

Last updated: 2 July 2010

RHOPALUM

Euplilis Risso, 1826:227. Type species: *Euplilis rufiventris* (Panzer, 1799) [= *Crabro rufiventris* Panzer, 1799 = *Sphex clavipes* Linnaeus, 1758], designated by Pate, 1935:246. Suppressed by International Commission on Zoological Nomenclature, 1978:237 (Opinion 1106). – Pate, 1935:246 (as valid name for *Rhopalum*); Menke, R. Bohart, and Richards, 1974:219 (proposition to International Commission on Zoological Nomenclature to suppress *Euplilis* in favor of *Rhopalum*); R. Bohart, 1975:75 (support for deleting *Euplilis*); Day, Fitton, Bolton, and Gauld, 1975:96 (support for preserving *Euplilis* as valid name); Evans, 1975c:98 (support for deleting *Euplilis* as valid name); Krombein, 1975:96 (support for preserving *Euplilis* as valid name); Menke, 1975:97 (support for deleting *Euplilis*); Merisuo, 1975b:99 (support for deleting *Euplilis*); R. Bohart and Menke, 1976:68 (reply to Krombein, 1975:96); Willink and Stange, 1975:99 (support for deleting *Euplilis*); Krombein, 1976a:205 (additional support in favor of preserving *Euplilis*).

Rhopalum Stephens, 1829a:34. Type species: *Crabro rufiventris* Panzer, 1799 [= *Sphex clavipes* Linnaeus, 1758], designated by J. Curtis, 1837:text accompanying plate 656. See also Stephens, 1829b:366 and J. Curtis, 1829:123. Conservation of the name: International Commission on Zoological Nomenclature, 1978:237 (Opinion 1106).

Physoscelus Lepeletier de Saint Fargeau and Brullé, 1835:804. Type species: *Crabro rufiventris* Panzer, 1799 [= *Sphex clavipes* Linnaeus, 1758], designated by Westwood, 1839:80.

Corynopus Lepeletier de Saint Fargeau and Brullé, 1835:802. Type species: *Crabro tibialis* of Panzer, 1801 [= *Crabro tibialis* Fabricius, 1798 = *Sphex coarctatus* Scopoli, 1763], by monotypy.

Physoscelis Westwood, 1839:80. Lapsus or emendation of *Physoscelus* Lepeletier de Saint Fargeau and Brullé, 1835.

Dryphus Herrich-Schaeffer, 1840:123. Type species: *Crabro tibialis* Fabricius, 1798 = *Sphex coarctatus* Scopoli, 1763], by monotypy. Synonymized with *Corynopus* Lepeletier de Saint Fargeau and Brullé by Pate, 1943c:2.

Alliognathus Ashmead, 1899d:219. Type species: *Crabro occidentalis* W. Fox, 1895, by original designation. Synonymized with *Corynopus* by Court and R. Bohart in Bohart and Menke, 1975:47.

Calceorhopalum Tsuneki, 1952b:111. Type species: *Rhopalum calceatum* (Tsuneki, 1947) [= *Crabro calceatus* Tsuneki, 1947, primary homonym of *Crabro calceatus* Rossi, 1794 = *Rhopalum pygidiale* R. Bohart, 1976], by original designation.

Latrorhopalum Tsuneki, 1952b:111. Type species: *Rhopalum latronum* (Kohl, 1915) [= *Crabro latronum*, by original designation.

Aporhopalum Leclercq, 1955k:3. Type species: *Rhopalum perforator* F. Smith, 1876, by original designation.

Zelorhopalum Leclercq, 1955k:4. Type species: *Rhopalum aucklandi* Leclercq, 1955, by original designation.

Notorhopalum Leclercq, 1979b:354, as subgenus of *Rhopalum*. Type species: *Rhopalum carnegiacum* Leclercq, 1979, by original designation and monotypy.

Revision: R. Bohart, 1974 (North America); Leclercq, 1994b (redefinition of genus, Chilean species), 1997 (Australia), 2002b (New World).

Keys: Alayo Dalmau, 1976 (Cuba), Leclercq, 1991 (European species of subgenus *Corynopus*).

Review of biology: Kazenas, 2001b:187.

Common name in New Zealand: policemen wasps (Ferro et al., 1977:18)

1. *acamas* Leclercq

Rhopalum acamas Leclercq, 2002b:40, ♀. Holotype: ♀, Colombia: Huila: Las Cuevas de los Guacherones (BMNH).
– Leclercq, 2002b:15 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

2. *ammaticum* Leclercq

Rhopalum ammaticum Leclercq, 1963:71, ♀. Holotype: ♀, India: Karnataka: Ammati in Coorg District (originally G.R. Ferguson coll., now CAS). – R. Bohart and Menke, 1976:389 (listed).

3. *angulicolle* Cameron

Rhopalum angulicolle Cameron, 1904i:263, ♀. Holotype or syntypes: ♀, Mexico: no specific locality (BMNH). – Leclercq, 1950b:7 (listed), 1954c:187 (in catalog of world Crabronini); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:19, 31 (in key to New World *Rhopalum*), 41 (locality records from Mexico); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:664 (in checklist of Mexican Sphecidae); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

Rhopalum femorum Leclercq, 1970a:100, ♂. Holotype: ♂, Mexico: central Guerrero: no specific locality (FSAG). Synonymized with *Rhopalum angulicolle* by Leclercq, 2002b:41. – Leclercq, 1970a:96 (in key); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae).

4. *angustipetiolatum* Tsuneki

Rhopalum angustipetiolatum Tsuneki, 1971a:25, ♀. Holotype: ♀, Taiwan: Nantou Prefecture: Pempuchi (originally K. Tsuneki coll.). – Haneda, 1971b:33 (Taiwan); Murota, 1973b:119 (Taiwan); Leclercq, 1973c:301 (Taiwan); R. Bohart and Menke, 1976:389 (listed); Porter, Stange, and Wang, 1999:10 (in checklist of Sphecidae of Taiwan).

5. *annickae* Leclercq

Rhopalum annickae Leclercq, 1997:42, ♀, ♂. Holotype: ♀, Australia: Southern Australia: 25 km SSW Pinnaroo at 35°28'S 140°47'E (ANIC).

6. *ansatum* Leclercq

Rhopalum ansatum Leclercq, 2002b:42, ♀. Holotype: ♀, Colombia: Valle: Peñas Blancas (FSCA). – Leclercq, 2002b:19 (in key); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

7. *anteum* Leclercq

Rhopalum anteum Leclercq, 1957b:215, ♀, ♂. Holotype: ♂, Australia: Victoria: Port Phillip (BMNH). – Leclercq, 1957b:8 (in key); R. Bohart and Menke, 1976:389 (listed); Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997:44 (in revision of Australian *Rhopalum*).

8. *antennatum* Li and He

Rhopalum antennatum Li and He, 1998c:305, ♀, ♂. Holotype: ♀, China: Zhejiang Province: Songyang (Zhejiang Agricultural University). – Li and He, 2001:757 (China: Tianmushan Nature Reserve at 30°22'N 119°26'E), 2004:1092 (in hymenopterous fauna of Zhejiang Province, China).

9. *antillarum* Leclercq

Rhopalum antillarum Leclercq, 1957a:54, ♂. Holotype: ♂, Cuba: no specific locality (Genève). – Alayo Dalmau, 1976:17 (in key to Cuban *Rhopalum*), 32 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:12, 29 (in key to New World *Rhopalum*), 42 (additional description, description of ♀, locality records from Ecuador and Venezuela); Amarante,

2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Genaro, 2006:54 (in checklist of Cuban Sphecidae and Crabronidae, occurrence in Cuba questionable). – **As *Euplilis antillarum***: Alayo Dalmau, 1968b:8 (new combination, original description translated into Spanish), 1973:193 (in catalog of Cuban Hymenoptera).

10. *anvillum* Leclercq

Rhopalum anvillum Leclercq, 1997:45, ♂. Holotype: ♂, Australia: Southern Australia: 49 km SW Pinnaroo at 35°42'S 140°49'E (ANIC).

11. *ataiyal* Tsuneki

Rhopalum ataiyal Tsuneki, 1982e:34, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Pempuchi valley (originally K. Tsuneki coll., now Hyogo Mus.). – Tano, 1995:44 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

12. *atlanticum* R. Bohart

Rhopalum atlanticum R. Bohart, 1974:256, ♂, ♀. Holotype: ♂, USA: Georgia: Athens (USNM). – R. Bohart and Menke, 1976:630 (listed); Kisslow and Matthews, 1977:85 (nesting habits); Krombein, 1979b:1662 (in catalog of North American Hymenoptera, list of prey); Leclercq, 2002b:15, 30 (in key to New World *Rhopalum*), 43 (may be a geographic form of *Rhopalum grenadinum*, locality records from USA and Mexico).

13. *aucklandi* Leclercq

Rhopalum aucklandi Leclercq, 1955k:14, ♀, ♂. Holotype: ♀, New Zealand: Auckland (BMNH). – Leclercq, 1955k:6 (in key); R. Bohart and Menke, 1976:389 (listed); Callan, 1979:37 (New Zealand; listed); Valentine and Walker, 1991:40 (in catalog of New Zealand Hymenoptera); Harris, 1994:54 (in Fauna of New Zealand, nest).

14. *australiae* Leclercq

Rhopalum australiae Leclercq, 1957b:210, ♀. Holotype: ♀, Australia: Australian Capital Territory: Blundells (ANIC). – Leclercq, 1957b:187 (in key); R. Bohart and Menke, 1976:393 (listed). – R. Bohart and Menke, 1976:389 (listed); Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997:45 (in revision of Australian *Rhopalum*).

15. *austriacum* (Kohl)

Crabro austriacus Kohl, 1899:308, ♀, ♂. Syntypes: Austria: Niederösterreich: no specific locality and Piesting (NHMW). – Kohl, 1899:309 and 310 (in key); Schmiedeknecht, 1907:200 (in key to Hymenoptera of North and Central Europe); Kohl, 1915:338 (in revision of Palearctic Crabronini); Zavadil, 1926:37 (Czechoslovakia); Schmiedeknecht, 1930:658 (in keys to Hymenoptera of North and Central Europe); Zavadil, 1937a:71 (eastern Slovakia); Zavadil, Šusterka, and Bat'a, 1937:169 (in catalog of Sphecidae of Czechoslovakia, as *austriacum*); Zavadil, 1939:121 (Czech Republic: Morava: several localities); Balthasar, 1942:4 (Czech Republic: Moravia, as *austriacum*); Zavadil in Zavadil and Šnoflak, 1948:137, 138 (in key to Sphecidae of Czechoslovakia); de Beaumont, 1950a:70 (first record from Switzerland); Vogrin, 1955:41 (Yugoslavia, as *austriacum*); Noskiewicz and Puławski, 1960:158, 159 (in key to Polish Sphecidae). – **As *Euplilis austriaca***: Zavadil, 1946:8 (new combination, Czechoslovakia: Ostrava area). – **As *Rhopalum austriacum***: Leclercq, 1954c:189 (new combination, in catalog of world Crabronini); Babiý, 1964:117 (Austria: Land Salzburg); de Beaumont, 1964c:155 (in Sphecid Fauna of Switzerland); Gauss, 1966a:66 and 1966b:308 (Germany: Baden-Württemberg: Wittental near Freiburg), 1967:559 (Germany: Baden-Württemberg); Oehlke, 1970:790 (Democratic Germany); Balthasar, 1972:134 (in Sphecid Fauna of Czechoslovakia); de Beaumont, Bytinski-Salz and Pulawski, 1973:21 (Israel); Leclercq, 1975b:2 (France: Var: Callian; Grimaud); R. Bohart and Menke, 1976:393 (listed); Marshakov, 1976d:106 (in revision of *Rhopalum* of USSR: Ukraine: Crimea; Russia: Far East); Pulawski, 1978:254 (in key to Sphecidae of European part of former

USSR); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Dollfuss, 1983b:14 (in catalog of Sphecidae of Austria); Westrich and Schmidt, 1985b:111 (Germany: endangered in Baden-Württemberg); Dollfuss, 1987:22 (Austria), 1989:12 (type material in NHMW); Pádr *in* Šedivý, 1989a:169 (in checklist of Czechoslovakian Sphecidae); Jacobs and Oehlke, 1990:122 and 181 (not collected in Democratic Germany after 1960); Pádr, 1990:82 (Czech Republic: Praha area); Schwammberger and Priesner, 1990:543 (Austria: Kärnten); Day, 1991:xviii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:142 (in key to Sphecidae of North and Central Europe); Gusenleitner, 1992:685 (Austria: Steiermark); Bitsch and Leclercq, 1993:224 (in revision of western European Crabroninae); Leclercq, 1993c:41 (references to recent publications); Leclercq and Barber, 1993:89 (map of distribution in France); Wiśniowski, 1993b:280 (first record from Poland: Ojców National Park); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to Sphecidae of Russian Far East); Gusenleitner, 1996b:811 (Austria: Steiermark); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: probably endangered); Celary, 1997:59 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:27 (in checklist of German Sphecidae); Gusenleitner, 1999:594 (Austria: first record from Burgenland: Winten NW Eberau); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Land Kärnten); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:285 (in Sphecidae Fauna of Germany); Ljubomirov, 2001b:51 (Bulgaria: Mount Vitosha near Sofia); Ohl et al., 2001:141 (distribution in Germany by provinces); Wiśniowski, 2002:71 (Poland: Ojców National Park); Wiśniowski *in* Dylewska and Wiśniowski, 2003:158 (Poland: Ojców National Park); Dollfuss, 2004b:782 (Algeria: Djanet); Skibińska *in* Bogdanowicz, Chudzińska, Pilipiuk, and Skibińska, 2004:357 (in catalog of Polish Crabronidae); Stolle et al., 2004:373 (Germany: Sachsen-Anhalt: last collected in 1958); Wiśniowski, 2004:47 and 61 (in checklist of Polish Sphecidae), 2005a:312 (Poland: Ojców National Park; found only on wooden buildings), 2005b:340 (in Poland known only from Ojców National Park); Jacobs, 2007:126, 127 (in key to Crabronidae of Germany); Vepřek and Straka, 2007:206 (in catalog of Sphecidae of Czech Republic and Slovakia), 231 (previous record from Bohemia by Pádr, 1990, is probably a misidentification; unknown from Bohemia); Mei, 2008:178 (first record from Italy: Roma: Tenuta di Castelporziano); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); Bitsch and Leclercq, 2009:226 (in supplement to vol. I of Faune de France, 1993: recent records from Bulgaria and Poland reported); Nemkov, 2009b:97 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: very rare).

16. *avexum* Leclercq

Rhopalum avexum Leclercq, 1963:65, ♀, ♂. Holotype: ♀, Philippines: Luzon: Baguio: Benguet (USNM). Paratype: India: Tamil Nadu. – Baltazar, 1966:351 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1984b:13 (Philippines), 1984f:6 (Philippines), 31 and 32 (in key to Crabronini of Philippines).

17. *avocetum* Leclercq

Rhopalum avocetum Leclercq, 1997:45, ♀. Holotype: ♀, Australia: Victoria: Mt. Dandenong (ANIC).

18. *baguione* Tsuneki

Rhopalum baguione Tsuneki, 1984f:10, ♀. Holotype: ♀, Philippines: Luzon Island: Baguio City: Mines View Park (originally K. Tsuneki coll.). – Tsuneki, 1984f:34 (in key to Crabronini of Philippines); Nuhn and Menke, 1994:26 (holotype not transferred to USNM, possibly returned to T. Murota, the collector); Menke, 1995:14 (type still in K. Tsuneki collection); Tano, 1995:46 (holotype in K. Tsuneki collection).

19. *bamendae* Leclercq

Podagritys bamendae Leclercq, 1961g:171, ♀. Holotype: ♀, Nigeria: Bamenda Hospital (BMNH). – *As Rhopalum bamendae*: R. Bohart and Menke, 1976:389 (new combination, listed).

20. banosense Leclercq

Rhopalum banosense Leclercq, 2002b:43, ♀, ♂. Holotype: ♀, Ecuador: Tungurahua: Baños (BMNH). – Leclercq, 2002b:18, 32 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

21. barbatum Leclercq

Rhopalum barbatum Leclercq, 1997:46, ♀, ♂. Holotype: ♀, Australia: 5 km SWW Paynes Find (ANIC).

22. beaumonti Móczár

Rhopalum beaumonti Móczár, 1957:423, ♂ (spelled *Beaumonti*, incorrect original capitalization). Holotype: ♂, Hungary: Plattensee = Lake Balaton: Gyenesdiás (TMB). – Felton, 1969:20 (Austria: Burgenland); Balthasar, 1972:137 (in Sphecid Fauna of Czechoslovakia, can be expected in the country); R. Bohart and Menke, 1976:389 (listed); Marshakov, 1976d:110 (in revision of *Rhopalum* of USSR: W Kazakhstan); Pulawski, 1978:254 (in key to Sphecidae of European part of former USSR); Dollfuss, 1983b:14 (in catalog of Sphecidae of Austria: Neusiedl), 1991:142 (in key to Sphecidae of North and Central Europe); Leclercq, 1991f:103 (description of ♀), 105 (in key); Bitsch and Leclercq, 1993:220 (in revision of western European Crabroninae); Leclercq, 1993c:42 (listed); Dollfuss, 1994:103 (endangered in Austria); K. Schmidt, 1997:43 (variation and distribution, first records from Germany and Turkey); Schnee, 1997:98 (first record from Germany: Sachsen: Nature Reserve Pressler Heidewald- und Moorgebiet); Schmidt and Schmid-Egger, 1997:27 (in checklist of German Sphecidae); Blösch, 2000:285 (in Sphecid Fauna of Germany); Zettel, 2000:29 (Austria: Burgenland: Oggau); Ohl et al., 2001:141 (distribution in Germany by provinces); Kazenas, 2002a:97 (geographic distribution, collecting localities in Kazakhstan); Dollfuss, 2004b:782 (Turkey: Van: Van Lake E Ercis); Saure, 2006:133 (Germany: Berlin); Jacobs, 2007:125, 127 (in key to Crabronidae of Germany); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Ljubomirov and Yildirim, 2008:297 (in catalog of Crabronidae of Turkey); Bitsch and Leclercq, 2009:226 (in supplement to vol. I of Faune de France, 1993: Schmidt, 1897, illustrated frontal tubercle and basal flagellomeres; known from Austria, Germany, Hungary, Ukraine, Kazakhstan, and Turkey); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: very rare).

23. bendorense Leclercq

Rhopalum bendorense Leclercq, 1997:46, ♀. Holotype: ♀, Australia: Bendora (ANIC). – Matthews, 2000c:1 (nesting habits).

24. bogotae Leclercq

Rhopalum bogotae Leclercq, 2002b:45, ♂. Holotype: ♂, Colombia: Candín Amarca 2 mi SE Bogota (CAS). – Leclercq, 2002b:35 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

25. bohartum Tsuneki

Rhopalum bohartum Tsuneki, 1966d:15, ♀. Holotype: ♀, Ryukyu Islands: Ishigaki Island (BISHOP). – Tsuneki and Tano, 1969:31 (distribution in Japan); Leclercq, 1973c:301 (Taiwan: Taihorin); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1982g:63 (known from the Ryukyu archipelago); Porter, Stange, and Wang, 1999:10 (in checklist of Sphecidae of Taiwan); Haneda, Nozaka, Tano, Kurokawa, Murota, and Murota, 2007:55 (Japan: Kagoshima Prefecture: Amami Oshima Islands); Haneda, 2008:6 (in key to Japanese Crabroninae).

Rhopalum bohartorum Tsuneki, 1966g:25 (unjustified emendation of *bohartum*). – Tsuneki, 1968g:30 (Taiwan; in key to Crabronini of Taiwan and Ryukyus); Murota, 1973b:119 (Taiwan); Leclercq, 1973c:301 (Taiwan); Tsuneki, 1977j:291 (Taiwan); Yamane, Ikudome, and Terayama, 1999:499 (in Identification Guide to Crabronidae of Nansei = Ryukyu Islands, Japan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

26. brachinense Leclercq

Rhopalum brachinense Leclercq, 1997:48, ♀. Holotype: ♀, Australia: Trezona Camp, Brachina Creek (ANIC).

27. brevinodum (Spinola)

Physoscelus brevinodum Spinola, 1851:361, ♀. Holotype: ♀, Chile: central provinces: no specific locality (lost). Neotype: ♀, Chile: Concepción (FSAG), designated by Leclercq, 1994b:255. – Leclercq, 2007g:194 (holotype in FSAG). – **As *Crabro brevinodus***: F. Smith, 1856:393 (new combination, in catalog of Hymenoptera in British Museum); Reed, 1894:649 (revision, description of ♂); Dalla Torre, 1897:585 (in catalog of world Sphecidae); Jaffuel and Piri6n, 1926:375 (Chile: valle de Marga Marga); Janvier, 1928:77 (nesting habits). – **As *Rhopalum brevinodum***: Leclercq, 1954c:186 (new combination, in catalog of world Crabronini), 298 (nest and prey records); R. Bohart and Menke, 1976:393 (listed); Sielfeld, 1981b:74 (in checklist of Chilean Sphecidae); Leclercq, 1994b:253 and 254 (in key), 255 (bibliographic references, faunal records, diagnostic characters), 2002b:8, 33 (in key to New World *Rhopalum*), 45 (bibliographic references, locality records from Argentina); Dollfuss, 2004b:782 (Argentina: Neuqu6n: Pucara); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

Rhopalum pucarense Leclercq, 1970a:102, ♀. Holotype: ♀, Argentina: Pucara in Parco Nacional Lanin (IML). Synonymized with *Rhopalum brevinodum* by Leclercq in Bohart and Menke, 1976:389, synonymy confirmed by Leclercq, 1994b:255. – Leclercq, 1970a:94 (in key).

28. brontense Leclercq

Rhopalum brontense Leclercq, 1997:49, ♂. Holotype: ♂, Australia: Tasmania: Bronte Lagoon (ANIC).

29. bruchi Schrottky

Rhopalum bruchi Schrottky, 1909b:250, ♀. Holotype or syntypes: ♀, Argentina: Catamarca: no specific locality (MACN). – Schrottky, 1913a:233 (Argentina: Catamarca); Leclercq, 1954c:186 (in catalog of world Crabronini), 1970a:91 (is probably a *Podagrītus*); R. Bohart and Menke, 1976:393 (listed, possibly belongs in *Podagrītus*); Leclercq, 2000:32 (original description copied); Amarante, 2002:33 (in catalog of Neotropical Crabronidae), 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae, as species incertae sedis), 2005a:10 (correction to his 2002 catalog).

30. bukidnon Tsuneki

Rhopalum bukidnon Tsuneki, 1984f:9, ♀. Holotype: ♀, Philippines: Mindanao Island: Bukidnon: Sungeo (originally K. Tsuneki coll., now). – Tsuneki, 1984f:34 (in key to Crabronini of Philippines); 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, 1995:46 (holotype in K. Tsuneki collection).

31. cajanum Leclercq

As *Rhopalum calderoni*: Leclercq, 1970a:97 (in key) and 101 (♂ only). Corrected to *Rhopalum calderoni* by Leclercq, 2002b:45.

Rhopalum cajanum Leclercq, 2002b:45, ♀, ♂. Holotype: ♀, Peru: Amazonas: Chachapoyas (BMNH). Paratypes: Colombia, Ecuador. – Leclercq, 2002b:20, 38 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

32. calderoni Leclercq

Rhopalum calderoni Leclercq, 1970a:101, ♀, ♂. Holotype: ♀, Bolivia: no specific locality (FSAG). – Leclercq, 1970a:92 (in key), nec 97 and 101 = *Rhopalum cajanum*); R. Bohart and Menke, 1976:393 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:24, 40 (in key to New World *Rhopalum*), 46 (description of male, locality records from Bolivia and Colombia); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG).

33. caldux Leclercq

Rhopalum caldux Leclercq, 2002b:47, ♀, ♂. Holotype: ♂, Ecuador: Tungurahua: Baños (BMNH). – Leclercq, 2002b:24, 40 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

34. caliense Leclercq

Rhopalum caliense Leclercq, 2002b:48, ♀, ♂. Holotype: ♂, Colombia: Valle: Peñas Blancas 10 km W Cali (FSCA). – Leclercq, 2002b:10, 28 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

35. calixtoides Leclercq

Rhopalum calixtoides Leclercq, 1997:50, ♀. Holotype: ♀, Australia: Tasmania: Barrow Creek 8 km NE Nunamara at 41°21'S 147°22'E (ANIC).

36. calixtum Leclercq

Rhopalum calixtum Leclercq, 1957b:231, ♀. Holotype: ♀, Australia: Queensland: Brisbane (ANIC). – Leclercq, 1957b:6 (in key); R. Bohart and Menke, 1976:393 (listed); Leclercq, 1979b:354 (additional localities); Cardale, 1985:265 (in catalog of Australian Sphecidae); Leclercq, 1997:50 (in revision of Australian *Rhopalum*).

37. calverti (Pate)

Euplilis calverti Pate, 1947d:1, ♂. Holotype: ♂, Costa Rica: Bonnefil Farm on Río Surubres (ANSP). – H. Allen, 1995:15 (type in ANSP). – **As *Rhopalum calverti***: Leclercq, 1954c:187 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:393 (listed); Hanson and Menke, 1995:644 (known from Costa Rica); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:11, 14, 30 (in key to New World *Rhopalum*), 49 (locality records from Costa Rica, Panama, and Trinidad, additional description); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

38. calvitinum Leclercq

Rhopalum calvitinum Leclercq, 2002b:50, ♀, ♂. Holotype: ♂, Costa Rica: San José: San Antonio de Escazú (Universidad de Costa Rica). – Leclercq, 2002b:11, 14, 34 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

39. canberrae Leclercq

Rhopalum canberrae Leclercq, 1997:50, ♀, ♂. Holotype: ♀, Australia: Australian Capital Territory: Blundells Creek at 35°22'E 148°50'E (ANIC). Paratype: New South Wales.

40. caniae Leclercq

Rhopalum caniae Leclercq, 1997:51, ♀. Holotype: ♀, Australia: Queensland: Cania Gorge National Park at 24°43'S 150°59'E (ANIC).

41. canlaoni Leclercq

Rhopalum canlaoni Leclercq, 1963:73, ♀, ♂. Holotype: ♀, Philippines: Luzon: Mt. San Tomas near Baguio (AEI). – Baltazar, 1966:352 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1984b:13 (Philippines), 1984f:6 (Philippines), 31 (in key to Crabronini of Philippines).

42. changi Tsuneki

Rhopalum changi Tsuneki, 1968g:22, ♂. Holotype: ♂, Taiwan: Ilan Prefecture: Mt. Taiping (originally K. Tsuneki coll., now USNM). – Tsuneki, 1968g:29 (Taiwan; in key to Crabronini of Taiwan and Ryukyus); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:10 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

43. cardaleae Leclercq

Rhopalum cardaleae Leclercq, 1997:51, ♀ (as *cardalae*, incorrect original spelling because dedicated to J. Cardale).
Holotype: ♀, Australia: Queensland: Mt. Lewis via Julatten (ANIC).

44. caripenne Leclercq

Rhopalum caripenne Leclercq, 2002b:50, ♂. Holotype: ♂, Venezuela: Caripo Conuco El Mirador (CNC). – Leclercq, 2002b:31 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

45. carnegiacum Leclercq

Rhopalum carnegiacum Leclercq, 1979b:356, ♀. Holotype: ♀, Australia: Victoria: Carnegie (Nation. Mus. Victoria).
– Cardale, 1985:269 (in catalog of Australian Sphecidae); Leclercq, 1997:51 (in revision of Australian *Rhopalum*).

46. carrabinum Leclercq

Rhopalum carrabinum Leclercq, 1997:52, ♀. Holotype: ♀, Australia: Western Australia: 12 km E Carrabin (ANIC).

47. categoricum Leclercq

Rhopalum categoricum Leclercq, 2002b:51, ♂ [paratypes ♀: sex apparently in error]. Holotype: ♂, Trinidad: St. George: St. Augustine (BMNH). – Leclercq, 2002b:30 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

48. caudinum Leclercq

Rhopalum caudinum Leclercq, 2002b:51, ♂. Holotype: ♂, Peru: Amazonas: Rodriguez de Mendoza (BMNH). – Leclercq, 2002b:30 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

49. cecropis Leclercq

Rhopalum cecropis Leclercq, 2002b:51, ♂. Holotype: ♂, Ecuador: Morona Santiago: Macas (BMNH). – Leclercq, 2002b:30 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

50. chinchillae Leclercq

Rhopalum chinchillae Leclercq, 1997:52, ♀. Holotype: ♀, Australia: Queensland: 11 km WNW Chinchilla (ANIC).

51. chinquense Leclercq

Rhopalum chinquense Leclercq, 1994b:256, ♀, ♂. Holotype: ♀, Chile: Llanquihue: El Cinco N Correntoso (AMNH). – Leclercq, 1994b:254 (in key); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:18 (in key to New World *Rhopalum*), 52 (bibliographic reference); Dollfuss, 2004b:782 (Chile: Las Trancas Nuble: Shemguilla); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

52. claudii (Janvier)

Crabro claudii Janvier, 1928:82, nest and larva (authorship attributed to P. Herbst). Holotype: larva: Chile: Cordillera de Santiago: Pañalolen valley or Macul valley (lost). Neotype: ♀, Chile: Santiago: El Portezuelo: Colina (AMNH), designated by Leclercq, 1994b:257. – **As *Rhopalum claudii***: Leclercq, 1954c:186 (new combination, in catalog of world Crabronini, name considered nomen nudum), 298 (nest and prey records); R. Bohart and Menke, 1976:389 (listed, name validated by illustration of larva); Sielfeld, 1981b:74 (in checklist of Chilean Sphecidae); Leclercq, 1994b:254 and 255 (in key), 257 (bibliographic references, faunal records, history of Janvier's type material, description); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:16, 33 (in key to New World *Rhopalum*), 52 (bibliographic reference); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

53. *clavipes* (Linnaeus)

Sphex clavipes Linnaeus, 1758:569, sex not indicated. Lectotype: ♀, Europe: no specific locality (Linnean Society, London), designated by Day, 1979:59. – Fueßlin, 1775:50 (Switzerland); de Villers, 1789:220 (redescription); Gmelin, 1790:2726 (redescription); Christ, 1791:274 (redescription); Day and Fitton, 1978:193 (recuration of Linnean type material). – **As *Crabro clavipes***: Dahlbom, 1839:43 and 1839-40:43 (new combination, in revision of Scandinavian Crabronini), 1842a:14 (in review of Scandinavian aculeates); F. Smith, 1856:391 (in catalog of Hymenoptera in British Museum); A. Morawitz, 1866a:270 and 1866b:346 (specimens in Eversmann collection); Bold, 1870:148 (Great Britain: Northumberland and Durham); Taschenberg, 1875:381 (Germany: Halle); Kohl, 1880:134 (Austria: Tirol, and Italy: Trentino–Alto Adige), 1883e:656 (Switzerland); Sickmann, 1883:75 (Germany: Niedersachsen: Wellingholthausen); von Heyden, 1884:124 (Germany: Frankfurt am Main area); Kohl, 1893a:21 (Austria: Niederösterreich); F. Morawitz, 1893a:113 (Russia: Karelian Isthmus); Sickmann, 1893:75 (Germany: Niedersachsen: Iburg); Krieger, 1894:3 (Germany: Kingdom of Saxony); Freke, 1895:281 (first record from Ireland: Dublin County: Dundrum), 1896:41 (Ireland); Dalla Torre, 1897:589 (in catalog of world Sphecidae); Kohl, 1899:309 and 310 (in key); R. Bradley, 1900:13 (Great Britain: Birmingham); W. Evans, 1900:266 (Great Britain: Scotland: Aberfoyle); Nevinson, 1900:62 (Great Britain: Wales: Criccieth); E. Saunders, 1900a:266 (Great Britain: Scotland); A. Carter, 1901a:67 (Great Britain: Scotland: Perthshire: Comrie); E. Saunders, 1902a:52 (SW Ireland); de Cobelli, 1903:118 (Italy: Trentino: Val di Fiemme); Antiga and Bofill, 1904:22 (Spain: Cataluña Province); E. Saunders, 1907a:67 (Britain: Porthcawl); Schmiedeknecht, 1907:200 (in key to Hymenoptera of Central Europe); Bequaert, 1909:74 (...); Cavro, 1910:685 (France: Département du Nord); Dittrich, 1911b:20 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Morley, 1911:24 (Western Ireland: Belclare); Hallett, 1912:94 (Britain: Glamorgan County); Alfken, 1914:274 (NW Germany); Kohl, 1915:336 (in revision of Palearctic Crabronini); O. Meyer, 1919:149 (Germany: Posen Province, now Poland: Poznań Region); Dubois, 1921b:162 (in key to Belgian Sphecidae), 166 (phenology, nesting habits); Stelfox, 1924:16 (Ireland: Glenasmole); Berland, 1925d:180 (in Sphecid Fauna of France); Bischoff, 1925:299 (Poland: Grajewo area); Blüthgen, 1925:165 (Germany: Saale River valley: Naumburg); Grönblom, 1925:8 (nesting habits); Shestakov, 1925:36 (Russia: Yaroslavl' area); Carpentier, Crèvecoeur and Maréchal, 1926:354 (Belgium: Barvaux-sur-Ourthe, Méry); Zavadil, 1926:36 (Czechoslovakia); Maréchal, 1929:115 (description of larva); Bouwman, 1930:105 (in revision of Sphecidae of Netherlands); Hedicke, 1930:130 (...); Schmiedeknecht, 1930:658 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:154 (...); Step, 1932:94 (...); Bondroit, 1932:42 (Belgium: recorded from Bruxelles area by Wesmael), 1933:33 (Belgium: Bruxelles); Chambers, 1933:188 (Great Britain: Bedfordshire); Merisuo, 1933a:60 (Finland: city of Turku); E. Nielsen, 1933:267 (summary of nesting habits); Routledge, 1933:88 (England: Cumberland); Balles, 1934:17 (Germany: Baden-Württemberg: Achern, Hopfengarten); Jansson, 1934:288 (Sweden); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Steck, 1935:326 (Switzerland); Crèvecoeur and Maréchal, 1936:257 (in catalog of Belgian Hymenoptera); Haines, 1936:141 (Great Britain: Scotland: Inverness-shire: Grantown); Zavadil, Šustera, and Bat'a, 1937:168 (in catalog of Sphecidae of Czechoslovakia); nec Iwata, 1938d:88 (= *Rhopalum jessonicum*); Leclercq, 1941b:16 (Belgium: Liège area); Giner Marí, 1943a:252 (in key to Spanish species); Guiglia, 1944b:35 (Italy); nec Tsuneki, 1947:429 (= *Rhopalum jessonicum*); de Hennin and Anciaux, 1948:76 (Belgium: between Sambre and Meuse rivers); Tsuneki, 1948c:8 (Japan: Hokkaido); Zavadil *in* Zavadil and Šnoflak, 1948:137 and 138 (in key to Sphecidae of Czechoslovakia); Cavro, 1950:38 (France: Département du Nord); Georgel, 1950:64 (France: Seine-et-Oise: Sucy-en-Brie); de Beaumont, 1951h:35 (Switzerland: Neuchâtel area); Fæster, 1951:458 (distribution in Scandinavia); Nouvel and Ribaut, 1953:182 (France: Haute-Garonne: Luchon, Saint-Béa, Hautes-Pyrénées: Cauteretst); de Beaumont, 1954e:98 (Italy); Vergne, 1955:5 (France: Auvergne); Vogrin, 1955:41 (Yugoslavia); Ceballos, 1956:393 (in catalog of Hymenoptera of Spain); Preuss, 1956:15 (Germany: Schleswig-Holstein: Mölln in Lauenburg); Benno, 1957:144 (Netherlands: Tilburg area, nesting in stems of *Rubus*); Zirngiebl, 1957:177 (Germany: Rheinland-Pfalz: Hildesheim, Leistadt); Benno, 1958b:20 (in review of Dutch Sphecidae); Noskiewicz and Puławski, 1960:158, 159

(in key to Polish Sphecidae); Fæster, 1965:193 (Denmark: Hansted Nature Reserve); Bonelli, 1966c:220 (Italy: Trentino–Alto Adige: Fiemme, Vigo di Fassa); Tumš and Maršakovs, 1970:31 (Latvian); Niedl and Deneš, 1967:75 (Czech Republic: Třeboň area); Skibińska, 1981:358 (Poland: Warszawa-Białoleka), 1982:124 (Poland: Warszawa area); Kowalczyk, 1988a:46 (Poland: Rogów), 1988b:66 (Poland: environs of Łódź). – **As Euplilis clavipes**: Pate, 1943d:14 (new combination, Holarctic; California, Oregon, Washington), 1946g (New York State: Adirondack Mts.); Krombein *in* Muesebeck et al., 1951:1018 (Holarctic, in catalog of North American Hymenoptera); Evans, 1957b:106 (discussion of Maréchal's, 1929, description of larva); Krombein *in* Krombein and Burks, 1967:419 (citation of Maréchal, 1929). – **As Physosceles clavipes**: R. Perkins, 1924a:226 (new combination, Great Britain: Devon); Hamm and Richards, 1926:318 (summary of nesting habits), 328 (list of prey); Stelfox, 1927:303 (Ireland: list of localities); Jones, 1928a:5 (nesting in old oak-stump at Wollaton Park, Nottingham), 1928b:14 (Great Britain: Hampshire: Milford-on-Sea); Butterfield and Fordham, 1931:158 (Great Britain: Yorkshire); Spooner, 1931:15 (Great Britain: Cambridgeshire); Jones, 1932b:233 (Great Britain: Wicken Fen); Hallett, 1937:73 (Great Britain: Herefordshire: Cusop, Mathon); T. Fletcher, 1945:54 (Great Britain: Gloucestershire: Chalford, Cotswolds, Rodborough, Stroud); Graham, 1950:349 (eggs of unknown insect deposited on thorax). – **As Rhopalum clavipes**: Dahlbom, 1844:291 (267 (new combination, in revision of Sphecidae and Pompilidae), 1845:510 (in key to *Rhopalum*); Eversmann, 1849:415 (Russia: Kazan Province); Kiesenwetter, 1849:90 (Germany: Kingdom of Saxony: Oberlausitz area); Wissmann, 1849:15 (Germany: Kingdom of Hannover: Münden); Tischbein, 1850:9 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); Wesmael, 1852:592 (Belgium: Bruxelles); Kirchner, 1854:313 (Czechoslovakia: Kaplitz in Budweiser District, now České Budějovice; as *Rhobalum*); Ruthe and Stein, 1857:315 (Germany: Berlin area); Schenck, 1857:119 (in revision of fossorial wasps of Nassau Region, Germany); A. Costa, 1858:21 (Italy: Campania: Monti Partenii in Benevento Region); Taschenberg, 1858:99 (in key to Sphecidae of Germany); Funk, 1859:58 (Germany: Bayern: Bamberg); Schenck, 1860:146 (Germany: Nassau Region); Brischke, 1862:105 (Germany: Preussen Province, now Poland: Pomorze Region); Taschenberg, 1866:184 (in revision of Hymenoptera of Germany); A. Costa, 1867c:121 (in revision of Italian Sphecidae); Kirchner, 1867:223 (in catalog of European Hymenoptera); Schenck, 1867a:352 (Germany: Nassau Region); Wierzejski, 1868:117 (Ukraine: Podole Region: Pieniaki); Thomson, 1870:158 (in revision of Swedish Crabroninae); A. Costa, 1871b:50 (in revision of Italian Sphecidae); Dours, 1874:152 (in catalog of Hymenoptera of France); Thomson, 1874:259 (in revision of Hymenoptera of Scandinavia); Marquet, 1875:209 (France: Aude: Narbonne; Hérault: Montpellier); Schlechtendal, 1876:54 (Germany: Sachsen: Zwickau); Radoszkowski, 1877:77 (Uzbekistan: Samarkand, Katta-Kurgan; also: Uch-Kurgan and Ayma); Siebke, 1880:68 (Norway); Marquet, 1881:184 (France: Landes); Schøyen, 1881:12 (correction to Siebke, 1880); Wüstnei, 1886:37 (Germany: Schleswig-Holstein: Emmelsbüll, Sonderburg); Brischke, 1888b:100 (Germany: Preussen Province, now Poland: Pomorze Region), 1889:204 (Germany: Steegen E Danzig, now Poland: Stegna E Gdańsk); Verhoeff, 1891a:4 (nesting habits), 1892b:362 (male cocoons are closer to nest entrance), 364 (nest may include progeny of one sex only), 1892c:724, 731 (nesting habits); Borries, 1897:46 (nesting habits); Lange, 1898:70 (Germany: Sachsen: Annaberg-Buchholz); Strand, 1898b:95 (Norway); J. Nielsen, 1901a:262 (nesting habits); Adlerz, 1904:136 (known prey: Psocidae, Mycetophilidae, Cecidomyiidae, Muscidae); Aurivillius, 1904:279 (in revision of Swedish Sphecidae); de Gaulle, 1908:122 (in catalog of French Hymenoptera); Höppner, 1910b:167 (mixed nest of *Rhopalum clavipes* and *Crossocerus* sp. ?*capitosus*); Graeffe, 1911:44 (Italy: Trieste area); Adlerz, 1912:57 (nesting habits); Chevalier, 1912:32 (carrying psocid prey with midlegs, venter to venter); Schirmer, 1912:164 (Germany: Berlin area); A. Wagner, 1920:47 (Germany: Lower Elbe region); Jansson, 1922:25 (Sweden: Öland Island); Coulon, 1925:123 (France: Oise, Germany, Switzerland); Friese, 1926:150 (in key to Sphecidae of Central Europe, morphological and biological characteristics); Hémon, 1926:199 (France: Finistère: Fouesnant); Maréchal, 1929a:111 (nesting habits), 1929b:240 (nest shared with *Hylaeus brevicornis* Nylander); Harttig, 1930b:8 (specimen bearing dipteran egg); Baudot, 1931:255 (characteristics of cocoon); Minkiewicz, 1935:219 (Poland: Lake Garbaś 20 km W Suwałki); Richards, 1937b:107 (in checklist of British aculeates); P. Freeman, 1938:1 (nest, prey, cocoon, life cy-

cle in England); A. Wagner, 1938a:118 (northwestern Germany); Blair, 1939:240 (nesting in old galls of *Saperda populnea* (L), nest parasite: *Demopheles caliginosus* Gravenhorst); Struve, 1940:823 (Germany: Borkum Island); de Graham, 1941:99 (Great Britain: Lincolnshire); Kloet, 1941:235 (Great Britain: Wales: Somerford and Wilmslow); J. Perkins, 1942:199 (Sweden: southern Skåne); Spooner, 1942:110 (Great Britain: Bedfordshire), 1946:27 (Britain: Leicestershire: Charnwood Forest); Bristowe, 1948:36 (prey: Psocidae); Guichard and Yarrow, 1948:92 (Britain: London: Hampstead Heath); Chambers, 1949:230 (Britain: Bedfordshire); Leclercq, 1951e:3 (bibliography of Belgian records); Głowacki, 1953:518 (Poland: Podkowa Leśna near Warszawa); Bischoff and Stadler, 1954:127 (Germany: Bayern: Romberg); Fahlander, 1954:250 (Sweden: Gästrikland Region); Leclercq, 1954c:188 (in catalog of world Crabronini), 299 (nest and prey records); Aerts, 1955:57 (Germany: Rheinland); Leclercq, 1956i:133 (Luxemburg); Yeo, 1957:20 (Great Britain: Middlesex, now in London); Wolf, 1959b:32 (Germany: Nassau); Hoop, 1961:64 (Germany: Schleswig-Holstein: Kronshagen); Valkeila, 1962b:68 (southwestern Finland); Felton, 1963:179 (Great Britain: Kent County); Lyngnes, 1963:100 (nesting in galleries of anobiid *Grynobius*, preying on aphids, prey record probably in error); Babiş, 1964:117 (Austria: Land Salzburg); de Beaumont, 1964c:155 (Switzerland); Valkeila, Brander, and Käpylä, 1964:75 (Finland: Southern Finland: Forssa); B. Klug, 1965:138 (Germany: Baden-Württemberg: Freiburg im Breisgau area); Benedek, 1966a:163, 164 (nest occasionally in galls of *Cynips kollari* Htg., and *Rhodites rosae* L.); Gauss, 1966c:240 (specimen bearing dipteran egg); Benno, 1967:39 (in checklist of Sphecidae of Netherlands); Gauss, 1967:559 (Germany: Baden-Württemberg); J. Heinrich, 1967:82 (Germany: Bayern: Unterfranken District); Leclercq, 1967a:35 (locality records from Great Britain); Lefebvre, 1967c:220 (Netherlands: Kannerbos, St. Pietersberg); Benedek, 1968:78 (Hungary, visiting flowers of *Angelica silvestris* L.); Lefebvre, 1968a:5 (Netherlands: Botshol), 1968b:94 (Netherlands: St. Pietersberg); Scobiola-Palade, 1968a:822 (first record from Romania: Prahova District: Sinaia); Wolf, 1968:12 (Germany: Nordrhein-Westfalen: Siegen, inhabitant of forest edge); Benedek, 1969a:85 (Hungary; marshy meadow); Lefebvre, 1969b:99 (Netherlands: Bemelen, St. Pietersberg; Belgium: Lanaye), 1969c:234 (Netherlands: St. Pietersberg = Montagne Saint Pierre); Romanova, 1969:134 (Russia: North Caucasus); Benedek, 1970:104 (Hungary: Tapolca); Oehlke, 1970:790 (Democratic Germany); Danks, 1971a:362 (nesting habits), 1971b:67-73 (Great Britain: Berkshire: Silwood Park), 1971c:80 (nest mortality); Leclercq, 1971:227: (Spain); Schmidt, 1971b:52 (Germany: Mainz area); Stritt, 1971a:105 (Germany: Baden-Württemberg: Karlsruhe); Torossian, 1971:147 (France: Toulouse area; nesting in oak galls, preying on Psocidae; parasite: *Diomorus* sp., a Torymid); Balthasar, 1972:135 (in Sphecidae Fauna of Czechoslovakia); Haeseler, 1972:157 (Germany: Schleswig-Holstein; anthropogenic habitats); Kofler, 1972:116 (Austria: eastern Tirol); Scobiola-Palade, 1972b:254 (Romania); Tsuneki, 1972a:159 (Mongolia); R. Bohart, 1974:257 (revision); Haeseler, 1974:124 (Germany: Schleswig-Holstein); Leclercq, 1975b:2 (France); Lefebvre, 1975b:156 (Belgium); Lomholdt, 1975b:32 (Denmark: Anholt Island); R. Bohart and Menke, 1976:389 (listed); Cretin and Robert, 1976:47 (France: Doubs: Chassagne-Saint Denis); Jacob-Remacle, 1976:237 (Belgium: Liège, nest structure and mortality); Lomholdt, 1976:352 (in Sphecidae Fauna of Fennoscandia and Denmark); Marshakov, 1976d:106 (in revision of *Rhopalum* of USSR, including Vladivostok); Guichard, 1977:253 (Great Britain: Surrey); Roques, 1977:419 (France: Fontainebleau, nesting in pine cones); Schmidt, 1977:99 (Germany: Schwarzwald); Haeseler, 1978c:195 (Germany: Friesian Islands: Borkum Island); Pulawski, 1978:254 (in key to Sphecidae of European part of former USSR); Schwammberger, 1978:421 (Germany: Württemberg); Haeseler, 1979:10 (Germany: Niedersachsen: 10 km S Oldenburg); Krombein, 1979b:1663 (in catalog of North American Hymenoptera, list of prey); Leclercq, Gaspar, and Verstraeten, 1979:map 1435 (Belgium); Marchal and Leclercq, 1979:10 (Belgium: Gembloux); Day and Smith, 1980:173 (eggs on miltogrammine flies on adult female); Jacob-Remacle and Leclercq, 1980:193 (Belgium: gardens in Liège); Pagliano, 1980:122 (Italy: Piemonte); Richards, 1980:56 (in key to Sphecidae of British Isles); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Haeseler, 1981:52 (Germany: Friesian Island: Amrum Island); Woydak, 1981:46 (Germany: Westfalen: Hamm); Axelsson, 1982:80 (Sweden); Donath, 1982:215 (Germany: Cottbus Bezirk); Finnamore, 1982:135 (in Sphecidae Fauna of Southern Quebec); Gayubo, 1982b:22 (Spain: Ávila: Solana de Béjar); Gayubo and Nieves, 1982:192

(nesting in abandoned galls on oak); Leclercq, 1982a:125 (Belgium: Liège), 1982e:100 (Norway: Nord-Trøndelag: Røra); Tsuneki, 1982b:10 (Korea), 1982b:17 (known from Korea); Dollfuss, 1983b:14 (in catalog of Sphecidae of Austria); Lefeber, 1983a:85 (Netherlands: Waddendistrict: northern coast sand dunes, Vlieland and Schiermonnikoog islands); Riemann, 1983:88 (Germany: Bremen-Daverden area); Chevin and Silvestre de Sacy, 1984:8 (France: Yvelines Department); Gayubo, 1984b:96 (Spain: previously recorded from Salamanca Province); Haack, Tschartke, and Vidal, 1984:132 (Germany: Hamburg area); Jacob-Remacle, 1984:260 (Belgium: urban center of Liège); Lefeber, 1984:29 (Netherlands: Maastricht); Schneider, 1984:145 (nesting habits); Archer, 1985:96 (Britain: Suffolk); Haeseler, 1985:350 (Germany: Schleswig-Holstein), 1985c:571 (Germany: Friesian Islands); Jacob-Remacle, 1985:408 (Belgium; second occupant in a composite nest); Lefeber, 1985:87 (Netherlands: southern Limburg); Tyrner, 1985:9 (Czech Republic: Jezerka Nature Reserve in Krušné Hory = Erzgebirge); Brechtel, 1986:72 (Germany: Südpfalz); Jozán, 1986:372 (Hungary: Kiskunság National Park); Nemkov, 1986:101 (Russia: Irkutsk Oblast'); Skibińska, 1986b:151, 154 (Poland: suburbs of Warszawa), 158 (rural and suburban parks), 160 (gardens), 165 (streetside green), 174 (various green urban habitats); Vikberg, 1986:77 (Finland); Schmidt and Westrich, 1987:375 (Germany: Mainz area); Haeseler, 1988:211 (Germany: Friesian Islands); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Archer, 1989a:131 (Great Britain: York: found before coniferization); Bałazy, Banaszak, and Michalski, 1989:119 (Poland: Wielkopolski National Park); Jacobs, 1989:17 (Germany: Mecklenburg-Vorpommern); Pádr *in* Šedivý, 1989a:16 (in checklist of Czechoslovakian Sphecidae); Pankevich, Belyavskaya, Molchanova, Shlyakhtenok, and Blinov, 1989:97 (Belarus': Berezinskiy Nature Reserve); Skibińska, 1989a:206 (Poland: Warszawa area), 163 (urban parks); Weiffenbach, 1989:110 (Germany: Hessen: Gießen area); Archer, 1990b:137 (Great Britain: city of Leicester), 1990c:17 (Great Britain: Leicestershire); Jacobs and Oehlke, 1990:181 (new records from Democratic Germany); Kowalczyk, 1990:292 (Poland: Góry Świętokrzyskie); Kuznetzova, 1990:22 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Nash, Boston, and Nelson, 1990:249 (Ireland: Down County); Pádr, 1990:82 (Czech Republic: Praha area); Pagliano, 1990:93 (in catalogue of Italian Sphecidae); Schwammler and Priesner, 1990:543 (Austria: Kärnten); von der Heide and Witt, 1990:64 (Germany: Niedersachsen); Dollfuss, 1991:142 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:406 (Italy: Veneto: San Rocco); Jakubzik, 1991:75 (Germany: Köln); Kowalczyk, 1991a:91, 100, 102, 105 (Poland: Łódź), 1991b:121 (Poland: Augustów Forest); Kurczewski and Miller, 1991:254 (New York: Madison County); Nilsson, 1991:83 (Sweden: Lake Mälaren); Pagliano, 1991b:357, 358 (in key to Italian Crabroninae); N. Schneider, 1991:93 (Luxemburg); Sorg and Wolf, 1991:195 (Germany: Koppelstein Reserve SE Koblenz); von der Heide, 1991:63 (Germany: peat bog near Oldenburg); Archer, 1992a:56 (Great Britain: Leicestershire); Cölln and Jakubzik, 1992:89 (Germany: Rheinland; reared from twigs of *Rubus*); Nilsson, 1992:54 (Sweden); N. Schneider and Jacob-Remacle, 1992:43 (Luxemburg), 52 (nest structure); Sorg and Cölln, 1992:132 (Germany: Rheinland-Pfalz: Gönnersdorf); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Wolf, 1992c:23 (Germany: Nordrhein-Westfalen: Plettenberg: castle Schwarzenberg ruin); Bitsch and Leclercq, 1993:225 (in revision of western European Crabroninae); Jakubzik and Cölln, 1993:136 (Germany: Rheinland-Pfalz: Bernkastel-Kues; nesting in stems of *Rubus*); Józán, 1993:413 (Hungary: Bükk National Park); Kuhlmann, 1993:76 (Germany: known from Westfalen); Leclercq, 1993c:42 (collecting localities from Europe); Leclercq and Barbier, 1993:90 (map of distribution in France); Sorg and Wolf, 1993:60 (Germany: Rheinland-Westfalen: Nature Reserve Die Spey); Finnamore, 1994:210 (Canada: Alberta: Wagner Natural Area 8 km W Edmonton, as *clavipes clavipes*); Kowalczyk, 1994:76 (Poland: Łagiewniki forest in Łódź); Pádr and Lukáš, 1994:894 (Slovakia: High Tatra Mountains); Theunert, 1994c:50 (summary of records from Niedersachsen and Bremen, Germany); Negrisola *in* Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to Sphecidae of Russian Far East); Pagliano and Pesarini, 1995:89 (Italy: Ferrara Province); Riemann, 1995:52 (Germany: Bremen); Scharrer, 1995:28 (Germany: Bayern: Mainfranken); Schmid-Egger, Risch, and Niehuis, 1995:207 (summary of records from Germany: Rheinland-Pfalz Province); Shlyakhtenok, 1995:194 (Belarus': Berezinskiy Nature Reserve); Skibińska, 1995:423, 425, 426, 427 (Poland: pine forest in Białowieża Primeval For-

est); von der Dunk and Amon, 1995:52 (Germany: Nürnberg: Birkenlach forest); Archer, 1996b:37 (Great Britain: Nottinghamshire: Sherwood Forest); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Harvey and Plant, 1996:74 (Great Britain: summary of records from Essex); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996a:323 (Germany: nesting in stems of *Rubus*), 325 (parasitoid: undetermined eurytomid), 335 (in keys to cocoons), 1996b:401 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: not endangered); Shlyakhtenok, 1996:304 (Belarus': Berezinsky Nature Reserve); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Woydak, 1996:53 (Germany: Westfalen: summary of distribution and nesting habits); Celary, 1997:59 (in checklist of Animals of Poland); Gauss, 1997:27 (egg of miltogrammatid flies deposited on adult specimens); Riemann, 1997:50 (Germany: Achim 14 km SE Bremen); Schmidt and Schmid-Egger, 1997:28 (in checklist of German Sphecidae); Stoyanov and Ljubomirov, 1997:27 (Bulgaria: Rila Mountains); Dollfuss, Gusenleitner, and Bregant, 1998:521 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km WSW Hamburg); Haeseler and Ritzau, 1998:51 (Germany: Bremen: Harriersand Island in Weser River); 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); Sugar *et al.*, 1998:16 (Canada: southern Ontario); van der Smissen, 1998:68 (Germany: Niedersachsen, Schleswig-Holstein); Archer, 1999b:82 (Great Britain: Yorkshire); Cölln and Jakubzik, 1999:29 (Germany: Rheinland-Pfalz: Keuper-Scharren SW Hungerburg); Dorow, 1999:531, 573 (Germany: Hessen: Niddahänge E Rudingshain Forest Reserve); Erhardt, 1999:75 (Germany: Niedersachsen: Ammerland area); Generani, Pagliano, Scaramozzino, and Strumia, 1999:79 (Italy: Toscana: Isola di Montecristo); Herrmann, 1999:8 (Germany: Niedersachsen: Oldenburg area; habitats size); Ljubomirov, 1999b:53 (Bulgaria: Mt. Vitosha near Sofia); Majzlan, Rychlík, and Deván, 1999:146 (Slovakia: Čenkovská Step Nature Reserve); Pauly, 1999:110 (in catalog of Belgian aculeates); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:286 (in Sphecid Fauna of Germany); Canovai *et al.*, 2000:78 (Italy: Toscana: Isola di Montecristo); Gonzáles, Gayubo, and Tormos, 2000:20 (Andorra: Santa Coloma); Jacobs, 2000:9 (Germany: Land Mecklenburg-Vorpommern: not endangered); Luig and Voolma, 2000:123 (first record from Estonia); M. Mader and Chalwatzis, 2000:60 (Germany: Hessen: Oderwald Mts.); Vepřek, 2000:236 (Slovakia: Správa in Bely Karpaty mountain range); Wiśniowski, 2000:161 (Poland: Bieszczady Mts.); Zeman and Vaněk, 2000:178 (Czech Republic: Harrachov); Archer, 2001b:14 (Great Britain: Watsonian Yorkshire); Dorow, 2001:136 (Germany: Hessen: Schönbuche Forest Reserve); Haeseler, 2001:266 (Germany: Niedersachsen: Brookdeich near Oldenburg); Kazenas, 2001b:187 (review of known biology); Ohl *et al.*, 2001:141 (distribution in Germany by provinces); Shlyakhtenok and Agunovich, 2001:144 (Belarus': Berezinskiy Nature Reserve); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Szczepko and Kowalczyk, 2001:188 (Poland: Kampinos National Park near Warszawa); Zettel, Gross, and Mazzucco, 2001:75 (Austria: Wien); Archer, 2002b:120 (Great Britain: Watsonian Yorkshire: distribution map); Archer and Edwards, 2002:102 (Great Britain: West Sussex: Ambersham and Iping commons); Beavis, 2002:109 (Great Britain: Kent: Tunbridge Wells area); Deván, 2002b:204 (Slovakia: Pekelná dolina); Esser and Cölln, 2002:1137 (SW Germany: Eifel region); Kazenas, 2002a:97 (geographic distribution, collecting localities in Kazakhstan); Leclercq, 2002b:13, 34 (in key to New World *Rhopalum*), 52 (bibliographic references, locality records from Canada and USA); Shlyakhtenok and Skibinska, 2002:34 (Belarus': no specific locality); Wiśniowski, 2002:71 (Poland: Ojców National Park); Blösch, 2003b:82 (Germany: Bayern: Erlangen area, nesting in rotten willow poles); Cölln, Esser, and Jakubzik, 2003:63 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:142 (Germany: Hessen: Gießen); Flügel, 2003:9 (Germany: Hessen: Knüllwald); Generani, Pagliano, Scaramozzino, and Strumia, 2003:65 (Italy: Arcipelago Toscano); Haeseler, 2003:340 (Germany: Niedersachsen: Harriersand Island near Bremen); Kula and Tyrner, 2003:203 (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 Ven-

torrillo in Sierra de Guadarrama); Schmid-Egger, 2003:757 (Italy: Sicilia: Piano, Randazzo); Steffan-Dewenter and Leschke, 2003:1966 (Germany: Niedersachsen: orchard meadows); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wiśniowski *in* Dylewska and Wiśniowski, 2003:158 (Poland: Ojców National Park); Wiśniowski and Werstak, 2003:77 (Poland: Pieniny National Park); Buck, 2004:26 (in checklist of Crabronidae of Ontario, Canada); Budrienė, Budrys, and Nevronytė, 2004:22 (Lithuania: nesting in trap nests); Dollfuss, 2004b:782 (Czech Republic: Krumlov); Dorow, 2004a:127 (Germany: Hessen: Schönbuche Nature Reserve); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (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); Jakubzik and Cölln, 2004:271 (in key to nests of Hymenoptera nesting in stems of *Rubus*); Jakubzik, Niehuis, and Cölln, 2004:458 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Salzmann-Wandeler and Rezbanyai-Reser, 2004:26 (central Switzerland); Schneider and Carrières, 2004:97 (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, 2004:47 and 61 (in checklist of Polish Sphecidae); Beavis, 2005:195 (Great Britain: Islands of Scilly); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Kofler, 2005:175 (Austria: Tirol: Lienz District: Bannberg in Assling Common, city of Lienz, Nörsach in Nikolsdorf Common, Nußdorf in Nußdorf-Debant Common, Tristacher Au in Tristach Common); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Pagliano and Negrisolo, 2005:296 (in Sphecid Fauna of Italy); Quest and Kuhlmann, 2005:33 (Germany: Bayern: Bayerischer Wald National Park); Riemann and Hohmann, 2005:565 (Germany: Niedersachsen: city of Bremen and adjacent area); Shorenko, 2005a:166 (Ukraine: Crimea); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Dathe, 2006:37 (*Chalcis clavipes* recorded from Plauenscher Grund near Dresden, Germany, by von Block, 1799, is now *Rhopalum clavipes*); Feitz, Gloden, Melchior, and Schneider, 2006:82 (Luxemburg: Baggerweieren area in Haff Réimech Nature Reserve); U. Frommer, 2006:37 (Germany: Hessen: Runkel area); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: Yadenitsa River valley, as *clavipes clavipes*); Nemkov, 2006b:168 (Russia: Primorskiy Krai: Kedrovaya Pad' Nature Reserve); Standfuss and Standfuss, 2006a:86 (Germany: Nordrhein-Westfalen: Dortmund); Tomarchio and Turrisi, 2006:956 (Italy: Sicilia: Mount Etna); Vepřek, 2006:511 (Czech Republic: Kokořínsko area); Dorow, 2007:263 (Germany: Hessen: Hohestein, Niddahänge, and Schönbuche Forest Reserves); Jacobs, 2007:126 (in key to Crabronidae of Germany); Nemkov, 2007b:70 (Russia: Kuril Islands: Kunashir Island); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Venne, Bleidorn, and Lauterbach, 2007:303 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:206 (in catalog of Sphecidae of Czech Republic and Slovakia), 231 (first recorded from Slovakia by Vepřek, 2000); K. Alexander, 2008:149 (Great Britain: Norfolk: Sheringham Park); Bogusch, 2008:6 (Czech Republic: Buzice); Gayubo, González, Tormos, and Asís, 2008:137 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Haeseler, 2008:309 (Germany: Friesian Islands); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); Archer, 2009:24 (Great Britain: Yorkshire: Sheffield); Bitsch and Leclercq, 2009:226 (in supplement to vol. I of Faune de France, 1993: recently recorded from Bulgaria, Italy, and Spain; France: first records from Isère: le Fontanil 10 Km NW Grenoble and Saint –Laurent-de-Beaumont; Loire: Doizieux); Donie, 2009:10 (Germany: Niedersachsen: Oldenburg); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Guéorguiev and Ljubomirov, 2009:265 (Bulgaria: Maleshevska Planina); Nemkov, 2009b:97 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Pagliano, 2009:182 (Italy: recorded from Sicilia by Tomarchio and Turrisi, 2006); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: relatively common).

Crabro rufiventris Panzer, 1799:186, ... Synonymized with *Rhopalum clavipes* by Dahlbom, 1844:291. – Jurine, 1807:212 (in checklist of species of *Crabro*); Vander Linden, 1829:74 (bibliographic references, Belgium: Liège; France: Lille, Germany); Shuckard, 1837a:178 (in revision of British Aculeata). – **As *Rhopalum rufiventre***: Hali-day, 1833:516 (new combination, Ireland: eastern coast N Dublin). – **As *Physoscelus rufiventris***: Lepelletier de

Saint Fargeau and Brullé, 1835:805 (new combination, in revision of *Crabronini*); Lepeletier de Saint Fargeau, 1845:207 (in revision of world Hymenoptera); Acloque, 1897:91 (in Sphecidae Fauna of France and Algeria); Bradley, 1957:48 (Lepeletier's specimens in Turin); Casolari and Casolari Moreno, 1980:121 (specimens in M. Spinola collection).

54. *claviventris* (Cresson)

Crabro claviventris Cresson, 1865a:151, ♂. Holotype: ♂, Cuba: no specific locality (IZAC). – Packard, 1867:383 (listed); Gundlach, 1886:140 (Cuba, ...); Dalla Torre, 1897:590 (in catalog of world Sphecidae); Cresson, 1916:102 (type in Gundlach collection, Habana, Cuba); Gowdey, 1926:97 (Jamaica). – *As Physoscelis claviventris*: nec Ashmead, 1900:222 and 305 (= *grenadinum*). – *As Euplilis claviventris*: Pate, 1947f:5 (new combination, in revision of Caribbean *Crabronini*); Alayo Dalmau, 1968b:4 (Pate's description translated into Spanish); Evans, 1972b:17 (Caribbeans: Dominica Island); Alayo Dalmau, 1973:192 (in catalog of Cuban Hymenoptera). – *As Rhopalum claviventris*: Leclercq, 1954c:187 (new combination, in catalog of world *Crabronini*); Alayo Dalmau, 1976:17 (in key to Cuban *Rhopalum*), 32 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:33 (in catalog of Neotropical *Crabronidae*); Leclercq, 2002b:21, 36 (in key to New World *Rhopalum*), 52 (bibliographic references); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical *Crabronidae* and Sphecidae); Genaro, 2006:53 (in checklist of Cuban Sphecidae and *Crabronidae*).

55. *clonatum* Leclercq

Rhopalum clonatum Leclercq, 2002b:52, ♀. Holotype: ♀, Brazil: São Paulo: Campinas (Kansas Univ.). – Leclercq, 2002b:9 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical *Crabronidae* and Sphecidae).

56. *coarctatum* (Scopoli)

Spheg coarctata Scopoli, 1763:293, [♂]. Holotype or syntypes: ♂, Carniolia (formerly Austria, since 1919 part of Italy and Yugoslavia): no specific locality (lost). – *As Crabro coarctatus*: A. Morawitz, 1864:458 (new combination), 1866a:270 and 1866b:346 (specimens in Eversmann collection); Kohl, 1883e:656 (Switzerland); Sickmann, 1883:75 (Germany: Niedersachsen: Wellingholthausen, as *coarctata*); Rogenhofer and Dalla Torre, 1897:591 (as synonym of *Crabro tibialis*); Mocsáry, 1897:83 (Kingdom of Hungary, some localities are in today's Romania and Slovakia); Cavo, 1910:685 (France: Département du Nord, as *coarctatum*); Steiner, 1955:141 (France: Dordogne); Benno, 1957:144 (Netherlands: Tilburg area, nesting in stems of *Rubus*), 1958b:20 (in review of Dutch Sphecidae). – *As Euplilis coarctatus*: Pate, 1943d:14 (new combination, Holarctic), 1947a:7 (synonymy); Strickland, 1947:127 (Canada: Alberta: Edmonton); Krombein *in* Muesebeck et al., 1951:1019 (Holarctic, in catalog of North American Hymenoptera); Krombein, 1954a:6 (West Virginia: Lost River State Park); Evans, 1957b:106 (discussion of Micheli's, 1929, description of larva). – *As Corynopus coarctatus*: Richards, 1937b:107 (new combination, in checklist of British aculeates); J. Perkins, 1942:199 (Sweden: southern Skåne); T. Fletcher, 1945:54 (Great Britain: Gloucestershire: Wotton); Guichard and Yarrow, 1948:92 (Britain: London: Hampstead Heath); Graham, 1950a:37 (Great Britain: Lincolnshire: Salmonby); Chambers, 1955:128 (Britain: Bedfordshire); Danks, 1971a:351 (nesting habits), 1971b:67-73 (Great Britain: Berkshire: Silwood Park), 1971c:80 (nest mortality); Guichard, 1972:244 (Great Britain: London: Bushey Park). – *As Rhopalum coarctatum*: Aurivillius, 1904:279 (new combination, in revision of Swedish Sphecidae); de Gaulle, 1908:122 (in catalog of French Hymenoptera); Jansson, 1922:24 (Sweden: Öland Island); Leclercq, 1951e:3 (bibliography of Belgian records); Bischoff and Stadler, 1954:127 (Germany: Bayern: Romberg); Leclercq, 1954c:188 (in catalog of world *Crabronini*), 300 (nest and prey records); Aerts, 1955:57 (Germany: Rheinland); Tsuneki, 1955b:126 (systematics; as *coarctatum coarctatum*); Wolf, 1959b:32 (Germany: Nassau); Grandi, 1961:238 (nesting habits); Hoop, 1961:64 (Germany: Schleswig-Holstein: Kiel-Eichhof); Grandi, 1962:98 (Italy); Valkeila, 1962b:68 (southwestern Finland); Babiý, 1964:117 (Austria:

Land Salzburg); de Beaumont, 1964c:156 (in Sphecidae Fauna of Switzerland); B. Klug, 1965:138 (Germany: Baden-Württemberg: Freiburg im Breisgau area); Roberti, Frilli, and Pizzaghi, 1965:110 (Italy: Emilia-Romagna: Pianello in Piacenza Province); Gauss, 1966c:240 (specimen bearing dipteran egg); Benno, 1967:39 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:364 (Turkey); Gauss, 1967:559 (Germany: Baden-Württemberg); J. Heinrich, 1967:83 (Germany: Bayern: Loht; as *coarctatum*); Leclercq, 1967a:35 (locality records from Great Britain); Lefeber, 1967c:220 (Netherlands: St. Pietersberg, Wolder, as *coarctatus*); Benedek, 1968:78 (Hungary, visiting flowers of *Anthriscus silvestris* L. and *Pastinaca sativa* L.; as *coarctatum*), 1969a:85 (Hungary; marshy meadow; as *coarctatum*); Lefeber, 1969b:99 (Netherlands: Maastricht, St. Pietersberg; Belgium: Lanaye) Lefeber, 1969c:234 (Netherlands: St. Pietersberg = Montagne Saint Pierre, as *coarctatus*); Romanova, 1969:134 (Russia: North Caucasus); Benedek, 1970:104 (Hungary: Tapolca; as *coarctatum*); Hoop, 1970:60 (Germany: Schleswig-Holstein: Heiligenhafen); Lefeber and Petit, 1970:130 (Belgium: Plombières); Oehlke, 1970:791 (Democratic Germany); Petit, 1971:22 (Luxemburg: Bourscheid); Schmidt, 1971c:76 (Germany: Schleswig-Holstein); Stritt, 1971a:105 (Germany: Baden-Württemberg: Karlsruhe); Oehlke, 1972:141 (Germany: Hiddensee Island); Haeseler, 1972:157 (Germany: Schleswig-Holstein; anthropogenic habitats); R. Bohart, 1974:257 (revision); Haeseler, 1974:124 (Germany: Schleswig-Holstein); Kofler, 1974:320 (Austria: Kärnten); Leclercq, 1975b:2 (France); Lefeber, 1975b:120 (Netherlands: Schiepersberg); R. Bohart and Menke, 1976:389 (listed); Lomholdt, 1976:354 (in Sphecidae Fauna of Fennoscandia and Denmark); Marshakov, 1976d:109 (in revision of *Rhopalum* of USSR: north to Kamchatka); Simon Thomas and Wiering, 1976:109 (Netherlands); Guichard, 1977:253 (Great Britain: Surrey); Kolesnikov, 1977:321 (Russia: Bryansk Oblast'); Marion, 1978:90 (France: Nièvre Department); Pulawski, 1978:254 (in key to Sphecidae of European part of former USSR); Schwammberger, 1978:421 (Germany: Württemberg); Benedek, 1979:236 (Hungary: Bakony Hills); Krombein, 1979b:1663 (in catalog of North American Hymenoptera, list of prey); Leclercq, Gaspar, and Verstraeten, 1979:map 1436 (Belgium); Marchal and Leclercq, 1979:10 (Belgium: Gembloux); Schmidt, 1979a:56 (Germany: Schleswig-Holstein); Schwammberger, 1979:118 (Germany: Nordrhein-Westfalen: Gildehauser Venn Nature Reserve); Jacob-Remacle and Leclercq, 1980:193 (Belgium: gardens in Liège); Pagliano, 1980:122 (Italy: Piemonte); Richards, 1980:57 (in key to Sphecidae of British Isles); Dollfuss and Ressler, 1981:323 (Austria: Niederösterreich: Scheibbs District); Woydak, 1981:46 (Germany: Westfalen: Hamm); Donath, 1982:215 (Germany: Cottbus Bezirk); Finnamore, 1982:136 (in Sphecidae Fauna of Southern Quebec); Leclercq, 1982a:125 (Belgium: Liège); Dollfuss, 1983b:14 (in catalog of Sphecidae of Austria); Kvamme and Axelsson, 1983:58 (Norway); Riemann, 1983:88 (Germany: Bremen-Daverden area); Chevin and Silvestre de Sacy, 1984:8 (France: Yvelines Department, as *coarctatum*); Haack, Tschardtke, and Vidal, 1984:132 (Germany: Hamburg area); Jacob-Remacle, 1984:260 (Belgium: urban center of Liège); Lefeber, 1984:29 (Netherlands: Maastricht); Nilsson, 1984:104 (Sweden: Västmanland Province); Schmidt and Westrich, 1984:241 (Germany: Rheinland-Pfalz: Bad Münster); Garland, Gibbs, Lee, and Whiteley, 1985:54 (Britain: Derbyshire); Haeseler, 1985:350 (Germany: Schleswig-Holstein); Józán, 1985b:59 (Hungary S Lake Balaton), 69 (map of distribution in Hungary), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Brechtel, 1986:72 (Germany: Südpfalz); Nemkov, 1986:101 (Russia: Irkutsk Oblast': Irkutsk); Nilssen, 1986:87 (Sweden); Skibińska, 1986b:151, 154 (Poland: suburbs of Warszawa), 158 (rural and suburban parks), 160 (gardens), 163 (urban parks), 165 (streetside green), 174 (various green urban habitats); Vikberg, 1986:77 (Finland); Dollfuss, 1988:15 (Austria: Bisamberg); Wolf, 1988b:141 (Germany: Rheinland-Westfalen); Jacobs, 1989:17 (Germany: Mecklenburg-Vorpommern); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Pádr *in* Šedivý, 1989a:169 (in checklist of Czechoslovakian Sphecidae); Skibińska, 1989a:206 (Poland: Warszawa area), 1989b:291 (Poland: moist meadow in Warszawa area); Weiffenbach, 1989:110 (Germany: Hessen: Gießen area); Barbier, Rasmont, and Wahis, 1990:32 (Belgium: Hainaut); Jacobs and Oehlke, 1990:181 (new records from Democratic Germany); Kowalczyk, 1990:292 (Poland: Góry Świętokrzyskie); Kuznetzova, 1990:22 (Russia: Voronezh Oblast': Galich'ya Gora Nature Reserve); Pádr, 1990:82

(Czech Republic: Praha area); Pagliano, 1990:94 (in catalogue of Italian Sphecidae); Yeo, 1990:101 (Britain: Cambridge); Schwammberger and Priesner, 1990:543 (Austria: Kärnten); Dollfuss, 1991:142 (in key to Sphecidae of North and Central Europe); Jacobs, 1991:46 (Germany: Mecklenburg-Vorpommern: Nature Reserve Elbtaldünen); Jakubzik, 1991:75 (Germany: Köln); Kowalczyk, 1991a:91, 105 (Poland: Łódź); Leclercq, 1991f:104 and 105 (in key); Negrisolo, 1991:320 (Italy: Gorizia Province); Nilsson, 1991:83 (Sweden: Lake Mälaren); Pagliano, 1991b:357, 358 (in key to Italian Crabroninae); Sorg and Wolf, 1991:195 (Germany: Koppelstein Reserve SE Koblenz); Cölln and Jakubzik, 1992:87 (parasite: ichneumonid *Perithous divinator* Rossi, chrysidid *Trichrysis cyanea* (Linnaeus)), 89 (Germany: Rheinland; reared from twigs of *Rubus*); Gayubo, Borsato, and Osella, 1992:285 (France: Corse); Józán, 1992a:229 (Hungary: Béda-Karapanca Protected Area), 1992b:174 (Hungary: Boronka-melléki Protected Area); Nemkov, 1992b:246 (Russia: Far East: Khingan Nature Reserve); Nilsson, 1992:54 (Sweden); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Wolf, 1992c:23 (Germany: Nordrhein-Westfalen: Plettenberg: castle Schwarzenberg ruin); Bitsch and Leclercq, 1993:220 (in revision of western European Crabroninae); Gorobchishin, 1993:47 (Ukraine: Kanev Nature Reserve); Jakubzik and Cölln, 1993:136 (Germany: Rheinland-Pfalz: Bernkastel-Kues; nesting in stems of *Rubus*); Kuhlmann, 1993:76 (Germany: known from Westfalen); Leclercq, 1993c:42 (collecting localities from Europe); Leclercq and Barbier, 1993:91 (map of distribution in France); Sorg and Wolf, 1993:60 (Germany: Rheinland-Westfalen: Nature Reserve Die Spey); Blades and Marshall, 1994:276 (Canada: southern Ontario); Junck, Schoos, and Schoos, 1994:96 (Luxemburg: Bettendorf); Kowalczyk, 1994:76 (Poland: Łagiewniki forest in Łódź); Theunert, 1994c:50 (summary of records from Niedersachsen and Bremen, Germany), 1994d:278 (Germany: Niedersachsen: Braunschweig); Gorobchishin, 1995:18 (Ukraine: Kanev Nature Reserve); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Negrisolo *in* Minelli, Ruffo, and La Posta, 1995b:8 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to Sphecidae of Russian Far East); Pagliano and Pesarini, 1995:89 (Italy: Ferrara Province); Papp and Józán, 1995:146 (Hungary: Síkfökút oak forest); Riemann, 1995:52 (Germany: Bremen); Saure and Dürrenfeld, 1995:29 (Germany: Brandenburg: Gabower Hänge near Bad Freienwalde); Scharrer, 1995:28 (Germany: Bayern: Lohr, Mainfranken); Schmid-Egger, Risch, and Niehuis, 1995:207 (summary of records from Germany: Rheinland-Pfalz Province); Shlyakhtenok, 1995:194 (Belarus: Berezinsky Nature Reserve); Skibińska, 1995:423, 425, 426, 427 (Poland: pine forest in Białowieża Primeval Forest); Arens, 1996:441 (Germany: Bayern: Bayreuth area); Gorobchishin, 1996:53 (Ukraine: Kanev Nature Reserve); Harvey and Plant, 1996:74 (Great Britain: summary of records from Essex); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996a:323 (Germany: nesting in stems of *Rubus*), 324 (parasitoid: *Perithous divinator* Rossi, an ichneumonid), 325 (parasitoid: undetermined Torymid and *Chrysis cyanea* (Linnaeus), a chrysidid), 335 (in keys to cocoons), 1996b:401 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: not endangered); Uffen, 1996:108 (nesting in larval case of psychid *Taleporia tubulosa* Retz.); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 111 (locality records); Woydak, 1996:53 (Germany: Westfalen: summary of distribution and nesting habits); Archer, 1997a:48 (Great Britain: Yorkshire: Burton Leonard Lime Quarries); Celary, 1997:59 (in checklist of Animals of Poland); Finnamore, 1997:889 (Canada: Yukon); Gauss, 1997:27 (egg of miltogrammatid flies deposited on adult specimens); Riemann, 1997:50 (Germany: Achim 14 km SE Bremen); Schmidt and Schmid-Egger, 1997:28 (in checklist of German Sphecidae); Dollfuss, Gusenleitner, and Bregant, 1998:521 (Austria: summary of collecting records from Burgenland); Drewes, 1998:49 (Germany: Niedersachsen: Goldbeck 26 km WSW Hamburg); 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); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); Salzmann-Wandeler, 1998a:98 (Switzerland: Luzern Canton: Sempach); Sugar *et al.*, 1998:16 (Canada: southern Ontario); van der Smissen, 1998:68 (Germany: Mecklenburg-Vorpommern, Niedersachsen: Laasche, Schleswig-Holstein); K. Weber,

1998:148 (Germany: Bayern: Bamberg area); Erhardt, 1999:75 (Germany: Niedersachsen: Ammerland area); Majzlan, Rychlík, and Deván, 1999:146 (Slovakia: Čenkovská Step Nature Reserve); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:110 (in catalog of Belgian aculeates); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Jacobs, 2000:9 (Germany: Land Mecklenburg-Vorpommern: not endangered); Ljubomirov, 2000:11 (Bulgaria, specimens in N. Nedelkov collection); Luig and Voolma, 2000:123 (first record from Estonia); Schmid-Egger, 2000b:276 (Germany: Baden-Württemberg: shores of Rhine River); Blösch, 2000:288 (in Sphecidae Fauna of Germany); Archer, 2001a:107 (Great Britain: Watsonian Yorkshire, as *coarctatus*); Deván, 2001:165 (Slovakia: Krasin Nature Reserve in Biele Karpaty Mountains); Haeseler, 2001:266 (Germany: Niedersachsen: Brookdeich near Oldenburg); Kazenas, 2001b:188 (review of known biology); Ohl et al., 2001:141 (distribution in Germany by provinces); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Zettel, Gross, and Mazzucco, 2001:75 (Austria: Wien); Archer, 2002b:120 (Great Britain: Watsonian Yorkshire: distribution map); Archer and Edwards, 2002:102 (Great Britain: West Sussex: Ambersham and Iping commons); Deván, 2002b:204 (Slovakia: Pekelná dolina and Prepadlisko); Gayubo, González, Tormos, and Asís, 2002:86 (Andorra: Santa Coloma); Kazenas, 2002a:97 (geographic distribution, collecting localities in Kazakhstan); C. Schlüter, 2002:141 (Germany: Niedersachsen: anthropogenic habitats in Ammerland District); Shlyakhtenok and Skibinska, 2002:34 (Belarus: no specific locality); Wiśniowski, 2002:71 (Poland: Ojców National Park); Blösch, 2003b:82 (Germany: Bayern: Erlangen area, nesting in rotten willow poles); Cölln, Esser, and Jakubzik, 2003:63 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Drewes, 2003:142 (Germany: Hessen: Gießen); Esser and Jakubzik, 2003:291 (Germany: Nordrhein-Westfalen: Niederrheinisches Tiefland); Haeseler, 2003:340 (Germany: Niedersachsen: Harriersand Island near Bremen); Kula and Tyrner, 2003:203 (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); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wiśniowski *in* Dylewska and Wiśniowski, 2003:159 (Poland: Ojców National Park); Wiśniowski and Werstak, 2003:77 (Poland: Pieniny National Park); Buck, 2004:26 (in checklist of Crabronidae of Ontario, Canada); Dollfuss, 2004b:782 (Czech Republic: Budejovice: Srubec); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Jakubzik and Cölln, 2004:271 (in key to nests of Hymenoptera nesting in stems of *Rubus*); Jakubzik, Niehuis, and Cölln, 2004:458 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Li and He, 2004:1090 (in hymenopterous fauna of Zhejiang Province, China); Salzmann-Wandeler and Rezbanyai-Reser, 2004:26 (central Switzerland); Schneider and Carrières, 2004:97 (Luxemburg: Bon-Pays Region); 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, 2004:47 and 61 (in checklist of Polish Sphecidae); Gayubo and Özbek, 2005:28 (Turkey: Erzurum: University campus); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:53 (Japan: Gifu Prefecture, as *coarctatum coarctatum*); Kofler, 2005:175 (Austria: Tirol: Lienz District: Göriach in Dölsach Common); Pagliano and Negrisolò, 2005:296 (in Sphecidae Fauna of Italy); Riemann and Hohmann, 2005:565 (Germany: Niedersachsen: city of Bremen and adjacent area); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Gayubo, González, de la Nuez, Asís, and Tormos, 2006:206 (Spain: Cantabria: Ruesga; Huesca: Ainsa; Salamanca: Villarino de los Aires); Hua, 2006:282 (in list of Chinese insects, geographic distribution); Ljubomirov, 2006:543 (Bulgaria: Rhodope Mountains: Yurukovo Village, as *coarctatum coarctatum*); Tomarchio and Turrisi, 2006:956 (Italy: first record from Sicilia: Mount Etna); Vepřek, 2006:511 (Czech Republic: Kokořínsko area); Jacobs, 2007:125, 126 (in key to Crabronidae of Germany); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Venne, Bleidorn, and Lauterbach, 2007:303 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia); Danilov, 2008:348 (Russia: Altayskiy Kray: Barnaul

area); Haeseler, 2008:309 (Germany: Friesian Islands); Haneda, 2008:5, 6 (in key to Japanese Crabroninae); Ljubomirov and Yildirim, 2008:297 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); Archer, 2009:24 (Great Britain: Yorkshire: Sheffield); Bitsch and Leclercq, 2009:226 (in supplement to vol. I of Faune de France, 1993: reference to Uffen, 1996; recent records from Bulgaria, Estonia, Italy, and Spain reported: France: first records from Gard: Vauvert, and Haut-Rhin: Colmar); Donie, 2009:10 (Germany: Niedersachsen: Oldenburg); Flügel, 2009b:63 (Germany: Hessen: Borken, in closed open brown coal mine); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen); Nemkov, 2009b:95 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Pagliano, 2009:182 (Italy: recorded from Sicilia by Tomarchio and Turrisi, 2006); Archer, 2010:52 (Great Britain: Watsonian Nottinghamshire: Spalford Warren); Ghazi-Soltani, Ebrahimi, Iranipour, and Pour Abad, 2010:800 (Iran: East Azarbaijan: Marand: Yam); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: relatively common).

Crabro crassipes Fabricius, 1798:270, sex not indicated. Holotype: ♀, Germany: Halae Saxonum, now Sachsen-Anhalt: Halle (ZMK). Synonymized with *Rhopalum clavipes* by Dahlbom, 1844:291 and 1845:XXV, and with *Rhopalum coarctatum* by van der Vecht, 1961a:67. – Fabricius, 1799:17 (in Index to his Supplementum, 1798); Vander Linden, 1829:75 (bibliographic references, Germany: Saxony). – **As *Pemphredon crassipes***: Fabricius, 1804:315 (new combination, redescription); Dahlbom, 1845:XXV (study of type material).

Crabro tibialis Fabricius, 1798:271, sex not indicated, junior primary homonym of *Crabro tibialis* Olivier, 1792. Syn-types: ♂, Germany: Halae Saxonum, now Sachsen-Anhalt: Halle (ZMK). Synonymized with *Rhopalum clavipes* by Dahlbom, 1844:291 and with *Rhopalum coarctatum* by van der Vecht, 1961a:67. – Fabricius, 1799:17 (in Index to his Supplementum, 1798); Jurine, 1807:212 (in checklist of species of *Crabro*); Vander Linden, 1829:75 (bibliographic references, Belgium: Bruxelles, Germany); Curtis, 1837:pl. 656 (illustration); Shuckard, 1837a:177 (in revision of British Aculeata); Dahlbom, 1838:41 (in revision of Scandinavian Crabronini); von Siebold, 1839:51 (Germany: Danzig, now Poland: Gdańsk); Dahlbom, 1842a:14 (in review of Scandinavian aculeates); F. Smith, 1856:391 (in catalog of Hymenoptera in British Museum); Bold, 1870:148 (Great Britain: Northumberland and Durham); Taschenberg, 1875:381 (Germany: Halle); Kohl, 1880:134 (Italy: Trentino–Alto Adige); von Heyden, 1884:124 (Germany: Frankfurt am Main area); Kohl, 1888b:722 (Austria: Tirol, now Italy: Alto Adige), 1893a:21 (Austria: Niederösterreich); F. Morawitz, 1893a:113 (Russia: Karelian Isthmus); Krieger, 1894:3 (Germany: Kingdom of Saxony); Freke, 1896:41 (Ireland); Kohl, 1899:309 (in key); Dalglish, 1901:7 (Great Britain: Scotland: Dundonald); Kubes, 1905:84 (Czech Republic: Obora); E. Saunders, 1907a:67 (Great Britain: Porthcawl); Schmiedeknecht, 1907:200 (in key to Hymenoptera of Central Europe); Bequaert, 1909:73 (Belgium); Orr, 1909a:25 (Ireland: Down County); Dittrich, 1911b:20 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Birula, 1912:536 (Ukraine: Zhytomyr Oblast': Radomyshl'; as *tibiale*); Hallett, 1912:94 (Britain: Glamorgan County); Alfken, 1914:274 (NW Germany, as *tibiale*); Birula, 1914:379 (Belarus': Ambrosovich and Luskinopol' near Vitebsk); Haines, 1914:129 (Great Britain: Dorset); Kohl, 1915:339 (in revision of Palearctic Crabronini); Hallett, 1916:221 (Great Britain: South Wales: Porthcawl); O. Meyer, 1919:149 (Germany: Posen Province, now Poland: Poznań Region, as *Crabro tibiale*); Dubois, 1921a:19 (Belgium: Marche, Tilff), 1921b:162 (in key to Belgian Sphecidae), 166 (phenology, nesting habits); Berland, 1925d:181 (in Sphecid Fauna of France); Grönblom, 1925:7 (nesting habits); Shestakov, 1925:36 (Russia: Yaroslavl' area, as *tibiale*); Zavadil, 1926:37 (Czechoslovakia); Blüthgen, 1929:82 (Germany: Saale River valley: Naumburg); Micheli, 1929:34 (nesting habits, description of larva); Bouwman, 1930:106 (in revision of Sphecidae of Netherlands); Hedicke, 1930:130 (...); Schmiedeknecht, 1930:658 (in keys to Hymenoptera of North and Central Europe); Pulkkinen, 1931:155 (...); Bondroit, 1932:42 (Belgium: recorded from Bruxelles area by Wesmel); Crèvecoeur and Maréchal, 1932:68 (in catalog of Belgian Hymenoptera: Ramioul); Bondroit, 1933:33 (Belgium: Bruxelles); E. Nielsen, 1933:267 (summary of nesting habits); Routledge, 1933:88 (England: Cumberland); Balles, 1934:17 (Germany: Baden-Württemberg: Achern, as *tibiale*); Bondroit, 1934:62 (Belgium: Solbosch); Jansson, 1934:288 (Sweden); Forsius in Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Grandi, 1935a:109 (Italy, as *tibiale*); Richards,

1935:168 (type species of *Corynopus*); Steck, 1935:327 (Switzerland); Crèvecoeur and Maréchal, 1936:257 (in catalog of Belgian Hymenoptera); Drogoszewski, 1936:129 (Poland: Opatów, as *tibiale*); Zavadil, Šusterka, and Bařa, 1937:169 (in catalog of Sphecidae of Czechoslovakia, as *tibiale*); Balthasar, 1943:41 (Czech Republic: Moravia: Zlin area, as *tibiale*); Benno, 1943:68 (Netherlands); Giner Marí, 1943a:252 (in key to Spanish species); Guiglia, 1944b:35 (Italy); Zavadil in Zavadil and Šnoflak, 1948:139 (in key to Sphecidae of Czechoslovakia); Cavro, 1950:38 (France: Département du Nord); de Beaumont, 1951h:35 (Switzerland: Neuchâtel area); Fæster, 1951:458 (distribution in Scandinavia); Vergne, 1955:5 (France: Auvergne); Vogrin, 1955:41 (Yugoslavia, as *tibiale*); Preuss, 1956:15 (Germany: Schleswig-Holstein: Mölln in Lauenburg; as *tibiale*); Noskiewicz and Puławski, 1960:158 (in key to Polish Sphecidae); Fæster, 1965:193 (Denmark: Hansted Nature Reserve); Niedl and Deneš, 1967:75 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:50 (Romania); Tumš and Maršakovs, 1970:31 (Latvia); Skibińska, 1981:358 (Poland: Warszawa-Białoteka), 1982:121, 124 (Poland: Mazovian Voivodship: Hamernia, Łomna, Młochów, Ursynów, Warszawa, Wola Mrokowska); Kowalczyk, 1988a:46 (Poland: Rogów), 1988b:66 (Poland: environs of Łódź). – **As *Pemphredon tibialis***: Fabricius, 1804:315 (new combination, redescription); Dahlbom, 1845:XXV (study of type material). – **As *Corynopus tibialis***: Lepeletier de Saint Fargeau and Brullé, 1835:803 (new combination, in revision of Crabronini); Herrich-Schaeffer, 1840:294 (Germany: Bayern: Regensburg area); Lepeletier de Saint Fargeau, 1845:205 (in revision of world Hymenoptera); Acloque, 1897:91 (in Sphecid Fauna of France and Algeria); Schneid, 1941:1031 (Germany: Bayern: Bamberg area, as *tibiale*); Bradley, 1957:44 (Lepeletier's specimens in Turin); Casolari and Casolari Moreno, 1980:117 (specimens in M. Spinola collection); Srba, 1999: 181 (Czech Republic: Chomutov). – **As *Rhopalum tibiale***: Haliday, 1833:516 (new combination, Ireland: eastern coast N Dublin); Dahlbom, 1844:288 (267 (new combination, in revision of Sphecidae and Pompilidae), 1845:XXV (new combination), 510 (in key); Eversmann, 1849:415 (Russia: Kazan Province); Kiesenwetter, 1849:90 (Germany: Kingdom of Saxony: Oberlausitz area); Tischbein, 1850:9 (Germany: Rheinland-Pfalz: Herrstein in Fürstenthum Birkenfeld); Wesmael, 1852:593 (Belgium: Bruxelles); Kawall, 1857:25 (Kurland, now Latvia); Ruthe and Stein, 1857:315 (Germany: Berlin area); Schenck, 1857:131 (in revision of fossorial wasps of Germany); Taschenberg, 1858:99 (in key to Sphecidae of Germany); Funk, 1859:58 (Germany: Bayern: Bamberg); Schenck, 1960:146 (Germany: Nassau Region); Brischke, 1862:105 (Germany: Preussen Province, now Poland: Pomorze Region); A. Costa, 1864b:104 (specimen from Torino, Italy, in Napoli Museum); Taschenberg, 1866:183 (in revision of Hymenoptera of Germany); A. Costa, 1867c:120 (in revision of Italian Sphecidae); Kirchner, 1867:223 (in catalog of European Hymenoptera); Schenck, 1867a:352 (Germany: Nassau Region); Wierzejski, 1868:117 (Poland: Kraków; Ukraine: Podole Region: Pieniaki); Thomson, 1870:158 (in revision of Swedish Crabroninae); A. Costa, 1871b:49 (in revision of Italian Sphecidae); Dours, 1874:152 (in catalog of Hymenoptera of France); Thomson, 1874:257 (in revision of Hymenoptera of Scandinavia); Wierzejski, 1874:261 (Poland: Kraków; Ukraine: Podole Region: Pieniaki, Sinkow); Schlechtendal, 1876:54 (Germany: Sachsen: Zwickau); Girard, 1879:938 (parasite on other Hymenoptera, in error); Siebke, 1880:67 (Norway); A. Costa, 1871b:49 (in revision of Italian Sphecidae); Wüstnei, 1886:37 (Germany: Schleswig-Holstein: Madskov near Sonderburg); Brischke, 1888b:100 (Germany: Preussen Province, now Poland: Pomorze Region), 1894:55 (Germany: Brösen W Danzig, now Poland: Gdańsk-Brzeźno); Borries, 1897:43 (nesting habits); Strand, 1898b:95 (Norway); J. Nielsen, 1901a:265 (nesting habits); Adlerz, 1904:136 (known prey: Nematocera); Graeffe, 1911:44 (Italy: Trieste area); Schirmer, 1912:164 (Germany: Berlin area); W. Wagner, 1914:72 (nest structure); A. Wagner, 1920:47 (Germany: Lower Elbe region); R. Perkins, 1924a:226 (Great Britain: Devon); Lauterborn, 1925:355 (Germany: Baden-Württemberg: Isteiner Klotz); Friese, 1926:150 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Hamm and Richards, 1926:317 (summary of nesting habits); Stelfox, 1927:302 (Ireland: list of localities); Gaunitz, 1929:199 (Sweden: Lapland); Maréchal, 1929a:111 (nesting habits), 1929b:239 (nesting habits); Baudot, 1931:255 (characteristics of cocoon); Butterfield and Fordham, 1931:158 (Great Britain: Yorkshire); Stelfox, 1933:51 (Ireland: Dublin, Leitrim, and Westmaeth counties); A. Wagner, 1938a:118 (north-western Germany); Piet, 1947:508 (surviving inundation because of gall nesting); Graham, 1950:349 (eggs of un-

known insect deposited on thorax); Fahlander, 1954:250 (Sweden: Gästrikland Region); Fahlander, 1954:250 (Sweden: Gästrikland Region); Lundblad, 1958:49 (Sweden: Gotland; as *Phopalum*); Torossian, 1971:147 (France: Toulouse area; nesting in oak galls); Balthasar, 1972:136 (in Sphecidae Fauna of Czechoslovakia); Blagoveshchenskaya, 1994:90 (Russia: Ul'yanovsk Oblast').

Rhopalum modestum Rohwer, 1908b:257, ♂. Holotype or syntypes: ♂, USA: Colorado: Boulder (USNM). Synonymized with *Rhopalum coarctatum* by Pate, 1947a:7 and by R. Bohart in Bohart and Menke, 1976 (as new synonym). – Rohwer, 1908b:258, 259 (in key to *Crabro* of Colorado and New Mexico), 1909c:145 (Wisconsin, ♀). – **As *Rhopalum coarctatum modestum***: Tsuneki, 1955b:126 (new status, discussion); Leclercq, 2002b:15, 26 (in key to New World *Rhopalum*), 53 (differences between American and European populations; native of North America, not introduced; locality records from Canada and USA). – **As *Euplilis coarctatus modestus***: Krombein, 1958a:53 (new combination, mating on oak foliage), 1958:199 (noted change of status by Tsuneki, 1955), 1963f:277 (Maryland: Plummers Island near Washington, D.C., as *modesta*); Evans, 1964b:292 (description of larva); Krombein, 1964:90 (nest, prey, parasites), 1967b:259 (nesting habits observed in artificial nests). – **As *Euplilis coarctata modesta***: Krombein, 1964:90 (nesting habits); Krombein in Krombein and Burks, 1967:420 (citation of Krombein, 1964 and Evans, 1964).

As *Rhopalum pedicellatum*: Harrington, 1902:220 (Canada: Ontario: Ottawa), corrected to *Rhopalum coarctatum* by Buck, 1902:76.

ssp. *koreense* Tsuneki

Rhopalum coarctatum koreense Tsuneki, 1974a:382, ♀. Holotype: ♀, Korea: Prov. Ryang-gang, Plateau Chann-Pay, Sam-zi-yan (TMB). – R. Bohart and Menke, 1976:630 (listed); Tsuneki, 1982b:17 (known from Korea).

Rhopalum coarctatum [sic] *koreense* Tsuneki, 1991:203, as new subspecies. Nomen nudum.

57. *cockleum* Leclercq

Rhopalum cockleum Leclercq, 1997:52, ♂. Holotype: ♂, Australia: Western Australia: 23 km ESE Cocklebiddy (ANIC).

58. *collectum* Leclercq

Rhopalum collectum Leclercq, 1994b:259, ♀, ♂. Holotype: ♂, Chile: Santiago: Nature Reserve Río Clarillos in Cordillera (FSCA). Paratypes: Argentina. – Leclercq, 1994b:254 (in key); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:18, 33 (in key to New World *Rhopalum*), 54 (bibliographic references, locality records from Argentina and Chile); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

59. *collessi* Leclercq

Rhopalum collessi Leclercq, 1997:53, ♀. Holotype: ♀, Australia: New South Wales: Sydney: Oxford Falls (ANIC).

60. *coriolum* Leclercq

Rhopalum coriolum Leclercq, 1957b:210, ♀. Holotype: Australia: New South Wales: Mt. Victoria (Natl. Mus. Victoria). – Leclercq, 1957b:184 (in key); R. Bohart and Menke, 1976:389 (listed); Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997a:54 (in revision of Australian *Rhopalum*).

61. *cornigerum* Tsuneki

Rhopalum cornigerum Tsuneki, 1977d:3, ♂. Holotype: ♂, Australia: New South Wales: Sydney, Botany Bay (TMB). – Leclercq, 1997:54 (in revision of Australian *Rhopalum*, transferred back to *Rhopalum*). – **As *Podagritys cornigerum*** (termination incorrect): Leclercq, 1979b:362 (new combination; additional localities); Cardale, 1985:270 (in catalog of Australian Sphecidae) Leclercq, 1998c:294 (now in *Rhopalum*).

62. *cornilabiatum* Li and He

Rhopalum cornilabiatum Li and He, 1999a:96, ♀, ♂. Holotype: ♀, China: Szechwan Province: Emeishan (Zhejiang Agricultural Univ.).

63. *crassinodum* (Spinola)

Physoscelus ? *crassinodum* Spinola, 1851:362, ♀. Holotype or syntypes: ♀, Chile: no specific locality (lost). Neotype: ♀, Chile: Santiago: El Canelo (TORINO), designated by – Casolari and Casolari Moreno, 1980:121 (specimens in M. Spinola collection). – **As *Crabro crassinodum***: F. Smith, 1856:394 (new combination, in catalog of Hymenoptera in British Museum); Reed, 1894:649 (revision); Dalla Torre, 1897:593 (in catalog of world Sphecidae); Jafuel and Piri6n, 1926:375 (Chile: valle de Marga Marga); Janvier, 1928:81 (nesting habits). – **As *Rhopalum crassinodum***: Leclercq, 1954c:186 (new combination, in catalog of world Crabronini), 298 (nest and prey records); R. Bohart and Menke, 1976:389 (listed); Sielfeld, 1981b:74 (in checklist of Chilean Sphecidae); Leclercq, 1994b:253 and 254 (in key), 261 (bibliographic references, faunal records); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:16, 33 (in key to New World *Rhopalum*), 54 (bibliographic references, locality records from Argentina and Chile); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

Crabro herbstii Kohl, 1905:355, ♂ (as *Herbstii*, incorrect original capitalization). Holotype: ♂, Chile: Concepci6n (NHMW). Synonymized with *Rhopalum crassinodum* by Leclercq in Bohart and Menke, 1976:389, synonymy confirmed by Leclercq, 1994b:261. – Janvier, 1928:77 (nesting habits). – **As *Rhopalum herbstii***: Leclercq, 1954c:186 (new combination, in catalog of world Crabronini), 298 (nest and prey records), 1970a:92 and 96 (in key), 99 (revision); Dollfuss, 1989:12 (type material in NHMW).

64. *cruentatum* (Arnold)

Crabro cruentatus Arnold, 1944:29, ♀. Holotype: ♀, Zimbabwe: Vumbu Mts (SAM). – **As *Rhopalum cruentatum***: Leclercq, 1954c:185 (new combination, listed); R. Bohart and Menke, 1976:389 (listed).

ssp. belgarum Leclercq

Rhopalum cruentatum var. *belgarum* Leclercq, 1955i:425, ♀. Holotype: ♀, Rwanda: Kisenyi Territory: Kayove (MRAC). – R. Bohart and Menke, 1976:389 (listed).

65. *cumbayae* Leclercq

Rhopalum cumbayae Leclercq, 2002b:54, ♀, ♂. Holotype: ♂, Peru: Amazonas: Chachapoyas (BMNH). – Leclercq, 2002b:24, 39 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

66. *curryi* Leclercq

Rhopalum curryi Leclercq, 1997a:54, ♀. Holotype: ♀, Australia: Western Australia: Crown St. For. [probably State Forest] near Pemberton (ANIC).

67. *curtisi* Leclercq

Rhopalum curtisi Leclercq, 1997a:55, ♀. Holotype: ♀, Australia: Queensland: Upper Mulgrave Rv via Gordonvale (ANIC).

68. *cygnorum* (R. Turner)

Rhopalum cygnorum R. Turner, 1915a:88, ♀. Holotype: ♀, Australia: Western Australia: Perth (BMNH). – R. Turner, 1915a:86 (in key to Australian *Rhopalum*). – Leclercq, 1997a:55 (in revision of Australian *Rhopalum*, transferred back to *Rhopalum*). – **As *Podagritys cygnorum***: Leclercq, 1950b:8 (new combination, listed), 1954c:191 (in catalog of world Crabronini), 1955f:310 (in key), 320 (listed); R. Bohart and Menke, 1976:393 (listed); Cardale, 1985:270 (in catalog of Australian Sphecidae); Leclercq, 1998c:294 (now in *Rhopalum*).

69. *decavum* Leclercq

Rhopalum decavum Leclercq, 1963:67, ♀. Holotype: ♀, Philippines: Sibuyan: no specific locality (USNM). – Baltazar, 1966:351 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1984f:6 (Philippines), 32 (in key to Crabronini of Philippines).

70. *dedarum* Leclercq

Rhopalum dedarum Leclercq, 1957b:189, ♀, ♂. Holotype: ♂, Australia: Western Australia: Dedari 40 mi W Coolgardie (BMNH). – Leclercq, 1957b:189 (in key); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:357 (Australia: Queensland, Victoria); Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997a:55 (in revision of Australian *Rhopalum*: additional faunal records).

71. *dellum* Leclercq

Rhopalum dellum Leclercq, 1997:56, ♀. Holotype: ♀, Australia: Southern Australia: Dingly Dell Camp at Oraparrina Creek at 31°21'S 138°42' (ANIC).

72. *dentiobliquum* Li and He

Rhopalum dentiobliquum Li and He, 1998c:303, ♀, ♂. Holotype: ♀, China: Zhejiang Province: Xitianmushan (Zhejiang Agricultural University). – Li and He, 2001:757 (China: Tianmushan Nature Reserve at 30°22'N 119°26'E), 2004:1092 (in hymenopterous fauna of Zhejiang Province, China).

73. *deroanni* Leclercq

Rhopalum deroanni Leclercq, 2002b:54, ♀, ♂. Holotype: ♂, Mexico: Chiapas: San Cristóbal de las Casas (CNC). Paratypes: Argentina, Costa Rica, Ecuador, Peru. – Leclercq, 2002b:10, 25 (in key to New World *Rhopalum*); Dollfuss, 2004b:782 (Ecuador: Tungurahua: Baños, Napo: Puerto Napo 8 km S Tena); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

74. *dineurum* Leclercq

Rhopalum dineurum Leclercq, 1957b:223, ♂. Holotype: ♀, Australia: Tasmania: Eaglehawk Neck (BMNH). – Leclercq, 1957b:185 (in key); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:354 (Australia: New South Wales); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:57 (in revision of Australian *Rhopalum*).

75. *diopura* (Pate)

Euplilis diopura Pate, 1947d:4, ♂. Holotype: ♂, Venezuela: Estado Carabobo: San Esteban (ANSP). – **As *Rhopalum diopura***: Leclercq, 1954c:186 (new combination, in catalog of world Crabronini, incorrectly spelled *diopurum*: *diopura* is a noun, hence invariable); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:39 (in key to New World *Rhopalum*), 57 (bibliographic references, locality records from Colombia and Venezuela, additional description); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

76. *distractum* Leclercq

Rhopalum distractum Leclercq, 1997:57, ♂. Holotype: ♂, Australia: Australian Capital Territory: Bull's Head (ANIC).

77. *domesticum* Williams

Rhopalum domesticum Williams, 1928b:101, ♀, ♂. Holotype: ♀, Philippines: Luzon: Los Baños (Bishop). – Leclercq, 1954c:189 (in catalog of world Crabronini), 298 (nest and prey records), 1963:63 (Philippines); Baltazar, 1966:351 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1984b:13 (Philippines), 1984f:7 (Philippines), 33 (in key to Crabronini of Philippines).

78. *downiense* Leclercq

Rhopalum downiense Leclercq, 1997:58, ♀. Holotype: ♀, Australia: Queensland: Downie Creek at 14°47'S (ANIC).

79. *drexum* Leclercq

Rhopalum drexum Leclercq, 1997:58, ♀, ♂. Holotype: ♀, Australia: Queensland: Mossman Gorge (ANIC).

80. *duclosi* Leclercq

Rhopalum duclosi Leclercq, 2002b:57, ♀. Holotype: ♀, Guadeloupe: Domaine Duclos, Petit Bourg, Forêt Castarel (FSCA). – Leclercq, 2002b:12 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

81. *durangoense* Leclercq

Rhopalum durangoense Leclercq, 2002b:58, ♀. Holotype: ♀, Mexico: Durango: El Salto (CNC). – Leclercq, 2002b:10 (in key to New World *Rhopalum*).

82. *duratum* Leclercq

Rhopalum duratum Leclercq, 1997:58, ♂. Holotype: ♂, Australia: Queensland: Ringrose National Park: The Crater (ANIC).

83. *ebetsuense* Tsuneki

Rhopalum ebetsuense Tsuneki, 1952b:120, ♂. Holotype: ♂, Japan: Ebetsu near Sapporo (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1952b:112 (in key); Leclercq, 1954c:188 (in catalog of world Crabronini); Tsuneki, 1960e:61 (in key), 1960g:50 (nesting habits); Tsuneki and Tano, 1969:31 (distribution in Japan); R. Bohart and Menke, 1976:389 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.).

84. *emolitum* Leclercq

Rhopalum emolitum Leclercq, 1997:59, ♀. Holotype: ♀, Australia: Queensland: 24 km NE Eidsvold (ANIC).

85. *encabbae* Leclercq

Rhopalum encabbae Leclercq, 1997:60, ♀. Holotype: ♀, Australia: Western Australia: Arrowsmith River area 20 km N Encabba (ANIC).

86. *erraticum* Tsuneki

As *Rhopalum shirozui*: Tsuneki, 1965j:169 (♀), corrected to *Rhopalum erraticum* by Tsuneki, 1968g:20.

Rhopalum erraticum Tsuneki, 1968g:20, ♀. Holotype: ♀, Taiwan: Nantou Prefecture: Sungkang (originally Kyushu Univ., now USNM). – Tsuneki, 1968g:29 (Taiwan; in key to Crabronini of Taiwan and Ryukyus), 1971a:24 (Taiwan; description of ♂); Haneda, 1972a:6 (Taiwan); Tsuneki, 1972c:7 (Taiwan), 1973f:48 (Taiwan; redescription); R. Bohart and Menke, 1976:389 (listed); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:10 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

87. *etiratum* Leclercq

Rhopalum etiratum Leclercq, 1997:60, ♀, ♂. Holotype: ♀, Australia: Victoria: 15 km S Yarrara at 34°33'S 141°25'E (ANIC).

88. *eucalypti* R. Turner

Rhopalum eucalypti R. Turner, 1915a:90, ♀. Holotype or syntypes: ♀, Australia: Tasmania: Eaglehawk Neck (BMNH). – R. Turner, 1915a:86 (in key to Australian *Rhopalum*), 1915b:552 (in key), 553 (Tasmania); Leclercq, 1950b:5 (listed), 1954c:184 (in catalog of world Crabronini), 1957b:189 (in key), 208 (revision); R. Bohart and

Menke, 1976:389 (listed); Leclercq, 1979b:354 (additional description); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:61 (in revision of Australian *Rhopalum*).

89. euclanum Leclercq

Rhopalum euclanum Leclercq, 1997:61, ♀, ♂. Holotype: ♂, Australia: Western Australia: 39 km SW Eucla (ANIC).

90. eurytibiale Li and Xue

Rhopalum eurytibiale Li and Xue, 1998a:78, ♀, ♂. Holotype: ♀, China: Zhejiang: Zhejiang, Xitianmushan (Zhejiang Agricult. Univ.). – Li and He, 2001:757 (China: Tianmushan Nature Reserve at 30°22'N 119°26'E), 2004:1089 (in hymenopterous fauna of Zhejiang Province, China).

91. eustonense Leclercq

Rhopalum eustonense Leclercq, 1997:63, ♂. Holotype: ♂, Australia: New South Wales: Euston (ANIC).

92. evansianum Leclercq

Rhopalum evansianum Leclercq, 1979b:357, ♀. Holotype: ♀, Australia: New South Wales: Packsaddle 111 mi N Broken Hill (MCZ). – Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997:63 (in revision of Australian *Rhopalum*).

93. evictum Leclercq

Rhopalum evictum Leclercq, 1979b:358, ♂. Holotype: ♂, Australia: Victoria: Wyperfeld National Park 25 mi N Rainbow (MCZ). – Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997:63 (in revision of Australian *Rhopalum*).

94. evocatum Leclercq

Rhopalum evocatum Leclercq, 1997:64, ♂. Holotype: ♂, Australia: Northern Territory: 53 km NE Alice Springs at 23°35'S 134°22'E (ANIC).

95. ewaratense Leclercq

Rhopalum ewaratense Leclercq, 1997:64, ♀. Holotype: ♀, Australia: Tasmania: Ewart Creek at 41°58'S 145°28'E (ANIC).

96. expeditionis Leclercq

Rhopalum expeditionis Leclercq, 1955c:196, ♂. Holotype: ♂, Tibet: Tasam in Rongshar Valley (BMNH). – R. Bohart and Menke, 1976:389 (listed).

97. exleyi Leclercq

Rhopalum exleyi Leclercq, 1997:65, ♂. Holotype: ♂, Australia: Western Australia: Newman (ANIC).

98. extranum Leclercq

Rhopalum extranum Leclercq, 2002b:58, ♀, ♂. Holotype: ♂, Ecuador: Napo: Pastanza, Sebundoi (BMNH). – Leclercq, 2002b:19, 36 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

99. exultatum Leclercq

Rhopalum exultatum Leclercq, 1970a:101, ♀, ♂. Holotype: ♀, Ecuador: Puenbo (MNHN). – Leclercq, 1970a:94 and 97 (in key); R. Bohart and Menke, 1976:389 (listed); Dollfuss, 1989:12 (paratype in NHMW); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:19, 36 (in key to New World *Rhopalum*), 58 (bibliographic reference, locality records from Bolivia and Ecuador, additional description); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

100. eyrense Leclercq

Rhopalum eyrense Leclercq, 1997:66, ♀, ♂. Holotype: ♀, Australia: South Australia: south of Lake Eyre at 29°29'S 137°11'E (ANIC).

101. facetum Leclercq

Rhopalum facetum Leclercq, 2002b:59, ♀, ♂. Holotype: ♀, Costa Rica: Puntarenas: Estación Biológica Las Alturas in San Vito (Universidad de Costa Rica). – Leclercq, 2002b:23, 36 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

102. famicum Leclercq

Rhopalum famicum Leclercq, 1979b:359, ♀. Holotype: ♀, Australia: Western Australia: 10 mi N Mt. Magnet (MCZ). – Cardale, 1985:267 (in catalog of Australian Sphecidae); Leclercq, 1997:67 (in revision of Australian *Rhopalum*).

103. fannum Leclercq

Rhopalum fannum Leclercq, 1997:67, ♀, ♂. Holotype: ♀, Australia: Queensland: 13 km SE Weiepa at 12°40'S 143°00'E ((ANIC).

104. farri Leclercq

Rhopalum farri Leclercq, 2002b:60, ♀. Holotype: ♀, Jamaica: Portland: Hardwar Gap (BMNH). – Leclercq, 2002b:12 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

105. faustum Leclercq

Rhopalum faustum Leclercq, 2002b:60, ♀, ♂. Holotype: ♂, Peru: Amazonas: Rodriguez de Mendoza (BMNH). – Leclercq, 2002b:19, 38 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

106. federale Leclercq

Rhopalum federale Leclercq, 2002b:61, ♂. Holotype: ♂, Brazil: Distrito Federal: Estação Florestal Cabeça do Veado (CNC). – Leclercq, 2002b:38 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

107. formosanum Tsuneki

Rhopalum formosanum Tsuneki, 1966d:13, ♀, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Sungkang (Kyushu Univ.). – Tsuneki, 1968d:57 (Taiwan), 1968g:23 (Taiwan), 30 (in key to Crabronini of Taiwan and Ryukyus); Murota, 1973b:119 (Taiwan); R. Bohart and Menke, 1976:389 (listed); Porter, Stange, and Wang, 1999:10 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

108. fraxinum Leclercq

Rhopalum fraxinum Leclercq, 1997:67, ♀, ♂. Holotype: Northern Territory: 12-17 mi E Alice Springs (ANIC).

109. frenchii (R. Turner)

Crabro frenchii R. Turner, 1908:526, ♀. Holotype or syntypes: ♀, Australia: Victoria: no specific locality (BMNH). – **As *Rhopalum frenchi*:** R. Turner, 1915a:86 (new combination, in key to Australian *Rhopalum*), 87 (nesting in roadside bank; Tasmania, Victoria), 1915b:552 (in key), 553 (Tasmania); Leclercq, 1950b:5 (listed), 1954c:184 (in catalog of world Crabronini), 298 (nest and prey records), 1957b:188 (in key), 220 (revision); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1977d:2 (Australia; description); Leclercq, 1979b:360 (variation, additional localities); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:68 (in revision of Australian *Rhopalum*).

110. *freturum* Leclercq

Rhopalum freturum Leclercq, 1997:70, ♀, ♂. Holotype: ♂, Australia: Tasmania: Barrow Creek 8 km NE Nunamara (ANIC).

111. *frogatum* Leclercq

Rhopalum frogatum Leclercq, 1997:72, ♀, ♂. Holotype: ♂, Australia: Tasmania: 4 km SW Marrawah (ANIC).

112. *futilum* Leclercq

Rhopalum futilum Leclercq, 1997:72, ♀, ♂. Holotype: ♀, Australia: Southern Australia: Dingly Dell Camp at Orapinna Creek at 31°21'S 138°42'E (ANIC).

113. *gansuense* Li and He

Rhopalum gansuense Li and He, 1999a:97, ♀, ♂. Holotype: ♀, China: Gansu Province: no specific locality (Institute of Zoology, Academia Sinica).

114. *gauldi* Leclercq

Rhopalum gauldi Leclercq, 1997:72, ♀. Holotype: ♀, Australia: Tasmania: Mount Field National Park (BMNH).

115. *gloriosum* Leclercq

Rhopalum gloriosum Leclercq, 1997:73, ♀, ♂. Holotype: ♀, Australia: Queensland: Mount Glorious near Brisbane (BMNH).

116. *gonopleurale* Li and Xue

Rhopalum gonopleurale Li and Xue, 1998c:263, ♀, ♂. Holotype: ♀, China: Zhejiang Province: Hangzhou (Zhejiang Agricult. Univ.). – Li and He, 2004:1091 (in hymenopterous fauna of Zhejiang Province, China).

117. *gorongozae* (Arnold)

Crabro gorongozae Arnold, 1960a:474, ♀. Holotype: ♀, Mozambique: Mt. Gorongoza (SAM). – **As *Rhopalum gorongozae***: R. Bohart and Menke, 1976:389 (new combination, listed).

118. *gracile* Wesmael

Rhopalum nigrinum Kiesenwetter, 1849:91, ♀, ♂, junior secondary junior homonym in *Crabro* of *Crabro nigrinus* Herrich-Schaeffer, 1841. Syntypes: Germany: Sachsen-Anstalt: Eisleben (depository?). – Taschenberg, 1858:99 (in key to Sphecidae of Germany), 1866:184 (in revision of Hymenoptera of Germany); Kirchner, 1867:223 (in catalog of European Hymenoptera); Schenck, 1861:159 (redescription, Germany: Halle), 1867a:352 (known from Germany: Halle); Schlechtendal, 1872:36 (Germany: Sachsen: Zwickau); Mocsáry, 1897:83 (Hungary except Kopács is today's Slovakia); de Gaulle, 1908:122 (in catalog of French Hymenoptera); A. Wagner, 1920:47 (Germany: Lower Elbe region); Coulon, 1925:123 (France: Evreux; Germany); A. Wagner, 1938a:118 (northwestern Germany); Ryckaert, 1950:228 (first record from Belgium: Berg); Leclercq, 1951e:4 (reported from Belgium by Ryckaert, 1950); Tsuneki, 1952b:112, 114 (in key), 122 (description); Leininger, 1953:20 (Germany: Baden-Württemberg: Konstanz-Staad); Leclercq, 1954c:188 (in catalog of world Crabronini), 299 (nest and prey records); Tsuneki, 1955d:218 (Russia: Kuril Islands); Tsuneki and Tanaka, 1955b:25 (Japan: near Nikko, 120 km NW Tokyo); de Beaumont, 1956c:186 (Switzerland); Grandi, 1959b:287 (Italy: Firenze: Empoli); Wolf, 1959b:32 (known from Germany, but not from Nassau); Tsuneki, 1960e:58, 60 (in key), 1960g:49 (nesting habits); Valkeila, 1962b:68 (southwestern Finland); de Beaumont, 1964c:156 (in Sphecidae Fauna of Switzerland); Gauss, 1967:560 (Germany: Baden-Württemberg: Bodensee); J. Heinrich, 1967:83 (Germany: Bayern: Obernau); Benedek, 1968:78 (Hungary, visiting flowers of *Angelica silvestris* L.); Haneda, 1968b:56 (Japan: Nagano Prefecture: Ina District, as *nigrinum* Kohl); Merisuo, 1968:46 (nest and prey); Nishino, 1968:25 (Japan); Okuno, 1968:31 (Japan); Benedek, 1969a:85 (Hungary; marshy meadow), 1969b:421 (Hungary: Csopak, collected in vicinity of aphid *Hyalopteritena pruni* (Geoffroy)); Itami, 1969:51 (Japan: Niigata Prefecture); Stritt, 1969:131 (Germany: Baden-Württemberg: Karlsruhe); Tsuneki, 1969i:61 (Japan: Fukui Prefecture: Taichôdzi temple); Zangheri, 1969:1706 (Italy: in catalog

of flora and fauna of Romagna Region); Benedek, 1970:104 (Hungary: Tapolca); Haneda, 1970:13 (Japan: Akita Prefecture); Oehlke, 1970:791 (Democratic Germany); Scobiola-Palade, 1970:152 (first record from Romania: Constanța District: Comarova forest); Leclercq, 1971:228 (Spain); Lefeber, 1971b:223 (Netherlands: Beesd); Schmidt, 1971c:76 (Germany: Schleswig-Holstein); Stritt, 1971a:105 (Germany: Baden-Württemberg: Karlsruhe); Haeseler, 1973:55 (Denmark: Ringkøbing, Germany: Schleswig-Holstein: Brenner Moor W Bad Oldesloe); Lomholdt, 1973a:108 (Denmark: West Jutland: Ringkøbing); Nambu, 1973d:153 (Japan: Saitama Prefecture); Scobiola-Palade, 1974:145 (Romania: Sărăturile sandbank in Danube delta); Tsuneki, 1974a:382 (Korea); Leclercq, 1975b:2 (France); Lefeber, 1975a:37 (Netherlands: Asperen, Naardemeer, Oudega, Warga), 1975b:156 (Netherlands: Schiepersberg); Nambu, 1975b:77 (Japan: Saitama Prefecture); Lefeber, 1976:152 (Netherlands: Biesbos, Hooisdammen, Nijetrijne); Lomholdt, 1976:357 (in Sphecidae Fauna of Fennoscandia and Denmark); Marshakov, 1976d:110 (in revision of *Rhopalum* of USSR: north to Kamchatka); Lefeber, 1978:138 (Netherlands: Elburg); Benedek, 1979:236 (Hungary: Bakony Hills); Preuss, 1979b:41 (Germany: first record from Rheinland-Pfalz: between Hornbach and Zweibrücken); Haeseler, 1981:52 (Germany: Friesian Island: Amrum Island); Haack, Tschardtke, and Vidal, 1984:132 (Germany: Hamburg area); Riemann, 1985:21 (Germany: Niedersachsen); Pádr *in* Šedivý, 1989a:169 (in checklist of Czechoslovakian Sphecidae); Weiffenbach, 1989:110 (Germany: Hessen: Gießen area); Gayubo, Borsato, and Osella, 1991:406 (Italy: Piemonte: Settimo); Jakubzik, 1991:75 (Germany: Köln); Leclercq, 1991f:104 and 105 (in key), 105 (Austria: Neusiedl); Nilsson, 1991:83 (Sweden: Lake Mälaren), 89 (general information about species); Pagliano, 1991b:357, 358 (in key to Italian Crabroninae); Tsuneki, 1991:203 (Korea); Delarze, 1992:68 (Switzerland: Valais: Les Follatères); Gusenleitner, 1992:686 (Austria: Oberösterreich); Józán, 1992b:174 (Hungary: Boronka-melléki Protected Area); Bitsch and Leclercq, 1993:222 (in revision of western European Crabroninae); Menke, 1994d:15 (California: Monterey County: Parkfield area (Austria: Neusiedl; Italy: Trieste); Leclercq and Barbier, 1993:92 (map of distribution in France); Torregrosa, Gayubo, Tormos, and Asís, 1993:20 (Spain: Alicante Province); Salzmann-Wandeler, 1998a:98 (Switzerland: Luzern Canton: Sempach); Gayubo, García, Torres, and González, 1999:91 (Spain: Soria Province); Vepřek, 2000:236 (Czech Republic: Moravia: Moravský Písek). – **As *Crabro nigrinus***: Dalla Torre, 1897:612 (new combination, in catalog of world Sphecidae); Józán, 1981:305 (Hungary: Hortobágy National Park). – **As *Corynopus nigrinus***: Richards, 1935:168 (new combination, is not a valid name), 1937b:107 (in checklist of British aculeates). – **As *Euplilis nigrinus***: Hellén, 1955a:127 (new combination, Finland: eight localities).

Rhopalum gracile Wesmael, 1852:592, ♀ (as *Gracile*, incorrect original capitalization). Holotype: ♀, Switzerland: Genève area (Bruxelles). Synonymized with ... *nigrinum* Kiesenwetter by ... – Kirchner, 1867:223 (in catalog of European Hymenoptera); A. Costa, 1884b:33 (Italy: Sardegna: Porto Torres), 54 and 1884b:244 (description of ♂); R. Bohart and Menke, 1976:389 (listed); Pulawski, 1978:254 (in key to Sphecidae of European part of former USSR); Leclercq, Gaspar, and Verstraeten, 1979:map 1437 (Belgium); Richards, 1980:57 (in key to Sphecidae of British Isles); Tsuneki, 1982b:17 (known from Korea); Dollfuss, 1983b:14 (in catalog of Sphecidae of Austria); Chevin and Silvestre de Sacy, 1984:8 (France: Yvelines Department); Lefeber, 1984:29 (Netherlands: Maastricht); Haeseler, 1985c:571 (Germany: Friesian Islands); Józán, 1985b:59 (Hungary S Lake Balaton), 84 (ecological and zoogeographic characteristics); Westrich and Schmidt, 1985b:112 (Germany: endangered in Baden-Württemberg); Józán, 1986:372 (Hungary: Kiskunság National Park); Vikberg, 1986:77 (Finland); Dollfuss, 1987:22 (Austria); Józán, 1989:101 (Hungary: Tihany Nature Reserve); Jacobs and Oehlke, 1990:182 (no new records from Democratic Germany); Pagliano, 1990:94 (in catalogue of Italian Sphecidae); Schwammberger and Priesner, 1990:543 (Austria: Kärnten); Day, 1991:xviii (summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:142 (in key to Sphecidae of North and Central Europe); Grove, 1991:117 (Great Britain: Norfolk); van der Smissen, 1991:97 (nw. Germany); Haeseler, 1992:355 (nesting in stems of *Phragmites*); Sorg and Wolf, 1993:60 (Germany: Rheinland-Westfalen: Nature Reserve Die Spey); Dollfuss, 1994:102 (endangered in Austria); Theunert, 1994c:50 (summary of records from Niedersachsen and Bremen, Germany); Negrisoló *in* Minelli, Ruffó, and La Posta, 1995b:8 (in catalog of Italian fauna); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to

Sphecidae of Russian Far East); Schmid-Egger, Risch, and Niehuis, 1995:207 (summary of records from Germany: Rheinland-Pfalz Province); Jakubzik, 1996:253 (Germany: Köln); Schmid-Egger, Schmidt, and Doczkal, 1996:378 (Germany: Baden-Württemberg: endangered); Shlyakhtenok, 1996:304 (Belarus: Berezinsky Nature Reserve); Celary, 1997:59 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:28 (in checklist of German Sphecidae); Schnee, 1997:100 (Germany: Sachsen); Dollfuss, Gusenleitner, and Bregant, 1998:521 (Austria: summary of collecting records from Burgenland); Shkuratov, 1998:98 (Russia: Rostov Oblast'); van der Smissen, 1998:68 (Germany: Schleswig-Holstein: Am Stau); Neumayer, Schwarz, and Bregant, 1999:225 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:110 (in catalog of Belgian aculeates); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:289 (in Sphecid Fauna of Germany); Jacobs, 2000:9, 17 (Germany: Land Mecklenburg-Vorpommern: probably endangered); Luig and Voolma, 2000:123 (first record from Estonia); Zettel, 2000:29 (Austria: Burgenland: Seewinkel); Kazenas, 2001b:188 (review of known biology); Ohl et al., 2001:141 (distribution in Germany by provinces); Deván, 2002b:204 (Slovakia: Pekelná dolina); Kazenas, 2002a:97 (geographic distribution, collecting localities in Kazakhstan); Shlyakhtenok and Skibińska, 2002:34 (Belarus: no specific locality); Gusenleitner, 2003:864 (Austria: Oberösterreich: Saulehen SW Schlägen at 48°25'N 13°51'E); 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); Wickl, Voith, Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:194, 196 (Germany: Bayern: endangered); Dollfuss, 2004b:783 (Czech Republic, Kazakhstan, Turkey, Uzbekistan); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:264 (in checklist of Sphecidae of Nordrhein-Westfalen State of Germany); Kazenas, 2004b:107 (Kazakhstan: western Tien Shan); Salzmänn-Wandeler and Rezbanyai-Reser, 2004:26 (central Switzerland); 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); Suda, 2004:42 (Japan: Yamanashi Prefecture); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:47 and 61 (in checklist of Polish Sphecidae); Negoro, Haneda, and Tano, 2005:49 (Japan: Toyama Prefecture); Nemkov, 2005a:149 (Russia: Sakhalin Island); Pagliano and Negrisola, 2005:297 (in Sphecid Fauna of Italy); Riemann and Hohmann, 2005:565 (Germany: Niedersachsen: city of Bremen and adjacent area); Theunert, 2005a:18 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Budrys, 2006:80 (Lithuania: Klaipėda District at 55°36'00"N 21°10'35"E); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2006:28 (Japan: Toyama Prefecture); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas Larrieu Nature Reserve near Argelès-sur-Mer); Vepřek, 2006:511 (Czech Republic: Kokořínsko area); Jacobs, 2007:125, 126 (in key to Crabronidae of Germany); Nemkov, 2007b:71 (Russia: Kuril Islands: Kunashir Island), 2007c:997 (in Appendix to Key to identification of Sphecidae of Far East of Russia); Saure, 2007:83 (in checklist of Aculeata of Brandenburg Land, Germany); Vepřek and Straka, 2007:207 (in catalog of Sphecidae of Czech Republic and Slovakia), 231 (first recorded from Moravia by Vepřek; Bohemia: Vlkov on Lužnic, Žehuňská Obora), Moravia: Dolní Věstonice); Haeseler, 2008:309 (Germany: Friesian Islands); Haneda, 2008:5, 7 (in key to Japanese Crabroninae); Ljubomirov and Yildirim, 2008:298 (in catalog of Crabronidae of Turkey); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); Okusa and Tajima, 2008:75 (Japan: central Honshu: Aichi Prefecture); S. Takahashi and Haneda, 2008:59 (Japan: Hokkaido: Sapporo); Bitsch and Leclercq, 2009:226 (in supplement to vol. I of Faune de France, 1993: recent records from Estœoni, Italy, and Spain reported; France: first records from Aisne: Chivres-en-Laonnais, and Loiret: Ardon); U. Frommer, 2009a:29 (Germany: in checklist of Sphecidae of Hessen), 40 (Hessen: Frankfurt, Gießen); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); Nemkov, 2009b:96 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Schmid-Egger, 2010a:18 (in red list of Aculeata of Germany: rare). – *As Crabro gracilis* F. Smith, 1856:391 (new combination, in catalog of Hymenoptera in British Museum).

Crabro kiesenwetteri A. Morawitz, 1866:267 (as *Kiesenwetteri*, incorrect original capitalization). Substitute name for *Crabro nigrinus* (Kiesenwetter, 1849) A. Morawitz, 1866. Synonymized with ... by ... – Kohl, 1883e:657 (Swit-

zerland), 1893a:21 (Austria: Niederösterreich); Krieger, 1894:3 (Germany: Kingdom of Saxony); Kohl, 1899:309 and 310 (in key); de Cobelli, 1903:119 (Italy: Trentino: Palude di Volano); Schmiedeknecht, 1907:200 (in key to Hymenoptera of Central Europe); Kohl, 1915:342 (in revision of Palearctic Crabronini); R. Perkins, 1919a:9 (addition to E. Saunders, 1902, catalog); Dubois, 1921b:162 (in key to Belgian Sphecidae); Berland, 1925d:181 (in Sphecidae Fauna of France); Bouwman, 1930:107 (in revision of Sphecidae of Netherlands); Hedicke, 1930:139 (...); Schmiedeknecht, 1930:658 (in keys to Hymenoptera of North and Central Europe); Hellén, 1931b:65 (recorded from Finland); Pulkkinen, 1931:155 (...); Bernard, 1934a:62 (France: Var: Fréjus); Forsius *in* Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Grandi, 1935a:109 (Italy); Richards, 1935:168 (*kiesenwetteri* is the valid name, a statement contrary to Article 59.3 of the Code); Steck, 1935:327 (Switzerland); Bernard, 1936c:288 (France: Aude: Ile Sainte-Lucie; Hérault: Valras; Var: Fréjus); de Beaumont, 1945:481 (Switzerland); Piet, 1947:508 (surviving inundation because of gall nesting); Tsuneki, 1947e:428 (Japan: Hokkaido), 1948c:8 (Japan: Hokkaido); Balthasar, 1948:140 (Slovakia: Kovačov, Parkan); Murota, 1948:56 (nesting habits); Zavadil *in* Zavadil and Šnoflak, 1948:139 (in key to Sphecidae of Czechoslovakia); Leth, 1950:408 (first record from Denmark); Abrahamsen, 1951:116 (recorded from Denmark after J.C. Nielsen, 1907); Fæster, 1951:457 (distribution in Scandinavia); Fahlander, 1951b:47 (first record from Sweden: Norrköping: Svärtinge); de Beaumont, 1954e:98 (Italy); Kjellander, 1954b:246 (Sweden); Vogrin, 1955:41 (Yugoslavia); Benno, 1958b:20 (in review of Dutch Sphecidae); Noskiewicz and Puławski, 1960:158, 159 (in key to Polish Sphecidae); Niedl and Deneš, 1967:75 (Czech Republic: Třeboň area); Tumšs and Maršakovs, 1970:31 (Latvia); Balthasar, 1972:137 (in Sphecidae Fauna of Czechoslovakia). – **As *Rhopalum kiesenwetteri***: Haines, 1922:14 (new combination, Great Britain: not found in Dorset); Hedicke, 1930a:99 (Germany: Bellinchen an der Oder, now Poland: Bielek); Spooner, 1931:15 (Great Britain: Cambridgeshire); Bernard, 1935:67 (France: Var: Fréjus area); Hallett, 1939:16 (Great Britain: Suffolk: no specific locality); A. Wagner, 1939b:74 (an eastern species in northwestern Germany); Bat'a, 1952:166 (Czech Republic); Morel, Nouvel, and Ribaut, 1956:339 (France: Département des Pyrénées-Orientales); Harz, 1965:223 (Germany: Friesian Islands: Wangerooge); Lefeber, 1966:210 (Netherlands: St. Pietersberg); Benno, 1967:39 (in checklist of Sphecidae of Netherlands, as *kiesenwetteri*); Lefeber, 1968a:5 (Netherlands: Botshol, Maastricht), 1969a:79 (Netherlands: Arkel).

Corynopus simplicipes F. Morawitz, 1888:291, ♂. Lectotype: ♂, Uzbekistan: Zeravshan (ZIL), designated by Maršakov, 1976d:110. Synonymized with *Crabro kiesenwetteri* by Kohl, 1915:342. – **As *Crabro simplicipes***: Dalla Torre, 1897:629 (new combination, in catalog of world Sphecidae).

119. *grahami* Leclercq

Rhopalum grahami Leclercq, 1957b:227, ♀, ♂. Holotype: ♀, Australia: Australian Capital Territory: Black Mountain (ANIC). – Leclercq, 1957b:185 (in key); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:354 (member of subgenus *Rhopalum* s.s.); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:74 (in revision of Australian *Rhopalum*).

120. *gratorineum* Leclercq

Rhopalum gratorineum Leclercq, 1997:74, ♀. Holotype: ♀, Australia: Queensland: Shiptons Flat at 15°47'S 145°14'E (ANIC).

121. *gratuitum* Leclercq

Rhopalum gratuitum Leclercq, 2002b:62, ♀. Holotype: ♀, Costa Rica: Guanacaste: NW Volcán Orosi in Cerro el Hacha (Universidad de Costa Rica). Paratypes: Guatemala. – Leclercq, 2002b:14 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

122. *grenadinum* (Pate)

As *Physoscelis claviventris*: Ashmead, 1900:222 (Lesser Antilles: Granada Island), 305 (in checklist of Caribbean Hymenoptera), corrected to *Euplilis grenadinus* by Pate, 1947:9.

Euplilis grenadinus Pate, 1947f:8, ♂. Holotype: ♂, Caribbean Islands: Grenada: Windward side: Chantilly Estate (USNM). – As ***Rhopalum grenadinum***: Leclercq, 1954c:187 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:15, 30, 31 (in key to New World *Rhopalum*), 62 (locality records from 14 countries, variation); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

Rhopalum prisonium Leclercq, 1970:103, ♀. Holotype: ♀, Paraguay: San Bernardino (NHMW). Synonymized with *Rhopalum grenadinum* by Leclercq, 2002:62. – Leclercq, 1970a:99 (in key); R. Bohart and Menke, 1976:390 (listed); Dollfuss, 1989:12 (holotype in NHMW); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Alves-dos-Santos, 2003:330 (Brazil: University of São Paulo campus).

123. *guttatum* Tsuneki

Rhopalum guttatum Tsuneki, 1955a:105, ♀. Holotype: ♀, Japan: Fukui Prefecture: Koike (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1960e:58, 61 (in key), 1960f:52 (description of ♂), 1960g:50 (nesting habits); Nambu, 1968:22 (Japan); Tsuneki and Tano, 1969:31 (distribution in Japan); Nambu, 1973d:153 (Japan: Saitama Prefecture), 1975b:77 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Haneda and Inoue, 2003:50 (Japan: Fukui Prefecture: Katsumi in City of Obama); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Inoue, Nozaka, Tano, Kurokawa, and H. and T. Murota, 2005:67 (Japan: Fukui Prefecture: Mount Monju); Haneda, 2008:5, 7 (in key to Japanese Crabroninae).

124. *hakodatense* Tsuneki

Rhopalum hakodatense Tsuneki, 1960f:51, ♀. Holotype: ♀, Japan: Hokkaido: Hakodate (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1970b:11 (central Japan); Tsuneki and Tano, 1969:31 (distribution in Japan); R. Bohart and Menke, 1976:389 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection, as *hakodatense hakodatense*); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Kurokawa, 2003:61 (Japan: city of Fukui: Egamichou, as *hakodatense hakodatense*); Haneda, 2008:9 (in key to Japanese Crabroninae, as *hakodatense hakodatense*).

ssp. taichodzi Tsuneki

Rhopalum hakodatense taichodzi Tsuneki, 1969i:58, ♀. Holotype: ♀, Japan: Fukui Prefecture: Taichôdzi temple (K. Tsuneki coll.). – Tsuneki, 1969i:61 (Japan: Fukui: Prefecture: Taichôdzi temple); Haneda, 2008:9 (in key to Japanese Crabroninae).

125. *hanedai* Tsuneki

Rhopalum hanedai Tsuneki, 1973a:21, ♀. Holotype: ♀, Japan: Fukui Prefecture: Taniyama (originally K. Tsuneki coll., now Hyogo Mus.). – R. Bohart and Menke, 1976:389 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection, as *hanedai*); Hashimoto and Nakanishi, 1997:19 (holotype and paratype transferred to Hyogo Mus.); Haneda, 2008:7 (in key to Japanese Crabroninae).

126. *hannense* Leclercq

Rhopalum hannense Leclercq, 1997:74, ♀. Holotype: ♀, Australia: Hann River at 15°11'S 143°52'E (ANIC).

127. *hansoni* Leclercq

Rhopalum hansoni Leclercq, 2002b:64, ♀. Holotype: ♀, Costa Rica: Puntarenas: Estación Biologica Las Alturas in San Vito (Universidad de Costa Rica). – Leclercq, 2002b:8 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

128. *harpax* Leclercq

Rhopalum harpax Leclercq, 1957b:202, ♂. Holotype: ♂, Australia: Victoria: Melbourne (Nat. Mus. Victoria). – Leclercq, 1957b:189 (in key); R. Bohart and Menke, 1976:389 (listed); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:74 (in revision in Australian *Rhopalum*).

129. *hawkerense* Leclercq

Rhopalum hawkerense Leclercq, 1997:74, ♀. Holotype: ♀, Australia: Southern Australia: Mernmerna 35 km N Hawker (ANIC).

130. *hillorum* Leclercq

Rhopalum hillorum Leclercq, 1963:72, ♀, ♂. Holotype: ♀, India: Tamil Nadu: Kodaikanal in Pulney Hills (originally G.R. Ferguson coll., now CAS). – R. Bohart and Menke, 1976:389 (listed).

131. *hobartense* Leclercq

Rhopalum hobartense Leclercq, 1997:74, ♂. Holotype: ♂, Australia: Tasmania: Fairy Glen E Hobart (BMNH).

132. *hombceanum* Tsuneki

Rhopalum hombceanum Tsuneki, 1973:47, ♀. Holotype: ♀, Taiwan: Nantou Prefecture: Pempuchi (originally K. Tsuneki coll. originally). – R. Bohart and Menke, 1976:389 (listed); Nuhn and Menke, 1994:25 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

133. *huberi* Leclercq

Rhopalum huberi Leclercq, 2002b:65, ♀, ♂. Holotype: ♂, Jamaica: Harwar Gap (CNC). – Leclercq, 2002b:23, 38 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

134. *huilae* Leclercq

Rhopalum huilae Leclercq, 2002b:65, ♀, ♂. Holotype: ♂, Colombia: Huila: Las Cuevas de los Guacheros (BMNH). – Leclercq, 2002b:14, 31 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

135. *ichneumoniforme* (Arnold)

Thyreopus ichneumoniformis Arnold, 1927:130, ♀, ♂. Syntypes: South Africa: Cape Province: Mossel Bay (BMNH). – Arnold, 1930:13 (in checklist of Afrotropical Sphecidae). – **As *Crabro ichneumoniformis***: Arnold, 1945:169 (new combination, Madagascar). – **As *Rhopalum ichneumoniforme***: Leclercq, 1954c:185 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:389 (listed); Pulawski, 2003b:797 (in checklist of Malagasy Sphecidae).

***ssp. stramineipes* (Arnold)**

Thyreopus stramineipes Arnold, 1932:21, ♂. Holotype: ♂, Zimbabwe: Chirinda Forest (SAM). – **As *Crabro stramineipes***: Arnold, 1943:83 (new combination, Zaire: Albert National Park, ♀), 1944:38 (Zaire, ♀). – **As *Rhopalum stramineipes***: Leclercq, 1954c:185 (new combination, in catalog of world Crabronini). – **As *Rhopalum ichneumoniforme stramineipes***: R. Bohart and Menke, 1976:389 (new status, listed); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains);

136. *inopinum* Leclercq

Rhopalum inopinum Leclercq, 1997:75, ♀. Holotype: ♀, Australia: Western Australia: Quillergup (ANIC).

137. *iridescens* R. Turner

Rhopalum iridescens R. Turner, 1917e:187, ♂. Holotype: ♂, India: Kashmir: Gulmarg (BMNH). – Leclercq, 1950b:2 (new combination), 1954c:190 (in catalog of world Crabronini); R. Bohart and Menke, 1976:389 (listed).

138. *jamesoni* Leclercq

Rhopalum jamesoni Leclercq, 2002b:65, ♀. Holotype: ♀, Costa Rica: Embalse El Llano (Kansas Univ.). – Leclercq, 2002b:14 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

139. *jessonicum* (Bischoff)

Crabro jessonicus Bischoff, 1921b:7, ♀. Holotype: ♀, Japan: Hokkaido: Akke shi (ZMHU). – Tsuneki, 1947e:429 (Japan: Hokkaido). – **As *Rhopalum jessonicum***: Tsuneki, 1952b:112 and 115 (new combination, in key), 119 (description of ♂); Leclercq, 1954c:188 (in catalog of world Crabronini); Tsuneki and Tanaka, 1955b:25 (Japan: Nikko, 120 km NW Tokyo); Tsuneki, 1955d:218 (Kuril Islands); Marshakov, 1976d:108 (in revision of *Rhopalum* of USSR: Russian Far East, as full species); Nemkov *in* Nemkov et al., 1995:428 (in key to Sphecidae of Russian Far East); Nagase, 2006a:54 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone); Nemkov, 2007b:71 (Russia: Kuril Islands: Kunashir Island). – **As *Rhopalum clavipes jessonicum***: Tsuneki, 1956a:68 (new status; description), 1960e:60 and 61 (in key), 1960g:50 (nesting habits); Tsuneki and Shimoyama, 1963:50 (Japan: Towada Prefecture); Haneda, 1968b:56 (Japan: Nagano Prefecture: Ina District), 1969:70 (Japan: Yamanashi Prefecture); Nambu, 1972b:14 (Japan: Saitama Prefecture), 1973d:153 (Japan: Saitama Prefecture); Tsuneki, 1973b:18 (nesting habits); Nambu, 1975b:77 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:37 (Japan: Gifu Prefecture); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:53 (Japan: Gifu Prefecture); Negoro, Haneda, and Tano, 2005:49 (Japan: Toyama Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2006:28 (Japan: Toyama Prefecture); Haneda, 2008:6, 7 (in key to Japanese Crabroninae); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); S. Takahashi and Haneda, 2008:60 (Japan: Hokkaido: Sapporo); Nemkov, 2009b:97 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:237 (Russia: Primorskiy Krai: Lazovsky Nature Reserve).

As *Crabro clavipes*: Iwata, 1938d:88 (Russia: Kuril Islands), corrected to *Rhopalum jessonicum* by Tsuneki, 1952b:119; Tsuneki, 1947e:429 (Japan: Hokkaido), corrected to *Rhopalum jessonicum* by Tsuneki, 1952b:119

140. *juventum* Leclercq

Rhopalum juvenum Leclercq, 1997:76, ♀. Holotype: ♀, Australia: Northern Territory: Plenty Highway 260 km ENE Alice Springs (ANIC).

141. *juxtatum* Leclercq

Rhopalum juxtatum Leclercq, 1997:76, ♀, ♂. Holotype: ♂, Australia: Southern Australia: 25 km SSW Pinnaroo at 35°28'S 140°47'E (ANIC).

142. *kawabatai* Marshakov

Rhopalum kawabatai Marshakov, 1976c:940, ♂, ♀. Holotype: ♂, Russia: Amur Oblast': 75 km W Svobodnoye (ZIN). – Marshakov, 1976d:110 (in revision of *Rhopalum* of USSR: Russian Far East); Nemkov, 1992b:246 (Russia: Far East: Khingan Nature Reserve); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to Sphecidae of Russian Far East); Nemkov, 2005a:150 (Russia: Sakhalin Island), 2008b:21 (in catalog of Crabronidae of Asiatic Russia); 2009a:65 (is an endemic of Russian Far East); Nemkov, 2009b:96 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

143. kawense Leclercq

Rhopalum kawense Leclercq, 2002b:66, ♀. Holotype: ♀, French Guiana: Montagne de Kaw, relais Patawa (FSAG). – Leclercq, 2002b:10 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG)..

144. kedahense Leclercq

Rhopalum kedahense Leclercq, 1957d:349, ♀. Holotype: ♀, Malaysia: Kedah Peak (BMNH). – R. Bohart and Menke, 1976:389 (listed).

145. kerangi Leclercq

Rhopalum kerangi Leclercq, 1957b:213, ♀. Holotype: ♀, Australia: Victoria: Kerang (Natl. Mus. Victoria). – Leclercq, 1957b:184 (in key); R. Bohart and Menke, 1976:389 (listed); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:77 (in revision of Australian *Rhopalum*).

146. kovacsi Leclercq

Rhopalum kovacsi Leclercq, 1994b:262, ♀, ♂. Holotype: ♀, Argentina: Chubut: Epuyén (BMNH). – Leclercq, 1994b:254 and 255 (in key); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:18, 33 (in key to New World *Rhopalum*), 66 (bibliographic reference); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

147. kuehlhorni Leclercq

Rhopalum kuehlhorni Leclercq, 1957b:203, ♀, ♂ (as *kühlhorni*, incorrect original diacritic mark. Holotype: ♀, Australia: South Australia: no specific locality (Zool. Samm. Bayer. Staates). – Leclercq, 1957b:188 (in key); R. Bohart and Menke, 1976:389 (listed); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:78 (in revision of Australian *Rhopalum*).

148. kuwayamai Tsuneki

Rhopalum kuwayamai Tsuneki, 1952b:121, ♀. Holotype: ♀, Kuril Islands: Etorofu (Hokkaido Univ.). – Tsuneki, 1952b:115 (in key); Leclercq, c:188 (in catalog of world Crabronini); Tsuneki, 1955d:218 (Kuril Islands); nec Tsuneki and Tanaka, 1955b:25 (= *Rhopalum kuwayamai nikkoense*); Tsuneki, 1960e:60 (in key), 1960g:50 (nesting habits); Tsuneki and Shimoyama, 1963:50 (Japan: Towada Prefecture); Nambu, 1968:22 (Japan); Tsuneki and Tano, 1969:31 (distribution in Japan); Nambu, 1973d:153 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Marshakov, 1976d:106 (in revision of *Rhopalum* of USSR: Russian Far East); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to Sphecidae of Russian Far East); Dollfuss, 2004b:783 (China: Shaanxi: Qinling Mts: 6 km E Xunyangba); Nemkov, 2005a:149 (Russia: Sakhalin Island), 2006c:247 (Russia: Moneron Island S Sakhalin), 2007b:71 (Russia: Kuril Islands: Kunashir and Iturup Island), 2008b:21 (in catalog of Crabronidae of Asiatic Russia), 2009b:98 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

spp. nikkoense Tsuneki

Rhopalum kuwayamai nikkoense Tsuneki, 1956a:67, ♀. Holotype: ♀, Japan: Nikko (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1956a:68 (description), 1960e:58, 60 (in key); Haneda, 1968a:46 (Japan); Tsuneki, 1973b:19 (nesting habits); Nambu, 1975b:78 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:36 (Japan: Gifu Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:52 (Japan: Gifu Prefecture), 2006:28 (Japan: Toyama Prefecture); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone); Haneda, 2008:5, 7 (in key to Japanese Crabroninae); S. Takahashi and Haneda, 2008:59 (Japan: Hokkaido: Sapporo).

As *Rhopalum kuwayamai*: Tsuneki and Tanaka, 1955b:25 (Japan: Nikko, 120 km NW Tokyo), corrected to *Rhopalum kuwayamai nikkoense* by Tsuneki, 1956a:67.

149. *kystum* Leclercq

Rhopalum kystum Leclercq, 1997:78, ♀, ♂. Holotype: ♀, Australia: Southern Australia: 25 km SSE Pinnaroo at 35°28'S 140°47'E (ANIC).

150. *laticorne* (Tsuneki)

As *Crabro latronum*: Gussakovskij, 1932:27 (Russia: Primorskiy Kray; ♂), corrected to *Crabro laticornis* by Tsuneki, 1947d:292.

Crabro laticornis Tsuneki, 1947d:292, ♂, ♀. Holotype: ♂, Korea: Nanetsurei (originally K. Tsuneki coll., now Hyogo Mus.). – Hashimoto and Nakanishi, 1997:15 (holotype and paratype in Hyogo Mus.). – **As *Rhopalum laticorne***: Tsuneki, 1952b:111 and 114 (new combination, in key), 119 (redescription); Leclercq, 1954c:189 (in catalog of world Crabronini); Tsuneki, 1957d:78 (Korea), 1957f:62 (Korea), 1960e:57, 60 (in key), 1967e:17 (China: Manchuria: Harbin); R. Bohart and Menke, 1976:389 (listed); Marshakov, 1976d:108 (in revision of *Rhopalum* of USSR: Russian Far East); Tsuneki, 1982b:17 (known from Korea); Nemkov, 1986:101 (Russia: Irkutsk Oblast'), 1992b:246 (Russia: Far East: Khingan Nature Reserve); Nemkov *in* Nemkov, Kazenas, Budryš, et Antropov, 1995:426 (in key to Sphecidae of Russian Far East); Nemkov, 2005a:149 (Russia: Sakhalin Island), 2008b:21 (in catalog of Crabronidae of Asiatic Russia); Nemkov, 2009b:96 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:237 (Russia: Primorskiy Kray: Lazovsky Nature Reserve).

151. *latronum* (Kohl)

Crabro latronum Kohl, 1915:344, ♀. Syntypes: ♀, Japan: Kofou (NHMW). – nec Gussakovskij, 1932:27 (= *Rhopalum laticorne*); Iwata, 1938d:88 (Japan: Hokkaido, Honshu; Russia: Sakhalin); Tsuneki, 1947e:428 (Japan: Hokkaido). – **As *Rhopalum latronum***: Iwata, 1933b:14 (new combination, description of ♂, collecting localities from Japan); Tsuneki, 1948c:8 (Japan: Hokkaido), 1952b:112 and 113 (in key), 115 (redescription), 1952c:70 (Japan: Shikoku); Leclercq, 1954c:189 (in catalog of world Crabronini), 299 (nest and prey records); Tsuneki and Tanaka, 1955b:24 (Japan: Nikko, 120 km NW Tokyo); Tsuneki, 1960e:57 and 60 (in key), 1960g:48 (nesting habits); Tsuneki and Shimoyama, 1963:50 (Japan: Towada Prefecture); Tsuneki, 1964c:10 (Japan: Kyushu), 1967g:44 (W Japan: Mt. Hyonosen); Haneda, 1968b:56 (Japan: Nagano Prefecture: Ina District); Itami, 1968a:16 (Japan: Yamagata Prefecture: foot of Mount Iide); Matsuura, 1968:29 (Japan); Okuno, 1968:31 (Japan); Tano, 1968:34 (Japan); Haneda, 1969:70 (Japan: Yamanashi Prefecture); Itami, 1969:51 (Japan: Niigata Prefecture); Tsuneki, 1969e:28 (Japan), 1970b:11 (Central Japan); Yamada, 1970:14 (Japan: Nagano Prefecture: Shimajima Valley); Suda, 1971:84 (Japan: Kanagawa Prefecture); Yamada, 1971:36 (Japan: Aichi Prefecture); Nambu, 1973d:153 (Japan: Saitama Prefecture); Suda, 1973:124 (Japan: Yamanashi Prefecture); Nambu, 1975b:77 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Marshakov, 1976d:108 (in revision of *Rhopalum* of USSR: Russian Far East); Tsuneki, 1979d:12 (Japan); Dollfuss, 1989:12 (type material in NHMW); Nemkov *in* Nemkov, Kazenas, Budryš, et Antropov, 1995:426 (in key to Sphecidae of Russian Far East); Miyatake, 1996:102 (specimens in Hiroshi Aoki collection); Haneda and Tano, 2003:12 (Japan: Nagasaki Prefecture: Tsushima); Tano, Kurokawa, Murota, and Nozaka, 2003:32 (Japan: Nagasaki Prefecture: Tsushima); Ohl and Linde, 2003:151 (number of ovarioles); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:36 (Japan: Gifu Prefecture); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:53 (Japan: Gifu Prefecture); Kinota, Haneda, and Tano, 2005:31 (Japan: Hokkaido); Negoro, Haneda, and Tano, 2005:48 (Japan: Toyama Prefecture); Nemkov, 2005a:149 (Russia: Sakhalin Island); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2006:28 (Japan: Toyama Prefecture); Hua, 2006:282 (in list of Chinese insects, geographic distribution); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone); Nemkov, 2007b:71 (Russia: Kuril Islands: Kunashir Island); Haneda, 2008:4, 6 (in key to Japanese Crabroninae); Nemkov, 2008b:21 (in catalog of Crabronidae).

of Asiatic Russia); S. Takahashi and Haneda, 2008:59 (Japan: Hokkaido: Sapporo); Nemkov, 2009b:96 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

152. *littorale* R. Turner

Rhopalum littorale R. Turner, 1915a:91, ♀. Holotype: ♀, Australia: Western Australia: Yallingup (BMNH). – R. Turner, 1915a:86 (in key to Australian *Rhopalum*). – Leclercq, 1950b:5 (listed), 1954c:184 (in catalog of world Crabronini), 1957b:189 (in key), 205 (revision); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:361 (variation, additional localities); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:78 (in revision of Australian *Rhopalum*).

153. *livanum* Leclercq

Rhopalum livanum Leclercq, 1997:79, ♀, ♂. Holotype: ♂, Australia: Tasmania: Lake St. Clair (ANIC).

154. *lomae* Leclercq

Rhopalum lomae Leclercq, 2002b:66, ♀. Holotype: ♀, Dominican Republic: Loma El Peñon, La Cumbre (CNC). – Leclercq, 2002b:21 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

155. *macasae* Leclercq

Rhopalum macasae Leclercq, 2002b:67, ♂. Holotype: ♂, Ecuador: Morona Santiago: Macas (BMNH). – Leclercq, 2002b:26 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

156. *macrocephalum* R. Turner

Rhopalum macrocephalum R. Turner, 1915a:86, ♀ (as *macrocephalus*, incorrect original termination). Holotype or syntypes: ♀, Australia: Queensland: Caloundra near Brisbane (Brisbane). – R. Turner, 1915a:85 (in key to Australian *Rhopalum*); Leclercq, 1950b:4 (listed), 1954c:184 (in catalog of world Crabronini), 1957b:187 (in key), 229 (revision); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:354 (member of subgenus *Rhopalum* s.s.); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:79 (in revision of Australian *Rhopalum*).

157. *masticatum* Leclercq

Rhopalum masticatum Leclercq, 1997:79, ♂. Holotype: ♂, Australia: Southern Australia: Parachilna Creek at 31°08'S 138°33'E (ANIC).

158. *matthewsi* Leclercq

Rhopalum matthewsi Leclercq, 1997:80, ♀, ♂. Holotype: ♀, Australia: Australian Capital Territory: Canberra (ANIC).

159. *minusculum* Leclercq

Rhopalum minusculum Leclercq, 1963:64, ♂. Holotype: ♂, Philippines: Basilan Island: no specific locality (USNM). – Baltazar, 1966:352 (in catalog of Hymenoptera of Philippines, as *minisculum*); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1984f:6 (Philippines), 32 (in key to Crabronini of Philippines).

160. *montanum* (Alayo Dalmau)

Euplilis montanus Alayo Dalmau, 1968b:6, ♀, ♂. Holotype: ♀, Cuba: Oriente: Gran Piedra (IZAC). – Alayo Dalmau, 1973:192 (in catalog of Cuban Hymenoptera); not listed by Bohart and Menke, 1976; Reyes and Hernández, 1995:3 (holotype in Inst. Ecol. Sist., La Havana, Cuba). – As *Rhopalum montanum*: Alayo Dalmau, 1976:17 (new combination, in key to Cuban *Rhopalum*), 32 (in checklist of Cuban Sphecidae); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:10, 29 (in key to New World *Rhopalum*), 68 (bibliographic references); Portuendo and Fernández, 2004:135 (Cuba: Sierra Maestra, as *montanus*); Amarante, 2005a:7 (in addendum to his

2002 catalog of Neotropical Crabronidae and Sphecidae); Genaro, 2006:54 (in checklist of Cuban Sphecidae and Crabronidae).

161. *mornense* Leclercq

Rhopalum mornense Leclercq, 2002b:68, ♀, ♂. Holotype: ♂, Trinidad: Morne Bleu (BMNH). – Leclercq, 2002b:13, 29 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

162. *moronae* Leclercq

Rhopalum moronae Leclercq, 2002b:68, ♀, ♂. Holotype: ♀, Ecuador: Morona Santiago: Macas. – Leclercq, 2002b:9, 34 (in key to New World *Rhopalum*).

163. *mouranum* Leclercq

Rhopalum mouranum Leclercq, 1997:81, ♀, ♂. Holotype: ♀, Australia: Queensland: circa 35 km SW Moura (ANIC).

164. *murotai* Tsuneki

Rhopalum murotai Tsuneki, 1973:45, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Wushe (originally K. Tsuneki coll., now USNM). – Murota, 1973b:119 (Taiwan); R. Bohart and Menke, 1976:389 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

165. *musallae* Leclercq

Rhopalum musallae Leclercq, 2002b:69, ♀, ♂. Holotype: ♀, Honduras: Olancho, La Musalla National Park (AMNH). – Leclercq, 2002b:20, 37, 40 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

166. *mushaense* Tsuneki

Rhopalum mushaense Tsuneki, 1971a:27, ♀. Holotype: ♀, Taiwan: Nantou Prefecture: Musha, correctly Wushe (originally K. Tsuneki coll., now USNM). – Tsuneki, 1977c:20 (Taiwan); R. Bohart and Menke, 1976:389 (listed); Marshakov, 1976d:111 (in revision of *Rhopalum* of USSR: Russian Far East: Vladivostok); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:428 (in key to Sphecidae of Russian Far East); Hua, 2006:282 (in list of Chinese insects, geographic distribution); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia), 2009b:98 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

167. *mycenum* Leclercq

Rhopalum mycenum Leclercq, 2002b:70, ♀, ♂. Holotype: ♂, Peru: Amazonas: Rodriguez de Mendoza (BMNH). Paratypes: Brazil, Ecuador, Panama. – Leclercq, 2002b:20, 37, 40 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

168. *nactor* Leclercq

Rhopalum nactor Leclercq, 2002b:71, ♀, ♂. Holotype: ♀, Ecuador: Pichincha: Tinalandia 16 km SE Santo Domingo (CNC). – Leclercq, 2002b:21, 35 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

169. *nahuelbutae* Leclercq

Rhopalum nahuelbutae Leclercq, 1994b:263, ♂. Holotype: ♂, Chile: Parque Nacional Nahuelbuta (BMNH). Paratype: Argentina. – Leclercq, 1994b:255 (in key); Amarante, 2002:33 (in catalog of Neotropical Crabronidae), Leclercq, 2002b:34 (in key to New World *Rhopalum*), 72 (bibliographic references); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

170. *nasale* Pulawski

Rhopalum nasale Pulawski, 2010a:139, ♀. Holotype: ♀, Australia: South Australia: 32 km N Renmark at 33°53'S 140°44'E (ANIC).

171. *naumanni* Leclercq

Rhopalum naumanni Leclercq, 1997:81, ♀. Holotype: ♀, Australia: Queensland: Cania Gorge National Park at 24°43'S 150°59'E (ANIC).

172. *navatum* Leclercq

Rhopalum navatum Leclercq, 2002b:72, ♀. Holotype: ♀, Brazil: São Paulo: Estação Biologica de Boracéia (CAS). – Leclercq, 2002b:20 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

173. *neboissi* Leclercq

Rhopalum neboissi Leclercq, 1957b:214, ♀. Holotype: ♀, Australia: Victoria: Nunawading (Nat. Mus. Victoria). – Leclercq, 1957b:184 (in key); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:361 (Australia: Australian Capital Territory and Victoria); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:82 (in revision of Australian *Rhopalum*).

174. *negligens* Leclercq

Rhopalum negligens Leclercq, 2002b:72, ♀. Holotype: ♀, Costa Rica: San José: Zurqui de Moravia (Universidad de Costa Rica). – Leclercq, 2002b:20 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

175. *nemesis* Leclercq

Rhopalum nemesis Leclercq, 2002b:73, ♀, ♂. Holotype: Mexico: Morelos: Cuernavaca (Cornell Univ.). – Leclercq, 2002b:23, 36 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae, as *nemensis*).

176. *nicaraguaense* Cameron

Rhopalum nicaraguaense Cameron, 1904h:66, ♀, actually ♂, see Leclercq, 2002b:73 (as *Nicaraguaense*, incorrect original capitalization). Holotype or syntypes: ♀, Nicaragua: San Marcos (BMNH). – Leclercq, 1950b:7 (listed), 1954c:187 (in catalog of world Crabronini), 1970a:94 and 99 (in key), 103 (revision); R. Bohart and Menke, 1976:389 (listed); Maes, 1989:99 (in catalog of Nicaraguan Sphecidae); Hanson and Menke, 1995:644 (known from Costa Rica); Amarante, 2002:33 (in catalog of Neotropical Crabronidae), 2002b:21, 24, 39 (in key to New World *Rhopalum*), 73 (bibliographic references, locality records from 14 countries, variation); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae). – **As *Euplilis nicaraguaënsis***: Pate, 1947a:7 (new combination, synonymy).

Rhopalum opacum Rohwer, 1914:521, ♂. Holotype: ♂, Guatemala: Quirigua (USNM). Synonymized with *Euplilis nicaraguaense* by Pate, 1947a:7.

177. *nifargum* Leclercq

Rhopalum nifargum Leclercq, 2002b:76, ♀, ♂. Holotype: ♂, Mexico: Chiapas: San Cristóbal de las Casas (CNC). – Leclercq, 2002b:23, 27 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

178. *nipponicum* (Kohl)

Crabro nipponicus Kohl, 1915:342, ♀ (as *Nipponicus*, incorrect original capitalization). Holotype or syntypes: ♀, Japan: Tokyo (NHMW). – Tsuneki, 1947e:429 (Japan: Hokkaido), 1948c:8 (Japan: Hokkaido). – **As *Rhopalum nipponicum***: Iwata, 1933b:13 (new combination, description of ♂, collecting localities from Japan, as *nipponi-*

cus); Iwata, 1938b:37 (nesting habits; as *nipponicus*); Tsuneki, 1952b:113 and 114 (in key), 123 (description); Leclercq, 1954c:189 (in catalog of world Crabronini), 299 (nest and prey records); Tsuneki, 1955b:126 (systematics); Tsuneki and Tanaka, 1955b:25 (Japan: Nikko, 120 km NW Tokyo); Tsuneki, 1960e:58 and 61 (in key; as *nipponicum nipponicum*), 1960g:49 (nesting habits); Tsuneki and Shimoyama, 1963:50 (Japan: Towada Prefecture); Nishino, 1968:25 (Japan); Itami, 1969:51 (Japan: Niigata Prefecture, as *nipponicum nipponicum*); Tsuneki, 1969i:61 (Japan: Fukui Prefecture: Taichôdzi temple); Haneda, 1970:13 (Japan: Akita Prefecture); Suda, 1971:84 (Japan: Chiba Prefecture); Yamada, 1971:36 (Japan: Aichi Prefecture); Nambu, 1975b:77 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Dollfuss, 1989:12 (type material in NHMW); Suda, 2004:42 (Japan: Yamanashi Prefecture, as *nipponicum nipponicum*); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone, as *nipponicum nipponicum*).

spp. *chosenense* Tsuneki

Rhopalum nipponicum chosenense Tsuneki, 1974a:382, ♀, ♂. Holotype: ♂, Korea: South Phenan Province: Sa-gam, 30 km N Pyongyang (TMB). – R. Bohart and Menke, 1976:630 (listed); Tsuneki, 1982b:17 (known from Korea).

Rhopalum nipponicum chosenense Tsuneki, 1991:203, as new subspecies. Nomen nudum.

spp. *hokkaidense* Tsuneki

Rhopalum nipponicum hokkaidense Tsuneki, 1952b:123, ♀, ♂. Lectotype: ♀, Japan: Hokkaido: Sapporo (originally K. Tsuneki coll., now Hyogo Mus.), designated by Hashimoto and Nakanishi, 1997:19 (as holotype, Article 74a). – Tsuneki, 1952b:113 and 114 (in key), 1960e:58 and 61 (in key); Okuno, 1968:31 (Japan, as *hokkaidoense*); Nambu, 1975b:77 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:389 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); S. Takahashi and Haneda, 2008:59 (Japan: Hokkaido: Sapporo).

179. *nordicum* Leclercq

Rhopalum nordicum Leclercq, 1997:82, ♀, ♂. Holotype: ♀, Australia: Northern Territory: 39 km E Alice Springs at 23°41'S 134°15'E (ANIC).

180. *notogeu* Leclercq

Rhopalum notogeu Leclercq, 1957b:216, ♀, ♂. Holotype: ♂, Australia: Western Australia: Dongarra (BMNH). – Leclercq, 1957b:188 (in key); R. Bohart and Menke, 1976:389 (listed); Leclercq, 1979b:361 (Western Australia: 2 mi N Maya); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:82 (in revision of Australian *Rhopalum*).

181. *nuphar* Leclercq

Rhopalum nuphar Leclercq, 2002b:77, ♂. Holotype: ♂, Ecuador: Morona Santiago: Macas (BMNH). – Leclercq, 2002b:39 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

182. *nyngnum* Leclercq

Rhopalum nyngnum Leclercq, 1997:83, ♂. Holotype: ♂, Australia: New South Wales: 25 mi W Nyngan (MCZ)

183. *occidentale* (W. Fox)

Crabro occidentalis W. Fox, 1895a:200, ♀, ♂. Lectotype: ♀, USA: Nevada: no specific locality (ANSP), designated by Cresson, 1928:54. – Dalla Torre, 1897:613 (in catalog of world Sphecidae). – **As *Allognathus occidentalis***: Ashmead, 1899d:220 (new combination, in checklist of North American Crabronidae). – **As *Euplilis occidentalis***: Krombein in Muesebeck et al., 1951:1019 (new combination, listed). – **As *Rhopalum occidentale***: Leclercq, 1954c:187 (new combination, in catalog of world Crabronini); R. Bohart, 1974:257 (revision); R. Bohart and Menke, 1976:389 (listed); Krombein, 1979b:1663 (in catalog of North American Hymenoptera); Finnamore, 1982:137 (in Sphecid Fauna of Southern Quebec); Ahlstrom, 1995:111 (in checklist of insects of North Carolina);

Leclercq, 2002b:15, 33 (in key to New World *Rhopalum*), 78 (bibliographic references, locality records from Canada and USA); Buck, 2004:26 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario), 57 (first record from Ontario: list of localities).

Rhopalum carolina Banks, 1921:17, ♀. Holotype: ♀, USA: North Carolina: n. fork of Swannanoa River in Black Mountains (MCZ). Synonymized with *Rhopalum occidentale* by R. Bohart, 1974:257. – **As *Euplilis occidentalis carolina***: Krombein in Muesebeck et al., 1951:1019 (new combination, new status; New York, North Carolina). – **As *Crabro carolina***: Brimley, 1938:450 (new combination, North Carolina: Black Mountain).

184. *odontodorsale* Li and He

Rhopalum odontodorsale Li and He, 2000b:15, ♀, ♂. Holotype: ♀, China: Sichuan: Emeishan: Jiulaodong (Chinese Acad. Sci.).

185. *okinawanum* Tsuneki

Rhopalum okinawanum Tsuneki, 1990a:97, ♀. Holotype: ♀ Japan: Okinawa: Mount Kuenchizi (originally K. Tsuneki coll., now Hyogo Mus.). – Tano, 1994a:7 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Haneda, 2008:6 (in key to Japanese Crabroninae).

186. *oriolum* Leclercq

Rhopalum oriolum Leclercq, 1957d:350, ♀. Holotype: ♀, Malaysia: Pahang: Cameron Highlands: no specific locality (BMNH). – R. Bohart and Menke, 1976:389 (listed).

187. *ovale* Tsuneki

Rhopalum ovale Tsuneki, 1984f:8, ♂. Holotype: ♂, Philippines: Mindanao Island: Bukidnon: Sungeo (originally K. Tsuneki coll., now). – Tsuneki, 1984f:33 (in key to Crabronini of Philippines); 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, 1995:46 (holotype in K. Tsuneki collection).

188. *pacificum* R. Bohart

As *Euplilis arapaho*: F. Parker and R. Bohart, 1966:94 (California: Davis, Nevada: Verdi; parasite: *Diomorus zabriskiei* Cresson, Torymidae), corrected to *Rhopalum pacificum* by R. Bohart, 1974:258.

Rhopalum pacificum R. Bohart, 1974:258, ♂, ♀. Holotype: ♂, USA: California: Yolo County: Putah Creek near Davis (UCD). – R. Bohart and Menke, 1976:630 (listed); Krombein, 1979b:1663 (in catalog of North American Hymenoptera); Leclercq, 2002b:16, 33 (in key to New World *Rhopalum*), 78 (bibliographic reference).

189. *pallipes* (Lepelletier de Saint Fargeau and Brullé)

Physoscelus pallipes Lepelletier de Saint Fargeau and Brullé, 1835:806, ♀. Holotype or syntypes: ♀, Uruguay: Montevideo (lost: Leclercq, 2002b:78). – Lepelletier de Saint Fargeau, 1845:209 (in revision of world Hymenoptera). – **As *Crabro pallipes***: F. Smith, 1856:393 (new combination, in catalog of Hymenoptera in British Museum); Taschenberg, 1875:381 (Brazil); Dalla Torre, 1897:614 (in catalog of world Sphecidae, as *pallidipes*). – **As *Rhopalum pallipes***: Dahlbom, 1844:291 (new combination, (in revision of Sphecidae and Pompilidae), 1845:510 (in key to *Rhopalum*); Holmberg, 1903:470 (Argentina, Uruguay); Schrottky, 1913a:233 (Argentina, Uruguay; as *pallidipes*); Leclercq, 1954c:186 (in catalog of world Crabronini), 299 (nest and prey records); R. Bohart and Menke, 1976:389 (listed); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:11 (in key to New World *Rhopalum*), 78 (bibliographic reference); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

190. *palmarae* Leclercq

Rhopalum palmarae Leclercq, 2002b:79, ♀, ♂. Holotype: ♂, Bolivia: Cochabamba: Palmar 30 km NNE Tiraque (BMNH). Paratype: Peru. – Leclercq, 2002b:12, 37 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

191. *panicum* Leclercq

Rhopalum panicum Leclercq, 1997:84, ♂. Holotype: ♂, Australia: New South Wales: 100 km SE Broken Hill (ANIC).

192. *parcimonium* Leclercq

Rhopalum parcimonium Leclercq, 1963:68, ♂. Holotype: ♂, Philippines: Luzon: Mt. San Tomas near Baguio (AEI). – Baltazar, 1966:352 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:389 (listed); Tsuneki, 1984f:9 (Philippines), 33 (in key to Crabronini of Philippines).

193. *pedicellatum* Packard

Rhopalum pedicellatum Packard, 1867:380, ♂, ♀. Lectotype: ♀, USA: New York: West Farms (ANSP), designated by Pate, 1943d:15. – Provancher, 1882:134 and 1883:668 (in revision of Canadian Hymenoptera); Cresson, 1887:284 (in catalog of North American Hymenoptera); Ashmead, 1890:32 (in checklist of Hymenoptera of Colorado), 1899d:220 (new combination, in checklist of North American Crabronidae); nec Harrington, 1902:220 (= *Rhopalum coarctatum*) Adlerz, 1904:136 (known prey: *Chironomus*); Peckham and Peckham, 1905:73 (nest and prey); Rohwer, 1908b:258 (in key to *Crabro* of Colorado and New Mexico), 1916b:664 (in catalog of Hymenoptera of Connecticut); Leclercq, 1954c:187 (in catalog of world Crabronini), 299 (nest and prey records); R. Bohart and Menke, 1976:389 (listed); R. Bohart, 1974:259 (revision); Krombein, 1979b:1663 (in catalog of North American Hymenoptera); Ahlstrom, 1995:111 (in checklist of insects of North Carolina); Leclercq, 2002b:16, 33 (in key to New World *Rhopalum*), 80 (bibliographic reference, locality records from USA); Leclercq, 2002:80 (bibliographic reference, locality records from New York and Ohio); Buck, 2004:26 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario); 57 (first record from Canada: Ontario and Quebec: list of localities). – As *Crabro pedicellatus*: W. Fox, 1895:201 (new combination, revision); Dalla Torre, 1897:616 (in catalog of world Sphecidae); Kincaid, 1900a:359 (USA: Washington: Olympia); Brimley, 1938:450 (North Carolina: Raleigh). – As *Solenius pedicellatus*: J.Ch. Bradley, 1928:1021 (new combination, in catalog of New York Sphecidae). – As *Euplilis pedicellatus*: Pate, 1947a:8 (new combination, synonymy); Krombein in Muesebeck et al., 1951:1019 (in catalog of North American Hymenoptera); Evans, 1957b:105 (description of larva); Krombein in Krombein and Burks, 1967:420 (citation of Evans, 1957).

Rhopalum rubrocinctum Peckham and Peckham, 1898:43, ♀. Syntypes: ♀, USA: Wisconsin: Waukesha County: Hartland (USNM). Synonymized with *Euplilis pedicellatus* by Pate, 1947a:8. – Peckham and Peckham, 1905:74 (nest and prey).

Euplilis arapaho Pate, 1947a:8, ♂. Holotype: ♂, USA: Colorado: Larimer County: Cache Le Poudre River Canyon 20 mi W Fort Collins (ANSP). Synonymized with *Rhopalum pedicellatum* by R. Bohart, 1974:259. – Krombein in Muesebeck et al., 1951:1019 (in catalog of North American Hymenoptera); Evans, 1957b:104 (description of larva); nec F. Parker and R. Bohart, 1966:94 (= *Rhopalum pacificum*); Krombein in Krombein and Burks, 1967:420 (citation of Evans, 1957). – As *Rhopalum arapaho*: Leclercq, 1954c:188 (new combination, in catalog of world Crabronini).

As *Rhopalum rufigaster*: Harrington, 1902:220 (Canada: Ontario: Ottawa), corrected to *Rhopalum pedicellatum* by Buck, 2004:76

194. *penongum* Leclercq

Rhopalum penongum Leclercq, 1997:84, ♂. Holotype: ♂, Australia: Southern Australia: 10 km WNW Penong at 31°53'S 132°54'E (ANIC).

195. *pepikum* Leclercq

Rhopalum pepikum Leclercq, 1997:84, ♂. Holotype: ♂, Australia: New South Wales: 100 km SE Broken Hill at 32°51'S 141°37'E (ANIC).

196. *perforator* (F. Smith)

Rhopalum perforator F. Smith, 1876b:483, ♂. Syntypes: New Zealand: Canterbury area (BMNH). – W.F. Kirby, 1881a:41 (in checklist of Hymenoptera of New Zealand), 1884b:69 (in checklist of Hymenoptera of New Zealand); Cameron, 1901:120 (known from New Zealand, as *perforatum*); Hutton, 1904:98 (listed); Leclercq, 1950b:6 (listed), 1954c:184 (in catalog of world Crabronini), 1955k:6 (in key), 16 (redescription); R. Bohart and Menke, 1976:390 (listed); Callan, 1979:36 (New Zealand; available information reviewed); Davies, 1986 (New Zealand: Hawkes Bay); Valentine and Walker, 1991:40 (in catalog of New Zealand Hymenoptera); Harris, 1994:51 (in Fauna of New Zealand, description of mature larva, cocoon, nest). – **As *Crabro perforator***: Hutton, 1881:105 (new combination, listed); Dalla Torre, 1897:618 (in catalog of world Sphecidae).

197. *petiolatum* (Nurse)

Crabro petiolatus Nurse, 1902:88, ♀, ♂. Syntypes: India: Himachal Pradesh: Simla (BMNH). – Ramakrishna Aiyar, 1916:559 (in catalog of Indian aculeates described after Bingham, 1897). – **As *Rhopalum petiolatum***: Leclercq, 1950b:2 (new combination), 1954c:190 (in catalog of world Crabronini); R. Bohart and Menke, 1976:390 (listed).

198. *peterseni* Tsuneki

Rhopalum peterseni Tsuneki, 1976b:117, ♀. Holotype: ♀, Philippines: Tawi Tawi: Tarawakan (ZMK). – Tsuneki, 1984f:7 (Philippines), 33 (in key to Crabronini of Philippines).

199. *pichincae* Leclercq

Rhopalum pichincae Leclercq, 2002b:89, ♀. Holotype: ♀, Ecuador: Pichincha, Santo Domingo, 16 km SE Tinalandia. – Leclercq, 2002b:13 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

200. *piosense* Leclercq

Rhopalum piosense Leclercq, 1997:84, ♂. Holotype: ♂, Australia: Northern Territory: Caranbirini Waterhole 33 km SW Boorooloola at 16°16'S 136°05'E (ANIC).

201. *pitillae* Leclercq

Rhopalum pitillae Leclercq, 2002b:80, ♀. Holotype: ♀, Costa Rica: Guanacaste: Estación Pitilla I km S Santa Cecilia (Universidad de Costa Rica). – Leclercq, 2002b:22 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae, Ecuador incorrectly given as country of origin).

202. *plaumanni* Leclercq

Rhopalum plaumanni Leclercq, 1970a:103, ♀. Holotype: ♀, Brazil: Santa Catarina: Nova Teutonia, 27°11'S, 52°11'W (FSAG). – Leclercq, 1970a:96 (in key); R. Bohart and Menke, 1976:390 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:12, 25 (in key to New World *Rhopalum*), 81 (bibliographic reference, color variation, locality records from Argentina and Brazil); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG).

203. *poecilofemorale* Li and Xue

Rhopalum poecilofemorale Li and Xue, 1998a:79, ♀, ♂. Holotype: ♀, China: Zhejiang: Qinguyan, Baishanzhu (Zhejiang Agricult. Univ.) – Li and He, 2004:1090 (in hymenopterous fauna of Zhejiang Province, China).

204. *popayans* Leclercq

Rhopalum popayans Leclercq, 2002b:81, ♀, ♂. Holotype: ♂, Colombia: Cauca: Popayan (BMNH). Paratypes: Ecuador. – Leclercq, 2002b:22, 37 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

205. *potosium* Leclercq

Rhopalum potosium Leclercq, 1970a:102, ♀. Holotype: ♀, Bolivia: Potosí (FSAG). – Leclercq, 1970a:96 (in key); R. Bohart and Menke, 1976:390 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:11, 15, 25 (in key to New World *Rhopalum*), 82 (locality records from 10 South American countries, variation); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG).

206. *praenatum* Leclercq

Rhopalum praenatum Leclercq, 2002b:83, ♂. Holotype: ♂, Ecuador: Tungurahua (BMNH). – Leclercq, 2002b:38 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

207. *probolognathum* Leclercq

Rhopalum probolognathum Leclercq and Menke, 2000:216, ♂. Holotype: ♂, Papua New Guinea: Morobe District: NE Wau (BISHOP).

208. *pygidiale* R. Bohart

Crabro calceatus Tsuneki, 1947e:430, ♀, ♂, junior primary homonym of *Crabro calceatus* Rossi, 1794. Holotype: ♂, Japan: Hokkaido: Jozankei (originally K. Tsuneki coll., now in Hyogo Mus.). – Tsuneki, 1948c:8 (Japan: Hokkaido); Hashimoto and Nakanishi, 1997:14 (holotype and allotype in Hyogo Mus.). – **As *Rhopalum calceatum***: Tsuneki, 1952b:113, 114 (new combination, key), 123 (redescription); Leclercq, 1954c:189 (in catalog of world Crabronini), 299 (nest and prey records); Tsuneki and Tanaka, 1955b:25 (Japan: Nikko, 120 km NW Tokyo); Tsuneki, Iida, Hirai, and Sabi, 1964:60 (Japan: Aomori Prefecture: Towada); Tsuneki, 1967g:44 (W Japan: Mt. Hyonoson); Itami, 1968a:16 (Japan: Yamagata Prefecture: foot of Mount Iide); Haneda, 1969:70 (Japan: Yamana-shi Prefecture); Itami, 1969:51 (Japan: Niigata Prefecture); Tsuneki, 1969i:62 (Japan: Fukui: Prefecture: Taichōdzi temple); Haneda, 1970:13 (Japan: Akita Prefecture); Tsuneki, 1970f:3 (peculiar variety), 1960e:57, 61 (key), 1960g:50 (nesting habits), 1974a:383 (Korea); Suda, 1971:84 (Japan: Chiba Prefecture); Nambu, 1975b:78 (Japan: Saitama Prefecture); Marshakov, 1976d:109 (in revision of *Rhopalum* of USSR: Russian Far East); Tsuneki, 1982b:17 (known from Korea), 1991:203 (Korea).

Rhopalum pygidiale R. Bohart in Bohart and Menke, 1976:390. Substitute name for *Crabro calceatus* Tsuneki. – Hoshiba and Imai, 1993:467 (chromosome number $n = 13$); Nemkov in Nemkov, Kazenas, Budryns, et Antropov, 1995:426 (in key to Sphecidae of Russian Far East, as *pygidiale*); Haneda and Tano, 2003:12 (Japan: Nagasaki Prefecture: Tsushima); Nozaka and Kurokawa, 2003:56 (Japan: town of Awara: lake side of Kitagata); Tano, Kurokawa, Murota, and Nozaka, 2003:32 (Japan: Nagasaki Prefecture: Tsushima); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:36 (Japan: Gifu Prefecture); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Inoue, Nozaka, Tano, Kurokawa, and H. and T. Murota, 2005:67 (Japan: Fukui Prefecture: Mount Monju); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:52 (Japan: Gifu Prefecture); Nemkov, 2005a:150 (Russia: Sakhalin Island); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2006:28 (Japan: Toyama Prefecture); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone); Haneda, 2008:5, 6 (in key to Japanese Crabroninae); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); S. Takahashi and Haneda, 2008:59 (Japan: Hokkaido: Sapporo); Nemkov, 2009b:95 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia), 2009c:237 (Russia: Primorskiy Krai: Lazovsky Nature Reserve).

209. *quitense* (Benoist)

Crabro quitensis Benoist, 1942:82, ♀, ♂. Syntypes: Ecuador: Rumipamba near Quito (MNHN). – **As *Rhopalum quitense***: Leclercq, 1950b:7 (new combination), 1954c:186 (in catalog of world Crabronini), 298 (nest and prey records), 1970a:94 and 99 (in key), 102 (revision); Leclercq, 1970a:102 (revision); R. Bohart and Menke, 1976:390 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:10, 34 (in key to New World *Rhopalum*), 83 (bibliographic references, locality record from Ecuador); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

210. *rockyense* Leclercq

Rhopalum rockyense Leclercq, 1997:84, ♀, ♂. Holotype: ♀, Australia: Queensland: 11 km ENE Mt. Tozer at 12°43'S 143°18'E (ANIC).

211. *rototum* Leclercq

Rhopalum rototum Leclercq, 1970a:102, ♀. Holotype: ♀, Mexico: Veracruz: Orizaba (FSAG). – Leclercq, 1970a:96 (in key); R. Bohart and Menke, 1976:390 (listed, as *rototum*); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:11 (in key to New World *Rhopalum*), 83 (bibliographic references, locality records from Costa Rica); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:665 (in checklist of Mexican Sphecidae, as *rototum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG).

212. *rondeuxi* Leclercq

Rhopalum rondeuxi Leclercq, 2002b:84, ♀, ♂. Holotype: ♂, Brazil: Santa Catarina: Nova Teutonia (FSAG). – Leclercq, 2002b:16, 27 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG).

213. *rorator* Leclercq

Rhopalum rorator Leclercq, 2002b:86, ♀. Holotype: ♀, Colombia: Putumayo: Villa Garzón (BMNH). Paratypes: Ecuador, Peru. – Leclercq, 2002b:16 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

214. *rossi* Leclercq

Rhopalum rossi Leclercq, 2002b:86, ♂. Holotype: ♂, Peru: 40 mi. S Tingo Maria (CAS). – Leclercq, 2002b:29 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

215. *rubigabdominale* Li and He

Rhopalum rubigabdominale Li and He, 2000b:16, ♀, ♂. Holotype: ♀, China: Sichuan: Emeishan: Xixiangchi (Chinese Acad. Sci.).

216. *rufigaster* Packard

Rhopalum rufigaster Packard, 1867:382, ♀, ♂. Lectotype: ♀, USA: Illinois: no specific locality (ANSP), designated by Cresson, 1928:55. – Provancher, 1882:134 and 1883:669 (in revision of Canadian Hymenoptera); Cresson, 1887:284 (in catalog of North American Hymenoptera); Ashmead, 1899d:220 (new combination, in checklist of North American Crabronidae); nec Harrington, 1902:220 (= *Rhopalum pedicellatum*); Rohwer, 1908b:258 (in key to *Crabro* of Colorado and New Mexico); Leclercq, 1954c:187 (in catalog of world Crabronini); R. Bohart and Menke, 1976:390 (listed); Krombein, 1979b:1664 (in catalog of North American Hymenoptera, list of prey); Finamore, 1982:138 (in Sphecid Fauna of Southern Quebec); Ahlstrom, 1995:111 (in checklist of insects of North Carolina); Leclercq, 2002b:15, 27 (in key to New World *Rhopalum*), 87 (bibliographic references, locality records from Canada and USA); Buck, 2004:26 (in checklist of Crabronidae of Ontario, Canada), 30 (distribution within Ontario), 58 ((first record from Ontario: list of localities). – **As *Crabro rufigaster***: W. Fox, 1895:202 (new combi-

nation, revision); Dalla Torre, 1897:624 (in catalog of world Sphecidae); Brimley, 1938:450 (North Carolina: Raleigh). – **As *Euplilis rufigaster***: Pate, 1947a:10 (new combination, synonymy); Krombein *in* Muesebeck et al., 1951:1019 (in catalog of North American Hymenoptera); Krombein, 1953a: 297 (visiting foliage of *Liquidambar styraciflua*), 337 (North Carolina), 1958b:26 (prey), 1963f:278 (Maryland: Plummers Island near Washington, D.C.); Kurczewski and Kurczewski, 1963:148 (Pennsylvania: Presque Isle State Park); Evans, 1964b:291 (description of larva); Krombein, 1964a:92 (nest, prey, cocoon, life cycle); Krombein *in* Krombein and Burks, 1967:450 (cited papers by Krombein, 1958, 1964, and by Evans, 1964); L. Davis, 1978:216 (North Carolina: Kill Devil Hills, data from Krombein, 1953a).

Rhopalum lucidum Rohwer, 1909e:324, ♀. Holotype: ♀, USA: Pennsylvania: Harrisburg (USNM). Synonymized with *Euplilis rufigaster* by Pate, 1947a:10. – **As *Crabro lucidum***: Brimley, 1942:36 (new combination, North Carolina: Wake County).

217. *rumipambae* Leclercq

Rhopalum rumipambae Leclercq, 1970a:101, ♀, ♂. Holotype: ♀, Ecuador: Rumipamba (MNHN). – Leclercq, 1970a:93–97 (in key); R. Bohart and Menke, 1976:390 (listed); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:17, 32 (in key to New World *Rhopalum*), 87 (bibliographic references, locality records from Ecuador and Peru, additional description); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

218. *runcator* Leclercq

Rhopalum runcator Leclercq, 2002b:88, ♀, ♂. Holotype: ♀, Costa Rica: Puntarenas: Finca Las Cruces 6 km S San Vito de Java (Universidad de Costa Rica). – Leclercq, 2002b:18, 32, 39 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

219. *ruppiatum* Leclercq

Rhopalum ruppiatum Leclercq, 2002b:88, ♀, ♂. Holotype: ♀, Costa Rica: Puntarenas: San Vito, Las Alturas (Universidad de Costa Rica). – Leclercq, 2002b:17, 23, 28 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

220. *rustulum* Leclercq

Rhopalum rustulum Leclercq, 2002b:90, ♀. Holotype: ♀, Costa Rica: Heredia: Vara Blanca, Finca Georgina (Universidad de Costa Rica). – Leclercq, 2002b:17 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

221. *rutans* Leclercq

Rhopalum rutans Leclercq, 2002b:90, ♀. Holotype: ♀, Costa Rica: Puntarenas: Golfo Dudce 3 km S Rincón (Universidad de Costa Rica). – Leclercq, 2002b:17 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

222. *rutrax* Leclercq

Rhopalum rutrax Leclercq, 2002b:90, ♀, ♂. Holotype: ♀, Santa Catarina: Nova Teutonia (BMNH). Paratype: Peru.– Leclercq, 2002b:18, 31 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

223. *saccatum* Leclercq

Rhopalum saccatum Leclercq, 2002b:91, ♂. Holotype: ♂, Costa Rica: Puntarenas: San Vito, Estación Biologica Las Alturas (Universidad de Costa Rica). Paratype: Mexico. – Leclercq, 2002b:28 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

224. *sanluisi* Leclercq

Rhopalum sanluisi Leclercq, 2002b:91, ♀. Holotype: ♀, Costa Rica: Puntarenas, Alta San Luis (LACM). – Leclercq, 2002b:22 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

225. *sauteri* Tsuneki

Rhopalum sauteri Tsuneki, 1977j:290, ♂. Holotype: ♂, Taiwan: Chipchip (TMB). – Hua, 2006:282 (in list of Chinese insects, geographic distribution).

226. *schaffneri* Leclercq

Rhopalum schaffneri Leclercq, 2002b:92, ♂. Holotype: ♂, Mexico: Michoacán: 5 mi SW Paracho (Texas A and M University). – Leclercq, 2002b:26 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

227. *schlingeri* Leclercq

Rhopalum schlingeri Leclercq, 2002b:93, ♀. Holotype: ♀, Colombia: Valle: 6 mi. W Calí (CAS). – Leclercq, 2002b:22 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

228. *seychellense* R. Turner

Crabro oceanicus R. Turner, 1911b:373, ♀, ♂, primary homonym of *Crabro oceanicus* Schulz, 1906. Syntypes: Seychelles: Mahé and Silhouette Islands (BMNH). – **As *Rhopalum oceanicum***: Leclercq, 1950b:4 (new combination, as valid name).

Rhopalum seychellense R. Turner, 1912g:375. Substitute name for *Crabro oceanicus* R. Turner. – Leclercq, 1954c:185 (in catalog of world Crabronini); R. Bohart and Menke, 1976:390 (listed).

229. *shirozui* Tsuneki

Rhopalum shirozui Tsuneki, 1965j:169, ♂. Holotype: ♂, Taiwan: Keito (originally K. Tsuneki coll., now USNM). – nec Tsuneki, 1965j:169, ♀ (= *Rhopalum erraticum*); Tsuneki, 1966d:2 (Taiwan; listed), 12 (Taiwan; ♀), 1968d:58 (Taiwan), 1968g:20 (Taiwan; ♀), 29 (in key to Crabronini of Taiwan and Ryukyus); R. Bohart and Menke, 1976:390 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

230. *simalurensis* Maidl

Crabro simalurensis Maidl, 1925b:391, ♀. Holotype: ♀, Indonesia: Sumatra: Simalur Island W Sumatra (NHMW). – **As *Rhopalum simalurensis***: Leclercq, 1954c:190 (new combination, in catalog of world Crabronini), 1963:70 (Philippines); Baltazar, 1966:352 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:76:390 (listed); Tsuneki, 1984f:6 (Philippines), 31 (in key to Crabronini of Philippines); Dollfuss, 1989:12 (type in NHMW).

231. *sinaloae* Leclercq

Rhopalum sinaloae Leclercq, 2002b:93, ♀, ♂. Holotype: ♀, Mexico: Sinaloa: 15 mi. W El Palmito (CNC). – Leclercq, 2002b:22, 35 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

232. *sinus* Leclercq

Rhopalum sinus Leclercq, 2002b:94, ♀. Holotype: ♀, Costa Rica: Puntarenas: Golfo Dulce 3 km SW Rincón (Universidad de Costa Rica). – Leclercq, 2002b:9 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

233. *smilax* Leclercq

Rhopalum smilax Leclercq, 2002b:95, ♀. Holotype: ♀, Bolivia: Alto Beni at Río Inicua (FSAG). – Leclercq, 2002b:9 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Leclercq, 2007g:195 (holotype in FSAG).

234. *sobrina* Leclercq

Rhopalum sobrina Leclercq, 2002b:95, ♀. Holotype: ♀, Costa Rica: Puntarenas: San Vito, Las Alturas (Universidad de Costa Rica). – Leclercq, 2002b:8 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

235. *sonani* Tsuneki

Rhopalum sonani Tsuneki, 1986:31, ♀. Holotype: ♀, Japan: Tokyo: Kodaira City (Ent. Lab. Min. Agr. For. Japan at Tsukuba, Ibaragi Prefecture); Haneda, 2008:9 (in key to Japanese Crabroninae).

236. *soroanum* (Alayo Dalmau)

Euplilis soroanus Alayo Dalmau, 1968b:5, ♀, ♂. Holotype: ♀, Cuba: Pinar del Río: Soroa (IZAC). – Alayo Dalmau, 1973:192 (in catalog of Cuban Hymenoptera); not listed by Bohart and Menke, 1976; Reyes and Hernández, 1995:3 (holotype in Inst. Ecol. Sist., La Havana, Cuba). – **As *Rhopalum soroanum***: Alayo Dalmau, 1976:17 (new combination, in key to Cuban *Rhopalum*), 32 (in checklist of Cuban Sphecidae); Amarante, 2002:34 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:10, 29 (in key to New World *Rhopalum*), 96 (bibliographic references); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae); Genaro, 2006:54 (in checklist of Cuban Sphecidae and Crabronidae).

237. *spinicollum* Tsuneki

Rhopalum spinicollum Tsuneki, 1968g:24, ♂, ♀. Holotype: ♂, Taiwan: Chiai Prefecture: Fenchihu (originally K. Tsuneki coll., now USNM). – Tsuneki, 1968g:29 (Taiwan; in key to Crabronini of Taiwan and Ryukyus); Haneda, 1971b:33 (Taiwan); Tsuneki, 1971a:27 (Taiwan); Haneda, 1972a:6 (Taiwan); Leclercq, 1973c:301 (Taiwan); R. Bohart and Menke, 1976:390 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

238. *stationis* Leclercq

Rhopalum stationis Leclercq, 2002b:96, ♀. Holotype: ♀, Trinidad: Simla Research Station (FSCA). – Leclercq, 2002b:14 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

239. *stelmanni* Leclercq

Rhopalum stelmanni Leclercq, 1997:85, ♂. Holotype: ♂, Australia: Southern Australia: Brookfield Conservation Park at 34°21'S 139°31'E (ANIC).

240. *subtaeniatum* Leclercq

Rhopalum subtaeniatum Leclercq, 1997:85, ♀. Holotype: ♀, Australia: Northern Territory: Jabaluka Lagoon 14 km N Mudgingarry H.S. at 12°28'S 132°52'E (ANIC).

241. *succineicollare* Tsuneki

Rhopalum succineicollarum Tsuneki, 1952b:120, ♀, incorrect original termination. Holotype: ♀, Japan: Sapporo (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1952b:115 (key); R. Bohart and Menke, 1976:390 (listed); Tano, 1994a:7 (holotype in K. Tsuneki collection). – **As *Rhopalum succineicollare***: Tsuneki, 1956a:68 (new combination, description), 1960e:58, 61 (key), 1960g:50 (nesting habits); Okuno, 1968:31 (Japan); Tsuneki and Tano, 1969:31 (distribution in Japan); Haneda, 1972c:59 (Japan: Fukui Prefecture); Tsuneki, 1972b:14 (description of ♂), 1973b:19 (nesting habits); Nambu, 1975b:77 (Japan: Saitama Prefecture); Tsuneki, 1976b:117 (Philippines; description), 1984f:6 (Philippines), 1984f:7 (Philippines), 32 (in key to Crabronini of Philippines); Hashimoto and Nakanishi, 1997:19 (holotype transferred to Hyogo Mus.); Tano, Kurokawa, Murota, and Nozaka, 2003:32 (Japan: Nagasaki Prefecture: Tsushima); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:37 (Japan: Gifu Prefecture, as *succineicollarum*); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Inoue, Nozaka, Tano, Kurokawa, and H. and T. Murota, 2005:67 (Japan: Fukui Prefecture: Mount Monju, as *succineicollarum*); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:53 (Japan: Gifu Prefecture, as *succineicollarum*), 2006:29 (Japan: Toyama Prefecture, as *succineicollarum*); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone, as *succineicollarum*); Haneda, 2008:5, 7 (in key to Japanese Crabroninae, as *succineicollarum*).

ssp. *taiwanum* Tsuneki

Rhopalum succineicollare taiwanum Tsuneki, 1971a:27, ♀. Holotype: ♀, Taiwan: no specific locality (originally K. Tsuneki coll., now USNM). – Leclercq, 1973c:302 (Taiwan); R. Bohart and Menke, 1976:390 (listed); Tsuneki, 1977j:291 (Taiwan), 1982e:34 (Taiwan); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

242. *sumatrae* Leclercq

Rhopalum sumatrae Leclercq, 1950b:2, ♀. Holotype: ♀, Indonesia: Sumatra: Fort de Kock (Zool. Mus. Amsterdam). – Leclercq, 1954c:190 (in catalog of world Crabronini); R. Bohart and Menke, 1976:390 (listed).

243. *taeniatum* Leclercq

Rhopalum taeniatum Leclercq, 1957b:225, ♀, ♂. Holotype: ♂, Australia: Queensland: Kuranda (BMNH). – Leclercq, 1957b:185 (in key); R. Bohart and Menke, 1976:390 (listed); Cardale, 1985:268 (in catalog of Australian Sphecidae); Leclercq, 1997:86 (in revision of Australian *Rhopalum*).

244. *taipingshanum* Tsuneki

Rhopalum taipingshanum Tsuneki, 1968g:21, ♂. Holotype: ♂, Taiwan: Ilan Prefecture: Mt. Taiping (originally K. Tsuneki coll., now USNM). – Tsuneki, 1968g:29 (in key to Crabronini of Taiwan and Ryukyus); Leclercq, 1973c:302 (Taiwan); R. Bohart and Menke, 1976:390 (listed); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

245. *tayalum* Tsuneki

Rhopalum tayalum Tsuneki, 1966d:16, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Sungkang (Kyushu Univ.). – Tsuneki, 1968d:58 (Taiwan), 1968g:29 (Taiwan; in key to Crabronini of Taiwan and Ryukyus; as *tayarum*); R. Bohart and Menke, 1976:390 (listed); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

246. *tegulatum* Leclercq

Rhopalum tegulatum Leclercq, 1997:86, ♀, ♂. Holotype: ♀, Australia: Southern Australia: 25 km SSW Pinnaroo at 35°28'S 140°47'E (ANIC).

247. tenuiventre (R. Turner)

Crabro tenuiventris R. Turner, 1908:524, ♀. Holotype or syntypes: ♀, Australia: Queensland: Mackay (BMNH). – **As *Rhopalum tenuiventre***: R. Turner, 1915a:86 (new combination, in key to Australian *Rhopalum*); Leclercq, 1950b:4 (listed), 1954c:184 (in catalog of world Crabronini), 1957b:186 (in key), 224 (revision); R. Bohart and Menke, 1976:390 (listed); Leclercq, 1979b:354 (member of subgenus *Rhopalum* s.s.); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:87 (in revision of Australian *Rhopalum*).

248. tepicum Leclercq

Rhopalum tepicum Leclercq, 1957b:226, ♂. Holotype: ♂, Australia: Tasmania: Mount Wellington (BMNH). – Leclercq, 1957b:186 (in key); R. Bohart and Menke, 1976:390 (listed); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:87 (in revision of Australian *Rhopalum*).

249. terzoi Leclercq

Rhopalum terzoi Leclercq, 2002b:96, ♀, ♂. Holotype: ♀, Ecuador: Tungurahua: Baños (BMNH). – Leclercq, 2002b:8, 25 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

250. testaceum R. Turner

Rhopalum testaceum R. Turner, 1917a:108, ♀. Holotype or syntypes: ♀, Australia: Queensland: Kuranda (BMNH). – Leclercq, 1950b:5 (listed), 1954c:183 (in catalog of world Crabronini, redescription), 1957b:183 (in key), 213 (revision); R. Bohart and Menke, 1976:390 (listed); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:88 (in revision of Australian *Rhopalum*); Naumann, 1998:183 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E).

251. tingonum Leclercq

Rhopalum tingonum Leclercq, 2002b:100, ♂. Holotype: ♂, Peru: E Carpish Mts. 40 mi. SW Tingo María (CAS). – Leclercq, 2002b:28 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

252. tongyaii Tsuneki

Rhopalum tongyaii Tsuneki, 1963c:35, ♂. Holotype: ♂, Thailand: Chantaburi (Sasayama Univ.). – R. Bohart and Menke, 1976:390 (listed).

253. transiens (R. Turner)

Crabro transiens R. Turner, 1908:525, ♂. Holotype or syntypes: ♂, Australia: Victoria: no specific locality (BMNH). – **As *Rhopalum transiens***: Leclercq, 1950b:5 (new combination), 1954c:183 (in catalog of world Crabronini), 1957b:183 (in key), 211 (revision); R. Bohart and Menke, 1976:390 (listed); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:88 (in revision of Australian *Rhopalum*).

254. tristani (Pate)

Euplilis tristani Pate, 1947d:3, ♂. Holotype: ♂, Costa Rica: San José (ANSP). – **As *Rhopalum tristani***: Leclercq, 1954c:187 (new combination, in catalog of world Crabronini); R. Bohart and Menke, 1976:390 (listed); H. Allen, 1995:15 (type in ANSP); Hanson and Menke, 1995:644 (known from Costa Rica); Amarante, 2002:33 (in catalog of Neotropical Crabronidae); Leclercq, 2002b:36 (in key to New World *Rhopalum*), 101 (bibliographic references, locality records from Costa Rica, Mexico, and Panama); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

255. tsunekiense Leclercq

Rhopalum tsunekiense Leclercq, 1957d:348, ♂. Holotype: ♂, Malaysia: Kedah Peak (BMNH). – R. Bohart and Menke, 1976:390 (listed).

256. *tubarum* Leclercq

Rhopalum tubarum Leclercq, 1957b:218, ♀, ♂. Holotype: ♂, Australia: Queensland: Brisbane (ANIC). – Leclercq, 1957b:187 (in key); R. Bohart and Menke, 1976:390 (listed); Cardale, 1985:269 (in catalog of Australian Sphecidae); Leclercq 1997:89 (in revision of Australian *Rhopalum*).

ssp. *papuanum* Tsuneki

Rhopalum tubarum papuanum Tsuneki, 1977d:1. ♂. Holotype: ♂, Papua New Guinea: Sattelberg in Huon-Golf (TMB).

257. *tuberculicorne* R. Turner

Rhopalum tuberculicorne R. Turner, 1917a:107, ♂. Holotype or syntypes: ♂, Australia: Queensland: Caloundra (BMNH). – Leclercq, 1950b:5 (listed), 1954c:184 (in catalog of world Crabronini), 1957b:183 (in key), 213 (revision); R. Bohart and Menke, 1976:390 (listed); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:90 (in revision of Australian *Rhopalum*).

258. *tunguræ* Leclercq

Rhopalum tunguræ Leclercq, 2002b:101, ♀, ♂. Holotype: ♂, Ecuador: Tungurahua: Baños (BMNH). – Leclercq, 2002b:24, 28 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

259. *urallæ* Leclercq

Rhopalum urallæ Leclercq, 1997:91, ♀, ♂. Holotype: ♂, Australia: New South Wales: 11 mi S Uralla (KANSAS UNIV.)

260. *vallense* Leclercq

Rhopalum vallense Leclercq, 2002b:102, ♀, ♂. Holotype: ♂, Colombia: Valle: Peñas Blancas 10 km from Cali (FSCA). Paratypes: Costa Rica, Ecuador, Mexico. – Leclercq, 2002b:13, 31 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

261. *varicoloratum* Li and He

Rhopalum varicoloratum Li and He, 1998d:1, 3, ♀, ♂. Holotype: ♀, China: Zhejiang Province: Kaihua: Gutianshan (Zhejiang Agricult. Univ.). – Li and He, 2004:1092 (in hymenopterous fauna of Zhejiang Province, China).

262. *variitarse* R. Turner

Rhopalum variitarse R. Turner, 1915a:89, ♀. Syntypes: ♀, Australia: Tasmania: Mount Wellington and Eaglehawk Neck (BMNH). – R. Turner, 1915a:86 (in key to Australian *Rhopalum*), 1915b:552 (in key), 553 (Tasmania); Leclercq, 1957b:184 (in key), 209 (revision); Leclercq, 1950b:5 (listed), 1954c:184 (in catalog of world Crabronini), 1957b:184 (in key), 209 (revision); Evans and Matthews, 1971a:(nesting habits, prey); R. Bohart and Menke, 1976:390 (listed); Leclercq, 1979b:361 (additional collecting records); Cardale, 1985:269 (in catalog of Australian Sphecidae); McCorquodale and Thomson, 1989:95 (citation of Evans and Matthews, 1971); Leclercq, 1997:91 (in revision of Australian *Rhopalum*).

263. *venustum* Tsuneki

Rhopalum venustum Tsuneki, 1955a:107, ♀. Holotype: ♀, Japan: Fukui Prefecture: Koike (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1960g:50 (nesting habits), 1960e:58, 61 (key); Tsuneki and Shimoyama, 1963:50 (Japan: Towada Prefecture); Tsuneki, 1966a:27 (Japan), 1969e:28 (Japan; as *vanustum*); Haneda, 1968a:46 (Japan); Tsuneki, 1969f:28 (Japan: Kyushu), 1969i:61 (Japan: Fukui Prefecture: Taichôdzi temple); Tsuneki and Tano, 1969:31 (distribution in Japan); Nambu, 1973d:153 (Japan: Saitama Prefecture); Tsuneki, 1973b:18 (nesting habits); Nambu, 1975b:77 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:390 (listed); Tano, 1994a:7

(holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:19 (holotype and allotype transferred to Hyogo Mus.); Takahashi and Shiraishi, 1999:12 (Japan: Ehime Prefecture); Tano, Kurokawa, Murota, and Nozaka, 2003:32 (Japan: Nagasaki Prefecture: Tsushima); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:37 (Japan: Gifu Prefecture); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:53 (Japan: Gifu Prefecture), 2006:29 (Japan: Toyama Prefecture); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone); Haneda, 2008:5, 7 (in key to Japanese Crabroninae); S. Takahashi and Haneda, 2008:60 (Japan: Hokkaido: Sapporo).

264. *verutum* (Rayment)

Dasyproctus verutus Rayment, 1932:171, ♀, ♂. Holotype: ♂, Australia: Victoria: Ferntree Gully (ANIC). – Rayment, 1935:62 (...); Leclercq, 1954c:257 (in catalog of world Crabronini), 316 (nest and prey records); Evans and Matthews, 1971:4 (citation of Rayment, 1932); Leclercq, 1972b:121 (is not a *Dasyproctus*); R. Bohart and Menke, 1976:421 (listed). – As *Rhopalum verutum*: Naumann, 1983a:349 (new combination, redescription); Cardale, 1985:266 (in catalog of Australian Sphecidae); Leclercq, 1997:92 (in revision of Australian *Rhopalum*).

265. *vicosae* Leclercq

Rhopalum vicosae Leclercq, 2002b:103, ♀, ♂. Holotype: ♂, Brazil: Mato Grosso: Vicosa (G. Melo coll.). – Leclercq, 2002b:11, 12, 34 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

266. *vincenti* Leclercq

Rhopalum vincenti Leclercq, 2002b:104, ♀, ♂. Holotype: ♂. Saint Vincent and the Grenadines: Saint Vincent Island: Majorca (CNC). – Leclercq, 2002b:21, 36 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

267. *volcani* Leclercq

Rhopalum volcani Leclercq, 2002b:105, ♀, ♂. Holotype: ♂, Costa Rica: Guanacaste: Sotobosque W Volcán Cacao (Universidad de Costa Rica). – Leclercq, 2002b:19, 27 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

268. *watanabei* Tsuneki

Rhopalum watanabei Tsuneki, 1952b:124, ♂, ♀. Holotype: ♂, Japan: Hokkaido: Jozankei (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1952b:113, 114 (key); Leclercq, 1954c:189 (in catalog of world Crabronini); Tsuneki and Tanaka, 1955b:25 (Japan: Nikko, 120 km NW Tokyo); Tsuneki, 1955d:218 (Kuril Islands), 1960e:58, 61 (key), 1960g:50 (nesting habits); Okuno, 1968:31 (Japan); Tsuneki and Tano, 1969:31 (distribution in Japan); Haneda, 1972a:6 (Taiwan), 1972c:59 (Japan: Fukui Prefecture); Tsuneki, 1973a:23 (synonymy), 1973b:20 (nesting habits); R. Bohart and Menke, 1976:390 (listed); Marshakov, 1976d:109 (in revision of *Rhopalum* of USSR: Russian Far East); Hoshiba and Imai, 1993:468 (chromosome number n = 13); Tano, 1994a:7 (holotype in K. Tsuneki collection); Nemkov in Nemkov, Kazenas, Budrys, et Antropov, 1995:426 (in key to Sphecidae of Russian Far East); Hashimoto and Nakanishi, 1997:19 (holotype and allotype transferred to Hyogo Mus.); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:36 (Japan: Gifu Prefecture); Suda, 2004:42 (Japan: Yamanashi Prefecture); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:53 (Japan: Gifu Prefecture); Nemkov, 2005a:150 (Russia: Sakhalin Island); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2006:28 (Japan: Toyama Prefecture); Nagase, 2006a:55 (Japan: Kanagawa Prefecture: Mount Komagatake near Hakone); Nemkov, 2007b:71 (Russia: Kuril Islands: Kunashir Island); Haneda, 2008:5, 6 (in key to Japanese Crabroninae); Nemkov, 2008b:21 (in catalog of Crabronidae of Asiatic Russia); S. Takahashi and Haneda, 2008:59 (Japan: Hokkaido: Sapporo); Nemkov, 2009b:95 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia).

Rhopalum arasianum Tsuneki, 1972b:16, ♀. Holotype: ♀, Japan: Fukui Prefecture: Arashi (K. Tsuneki coll.). Synonymized with *Rhopalum watanabei* by Tsuneki, 1973a:23.

ssp. *tsuifenicum* Tsuneki

Rhopalum watanabei tsuifenicum Tsuneki, 1972c:8, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Tsuifeng (K. Tsuneki coll.). – R. Bohart and Menke, 1976:390 (listed); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

269. *weipanum* Leclercq

Rhopalum weipanum Leclercq, 1997:92, ♀. Holotype: ♀, Australia: Queensland: 13 km SE Weipa at 12°40'S 143°00'E (ANIC).

270. *wileyi* Leclercq

Rhopalum wileyi Leclercq, 2002b:106, ♂. Holotype: ♂, Venezuela: Merida: Alto Manzano Alton (FSCA). – Leclercq, 2002b:26 (in key to New World *Rhopalum*); Amarante, 2005a:7 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

271. *wonvillei* Leclercq

Rhopalum wonvillei Leclercq, 1997:92, ♀, ♂. Holotype: ♀, Australia: Queensland: 11 km ENE Mt. Tozer at 12°43'S 143°18'E (ANIC).

272. *wusheense* Tsuneki

Rhopalum wusheense Tsuneki, 1973:47, ♂. Holotype: ♂, Taiwan: Nantou Prefecture: Wushe (originally K. Tsuneki coll., now USNM). – R. Bohart and Menke, 1976:390 (listed); Nuhn and Menke, 1994:26 (holotype transferred to USNM); Porter, Stange, and Wang, 1999:11 (in checklist of Sphecidae of Taiwan); Hua, 2006:282 (in list of Chinese insects, geographic distribution).

273. *xenum* Leclercq

Rhopalum xenum Leclercq, 1957b:217, ♀, ♂. Holotype: ♂, Australia: Western Australia: Dongarra (BMNH). – Leclercq, 1957b:187 (in key); R. Bohart and Menke, 1976:390 (listed); Leclercq, 1979b:362 (variation, additional localities); Cardale, 1985:269 (in catalog of Australian Sphecidae); Leclercq, 1997:93 (in revision of Australian *Rhopalum*).

274. *xinjangense* Li and Xue

Rhopalum xinjangense Li and Xue, 1998c:262, ♀. Holotype: ♀, China: Xinjiang Province: Wulumuqui (Zhejiang Agricult Univ).

275. *yallingupae* Leclercq

Rhopalum yallingupae Leclercq, 1997:93, ♀. Holotype: ♀, Australia: Western Australia: Yallingup (BMNH).

276. *yercaudi* Leclercq

Rhopalum yercaudi Leclercq, 1963:69, ♂. Holotype: ♂, India: Tamil Nadu: Yercaud in Shevaroy Hills (originally G.R. Ferguson coll., now CAS). – R. Bohart and Menke, 1976:390 (listed).

277. zamorae Leclercq

Rhopalum zamorae Leclercq, 2002b:107, ♀. Holotype: ♀, Ecuador: Loja: Zamora (BMNH). – Leclercq, 2002b:16 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

278. zethus Leclercq

Rhopalum zethus Leclercq, 2002b:108, ♂. Holotype: ♂, Peru: Amazonas: Lymbamba (BMNH). – Leclercq, 2002b:26 (in key to New World *Rhopalum*); Amarante, 2005a:8 (in addendum to his 2002 catalog of Neotropical Crabronidae and Sphecidae).

279. zelandum Leclercq

Rhopalum zelandum Leclercq, 1955:16, ♀. Holotype: ♀, New Zealand: Kumara, Westland (USNM). – Leclercq, 1955k:6 (in key); R. Bohart and Menke, 1976:390 (listed); Callan, 1979:37 (New Zealand); Valentine and Walker, 1991:40 (in catalog of New Zealand Hymenoptera); Harris, 1994:55 (in Fauna of New Zealand, nest).

sp.

Bischoff and von Schulthess, 1937:170 (Bolivia); Giner Mari, 1945c:857 (India); Tsuneki, 1960e:59 (in key); Leclercq, 1963:63 (*Rhopalum* cf. *domesticum*, Philippines); Bernhardt, 1987:48 (visiting flowers of *Acacia*); Cambra, 1993:16 (Peru: Pakitza, 11°57'S, 71°17'W); Naumann, 1998:184 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); Gonzáles, Gayubo, and Tormos, 2000:20 (Andorra: Santa Coloma); Beardsley and Perreira, 2002:13 (Hawaiian Islands); Cambra and Santos, 2000:54 (Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies); Alves-dos-Santos, 2003:330 (Brazil: University of São Paulo campus); Dollfuss, 2004b:783 (China: Yunnan: Heishui 35 km N Lijiang); Haneda, Nozaka, Tano, Kurokawa, Murota, and Murota, 2007:55 (Japan: Kagoshima Prefecture: Amami Oshima Islands); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007: 46 (Mexico: Tamaulipas).

UNRECOGNIZABLE SPECIES HERE PLACED IN RHOPALUM***Crabro cognatus* (F. Smith)**

As *Physoscelis* [sic] *pallipes* Lepeletier de Saint Fargeau and Brullé, 1835 and *Rhopalum pallipes* (Lepeletier de Saint Fargeau and Brullé) Dahlbom, 1844:294: F. Smith, 1856:393 (in catalog of Hymenoptera in British Museum).

Crabro cognatus F. Smith, 1856:478 (in Addenda et Corrigenda). Substitute name for *Crabro pallipes* of F. Smith, 1856:393. Here tentatively placed in *Rhopalum*. Origin: South America: Montevideo.

NOMINA NUDA IN RHOPALUM

Rhopalum fraternum F. Smith: Walker, 1871:27 (Egypt: Cairo); Innes Bey, 1912:112 (specimens recorded by Walker, 1871, now destroyed by dermestids, were collected at unknown locality).

Corynopus melanoscelis: Casolari and Casolari Moreno, 1980:117 (specimens in M. Spinola collection).

Physoscelus australasiae: Casolari and Casolari Moreno, 1980:121 (specimens in M. Spinola collection).

SPECIES DESCRIBED IN RHOPALUM AND TRANSFERRED TO OTHER GENERA

albipes F. Smith, 1878 = *Podagritus*

albocollare Ashmead, 1904 = *Eupliloides*

aliciae R. Turner, 1915 = *Podagritus*

buddha Cameron, 1889 = *Dasyproctus*

carbonicolor Dalla Torre, 1897 = *Podagritus*
cornigerum Tsuneki, 1977 = *Podagritus*
cygnorum R. Turner, 1915 = *Podagritus*
imbelle R. Turner, 1915 = *Podagritus*
leptospermi R. Turner, 1915 = *Podagritus*
longinodum (Spinola, 1851) = *Podagritus*
magellanicum (Leclercq, 1957) = *Podagritus*
lynchii Holmberg, 1903 = *Podagritus*
ornatipes R. Turner, 1918 = *Crossocerus*
parrotti Leclercq, 1955 = *Podagritus*
patagonicum Holmberg, 1903 = *Podagritus*
quadricolor F.W. Kirby, 1900 = *Dasyproctus*
spinigerum Cameron, 1904 = *Crossocerus*
spinulifer R. Turner, 1918 = *Notocrabro*
swalei Leclercq, 1955 = *Podagritus*