer, 1809:pl. 15, ♀ (as *Jokischiana*, incorrect original capitalization). Holotype: ♀, Germany: no specific locality (Zool. Samml. Bayer. Staates, Munich, Germany). Synonymized with *Tachysphex pectinipes* of Kohl by Kohl, 1885:388. – Casolari and Casolari Moreno, 1980:113 (specimens in M. Spinola collection, as *jokischianus*). – **As *Tachytes jokischiana***: Herrich-Schaeffer, 1840:296 (new combination; Germany: Bayern: Regensburg area).

*Larrada parvula* Cresson, 1865b:465, ♂. Lectotype: ♂, USA: Colorado Territory: no specific locality (ANSP), designated by Cresson, 1916:96. Synonymized with *Tachysphex pompiliformis* by Pulawski, 1988a:20 – **As synonym of *Larra montana***: Patton, 1880:389 (new combination); Kohl, 1885:246. – **As *Tachysphex parvulus***: W. Fox, 1894a:518 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:683 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Rohwer, 1908a:223 (Colorado: Florissant); G. Bohart, 1951:951 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Alcock, 1974a:329 (nesting habits); R. Bohart and Menke, 1976:275 (listed); Krombein, 1979:1929 (in catalog of North American Hymenoptera).

*Larra quebecensis* Provancher, 1882:50, ♀, ♂ (as *Quebecensis*, incorrect original capitalization). Lectotype: ♀, Canada: Quebec: no specific locality (Laval Univ. Quebec), designated by Pulawski, 1988a:20. Synonymized with *Tachysphex pompiliformis* by Pulawski, 1988a:20. – Cresson, 1887:277 (in catalog of North American Hymenoptera); Peckham and Peckham, 1905:263 (...); Bridwell, 1899:209 (Kansas: Baldwin); Gahan and Rohwer, 1917:433 (type not located). – **As *Tachysphex quebecensis***: W. Fox, 1894a:527 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); J. Smith, 1900:518 (...); Harrington, 1902:221 (Canada: Ontario: Ottawa); J. Smith, 1910:683 (...); F. Williams, 1914a:173 (in revision of Larrinae of Kansas); Rohwer, 1916b:687 (in catalog of Hymenoptera of Connecticut); Gahan and Rohwer, 1917:433 (...); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Elliott and Kurczewski, 1973:80 (Alberta near Whitecourt); Steiner, 1973:24 (...); R. Bohart and Menke, 1976:276 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Finnamore, 1982:103 (in Sphecid Fauna of Southern Quebec); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument).

*Larra quebecensis* Provancher, 1883:633, ♀, ♂ (as *Quebecensis*, incorrect original capitalization). Objective synonym of *Larra quebecensis* Provancher, 1882.

*Tachysphex decorus* W. Fox, 1894a:524, ♀. Holotype: ♀, USA: Dakota: no specific locality (ANSP). Synonymized with *Tachysphex pompiliformis* by Pulawski, 1988a:20. – Dalla Torre, 1897:679 (in catalog of world Hymenop-



- tera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cresson, 1928:44 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:275 (listed); Krombein, 1979b:1628 (in catalog of North American Hymenoptera).
- Tachysphex tenuipunctus* W. Fox, 1894a:525, ♀. Lectotype: ♀, USA: Oregon: Mt. Hood (ANSP), designated by Cresson, 1928:46. Synonymized with *Tachysphex pompiliformis* by Pulawski, 1988a:20. – Dalla Torre, 1897:686 (in catalog of world Hymenoptera); J. Smith, 1910:683 (...); Stevens, 1917:422 (North Dakota: Fargo); Mickel, 1918b:423 (in catalog of Nebraskan Sphecidae); Carter, 1925:133 (Canada: Alberta: Chin); Strickland, 1947:129 (Canada: Alberta: Lethbridge, Medicine Hat); G. Bohart in Muesebeck et al., 1951:953 (in catalog of North American Hymenoptera); Newton, 1956:615 (nesting habits); W. Ferguson, 1962:81 (nest parasite: *Sphaerophthalma (Photopsis) unicolor* (Cresson), a mutillid); Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:277 (listed); Krombein, 1979b:1630 (in catalog of North American Hymenoptera).
- Tachysphex consimilis* W. Fox, 1984a:526, ♀, ♂. Lectotype: ♀, USA: Montana: no specific locality (ANSP), designated by Cresson, 1928:44. Synonymized with *Tachysphex parvulus* by R. Bohart in Bohart and Menke, 1976:275. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); H. Smith, 1908:382 (in revision of Nebraskan Sphecidae); F. Williams, 1914a:164 (in revision of Larrinae of Kansas, as *consimilis* Cresson); Mickel, 1918b:423 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera).
- Tachysphex rufoniger* Bingham, 1897:195, ♀ (as *rufo-niger*, incorrect original hyphenation). Lectotype: ♀, Pakistan: North-West Provinces: no specific locality (BMNH), designated by Pulawski, 1975a:310. Synonymized with *Tachysphex pompiliformis* by Pulawski, 1975:310.
- Tachysphex projectus* Nurse, 1903a:517, ♀. Holotype: ♀, India: Kashmir: no specific locality (BMNH). Synonymized with *Tachysphex pompiliformis* by Pulawski, 1975a:310. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897).
- Tachysphex argyrotrichus* Rohwer, 1911b:572, ♂. Holotype: ♂, USA: Colorado: Las Animas County: Trinidad (USNM). Synonymized with *Tachysphex parvulus* by R. Bohart in Bohart and Menke, 1976:275. – G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera).
- Tachysphex granulosis* Mickel, 1916a:413, ♀. Holotype: ♀, USA: Nebraska: USA: Sioux County: Glen (UNL). Synonymized with *Tachysphex tenuipunctus* by G. Bohart in Muesebeck et al., 1951:953 (listed). – Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); Carter, 1925:133 (Canada: Alberta); Strickland, 1947:129 (Canada: Alberta: Edmonton, Lethbridge); Muma, 1952:23 (type in UNL).
- Tachysphex erythraeus* Mickel, 1916a:415, ♀. Holotype: ♀, USA: Nebraska: Warbonnet Canyon (UNL). Synonymized with *Tachysphex pompiliformis* by Pulawski, 1988a:21. – Mickel, 1918b:424 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:273 (listed); Muma, 1952:23 (type in UNL); Krombein, 1979b:1628 (in catalog of North American Hymenoptera).
- Tachysphex angularis* Mickel, 1916a:416, ♂. Holotype: ♂, USA: Nebraska: Sioux County: Sowbelly Canyon (UNL). Synonymized with *Tachysphex pompiliformis* by Pulawski, 1988a:20. – Mickel, 1918b:424 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); Muma, 1952:23 (type in UNL), 28 (paratypes in UNL); R. Bohart and Menke, 1976:272 (listed); Krombein, 1979b:1627 (in catalog of North American Hymenoptera).
- As *Sphex pectinipes* Linnaeus, 1758 (which actually is a pompilid): As *Larra pectinipes*: Dahlbom, 1832:53 (new combination, redescription). – As *Tachytes pectinipes*: Dahlbom, 1840:249 (new combination, ...), 1843:127 (in revision of Sphecidae and Pompilidae), 1845:470 (in key); Eversmann, 1849:385 (Russia: southern Ural Mts. and Orenburg province); Kiesenwetter, 1849:89 (Germany: Kingdom of Saxony); Wissmann, 1849:12 (Germany: Kingdom of Hannover: Hedemünden nd Münden); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in

Fürstenthum Birkenfeld); Wesmael, 1852:85 (Belgium); Kirschbaum, 1853:44 (Germany: Herzogtum Nassau: Mainz-Mombach); Kirchner, 1854:311 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice); Kawall, 1857:24 (Kurland, now Latvia); Ruthe and Stein, 1857:313 (Germany: Berlin area); Schenck, 1857:191 (in revision of fossorial wasps of Nassau Region, Germany); Taschenberg, 1858:84 (in key to Sphecidae of Germany); Assmus, 1859:610 (Russia: Moscow Oblast'); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:149 (Germany: Nassau Region); Frauenfeld, 1861:103 (Croatia: Dalmatia); Schenck, 1861:143 (Germany: Hessen: Weilburg); Brischke, 1862:100 (Germany: Preussen Province, now Poland: Pomorze Region); Giraud, 1863a:14 (Italy: Piemonte: Suse); Taschenberg, 1866:201 (in revision of Hymenoptera of Germany); Jaenicke, 1867:147 (Germany: Hessen: Frankfurt area); Kirchner, 1867:216 (in catalog of European Hymenoptera); Schenck, 1867a:356 (Germany: Nassau Region); Dietrich, 1868:364 (Switzerland: Zurich Canton); Jaenicke, 1868:9 (Germany: Hessen: Mombach); Wierzejski, 1868:116 (Ukraine: Podole Region: Jan); Aichinger, 1870:320 (Austria: Tirol); Thomson, 1870:241 (in revision of Swedish wasps); P. Ivanov, 1872:152 (Ukraine: Kharkov Oblast': Kupyansk area); Schlechtendal, 1872:37 (Germany: Sachsen: Zwickau); Dours, 1874:139 (in catalog of Hymenoptera of France); Mocsáry, 1874:120 (Siebenbürgen, now Romania: Transylvania: no specific locality); Thomson, 1874:218 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:257 (Poland: Żegiastów; Ukraine: Lviv and Podole Region); Marquet, 1875:203 (France: Hérault: Béziers); Beuthin, 1876:231 (Germany: Hamburg area); Becker, 1880:153 (Russia: Sarepta, now Krasnoarmeysk S Volgograd); Kohl, 1880:180 (Austria: Tirol, and Italy: Trentino–Alto Adige); Siebke, 1880:64 (Norway); Yaroshevskiy, 1881:126 (Ukraine: Khar'kiv Oblast': Kupyansk); Friese, 1883:203 (Germany: Sachsen-Anhalt: Kösen, Weissenfels); Harwood, 1884:211 (England: Essex: Colchester area); von Heyden, 1884:116 (Germany: Frankfurt am Main); Brischke, 1888a:54 (Germany: Hela Peninsula, now Poland: Hel Peninsula), 1888b:97 (Germany: Preussen Province, now Poland: Pomorze Region), 1889:204 (Germany: Steegen E Danzig, now Poland: Stegna E Gdańsk); Radoszkowski, 1893a:62 (Turkmenistan); Sickmann, 1893:83 (Germany: Niedersachsen: Iburg); Westerlund, 1893:26 (Russia: Karelian Republic: northern shore of Lake Ladoga); Freke, 1896:40 (Ireland); Meunier, 1896:273 (Belgium: Bruxelles area); Meunier, 1897a:350 (Bulgaria: Sofia area); Strand, 1898b:93 (Norway); W. Evans, 1900:265 (Great Britain: Scotland: Cromdale, and near Perth); Nevinson, 1900:62 (Great Britain: Wales: Criccieth, Towyn); Carr, 1901:16 (Great Britain: Lincolnshire: Skegness); Ferton, 1901b:680 (found in Marseille area, France, but not in Corsica); J. Nielsen, 1901a:268 (nesting habits); Rothney, 1901:150 (Great Britain: Cornwall: Tintagel); Thornley, 1901b:63 (Great Britain: Lincolnshire: Skegness); Bradley, 1902:267 (Great Britain: N Wales); Chyzer, 1902:33 (Hungary); Nevinson, 1902:12 (Great Britain: Cornwall: Newquay); de Cobelli, 1903:111 (Italy: Province of Trentino); J. Nielsen, 1903:112 (nesting habits); Aurivillius, 1904:266 (in revision of Swedish Sphecidae); von Heyden, 1905:81 (Germany: Hessen: Frankfurt); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Gardner, 1908:186 (preying on grasshoppers); Orr, 1909a:25 (Ireland: Down County); Morice, 1911:103 (Algeria: Constantine); Friese, 1926:162 (in key to Sphecidae of Central Europe, short morphological and biological characteristics). – **As *Tachysphex pectinipes***: Kohl, 1883e:671 (new combination, Switzerland), 1885a:353 and 355 (in key to Palearctic *Tachysphex*), 388 (in revision of Palearctic *Tachysphex*); Wüstnei, 1886:42 (Germany: Schleswig-Holstein: Madskov near Sonderburg); Gasperini, 1887:15 (recorded as *Tachytes pectinipes* from Dalmatia, now Croatia, by Frauenfeld, 1861); F. Morawitz, 1891a:207 (Russia: Astrakhan Government); Kohl, 1893a:31 (Austria: Niederösterreich); F. Morawitz, 1893a:111 (Russia: Karelian Isthmus); Krieger, 1894:10 (Germany: Kingdom of Saxony); Borries, 1897 (review of known nesting habits); Dalla Torre, 1897:683 (in catalog of world Sphecidae); Mocsáry, 1897:77 (Kingdom of Hungary, some localities are in today's Croatia and Romania); O. Schneider, 1898:102 (Germany: Borkum Island); E. Saunders, 1902b:143 (Great Britain: Jersey and Alderney Islands; France: Bretagne: St. Briac); J. Nielsen, 1903:112 (nesting habits); Adlerz, 1904:50 (nesting habits); Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); E. Saunders, 1904b:249 (Great Britain: Scotland: Nairn); Kubes, 1905:85 (Czech Republic: Kolín); Mortimer, 1905:261 (Great Britain: Wales: Aberdovey); W. Schulz, 1906:46 (Greece: Crete); Luff, 1907:39 (Great Britain: Island of Guernsey); Móczár and Hen-

ter, 1907:205 (Hungary: Tiszaalpár, Dobsina; Romania: Caraş-Severin: Mehadia); Schmiedeknecht, 1907:233, 234 (in key to Hymenoptera of Central Europe); Ferton, 1910:157 (prey preference); Mercet, 1910b:165 (listed from Spain); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:45 (Italy: Trieste area); Schirmer, 1912:167 (Germany: Berlin area); Lundblad, 1913:212 (Sweden); Szilády, 1913:88 (Hungary: Bólya, Igenpataka, Torda); Alfken, 1914:281 (NW Germany); Birula, 1914:368 (Ukraine: Zhytomyr Oblast': Radomyshl'), 387 (Belarus: Luskinoopol' near Vitebsk); Bouwman, 1916:203 (nesting habits); Hallett, 1916:221 (Great Britain: South Wales: Porthcawl); Dubois, 1919:96 (Belgium: Bruxelles: Uccle); Hallett, 1919:262 (Great Britain: Island of Guernsey); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); Łoziński, 1920:121 (Poland: Kraków, Maków Podhalański); A. Wagner, 1920:39 (Germany: Lower Elbe region); Dubois, 1921c:208, 209 (in key to Belgian Sphecidae); Strand, 1921:33 (Germany: Bayern: Kulmbach); Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Ferton, 1923:323 (larves of *Stenobothrus* are preferred prey, and the setose *Acrotylus* is rarely captured), 333 (known from continental France but not found in Corsica); Alfken, 1924:425 (Germany: Memmert); Chevalier, 1924c:74 (nesting habits); R. Perkins, 1924a:230 (Great Britain: Devon); Berland, 1925d:121 (in Sphecid Fauna of France); Bischoff, 1925:301 (Latvia: Wezkukkul; Poland: Białowieża); Coulon, 1925:121 (in Elbeuf Museum: no locality); Strohm, 1925:211 (Germany: Baden-Württemberg: Kaiserstuhl); Grandi, 1927:202 (nesting habits); Stelfox, 1927:308 (Ireland: list of localities); F. Werner, 1927:66 (Austria: Niederösterreich: River Kamp valley); Benoist, 1928:410 (France: Alpes-Maritimes, Basses-Alpes, Hautes-Alpes); Bouwman, 1928b:27 (in revision of Sphecidae of Netherlands); Grandi, 1928d:305 (prey), 307 (description of egg and larva), 1929:288 (Italy: Toscana: valle della Limentra); Schmiedeknecht, 1930:694, 695 (in keys to Hymenoptera of North and Central Europe); Grandi, 1931:57 (Italy: Toscana: Vallata delle Pozze near Le Mandriole); Bondroit, 1932:37 (Belgium: Solbosch); Gussakovskij, 1932:14 (Russia: Kamchatka: Elisovo); Maneval, 1932:94 (nesting habits); Bernard, 1933:62 (France: Drôme: Dieulefit); Bondroit, 1934:60 (Belgium: Ostende); Drogoszewski, 1933:118 (Poland: Łowicz); Nadig, 1933:79 (Morocco: Asni); E. Nielsen, 1933:294 (summary of nesting habits); Stelfox, 1933:52 (Ireland: Waterford County: Bunmahon); Balles, 1934:20 (Germany: Baden-Württemberg: Oberachern); Giner Marí, 1934:133 (Spain); Jansson, 1934:290 (Sweden); Spooner, 1934b:278 (Great Britain: Devon: Braunton Burrows); Bernard, 1935:65 (France: Var: Fréjus area); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Grandi, 1935a:110 (Italy); Minkiewicz, 1935:196 (Poland: Kazimierz on Wisła, 51°20'N 21°58'E); Richards, 1935a:163 (Linnaeus' *Sphex pectinipes* is actually a pompilid); Vergne, 1935:118 (France: Auvergne: common); Bernard, 1936a:35 (France: Hautes-Pyrénées: Pic de Néouvielle area); Crèvecoeur and Maréchal, 1936:252 (in catalog of Belgian Hymenoptera); de Beaumont, 1936a:202 (in revision of French *Tachysphex*), 1936c:8 (specimens in coll. A. Costa); Dulac, 1937:13 (France: Saône-et-Loire: Saint-Laurent d'Andenay); Goebel, 1937:42 (Poland: Poznań District: Głuszyna, Poznań-Dębina, Puszczykowo, Splawie, Strzeszyn); Hallett, 1937:74 (Great Britain: Herefordshire: Mathon, Ross-on-Wye); Zavadil, Šustera, and Bat'a, 1937:203 (in catalog of Sphecidae of Czechoslovakia); Hardouin, 1938:9 (nest and prey); A. Wagner, 1938a:122 (northwestern Germany); Aerts, 1939:134 (Germany: Nordrhein-Westfalen: loess cliff at Weilerswist near Köln); Giordani Soika, 1939b:73 (Italy: Lido di Venezia); Koornneeff, 1939:130 (Netherlands: Rhenen, comparison with *Tachysphex nigripennis*, misspelled *nigricornis*); Móczár, 1939:4 (Hungary: Jászberény); de Beaumont, 1940b:177 (not known from Egypt); Dovnar-Zapolskiy, 1940:304 (Russia: Kursk Oblast'); Balthasar, 1941b:112 (Czech Republic: eastern Moravia); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Hoop, 1941b:70 (Germany: Schleswig-Holstein: Süderhastedt); Schneid, 1941:1045 (Germany: Bayern: Bamberg area); Giner Marí, 1943a:142 (in Sphecid Fauna of Spain); Móczár, 1943a:58 (Hungary: Nagykörös); Guiglia, 1944b:28 (Italy); Deleurance, 1946b:63 (habits as in *Tachysphex panzeri*), 67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); Carl and de Beaumont, 1947:68 (Switzerland: Graubünden = Grisons Canton: Swiss National Park); Balthasar, 1948:142 (Slovakia: Kovačov, Parkan); Zavadil *in* Zavadil and Šnoflak, 1948:151, 153 (in key to Sphecidae of Czechoslovakia); Georgel, 1950:64 (France: Seine-et-Oise: Sucy-en-Brie); Szulczewski, 1950:108 (Poland: Wielkopolski National

Park 15 km S Poznań); Caruel, 1952a:62 (France: Marne Department); Móczár, 1953:310 (Hungary); Fahlander, 1954:252 (Sweden: Gästrikland Region); Tjeder, 1954:67 (Sweden: eastern Skåne: Löderup); Teschner, 1955:57 (Germany: Nordrhein-Westfalen: Hohe Ward near Münster); Vogrin, 1955:37 (Yugoslavia); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Bajári, 1957a:54, 55 (in key to Hungarian Sphecidae); Zirngiebl, 1957:183 (Germany: Rheinland-Pfalz: Birkenheide, Landau, Leistadt); Lehrer and Scutaru, 1963:287 (Romania: Moldova: Baia in Suceava District, Pașcani in Iași District); Evans, 1968c:119 (discussion of larval descriptions by Grandi); Babiy, 1964:114 (Austria: Land Salzburg); Fæster, 1965:192 (Denmark: Hansted Nature Reserve); Scobiola-Palade, 1966b:392 (Romania: Tulcea District: Periprava); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); Niedl and Deneš, 1967:81 (Czech Republic: Třeboň area); Benedek, 1968:73 (Hungary, floral records); Nagy, 1968:378 (nest parasite in Romania: *Smicromyrme septentrionalis* Hoffer, a mutilid, now *Erimyrme sicana* (De Stefani Perez, 1887)); Benedek, 1969a:84 (Hungary; marshy meadow); Dathe, 1969:439 (Germany: Berlin Zoological Garden); Benedek, 1970:98 (Hungary: Tapolca); Kazenas, 1971:161 (Kazakhstan: Zailiyskiy Alatau Range; widely distributed in Kazakhstan); Balthasar, 1972:263 (in Sphecid Fauna of Czechoslovakia); Kazenas, 1972b:163 (Kazakhstan); Józán, 1981:304 (Hungary: Hortobágy National Park), 1983:99 (Hungary); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Scobiola-Palade, 1989:87 (Romania: delta of Danube); Pádr, 1990:74 (Czech Republic: Praha area); Blagoveshchenskaya, 1994:87 (Russia: Ul'yanovsk Oblast').

As *Larra abdominalis*: Provancher, 1887:266 (...), corrected to *Tachysphex pompiliformis* by Pulawski, 1988a:22.

As *Tachysphex compactus*: Harrington: 1902:221 (Canada: Ontario: Ottawa area), corrected to *Tachysphex pompiliformis* by Buck, 2004:75.

As *Tachysphex fulvitaris*: Lefebvre, 1971a:17 (Netherlands: Meynweg), corrected to *Tachysphex pompiliformis* by Lefebvre, 1973:153.

*Tachysphex pompiliformis* forme *tenebricosus* K. Schmidt *in* Bitsch et al., 2001:268. Not available: Article 15.2 (infrasubspecific name). Holotype: not designated.

*Tachysphex* unidentified species: Steiner, 1981:333 (nesting habits), corrected to *Tachysphex pompiliformis* by Pulawski, 1988a:21.

### 316. *powelli* R. Bohart

*Tachysphex powelli* R. Bohart, 1962a:35, ♂, ♀. Holotype: ♂, USA: California: Alpine County: Winnemucca Lake (CAS). – Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:276 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Pulawski, 1988a:38 (in revision of Nearctic *Tachysphex*).

### 317. *priesneri* de Beaumont

*Tachysphex priesneri* de Beaumont, 1940b:176, ♀, ♂. Holotype: ♀, Egypt: Kharga oasis (Ministry of Agriculture of Egypt). – Honoré, 1942:55 (listed); de Beaumont, 1947a:208 (in new revision of *Tachysphex* of Egypt), 1956a:199 (Libya; variation); Pulawski, 1971:132 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a:499 (in revision of African *Tachysphex*).

### 318. *prismaticus* Straka

*Tachysphex prismaticus* Straka, 2005:262, ♀, ♂. Holotype: ♂, Kazakhstan: 20 km SE Aksay (OÖLM). Paratypes: Kyrgyzstan, Turkey.

### 319. *prosopigastroides* Bischoff

*Tachysphex prosopigastroides* Bischoff, 1913c:65, ♀. Holotype: ♀, Zimbabwe: Bulawayo (ZMHU). – Arnold, 1923:163 (Zimbabwe; revision), 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:502 (in revision of African *Tachysphex*).

*Tachysphex subfuscatus* R. Turner, 1917b:323, ♀. Holotype: ♀, Malawi: Mlanje (BMNH). Synonymized with *Tachysphex prosopigastroides* by Pulawski, 2007a:502. – Arnold, 1923a:176 (original description copied), 1930:4 (in checklist of Afrotropical Sphecidae); Pulawski, 1975a:313 (diagnostic characters); R. Bohart and Menke, 1976:277 (listed).

*Tachysphex strigatus* R. Turner, 1917b:324, ♀. Lectotype: ♀, Zambia: between Fort Jameson (now Chipata) and Lundazi (BMNH), designated by Pulawski, 1975a:313. Synonymized with *Tachysphex subfuscatus* by Pulawski, 1975a:313. – Arnold, 1923a:174 (original description copied), 1930:4 (in checklist of Afrotropical Sphecidae).

*Tachysphex sipapomae* Arnold, 1923:164, ♂. Lectotype: ♂, Zimbabwe: Sawmills (SAM), designated by Pulawski, 2007a:502. Synonymized with *Tachysphex prosopigastroides* by Arnold, 1924:70

### 320. *proteus* Pulawski

*Tachysphex proteus* Pulawski, 1977a:255, ♀. Holotype: ♀, Australia: Victoria: Wilkur (National Museum of Victoria, Melbourne). – Cardale, 1985:242 (in catalog of Australian Sphecidae).

### 321. *psammobius* (Kohl)

*Tachytes psammobius* Kohl, 1880:235, ♀, ♂ (as *psammobia*, incorrect original termination). Lectotype: ♀, Italy: Bolzano (as Bozen; NHMW), designated by Pulawski, 1971:189. – As *Tachysphex psammobius*: Kohl, 1880:180 (new combination, Italy: Trentino-Alto Adige), 1883e:671 (Switzerland, as *psammobia*), 1885a:353 and 355 (in key to Palearctic *Tachysphex*), 386 (in revision of Palearctic *Tachysphex*); Gasperini, 1889:69 (Dalmatia: Spalato, now Croatia: Split); Kohl, 1893a:32 (Austria: Niederösterreich); Krieger, 1894:11 (Germany: Kingdom of Saxony); Dalla Torre, 1897:684 (in catalog of world Hymenoptera); Ferton, 1901b:680 (found in Marseille area, France, but not in Corsica); Antiga and Bofill, 1904:11 (in catalog of Catalan Hymenoptera); Schmiedeknecht, 1907:232, 233 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Šusterka, 1909:35 (Czech Republic: vicinity of Praha); Mercet, 1910b:165 (listed from Spain); Dittrich, 1911b:24 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Morice, 1911:105 (Algeria: Constantine); Birula, 1914:387 (Belarus: Vitebsk, as *psammobia*); Zilahi Kiss, 1915:80 (Hungary: Bethlen, Nagyilonda); Stöckert, 1919:41 (Germany: Franken); O. Meyer, 1919:154 (Germany: Posen Province, now Poland: Poznań Region); Enslin, 1922c:247 (Germany: Bayern: Fürth); Ferton, 1923:333 (known from continental France but not found in Corsica); Berland, 1925d:122 (in Sphecid Fauna of France); Bischoff, 1925:301 (Latvia: Wezkukkul); Blüthgen, 1925:166 (Germany: Saale River valley: Eulau); von Schulthess, 1926b:215 (Tunisia); Bouwman, 1928b:27 (in revision of Sphecidae of Netherlands); Schmiedeknecht, 1930:694 (in keys to Hymenoptera of North and Central Europe); Crèvecoeur and Maréchal, 1932:70 (first record from Belgium); Giordani Soika, 1932a:22 (Italy: Lido di Venezia; determination?); Giner Marí, 1934:133 (Spain); Bernard, 1935:65 (France: Var: Fréjus area); Maneval, 1935:75 (France: Haute-Loire: Puy); Grandi, 1935a:110 (Italy); Crèvecoeur and Maréchal, 1936:252 (in catalog of Belgian Hymenoptera); de Beaumont, 1936a:204 (in revision of French *Tachysphex*), 1936c:8 (specimen in coll. A. Costa); Goebel, 1937:42 (Poland: Poznań District: Strzeszyn); Zavadil, Šusterka, and Bat'a, 1937:202 (in catalog of Sphecidae of Czechoslovakia); Maréchal, 1939:341 (Belgium: Loën); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Schneid, 1941:1045 (Germany: Bayern: Bamberg area); Blüthgen, 1942:10 (Germany: Sachsen: known from both Saal Valley and Kyffhäuser); Giner Marí, 1943a:142 (in Sphecid Fauna of Spain); Bat'a, 1944b:91 (Czech Republic: Veselí); Guiglia, 1944b:28 (Italy); Balthasar, 1945:115 (Czech Republic: southeastern Morava Region); Carl and de Beaumont, 1947:68 (Switzerland: Graubünden = Grisons Canton: Swiss National Park); de Beaumont, 1947b:393 (Cyprus); Zavadil in Zavadil and Šnoflak, 1948:150, 152 (in key to Sphecidae of Czechoslovakia); Ceballos, 1949:102 (Spain); Cavro, 1950:36 (France: Département du Nord); Pittioni, 1950:25 (Cyprus); Bat'a, 1952:167 (Czech Republic); Aerts, 1955:63 (Germany: Rheinland); Nouvel and Ribaut, 1955:141 (France: Haute-Garonne: Melles); Steiner, 1955:139 (France: Dordogne); Vogrin, 1955:37 (Yugoslavia); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); Bajári, 1957a:53, 54 (in key to Hungarian Sphecidae); Benno, 1958b:12 (in review of Dutch Sphecidae); de

Beaumont, 1958c:205 (Swiss National Park); Nouvel and Ribaut, 1958:14 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958a:181 (Bulgaria: Kniazhevo near Sofia); Wolf, 1959b:24 (Germany: Nassau); Noskiewicz and Puławski, 1960:123, 125 (in key to Polish Sphecidae); de Beaumont, 1962b:26 (Spain); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:76 (in Sphecid Fauna of Switzerland); Diniz, 1964a:6 (Portugal: Rezende); de Beaumont, 1965a:49 (Greece); Bonelli, 1966c:218 (Italy: Trentino–Alto Adige: Montagna); Lefeber, 1966:209 (Netherlands: Kannerberg, Meyendel); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); Gauss, 1967:554 (Germany: Baden-Württemberg); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); J. Heinrich, 1967:75 (Germany: Bayern: Unterfranken District); Niedl and Deneš, 1967:81 (Czech Republic: Třeboň area); Pulawski, 1967a:404 (Turkey); Scobiola-Palade, 1967a:162 (Romania: Constanța District: Canaraua Fetei); Lefeber, 1968a:5 (Netherlands: Kanne, specimen from Meijendel, reported in 1966i, is *Tachysphex pompiliformis*); Scobiola-Palade, 1968b:142 (Romania: Island of Letea in delta of Danube), 1968c:384 (Romania: Budești); Lefeber, 1969a:79 (Netherlands: Bemelen, St. Pietersberg), 1969c:233 (Netherlands: St. Pietersberg = Montagne Saint Pierre); Leclercq, 1970c:map 34 (distribution in Belgium); Oehlke, 1970:715 (Democratic Germany); Lefeber, 1971a:17 (Netherlands: t'Rooth); Pulawski, 1971:189 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:36 (Germany: Mainz area); Balthasar, 1972:265 (in Sphecid Fauna of Czechoslovakia); Simon Thomas, 1972:182 (France: Landes); de Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); Lefeber, 1973:153 (Netherlands: Bemelerberg; Belgium: Eben, Plombières, Vroenhoven); Lefeber and Petit, 1974:163 (Belgium: Plombières); Scobiola-Palade, 1974:145 (Romania: Sărăturile sandbank in Danube delta); Lefeber, 1975b:120, 154 (Netherlands: Schiepersberg); R. Bohart and Menke, 1976:276 (listed); Eck, 1976:91 (Democratic Germany); Georghiou, 1977:192 (Cyprus); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Kazenas, 1978b:120, 131 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Benedek, 1979:231 (Hungary: Bakony Hills); Lefeber, 1979:12 (in checklist of Sphecidae of Netherlands), 75 (Netherlands: distribution map); Richards, 1979:397 (British Channel Islands); Pagliano, 1980:128 (Italy: Toscana); Józán, 1981:304 (Hungary: Hortobágy National Park); Gayubo, 1982a:106 (N Spain: Sierra de Béjar); Schedl, 1982:102 (Austria: Tirol: Ötztaler Alps); Dollfuss, 1983a:76 (endangered in Niederösterreich, Austria), 77 (endangered in Burgenland, Austria), 78 (endangered in Oberösterreich, Austria), 1983b:11 (in catalog of Sphecidae of Austria); Józán, 1983:99 (Hungary); Chevin and Silvestre de Sacy, 1984:7 (France: Yvelines Department); Gayubo, 1984b:86 (Spain: Salamanca Province); Józán, 1985a:181 (Hungary), 1985b:57 (Hungary S Lake Balaton), 78 (floral records), 83 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Westrich and Schmidt, 1985b:112 (Germany: endangered in Baden-Württemberg); Wolf, 1985a:6 (Germany: Frankfurt area); Brechtel, 1986:61 (Germany: Südpfalz: Lauterwiesen, Sandbuckel); Gayubo, 1986c:33 (Spain: Zamora Province); Józán, 1986:370 (Hungary: Kiskunság National Park); Nemkov, 1986:97 (Russia: Siberia: Irkutsk Oblast'); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Kurczewski, 1987a:121 (nesting habits); Schmidt and Westrich, 1987:364 (Germany: Mainz area); Dollfuss, 1988:12, 24 (Austria: Bisamberg near Vienna; Niederösterreich: Oberweiden); Gayubo and Mingo, 1988:81 (Spain); Karsai, 1988:100 (Hungary: Kiskunság National Park); Pulawski, 1988a:109 (in revision of Nearctic *Tachysphex*); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Dollfuss, 1989:13 (lectotype in NHMW); Jacobs, 1989:13 (Germany: Mecklenburg-Vorpommern); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Gayubo, Asís, and Tormos, 1990a:18 (Spain); Jacobs and Oehlke, 1990:166 (new records from Democratic Germany); Kuznetzova, 1990:20 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Pádr, 1990:74 (Czech Republic: Praha area); Pagliano, 1990:106 (in catalog of Italian Sphecidae); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:107 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:403 (Italy); Józán, 1991:603 (Hungary: Bátorliget Nature Reserve); van der Smissen, 1991:97 (nw. Germany); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area),

1992c:289 (Hungary: Zselic Hills); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Gorobchishin, 1993:46 (Ukraine: Kanev Nature Reserve); Kuhlmann, 1993:76 (Germany: known from Westfalen); Luig, 1993:44 (Estonia); van der Smissen, 1993:130 (nw. Germany); Dollfuss, 1994:102 (endangered in Austria); Theunert, 1994a:48 (Germany: Niedersachsen: Wense and Balgenberg near Neubrücke), 1994c:51 (summary of records from Niedersachsen and Bremen, Germany); Tormos, Asís, and Gayubo, 1994:188, 207 (Spain: Albacete Province); Wickl and Wickl, 1994:193 (Germany: Bayern: Oberpfalz: Holzhammer, Mantel); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Józán, 1995:104 (Hungary: projected Duna-Dráva National Park); Negrísolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:410, 412 (in key to Sphecidae of Russian Far East); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:25 (Austria: Niederösterreich: Oberweiden; Germany: Bayern: Aschaffenburg, Obernau); Schmid-Egger, Risch, and Niehuis, 1995:212 (summary of records from Germany: Rheinland-Pfalz Province); Skibińska, 1995:423, 425 (Poland: pine forest in Białowieża Primeval Forest); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996b:401 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Celary, 1997:58 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:30 (in checklist of German Sphecidae); Blösch, 1998:168 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Flügel, 1998:61 (Germany: Brandenburg: Unteres Odertal National Park); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); van der Smissen, 1998:70 (Germany: Niedersachsen: Brünkendorf, Schleswig-Holstein); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); García, Torres, and González, 1999:90 (Spain: Soria Province); Gusenleitner, 1999:599 (Austria: Vorarlberg: Vandans NW Schruns); Ljubomirov, 1999b:51 (Bulgaria: Mt. Vitosha near Sofia); Mandery, 1999:106 (Germany: Bayern: Coburg area); Pauly, 1999:109 (in catalog of Belgian aculeates); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Wickl, 1999a:108 (Germany: Bayern: Oberpfalz area); Blösch, 2000:235 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:106 (Greece); Jacobs, 2000:12 (Germany: Land Mecklenburg-Vorpommern: not endangered); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); Zettel, 2000:27 (Austria: Marchfeld); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Mazzucco, 2001:203 (Austria: Niederösterreich: Steinfeld); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch *in* Bitsch et al., 2001:269 (in Sphecidae Fauna of Western Europe); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Kazenas, 2002a:74 (geographic distribution, collecting localities in Kazakhstan); Kowalczyk, Szczepko, and Świątek, 2002:153 (Poland: Kampinos National Park near Warszawa); Shlyakhtenok and Skibinska, 2002:33 (Belarus: no specific locality); van der Smissen, 2002:212 (Germany: Schleswig-Holstein: Teschow 6 km NE Lubeck-Schlutup; probable parasite: *Chrysis illigeri* Westmael); Ziska, 2002:9 (Germany: Berlin-Köpenick: Krumme Lake); Cölln, Esser, and Jakubzik, 2003:63 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Tischendorf and Treiber, 2003:121 (Germany: Hessen: 15 km SW Frankfurt am Main: nesting under high power lines); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:196 (Germany: Bayern: endangered); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El

Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:452 (Bulgaria); Kofler, 2005:173 (Austria: Tirol: Lienz District: Forchach in Lavant Common); Pagliano and Negrisoló, 2005:380 (in Sphecidae Fauna of Italy); Reder, 2005:954 (Germany: Rheinland-Pfalz: Eisenberg); Shorenko, 2005a:164 (Ukraine: Crimea), 2005b:98 (Ukraine: Crimea: Karadagh Nature Reserve); Straka, 2005:264 (Turkey: Antalya: Taşkesigi 100 km E Antalya; Erzurum: Tekederesi 15 km SW Erzurum); Theunert, 2005a:19 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: previous records summarized, also Yurukovo Village); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); YJacobs, 2007:95, 99 (in key to Crabronidae of Germany); Kowalczyk and Nadolski, 1007:284 (Łódź: railway areas); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia); Yildirim and Ljubomirov, 2007:120 (Turkey: Bingöl and Kars provinces); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); T. Li, Li, and Cai, 2008:144 (first record from China); Ljubomirov and Yildirim, 2008:218 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:19 (in catalog of Crabronidae of Asiatic Russia); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen), 41 Hessen: locality records); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gonzalez, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Nemkov, 2009b:80 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: rare).

*Tachysphex asperatus* W. Fox, 1894a:516, ♀. Holotype: ♀, USA: Nevada: no specific locality (ANSP). Synonymized with *Tachysphex sculptilis* by Pulawski in Krombein, 1979b:1629. – Dalla Torre, 1897:678 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cresson, 1928:43 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:950 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:272 (listed).

*Tachysphex sculptilis* W. Fox, 1894a:517, ♀. Holotype: ♀, USA: Colorado: no specific locality (ANSP). Synonymized with *Tachysphex psammobius* by Pulawski, 1988a:109. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Cresson, 1928:46 (holotype in ANSP); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:276 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera).

*Tachysphex nigrescens* Rohwer, 1908a:220, ♀. Holotype: ♀, USA: Colorado: Teller County: Florissant (USNM). Synonymized with *Tachysphex sculptilis* by Pulawski in Krombein, 1979b:1629. – G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:274 (listed).

*Tachysphex sphecodoides* Rohwer, 1911b:578, ♀. Holotype: ♀, USA: Colorado: Otero County: Rocky Ford (USNM). Synonymized with *Tachysphex sculptilis* by G. Bohart in Muesebeck et al., 1951:952.

### 322. *pseudofasciatus* Pulawski

*Tachysphex pseudofasciatus* Pulawski, 2007a:506, ♀, ♂. Holotype: ♀, Egypt: Al Qahirah (= Cairo): Gebel Asfar (USNM).

As *Tachysphex fasciatus* (corrected to *Tachysphex pseudofasciatus* by Pulawski, 2007a:506): de Beaumont, 1940b:178 (Egypt, Algeria: Biskra; in revision of *Tachysphex* of Egypt), 1947a:207 (Egypt, Algeria; in new revision of



*Tachysphex* of Egypt, ♀ only, ♂ = *Tachysphex speciosissimus*; Pulawski, 1971:118 (in revision of Palearctic *Tachysphex*).

### 323. *pseudopanzeri* de Beaumont

As *Tachysphex panzeri* var. *oraniensis* (corrected to *Tachysphex pseudopanzeri* by Pulawski, 1971:278): Medina, 1896:107 (...); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Mercet, 1910b:165 (...); Ceballos, 1956:377 (listed).

*Tachysphex panzeri* forme *pseudopanzeri* de Beaumont, 1955a:174, ♂, ♀. Holotype: ♂: Morocco: Port Lyautey, now Kenitra (Lausanne). – Ceballos, 1959:229 (in supplement to catalog of Spanish Sphecidae); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1962b:25 (Spain); Ceballos, 1964:90 (in supplement to catalog of Spanish Sphecidae); Diniz, 1964a:4 (Portugal: Rezende, Troia). – As *Tachysphex pseudopanzeri*: Morel, Nouvel, and Ribaut, 1956:338 (full species status, France: Département des Pyrénées-Orientales); Pulawski, 1971:278 (in revision of Palearctic *Tachysphex*); Erlandsson, 1974:73 (Spain); R. Bohart and Menke, 1976:276 (listed); Gayubo, 1982a:107 (N Spain: Sierra de Béjar), 1982f:253 (Spain: Cádiz Province); , 1984b:86 (Spain: Salamanca Province), 1984c:366 Gayubo, 1984c: (Portugal: El Algarve Province); Gayubo and Tormos, 1984:16 (Spain: Valencia); Eiroa and Novoa, 1985:23 (Spain: Pontevedra: Barra beach near Cangas); Gayubo, 1985a:487 (prey: *Docio-staurus genei genei* (Ocskay)?), 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:43 (Spain: Segovia and Valladolid Provinces; floral records); Gayubo and Sanza, 1986:48 (Spain: Burgos, Soria); Gayubo and Tormos, 1986a:17 (Spain: Castellón de la Plana); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Asís and Jiménez, 1988:272 (Spain: Castellón Province); Gayubo and Mingo, 1988:82 (Spain); Gayubo, Asís, and Tormos, 1990a:18 (Spain); Gayubo and Torres, 1991:Table I and p. 81 (Spain: Salamanca; effects of urban pressure); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Tormos, Asís, and Gayubo, 1994:188, 207 (Spain: Albacete Province); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); García, Torres, and González, 1999:90 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); K. Schmidt and Bitsch in Bitsch et al., 2001:271 (in Sphecid Fauna of Western Europe); Drewes, 2003:143 (Spain: Figueras, Taragona); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gonzalez, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park).

### 324. *psilocerus* Kohl

*Tachysphex psilocerus* Kohl, 1884a:374, ♀. Holotype or syntypes: ♀, Mexico: Chapultepec (NHMW). – Cameron, 1889a:64 (listed); Dalla Torre, 1897:684 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); R. Bohart and Menke, 1976:276 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Pulawski, 1988a:139 (in revision of Nearctic *Tachysphex*); Dollfuss, 1989:13 (type material in NHMW); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex helianthi* Rohwer, 1911b:570, ♀. Holotype: ♀, USA: Colorado: Boulder (USNM). Synonymized with *Tachysphex psilocerus* by Pulawski in Krombein, 1979b:1629. – G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:274 (listed).

*Tachysphex nitelopteroides* F. Williams, 1958:207, ♀, ♂. Holotype: ♀, Mexico: Baja California Sur: La Paz (CAS). Synonymized with *Tachysphex psilocerus* by Pulawski in Krombein, 1979b:1629. – Arnaud, 1970:32; R. Bohart and Menke, 1976:275 (listed); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

**325. *psilonotus* Pulawski**

*Tachysphex psilonotus* Pulawski, 2007a:508, ♀, ♂. Holotype: ♂, South Africa: Western Cape Province: Wellington: Roosehoek (RMNH).

**326. *ptah* Pulawski**

*Tachysphex ptah* Pulawski, 1964:84, ♀, ♂. Holotype: ♂, Egypt, Abou Rawash NW Cairo (originally W. Pulawski coll, now CAS). – Pulawski, 1971:287 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a:510 (in revision of African *Tachysphex*).

**327. *pubescens* Pulawski**

*Tachysphex pubescens* Pulawski, 1977a:248, ♀. Holotype: ♀, Australia: Victoria: Wyperfeld National Park 25 mi N Rainbow (ANIC). – Cardale, 1985:242 (in catalog of Australian Sphecidae).

**328. *pugnator* R. Turner**

*Tachysphex pugnator* R. Turner, 1908:491, ♀. Holotype: ♀, Australia: South Australia: Adelaide (BMNH). – R. Turner, 1915b:556 (Tasmania), 1916b:255 (in key); R. Bohart and Menke, 1976:276 (listed); Pulawski, 1977a:238 (in revision of Australian *Tachysphex*); Cardale, 1985:242 (in catalog of Australian Sphecidae); McCorquodale and Thomson, 1989:94 (prey: nymph of *Laxta*, a blattid).

**329. *pulcher* Pulawski**

*Tachysphex pulcher* Pulawski, 1967a:394, ♀, ♂. Holotype: ♀, Turkmenistan: Akhcha-Kuyma near Nebit-Dag (ZIN). Paratypes: Kazakhstan, Tajikistan, Turkey. – Pulawski, 1971:280 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:10 (Israel); R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:112, 124 (in key to Sphecidae of Kazakhstan and Central Asia); Roche, 1981:3 (in checklist of Sphecidae of United Arab Emirates); Hensen and van Ooijen, 1987: (Turkey); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:74 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:272 (Turkey: Adiyaman: Nemru dag; Van: 10 km E Erciş, 10 km N Muradiye); Pulawski, 2007a:512 (in revision of African *Tachysphex*); Kazenas, 2008a:101 (Southeastern Kazakhstan: 15 km N Aksuek, 65 km W Bakanas); Ljubomirov and Yildirim, 2008:219 (in catalog of Crabronidae of Turkey).

**330. *punctatiformis* Arnold**

*Tachysphex punctatiformis* Arnold, 1923a:151, ♀, ♂ (authorship attributed to Brauns). Lectotype: ♀, South Africa: Eastern Cape Province: Willowmore (SAM), designated by Pulawski, 2007a:514. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:514 (in revision of African *Tachysphex*).

**331. *punctatus* (F. Smith)**

*Larrada punctata* F. Smith, 1856:282, ♀, actually ♂. Holotype or syntypes: ♂, South Africa: Western Cape Province: Cape of Good Hope (BMNH). – *As Larra punctata*: Kohl, 1885a:247 (new combination, in checklist of world *Larra*); Dalla Torre, 1897:672 (in catalog of world Hymenoptera). – *As Tachysphex punctata*: R. Turner, 1917b:323 (new combination, diagnostic characters). – *As Tachysphex punctatus*: R. Turner, 1917f:292 (new combination, diagnostic characters, description of ♀); Arnold, 1923a:148 (in revision of southern African *Tachysphex*; South Africa: Eastern Cape Province: Willowmore), 1930:2 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:518 (in revision of African *Tachysphex*).

**332. *puncticeps* Cameron**

*Tachysphex puncticeps* Cameron, 1903b:127, ♀. Holotype or syntypes: ♀, India: West Bengal: Barrackpore 20 km N Calcutta (OXUM). – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897); R. Bohart and Menke, 1976:276 (listed); Pulawski, 1977a:215 (in revision of Australian *Tachysphex*); Tsuneki, 1983a:62 (Philippines; revision), 67, 68 (in key); Cardale, 1985:242 (in catalog of Australian Sphecidae); Krombein and Pulawski, 1994:77 (in revision of Sri Lankan *Tachysphex*); Naumann, 1998:186 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); Porter, Stange, and Wang, 1999:9 (in checklist of Sphecidae of Taiwan); Pagliano, 2003a:508 (Australia: Victoria: Droitana).

*Tachysphex varihirtus* Cameron, 1903b:128, ♂ (as *varihirta*, incorrect original termination). Holotype or syntypes: ♂, India: West Bengal: Barrackpore 20 km N Calcutta (OXUM). Synonymized with *Tachysphex puncticeps* by Pulawski, 1975a:311. – Ramakrishna Aiyar, 1916:551 (in catalog of Indian aculeates described after Bingham, 1897).

*Tachysphex rugidorsatus* R. Turner, 1915b:556, ♀. Lectotype: ♀, Australia: Tasmania: Eaglehawk Neck (BMNH), designated by Pulawski, 1975a:311. Synonymized with *Tachysphex puncticeps* by Pulawski, 1975a:311. – R. Turner, 1916b:254 (in key).

*Tachysphex mindorensis* F. Williams, 1928a:92, ♂, ♀. Holotype: ♂, Philippines: Mindoro Island: San Jose (Bishop Mus.). Synonymized with *Tachysphex puncticeps* by Pulawski, 1975a:311. – Baltazar, 1966:329 (in catalog of Hymenoptera of Philippines); Tsuneki, 1971h:14 (Taiwan); Haneda, 1972a:4 (Taiwan); Tsuneki, 1976b:54 (Philippines; redescription), 1977c:6 (Taiwan), 1982e:28 (Taiwan).

**333. *punctifrons* (W. Fox)**

*Larra punctifrons* W. Fox, 1891e:194, ♀. Lectotype: ♀, USA: Montana: no specific locality (USNM), designated by Pulawski, 1988a:37. – **As *Tachysphex punctifrons***: W. Fox, 1894a:531 (new combination, in revision of North American Larrinae, description of ♂); Dalla Torre, 1897:684 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); J. Smith, 1900:518 (...); H. Smith, 1908:380 (in revision of Nebraskan Sphecidae); J. Smith, 1910:683 (...); Mickel, 1918:423 (in catalog of Nebraskan Sphecidae); Carter, 1925:133 (Canada: Alberta: Lethbridge); Strickland, 1947:129 (Canada: Alberta); G. Bohart *in* Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Krombein and Evans, 1954:232 (Florida: Arcadia); Kurczewski, 1971:114 (in key to Floridan species); R. Bohart and Menke, 1976:276 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Kurczewski, 1987a:118 (nesting habits); Pulawski, 1988a:37 (in revision of Nearctic *Tachysphex*); Kurczewski, 2000c:114 (locality records from North Carolina), 116 (nest and prey); Buck, Paiero, and Marshall, 2006:41 (Canada: Ontario: Lake Opinicon).

*Tachysphex fedorensis* Rohwer, 1911b:576, ♀, ♂. Lectotype: ♀, USA: Texas: Lee County: Fedor (USNM), designated by Pulawski, 1988a:37. Synonymized with *Tachysphex punctifrons* by G. Bohart *in* Muesebeck et al., 1951:952.

**334. *punctiger* Pulawski**

*Tachysphex punctiger* Pulawski, 2007a:520, ♀, ♂. Holotype: ♂, Namibia: Swakopmund District: 63 km NE Swakopmund at 22°24'S 15°02'E (CAS).

**335. *punctipes* Pulawski**

*Tachysphex punctipes* Pulawski, 1967a:404, ♀. Holotype: ♀, Turkey: Artvin: 20 km Yusufeli-Tortum road (BMNH). – Pulawski, 1971:89 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Straka, 2005:264 (description of ♂; Kazakhstan: Matay desert; Mongolia: Bayanzag 100 km SW Dalanzadgad; Turkey: Van: Erciş); Ljubomirov and Yildirim, 2008:219 (in catalog of Crabronidae of Turkey).

**336. *pusulosus* de Beaumont**

*Tachysphex pusulosus* de Beaumont, 1955a:184, ♀. Holotype: ♀, Libya: n. Tripolitania: Corradini (BMNH). – de Beaumont, 1956a:199 (Libya); Pulawski, 1971:136 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); R. Bohart and Menke, 1976:276 (listed); Straka, 2005:268 (Turkey: reference to Pulawski, 1971); Pulawski, 2007a: 522 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:220 (in catalog of Crabronidae of Turkey).

**337. *quadricolor* (Gerstaecker)**

*Lyrops quadricolor* Gerstaecker in Peters, 1858:510, ♀. Holotype: ♀, Mozambique: no specific locality (ZMHU). – **As *Tachytes quadricolor***: Dalla Torre, 1897:693 (new combination, in catalog of world Hymenoptera). – **As *Tachysphex quadricolor***: Stadelmann, 1897:255 (new combination, study of type); R. Turner, 1917d:43 (new combination); Arnold, 1923:175 (listed, original description translated into English), 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:524 (in revision of African *Tachysphex*).

*Lyrops quadricolor* Gerstaecker in Peters, 1862:477, ♀. Objective synonym of *Lyrops quadricolor* Gerstaecker, 1857.

*Tachysphex depilosellus* R. Turner, 1917b:322, ♀. Lectotype: ♀, Zambia: Pakasa, locality of unknown location (BMNH), designated by Pulawski, 2007a:524. Synonymized with *Tachysphex quadricolor* by Pulawski, 2007a:524. – Arnold, 1923:173 (original description copied), 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:273 (listed).

*Tachysphex depilosellus* var. *fallax* Arnold, 1924:71, ♀, ♂. Lectotype: ♀, South Africa: Eastern Cape Province: Willowmore (SAM), designated by Pulawski, 2007a:524. Synonymized with *Tachysphex quadricolor* by Pulawski, 2007a:524. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex depilosellus fallax***: R. Bohart and Menke, 1976:273 (new status, listed).

**338. *quisqueyus* Pulawski**

*Tachysphex quisqueyus* Pulawski, 1988a:156, ♀, ♂. Holotype: ♂, Dominican Republic: Pedernales: Cabo Rojo (CAS). – Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**339. *radiatus* Gussakovskij**

*Tachysphex radiatus* Gussakovskij, 1952:246, ♀. Syntypes: ♀, Tajikistan: Stalinabad, now Dushanbe (ZIN). – Pulawski, 1971:236 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:117 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:74 (geographic distribution, collecting localities in Kazakhstan), 2004b:104 (Kazakhstan: western Tien Shan).

**340. *radoszkowskyi* F. Morawitz**

*Tachysphex radoszkowskyi* F. Morawitz, 1893b:411, ♀ (as *Radoszkowskyi*, incorrect original capitalization). Lectotype: ♀, Tajikistan: Kol in Yagnob River valley (ZIN), designated by Pulawski, 1971:75. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Pulawski, 1971:74 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:120 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia); Yildirim and Ljubomirov, 2005:1797 (first record from Turkey: Erzurum: Oltu: Sütkans); Ljubomirov and Yildirim, 2008:220 (in catalog of Crabronidae of Turkey).

**341. *ramses* Pulawski**

*Tachysphex ramses* Pulawski, 1971:297, ♀, ♂. Holotype: ♀, Egypt: Manshiet Radwan near Ghiza (USNM). – R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a:529 (in revision of African *Tachysphex*).

**342. rapax Pulawski**

*Tachysphex rapax* Pulawski, 2007a:531, ♀, ♂. Holotype: ♀, Kenya: Eastern Province: 94 km E Thika at 1°06.6'S 37°42.1'E (CAS). Paratypes: Tanzania.

**343. reedi Menke**

*Tachysphex pisonoides* var. *erythropus* Herbst, 1921c:114, ♀, ♂, junior secondary homonym of *Tachysphex erythropus* (Spinola, 1839). Lectotype: ♂, Chile: Valparaiso: Marga Marga (MCZ), designated by Pulawski, 1974a:64. – Jaffuel and Piri6n, 1926:376 (Chile: valle de Marga Marga).

*Tachysphex reedi* Menke in Pulawski, 1974a:64. Substitute name for *Tachysphex erythropus* Herbst, 1921. – Pulawski, 1974a:64 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**344. remotus Pulawski**

*Tachysphex remotus* Pulawski, 1974a:92, ♀, ♂. Holotype: ♂, Colombia: Guajira: Riohacha (BMNH). – R. Bohart and Menke, 1976:276 (listed); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

**345. rhacodes Pulawski**

*Tachysphex rhacodes* Pulawski, 2007a:534, ♀, ♂. Holotype: ♀, Zambia: Eastern Province: Wildlife Camp at Luangwa River 7 km SW Mfue at 13°07'S 31°45'E (CAS). Paratypes: Ethiopia, Kenya, Namibia, Tanzania, Zimbabwe.

**346. rhodesianus Bischoff**

*Tachysphex panzeri rhodesianus* Bischoff, 1913c:64, ♂. Holotype: ♂, Zimbabwe: Bulawayo (ZMHU). – **As *Tachysphex panzeri* race *rhodesianus***: Arnold, 1923a:170 (new status, revision, description of ♀), 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex rhodesianus***: Arnold, 1947:147 (full species status); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a:537 (in revision of African *Tachysphex*).

**347. rhynchocephalus Pulawski**

*Tachysphex rhynchocephalus* Pulawski, 1977a:281, ♂. Holotype: ♂, Australia: South Australia: 30 mi S Mt. Davies (ANIC). – Cardale, 1985:243 (in catalog of Australian Sphecidae).

**348. robustior F. Williams**

*Tachysphex robustior* F. Williams, 1914a:164, ♂. Holotype ♂: USA: Kansas: Grant County: no specific locality (Kansas Univ.). – G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); LaBerge, 1956:527 (holotype in Snow Entomological Museum)Arnaud, 1970:33 (...); R. Bohart and Menke, 1976:276 (listed); Pulawski in Krombein, 1979b:1632 (as new synonym of *Tachysphex mundus*); Pulawski, 1988a:176 (in revision of Nearctic *Tachysphex*); Ruiz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex crenuloides* F. Williams, 1914a:168, ♀. Holotype: ♀, USA: Kansas: Morton County: no specific locality (Kansas Univ). Synonymized with *Tachysphex robustior* by G. Bohart in Muesebeck et al., 1951:952 and with *Tachysphex mundus* by Pulawski in Krombein, 1979b:1632. – LaBerge, 1956:527 (holotype in Snow Entomological Museum); Arnaud, 1970:32 (...).

**349. rotundus Pulawski**

*Tachysphex rotundus* Pulawski, 2007a:540, ♀, ♂. Holotype: ♂, Namibia: Rehoboth District: 23 km N Rehoboth (CAS). Paratypes: Angola, Botswana, South Africa, Zaire, Zimbabwe.

**350. ruber Pulawski**

*Tachysphex ruber* Pulawski, 2007a:543, ♀, ♂. Holotype: ♀, Namibia: Rehoboth District: 15 km N Kalkrand (CAS). Paratypes: Botswana, South Africa.

**351. rubicundus Pulawski**

*Tachysphex rubicundus* Pulawski, 1971:342, ♀, ♂. Holotype: ♀, Turkmenistan: Uch-Adzhi (ZIN). Paratypes: Kazakhstan. – R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:113, 126 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:74 (geographic distribution, collecting localities in Kazakhstan).

**352. ruficaudis (Taschenberg)**

*Tachytes ruficaudis* Taschenberg, 1870:12, ♀. Lectotype: ♀, Brazil: Nova Friburgo (Halle), designated by R. Bohart in Pulawski, 1974a:37. – Kohl, 1885:406 (...); Dalla Torre, 1895:693 (in catalog of world Hymenoptera); Schrottky, 1903b:178 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay), 1913:231 (listed). – **As *Notogonia ruficaudis***: Strand, 1910a:159 (new combination, Paraguay). – **As *Tachysphex ruficaudis***: Jörgensen, 1912:291 (new combination, Argentina: Mendoza Province); Pulawski, 1974a:37 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Pulawski, 1988a:149 (in revision of Nearctic *Tachysphex*); Callan, 1991a:8 (Trinidad); Cambra and Santos, 2000:56 (Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Amarante, 1993:19 (ne. Brazil), 2002:35 (in catalog of Neotropical Crabronidae); Ruiz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies).

*Tachytes pullulus* Strand, 1910a:169, "♀" = ♂. Lectotype: ♂, Paraguay: Asunción: Villa Morra (or Asunción?), designated by R. Bohart in Pulawski, 1974a:37 (ZMHU). Synonymized with *Tachysphex ruficaudis* by R. Bohart in Pulawski, 1974a:37.

**353. rufitarsis (Spinola)**

*Larra rufitarsis* Spinola, 1851a:323, ♀. Lectotype: ♀, Chile: no specific locality (Torino), designated by Pulawski, 1974a:65. – **As *Lyrops rufitarsis***: Casolari and Casolari Moreno, 1980:113 (new combination, specimens in M. Spinola collection, Torino); Pagliano, 2008:549 (specimens in M. Spinola collection, Torino). – **As *Tachytes rufitarsis***: F. Smith, 1856:304 (new combination, in catalog of Hymenoptera in British Museum); Kohl, 1885:406 (in checklist of world *Tachytes*); Reed, 1894:631 (revision); Dalla Torre, 1897:693 (in catalog of world Hymenoptera). – **As *Tachysphex rufitarsis***: Kohl, 1905:364 (new combination, ...); Kieffer and Herbst, 1909:122 (visiting galls of *Lecanium resinatum*); W. Schulz, 1911b:195 (study of type, redescription); nec Brèthes, 1913:149 (= *Tachysphex conceptus*); Herbst, 1921c:114 (synonymy); Ruiz, 1924:102 (...); Jaffuel and Piri6n, 1926:377 (Chile: valle de Marga Marga); Janvier, 1928:93 (nesting habits); Gazulla and Ruiz Pereira, 1929:300 (Chile: Hacienda de "Las Mercedes"); Janvier, 1928:92 (nesting habits); Pulawski, 1974a:65 (in revision of Neotropical *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

? *Tachytes saussurei* var. *rufipes* Reed, 1894:632, ♂. Holotype: ♂, Chile: no specific locality (depository?). Tentatively synonymized with *Tachysphex rufitarsis* by Bohart and Menke, 1976:276.

*Larrada rufiventris* Reed, 1894:633, ♂, junior secondary homonym of *Tachysphex rufiventris* (Spinola, 1839). Holotype or syntypes: ♂, Chile: Valparaiso: El Salto (MCZ). Synonymized with *Tachytes rufitarsis* by Dalla Torre, 1897:693 (synonymy confirmed by Pulawski, 1974a:65) and with *Tachysphex pisonoides* var. *herbstii* by Herbst, 1921c:114.

**354. rufopictus Arnold**

*Tachysphex Braunsi* var. *rufopictus* Arnold, 1929c:385, ♂. Holotype: South Africa: Eastern Cape Province: Lady Gray (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex braunsi rufopictus***: R. Bohart and Menke, 1976:272 (new status, listed). – **As *Tachysphex rufopictus***: Pulawski, 2007a:544 (full species status, in revision of African *Tachysphex*).

*Tachysphex brachycerus* Arnold, 1940:121, ♀. Holotype: ♀, South Africa: Eastern Cape Province: Willowmore (TMP). Synonymized with *Tachysphex rufopictus* by Pulawski, 2007a:544. – R. Bohart and Menke, 1976:272 (listed).

**355. rugicauda Pulawski**

*Tachysphex rugicauda* Pulawski in Krombein and Pulawski, 1994:87, ♀. Holotype: ♀, India: Tamil Nadu: Moyar Camp in Nilgiri Hills (CAS).

**356. rugosipleuris Pulawski**

*Tachysphex rugosipleuris* Pulawski, 2007a:547, ♀, ♂. Holotype: ♂, Senegal: 10 km S Bignona (CAS). Paratypes: Burkina Faso, Cameroon, Ivory Coast.

**357. sabulosus Pulawski**

*Tachysphex sabulosus* Pulawski, 2007a:549, ♀, ♂. Holotype: ♀, Zimbabwe: Bulawayo airport at 20°00'S 28°38'E (CAS). Paratype: South Africa.

**358. saevus Arnold**

*Tachysphex saevus* Arnold, 1924:52, ♀. Holotype: ♀, South Africa: Northern Province: Pietersburg (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a:551 (in revision of African *Tachysphex*).

**359. sahelensis Pulawski**

*Tachysphex sahelensis* Pulawski, 2007a:553, ♂. Holotype: ♂, Senegal: 4 km SW Thiès (CAS). Paratypes: Mali.

**360. samburu Pulawski**

*Tachysphex samburu* Pulawski, 2007a:555, ♀, ♂. Holotype: ♀, Kenya: Eastern Province: near Ewaso Ng'iro River opposite Archer's Post at 0°38.1'N 37°40.4'E (CAS). Paratypes: Tanzania.

**361. saturnus Arnold**

*Tachysphex saturnus* Arnold, 1924:52, ♀. Holotype: ♀, South Africa: Eastern Cape Province: Algoa Bay (TMP). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a: 557 (in revision of African *Tachysphex*).

*Tachysphex halictiformis* Arnold, 1945:100, ♀, ♂. Lectotype: ♂, Madagascar: Bekily (MNHN), designated by Pulawski, 2007a:557. Synonymized with *Tachysphex saturnus* by Pulawski, 2007a:557.– Leclercq, 1960a:98 (Madagascar), 1961d:111 (Madagascar); R. Bohart and Menke, 1976:274 (listed); Leclercq, 1990b:117 (Madagascar: Bekily, Fampanambo); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

**362. saundersi Mercet**

*Tachysphex saundersi* Mercet, 1909b:195, ♀, ♂. Syntypes: Spain: Madrid and Aranjuez (MNCN). – Mercet, 1910b:165 (listed from Spain); Giner Mari, 1943a:137 (in Sphecid Fauna of Spain); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain); R. Bohart and Menke, 1976:276 (listed); Gayubo, 1982a:107 (N Spain: Sierra de Béjar), 1984b:96 (Spain: previously recorded from Salamanca Province).

**363. *scaber* Pulawski**

*Tachysphex scaber* Pulawski, 2007a:562, ♀, ♂. Holotype: ♂, Zambia: Lusaka Province: 25 km E Lusaka at 15°21'S 28°30'E (CAS). Paratypes: Botswana, Namibia, South Africa, Zimbabwe.

**364. *scaurus* Arnold**

*Tachysphex scaurus* Arnold, 1945:98, ♀, ♂. Syntypes: Madagascar: Bekily, Ihosy (MNHN). – Leclercq, 1961d:110 (Madagascar); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

**365. *schmiedeknechti* Kohl**

*Tachysphex schmiedeknechti* Kohl, 1883a:170, ♀ (as *Schmiedeknechti*, incorrect original capitalization). Lectotype: ♀, Greece: Attica: Aegina, now Aiyina (NHMW), designated by Pulawski, 2007a: 568. – Kohl, 1885a:350 (in key to Palearctic *Tachysphex*), 375 (in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); de Beaumont, 1940b:171 (in revision of *Tachysphex* of Egypt); Honoré, 1942:56 (Egypt); de Beaumont, 1947a:185 (in new revision of *Tachysphex* of Egypt), 1950d:20 (Egypt: Siwa oasis), 1950f:404 (Algeria); Gussakovskij, 1952:240 (Kazakhstan, Turkmenistan, Tajikistan); de Beaumont, 1953a:175 (Mauritania), 1955a:181 (Morocco); Bytinski-Salz, 1956:226 (Turkey: Kemer); de Beaumont, 1956a:197 (Libya), 1958b:61 (Algeria: Tassili des Ajjer), 1960a:18 (Greece: Rhodes Island), 1960b:238 (Libya), 1965a:48 (Greece); Myartseva, 1965:77 (Turkmenistan: Akibay); Pulawski, 1967a:398 (Turkey), 1971:389 (in revision of Palearctic *Tachysphex*); Balthasar, 1972:275 (in Sphecida Fauna of Czechoslovakia: can be expected in the country); Myartseva, 1972a:79 (Turkmenistan), 1972b:112 (parasite: *Chrysis (Tetrachrysis) mesasiatica* Semenov, 1912 = *decora* Mocsáry, 1887); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); R. Bohart and Menke, 1976:276 (listed); Myartseva, 1976:77 (nesting habits); Kazenas, 1978b:114, 126 (in key to Sphecidae of Kazakhstan and Central Asia); Guichard, 1980:227 (Oman); Roche, 1981:3 (in checklist of Sphecidae of United Arab Emirates); Gayubo and Mingo, 1988:82 (Spain: Córdoba: Sierra Morena); Dollfuss, 1989:13 (type material in NHMW); Guichard, 1991a:339 (Jordan); Krombein and Pulawski, 1994:13 (summary of nesting habits), 93 (in revision of Sri Lankan *Tachysphex*); Roche and Zalat, 1994:115 (Egypt: Sinai Peninsula); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 160 (review of known biology); K. Schmidt and Bitsch *in* Bitsch et al., 2001:271 (in Sphecida Fauna of Western Europe); Kazenas, 2002a:75 (geographic distribution, collecting localities in Kazakhstan); Gadallah and Assery, 2004b:1396 (skeletal parts of sting apparatus); Straka, 2005:273 (Turkey: Antalya: Beşkonak); Pulawski, 2007a:568 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:220 (in catalog of Crabronidae of Turkey).

*Tachysphex psilopus* Kohl, 1884a:371, ♂. Holotype or syntypes: ♂, Egypt: Sinai Peninsula: Tor (NHMW). Synonymized with *Tachysphex schmiedeknechti* by de Beaumont, 1940b:171. – Kohl, 1885a:354 (in key to Palearctic *Tachysphex*), 368 (in revision of Palearctic *Tachysphex*); Dalla Torre, 1897:684 (in catalog of world Hymenoptera); Bingham, 1898a:104 (Yemen: Aden); Morice, 1911:103 (Algeria); Dollfuss, 1989:13 (lectotype in NHMW).

*Tachysphex heliophilus* Nurse, 1909:515, ♀, ♂. Lectotype: ♀, India: Gujarat: Deesa (BMNH), designated by Pulawski, 1975a:312. Synonymized with *Tachysphex schmiedeknechti* by Pulawski, 1975a:312. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897).

*Tachysphex ornatipennis* Gussakovskij, 1933b:283, ♂. Holotype: ♂, former Persian province Seistan, now part of Iran and Afghanistan: no specific locality (ZIN). Synonymized with *Tachysphex schmiedeknechti* by Pulawski, 1971:389.

*Tachysphex fasciipennis* Gussakovskij, 1933b:283, ♂. Holotype: ♂, Turkmenistan: Farab (ZIN). Synonymized with *Tachysphex schmiedeknechti* by Pulawski, 1971:389. – Myartseva, 1963b:58 (Turkmenistan: lower Murgab River).



*Tachysphex calopteryx* Gussakovskij, 1933b:284, ♀. Holotype: ♀, Turkmenistan or Uzbekistan: sands Kara-Dzhuzgun in Aralian part of Kara Kum desert (ZIN). Synonymized with *Tachysphex schmiedeknechti* by Gussakovskij, 1952:240.

*Tachysphex schmiedeknechti satanas* Pulawski, 1971:393, ♀, ♂. Holotype: ♀, Syria: Ramadan near Damascus (A. Mochi coll.). Synonymized with *Tachysphex schmiedeknechti* by Pulawski in Krombein and Pulawski, 1994:94. – R. Bohart and Menke, 1976:276 (listed).

### 366. *schoenlandi* Cameron

*Tachysphex schoenlandi* Cameron, 1905f:211, ♂ (as *Schönlandi*, incorrect original capitalization and use of diacritic mark). Holotype or syntypes: South Africa: Cape Province: Grahamstown (AMG according to original description, currently TMP). – Arnold, 1923:167 (certainly a variety of *panzeri*, but the type is lost and the status of the species cannot be settled), 169 (probably the senior synonym of *Tachysphex panzeri* var. *aethiopicus*), 175 (listed, original description copied), 1924:68 (♀, South Africa: Cape Province: Algoa Bay, good species characterized by fimbriate male sterna), 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:276 (listed); Gess, 1981:20 (South Africa: Cape Province: 18 km WNW Grahamstown; nesting in friable soils, preying upon mandid nymphs); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:572.

### 367. *scopa* Pulawski

*Tachysphex scopa* Pulawski, 2007a:575, ♀, ♂. Holotype: ♂, Namibia: Karaibib District: 65 km SW Usakos (CAS). Paratypes: Angola, western South Africa.

### 368. *scopaes* Pulawski

*Tachysphex scopaes* Pulawski, 1988a:137, ♀, ♂. Holotype: ♀, USA: Texas: Kleberg County: Kingsville (UCD).

### 369. *semirufus* (Cresson)

*Larrada semirufa* Cresson, 1865b:464, ♀. Lectotype: ♀, USA: Colorado Territory: no specific locality (ANSP), designated by Cresson, 1916:96. – Riley, 1878:317 (...). – **As *Larra semirufa***: Patton, 1881:389 (new combination,...); Kohl, 1885a:247 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado). – **As *Tachysphex semirufus***: W. Fox, 1894a:515 (new combination, in revision of North American Larrinae); Ashmead 1894:63 (...); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); H. Smith, 1908b:381 (in revision of Nebraskan Sphecidae); Rohwer, 1911b:580 (in key); Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:276 (listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Kurczewski and Evans, 1986:271 (nesting habits); Pulawski, 1988a:40 (in revision of Nearctic *Tachysphex*); Finnamore, 1997:888 (Canada: Yukon); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada).

*Tachysphex punctulatus* H. Smith, 1906:246, ♀, junior primary homonym of *Tachysphex punctulatus* Kohl, 1884 (now in *Larropsis*). Holotype: ♀, USA: Nebraska: Sioux County: no specific locality (UNL). Synonymized with *Tachysphex semirufus* by G. Bohart in Muesebeck et al., 1951:952. – Rohwer, 1911b:580 (in key); Muma, 1952:23 (type in UNL).

*Tachysphex puncticeps* H. Smith, 1908:381. Substitute name for *Tachysphex punctulatus* H. Smith, 1906. Synonymized with *Tachysphex semirufus* by G. Bohart in Muesebeck et al., 1951:952. – Mickel, 1918b:424 (in catalog of Nebraskan Sphecidae).

*Tachysphex giffardi* Rohwer, 1917a:244, ♀. Holotype: ♀, USA: California: Placer County: Summit (USNM). Synonymized with *Tachysphex semirufus* by G. Bohart in Muesebeck et al., 1951:952.

**370. *sericans* Gussakovskij**

*Tachysphex sericans* Gussakovskij, 1952:241, ♀, ♂. Lectotype: ♀, Tajikistan: Ayyvaj (ZIN), designated by Pulawski, 1971:326. – Pulawski, 1971:324 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:113, 125 (in key to Sphecidae of Kazakhstan and Central Asia); Roche, 1981:3 (in checklist of Sphecidae of United Arab Emirates); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia).

**ssp. *gracilis* Pulawski**

As *Tachysphex pygidialis*: de Beaumont, 1950d:18 (Egypt: Siwa oasis), corrected to *Tachysphex sericans gracilis* by Pulawski, 1971:326.

*Tachysphex sericans gracilis* Pulawski, 1971:326, ♀, ♂. Holotype: ♀, Algeria: Biskra (Lausanne). – R. Bohart and Menke, 1976:276 (listed).

**371. *sericeus* (F. Smith)**

*Larrada sericea* F. Smith, 1856:285, ♀. Holotype or syntypes: ♀, Gambia: no specific locality (BMNH). – Nec *Tachytes sericeus* (= *Tachysphex erythropus*): De-Stefani, 1886:171, 1895:226. – **As *Larra sericea***: Kohl, 1885a:247 (new combination, in checklist of world *Larra*); Dalla Torre, 1987:674 (in catalog of world Hymenoptera). – **As *Tachysphex sericeus***: R. Turner, 1917e:197 (new combination, synonymy); Arnold, 1923a:154 (Zimbabwe, South Africa; revision), 1930:3 (in checklist of Afrotropical Sphecidae); Guiglia, 1943c (Ethiopia), 1950:249 (Ethiopia: Gamo Gofa: Elolo, Gondaraba at 4°58'N 36°49'E); Pulawski, 1975:313 (synonymy); R. Bohart and Menke, 1976:276 (listed); Gess, 1981:20 (South Africa: Cape Province: 18 km WNW Grahams-town; nesting in friable soils); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:579 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:221 (in catalog of Crabronidae of Turkey).

*Lyrops fluctuata* Gerstaecker in Peters, 1858:510, ♀ (authorship assigned to Klug). Holotype: ♀, Mozambique: Tette (ZMHU). Synonymized with *Tachysphex sericeus* by R. Turner, 1917e:197, synonymy confirmed by Pulawski, 1975a:313. – Kohl, 1883c:226 (incorrectly synonymized with *Tachysphex erythropus*); Casolari and Casolari Moreno, 1980:112 (specimens in M. Spinola collection, Torino); Pagliano, 2008:546 (specimens in M. Spinola collection, Torino). – **As *Tachytes fluctuata***: Magretti, 1884c:587 (new combination, Eritrea: Kor Cheru; Sudan and/or Eritrea), 1898:51 (Somalia: Umberto I). – **As *Tachysphex fluctuatus***: nec Kohl, 1885a:250 (new combination, = *Tachysphex erythropus*); nec F. Morawitz, 1894:342 (= *Tachysphex sordidus*); W. Fox, 1896e:554 (Somalia: Berbera); Dalla Torre, 1897:679 (in catalog of world Hymenoptera); Stadelmann, 1897:255 (study of type, new combination); Bingham, 1898a:104 (Yemen: Aden); W. Schulz, 1905b:9 (West Africa: Muculla); Kohl, 1906a:218 (Yemen: Aden); Longstaff, 1911:195 (Sudan: Khartoum), 199 (Sudan: Kosti); nec Ferton, 1912a:399 (= *Tachysphex costae fertoni*); nec Kruger, 1929a:21 and 1929b:56 (as *fluctuosus* = *Tachysphex erythropus*); nec Gussakovskij, 1933b:280 and 1935:426 (= *Tachysphex erythropus*); nec Cros, 1936:355 (= *Tachysphex costae fertoni*); nec Rungs, 1936:25; nec Móczár, 1938a:80 (= *Tachysphex costae*); Arnold, 1945:97 (as good species), 1951:155 (Ethiopia, Ghana); nec Ceballos, 1956:376 (= *Tachysphex erythropus*); Pulawski, 1971:416 (taxonomy). – Nec following authors (= *Tachysphex erythropus*): Kohl, 1885:367; W. Fox, 1896:554; W. Schulz, 1904:102; von Schulthess, 1909:442; Mercet, 1910:165; Morice, 1911:101; Dusmet, 1915:87; von Schulthess, 1926:215; Guiglia, 1932b:474; Gussakovskij, 1933:280; Nadig, 1933:79; Guiglia in Zavattari, 1934:303; Gussakovskij, 1935:426 (Tajikistan); de Beaumont, 1936b:614, 1936c:8; Rungs, 1936:24; Guiglia, 1939a:187, 1940:292, 1942:234; Honoré, 1942:56 Giner Mari, 1943:139, 1947:25; Ceballos, 1956:376; Myartseva, 1963:58.

*Lyrops fluctuata* Gerstaecker, 1862:478, ♀. Objective synonym of *Lyrops fluctuata* Gerstaecker, 1858.

*Tachysphex selectus* Nurse, 1909:514, ♂. Holotype: ♂, India: Bombay (BMNH). Synonymized with *Tachysphex sericeus* by R. Turner, 1917e:198 and by Pulawski, 2007a:579. – Ramakrishna Aiyar, 1916:552 (in catalog of Indian aculeates described after Bingham, 1897); Pulawski, 1975a:313 (synonymy); R. Bohart and Menke,

1976:276 (listed); Krombein and Pulawski, 1994:72 (as valid species, in revision of Sri Lankan *Tachysphex*); Straka, 2005:274 (Turkey: Antalya: Gönük 25 km SW Antalya, Kemer 35 km SW Antalya; Balıkesir: Arkent near Ayvalık).

As *Tachysphex ferrugineipes* (Lepeletier de Saint Fargeau): Cameron, 1910:289 (Tanzania: Meru), corrected to *Tachysphex sericeus* by R. Turner, 1917e:198.

*Tachysphex actaeon* de Beaumont, 1960a:16, ♀, ♂. Holotype: ♂, Israel: Jerusalem (Lausanne). Synonymized with *Tachysphex selectus* by Pulawski, 1975a:313. – Pulawski, 1967a:398 (Turkey), 1971:412 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:13 (Israel).

### 372. *sexinus* Leclercq

*Tachysphex sexinus* Leclercq, 1961d:111, ♂. Holotype: ♂, Madagascar: Ranomafana (MHNB). – R. Bohart and Menke, 1976:276 (listed); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae), 2007a:585 (in revision of African *Tachysphex*).

### 373. *seyrigi* Arnold

*Tachysphex seyrigi* Arnold, 1945:99, ♀, ♂ (as *Seyrigi*, incorrect original capitalization). Lectotype: ♂, Madagascar: Bekily (MNHN). – Leclercq, 1960a:99 (Madagascar), 1961d:110 (Madagascar); R. Bohart and Menke, 1976:276 (listed); Leclercq, 1990b:118 (Madagascar: Bekily); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae), 2007a:587 (in revision of African *Tachysphex*).

### 374. *siitanus* Tsuneki

*Tachysphex siitanus* Tsuneki, 1971m:30, ♀. Holotype: ♀, China: Peking: Siitan (originally K. Tsuneki coll., now USNM). – R. Bohart and Menke, 1976:276 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Hua, 2006:283 (in list of Chinese insects, geographic distribution).

### 375. *silvestris* Pulawski

*Tachysphex silvestris* Pulawski, 2007a:589, ♀, ♂. Holotype: ♀, Ivory Coast: Abijan: Forêt de Banco (CAS). Paratypes: Cameroon, Gabon, Ghana, Kenya, Tanzania.

### 376. *similis* Rohwer

*Tachysphex similis* Rohwer, 1910a:51, ♀, ♂. Lectotype: ♀, USA: Texas: Lee County: Fedor (USNM), designated by Pulawski, 1988a:161. – J. Smith, 1910:683 (...); Krombein, 1950a:267 (North Carolina: Dare County); Wray, 1950:38 (...); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Krombein, 1951a:143 (Virginia: Dunn Loring; visiting tulip-tree honeydew), 1952a:93 (USA: Virginia: Westmoreland State Park), 330 (North Carolina), 1953b:122 (visiting foliage of *Quercus marilandica*), 132 (North Carolina: Kill Devil Hills); Krombein and Evans, 1954:232 (Florida), 1955:231 (Florida, grasshopper prey); Krombein, 1958c:188 (...), 1963f:273 (Maryland: Plimmers Island near Washington, D.C.), 1964c:15 (nesting habits); Kurczewski, 1966c:436-453 (comparative male behavior); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Kurczewski, 1967b:279 (*Hedychridium fletcheri* is a probable parasite), 1971:114 (in key to Floridan species); Wray, 1967:123 (...); Elliot and Kurczewski, 1974:725 (character displacement); Evans, 1975a:263 (slow colonizer of new habitats); R. Bohart and Menke, 1976:276 (listed); L. Davis, 1978:218 (North Carolina: Kill Devil Hills, data from Krombein, 1953a); Krombein, 1979b:1631 (in catalog of North American Hymenoptera); Finnamore, 1982:104 (in Sphecid Fauna of Southern Quebec); Elliott and Kurczewski, 1985:295 (prey); Pulawski, 1988a:161 (in revision of Nearctic *Tachysphex*); Spofford and Kurczewski, 1992:997 (species of miltogrammine parasites listed), 1002 (counter-cleptoparasitic behavior: freeze-stop and face-off); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Elliott, 1996:24 (Bashamas, nesting habits); Kurczewski, 1998d:250 (pine barrens in upstate New York), 1998e:253 (possibly a synonym of *Tachysphex acutus*, but current usage recommended); Kurczewski, 2000c:115 (locality records from North and South Carolina), 118 (nest and prey); Amaranter, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and

Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada); Kurczewski, 2009:42 (review of known behavioral information, field observations), 81-86 (discussion of nesting behavior).

*Tachysphex similans* Rohwer, 1910a:52, ♀. Holotype: ♀, USA: Texas: Lee County: Fedor (USNM). Synonymized with *Tachysphex similis* by G. Bohart in Muesebeck et al., 1951:952.

As *Tachysphex terminatus*: Krombein, 1953c:13 (Bahamas: South Bimini), corrected to *Tachysphex similis* by Pulawski, 1988a:161.

### 377. *socotrae* Pulawski

*Tachysphex socotrae* Pulawski, 2007a:592, ♀, ♂. Holotype: ♀, Yemen: Isle of Socotra: Hadibo Plain (BMNH).

### 378. *solaris* Pulawski

*Tachysphex solaris* Pulawski, 1982b:35, ♀, ♂. Holotype: ♀, USA: California: San Diego County: Borrego Valley (UCD). – Pulawski, 1988a:93 (in revision of Nearctic *Tachysphex*).

### 379. *sonorensis* (Cameron)

*Larra sonorensis* Cameron, 1889a:50, ♀. Holotype: ♀, Mexico: Northern Sonora: no specific locality (BMNH). – Dalla Torre, 1897:674 (in catalog of world Hymenoptera); Ashmead, 1899d:249 (in checklist of North American Crabronidae). – As *Tachysphex sonorensis*: R. Bohart and Menke, 1976:276 (new combination, listed); Krombein, 1979b:1629 (in catalog of North American Hymenoptera); Rust, Menke, and Miller, 1985:46 (California: Channel Islands), 53 (color forms); Parks, 1986:34 (California: Torrey Pine State Reserve); Pulawski, 1988a:133 (in revision of Nearctic *Tachysphex*); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

*Tachysphex dakotensis* Rohwer, 1923a:98, ♀. Holotype: ♀, USA: North Dakota: Bowman County: Gascoyne (USNM). Synonymized with *Tachysphex sonorensis* by Pulawski in Krombein, 1979b:1629. – G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:273 (listed).

*Tachysphex schlingerii* R. Bohart, 1962a:36, ♂, ♀. Holotype: ♂, USA: California: Sierra County: Sierraville (CAS). Synonymized with *Tachysphex sonorensis* by Pulawski in Krombein, 1979b:1629. – Krombein, 1967c:393 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:276 (listed).

### 380. *sordidus* (Dahlbom)

*Tachytes sordidus* Dahlbom, 1845:470, ♂ (as *sordida*, incorrect original termination). Lectotype: ♂, "Egypt", actually Greece: Rhodes Island (Stockholm, Hedenborg coll.), designated by de Beaumont, 1947b:391. – As *Tachysphex sordidus*: Kohl, 1885a:397 (tentative new combination, original description copied); Dalla Torre, 1897:694 (in catalog of world Hymenoptera); de Beaumont, 1940b:170 (not found in in revision of *Tachysphex* of Egypt); Honoré, 1942:56 (described from Egypt in error); de Beaumont, 1947a:176 (in new revision of *Tachysphex* of Egypt, occurrence in Egypt doubtful), 1947b:391 (Cyprus); Pittioni, 1950:25 (Cyprus); de Beaumont, 1960a:16 (Greece: Rhodes Island); Pulawski, 1971:417 (in revision of Palearctic *Tachysphex*); Kazenas, 1972b:163 (Kazakhstan); Myartseva, 1972a:79 (Turkmenistan); de Beaumont, Bytinski-Salz, and Pulawski, 1973:13 (Israel); Kazenas, 1974b:109 (feeding on flowers of *Tamarix* sp. in Kazakhstan); R. Bohart and Menke, 1976:276 (listed); Georghiou, 1977:192 (Cyprus); Kazenas, 1978b:114, 126 (in key to Sphecidae of Kazakhstan and Central Asia); Islamov, 1986:527 (Uzbekistan: Surkhandarya Oblast); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:75 (geographic distribution, collecting localities in Kazakhstan), 2004b:104 (Kazakhstan: western Tien Shan); Straka, 2005:275 (Turkey: Antalya: Gönük 25 km SW Antalya; Nevşehir: Ürgüp); Pulawski, 2007a:594 (in revision of African *Tachysphex*); Ljubomirov and Yildirim, 2008:222 (in catalog of Crabronidae of Turkey).

*Tachysphex lebedevi* Gussakovskij, 1952:238, ♀, ♂. Lectotype: Tajikistan: Koy-pyaz-tau (ZIN), designated by Pulawski, 1971:419. Synonymized with *Tachysphex sordidus* by Pulawski, 1971:417 and 419.

As *Tachysphex fluctuatus*: Morawitz, 1894:342 (Turkmenistan: Repetek), corrected to *Tachysphex sordidus* by Pulawski, 1971:417.

As *Tachysphex grandissimus* ( $\sigma$  only): Gussakovskij, 1933b:382 (Iran), corrected to *Tachysphex sordidus* by Pulawski, 1971:417.

### 381. *spatulifer* Pulawski

*Tachysphex spatulifer* Pulawski, 1982b:35, ♀, ♂. Holotype: ♀, USA: California: Monterey County: Arroyo Seco Camp (UCD). – Pulawski, 1988a:63 (in revision of Nearctic *Tachysphex*).

### 382. *speciosissimus* Morice

*Tachysphex speciosissimus* Morice, 1897:308, ♀. Holotype: ♀, Egypt: Koubbeh near Cairo (OXUM). – de Beaumont, 1940b:177 (in revision of *Tachysphex* of Egypt); Honoré, 1942:55 (listed from Egypt); de Beaumont, 1947a:206 (in new revision of *Tachysphex* of Egypt); Pulawski, 1971:109 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:7 (Israel); R. Bohart and Menke, 1976:276 (listed); Pulawski, 2007a:596 (in revision of African *Tachysphex*).

*Tachysphex redivivus* Kohl, 1901c:781, ♀. Holotype: ♀, Egypt: Cairo (NHMW). Synonymized with *Tachysphex speciosissimus* by de Beaumont, 1940b:178. – Dollfuss, 1989:13 (type material in NHMW).

As *Tachysphex fasciatus* ( $\sigma$  only): de Beaumont, 1940b:178 and 1947a:207 (corrected to *Tachysphex speciosissimus* by Pulawski, 1971:109 and 112).

### 383. *spectrum* Pulawski

*Tachysphex spectrum* Pulawski, 2007a:600, ♀, ♂. Holotype: ♀, Tanzania: Morogoro Region: 128 road km NW Morogoro at 6°08.2'S 36°54.3'E (CAS). Paratypes: Kenya.

### 384. *spinulosus* Pulawski

*Tachysphex spinosus* Pulawski, 1974a:72, ♀, junior primary homonym of *Tachysphex spinosus* W. Fox, 1893. Holotype: ♀, Brazil: Mato Grosso: Xavantina (BMNH). – Amarante, 2002:35 (in catalog of Neotropical Crabronidae).

*Tachysphex spinulosus* Pulawski, 1975a:311. Substitute name for *Tachysphex spinosus* Pulawski, 1974. – R. Bohart and Menke, 1976:276 (listed); Amarante, 2005:10 (*spinulosus* is the valid name for the species).

### 385. *splendidulus* F. Morawitz

*Tachysphex splendidulus* F. Morawitz, 1893b:411, ♀. Holotype: ♀, Tajikistan: Varzaminor 70 km E Samarkand (ZIN). – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Pulawski, 1971:75 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:276 (listed); Kazenas, 1978b:120 (in key to Sphecidae of Kazakhstan and Central Asia), 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia).

### 386. *spretus* Kohl

*Tachysphex spretus* Kohl, 1901c:778, ♀. Holotype: ♀, Turkmenistan: Bolshyie Balkhany (NHMW). – Pulawski, 1971:120 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:277 (listed); Kazenas, 1978b:118, 128 (in key to Sphecidae of Kazakhstan and Central Asia); Dollfuss, 1989:13 (lectotype in NHMW); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:75 (geographic distribution, collecting localities in Kazakhstan), 2008a:102 (Southeastern Kazakhstan: Ili River valley: 14-18 km Ayak-Kalkan, 10 km NW and 45SWChundzha).

### 387. *sri* Pulawski

*Tachysphex sri* Pulawski in Krombein and Pulawski, 1994:22, ♀, ♂. Holotype: ♂, Sri Lanka: Anuradhapura District: Padaviya tank (USNM).

**388. *stachi* de Beaumont**

As *Tachysphex caucasicus* (Radoszkowski, 1886): Kohl, 1888a:143 (♀ only; ♂ = *Tachysphex fulvitaris*), corrected to *Tachysphex stachi* by ...

*Tachysphex stachi* de Beaumont, 1936b:618, ♀. Syntypes: ♀, Caucasus: no specific locality (Kraków). – Pulawski, 1971:99 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:7 (Israel); R. Bohart and Menke, 1976:277 (listed); Kazenas, 1978b:119, 134 (in key to Sphecidae of Kazakhstan and Central Asia); Pulawski, 1978:218 (in key to Sphecidae of European part of former USSR); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:75 (geographic distribution, collecting localities in Kazakhstan); Straka, 2005:267 (Turkey: Adiyaman: Nemrut dag near Karadut).

**389. *stevensoni* Arnold**

*Tachysphex stevensoni* Arnold, 1924:64, ♀, ♂ (as *Stevensoni*, incorrect original capitalization). Lectotype: ♀, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:602. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a:602 (in revision of African *Tachysphex*).

**390. *stimulator* R. Turner**

*Tachysphex stimulator* R. Turner, 1916b:257, ♀, ♂. Lectotype: ♀, Australia: Western Australia: Yallingup (BMNH), designated by Pulawski, 1977a:227. – R. Turner, 1916b:254 (in key); R. Bohart and Menke, 1976:277 (listed); Pulawski, 1977a:227 (in revision of Australian *Tachysphex*); Cardale, 1985:243 (in catalog of Australian Sphecidae).

**391. *stysi* Straka**

*Tachysphex stysi* Straka, 2008:692, ♀, ♂. Holotype: ♂, Kazakhstan: Chagir 40 km S Arys' (OÖLM). Paratypes: Tajikistan, Turkmenistan.

**392. *suavis* Arnold**

*Tachysphex suavis* Arnold, 1929c:385, ♀. Holotype: ♀, Zimbabwe: Bulawayo (SAM). – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae), 1945:97 (Madagascar); Leclercq, 1961d:109 (Madagascar); R. Bohart and Menke, 1976:277 (listed); Leclercq, 1990b:118 (Madagascar: Fort Dauphin); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae), 2007a:604 (in revision of African *Tachysphex*).

**393. *subandinus* Pulawski**

*Tachysphex subandinus* Pulawski, 1974a:57, ♀, ♂. Holotype: ♂, Argentina: Tucumán: Las Cejas (MCZ). – R. Bohart and Menke, 1976:277 (listed); Amarante, 1993:19 (ne. Brazil), 2002:35 (in catalog of Neotropical Crabronidae).

**394. *subcoriaceus* Arnold**

*Tachysphex subcoriaceus* Arnold, 1945:98, ♂. Holotype: ♂, Madagascar: Ranomafana (MNHN). – Leclercq, 1961d:109 (description of ♀; Madagascar); R. Bohart and Menke, 1976:277 (listed); Leclercq, 1990b:118 (Madagascar: Nosy-Komba); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae), 2007a:607 (in revision of African *Tachysphex*).

*Tachysphex subeditus* Leclercq, 1961d:109, ♂, ♀. Holotype: ♂, Madagascar: Toamasina: Foulpointe, now Mahavelona (MHNB). Synonymized with *Tachysphex subcoriaceus* by Pulawski, 2007a:607. – R. Bohart and Menke, 1976:277 (listed); Pulawski, 2003b:798 (in checklist of Malagasy Sphecidae).

**395. *subdentatus* F. Morawitz**

*Tachysphex subdentatus* F. Morawitz, 1893c:412, ♀. Lectotype: ♀, Tajikistan: Iskander-kul in Yagnob River valley 55 km NW Dushanbe (ZIN), designated by Pulawski, 1971:98. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Myartseva, 1963b:58 (Turkmenistan: lower Murgab River), 1965:78 (Turkmenistan: Akibay); Pulawski, 1967a:405 (Turkey, description of ♂), 1971:96 (in revision of Palearctic *Tachysphex*); Myartseva, 1972a:80 (Turkmenistan); R. Bohart and Menke, 1976:277 (listed); Kazenas, 1978b:118, 133 (in key to Sphecidae).

of Kazakhstan and Central Asia); Pulawski, 1978:216, 220 (in key to Sphecidae of European part of former USSR); Islamov, 1986:525 (Uzbekistan: Tashkent Oblast'); Hensen and van Ooijen, 1987:16 (Turkey); Gorobchishin, 1994:21 (first record from Ukraine); Nazarova, 1998:41 (Tajikistan: Tigrovaya Balka Nature Reserve); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia); K. Schmidt and Bitsch *in* Bitsch et al., 2001:272 (in Sphecid Fauna of Western Europe); Kazenas, 2002a:76 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Nazarova, 2004:107 (Tajikistan: Badakhshan Region: Rushan district: villages Visav and Dasht), 2005:94 (alfalfa fields in southwestern Tajikistan); Straka, 2005:267 (Turkey: Agri: 20 km S Agri); Yildirim and Ljubomirov, 2007:120 (Turkey: Malalyta: Kale); Danilov, 2008:349 (Russia: Altayskiy Kray: Barnaul area); Ljubomirov and Yildirim, 2008:222 (in catalog of Crabronidae of Turkey).

### 396. *subfimbriatus* Arnold

*Tachysphex subfimbriatus* Arnold, 1924:69, ♀, ♂. Lectotype: ♀, South Africa: Eastern Cape Province: Willowmore (TMP), designated by Pulawski, 2007a:610. – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a: 610 (in revision of African *Tachysphex*).

### 397. *subopacus* R. Turner

*Tachysphex debilis* R. Turner, 1908:490, ♀, junior primary homonym of *Tachysphex debilis* Pérez, 1907 [which is a junior synonym of *Tachytes argyreus* (F. Smith)]. Holotype: ♀, Australia: Queensland: Cairns (BMNH).  
*Tachysphex subopacus* R. Turner, 1910a:348. Substitute name for *Tachysphex debilis* R. Turner, 1908. – R. Turner, 1916b:255 (in key; R. Bohart and Menke, 1976:277 (listed); Pulawski, 1977a:296 (in revision of Australian *Tachysphex*); Cardale, 1985:243 (in catalog of Australian Sphecidae).

### 398. *sulcatus* Pulawski

*Tachysphex sulcatus* Pulawski, 1988a:97, ♀, ♂. Holotype: ♀, USA: California: Los Angeles County: Angeles Crest Highway: Arroyo Seco (CAS).

### 399. *sulcidorsum* de Beaumont

*Tachysphex sulcidorsum* de Beaumont, 1950f:406, ♀, ♂. Holotype: ♀, Algeria: Laghouat (BMNH). – de Beaumont, 1952c:195 (Algeria: Hoggar), 1955a:186 (Morocco); Pulawski, 1971:115 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a:613 (in revision of African *Tachysphex*).

### 400. *sveltanae* Pulawski

*Tachysphex sveltanae* Pulawski, 1971:316, ♂. Holotype: ♂, Turkmenistan: Ashgabat (W.J. Pulawski coll.). – R. Bohart and Menke, 1976:277 (listed); Kazenas, 1978b:125 (in key to Sphecidae of Kazakhstan and Central Asia); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 2002a:76 (geographic distribution).

### 401. *sycorax* Arnold

*Tachysphex Panzeri* var. *sycorax* Arnold, 1923a:169, ♂ (as *Sycorax*, incorrect original capitalization). Holotype: ♂, Zimbabwe: Bulawayo (SAM). – Arnold, 1930:4 (in checklist of Afrotropical Sphecidae). – **As *Tachysphex panzeri sycorax***: R. Bohart and Menke, 1976:275 (new status, listed). – **As *Tachysphex sycorax***: Pulawski, 2007a:615 (full species status, in revision of African *Tachysphex*).

### 402. *sympleuron* Pulawski

*Tachysphex sympleuron* Pulawski *in* Krombein and Pulawski, 1994:60, ♀, ♂. Holotype: ♀, Sri Lanka: Mannar District: 0.8 km NE Kokmotte in Wilpattu National Park (USNM). – Krombein *in* Krombein and Pulawski, 1994:11 (nesting habits).

**403. *tahoe* Pulawski**

*Tachysphex tahoe* Pulawski, 1988a:86, ♀, ♂. Holotype: ♂, USA: California: Placer County: Carnelian Bay on Lake Tahoe (UCD).

**404. *taita* Pulawski**

*Tachysphex taita* Pulawski, 2007a:617, ♀, ♂. Holotype: ♂, Kenya: Coast Province: 10 km N Taita Discovery Centre (CAS). Paratypes: Namibia, Tanzania.

**405. *tanqua* Pulawski**

*Tachysphex tanqua* Pulawski, 2007a:620, ♀, ♂. Holotype: ♀, South Africa: Northern Cape Province: Pofadder (SAM).

**406. *tarsatus* (Say)**

*Larra tarsata* Say, 1823:78, sex not indicated. Holotype or syntypes: USA: Arkansas: no specific locality (destroyed, see W. Fox, 1902:11). – F. Smith, 1856:281 (in catalog of Hymenoptera in British Museum); Le Conte, 1859a:166 (original description copied); Cresson, 1862:237 (in catalog of North American Hymenoptera), 1862:237 (...); Riley, 1880:270 (...); Patton, 1881:389 (...); Cresson, 1887:277 (in catalog of North American Hymenoptera); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado). – **As *Larrada tarsata***: Cresson, 1865:464 (new combination, body color), 1876:208 (Colorado: Denver). – **As *Tachysphex tarsatus***: W. Fox, 1894a:512 (new combination, in revision of North American Larrinae), 1894c:106 (Mexico: Baja California); Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Peckham and Peckham, 1900:89 (nesting habits); J. Smith, 1900:518 (...); Peckham and Peckham, 1905:261 (...); H. Smith, 1908:381 (in revision of Nebraskan Sphecidae); J. Smith, 1910:683 (...); Rohwer, 1911b:580 (in key); F. Williams, 1914a:165 (in revision of Larrinae of Kansas), 203 (nesting habits); Rohwer, 1916b:687 (in catalog of Hymenoptera of Connecticut); Stevens, 1917:422 (North Dakota: Sheldon); Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); J.Ch. Bradley, 1928:1009 (in catalog of Hymenoptera of New York); Robertson, 1928:128 (...), 195 (...); G. Carpenter, 1930b:299 (nest closure); Brimley, 1938:443 (North Carolina: Raleigh); Strickland, 1947:129 (Canada: Alberta); Krombein, 1950a:267 (North Carolina: Dare County); G. Bohart *in* Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); K. Cooper, 1953:33 (Massachusetts: Penikese Island); Krombein, 330 (North Carolina); Kurczewski and Kurczewski, 1963:146 (Pennsylvania: Presque Isle State Park); Kurczewski, 1966b:436-453 (...); Lavigne and Pfadt, 1966:31 (Wyoming; preying on grasshopper *Amphitornus coloradus*); Krombein, 1967c:393 (in catalog of North American Hymenoptera); G. Bohart, Nye, and Hawthorn, 1970:48 (Utah: Logan, onion pollinator); Evans, 1970:490 (Wyoming: Jackson Hole, nesting habits); Horning and Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); Alcock and Gamboa, 1975b:164 (nesting habits); Evans, 1975a:263 (slow colonizer of new habitats); R. Bohart and Menke, 1976:277 (listed); L. Davis, 1978:218 (North Carolina: Kill Devil Hills, data from Krombein, 1953a); Krombein, 1979b:1630 (in catalog of North American Hymenoptera); Steiner, 1981a:333 (...), 1981b:2 (...), 12-14 (defensive reaction of prey); Finnermore, 1982:106 (in Sphecid Fauna of Southern Quebec); Hilchie, 1982:106 (prey of *Philanthus albopilosus*), 107 (Alberta: Empress); Elliott and Kurczewski, 1985:293 (prey); Rust, Menke, and Miller, 1985:46 (California: Channel Islands), 53 (prey); Pulawski, 1988a:57 (in revision of Nearctic *Tachysphex*); Kurczewski and Acciavatti, 1990:60 (New York: Cayuga County); Kurczewski, 1991a:300 (nesting habits); Spofford and Kurczewski, 1992:997 (species of miltogrammine parasites listed), 1002 (counter-cleptoparasitic behavior: freeze-stop and face-off, diversionary flight), 1003 (chasing flight), 1004 (post-larvipositional counter-cleptoparasitic behavior: abandon burrow), 1005 (abandon prey, clean prey, inordinate amount of post-provisioning time in burrow); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Kurczewski, 1998d:250 (pine barrens in upstate New York), 1999:181 (nesting habits); Kurczewski, 2000c:115 (locality records from North and South Carolina), 117 (nest and prey); Skevington et al., 2001:128 (Canada: Ontario: Lambton County); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado



Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada).

*Tachysphex dubius* W. Fox, 1894a:515, ♂, junior secondary homonym of *Tachysphex dubius* (Radoszkowski, 1886).

Lectotype: ♂, USA: New Jersey: Camden County: Camden (ANSP), designated by Cresson, 1928:44. Synonymized with *Tachysphex tarsatus* by R. Bohart in Bohart and Menke, 1976:277. – Ashmead, 1899d:250 (in checklist of North American Crabronidae); J. Smith, 1900:518 (...); Viereck, 1903a:67 (New Mexico: Beulah); F. Williams, 1914a:163 (in revision of Larrinae of Kansas); Strickland, 1947:129 (Canada: Alberta: Medicine Hat).

*Tachysphex dubiosus* Dalla Torre, 1897:679. Substitute name for *Tachysphex dubius* W. Fox. – Viereck, 1902-1903:67 (...); J. Smith, 1910:683; G. Bohart in Muesebeck et al., 1951:951 (in catalog of North American Hymenoptera).

*Tachysphex hitei* Rohwer, 1908a:221, ♀. Holotype: ♀, USA: Colorado: Boulder County: Jim Creek (USNM). Synonymized with *Tachysphex tarsatus* by G. Bohart in Muesebeck et al., 1951:952. – Rohwer, 1911b:580 (in key).

*Tachysphex sanguinosus* Mickel, 1916a:414, ♀. Holotype: ♀, USA: Nebraska: Douglas County: Omaha (UNL). Synonymized with *Tachysphex tarsatus* by Pulawski in Krombein, 1979b:1630. – Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Muma, 1952:23 (type in UNL); R. Bohart and Menke, 1976:276 (listed).

*Tachysphex zimmeri* Mickel, 1916a:415, ♀. Holotype: ♀, USA: Nebraska: Sioux County: Monroe Canyon (UNL). Synonymized with *Tachysphex tarsatus* by G. Bohart in Muesebeck et al., 1951:952. – Mickel, 1918b:423 (in catalog of Nebraskan Sphecidae); Carter, 1925:133 (Canada: Alberta: Lethbridge); Strickland, 1947:129 (Canada: Alberta: Lethbridge); Muma, 1952:23 (type in UNL).

#### 407. *tarsinus* (Lepeletier de Saint Fargeau)

*Tachytes tarsinus* Lepeletier de Saint Fargeau, 1845:243, ♂ (as *tarsina*, incorrect original termination). Holotype or syntypes: ♂, France: probably Dauphinée: no specific locality (MNHN). – Fabre, 1856a:139 (France: Vaucluse: Avignon area); Dours, 1874:139 (in catalog of Hymenoptera of France); Radoszkowski, 1877:28 (Uzbekistan: Samarkand); Girard, 1879:955 (preying on acridids); Marquet, 1881:179 (southern France); Fabre, 1886:229 (nesting in soil, preying on acridids); De Stefani Perez, 1894:216 (Italy: Sicilia), 1895:226 (in catalog of Sicilian Hymenoptera); Acloque, 1897:93 (in Sphecid Fauna of France and Algeria). – As *Tachysphex tarsinus*: Kohl, 1885:398 (tentative new combination, original description copied); Dalla Torre, 1897:686 (new combination, in catalog of world Sphecidae); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Coulon, 1925:121 (Morocco: Tanger); de Beaumont, 1940b:175 (in revision of *Tachysphex* of Egypt), 1947a:198 (in new revision of *Tachysphex* of Egypt), 1950f:406 (Algeria), 1953b:15 (*Tachysphex nitidus* form B is a synonym of *tarsinus*), 1954a:58 (Italy), 1954e:91 (Italy); Grandi, 1954:240 (Italy); de Beaumont, 1955a:184 (Morocco); Steiner, 1955:138 (France: Dordogne); Ceballos, 1956:378 (in catalog of Hymenoptera of Spain); de Beaumont, 1956a:199 (Libya); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales); Grandi, 1957:390 (Italy: Abruzzi); Nouvel and Ribaut, 1958:14 (France: Pyrénées-Orientales: Banyuls-sur-Mer); Pulawski, 1958a:181 (Bulgaria: Aitos, Kniazhevo near Sofia, Sozopol, Varna); Grandi, 1959b:287 (Italy: Livorno: Quercianella); Suárez, 1959:57 (Spain: Almería Province); de Beaumont, 1962b:26 (Spain); Grandi, 1962:96 (Italy); de Beaumont, 1964c:76 (Switzerland); Ceballos, 1964:91 (in supplement to catalog of Spanish Sphecidae); de Beaumont, 1964c:77 (in Sphecid Fauna of Switzerland); Diniz, 1964a:6 (Portugal: seventeen localities); de Beaumont, 1965a:50 (Greece); Bonelli, 1966c:218 (Italy: Trentino–Alto Adige: Montagna); Balthasar, Hrubant, and Hrubant, 1967:171 (Bulgaria: Slanchev Bryag near Nessebar); J. Heinrich, 1967:75 (Germany: Bayern: Kahl and Miltenberg); Pulawski, 1967a:405 (Turkey); Stritt, 1968:110 (Germany: Baden-Württemberg); Gauss and Perraudin, 1970:360 (Germany: Baden-Württemberg: Achkarren in Kaiserstuhl); Oehlke, 1970:716 (Democratic Germany); Pulawski, 1971:158 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:36 (Germany: Mainz area); Balthasar, 1972:276 (in Sphecid Fauna of Czechoslovakia); Simon Thomas, 1972:182 (France: Gironde,

Lot-et-Garonne); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel); Erlandsson, 1974:73 (France); Frilli and Pizzaghi, 1975:76 (Italy: Badagnano in Piacenza Province); R. Bohart and Menke, 1976:277 (listed); Eck, 1976:91 (Democratic Germany); Simon Thomas, 1976:5 (France: Lot-et-Garonne); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Guichard, 1978:271 (Greece); Kazenas, 1978b:122, 132 (in key to Sphecidae of Kazakhstan and Central Asia); Marion, 1978:88 (France: Nièvre Department); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Guichard, 1980:228 (Oman); Pagliano, 1980:127 (Italy: Piemonte); Preuss, 1980:23 (Germany; endangered); Gayubo, 1982a:108 (N Spain: Sierra de Béjar), 1982f:254 (Spain: Cádiz Province); Dollfuss, 1983a:76 (endangered in Niederösterreich, Austria), 80 (endangered in Steiermark, Austria), 1983b:11 (in catalog of Sphecidae of Austria); Gayubo, 1983a:123 (prey: nymph of *Euchortippus* sp., an acridid); Schmidt and Westrich, 1983:123 (Greece); Gayubo, 1984b:86 (Spain: Salamanca Province), 1984c:367 (Portugal: Algarve Province); Brechtel, 1986:61 (Germany: Südpfalz); Gayubo, 1986c:33 (Spain: Zamora Province); Gayubo and Heras, 1986:44 (Spain: Segovia Province; floral records); Gayubo and Sanza, 1986:49 (Spain: Burgos); Gayubo, 1987a:113 (Spain: Ciudad Real Province); Schmidt and Westrich, 1987:364 (Germany: Mainz area); Dollfuss, 1988:12 (Austria: Bisamberg); Asís and Jiménez, 1988:272 (Spain: Castellón Province); Gayubo and Mingo, 1988:83 (Spain); Asís, Gayubo, and Tormos, 1989a:237 (description of larva); Jacobs, 1989:12 (Germany: Mecklenburg-Vorpommern); Gayubo, Asís, and Tormos, 1990a:18 (Spain); Jacobs and Oehlke, 1990:167 (new records from Democratic Germany); Pagliano, 1990:106 (in catalog of Italian Sphecidae); Day, 1991:xix (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:107 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:403 (Italy: Sicilia); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Jacobs, 1991:46, 48 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtaldünen); Negrisolo, 1991:318 (Italy: Gorizia and Trieste Provinces); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area), 1992c:289 (first record from Hungary: Zselic Hills); Kuhlmann, 1993:76 (Germany: known from Westfalen); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Dollfuss, 1994:101 (endangered in Austria); Gayubo and Borsato, 1994:209 (Italy: Toscana, Veneto); Tormos, Asís, and Gayubo, 1994:188, 207 (Spain: Albacete Province); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:25 (Germany: Bayern: Miltenberg); Schmid-Egger, Risch, and Niehuis, 1995:212 (summary of records from Germany: Rheinland-Pfalz Province); Gusenleitner, 1996b:810 (Austria: Burgenland); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Woydak, 1996:39 (Germany: Westfalen: summary of distribution and nesting habits), 104 (not collected after 1942); Celary, 1997:58 (in checklist of Animals of Poland); Hinrichsen and Saure, 1997:32 (recognition characters); Schmidt and Schmid-Egger, 1997:30 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Flügel, 1998:61 (Germany: Brandenburg: Unteres Odertal National Park); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); van der Smissen, 1998:70 (Germany: Niedersachsen: Brünkendorf, Laasche); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Kuhlmann, Wolf, and Woydak, 1999:568 (extinct or presumably extinct in Nordrhein-Westfalen State of Germany); Wickl, 1999a:108 (Germany: Bayern: Oberpfalz area); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:236 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:106 (Greece); Jacobs, 2000:12 (Germany: Land Mecklenburg-Vorpommern: endangered); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Vepřek, 2000:233 (reference to records from Czech Republic by Tyrner, 1981; Moravia: Bzenec); Zettel, 2000:27 (Austria: Hundsheimer Kogel); nec Vepřek, 2000 (= *Tachysphex grandii*); Cungs and Jakubzik,

2001:122, 123, 125 (first record from Luxembourg); Ivanov and Ljubomirov, 2001:212 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Jacobs, 2001:137 (endangered in Germany: Mecklenburg-Vorpommern); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 161 (review of known biology); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch in Bitsch et al., 2001:273 (in Sphecidae Fauna of Western Europe); Tischendorf, 2001:30 (Germany: Hessen: Kühkopf-Knoblochsaue Nature Reserve); Kazenas, 2002a:76 (geographic distribution, collecting localities in Kazakhstan); Shlyakhtenok and Skibinska, 2002:33 (Belarus: no specific locality); Cölln, Esser, and Jakubzik, 2003:63 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:143 (Germany: Baden-Württemberg: Kaiserstuhl; Italy: Trentino: Torbole; Spain: Tarragona); Feitz, Schneider, and Pauly, 2003:85 (Luxemburg: Remerschen); Gayubo, Özbek, and Yıldırım, 2003:90 (Turkey: Erzurum: Tortum, Palandöken); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Schmid-Egger, 2003:758 (Milo, Randazzo, Venticari); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:196 (Germany: Bayern: strongly endangered); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: in red list of Sphecidae); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Jacobs, 2005a:452 (Bulgaria: Melnik); Nazarova, 2005:94 (alfalfa fields in southwestern Tajikistan); Pagliano and Negrisolo, 2005:381 (in Sphecidae Fauna of Italy); Straka, 2005:267 (Turkey: four localities); Theunert, 2005a:19 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Hua, 2006:283 (in list of Chinese insects, geographic distribution); Ljubomirov, 2006:543 (Greece: Rhodope Mountains: previous records summarized); Magdalou, 2006a:7, 10 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane), 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Baños-Picón, Gayubo, Asís, and González, 2007a:256, 258 (Spain: Zamora: Cabañas de Aliste); Jacobs, 2007:97, 101 (in key to Crabronidae of Germany); Pulawski, 2007a:622 (in revision of African *Tachysphex*); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia), 222 (first reliable record from Slovakia: Kovačov, Šturovo); Danilov, 2008:349 (Russia: Altayskiy Krai: Barnaul area); Danilov and Tshernyshev, 2008:43 (Russia: Novosibirsk Oblast: Karasuk area); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Ljubomirov and Yildirim, 2008:223 (in catalog of Crabronidae of Turkey); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gonzalez, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: rare).

*Tachysphex nitidus* Spin., variété B de Beaumont, 1936a:206 (in revision of French *Tachysphex*), 1936c:8 (specimen in coll. A. Costa). Synonymized with *Tachysphex tarsinus* by de Beaumont, 1940b:175.

As *Tachysphex nitidus*: Gussakovskij, 1938:7 (China: Kiangsu Province), corrected to *Tachysphex tarsinus* by Pulawski, 1971:158.

**408. tembe Pulawski**

*Tachysphex tembe* Pulawski, 2007a:624, ♀. Holotype: ♀, South Africa: Kwazulu-Natal: Tembe Elephant Park (OÖLM).

**409. tenuicornis Bischoff**

*Tachysphex tenuicornis* Bischoff, 1913b:120, ♀, ♂. Lectotype: ♀, Namibia: Lüderitz District: Prinzen Bucht S Lüderitz (ZMHU), designated by Pulawski, 2007a:626. – Arnold, 1923:175 (listed), 176 (original description translated into English), 1930:4 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a:626 (in revision of African *Tachysphex*).

**410. tenuis R. Turner**

*Tachysphex tenuis* R. Turner, 1908:489, ♀. Holotype: ♀, Australia: Northern Territory: Port Darwin (BMNH). – R. Turner, 1916b:255 (in key); R. Bohart and Menke, 1976:277 (listed); Pulawski, 1977a:256 (in revision of Australian *Tachysphex*); Cardale, 1985:243 (in catalog of Australian Sphecidae); Pagliano, 2003a:509 (Australia).

**411. tenuisculptus Pulawski**

*Tachysphex tenuisculptus* Pulawski, 1977a:315, ♀, ♂. Holotype: ♀, Australia: South Australia: Musgrave Park (ANIC). – Cardale, 1985:243 (in catalog of Australian Sphecidae).

**412. terminatus (F. Smith)**

*Larrada terminata* F. Smith, 1856:291, ♂. Lectotype: ♂, USA: New York: Trenton Falls (OXUM), designated by Pulawski, 1988a:156. – Cresson, 1862:238 (in catalog of North American Hymenoptera), 1873:214 (Texas), 1876:208 (Utah: Spring Lake). – **As *Larra terminata***: Patton, 1881:389 (new combination, ...); Provancher, 1882:50 and 1883:633 (in revision of Canadian Hymenoptera); Kohl, 1885a:248 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera); Provancher 1887:267 (in key); Ashmead, 1894:63 (...). – **As *Tachysphex terminatus***: W. Fox, 1894a:520 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:686 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Cockerell, 1899a:144 (New Mexico); J. Smith, 1900:518 (...); Harrington, 1902:221 (Canada: Ontario: Ottawa); H. Smith, 1908:382 (in revision of Nebraskan Sphecidae); J. Smith, 1910:683 (...); F. Williams, 1914a:172 (in revision of Larrinae of Kansas), 201 (nesting habits); Rohwer, 1916b:687 (in catalog of Hymenoptera of Connecticut), nec 1917a:244 (= *Tachysphex alpestris*); Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); Rau and Rau, 1918:144 (...); Washburn, 1918:223 (...); Rau, 1926:188 (...), 1927:188 (...); J.Ch. Bradley, 1928:1009 (in catalog of Hymenoptera of New York); Robertson, 1928:195 (...), 209 (...); G. Carpenter, 1930b:300 (nest closure); Brimley, 1938:443 (North Carolina: Castle Hayne, Kinston, Raleigh, Wilmington); Rau, 1938b:543 (sleeping habits), 1946:10 (prey: *Arphia sulphurea* Fabricius, *Dichromorpha viridis* Scudder, *Melanoplus* sp., all acridids); Strickland, 1947:129 (Canada: Alberta: Drumheller/Medicine Hat); Krombein, 1950a:267 (North Carolina: Dare County); G. Bohart in Muesebeck et al., 1951:953 (in catalog of North American Hymenoptera); Krombein, 1951a:143 (Virginia: Dunn Loring; visiting tulip-tree honeydew), 1952a:93 (USA: Virginia: Westmoreland State Park); K. Cooper, 1953:33 (Massachusetts: Penikese Island); Krombein, 1953a:295 (visiting foliage of *Pinus serotina*), 296 (visiting foliage of *Quercus marilandica*), 298 (visiting flowers of Virginia creeper), 330 (North Carolina), 1953b:123 (visiting foliage of *Quercus virginiana*), 132 (North Carolina: Kill Devil Hills); nec Krombein, 1953c:13 (= *Tachysphex similis*); Strandtman, 1953:49 (nesting habits); Evans, 1958c:118 (larva); Krombein, 1958b:100 (...), 1958c:188 (...); Kurczewski and Kurczewski, 1963:146 (Pennsylvania: Presque Isle State Park); Kurczewski, 1966b:317 (preying on Tettigoniidae), 1966c:436-453 (comparative male behavior); Krombein, 1967c:393 (in catalog of North American Hymenoptera); Kurczewski, 1967:279 (...); Kurczewski and Harris, 1968:81-82 (New York: Groton, relative abundance); Kurczewski and Snyder, 1968:28 (nesting habits); Steiner, 1973:24 (...); nec G. Bohart, Nye, and Hawthorn, 1970:48 (= *alpestris*); nec Evans, 1970:491 (= *alpestris*); nec Horning and Barr, 1970:103 (= *alpestris*); Elliott and Kurczewski, 1974:725 (charac-

ter displacement); Miller and Kurczewski, 1973:210 (...); Pulawski, 1974a:41 (in revision of Neotropical *Tachysphex*); Elliott and Kurczewski, 1975:268 (seasonal variation); R. Bohart and Menke, 1976:277 (listed); L. Davis, 1978:218 (North Carolina: Kill Devil Hills, data from Krombein, 1953a); Elliott and Kurczewski, 1978:103 (geographic variation); Krombein, 1979b:1631 (in catalog of North American Hymenoptera); Finnermore, 1982:107 (in Sphecidae Fauna of Southern Quebec); Spofford and Kurczewski, 1984:663 (...); Pulawski, 1988a:156 (in revision of Nearctic *Tachysphex*); Kurczewski and Acciavatti, 1990:60 (New York: Cayuga County); Spofford and Kurczewski, 1992:997 (species of miltogrammine parasites listed), 1002 (counter-cleptoparasitic behavior: freeze-stop and face-off, diversionary flight), 1003 (chasing flight), 1004 (post-larvipositional counter-cleptoparasitic behavior: abandon burrow), 1005 (abandon prey, clean prey, inordinate amount of post-provisioning time in burrow); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Kurczewski, 1998d:250 (pine barrens in upstate New York), 2000c:115 (locality records from North and South Carolina), 118 (nest and prey, males emerging from nests); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada); Kurczewski, 2009:9 (review of known behavioral information, field observations), 81-86 (discussion of nesting behavior).

*Larra minor* Provancher, 1887:268, ♀, ♂. Lectotype: ♂, Canada: Ontario: Ottawa (Laval Univ. Quebec), designated by Gahan and Rohwer, 1917:433. Synonymized with *Tachysphex terminatus* by W. Fox, 1893b:520, and G. Bohart in Muesebeck et al., 1951:953 (as new synonym).

#### 413. *tessellatus* (Dahlbom)

*Tachytes tessellatus* Dahlbom, 1845:471, ♀, ♂ (as *tessellata*, incorrect original termination). Lectotype: ♂, Greece: Rhodes Island (Stockholm), designated by de Beaumont, 1947c:662. – Frivaldszky, 1877:351 (Hungary: Temes Komitat: Grebenáč, now in Timiș District in Romania). – **As *Tachysphex panzeri* forme *tessellata***: de Beaumont, 1960a:15 (new status, diagnostic characters, Island of Rhodes). – **As *Tachysphex tessellatus***: Kohl, 1885a:398 (new combination, original description copied); Dalla Torre, 1897:686 (in catalog of world Hymenoptera); de Beaumont, 1947:662 (as synonym of *Tachysphex panzeri*); Pulawski, 1967a:393 (Turkey), 1971:276 (in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:277 (listed); Schmidt and Westrich, 1983:123 (Greece); K. Schmidt and Bitsch in Bitsch et al., 2001:274 (in Sphecidae Fauna of Western Europe); Straka, 2005:272 (Turkey: Siirt: 15 km S Siirt); Yildirim and Ljubomirov, 2005:1797 (Turkey: Erzurum: Şenkaya; Malatya: Kale); Ljubomirov and Yildirim, 2008:223 (in catalog of Crabronidae of Turkey); Pagliano, 2009:184 (Italy: recorded from Calabria by Costa, 1863, but presence in Italy needs confirmation).

#### 414. *testaceipes* Bingham

*Tachysphex testaceipes* Bingham, 1897:193, ♂. Lectotype: ♂, Burma: Tenasserim (BMNH), designated by Pulawski in Krombein and Pulawski, 1994:91. – Giner Marí, 1945c:856 (India: Maharashtra: Borivli near Bombay); R. Bohart and Menke, 1976:277 (listed); Krombein and Pulawski, 1994:91 (in revision of Sri Lankan *Tachysphex*, description of ♀; Laos, Thailand).

#### 415. *texanus* (Cresson)

*Larrada texana* Cresson, 1873:214, ♀, ♂. Lectotype: ♀, USA: Texas: Bosque County: no specific locality (ANSP), designated by Cresson, 1916:96. – **As *Tachytes texanus***: Snow, 1881:99 (new combination,...); Patton, 1879d:368 (description of ♂, western central Kansas). – **As *Larra texana***: Patton, 1881:389 (new combination,...); Kohl, 1885a:248 (in checklist of world *Larra*); Cresson, 1887:277 (in catalog of North American Hymenoptera). – **As *Tachysphex texanus***: W. Fox, 1894a:513 (new combination, in revision of North American Larrinae); Dalla Torre, 1897:686 (in catalog of world Hymenoptera); Ashmead, 1899d:250 (in checklist of North American Crabronidae); Hartman, 1905:29 (preying on fly, prey impaled on sting, observation probably referring to an *Oxybelus*); Hart, 1907:256 (Illinois); F. Williams, 1914a:166 (in revision of Larrinae of Kansas), 206 (prey carrying); Mickel, 1918b:422 (in catalog of Nebraskan Sphecidae); G. Bohart in Muesebeck et al., 1951:953 (in catalog of

North American Hymenoptera); Krombein, 1967c:394 (1 in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:277 (listed); Krombein, 1979b:1630 (in catalog of North American Hymenoptera); Rust, Menke, and Miller, 1985:46 (California: Channel Islands), 53 (prey); Kurczewski, 1987a:122 (nesting habits); Frommer, 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:121 (in revision of Nearctic *Tachysphex*); Ahlstrom, 1995:109 (in checklist of insects of North Carolina); Amarante, 2002:35 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae); Buck, 2004:25 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario); 46 (first record from Ontario: Arkell, Eramosa, Ottawa, Primrose).

*Tachysphex sepulcralis* F. Williams, 1914a:169, ♀, ♂. Holotype: ♀, USA: Kansas: Phillips County: no specific locality (KU). Synonymized with *Tachysphex texanus* by Pulawski in Krombein, 1979b:1630. – G. Bohart in Muesebeck et al., 1951:952 (in catalog of North American Hymenoptera); Krombein, 1953a:295 (visiting foliage of *Pinus serotina*), 297 (visiting foliage of *Liquidambar styraciflua*), 330 (North Carolina); LaBerge, 1956:528 (holotype in Snow Entomological Museum, as *sepulchralis*); Krombein, 1958c:188 (...), 1967:393 (...); Arnaud, 1970:33 (taxon described by F. X. Williams); R. Bohart and Menke, 1976:277 (listed); L. Davis, 1978:217 (North Carolina: Kill Devil Hills, data from Krombein, 1953a); .

*Tachysphex maneei* Banks, 1921:19, ♀. Holotype: ♀, USA: North Carolina: Southern Pines (MCZ). Synonymized with *Tachysphex sepulcralis* by G. Bohart in Muesebeck et al., 1951:952. – Brimley, 1938:443 (North Carolina: Havelock, Hoffman, Raleigh, Southern Pines, Wilmington).

#### 416. *theseus* Arnold

*Tachysphex theseus* Arnold, 1951:156, ♀. Holotype: ♀, Ghana: Accra (BMNH). – R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a:629 (in revision of African *Tachysphex*).

#### 417. *thysanomerus* Pulawski

*Tachysphex thysanomerus* Pulawski, 2007a:631, ♀, ♂. Holotype: ♀, Namibia: Swakopmund District: 10 km N Swakopmund at 22°35.S' 14°32'E (CAS).

#### 418. *tipai* Pulawski

*Tachysphex tipai* Pulawski, 1988a:99, ♀, ♂. Holotype: ♀, USA: California: Riverside County: 18 mi W Blythe (CAS).

#### 419. *titania* Arnold

*Tachysphex titania* Arnold, 1923:163, ♀, ♂ (as *Titania*, incorrect original capitalization). Lectotype: ♀, Zimbabwe: Bulawayo (SAM), designated by Pulawski, 2007a:634. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:634 (in revision of African *Tachysphex*).

*Tachysphex titania* var. *willowmorensis* Arnold, 1924:55, ♀, ♂. Lectotype: ♂, South Africa: Eastern Cape Province: Willowmore (TMP), designated by Pulawski, 2007a:634. Synonymized with *Tachysphex titania* by Pulawski, 2007a:634. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae). – As *Tachysphex titania willowmorensis*: R. Bohart and Menke, 1976:277 (new status, listed).

#### 420. *toltec* Pulawski

*Tachysphex toltec* Pulawski, 1988a:83, ♀, ♂. Holotype: ♂, Mexico: Mexico: Teotihuacán Pyramids (CAS). – Amarante, 2002:336 (in catalog of Neotropical Crabronidae).

#### 421. *truncatifrons* R. Turner

*Tachysphex truncatifrons* R. Turner, 1908:484, ♀. Holotype: ♀, "Australia: Queensland": no specific locality (OXUM, Saunders coll., lost?). – R. Turner, 1916a:225 (locality label possibly erroneous), 1916b:254 (in key); Pulawski, 1977a:329 (probably not Australian); Cardale, 1985:243 (in catalog of Australian Sphecidae).

**422. tryssus Pulawski**

*Tachysphex tryssus* Pulawski, 2007a:638, ♀, ♂. Holotype: ♀, South Africa: Northern Province: Happy Rest Nature Reserve at 22°59'S 29°46'E. Paratype: Zimbabwe.

**423. tsil Pulawski**

*Tachysphex tsil* Pulawski, 1988a:131 ♀, ♂. Holotype: ♂, USA: Arizona: Cochise County: Portal (CAS).

**424. ulonyovu Pulawski**

*Tachysphex ulonyovu* Pulawski, 2007a:639, ♀, ♂. Holotype: ♀, Zimbabwe: Victoria Falls at 17°56'S 25°50'E (CAS). Paratypes: South Africa.

**425. ulothrix Pulawski**

*Tachysphex ulothrix* Pulawski, 2007a:642, ♀, ♂. Holotype: ♀, Namibia: Karibib District: 65 km SW Usakos (CAS).

**426. undatus (F. Smith)**

*Tachytes undatus* F. Smith, 1856:304, ♀. Holotype or syntypes: ♀, Brazil: Amazonas: Villa Nova, now Parintins (BMNH). – Dalla Torre, 1897:695 (in catalog of world Hymenoptera). – **As *Tachysphex undatus***: Pulawski, 1974a:26 (new combination, in revision of Neotropical *Tachysphex*); Sielfeld, 1981b:73 (in checklist of Chilean Sphecidae); Amarante, 2002:36 (in catalog of Neotropical Crabronidae).

*Tachysphex herbstii* Kohl, 1905b:364, ♂ (as *Herbstii*, incorrect original capitalization). Lectotype: ♂, Chile: Concepción (NHMW), designated by Pulawski, 1974a:26. Synonymized with *Tachysphex undatus* by Pulawski, 1974a:26. – Dollfuss, 1989:13 (lectotype in NHMW). – **As *Tachysphex pisonoides* var. *herbstii***: Herbst, 1921c:114 (new status); Jaffuel and Piri6n, 1926:377 (Chile: valle de Marga Marga).

**427. unicolor (Panzer)**

*Larra unicolor* Panzer, 1806-1809:pl.16, ... Holotype (or syntypes): ..., Germany: N6rnberg area (lost). Neotype: ♂, Germany: Bayern: F6rth area (ZSBS), designated by Pulawski, 1972:817. – Dahlbom, 1832:55 (redescription); Ghiliani, 1842:25 (listed from Italy: Sicilia). – **As *Tachytes unicolor***: nec Dahlbom, 1832:55 (new combination, = *Tachysphex nitidus*); nec Shuckard, 1837a:90 (= *Tachysphex nitidus*); nec Brull6, 1839:91 (= *Tachysphex unicolor simonyi*); von Siebold, 1839:48 (Germany: Danzig, now Poland: Gdańsk); Dahlbom, 1843:129 (in revision of Sphecidae and Pompilidae), 1845:469 (in key); Lepeletier de Saint Fargeau, 1845:240 (in revision of world Hymenoptera); Lucas, 1849:246 (Algeria: La Calle, Oran); nec F. Smith, 1849b:2550 (= *Tachysphex nitidus*); Tischbein, 1850:8 (Germany: Rheinland-Pfalz: Herrstein in F6rstenthum Birkenfeld); Kirschbaum, 1853:44 (Germany: Herzogtum Nassau: Mainz-Mombach); Ruthe and Stein, 1857:313 (Germany: Berlin area); Schenck, 1857:193 (in revision of fossorial wasps of Nassau Region, Germany); Giraud, 1858:446 (Austria: Wien area); Taschenberg, 1858:84 (in key to Sphecidae of Germany); Assmus, 1859:610 (Russia: Moscow Oblast'); Funk, 1859:59 (Germany: Bayern: Bamberg); Schenck, 1860:149 (Germany: Nassau Region); Frauenfeld, 1861:103 (Croatia: Dalmatia); Kirchner, 1867:216 (in catalog of European Hymenoptera); nec Taschenberg, 1866:201 (= *Tachysphex nitidus*); Palma, 1867:38 (Italy: Sicilia settentrionale); nec Taschenberg, 1870:12 (= *Tachysphex nitidus*); nec Brischke, 1862:100 (= *Tachysphex nitidus*); A. Costa, 1867b:83 and 1867c:27 (in revision of Italian Sphecidae); Schenck, 1867a:356 (Germany: Nassau Region); Wierzejski, 1868:116 (Ukraine: L'viv area); Aichinger, 1870:320 (Austria: Tirol); nec Thomson, 1870:242 (= *Tachysphex nitidus*); P. Ivanov, 1872:152 (Ukraine: Kharkov Oblast': Kupyansk area); Dours, 1874:139 (in catalog of Hymenoptera of France); nec Thomson, 1874:220 (= *Tachysphex nitidus*); Wierzejski, 1874:257 (Ukraine: Lviv); Beuthin, 1876:231 (Germany: Hamburg area); nec Radoszkowski, 1877:27 and 1886a:29 (= *Liris* sp., see Fig. 26); Becker, 1880:153 (Russia: Sarepta, now Krasnoarmeysk S Volgograd); Kohl, 1880:180 (Austria: Tirol, and Italy: Trentino–Alto Adige); Magretti, 1881:107 (Italy: Lombardia), 270 (listed); Yaroshevskiy, 1881:125 (Ukraine: Khar'kiv Oblast': Kupyansk); A. Costa, 1882b:22 (Italy: Sardegna), 1883:57 (Italy: Sardegna); Friese, 1883:203 (Germany: Sachsen-Anhalt: Weissenfels; Th6ringen: Schwarzburg); nec Sickmann, 1883:86 (= *Tachysphex nitidus*); Brischke,

1888b:97 (Germany: Preussen Province, now Poland: Pomorze Region), 1889:204 (Germany: Steegen E Danzig, now Poland: Stegna E Gdańsk); Westerlund, 1893:25 (Russia: Karelian Republic: northern shore of Lake Ladoga); Baldini, 1894:62 (Italy: Modena area); De Stefani Perez, 1894:215 (Italy: Sicilia); Engel, 1894:53 (Germany: Steinbek near Hamburg); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera); Acloque, 1897:93 (in Sphecidae Fauna of France and Algeria); Lüderwaldt, 1897b:29 (Germany: Gollnow, now Poland: Pomorze Region: Goleniów); nec Nevinson, 1900:62 (= *Tachysphex nitidus*); nec Carr, 1901:15 (= *Tachysphex nitidus*); nec Thornley, 1901:63 (= *Tachysphex nitidus*); nec Bradley, 1902:267 (= *Tachysphex nitidus*); nec E. Saunders, 1902b:143, 1903b:17, and 1907a:67 (= *Tachysphex nitidus*); von Heyden, 1905:81 (Germany: Hessen: Frankfurt); G. Carpenter, 1930b:300 (nest closure). – **As *Tachysphex unicolor***: Kohl, 1883e:670 (new combination, Switzerland); nec Morice, 1900c:210 (= *Tachysphex nitidus*); nec E. Saunders, 1903b:17 (= *Tachysphex nitidus*); nec Adlerz, 1904:44 (= *Tachysphex nitidus*); Graeffe, 1911:45 (Italy: Trieste area); nec Hallett, 1912:94 and 1916:221 (= *Tachysphex nitidus*); Dathe, 1971:234, 238, (Germany: Berlin Zoological Garden, phenology); R. Bohart and Menke, 1976:277 (listed); Leclercq, Gaspar, Lajoinie, and Thirion, 1976:178 (Belgium: Chaumont-Gistoux); Pulawski, 1978:218, 221 (in key to Sphecidae of European part of former USSR); Guichard, 1977:252 (Great Britain: Surrey); Benedek, 1979:231 (Hungary: Bakony Hills); Jacob-Remacle and Leclercq, 1980:193 (Belgium: gardens in Liège); Pagliano, 1980:127 (Italy: Piemonte); Richards, 1980:43 (in key to Sphecidae of British Isles); Nelson, 1981:145 (Great Britain: Isle of Man); Gayubo, 1982a:110 (N Spain: Sierra de Béjar), 1982f:254 (Spain: Cádiz Province); Leclercq, 1982a:124 (Belgium: Liège); Dollfuss, 1983b:11 (in catalog of Sphecidae of Austria); Schmidt and Westrich, 1983:123 (Greece); Veenendaal, 1983a:135 (first record from Netherlands); Gayubo, 1984b:87 (Spain: Salamanca Province), 1984c:367 (Portugal: El Algarve Province); Lefeber, 1984:29 (Netherlands: Maastricht); Gayubo and Tormos, 1984:16 (Spain: Valencia); Gayubo, 1985c:168 (Spain: Valladolid: Valladolid); Lefeber, 1985:87 (Netherlands: southern Limburg); Gayubo, 1986c:34 (Spain: Zamora Province); Gayubo and Sanza, 1986:49 (Spain: Burgos, Segovia); Gayubo and Tormos, 1986a:17 (Spain: Castellón de la Plana); Archer, 1987:110 (Great Britain: Yorkshire); Gayubo, 1987a:114 (Spain: Ciudad Real Province); Asís and Jiménez, 1988:273 (Spain: Castellón Province); Dollfuss, 1988:24 (Austria: Niederösterreich: Oberweiden); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Gayubo, Asís, and Tormos, 1990a:18 (Spain); Jacobs and Oehlke, 1990:127 (in key), 167 (new records from Democratic Germany); Pagliano, 1990:106 (in catalog of Italian Sphecidae); Schwammberger and Priesner, 1990:540 (Austria: Kärnten); Dollfuss, 1991:107 (in key to Sphecidae of North and Central Europe); Gayubo and Torres, 1991:Table I (Spain: Salamanca; effects of urban pressure); Kazenas and Nasyrova, 1991:38 (Kazakhstan: preying on *Sphingonotus maculatus* Uv.); Schembri, 1991:180 (first record from Malta); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Hohmann, La Roche, Ortega, and Barquín, 1993:238 (detailed records from Canary Islands); Torregrosa, Gayubo, Tormos, and Asís, 1993:18 (Spain: Alicante Province); Archer, 1994b:104 (British Channel Islands); Dollfuss, 1994:103 (endangered in Austria); Gayubo and Borsato, 1994:209 (Italy: Veneto); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Tormos, Asís, and Gayubo, 1994:188, 208 (Spain: Albacete Province); Archer, 1995a:21 (Great Britain: Yorkshire: Blaxton); Gorobchishin, 1995:17 (Ukraine: Kanev Nature Reserve); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:9 (in catalog of Italian fauna); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Schmid-Egger, Risch, and Niehuis, 1995:213 (summary of records from Germany: Rheinland-Pfalz Province); Archer, 1996a:58 (Great Britain: Channel Islands); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Blösch, 1996:4 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Jakubzik and Cölln, 1996b:401 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: may be endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Hinrichsen and Saure, 1997:32 (recognition characters); Schmidt and Schmid-Egger, 1997:30 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:515 (Austria: summary of collecting records from Burgenland); Flügel, 1998:61 (Germany: Brandenburg: Unteres Odertal National Park); Jakub-



zik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); van der Smissen, 1998:70 (Germany: Niedersachsen, Schleswig-Holstein: Siems); K. Weber, 1998:149 (Germany: Bayern: Bamberg area); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); Löhr, 1999:62 (Germany: Hessen: Mücke-Merlau near Gemünden); Pauly, 1999:109 (in catalog of Belgian aculeates); Salzmann-Wandeler and Rezbanyai-Reser, 1999:101 (Switzerland: Tessin: Monte Generoso); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Theunert, 1999:138 (Germany: Niedersachsen); Blösch, 2000:236 (in Sphecidae Fauna of Germany); Dressler, 2000:34 (Germany: Hessen: Darmstadt area); Gayubo, González, and Torres, 2000:185 (Spain: Salamanca Province); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:106 (Greece); Jacobs, 2000:12 (Germany: Land Mecklenburg-Vorpommern: not endangered); M. Mader and Chalwatzis, 2000:60 (Germany: Hessen: Oderwald Mts.); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); Shkuratov, 2000:58 (Russia: Rostov Oblast': Vëshenskaya village area at 49°37'N 41°45'E); Cungs and Jakubzik, 2001:122, 123 (Luxembourg); Kazenas, 2001:30 (in checklist of Sphecidae of Kazakhstan and Central Asia), 161 (review of known biology); Kazenas and Esenbekova, 2001:134 (Kazakhstan: Almatinskiy Nature Reserve); Ljubomirov, 2001b:49 (Bulgaria: Mount Vitoshka near Sofia); Ohl et al., 2001:142 (distribution in Germany by provinces); K. Schmidt and Bitsch in Bitsch et al., 2001:274 (in Sphecidae Fauna of Western Europe); Turner, 2001:129 (first record from Czech Republic: several localities); Kazenas, 2002a:76 (geographic distribution, collecting localities in Kazakhstan); Shkuratov, 2002b:141 (Russia: Rostov Oblast': Rostovskiy Nature Reserve at 46°27'N 42°41'E); Shlyakhtenok and Skibinska, 2002:33 (Belarus': no specific locality); Wiśniowski, 2002:70 (Poland: Ojców National Park); Cölln, Esser, and Jakubzik, 2003:63 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:143 (Germany: Bayern: Karlstadt am Main); Flügel, 2003:9 (Germany: Hessen: Knüllwald); Gayubo, Özbek, and Yıldırım, 2003:90 (Turkey: Erzurum: Güzelyayla, Tortum, Şenkaya); Generani, Pagliano, González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Kula and Turner, 2003:204 (Northern Czech Republic: spruce stands in air-pollution region); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:70 (in catalog of wasps and bees of Bayern, Germany); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Schmid-Egger, 2003:758 (Italy: Sicilia: Milo, Nebrodi, Noto 30 km W Siracusa, Randazzo); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:197 (Germany: Bayern: approaching endangered status); Wiśniowski in Dylewska and Wiśniowski, 2003:151 (Poland: Ojców National Park); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Jakubzik, Niehuis, and Cölln, 2004:458 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Kazenas, 2004b:104 (Kazakhstan: western Tien Shan); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: in red list of Sphecidae); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:44 and 60 (in checklist of Polish Sphecidae); Blösch, 2005:4 (Germany: Bayern: Tennenloher Forst Nature Reserve near Erlangen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Ebrahimi, 2005:123 (in key to selected Iranian Sphecidae); Jacobs, 2005a:452 (Bulgaria: Shipka, Troyanska Planina S Troyan); Pagliano and Negrisoló, 2005:381 (in Sphecidae Fauna of Italy); Reder, 2005:954 (Germany: Rheinland-Pfalz: Eisenberg, Flörsheim-Dalsheim, Grünstadt, Monsheim); Straka, 2005:267 (Turkey: many localities); Theunert, 2005a:19 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: Milevi Skali Hut, as *unicolor unicolor*); Schneider and Feitz, 2006:68 (a female with reduced hindocellar scars and shifted backward midocellus); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnissia Peninsula at 39°N 23°E); Jacobs, 2007:97, 101 (in key to Crabroni-

dae of Germany); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia), 223 (first record from Slovakia: Vaporské vrchy); Gayubo, González, Tormos, and Asís, 2008:138 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Kazenas, 2008b:112 (Kazakhstan: foothills of Zailiskiy Alatau: found near loess cliffs); T. Li, Li, and Cai, 2008:144 (first record from China); Ljubomirov and Yildirim, 2008:224 (in catalog of Crabronidae of Turkey); Flügel, 2009b:63 (Germany: Hessen: Borken, in closed open brown coal mine); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:623 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Pagliano, 2009:184 (Italy: Abruzzo: Moscutto; recorded from Trentino-Alto Adige by Kohl, 1880); Schmid-Egger, 2010a:19 (in red list of Aculeata of Germany: relatively common).

*Larra jurinii* Drapiez, 1819:54., ♀. Holotype or syntypes: ♀, southern France: no specific locality (lost). Synonymized with ... – **As *Tachytes jurinei***: Vander Linden, 1829:26 (new combination, bibliographic references, Italy: Bologna, southern France, redescription); Herrich-Schaeffer, 1840:296 (new combination; Germany: Bayern: Regensburg area).

*Tachysphex nitidus* Spinola variété A de Beaumont, 1936a:206.

As *Tachysphex nitidus* (if not indicated otherwise, records were cited by Pulawski, 1971:139 and collectively corrected to *Tachysphex unicolor* by Pulawski, 1972:817): Sickmann, 1893:84 (Germany: Niedersachsen: Iburg, present correction based on geographic distribution); Antiga and Bofill, 1904:10 (in catalog of Catalonian Hymenoptera), present correction; Morice, 1911:102 (Algeria); Birula, 1912:543 (Ukraine: Zhytomyr Oblast': Radomyshl'); Du-bois, 1921c:208, 209 (in key to Belgian Sphecidae), present correction; Hedicke, 1922:271 (Germany: Brandenburg: Gross Machnower Weinberg); Leininger, 1924:121 (Germany: Baden-Württemberg: Sandhausen bei Heidelberg), 1925:355 (Germany: Baden-Württemberg: Kaiserstuhl); Carpentier, Crèvecoeur and Maréchal, 1926:353 (Belgium); Grandi, 1928a:21 (nest and prey), present correction, 1928d:300 (nest and prey), 303 (description of larva), 1929:267 (number of prey per cell, position of egg, parasite: *Heteropterina multipunctata* Rondani, a dipteran) Grandi, 1929:288 (Italy: Toscana: valle della Limentra); Giordani Soika, 1932a:22 (Italy: Lido di Venezia); Guiglia, 1932d:474 (Libya: Gialo); Bischoff, 1933:5 (Morocco); Nadig, 1933:79 (Morocco); Giner Marí, 1934:133 (Spain); Grandi, 1935a:110 (Italy); Crèvecoeur and Maréchal, 1936:252 (in catalog of Belgian Hymenoptera); de Beaumont, 1936a:205 (in revision of French *Tachysphex*) and 206 (*Tachysphex nitidus* Spin., variété A), 1936c:8 (specimens in coll. A. Costa); Goebel, 1937:42 (Poland: Poznań District: Poznań-Dębin, Puszczycowko); Hardouin, 1938:9 (nest and prey, revue of data by French authors); de Beaumont, 1940b:175 (in revision of *Tachysphex* of Egypt); Guiglia, 1941c:166 (Italy: Calabria: Grande Sila); Leclercq, 1941b:12 (Belgium: Liège area, present correction); Guiglia, 1942:60 (Rhodes Island); Giner Marí, 1943a:136 (in Sphecid Fauna of Spain, present correction); Giordani Soika, 1944:9 (Italy: Sicilia: Messina, Taormina); Guiglia, 1944b:25 (Italy); Deleurance, 1946b:63 (prey, nest), 67 (France: Bouche-du-Rhône: Camargue: Bois des Rièges); de Beaumont, 1947a:197 (in new revision of *Tachysphex* of Egypt); Guiglia, 1948c:201 (Italy: Sardegna: Villasalto); de Andrade, 1949:14 (Portugal); de Beaumont, 1950f:406 (Algeria, Morocco), 1951h:33 (Switzerland: Neuchâtel area), 1953b:15 (*Tachysphex nitidus* form A is synonym of *nitidus*); Móczár, 1953:310 (Hungary); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg); de Beaumont, 1954a:58 (Italy), 1954e:91 (Italy); Grandi, 1954:239 (Italy); Aerts, 1955:63 (Germany: Rheinland); de Beaumont, 1955a:183 (Morocco); Steiner, 1955:138 (France: Dordogne); Bytinski-Salz, 1956:226 (Turkey; present correction); de Beaumont, 1956a:199 (Libya); Grandi, 1957:389 (Italy; present correction); Pulawski, 1958a:181 (Bulgaria: Kniazhevo near Sofia); Compte Sart, 1959:133 (Spain: Mayorca); de Beaumont, 1959a:28 (Italy); Suárez, 1959:57 (Spain: Almería Province); Wolf, 1959b:24 (Germany: Nassau); de Beaumont, 1960b:239 (Libya), 1962b:26 (Spain); Erlandsson, 1963:66 (Denmark: Bornholm Island, present correction); Richards, 1964:25 (heath-lands in southern England); de Beaumont, 1965a:49 (Greece); B. Klug, 1965:132 (Germany: Baden-Württemberg: Freiburg im Breisgau

area); de Beaumont, 1966:212 (Egypt: Abukir and Agami near Alexandria); Fæster, 1965:192 (Denmark: Hansted Nature Reserve); Scobiola-Palade, 1966b:392 (Romania: Tulcea District: Periprava); Heinrich, 1967:75 (Germany: Niederfranken; present correction); Niedl and Denes, 1967:81 (Czech Republic: Třeboň area; present correction); Pulawski, 1967a:405 (Turkey); Scobiola-Palade, 1967b:42 (Romania); de Beaumont, 1968a:262 (Canary Islands: Fuertaventura, Lanzarote); Scobiola-Palade, 1968b:142 (Romania: Island of Letea in delta of Danube), 1968c:384 (Romania: Budești, Comana, Frătești, Giurgiu, Herăstrău); Benedek, 1969a:84 (Hungary; marshy meadow); Dathe, 1969:439 (Germany: Berlin Zoological Garden; present correction); de Beaumont, 1970a:401 (Afghanistan); Leclercq, 1970:map 32 (distribution in Belgium); Grandi, 1971:202 (nesting habits), 503 (description of larva); Königsmann, 1971:107 (Spain: Gerona: Palamós; present correction); Pulawski, 1971:139 (in revision of Palearctic *Tachysphex*); Schmidt, 1971b:36 (Germany: Mainz area; present correction); Tsuneki, 1971m:31 (China: Peking: Tiendang; present correction); Wolf, 1971:374 (Italy: Trentino–Alto Adige: Alpi Siusi; present correction); Scobiola-Palade, 1972:150 (Romania: delta of Danube: Caraorman; present correction); Simon Thomas, 1972:182 (France: Landes, Lot-et-Garonne; present correction); Tsuneki, 1972e:392 (Mongolia; present correction); de Beaumont, Bytinski-Salz, and Pulawski, 1973:8 (Israel; present correction); Wolf, 1973:41 (Germany: Siegerländer Hüttensand; present correction); Erlandsson, 1974:72 (Malta, Spain, Yugoslavia, present correction); Scobiola-Palade, 1974:145 (Romania: Sărăturile sandbank in Danube delta, present correction); Simon Thomas, 1976:5 (France: Lot-et-Garonne, present correction); Kolesnikov, 1977:318 (Russia: Bryansk Oblast', present correction); Báez and Ortega, 1978:192 (Canary Islands, present correction); Kazenas, 1978b:121, 132 (in key to Sphecidae of Kazakhstan and Central Asia, present correction); Marion, 1978:88 (France: Nièvre Department, present correction); Richards, 1979:397 (British Channel Islands), present correction; Schembri, 1991:180 (citation of Erlandsson, 1974).

### **ssp. *simonyi* Kohl**

As *Tachysphex unicolor*: Brullé, 1839:91 (Canary Islands), corrected to *Tachysphex nitidus simonyi* by Pulawski, 1971:146.

*Tachysphex simonyi* Kohl, 1892:218, ♀ (as *Simonyi*, incorrect original capitalization). Lectotype: ♀, Canary Islands: Gran Canaria (NHMW), designated by Pulawski, 1971:147. – Dalla Torre, 1897:685 (in catalog of world Hymenoptera); Saunders, 1903c:209 (Canary Islands: Tenerife: Orotava), 1904a:201 (Canary Islands: Tenerife); de Beaumont, 1947c:669 (revision), 1954b:3 (Canary Islands: Tenerife), 1968a:262 (Canary Islands: Gran Canaria, Tenerife, Gomera, Hierro); Simon Thomas, 1969a:120 (Canary Islands: Tenerife); Wolf, 1980:73 (Canary Islands). – As *Tachysphex nitidus simonyi*: Pulawski, 1971:146 (new status, in revision of Palearctic *Tachysphex*); R. Bohart and Menke, 1976:277 (listed); Báez and Ortega, 1978:192 (Canary Islands); Dollfuss, 1989:13 (lectotype in NHMW); Hohmann, La Roche, Ortega, and Barquín, 1993:239 (detailed locality records from Canary Islands); Ljubomirov, 2008:257 (known from La Palma, Canary Islands).

### **428. *usakos* Pulawski**

*Tachysphex usakos* Pulawski, 2007a:644, ♀, ♂. Holotype: ♀ (not ♂), Namibia: Karibib District: 50 km SW Usakos (CAS).

### **429. *utina* Pulawski**

*Tachysphex utina* Pulawski, 1988a:178, ♀, ♂. Holotype: ♂, USA: Florida: Putnam County: Welaka (USNM).

### **430. *vanrhynsi* Arnold**

*Tachysphex vanrhynsi* Arnold, 1940:120, ♂. Holotype: ♂, South Africa: Cape Province: Vanrhynsdorp (TMP). – R. Bohart and Menke, 1976:277 (listed); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Pulawski, 2007a:646 (in revision of African *Tachysphex*).

**431. *vardyi* Pulawski**

*Tachysphex vardyi* Pulawski, 1977a:233, ♀, ♂. Holotype: ♀, Australia: Western Australia: S Perth (BMNH). – Cardale, 1985:243 (in catalog of Australian Sphecidae).

**432. *venator* Arnold**

*Tachysphex venator* Arnold, 1960a:468, ♀. Holotype: ♀, Zambia: Abercorn, now Mbala (SAM). – R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a:648 (in revision of African *Tachysphex*).

**433. *verticalis* Pulawski**

*Tachysphex verticalis* Pulawski, 1982:36, ♀, ♂. Holotype: ♀, California: Riverside County: 9 mi W Beaumont (UCD). – Pulawski, 1988a:104 (in revision of Nearctic *Tachysphex*); Amarante, 2002:36 (in catalog of Neotropical Crabronidae).

**434. *vestitus* Kohl**

*Tachysphex vestitus* Kohl, 1892:217, ♂. Holotype or syntypes: ♂, Algeria: Biskra (NHMW). – Dalla Torre, 1897:686 (in catalog of world Hymenoptera); Morice, 1911:104 (Algeria: Biskra; description of ♀); nec Moidl, 1924:236 (= *Tachysphex micans*); de Beaumont, 1940b:173 (in revision of *Tachysphex* of Egypt); Honoré, 1942:55 (listed); de Beaumont, 1947a:191 (in new revision of *Tachysphex* of Egypt), 1950d:20 (Egypt: Siwa oasis), 1950f:405 (Algeria), 1955a:182 (Morocco), 1956a:198 (Libya), 1958b:61 (Algeria: Tassili des Ajjer), 1960b:239 (Libya); Pulawski, 1964:95 (Egypt: Abu Rawash, Dahshur, Kom Osheim, Saqqara; Sudan: Wadi Halfa), 1971:382 (in revision of Palearctic *Tachysphex*); de Beaumont, Bytinski-Salz, and Pulawski, 1973:12 (Israel); R. Bohart and Menke, 1976:277 (listed); Dollfuss, 1989:13 (type material in NHMW); Roche and Zalut, 1994:115 (Egypt: Sinai Peninsula); Pulawski, 2007a:650 (in revision of African *Tachysphex*).

**435. *vitiensis* F. Williams**

*Tachysphex vitiensis* F. Williams, 1928:166, ♀. Holotype: ♀, Fiji: Viti Levu Island: Suva Bay (BISHOP). – F. Williams, 1947:318 (listed from Fiji), 334 (description of ♂); Fullaway, 1957:279 (in checklist of Hymenoptera of Fiji); R. Bohart and Menke, 1976:277 (listed); Pulawski, 1977a:304 (revision).

**436. *vividus* Pulawski**

*Tachysphex vividus* Pulawski, 1977a:274, ♀, ♂. Holotype: ♂, Australia: New South Wales: 25 mi W Nyngan (ANIC). – Cardale, 1985:243 (in catalog of Australian Sphecidae).

**437. *vulneratus* R. Turner**

As *Tachytes fluctuata* (part): Magretti, 1884c:587 (Eritrea), corrected to *Tachysphex vulneratus* by Pulawski, 2007a:654.

*Tachysphex vulneratus* R. Turner, 1917b:325, ♀, ♂. Lectotype: ♀, East Zambia: Niamadzi River near Nawalia (BMNH), designated by Pulawski, 1975a:312. – Arnold, 1923a:155 (Zimbabwe; revision), 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:277 (listed); Krombein and Pulawski, 1994:88 (in revision of Sri Lankan *Tachysphex*); Pretorius, 2005:116 (use of geometric morphometrics to determine sexual dimorphism in wing venation); Straka, 2005:274 (first record from Turkey: İçel: Büyükeçeli); Pulawski, 2007a:654 (in revision of African *Tachysphex*).

*Tachysphex karrooensis* Arnold, 1923a:158, ♀, ♂. Holotype: sex not indicated, South Africa: Willowmore (SAM). Synonymized with *Tachysphex vulneratus* by Pulawski in Krombein and Pulawski, 1994:88. – Arnold, 1930:3 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:274 (listed); Gess, 1981:19 (South Africa: Cape Province: 18 km WNW Grahamstown; nesting in friable soils).

*Tachysphex foucauldi* de Beaumont, 1952c:190, ♂. Holotype: ♂, Algeria: Hoggar: Tinhamour (Lausanne). Synonymized with *Tachysphex vulneratus* by Pulawski in Krombein and Pulawski, 1994:88. – de Beaumont,

1956a:197 (Chad: Tibesti: Tao; description of ♀); Pulawski, 1971:379 (in revision of Palearctic *Tachysphex*). –  
**As *Tachysphex vulneratus foucauldi***: Pulawski, 1975a:312 (new status); R. Bohart and Menke, 1976:277 (listed).

**438. *walkeri* R. Turner**

*Tachysphex walkeri* R. Turner, 1908:487, ♀. Holotype: ♀, Australia: Queensland: Sand Islet on Long Reef (BMNH).  
 – R. Turner, 1916b:254 (in key); R. Bohart and Menke, 1976:277 (listed); Pulawski, 1977a:260 (in revision of  
 Australian *Tachysphex*); Alcock, 1980b:259 (prey: Blattellidae); Cardale, 1985:244 (in catalog of Australian  
 Sphecidae); Naumann, 1993:186 (Australia: Queensland: Heathlands area in Cape York), 1998:186 (Australia:  
 northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); Pagliano, 2003a:509 (Australia:  
 Northern Territory and Queensland).

**439. *waltoni* Arnold**

*Tachysphex waltoni* Arnold, 1940:121, ♀ (as *Waltoni*, incorrect original capitalization). Holotype: ♀, South Africa:  
 Cape Province: Albany District (TMP). – R. Bohart and Menke, 1976:277 (listed); Pulawski, 2007a:658 (in revision  
 of African *Tachysphex*).

**440. *williamsi* R. Bohart**

*Tachysphex williamsi* R. Bohart, 1962a:38, ♂, ♀. Holotype: ♂, USA: California: San Francisco County: Lone Mt.  
 (CAS). – Krombein, 1967c:394 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:277  
 (listed); Krombein, 1979b:1630 (in catalog of North American Hymenoptera); Elliott and Kurczewski, 1985:294  
 (prey); Pulawski, 1988a:62 (in revision of Nearctic *Tachysphex*).

**441. *xanthoptesimus* Pulawski**

*Tachysphex xanthoptesimus* Pulawski in Krombein and Pulawski, 1994:50, ♀, ♂. Holotype: ♀, Sri Lanka: Monaragala  
 District: 20.8 km E Uda Walawe along Mau Aru (USNM). Paratypes: southern India.

**442. *yarrowi* de Beaumont**

*Tachysphex* No. 17: de Beaumont, 1940b:178 (Egypt), corrected to *Tachysphex yarrowi* by de Beaumont, 1960b:239.  
*Tachysphex yarrowi* de Beaumont, 1960b:239, ♀. Holotype: ♀, Libya: Cyrenaica: Capuzzo (BMNH). – Pulawski,  
 1964:96 (Egypt: Abu Rawash, Ghiza; description of ♂), 1971:193 (in revision of Palearctic *Tachysphex*); de  
 Beaumont, Bytinski-Salz, and Pulawski, 1973:9 (Israel); R. Bohart and Menke, 1976:277 (listed); Pulawski,  
 2007a:661 (in revision of African *Tachysphex*).

**443. *yolo* Pulawski**

*Tachysphex yolo* Pulawski, 1982b:37, ♀, ♂. Holotype: ♂, USA: California: Yolo County: Davis (UCD). – Elliott and  
 Kurczewski, 1985:294 (...); Kurczewski, 1987a:119 (nesting habits); Pulawski, 1988a:117 (in revision of Nearctic  
*Tachysphex*); Amarante, 2002:36 (in catalog of Neotropical Crabronidae).

**444. *yuma* Pulawski**

*Tachysphex yuma* Pulawski, 1982b:39, ♀, ♂. Holotype: ♂, Mexico: Baja California Sur: La Paz (CAS). – Frommer,  
 1988:96 (California: Riverside County: Deep Canyon); Pulawski, 1988a:120 (in revision of Nearctic *Tachysphex*);  
 Amarante, 2002:36 (in catalog of Neotropical Crabronidae).

**445. *zambius* Pulawski**

*Tachysphex zambius* Pulawski, 2007a:663, ♂. Holotype: ♂, Zambia: Southern Province: 56 road km NE Choma at  
 16°37'S 27°20'E (CAS).

**446. *ziziphi* Pulawski**

*Tachysphex ziziphi* Pulawski, 2007a:665, ♀, ♂. Holotype: ♂, Namibia: Okahandja District: Waldau River 17 km W Okahandja at 21°57'S 16°45'E (CAS). Paratypes: South Africa.

**sp.**

Ferton, 1894:216 (= *obscuripennis gibbus*); Harrington, 1902:222 (Canada: Ontario: Ottawa); E. Saunders, 1902b:143 (British Channel Islands; as n. sp.), 1904c:604 (Spain: Mayorca); von Schulthess, 1909:441 (Libya: Djebel Gosseba, sp. near *panzeri*); Morice, 1911:102 (Algeria: Biskra); Nurse, 1914:444 (India: Assam); Bischoff, 1930:219 (Tajikistan: Pamir); Roth, 1930:83 (Algeria: Tassili des Ajjer); Bondroit, 1932:37 (Belgium: Solbosch); Rau, 1933:184 (Panama: Barro Colorado Island; species with red gastral tip preying on acridids, all-black species preying on cockroaches); Roth, 1934b:190 (Algeria); Bischoff, 1935:259 (Kashmir); von Schulthess, 1935:305 (Australia: Northern Territory: Burnside); F. Williams, 1936b:128 (Solomon Islands, two species); Yasumatsu, 1942c:112 (China: Beijing; Nei Mongol: Apaka at 44°N 114.96°E); Giner Mari, 1945b:361 (Canary Islands: Gran Canaria: El Carrizal), 362 (Western Sahara), 1947:25 (Western Sahara); Gibson-Hill, 1950:160 (Cocos Islands); Krombein, 1951a:143 (Virginia: Dunn Loring; visiting tulip-tree honeydew); Wolcott, 1951:841 (Puerto Rico); Krombein, 1953b:132 (= *crassiformis*); Balthasar, 1954b:269 (Palestine); Callan, 1954:24 (Venezuela: Paria Peninsula: Cristóbal Colón); Krombein and Evans, 1954:233 (Florida), 1955:231 (= *crassiformis*); Vesey-Fitzgerald 1956a:287 (sp. near *blatticida*: Trinidad, prey: *Cariblatta*); de Beaumont, 1957b:137 (n. Iran; *panzeri* species group and *pompiliformis* species group), 1958b:62 (Algeria: Tassili des Ajjer; five spp.); Pulawski, 1958a:181 (= *rugosus*); de Beaumont, 1960b:238 (three species of the *panzeri* group; Libya), 1961c:50 (Greece: Crete Island; spp. near *nitidus*), 1961e:5 (Iraq); Krombein, 1961a:82 (visiting flowers of mat euphorbia, *Euphorbia albomarginata*); Diniz, 1964a:6 (Portugal: Rezende, Sines); Myartseva, 1965:78 (Turkmenistan: Akibay); Lavigne and Pfadt, 1966:31 (Wyoming; preying on grasshopper *Melanoplus occidentalis*); de Beaumont, 1968a:263 (as sp. aff. *nitidus* = *nitidus ibericus*); de Beaumont, 1960a:19 (Greece: Rhodes Island), 1967b:510 (South Africa); Pulawski, 1967a:397 (Turkey; sp. near *catharinae*); de Beaumont, 1968a:263 (spp. similar to *nitidus*); Horning and Barr, 1970:103 (USA: Idaho: Craters of the Moon National Monument); Alayo Dalmau, 1973:177 (in catalog of Cuban Hymenoptera); Hurd and Linsley, 1975:116 (Arizona: Cochise County: Douglas; New Mexico: Hidalgo County: Lordsburg; on flowers of *Larrea tridentata* (De Candolle) Coville, Zygophyllaceae); Kumar, Lavigne, Lloyd, and Pfadt, 1976:52 (USA: Colorado: Pawnee National Grassland); C. Ward et al., 1977:156 (associated with mesquite (*Prosopis*); Gess, 1981:17 (sp. near *modestus*; South Africa: Cape Province: 18 km WNW Grahamstown; in old or abandoned burrows of *Parachilus insignis*), 54 and 69 (facultative nesting in preexisting cavities); Roche, 1981:3 (in checklist of Sphecidae of United Arab Emirates); Hilchie, 1982:107 (Alberta: Empress); Rust, Hanks, and Bechtel, 1983:406 (Nevada: Churchill County: Blow Sand Mountains); Sk. Yamane, 1983:86 (Indonesia: Krakatau Islands); G. Ferguson, 1984a:299 (prey of *Philanthus zebratus*); Parks, 1986:35 (California: Torrey Pine State Reserve; 3 species); Hensen and van Ooijen, 1987:12 (near *liriformis*; Turkey); Ch. Porter, 1987:45 (Chile: Tarapacá Region); Hilburn et. al., 1990:175 (Bermuda); Amarante, 1993:19 (ne. Brazil); Hohmann, La Roche, Ortega, and Barquín, 1993:234 (Canary Islands, aff. *gracilitarsis*), 235 (Canary Islands: aff. *nitidus*); Schmid-Egger, Risch, and Niehuis, 1995:212 (sp. aff. *psammobius*; Germany: Rheinland-Pfalz); S. Gess, 1996:266 (visiting flowers of *Limeum aethiopicum* Burm.), 275 (visiting flowers of *Conyza bonariensis* (L.) Cronq.); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (sp. aff. *psammobius*; Germany: Baden-Württemberg: endangered); González, Gayubo, and Torres, 1998:72, 73 (Spain: Valladolid Province); Naumann, 1998:186 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega, near *blattibvorus*, near *nitidus*); Meagher and Mitchell, 1999:368 (collected in pheromone- and synthetic floral volatile-baited traps); Weissmann and Kondratieff, 1999:78 (Colorado: Great Sand Dunes National Monument); Pitts, 2003:485 (nest parasite: *Dilophotopsis concolor crassa* (Viereck), a mutillid); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007: 46 (Mexico: Tamaulipas, seven species).

**SPECIES DESCRIBED IN TACHYSPHEX AND TRANSFERRED TO OTHER GENERA**

- capitalis* E. Saunders, 1910 = *Parapiagetia*  
*falsus* F. Morawitz, 1893 = *Prosopigastra*  
*genicularis* F. Morawitz, 1890 = *Parapiagetia*  
*globiceps* F. Morawitz, 1889 = *Prosopigastra*  
*integer* Kohl, 1892 = *Parapiagetia*  
*intermedius* Viereck, 1906 = *Tachytes*  
*longiventris* Cameron, 1912 = *Liris*  
*melanarius* Kohl, 1888 = *Larropsis*  
*nudus* Nurse, 1903 = *Prosopigastra*  
*pollux* Nurse, 1903 = *Holotachysphex hognathus* Morice, 1897  
*punctulatus* Kohl, 1884 = *Larropsis*  
*rufogeniculatus* Cameron, 1912 = ? *Liris anticus* (F. Smith, 1856)  
*rufomaculatus* Cameron, 1889a = *Tachytes amazonus* F. Smith, 1856  
*semiappendiculatus* Cameron, 1912 = *Liris*  
*socius* Kohl, 1888 = *Larropsis*  
*substriatulus* R. Turner, 1917 = *Parapiagetia*  
*tarsalis* Dalla Torre, 1897 = *Tachytes tarsalis* Spinola, 1839

**NOMINA NUDA IN TACHYSPHEX**

- Tachysphex Antigae* Tournier: Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); Mercet, 1910b:145 (listed); Ceballos, 1956:375 (in catalog of Hymenoptera of Spain).  
*Tachysphex laevidorsis* Pérez: Ferton, 1912, 1923. Synonymized with *Ancistromma punctulatum*, now *Larropsis punctulata*, by Pulawski in Bohart and Menke, 1976:260.  
*Tachysphex Reticulatus* Pérez: Antiga and Bofill, 1904:11 (in catalog of Catalanian Hymenoptera); Mercet, 1910b:165 (listed); Ceballos, 1956:377 (in catalog of Hymenoptera of Spain).

**UNRECOGNIZABLE MISSPELLING**

- Tachysphex spinipes* Panzer: Móczár and Henter, 1907:205 (Romania: Caraş-Severin: Mehadia).