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Catalog of Species in the Polistine Tribe Ropalidiini (Hymenoptera: Vespidae)

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ABSTRACT

A comprehensive catalog of species in the polistine tribe Ropalidiini, which comprises four genera endemic to the Old World (*Ropalidia, Parapolybia, Polybioides*, and *Belonogaster*), is presented. A total of 225 species and subspecies are treated as valid in *Ropalidia*, nine in *Parapolybia*, six (and one variety) in *Polybioides*, and 85 in *Belonogaster*. Lectotypes of 14 species described by Cameron in the Zoölogisch Museum, Amsterdam, and in the Natural History Museum, London, are designated. Lectotypes of three species described by Smith in the Hope Entomological Collections, Oxford, and of one species described by Cheesman in the Natural History Museum, London, are designated. Nomenclatural changes include transfer of *Odynerus jaculator* Smith, 1871, to *Ropalidia*, NEW COMBINATION; and synonymy of *Icaria sericea* Cameron, 1911, with *Ropalidia wollastoni* (Meade-Waldo, 1912), NEW SYNONYMY.

INTRODUCTION

The subfamily Polistinae of the wasp family Vespidae, consisting of more than 800 species in 27 genera (Carpenter, 1996; see also Carpenter et al., 1996), can be divided into four monophyletic tribes (Carpenter, 1993). The tribe Polistini comprises the large cosmopolitan genus *Polistes*; the tribe Mischocyttarini consists only of *Mischocyttarus*, the largest polistine genus, whose distribution is confined to the New World; Ropalidiini includes the four genera endemic to the Old World including Oceania (namely, *Belonogaster*, *Parapolybia*, *Polybioides*, and *Ropalidia*); and Epiponini includes the remaining 21 New World, swarm-founding genera.

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Of the four tribes, Ropalidiini is of special interest from the viewpoint of the evolution of social behavior in wasps because it includes both independent- and swarm-founding species. This suggests that swarm-founding evolved in Ropalidiini and Epiponini independently. Further, Ropalidiini includes the genus *Ropalidia*, which is one of the largest polistine genera, comprising over 180 species, and is the only polistine genus that includes both independent- and swarm-founding species. Thus, swarm-founding evolved at least twice in the tribe Ropalidiini, once in *Ropalidia* and once in *Polybioides* (Carpenter, 1991; Jeanne, 1991). These facts provide an excellent opportunity: detailed comparative studies of social behavior in *Ropalidia* and Ropalidiini as a whole will enable us to better understand the evolution of social behavior in the Polistinae.

Another biological fact of interest for the tribe is its biogeography. Of the four ropalidiine genera, *Ropalidia* is distributed in the greater part of the Old World with a mild climate, *Parapolybia* is restricted to the Asian and Papuan regions, *Polybioides* has a disjunct distributional pattern (namely, in the Indo-Papuan and Ethiopian regions), and *Belonogaster* is Ethiopian and Malagasy with a few species extending into the Indian subcontinent. Such distributional patterns invite biogeographic explanations from the viewpoint of plate tectonics (Carpenter, 1993, 1996).

Studies of either the evolution of social behavior or biogeography should refer to well-corroborated phylogenetic frameworks, which in turn should be established on the basis of thorough taxonomic revisions at the species level. Although monographs on the ropalidiine fauna in some restricted zoological regions are available (van der Vecht, 1941, 1962, 1966; Richards, 1978; Hensen and Blommers, 1987; Das and Gupta, 1989; Giordani Soika, 1991), comprehensive taxonomic studies have not been made on ropalidiine genera except for a monograph on *Belonogaster* by Richards (1982)—which is now out of date (Hensen and Blommers, 1987).

Comprehensive taxonomic studies will be greatly aided by a catalog of the available names, their current status, and the type depositories. While such information for parts of Ropalidiini may be extracted from monographs or catalogs for faunas in certain zoological regions (Bequaert, 1918; van der Vecht, 1941, 1962, 1966; Richards, 1978, 1982; Hensen and Blommers, 1987; Das and Gupta, 1984, 1989; Giordani Soika, 1991), the last catalog that covers all the contemporaneous species that are currently placed in the Ropalidiini is that by Dalla Torre (1904). That work is more than 90 years old, and a large number of species have been described since then. We present here the first comprehensive, modern catalog for the species of Ropalidiini.

The catalog includes all the species-group names of Ropalidiini in the sense of Carpenter (1993). The names are arranged alphabetically in each genus insofar as they are regarded as valid in the most recent citation (unless otherwise noted in brackets). Each name is accompanied by the original citation, followed by synonymies and generic changes, which are arranged chronologically. Other references are listed chronologically under each synonym or generic change, regardless of changes in gender or incorrect spellings (these are indicated in brackets, with a exclamation mark for an incorrect spelling). Where two dates are listed, the first is the true date of publication, while the date listed in parentheses is that printed in the source.[3] In addition to the nomenclatural references, we tried to list as many papers as possible that deal with distribution or with behavioral and ecological studies. Yet, not a few papers on these subjects, such as records of local faunas, those appearing in institu-

[3] For example, Frederick Smith published several papers on the species currently placed in the Ropalidiini in the Journal of the Proceedings of the Linnean Society Zoology. Although some of his reprints and each number of the journal have the actual dates of publication on them, the versions of the journal bound into each volume, which are now available at libraries and were sold to the public, do not have the actual dates (or the list of dates) of publication on them. What is printed for the date of publication of each bound volume is "Journal of the . . . Zoology VOL. I . . . 1857" or something like it on the first page. For citations of this journal, the true date of publication is listed first, and the date printed in the bound version, if different from the true date of publication, is given in parentheses.

tional reports, or in conference proceedings, may have been missed. For behavioral and ecological studies, the first page of a given paper is listed. In the last paragraph for each valid taxon, under DISTRIBUTION, is a summary of distributional data. When distributional records are on continents, they are given according to the countries. However, if the records are from areas such as peninsulas and islands, they are given that way regardless of country.

Museums or institutions where the type specimens are kept are as follows. A code word precedes each address to designate the museum or institution in the present catalog. Typically, the designation is the city in which the collection is located.

Adelaide: South Australian Museum, North Terrace, Adelaide, South Australia 5000, Australia.

Amsterdam: Zoölogisch Museum Amsterdam, Plantage Middenlaan 64, 1018 DH Amsterdam, the Netherlands.

Basel: Naturhistorisches Museum Basel, Augustinergastee 2, CH 4051, Basel, Switzerland.

Berlin: Zoologisches Museum der Humboldt–Universität, 1040 Berlin, Germany.

Brussels: Institut Royal des Sciences Naturelles de Belgique, 29 Rue Vautier, B-1040 Brussels, Belgium.

Calcutta: Zoological Survey of India, 34, Chittaranjan Avenue, Calcutta 700 012, India (including Gupta collection).

Cambridge, U. K.: University Museum of Zoology, Dowing Street, Cambridge, CB3 2EJ, England.

Cambridge: Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts 02138, U.S.A. (including Bequaert collection).

Canberra: Australian National Insect Collection, Division of Entomology, CSIRO, PO Box 1700, Canberra, ACT 2601, Australia.

Chicago: Field Museum of Natural History, Roosevelt Road and Lake Shore Drive, Chicago, Illinois 60605, U.S.A.

Eberswalde: Deutsches Entomologisches Institut, Eberswalde, Finow 1, 1300, Germany.

Gainesville: Townes collection, American Entomological Institute, 3005 SW 56th Avenue, Gainesville, Florida 32608, U.S.A.

Genéve: Museum d'Histoire Naturelle, Case Postale 434, CH-1211 Genéve, Switzerland.

Genova: Museo Civico di Storia Naturale, via Brigata Liguria 9, I-16121 Genova, Italy.

Honolulu: Bernice P. Bishop Museum, P. O. Box 19000A, Honolulu, Hawaii 96817, U.S.A.

Kiel: University of Kiel, Department of Zoology, Kiel, Germany.

Kobenhavn: Universitets Zoologisk Museum, Universitetsparken 15, DK 2100, Kobenhavn, Denmark.

Lawrence: Snow Entomological Museum, University of Kansas, Lawrence, Kansas 66045, U.S.A.

Leiden: Nationaal Natuurhistorisch Museum, Postbus 9517, 2300 RA Leiden, the Netherlands.

Linz: coll. Gusenleitner, Pfitznerstrasse 31, A-4020 Linz/Donau, Austria.

London: The Natural History Museum, Cromwell Road, London SW7 5BD, England.

Melbourne: National Museum of Victoria, 71 Victoria Crescent, Abbotsford, Victoria 3067, Australia.

Oxford: Hope Entomological Collections, University Museum, Parks Road, Oxford OX1 3PW, England.

Paris: Laboratoire d'Entomologie, Museum National d'Histoire Naturelle, 45 rue de Buffon, 75005 Paris, France.

San Francisco: California Academy of Sciences, Golden Gate Park, San Francisco, California 94118, U.S.A.

Sapporo: Systematic Entomology Laboratory, Faculty of Agriculture, Hokkaido University, Sapporo 060, Japan.

Singapore: Zoological Reference Collection, Department of Zoology, National University of Singapore, Kent Ridge, S-0511 Singapore.

Stockholm: Naturhistoriska Riksmuseet (Entomologiska), S-10405 Stockholm, Sweden.

Sydney: Australian Museum, P. O. Box A285, Sydney South, N.S.W. 2000, Australia.

Tervuren: Koninklijk Museum voor Midden-Afrika, Leuvensesleenweg 13, B-3040 Tervuren, Belgium

Torino: Instituto e Museo di Zoologia, Università di Torino, via Accademia Albertina 17, Torino, Italy.

Uppsala: Entomology Department, Zoological Museum, Uppsala University, P. O. Box 561, S-75122 Uppsala, Sweden.

Venezia: Museo Civico di Storia Naturale, S. Croce 1730, Venezia 30135, Italy.

Washington: U. S. National Museum, Washington, D. C. 20560, U.S.A.

Wien: Zoologische Sammlung, Naturhistorisches Museum, Burgring 7, 1040 Wien, Austria.

Wufeng: Taiwan Agricultural Research Institute, 189 Chungcheng Road, Wufeng, Taichung 41301, Taiwan.

Zürich: Entomologisches Institut, Eidgenössische Technische Hochshule, Clausuisstr. 21, CH-8092, Zürich, Switzerland.

Phylogenetic relationships among the genera of Ropalidiini are: (*Ropalidia* + *Parapolybia*) + (*Polybioides* + *Belonogaster*) (Carpenter, 1991, 1993; Wenzel, 1993; Wenzel and Carpenter, 1994). The catalog lists the largest genus *Ropalidia* first, followed by its sister group, *Parapolybia*. The sister group of this clade is then listed, first *Polybioides*, then *Belonogaster*.

DESIGNATION OF LECTOTYPES AND NOMENCLATURAL CHANGES

We expect that quite a few nomenclatural changes and type designations in the genus *Ropalidia* will derive from ongoing work by the senior author. However, because those changes still require further taxonomic studies before they are published, only the following are given in this paper.

Designation of Lectotypes

The lectotypes of the following species are herewith designated. Complete label data for all lectotypes are recorded. We examined all of these types. Although the original descriptions of some of the following species seem to be based on single specimens, the lectotypes are designated for them following recommendation 73F and the article 74b in the present International Code of Zoological Nomenclature (Third edition, 1985).

Ancistrocerus catharinae Cameron, 1913: female – "Waigeoe, 4. I. '10", "Mevr. de Beaufort leg." also with a label on which are "*Ancistrocerus Beauforti* Cam. Type" (in Cameron's handwriting) and "*Icaria* (correction on *Ancistrocerus*) Holotype, sec. J. v. d. Vecht '33" (in van der Vecht's handwriting) (Amsterdam) [probably unique].

Icaria bilineata Cameron, 1905: female – "Tjandi bij Semarang, IV-VI 04 Drescher" also with labels "Cameron coll. 1906–138", "*Icaria bilineata* Cam. Type, Java" (in Cameron's handwriting), and "B.M. TYPE HYM 18.847" (London). Two females with the same collection data are paralectotypes (Amsterdam).

Icaria impetuosa Smith, 1860: female – "Batchian; Amboyna" labeled "Bac" and "Lectotype v. d. Vecht des. 1958" (Oxford). A female with labels "Amb" and "*Icaria impetuosa* (var) Smith" is a paralectotype (Oxford).

Icaria intermedia Cameron, 1905: female – "Tjandi near Semarang, IV-VI 04 Drescher" also with a label on which are "*Icaria intermedia* Cam. Type, Java" (in Cameron's handwriting) and "Holotype sec. J. v. d. Vecht '33" (in van der Vecht's handwriting) (Amsterdam) [probably unique].

Icaria longipetiolata Cameron, 1911: female – "Z. Nieuw Guinea, Lorentz 1909–10, Noord Rivier, IX. 09" also with labels "Nest B?", "*longipetiolata*" (in Cameron's handwriting), "Holotype", "*Icaria longipetiolata* Cam. (1911) Holotype sec. J. v. d. Vecht '33" (in van der Vecht's handwriting) and "*Ropalidia longipetiolata* (Cam.) det. J. v. d. Vecht 1973" (Amsterdam) [probably unique].

Icaria nigra Smith, 1859: female – "Aru" also with labels "Type", "*Icaria nigra* Smith", "*Icaria nigra* Sm." and "Lectotype v. d. Vecht desig. 1958" (Oxford) [probably unique].

Icaria parvimaculata Cameron, 1911, non 1907: female – "Z. Nieuw Guinea Lorentz 1909–10, Heurel Bivak, XI 09, 750 m" also with labels "*parvimaculata*" (in Cameron's handwriting), and "*Icaria parvimaculata* Cam. Holotype sec. J. v. d. Vecht '33" (in van der Vecht's handwriting) (Amsterdam). A female with a label "Z. Nieuw Guinea, Lorentz 1909–10, Bivak Eiland" is a paralectotype (Amsterdam).

Icaria pruinosa Cameron, 1906: female – "Nieuw Guinea Expeditie 1904, Digoel" also with labels "*Icaria pruinosa* Cam. type, New Guinea" (in Cameron's handwriting) and "Holotype sec. J. v. d. Vecht 1933" (in van der Vecht's handwriting) and "*Ropalidia ferruginea* (F.) var. *jucunda* (Cam.). det. J. v. d. Vecht" (Amsterdam), metasomal segments and right forewing lacking [probably unique].

Icaria sericea Cameron, 1911, non 1906: female – "Z. Nieuw Guinea, Lorentz 1909–10, Bivak Eiland, I.10" also with labels "*sericea*" (in Cameron's handwriting), "*Icaria sericea* Cam. 1911 Holotype by design. J. v. d. Vecht 1933" (in van der Vecht's handwriting), "= *wollastoni* M. Waldo, 1912" (in van der Vecht's handwriting) and "*Ropalidia wollastoni* (M. Waldo) = *sericea* (Cam) 1911, nec 1906, det. J. v. d. Vecht 1934" (Amsterdam) [probably unique].

Icaria sexmaculata Cameron, 1911: female – "Z. Nieuw Guinea, Lorentz 1909–10, Bivak Eiland, II '10" also with labels "*6-maculata*" (in Cameron's handwriting), "*Icaria sexmaculata* Cam. Holotype by design. J. v. d. Vecht 1933" (in van der Vecht's handwriting), "*Ropalidia sexmaculata* (Cam.) det. J. v. d. Vecht '34" (in van der Vecht's handwriting) and "Holotype" (Amsterdam). A female with a label "Z. Nieuw Guinea, Lorenz 1909–10, Noord Rivier, X.09" is a paralectotype (Amsterdam).

Icaria spilocephala Cameron, 1906: female – "Nieuw Guinea Expeditie 1904/05, Etna baai" also with a label on which are "*Icaria spilocephala* Cam. Type, New Guinea" (in Cameron's handwriting) and "Holotype sec. J. v. d. Vecht 1933" (in van der Vecht's handwriting) (Amsterdam) [probably unique].

Icaria spilostoma Cameron, 1906: female – "Manokwari, 23 mei 03" also with labels "*Icaria spilostoma* Cam. Type" (in Cameron's handwriting), "B.M. TYPE HYM 18.873a" and "*Ropalidia spilostoma* (Cam.) Lectotype" (in Richards' handwriting) (London). A male with labels "Manokwari, 2 mei 03" and "*Icaria spilostoma* Cam. type, New Guinea" (in Cameron's handwriting) and "alloparatype" (in van der Vecht's handwriting) is the allolectotype, and two males with the same collection data (but a male with "15 mei 03") are paralectotypes (Amsterdam).

Icaria zonata Cameron, 1906: female – "Moaif, 26 VI–4 VII" also with labels on which are "*Icaria zonata* Cam. Type, New Guinea" (in Cameron's handwriting) and "Holotype sec. J. V. d. Vecht 33" (in van der Vecht's handwriting), and "*Ropalidia zonata* (Cam.) det. J. v. d. Vecht 1974" (Amsterdam). Five females with the same collection data are paralectotypes (three in Amsterdam, one in Leiden, and one in London).

Odynerus confraternus Cameron, 1911: female – "Z. Nieuw Guinea, Lorentz 1909–10, Noord Rivier, IX. 09" also with a label on which are "*Odynerus confraternus* Cam. Type" (in Cameron's handwriting) and "*Icaria* (correction on *Odynerus*) Holotype, sec. J. v. d. Vecht 1933" (in van der Vecht's handwriting) (Amsterdam) [probably unique].

Odynerus sariensis Cameron, 1906: female – "Sari 12 II 03" also with a label "*Odynerus sariensis* Cam. Type" (in Cameron's handwriting) and "Holotype sec. J. v.d.Vecht" (in van der Vecht's handwriting) (Amsterdam). Another type is probably in London.

Polybia limatula Smith, 1863: female – "Mysol" labeled "M", "*Polybia limatula* Smith" and "Lectotype desig. J. v. d. Vecht, Aug. 1958" (Oxford).

Polybia papuana Cameron, 1913: female – "Waigeu, 25 XII 09, Mevr. de Beaufort leg" also with a label "*Polybia papuana* Cam. Type" (in Cameron's handwriting) and "Holotype sec. J. v. d. Vecht '33" (in van der Vecht's handwriting) (Amsterdam) [probably unique].

Ropalidia insolens Cheesman, 1952: female – "Dutch New Guinea, Japen Is., Mt. Baduri, 1000 ft. viii. 1938, L. E. Cheesman, B. M. 1938–593" also with labels "Type", "L. E. Cheesman det. 1948, *insolens* Chees." and "B.M. TYPE HYM 18.875" (London).

New Combination

The following generic change is based on an unpublished note by van der Vecht and examination of the type in Oxford.

Ropalidia jaculator (Smith) = *Odynerus jaculator* Smith, 1871 [replacement name for *O. fallax* Smith, 1863, non 1861 and de Saussure, 1852].

CATALOG OF ROPALIDIINI

Genus ***Ropalidia*** Guérin-Méneville

Ropalidia Guérin-Méneville, 1831, *in* Duperrey, Voyage de la Coquille, Zoologie, Atlas, Insectes: pl. 9 fig. 8, genus.
Type species: *Ropalidia maculiventris* Guérin-Méneville, 1831, by monotypy.

Rhopalidia Guérin-Méneville, 1838, *in* Duperrey, Voyage de la Coquille, Zoologie 2, 2e partie, 1ère division: 266. Incorrect spelling of *Ropalidia* Guérin-Méneville. Non *Rhopalidia* Lepeletier, 1836.

Rhopalia Guérin-Méneville, 1838, *in* Duperrey, Voyage de la Coquille, Zoologie 2: 317 (in explanation of plates). Incorrect spelling of *Ropalidia* Guérin-Méneville.

Icaria de Saussure, 1853, Ét. Fam. Vesp. 2: 22, pls. 4 and 5, genus (20 species).
Type species: "*I. maculiventris* (Guer.)" [= *Ropalidia maculiventris* Guérin-Méneville, 1831], by subsequent designation of Bingham, 1897, Fauna Br. India, Hym. 1: 385.

Icharia Gribodo, 1892 (1891), Boll. Soc. Entomol. Ital. 23: 243. Incorrect spelling of *Icaria* de Saussure.

Lit.: van der Vecht, 1941, Treubia 18: 103–190 (revision of Indo-Australian species); 1962, Zool. Verh., Leiden 57: 1–72, 8 pls. (revision of Indo-Australian species). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 49—131 (subgeneric division, revision of Australian species). – Gadagkar, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 149–190 (ethology of independent-founding species).

De Saussure (1862: 130–133) divided his genus *Icaria* into three unnamed sections; Dalla Torre (1904: 72) gave the sections Latin names; and Meade-Waldo (1913: 46) subsequently designated the type species. Bequaert (1918: 247) tried to define divisions in the genus *Ropalidia*, but his definitions were followed by contradiction of the basis for his division (cf. Kojima, 1997). Van der Vecht (1962: 3) recognized three subgenera for the Oriental species, but he did not refer to species in other zoological regions.

Subsequently, Richards (1978) recognized six subgenera in the genus as listed below, and arranged most of the described species in these subgenera. While his subgeneric division is now widely accepted, all six subgenera except *Paraicaria* are so ill-defined that one can hardly decide the subgeneric affiliation of a given species unless the species has already been identified.

Subgenus ***Anthreneida*** White

Anthreneida White, 1841, Ann. Mag. Nat. Hist. (1) 7: 321, genus.
Type species: *Anthreneida coronata* White, 1841 [= *Vespa sumatrae* Weber, 1801], by monotypy.

Anthreneidea de Saussure, 1854, Ét. Fam. Vesp. 2: 235. Incorrect spelling of *Anthreneida* White.

Icariastrum Dalla Torre, 1904, Genera Insectorum 19: 72, name for group I of genus *Icaria* de Saussure *in* de Saussure, 1862, Stettin. Entomol. Ztg. 23: 132 (5 species).
Type species: *Icaria opulenta* Smith, 1857, by subsequent designation of

Meade-Waldo, 1913, Ann. Mag. Nat. Hist. (8) 11: 46.

Subgenus ***Icarielia*** Dalla Torre

Icarielia Dalla Torre, 1904, Genera Insectorum 19: 72, name for group II of genus *Icaria* de Saussure *in* de Saussure, 1862, Stettin. Entomol. Ztg. 23: 132 (9 species).
Type species: *Icaria flavopicta* Smith, 1857, by subsequent designation of Meade-Waldo, 1913, Ann. Mag. Nat. Hist. (8) 11: 46.
Icariella Dalla Torre, 1904, Genera Insectorum 19, Index: 96. Incorrect spelling of *Icarielia* Dalla Torre.

Subgenus ***Icariola*** Dalla Torre

Icariola Dalla Torre, 1904, Genera Insectorum 19: 72, name for group III of genus *Icaria* de Saussure *in* de Saussure, 1862, Stettin. Entomol. Ztg. 23: 133 (11 species).
Type species: *Icaria gregaria* de Saussure, 1853, by subsequent designation of Meade-Waldo, 1913, Ann. Mag. Nat. Hist. (8) 11: 46.
Zuba Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 3 (key), 23, subgenus of *Ropalidia* (14 species). Unavailable: no type species designated.
Zuba Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57; validation by type selection of *Zuba* Cheesman.
Type species: *Icaria gregaria* de Saussure, 1853, by original designation.

Subgenus ***Paraicaria*** Gribodo

Paraicaria Gribodo, 1892 (1891), Boll. Soc. Entomol. Ital. 23: 248, genus.
Type species: *Paraicaria bicolor* Gribodo, 1892 [= *Ropalidia bicolorata* van der Vecht, 1962, replacement name], by monotypy.

Subgenus ***Polistratus*** Cameron

Polistratus Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 59, genus.
Type species: *Polistratus cariniscutis* Cameron, 1906 [= *Icaria brunnea* Smith, 1858], by monotypy.

Subgenus ***Ropalidia*** Guérin-Méneville

See genus *Ropalidia* Guérin-Méneville.

Species list

Partly because Richards (1978) did not treat all the described species when he arranged the species in the subgenera, but mainly because the subgenera of *Ropalidia* are not, at present, defined phylogenetically or supported by well-corroborated characters, we arrange the *Ropalidia* species alphabetically, not according to subgenus.

aethiopica aethiopica (du Buysson)
Icaria aethiopica du Buysson, 1907, Rev. Entomol. 25: 110, female, male – "Ethiopie méridionale: Dirouhoria" (Paris).
?*Icaria africana* Cameron, 1910, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Vesp.: 170, female – "*Kilimandjaro:* Kibonoto, 1000–1200 m" (?Stockholm). – Meade-Waldo, 1913, Ann. Mag. Nat. Hist. (8) 11: 53 (syn. of *R. distigma* (Gerstaecker)). – von Schulthess, 1913, Ark. Zool. 8 (17): 13 (syn. of *R. cincta* (Lepeletier)).
Ropalidia aethiopica; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 338 (cat.; distr.; syn.: ?*Icaria africana* Cameron). – Giordani Soika, 1952 (1951), Riv. Biol. Colon. 11: 88 (distr.); 1957, Br. Mus. (Nat. Hist.) Exp. S. W. Arabia 1937–38, 1 (31): 484 (distr.); 1961, S. Afr. Anim. Life 8: 449 (distr.). – Richards, 1985 (1984), Fauna Saudi Arabia 6: 434, fig. 9 (in subgenus *Icariola*; distr.).
Ropalidia africana; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 338 (? syn. of *R. aethiopica* (du Buysson)).
DISTRIBUTION: Saudi Arabia; Yemen; Sudan; Ethiopia; Somalia; Tanzania; South Africa (Northern Cape).

aethiopica bimaculata Giordani Soika
Ropalidia aethiopica bimaculata Giordani Soika, 1981, Boll. Soc. Entomol. Ital. 113: 172, 175, male, female – "Tanza-

nia: Dar es Salaam" (holotype female Monaco); also from Ethiopia.
DISTRIBUTION: Ethiopia; Tanzania.

anarchica (de Saussure)
Icaria anarchica de Saussure, 1853, Ét. Fam. Vesp. 2: 34, pl. 5 fig. 4, female – "Madagascar" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 121 (female). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.). – Bingham, 1898, J. Bombay Nat. Hist. Soc. 12 (1): 110. – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 214. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).
Ropalidia anarchica; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (cat.; distr. [erroneously recorded from Southern Arabia]). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 81 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 297, figs. 22–25 (larva). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 82 (distr.), 86, 87 (key).
DISTRIBUTION: Madagascar.

andamanensis Das and Gupta
Ropalidia andamanensis Das and Gupta, 1984 (1983), Orient. Insects 17: 415. Nomen nudum.
Ropalidia andamanensis Das and Gupta, 1989, Orient. Insects Monogr. 11: 112 (key), 139, figs. 24c, 26K, 26k, 28b, 28n, map 22, female (in *sumatrae* group of subgenus *Anthreneida*) – "India: Andamans: Port Blair" (Calcutta).
DISTRIBUTION: India (Andamans).

antennata (de Saussure)
Icaria antennata de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 136, footnote, female, male – "côte de Mozambique" (?Zürich). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.). – von Schulthess, 1899, Bull. Soc. Vaud. Sci. Nat. (4) 35: 270 (distr.). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).
Ropalidia antennata; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (cat.; distr.).
DISTRIBUTION: Mozambique.

aristocratica (de Saussure)
Icaria aristocratica de Saussure, 1853, Ét. Fam. Vesp. 2: 37, female -- "Les Indes Orientales. Pulo-Pinang" (Torino). – Smith, 1857, Cat. Hym. Br. Mus. 5: 97 (cat.); 1871, J. Proc. Linn. Soc. Zool. 11: 378 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 387 (key), 391 (female; distr. ["Pulo-Penang" should be "Pinang"]) [records from India and Myanmar based on misdeterminations]. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.) [erroneously recorded from India].
Ropalidia aristocratica; Dover, 1929, Bull. Raffles Mus. 2: 47 (distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 328.
Ropalidia aristocratica aristocratica; van der Vecht, 1962, Zool. Verh., Leiden 57: 44 (in subgenus *Icarielia*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55, 58 (in subgenus *Icariola*; nest; list). – Das and Gupta, 1984 (1983), Orient. Insects 17: 426 (in subgenus *Icarielia*; cat.); 1989, Orient. Insects Monogr. 11: 113 (key), 149 (in subgenus *Icarielia*).
DISTRIBUTION: Thailand; Malay Peninsula; Sumatra.

artifex artifex (de Saussure)
Icaria variegata Smith; de Saussure, 1853, Ét. Fam. Vesp. 2: 25 (description of female from Java).
Icaria artifex de Saussure, 1854, Ét. Fam. Vesp., 2: 236, female – "Java" (Genève, Torino) [de Saussure first described this species under the name *variegata* Smith, but after having come to the conclusion the species was not identical with *variegata* of Smith, he gave it the name *artifex*]. – Smith, 1857, Cat. Hym. Br. Mus. 5: 98 (cat.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.; syn: ?*Polistes bioculata* Fabricius, *Icaria variegata* de Saussure) [According to van der

Vecht, 1941, the record "New Cambria" is erroneous, as is also the synonymy: "?*Pol. bioculata* F."]. – Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 495 (?male). – Rothney, 1903, Trans. R. Entomol. Soc. London 1903: 107. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.) [erroneously recorded from India].

Ropalidia artifex; Dover, 1931 (1930), J. Fed. Mal. St. Mus. 16: 257.

Ropalidia artifex artifex; van der Vecht, 1941, Treubia 18: 110 (key), 134, male (in *stigma* group; distr.; "*R. artifex* was not recognized since 1853 and the species recorded under this name by various authors are either *R. stigma* or *R. mathematica*"); 1962, Zool. Verh., Leiden 57: 21 (in subgenus *Anthreneida*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (in subgenus *Icariola*; nest). – Das and Gupta, 1984 (1983), Orient. Insects 17: 416 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 111 (key), 124, map 17 (in *stigma* group of subgenus *Anthreneida*).

DISTRIBUTION: Myanmar; Malay Peninsula; Borneo; Java.

artifex fuscata van der Vecht

Ropalidia artifex var. *fuscata* van der Vecht, 1941, Treubia 18: 136, female, male – "N. Sumatra, Toba Lake" (holotype female Leiden); also from Malay Peninsula, Borneo.; 1962, Zool. Verh., Leiden 57: 22 (distr.; biology).

Ropalidia artifex fuscata; Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (nest). – Itô, 1993, Behav. Soc. Evol. Wasps: 20 (ethology).

Ropalidia artifex; Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key).

DISTRIBUTION: Malay Peninsula; Sumatra; Borneo.

atra (de Saussure)

Icaria atra de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 119, female – "*Madagascar* . . . dans le Sud-Est" (unique Genève). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 215. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia atra; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85, 87 (key).

DISTRIBUTION: Madagascar.

australis (de Saussure)

Icaria australis de Saussure, 1853, Ét. Fam. Vesp. 2: 24, pl. 34 fig. 5, female – "Dorey. Nouvelle-Guinée" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 95 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.); 1904, Genera Insectorum 19: 73 (cat.). – Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 62 (distr.). – Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 448 (distr.).

Ropalidia australis; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

DISTRIBUTION: New Guinea.

bambusae Richards

Ropalidia bambusae Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest), 57 (list), 65 (larva in key), 122 (key), 123, female, male, nest (in subgenus *Polistratus*) – "**New Guinea**: Morobe District, Wau" (holotype female London). – Kojima and Spradbery, 1987, Kontyû 55: 603, figs. 9–17 (larva). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 648 (colony population; nest). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 350 (colony population). – Kojima and Kojima, 1994, Tropics 4: 49 (caste differentiation). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Polistratus*; morphology).

DISTRIBUTION: Eastern New Guinea.

bensoni Richards

Ropalidia bensoni Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (nest), 59 (list), 65 (larva in key), 129 (key), 130, female, larva, nest (in subgenus *Icarielia*) – "**New Guinea:** Morobe district, Wau" (London). – Kojima and Spradbery, 1987, Kontyû 55: 604, figs. 18–27 (larva). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 640 (biology; nest). –

Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 350 (colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 328; 1996, Zool. Meded., Leiden 70: 350.

DISTRIBUTION: Eastern New Guinea.

bicincta (de Saussure)

Icaria bicincta de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114 (key), 136, pl. 4 figs. 3, 3b, pl. 18 fig. 20, pl. 22 fig. 2, female, male, ethology – "*Madagascar . . . Nosibé*" (Genève). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 218, 232 (female, male). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia bicincta; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 82 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (in subgenus *Icariola*; nest). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 87 (key), fig. 16.

DISTRIBUTION: Madagascar.

bicolor (Smith)

Icaria bicolor Smith, 1865, J. Proc. Linn. Soc. Zool. 8: 90, female – "New Guinea" (Oxford). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia bicolor; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Cheesman, 1952, Ann. Mag. Nat Hist. (12) 5: 2, 7 (redescription of the type). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list).

DISTRIBUTION: New Guinea.

bicolorata bicolorata van der Vecht

Paraicaria bicolor Gribodo, 1892 (1891), Boll. Soc. Entomol. Ital. 23: 249, female – "Chan-Yoma (Alta Birmania)" (Genova); preoccupied by *Ropalidia bicolor* (Smith) (= *Icaria bicolor* Smith, 1865). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 376, 392 (fig.; distr.; ethology: ". . . makes a very large *Polybia*-like nest."). – Dalla Torre, 1904, Genera Insectorum 19: 75 (cat.).

Ropalidia bicolorata bicolorata van der Vecht, 1962, Zool. Verh., Leiden 57: 38 (key), 39 (in subgenus *Paraicaria*; taxonomy; distr.). Replacement name for *bicolor* (Gribodo), junior secondary homonym of *Ropalidia bicolor* (Smith, 1865). – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 96, pl. 3 fig. 10 (in subgenus *Paraicaria*); 1982, Zool. Res. 3: 86 (in subgenus *Paraicaria*; distr.) [error: author Gribodo, 1892]. – Das and Gupta, 1984 (1983), Orient. Insects 17: 428 (in subgenus *Paraicaria*; cat.). – Lee, 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 54, pl. 3 fig. 10 (in subgenus *Paraicaria*; female; distr.) [error: author Gribodo, 1892]; 1987, *in* Forest Insects Yunnan: 1349 (in subgenus *Paraicaria*; key) [error: author Gribodo]. – Das and Gupta, 1989, Orient. Insects Monogr. 11: 110, 153 (key), 154, map 26 (in subgenus *Paraicaria*; distr.) [error: "*bicolorata shiva*" in map 26 should read "*bicolorata bicolorata*"].

Ropalidia bicolorata; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55, 59 (in subgenus *Paraicaria*; comment on the note on the nest by Bingham, 1897; list). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Paraicaria*; morphology).

DISTRIBUTION: Myanmar; Thailand; China (Yunnan).

bicolorata parvula van der Vecht

Ropalidia bicolorata parvula van der Vecht, 1962, Zool. Verh., Leiden 57: 38 (key), 39, female – "North Borneo, Bettotan near Sandakan" (London). – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 95, pl. 3 fig. 1 (in subgenus *Paraicaria*); 1982, Zool. Res. 3: 86 (in subgenus *Paralidia* [!]; distr.); 1985, Econ. Insect. Fauna China 30 Hym.: Vespoidea: 46 (key), 54, pl. 3 fig. 1 (in subgenus *Paraicaria*; female; distr.); 1987,

in Forest Insects Yunnan: 1349 (in subgenus *Paraicaria*; key). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 153 (key), 155 (in subgenus *Paraicaria*).

DISTRIBUTION: Borneo.

bicolorata shiva Das and Gupta

Ropalidia bicolorata shiva Das and Gupta, 1984 (1983), Orient. Insects 17: 428. Nomen nudum.

Ropalidia bicolorata shiva Das and Gupta, 1989, Orient. Insects Monogr. 11: 153 (key), 154, map 26 [error: "*bicolorata bicolorata*" in map 26 should read "*bicolorata shiva*"], female (in subgenus *Paraicaria*) – "India: Tripura: Dharamnagar" (Calcutta); also from Assam, Manipur.

DISTRIBUTION: India (Assam, Manipur, Tripura).

bidens van der Vecht

Ropalidia bidens van der Vecht, 1996, *in* van der Vecht and Kojima, Zool. Meded., Leiden 70: 99, female, male – "N. W. New Guinea, Klamono Oilfds [1°08'S, 131°30'E]." (holotype female Leiden).

DISTRIBUTION: Northwestern New Guinea.

binghami binghami van der Vecht

Icaria sumatrae (Weber); Bingham, 1897. Fauna Br. India, Hym. 1: 387 (key), 389 (misidentification; not *Vespa sumatrae* Weber).

Ropalidia binghami van der Vecht, 1941, Treubia 18: 109 (key), 113, male – "Luang Prabang, Hat Thoun" [Laos] (London); also from Myanmar, Tenasserim (Mergui). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Kojima, 1996, Zool. Meded., Leiden 70: 350.

Ropalidia binghami binghami; van der Vecht, 1962, Zool. Verh., Leiden 57: 8 (in subgenus *Anthreneida*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 416 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 110 (key), 114, map 14 (in *marginata* group of subgenus *Anthreneida*; ref.).

?*Ropalidia sumatrae sumatrae*; Lee, 1982, Hornets from Agric. Regions China: 83 (key), 88, pl. 3 fig. 5 (in subgenus *Anthreneida*); 1985, Econ. Insect. Fauna China, 30 Hym.: Vespoidea: 46 (key), 50, pl. 3 fig. 5 (in subgenus *Anthreneida*; female, male; distr.).

DISTRIBUTION: Myanmar; Thailand; ?China.

binghami wegneri van der Vecht

Ropalidia binghami wegneri van der Vecht, 1962, Zool. Verh., Leiden 57: 8, female – "East Borneo, Samarinda, 50 m, Muara Kaman" (Leiden).

DISTRIBUTION: Borneo.

bipartita van der Vecht

Ropalidia flavopicta bipartita van der Vecht, 1962, Zool. Verh., Leiden 57: 58 (key), 61, female (in subgenus *Icarielia*) – "Luzon: Mountain Province, . . . Mt. Polis, . . . 5500 ft." (Gainesville). – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Icarielia*; cat.).

Ropalidia bipartita; Kojima, 1982, Kontyû 50: 109 (key), 111 (in subgenus *Icarielia*; female); 1996, Zool. Meded., Leiden 70: 326, 341, figs. 89, 90, 92–97 (taxonomy; distr.).

DISTRIBUTION: Luzon I.

bispinosa (Meade-Waldo)

Icaria bispinosa Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 448 (key), 449, female (in subgenus *Icariastrum*) – "Mimika River" [New Guinea] (London).

Ropalidia fasciata bispinosa; Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 9.

Ropalidia bispinosa; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list).

DISTRIBUTION: Northwestern New Guinea.

brazzai (du Buysson)

Icaria brazzai du Buysson, 1906, Rev. Entomol. Caen 25: 110, female – "Congo, Lékéti" (Paris).

Ropalidia brazzai; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (cat.; probable syn. of *R. guttatipennis* (de Saussure); distr.). – Giordani Soika, 1977, Steenstrupia 4: 125, 128, fig. 1 (distinct species, compared to *R. excavata* n. sp.; distr.).

DISTRIBUTION: Cameroon; Congo.

brevita Das and Gupta

Ropalidia spatulata van der Vecht 1962, Zool. Verh., Leiden 57: 9 [partim].

Ropalidia brevita Das and Gupta, 1984 (1983), Orient. Insects 17: 416. Nomen nudum.

Ropalidia brevita Das and Gupta, 1989, Orient. Insects Monogr. 11: 110 (key), 121, map 16, male, female (in *marginata* group of subgenus *Anthreneida*) – "India: Dehli: University Ridge" (holotype male Calcutta); also from Uttar Pradesh, Himachal Pradesh, Sikkim, West Bengal, Assam, Orissa, Karnataka, Kerala.

DISTRIBUTION: India.

brunnea (Smith)

Icaria brunnea Smith, 1859, J. Proc. Linn. Soc. Zool. 3: 167, female – "Aru" (London); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (*brunea* [!]; cat.); 1904, Genera Insectorum 19: 73 (*brunea* [!]; cat.).

Polistratus cariniscutis Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 59, female – "Manokwari" (unique "Manokwari, [2] May 03" Amsterdam) [also with a label on which are "*Polistratus cariniscutis* Cam. Type, New Guinea" (in Cameron's handwriting) and "Holotype by designation J. van der Vecht 1933" (in van der Vecht's handwriting)]. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *R. brunnea* (Smith)).

Ropalidia brunnea; Bequaert, 1932, Rés. scient. Voy. Leopold 4(5): 51. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 14 (redescription of type) [error: year of publication 1864]. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Polistratus*; list; syn.: *cariniscutis* (Cameron), *alleni* Cheesman) [*alleni* as syn., apparently by error], 121 (key).

Ropalidia brunnea var. *cariniscutis*; van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8.

Ropalidia cariniscutis; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 121 (syn. of *R. brunnea* (Smith)).

DISTRIBUTION: New Guinea (Aru, Misool).

canaria Cheesman

Ropalidia canaria Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 19, male – "Papua, Kokoda" (London). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: New Guinea.

capensis (de Saussure)

Icaria capensis de Saussure, 1862, Stettin. Entomol. Ztg. 23: 139, female – "le Cap de Bonne Espérance" (Leiden). – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 125 (compared to *I. ambigua* n. sp.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.). – Cameron, 1905, Trans. S. Afr. Philos. Soc. 25 (4): 230 (male); 1910, Ann. Transvaal Mus. 2 (3): 155.

Icaria ambigua Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 124, female – "Mozambico . . . fiume Magnarra" (unique ?Genova). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat). – du Buysson, 1914, *in* Voy. Alluad et Jeannel, Afr. Or., Rés. Sci., Ins. Hym., 3, Vesp.: 155 (ethology). – Schouteden, 1919, Rev. Zool. Afr. 6: 187 (*Rhopalidia* [!]; distr.).

Ropalidia ambigua; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 338 (cat.; distr.), 339 (probable syn. of *R. capensis* (de Saussure)).

Ropalidia capensis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 249 (key), 250, 339, figs. 241–242 (cat.; probable syn.: *Icaria ambigua* Gribodo; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 187 (*Rhopalidia* [!]; distr.). – Giordani Soika, 1935, Mem. Estud. Mus. Zool. Univ. Coimbra (1) 82: 15 (distr.); 1944, Atti Inst. Veneto Sci., Lett. Arti, Cl. Sci. Mat. Nat. 103 (2): 176 (compared to *R. novissima* n. sp.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest, list; syn.: *ambigua* (Gribodo)). – Giordani Soika, 1981, Boll. Soc. Entomol. Ital. 113: 172 (compared to *R. crassipunctata* n. sp.).

– Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Gabon; Zaire; Tanzania; Mozambique; South Africa (Cape Province, Transvaal).

carinata (de Saussure)

Icaria carinata de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 122, female, male – "*Madagascar*" (Genève). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 215, 222 (female, male). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903—1905, Wiss. Ergebn. 2 (2): 64.

Ropalidia carinata; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 82 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 298, figs. 39–43 (larva). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85 (key).

DISTRIBUTION: Madagascar.

catharinae (Cameron)

Icaria catharinae Cameron, 1913, Bijdr. Dierkd. 19: 77, female – "Waigeu" (Amsterdam). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 ("All the species published with the specific name "*catharinae*" in Cameron's paper . . . (. . ., 1913) bear labels with the specific name "*beauforti*" on the type-specimens"). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8.

Ropalidia catharinae; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

DISTRIBUTION: New Guinea.

celebensis van der Vecht

Ropalidia celebensis van der Vecht, 1941, Treubia 18: 111 (key), 170, female – "S. Celebes: . . . Bantoe Batoe District, Latimodjong Mts." (Cambridge). — Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: Sulawesi.

cincta (Lepeletier)

?*Polistes punctum* Fabricius, 1804, Syst. Piez.: 273 – "nova Cambria" (Kobenhavn).

Epipona cincta Lepeletier, 1836, Hist. Nat. Ins. Hym. 1: 541, female – "Sénégal, Afrique equinoxiale" (coll. Serville; current depository unknown).

Icaria cincta; de Saussure, 1853, Ét. Fam. Vesp. 2: 39, pl. 5 fig. 9 (female, male). – Smith, 1857, Cat. Hym. Br. Mus. 5: 97 (cat.). – de Saussure, 1863, Mém. Soc. Phys. Hist. Nat. Genève 17: 234 (male). – Gerstaecker, 1871, Arch. Naturgesch. 37 (2): 351; 1873, *in* v. d. Decken's Reisen in Ost-Afrika 3 (2), Gliederth.: 324. – Walker, 1871, List Hym. Egypt: 40. – Schletterer, 1891, Ann. Soc. Entomol. Belg. 35: 28. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 125 (compared to *I. ambigua* n. sp.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 333. – Stadelmann, 1898, Dtsch. Ost-Afrika 4, Hym.: 33. – Magretti, 1898, Ann. Mus. Civ. Stor. Nat. Genova (2) 19 (= 39): 35. – Bingham, 1898, J. Bombay Nat. Hist. Soc. 12 (1): 110. – von Schulthess, 1899, Bull. Soc. Vaudoise Sci. Nat. (4) 35: 269 (distr.). – Bingham, 1903, Ann. Mag. Nat. Hist. (7), 12: 48. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – Morice, 1904, Res. Swed. Zool. Exp. Jägerskiöld (1), Hym. Acul.: 6. – Zavattari, 1907, Boll. Mus. Zool. Anat. Comp. Torino 22 (548): 2. – Bingham, 1909, Trans. Zool. Soc. London 19, 2: 182. – Cameron, 1910, Ann. Transvaal Mus. 2 (3): 155. – von Schulthess, 1912, Wiss. Ergebn. D. Z. Afr. Exp. (1907–08) 4, Lf. 10: 291; 1914, Dtsch. Entomol. Z.: 290. – du Buysson, 1914, *in* Voy. Alluad. et Jeannel, Afr. Or., Rés. Sci., Ins. Hym., 3, Vesp.: 156. – Roubaud, 1916, Ann. Sci. Nat. Zool. (10) 1 (1): 140, fig. 32 (ethology). – von Schulthess, 1923, *in* Michaelsen, Beitr. Kennt. Land- und Süs-

swasserfauna Deutsch-Südwestafrikas 2 (2): 135 (distr.); 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Guiglia, 1928 (1925–26), Ann. Mus. Civ. Stor. Nat. Genova 52: 493 (distr.).

Icaria xanthura; Magretti, 1884, Ann. Mus. Civ. Stor. Nat. Genova (2) 1 (= 21): 606 [misidentification; not *Icaria xanthura* de Saussure, 1853]. – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 333 (*Icaria xanthura* sensu Magretti treated as homonym of *Icaria xanthura* de Saussure).

Icaria tricinctella Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 333, female, male – "Mozambico: ... Lourenso-Marquez (?Genova). – Magretti, 1898, Ann. Mus. Civ. Stor. Nat. Genova (2) 19 (= 39): 595. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 340 (syn. of *R. cincta* (Lepeletier)).

Ropalidia cincta; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 250 (key), 251, 340, figs. 247, 248 (cat.; syn.: *Icaria xanthura* Magretti, *I. tricinctella* Gribodo; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 187 (*Rhopalidia* [!]; distr.). – Salt, 1927, Psyche 34: 185 (record of stylopized specimen). – Salt and Bequaert, 1929, Psyche 36: 263 (record of stylopized specimen). – Scott, 1933, Ann. Mag. Nat. Hist. 12: 120 (distr.). – Giordani Soika, 1935, Mem. Estud. Mus. Zool. Univ. Coimbra (1) 82: 15 (distr.); 1940 (1939), Mem. Soc. Entomol. Ital. 17: 100 (distr.). – FitzGerald, 1940, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 15: 35 (distr.; nest). – Giordani Soika, 1952 (1951), Riv. Biol. Colon. 11: 88 (distr.). – van der Vecht, 1959, Arch. Neerl. Zool. 13, Suppl.: 245 (?syn. of *R. punctum* (Fabricius)). – Girodani Soika, 1961, S. Afr. Anim. Life 8: 449 (distr.). – Richards, 1969, Mem. Soc. Entomol. Ital. 48: 81 (nest). – Darchen, 1976, Ann. Soc. Entomol. France (n. ser.) 12: 579 (ethology). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 350 (colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 404, 405 (ethology). – Itô, 1993, Behav. Soc. Evol. Wasps: 20, 40, 51, 131, 133 (ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Senegal; Gambia; Sudan; Eritrea; Ethiopia; Somalia; Congo; Zaire; Uganda (on Mt. Ruwenzori as high as 2000 m); Kenya; Tanzania, Mozambique; Zimbabwe; Namibia; South Africa (Transvaal).

clavata (de Saussure)

Icaria clavata de Saussure, 1853, Ét. Fam. Vesp. 2: 40, female – "Le Cap de Bonne-Espérance" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 97 (cat.). – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 125, 126 (compared to *I. ambigua* n. sp.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.). – Bingham, 1903, Ann. Mag. Nat. Hist. (7), 12: 48, 68. – Dalla Torre, 1904, Genera Insectrum 19: 73 (cat.).

Ropalidia clavata; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 340 (cat.; distr.).

DISTRIBUTION: South Africa (Western Cape, Kwazulu-Natal, Transvaal).

clypeata Kojima

Ropalidia clypeata Kojima, 1996, *in* van der Vecht and Kojima, Zool. Meded., Leiden 70: 103, male, female – "New Guinea, Sivipi near Sasambata, Popondetta subdist." (holotype male Leiden).

DISTRIBUTION: New Guinea.

colorata colorata van der Vecht

Ropalidia colorata colorata van der Vecht, 1941, Treubia 18: 111 (key), 151, male, female – "Peshawar" [Pakistan] (London); also from India: Himachal Pradesh, Kangra Valley; Pakistan: Northwest Frontier Province, Mauree Hills. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Anthreneida*). – Das and Gupta, 1984 (1983), Orient. Insects 17: 416

(cat.); 1989, Orient. Insects Monogr. 11: 112, 141 (key), 142, map 23 (in *sumatrae* group of subgenus *Anthreneida*; female; fig.; distr.).

DISTRIBUTION: Pakistan; India.

colorata sordida van der Vecht

Ropalidia colorata var. *sordida* van der Vecht, 1941, Treubia 18: 154, female – "Kooloo, India" (Cambridge).

Ropalidia colorata sordida; Das and Gupta, 1984 (1983), Orient. Insects 17: 417 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 112, 141 (key), 142, map 23 (in *sumatrae* group of subgenus *Anthreneida*).

DISTRIBUTION: India.

conservator conservator (Smith)

Icaria conservator Smith, 1860 (1861), J. Proc. Linn. Soc. Zool. 5: 130, female – "Dory" [New Guinea] (London); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1865, J. Proc. Linn. Soc. Zool. 8: 90 (Salwatty); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.). – Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 447 (distr.). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 405 (syn.: *Icaria waigeuensis* Cameron).

Polybia limatula Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 43, female – "Mysol" (lectotype Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 139 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 384 (cat.) – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 100 (syn. of *Icaria conservator* Smith)); 1912, Ann. Mag. Nat. Hist. (8) 9: 448. – van der Vecht, 1966, Zool. Verh., Leiden 82: 6 (syn. of *Ropalidia conservator* (Smith)).

Icaria parvimaculata Cameron, 1911, Nova Guinea 9, Zool 2: 189, female – "Bivak Island" (lectotype Amsterdam). Junior primary homonym of *I. parvimaculata* Cameron, 1907. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *Ropalidia conservator* (Smith)).

Icaria insularis Cameron, 1911, Nova Guinea 9, Zool. 2: 188, female – "Bivak Island" (unique Amsterdam, also with a label "*Icaria insularis* Cam. Holotype designated by. J. v.d.Vecht 1933" (in van der Vecht's handwriting)). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *R. conservator* (Smith)).

Parapolybia limatula; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (syn. of *Icaria conservator*).

Ropalidia conservator; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn.). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 15 (redescription; distr.; note on nest "nests low in rotten stumps and between rocks"). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 59, 130 (in subgenus *Icarielia*; nest; list; syn.: *limatula* (Smith), *waigeuensis* (Cameron), *goodfellowi* Cheesman, *decorata* (Smith), *xanthopoda* (Cameron) [error; listing *decorata* and *xanthopoda* as syn. by mis-typesetting]). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

Ropalidia insularis; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

Ropalidia parvimaculata; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

DISTRIBUTION: New Guinea.

conservator goodfellowi Cheesman

Ropalidia conservator goodfellowi Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 16, female – "S. Dutch New Guinea, Mimika R." (London).

Ropalidia conservator form *goodfellowi*; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 130.

DISTRIBUTION: Southwestern New Guinea.

conservator waigeuensis (Cameron)

Icaria waigeuensis Cameron, 1913, Bijdr. Dierkd. 19: 76, female – "Waigeu" (unique "Waigeu, 31.XII [09], Mevr. de Beaufort leg." Amsterdam) [also with a label in Cameron's handwriting "*Icaria waigionensis* Cam. Type" (this may be the name that Cameron wanted to give)]. – Meade-Waldo and Morley, 1914, Ann.

Mag. Nat. Hist. (8) 14: 405 (syn. of *Icaria. conservator* Smith) – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *R. conservator* (Smith)).

Ropalidia conservator waigeuensis; Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 16 (distr.).

Ropalidia waigeuensis; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (syn. of *R. conservator* (Smith)).

Ropalidia conservator form *waigeuensis*; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 130.

DISTRIBUTION: New Guinea (Waigeo).

conspicua (Smith)

Odynerus conspicuus Smith, 1863 (1864), J. Proc. Linn. Soc. 7: 40, female – "Mysol" (Oxford; according to van der Vecht's unpublished note, a specimen in London also has a type label, but the true type is in Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 137 (distr.); 1865, J. Proc. Linn. Soc. Zool. 8: 88 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 377 (cat.).

Odynerus mysolicus Dalla Torre, 1889, Wien. Entomol. Ztg. 8: 124. Replacement name for *Odynerus conspicuus* Smith, 1863, non de Saussure [unnecessary replacement, incorrectly considering de Saussure, 1870, as de Saussure, 1857]; 1894, Cat. Hym. 9: 81 (cat.); 1904, Genera Insectorum 19: 50 (cat.).

Ropalidia conspicua; Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 13 (redescription of the type; distr.).

Ropalidia conspicua alleni Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 13, female – "Mysol" (London).

Ropalidia alleni; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (syn. of *R. brunnea* (Smith)) [*alleni* is quite different from *brunnea*, and Richards' treatment is apparently based on erroneously taking "*conspicua alleni*" as "*cariniscutis alleni*"].

Ropalidia mysolica; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Polistratus*; list; syn.: *Odynerus conspicuus* Smith).

DISTRIBUTION: Western New Guinea.

constitutionalis (de Saussure)

Icaria constitutionalis de Saussure, 1853, Ét. Fam. Vesp. 2: 30, pl. 4 fig. 4, female – "Madagascar" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 95 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114 (key), 128 (female). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 334. – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216, 222 (female, male). – Dalla Torre, 1904, Genera Insectorum 19: 73, pl. 5 figs. 3a, 3b (cat.).

Ropalidia constitutionalis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 340 (cat.; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86 (key).

DISTRIBUTION: Madagascar.

copiaria (de Saussure)

Icaria copiaria de Saussure, 1862, Stettin. Entomol. Ztg. 23: 135, male — "Java" (Leiden). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia aristocratica copiaria; van der Vecht, 1962, Zool. Verh., Leiden 57: 30, 43, 44, 47 (key; in subgenus *Icarielia*; fig.; nest; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (in subgenus *Icariola*; nest).

Ropalidia copiaria; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 328, figs. 6, 19.

Ropalidia aristocratica; Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key).

DISTRIBUTION: Java.

crassa van der Vecht

Ropalidia crassa van der Vecht, 1941, Treubia 18: 112 (key), 162, female – "Celebes: . . . Palopo, Todjamboe (1000 m)" (unique Leiden) [?lost].

DISTRIBUTION: Sulawesi.

crassipunctata Giordani Soika

Ropalidia crassipunctata Giordani Soika,

1981, Boll. Soc. Entomol. Ital. 113: 172, 175, female – "Camerun: Ekodoco" (Monaco).

DISTRIBUTION: Cameroon.

cristata Kojima

Ropalidia cristata Spradbery, 1985, Paradise 52: 17. Nomen nudum.

Ropalidia cristata Kojima, 1989, Jpn. J. Entomol. 57: 143, female, male, larva – "Papua New Guinea . . . Ower's Corner, Sogeri, Central Province" (holotype female Canberra); . – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 633 (colony population; nest; ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 350 (colony population).

DISTRIBUTION: New Guinea.

curvilineata (Cameron)

Icaria curvilineata Cameron, 1908, Dtsch. Entomol. Z. 1908: 564, female -- "Inop. Borneo" (London).

Ropalidia curvilineata; van der Vecht, 1941, Treubia 18: 112 (key), 177 (female; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key).

DISTRIBUTION: Malay Peninsula; Borneo; Sumatra.

cyathiformis (Fabricius)

Eumenes cyathiformis Fabricius, 1804, Syst. Piez.: 289 – "Java" (holotype female Kobenhavn). – Dalla Torre, 1894, Cat. Hym. 9: 22 (cat.; unidentified sp.); 1904, Genera Insectorum 19: 25 (cat.; unidentified sp.).

Icaria ceylonica Cameron, 1898, Mem. Manch. Lit. Philos. Soc. 42 (11): 48, female – "Periyakullam, Ceylon" (Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 713 (cat.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. cyathiformis* (Fabricius)).

Icaria cagayanensis Ashmead, 1905, Can. Entomol. 37: 3 [*cayayanensis* !], female – "Manila" [the Philippines] (Washington, No. 8126); 1905, Proc. U.S. Natl. Mus. 28: 962 (*Icaria cagayanensis*, emendation). – Brown, 1906, Philipp. J. Sci. 1: 688 (listed from the Philippines). – Williams, 1928, Philipp. J. Sci. 35: 78, 79 (ethology). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. cyathiformis* (Fabricius)).

Icaria bilineata Cameron, 1905, Tijdschr. Entomol. 48: 72, female – "Tjandi near Semarang" (lectotype London). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. cyathiformis* (Fabricius)), 162.

Icaria cyathiformis; Schulz, 1912, Berlin. Entomol. Z. 57: 88 (syns.: *Eumenes fasciata* Fabricius, *Icaria variegata* (Smith)).

Ropalidia cyathiformis; van der Vecht, 1941, Treubia 18: 104 (syn: *Icaria bilineata* Cameron, *I. cagayanensis* Ashmead, *I. cylonica* Cameron), 112 (key), 158 (ethology; taxonomy, distr.); 1962, Zool. Verh., Leiden 57: 31 (in subgenus *Anthreneida*; ethology; distr.). – Baltazar, 1966, Pac. Insects Monogr. 8: 291 (in subgenus *Anthreneida*; cat.). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 55, 58 (in subgenus *Icariola*; nest; list). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 4 (key), 14, 32 (in subgenus *Anthreneida*; distr.). – Gadagkar and Joshi, 1982, J. Zool. (London) 198: 27 (ethology); 1982, *in* Breed et al., Biol. Soc. Insects: 187 (ethology). – Das and Gupta, 1984 (1983), Orient. Insects 17: 416 (cat.; distr.). – Kojima, 1984, Kontyû, 52: 50, fig. 1 (larva); 1984, Kontyû, 52: 525 (key), 528, 530, 531 (in subgenus *Icariola*; Luzon; male genitalia). – Gadagkar and Joshi, 1984, Z. Tierpsychol. 64: 15 (ethology); 1985, Curr. Sci. 54: 57 (ethology). – Kojima and Tano, 1985, Kontyû 53: 524 (distr.; note on females with two submarginal cells in fore wings). – Gadagkar, 1987, *in* Eder and Rembold, Chemistry Biol. Soc. Insects: 377 (ethology). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 112 (key), 143, map 10 (in *sumatrae* group of subgenus *Anthreneida*; female, male; fig.; distr.). – Gadagkar, 1990, *in* Veeresh et al., Soc. Insects Environ.: 9 (ethology); 1990, *in* Veeresh et al., Soc.

Insects Indian Perspec.: 129 (ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 350, 354, 383 (colony population). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 463 (biology). – Itô, 1993, Behav. Soc. Evol. Wasps: 51, 52, 74, 132 (ethology). – Gadagkar, 1994, *in* Agrawal, Perspec. Entomol. Res.: 263 (ethology); 1995, *in* Ramamurthi and Bali, Readings Behav.: 135 (ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: table 1 (in subgenus *Icariola*; morphology).

Ropalidia bilineata; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list) [based on the examination of types of *bilineata* (London, Amsterdam), we follow van der Vecht's (1941) view].

DISTRIBUTION: Nepal; India; Sri Lanka; Myanmar; Malay Peninsula; Java; Sulawesi; Sumba; Philippine Is.

darwini Richards

Ropalidia darwini Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 61, 64 (key), 72, female, male (in subgenus *Icariola*) – "**Northern Territory**, 12°25'S., 131°03'E., Milner's Swamp" [Australia] (holotype female Sydney); also from two other localities in Northern Territory. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym: 214 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (North coastal Northern Territory).

deceptor (Smith)

Icaria deceptor Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 42, female – "Mysol" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.) – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia deceptor; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (nest), 58 (list), 61 (key), 99, figs. 20, 34 (in subgenus *Icariola*; female, male; distr.). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: 214 (in subgenus *Icariola*; cat.). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 179 (distr.).

DISTRIBUTION: New Guinea (Misool); Australia (North Queensland).

decorata (Smith)

Polybia decorata Smith, 1858, J. Proc. Linn. Soc. Zool. 2: 114, female – "Borneo, (Sarawak)" (lectotype Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 139 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 384 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 163 (cat.). – Bingham, 1897, Fauna Br. India, Hym 1: 384 [erroneously regarded as synonym of *Polybia stigma* Smith]. – Dalla Torre, 1904, Genera Insectorum 19:77 (cat.). – van der Vecht, 1962, Zool. Verh., Leiden 57: 43 (designation of lectotype); 1966, Zool. Verh., Leiden 82: 6.

Icaria xanthopoda Cameron, 1902, J. Straits Branch Asiat. Soc. 37: 103, female – "Borneo" (London). – Dalla Torre, 1904, Genera Insectorum 19: 75 (cat.). – von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (syn. of *I. decorata* (Smith) according to Meade-Waldo, in litt.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (syn. of *R. conservator* (Smith) [by typesetting error]).

Polybia stigma Smith; Bingham, 1897, Fauna Br. India, Hym. 1: 384, (female, male, distr.); 1908, Rec. Ind. Mus. 2:359 (distr.) [misidentification].

Parapolybia decorata; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (species of *Icaria*; syn.: *Icaria xanthopoda* Cam., according to Meade-Waldo, in litt.).

Icaria decorata; du Buysson, 1913, Bull. Soc. Entomol. France 1913: 296.

Ropalidia stigma; Dover, 1931 (1930), J. Fed. Mal. St. Mus. 16: 257 [misidentification; incorrectly gives Fabricius as the author of the name *Polybia stigma*].

Ropalidia decorata; van der Vecht, 1962, Zool. Verh., Leiden 57: 41 (key), 42 (in subgenus *Icarielia*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (syn. of *R. conservator* (Smith) [error; "... *R. decorata* (Smith), *xanthopoda*

(Cameron)];" is mis-typesetting for ". . . *R. decorata* (Smith) [= *xanthopoda* (Cameron)];"], 128 (key to subgenus *Icarielia* species). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key). – Gusenleitner, 1994, Linz. Biol. Beitr. 26: 328 (compared to *R. thailandia* n. sp.). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 328, figs. 5, 18.

DISTRIBUTION: Malay Peninsula; Borneo; Sumatra.

deminutiva Cheesman

Ropalidia deminutiva Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 23, female – "S. of Humboldt Bay, inland 16 miles, Mt. Nomo" (London); "Nest inside the stem of a bamboo grass". – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (*diminutiva* [!]; nest), 58 (in subgenus *Icarielia*; list), 129 (key; "All the species including the type are labelled Bougainville, Mt. Nomo . . . Mt. Bougainville which is apparently in West Irian."). – Kojima, 1996, Zool. Meded., Leiden 70: 328, figs. 12, 25.

DISTRIBUTION: New Guinea.

democratica (de Saussure)

Icaria democratica de Saussure, 1853, Ét. Fam. Vesp. 2: 33, female – "Madagascar." (coll. Guérin-Méneville; current depository unknown). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 115 (key), 142 (female, male). – André, 1889, Le Naturaliste: 189 (ethology). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia democratica; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 340 (cat.; distr.).

DISTRIBUTION: Madagascar.

dispila (Cameron)

Icaria dispila Cameron, 1913, Bijdr. Dierkd. 19: 77, female – "Waigeu" (unique "Waigeu, [5] i 10 [Mevr. de Beaufort leg.]" Amsterdam) [lacking 2nd-6th metasomal segments (noted in original description), and with a label on which are "*Icaria dispila* Cam. Type" (in Cameron's handwriting) and "Holotype sec J. v. d. Vecht '33" (in van der Vecht's handwriting)].

Ropalidia dispila; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

DISTRIBUTION: New Guinea (Waigeo).

distigma (Gerstaecker)

Icaria distigma Gerstaecker, 1857, Monatsber. K. Preuss. Akad. Wiss. Berlin: 464, female – "Mossanbique" (?Berlin); 1862, *in* Peters, Reise Mossambique, Zool. 5: 471. – Kohl, 1894, Ann. Naturhist. Hofmus. Wien, 9: 343. – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.). – Stadelmann, 1898, Deutsch Ost-Afrika IV, Hym.: x33. – von Schulthess, 1899, Bull. Soc. Vaudoise Sci. Nat. (4) 35: 270 (distr.). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – du Buysson, 1914, *in* Voy. Alluaud et Jeannel, Afr. Or., Rés. Sci., Ins. Hym., 3: 157.

?*Icaria cariniscutis* Cameron, 1910, Wiss. Ergebn. Schwed. Zool., Exp. Kilimandjaro 2 (8), Vesp.: 170, 171, female – "*Usambara:* Mombo" [Tanzania] (London). – Meade-Waldo, 1913, Ann. Mag. Nat. Hist. (8) 11: 53 (syn. of *R. distigma* (Gerstaecker)). – von Schulthess, 1913, Ark Zool. 8 (17): 13 (female is *R. cincta* (Lepeletier), but the male belongs to another species). Junior secondary homonym of *Ropalidia cariniscutis* (Cameron, 1906).

Ropalidia cariniscutis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 339 (female was not described by Cameron).

Ropalidia distigma; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (cat.; distr.). – Giordani Soika, 1935, Mem. Estud. Mus. Zool. Univ. Coimbra (1) 82: 15 (distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Kenya; Tanzania; Zimbabwe; Mozambique; South Africa (Transvaal, Kwazulu-Natal).

domestica Cheesman

Ropalidia domestica Cheesman, 1952, Ann.

Mag. Nat. Hist. (12) 5: 2, 12, female, male – "Papua, Kokoda" (holotype male London, no. 18.1037). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest), 57 (in subgenus *Polistratus*; list), 122 (holotype stated to be female; redescription). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Polistratus*; morphology).

DISTRIBUTION: Eastern New Guinea.

dubia (de Saussure)

Icaria dubia de Saussure, 1853, Ét. Fam. Vesp. 2: 33, female – "Madagascar" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 115 (key), 141, pl. 18 fig. 19 (female). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216, 217, 229 (female). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 65.

Ropalidia dubia; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 82 (nest). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 88 (key), fig. 13. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list).

DISTRIBUTION: Madagascar.

ducalis (de Saussure)

Icaria ducalis de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216 (key), 226, female – "Madagascar" (Genève). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia ducalis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85 (key).

DISTRIBUTION: Madagascar.

duchaussoyi (Gribodo)

Icaria duchaussoyi Gribodo, 1896, Misc. Entomol. 4: 13, female – "*Nova Caledonia*" (?Genova, ?Paris). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).

Icaria marginata var. *duchaussoyi*; von Schulthess, 1915, *in* Sarasin and Roux, Nova Caledonia, Zool. 2, 1 (3): 48 (description of male).

Ropalidia marginata duchaussoyi; van der Vecht, 1941, Treubia 18: 104, 124 (1 female of the series from New Caledonia examined by von Schulthess).

Ropalidia duchaussoyi; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (list).

DISTRIBUTION: New Caledonia.

eboraca Richards

Ropalidia eboraca Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (list), 63, 65 (key), 66, female (in subgenus *Ropalidia*) – "**Queensland Q3**, Cape York, Lockerbie" [Australia] (Canberra); also from 4 other localities in Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 213 (in subgenus *Ropalidia*; cat.).

DISTRIBUTION: Australia (North Queensland).

elegantula Richards

Ropalidia elegantula Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (nest), 61, 64 (key), 70, figs. 16, 23, 37, female, male, nest (in subgenus *Icariola*) – "**Queensland Q3**, Cape York Peninsula, Bamaga" [Australia] (holotype female Canberra); also from 7 other localities in Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym: 214 (in subgenus *Icariola*; cat.). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 179 (distr.).

DISTRIBUTION: Australia (North Queensland).

erratica Cheesman

Ropalidia fasciata erratica Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 9, female – "Cyclops Mt." [New Guinea] (London).

Ropalidia erratica; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list).

DISTRIBUTION: New Guinea.

erythrospila (Cameron)

Icaria erythrospila Cameron, 1908, Dtsch.

Entomol. Z. 1908: 563, female – "Borneo ... Kuching" (London).

Ropalidia erythrospila; Dover, 1931 (1930), J. Fed. Mal. St. Mus. 16: 257. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 57 (in subgenus *Anthreneida*; list). – Kojima and Yamane, 1984, Rep. Fac. Sci., Kagoshima Univ. (Earth Sci., Biol.) 17: 104, figs. 1–7 (larva). – Kojima, 1996, Zool. Meded., Leiden 70: 349, 355, 357 (key), figs. 3, 10, 11, 16, 20, 29–33 (taxonomy; distr.).

Ropalidia malayana var. *erythrospila*; van der Vecht, 1941, Treubia 18: 104, 176 (taxonomy; fig.; distr.); 1962, Zool. Verh., Leiden 57: 34, pl. 2 (in subgenus *Anthreneida*; distr.; nest; ethology).

Ropalidia malayana erythrospila; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (in subgenus *Icariola*; nest).

DISTRIBUTION: Malay Peninsula; Borneo; Sumatra.

eurostoma Richards

Ropalidia eurostoma Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 60 (key), 93, female (in subgenus *Icariola*) – "**Queensland**, Mornington I." [Australia] (Adelaide). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: 214 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (Mornington Is.).

excavata Giordani Soika

Ropalidia excavata Giordani Soika, 1977, Steenstrupia 4: 125, 128, fig. 2, female – "CAMEROON: ... Nyong" (Kobenhavn); also from other locality in Cameroon.

DISTRIBUTION: Cameroon.

extrema van der Vecht

Ropalidia flavopicta extrema van der Vecht, 1962, Zool. Verh., Leiden 57: 58 (key), 60, female (in subgenus *Icarielia*) – "Luzon: ... Atimonan" (Leiden); also from Negros I.; a male is recorded but not described. – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Icarielia*; cat.).

Ropalidia extrema; Kojima, 1982, Kontyû 50: 109 (key), 112 (in subgenus *Icarielia*; female, male; male genitalia; larva; fig.; distr.). – Jeanne et al., 1983, Zoomorphologie 103: 155 (in subgenus *Icarielia*; morphology). – Kojima and Jeanne, 1986, Biotropica 18: 327 (in subgenus *Icarielia*; nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 326.

DISTRIBUTION: Luzon I.; Negros I.

fasciata (Fabricius)

Eumenes fasciata Fabricius, 1804, Syst. Piez.: 290 – "Java" (syntype males Kobenhavn). – Dalla Torre, 1894, Cat. Hym. 9: 24 (cat.; unidentified sp.); 1904, Genera Insectorum 19: 25 (cat.; unidentified sp.). – Schulz, 1912, Berlin. Entomol. Z. 57: 88 (types examined; syn. of *Icaria cyathiformis* (Fabricius)).

Icaria picta de Saussure, 1854, Ét. Fam. Vesp.: 238, female – "Le Bengale" [India] (Paris). – Smith, 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – van der Vecht, 1959, Arch. Neerl. Zool. 13(1), suppl. 1958: 245 (syn. of *R. fasciata* (Fabricius)).

?*Icaria pendula* Smith; de Saussure, 1867, Reise Novara, Zool. 2, 1 Hym.: 22 (distr.).

Icaria variegata Smith; Bingham, 1897, Fauna Br. India, Hym. I: 386 (key), 388 (female).

Icaria maculifrons Cameron, 1903, J. Straits Br. R. Asiat. Soc. 39: 172, female – "Santubong" [Borneo] (London, no. 18835); 1905, Tijdschr. Entomol. 48: 71 (distr.); 1906, Tijdschr. Entomol. 49: 231 (compared to *Icaria spilocephala* n. sp.); 1907, J. Straits Br. R. Asiat. Soc. 48: 26 (distr.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. picta* (de Saussure)).

Icaria intermedia Cameron, 1905, Tijdschr. Entomol. 48: 70, female, "Tjandi near Semarang" (lectotype Amsterdam); 1907, J. Straits Br. R. Asiat. Soc. 48: 26 (distr.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. picta* (de Saussure)).

Icaria ferruginea; Matsumura, 1908, *in* Kuroiwa, Prov. List Hym. in Loochoo: 5 (distr.) [misidentification]. – Matsumura

and Uchida, 1926, Insecta Matsumurana 1: 35 (distr.) [misidentification].

Ropalidia variegata; Dover, 1929, Bull. Raffles Mus., Singapore 2: 47; 1931, J. Fed. Mal. St. Mus. 16: 257. – Sonan, 1935, Trans. Nat. Hist. Soc. Formosa 25: 199, 200 (description; key). – Liu, 1936–37, Peking Nat. Hist. Bull. 11 (3): 207, 348 (cat.; distr.). – Kuo and Yeh, 1987, J. Nat. Chiayi Inst. Agric. 11: 82.

Ropalidia picta; van der Vecht, 1941, Treubia 18: 104 (syn: *Icaria intermedia* Cameron, *I. maculifrons* Cameron), 111 (key), 145 (male; fig., distr.). – Tweedie, 1941, Poisonous Anim. Malaya: 60 (effect of sting). – Walrecht, 1953, Levende Nat. 56: 53–54 (nest).

Ropalidia fasciata; van der Vecht, 1959, Arch. Neerl. Zool. 13(1), suppl. 1958: 245 (taxonomy); 1962, Zool. Verh., Leiden 57: 23 (in subgenus *Anthreneida*; ethology; distr.). – Yoshikawa, 1964, Nat. Life S. E. Asia 3: 395, pl. 5 figs. 7, 9 (nest). – Baltazar, 1966, Pac. Insects Monogr. 8: 291 (in subgenus *Anthreneida*; cat.). – van der Vecht, 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3h (morphology). – Iwata, 1969, Kontyû 37: 437–443 (nest). – Matsuura, 1975, Shokubutsu-boeki 29: 294 (key to nest). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 4 (key), 10, 32 (distr.). – Suzuki and Murai, 1980, Res. Popul. Ecol. 22: 184 (biology). – Tano, 1980, Hymen. Comm. (11): 16 (distr.). – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 86, pl. 2 fig. 2 (in subgenus *Anthreneida*); 1982, Zool. Res. 3: 86 (in subgenus *Anthreneida*; distr.). – Itô, 1983, J. Ethol. 1: 1 (ethology); 1983, Kontyû 51: 269 (biology). – Jeanne et al., 1983, Zoomorphologie 103: 155, fig. 16 (in subgenus *Icariola*; morphology). – Kojima, 1983, Jpn. J. Ecol. 33: 213 (ethology); 1983, Kontyû 51: 502 (ethology). – Das and Gupta, 1984 (1983), Orient. Insects 17: 417 (cat.; distr.). – Kojima, 1984, Kontyû 52: 52, 53, fig. 3 (larva); 1984, Biol. Mag, Okinawa 22: 27 (ethology); 1984, Jpn. J. Ecol. 34: 233 (nest); 1984, Kontyû, 52: 525 (key), 530, 531 (in subgenus *Icariola*; distr.; male genitalia). – Kojima and Yamane, 1984, Rep. Fac. Sci., Kagoshima Univ. (Earth Sci., Biol.) 17: 109, figs. 23–29 (larva). – Lee, 1985, Econ. Insect Fauna China, 30 Hym.: Vespoidea: 46 (key), 47, pl. 2 fig. 2 (in subgenus *Anthreneida*; female, male). – Itô, 1985, Res. Popul. Ecol. 27: 333 (biology) – Itô et al., 1985, Kontyû 53: 486 (biology). – Itô and Sk. Yamane, 1985, Insectes Soc. 32: 403 (biology). – Turillazzi and Marucelli-Turillazzi, 1985, Monit. Zool. Ital. (n. ser.) 19: 219–230 (ethology). – Itô, 1986, J. Ethol. 4: 73 (ethology). – Itô and Iwahashi, 1987, Res. Popul. Ecol. 29: 189 (population). – Lee, 1987, *in* Forest Insects Yunnan: 1348 (in subgenus *Anthreneida*; key). – Kojima, 1988, Kontyû, 56: 169 (ethology); 1989, Insectes Soc. 36: 197 (biology). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 112 (key), 140, map 22 (in *sumatrae* group of subgenus *Anthreneida*; female, male; fig.; distr.). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34, 36 (key; distr.). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 341, 349, 350, 351, 354, 372, 374, 375 (colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 395, 404 (ethology). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 459, 463 (biology). – Starr, 1992, Bull. Natl. Mus. Nat. Sci. 3: 115. – Itô, 1992, J. Ethol. 10:109 (ethology); 1993, Behav. Soc. Evol. Wasps: 8, 20, 25, 27, 28, 32, 34, 56, 67, 68, 71, 76, 87, 93, 107, 127, 128, 129, 132 (in subgenus *Icariola*; ethology). – Itô et al., 1994, J. Ethol. 12: 187 (ethology). – Itô, 1995, Insectarium 32 (1): 18; 1995, Pac. Sci. 49: 42 (ethology); 1996, Ecol. Res. 11: 79 (ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: 112, table 1 (in subgenus *Icariola*; morphology). – Katada and Iwahashi, 1996, Insectes Soc. 43: 247 (ethology).

?*Ropalidia variegata variegata*; Lee, 1982, Hornets from Agric. Regions China: 83 (key), 88, pl. 3 fig. 2 (in subgenus *Anthreneida*); 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 47, pl. 3 fig. 2 (in subgenus *Anthreneida*; female, male; distr.). – Lee and Ma, 1992, *in* Icono. Forest Insects Hunan China: 1328 (distr.).

DISTRIBUTION: Nepal; India; Myanmar; Thailand; Malay Peninsula; Sumatra; Nias; Bangka I.; Java; Karimon Djawa I.; Bali; Flores; Borneo; South China; Palawan; Taiwan; Ryukyu Islands.

fasciola Richards

Icaria fasciata Smith, 1859, J. Proc. Linn. Soc. Zool. 3: 167, female – "Aru" (Oxford) [junior secondary homonym of *Ropalidia fasciata* (Fabricius)]; 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.) [error: Sulawesi]; 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia fasciata; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 8 (redescription of the type).

Ropalidia fasciola Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56. (in subgenus *Ropalidia*). Replacement name for *Icaria fasciata* Smith, 1858, non *Eumenes* [= *Ropalidia*] *fasciata* Fabricius, 1804.

DISTRIBUTION: New Guinea (Aru).

festina (Smith)

Icaria festina Smith, 1865, J. Proc. Linn. Soc. Zool. 8: 90, female – "New Guinea" (Oxford). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Polistes albobalteatus Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 61, female – "Manokwari" (unique "Manokwari, [14-28] II [03]" Amsterdam) [also with a label on which are "*Polistes albobalteatus* Cam. Type, New Guinea" (in Cameron's handwriting) and "Holotype sec. J. v. d. Vecht '33" (in van der Vecht's handwriting)]. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *R. festina* (Smith)).

Ropalidia festina; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn.: *Polistes albobalteatus* Cam. 1906, *Icaria zonata* Cam. 1906, *Polybia papuana* Cam. 1913). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 129 (key). – Kojima, 1996, Zool. Meded., Leiden 70: 328; 1996, Zool. Meded., Leiden 70: 350.

Ropalidia reactionalis festina; Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 21 (redescription of types).

DISTRIBUTION: New Guinea.

flavobrunnea van der Vecht

Ropalidia flavopicta flavobrunnea van der Vecht, 1962, Zool. Verh., Leiden 57: 58, key, female (in subgenus *Icarielia*) – "Calapan, Mindoro" [Philippines] (Gainesville); also from Luzon, Negros, Samar, Mindanao. – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Icarielia*; cat.). – Kojima, 1982, Biotro pica 14: 272 (in subgenus *Icarielia* nest).

Ropalidia flavobrunnea flavobrunnea; Koji ma, 1982, Kontyû 50: 109 (key), 118 (in subgenus *Icarielia*; female, male; fig.; distr.).

Ropalidia flavobrunnea lapiniga Kojima, 1982, Kontyû 50: 110 (key), 116, 120, female, male, larva (in subgenus *Icarielia*) – "Palo, Leyte I." [Philippines] (holotype female Sapporo); also from two other localities in Leyte; and Samar. – Yamane and Kojima, 1982, Kontyû, 50: 183 (record of trigonalyid parasite, *Pseudonomadina biceps* Yamane and Kojima). – Jeanne et al., 1983, Zoomorphologie 103: 155 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 343 (syn. of *Ropalidia flavobrunnea*).

Ropalidia flavobrunnea iracunda Kojima, 1982, Kontyû 50: 110 (key), 122, female, male (in subgenus *Icarielia*) – "Central Mindanao University, Musuan, Bukidnon, Mindanao I." [Philippines] (holotype female Sapporo). – Kojima and Jeanne, 1986, Biotropica 18: 329 (in

subgenus *Icarielia*; nest). – Kojima, 1996, Zool. Meded., Leiden 70: 343 (syn. of *Ropalidia flavobrunnea*).

Ropalidia flavobrunnea; Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 501 (in subgenus *Icarielia*; nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 342, figs. 91, 101 (taxonomy; syn: *Ropalidia flavobrunnea iracunda* Kojima, *Ropalidia flavobrunnea lapiniga* Kojima).

DISTRIBUTION: Luzon; Mindoro; Negros; Leyte; Samar; Mindanao.

flavopicta (Smith)

Icaria flavopicta Smith, 1857, Cat. Hym. Br. Mus. 5: 99, female – "Borneo (Sarawak)" (London). – de Saussure, 1862, Stettin. Entomol. Ztg., 23: 135 (distr.). – Smith, 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894. Cat. Hym., 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.). – Bingham, 1905, Fasc. Malay. 3: 50 (distr.). – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 100 (syn.: *I. ornaticeps* Cameron; distr.); 1913, Ann. Mag. Nat. Hist. (8) 11: 46 (designated as type species of subgenus *Icarielia* Dalla Torre). – von Schulthess, 1914, Zool. Jahrb. Syst. 37: 259 (distr.).

Ropalidia flavopicta; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 246. – Dover, 1926, China J. Sci. Arts 4: 233; 1931 (1930), J. Fed. Malay St. Mus. 16: 257 (distr.). – Liu, 1936–37, Peking Nat. Hist. Bull. 11: 206, 338 (cat.; distr.). – van der Vecht, 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3e (morphology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (in subgenus *Icarielia*; list), 128 (key). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key), 37 (distr.). – Itô, 1993, Behav. Soc. Evol. Wasps: 89 (in subgenus *Icarielia*; ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 328, figs. 27–44, 48, 51, 54, 55, 60, 63–74 (taxonomy; distr.).

Ropalidia flavopicta flavopicta; van der Vecht, 1962, Zool. Verh., Leiden 57: 42, 48, 49 (key), 51 (in subgenus *Icarielia*; distr.; biology). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Icarielia*; ethology). – Das and Gupta, 1984 (1983), Orient. Insects 17: 427 (in subgenus *Icarielia*; cat.) – Kojima, 1982, Kontyû 50: 110, 111. – Kojima and Yamane, 1984, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 17: 116, figs. 50–56 (larva). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 113 (key), 150 (in subgenus *Icarielia*). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 212 (colony population).

DISTRIBUTION: Hong Kong; Vietnam; Malay Peninsula: Borneo; Sumatra.

flavoviridis Kojima

Ropalidia flavoviridis Kojima, 1988, J. Kansas Entomol. Soc. 61: 292, female, male, larva – "Tulear Prov., Berenty, 25°00′S, 46°18′E" [Madagascar] (holotype female Lawrence). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 83–84 (color varieties; distr.), 86, 88 (key), fig. 12.

DISTRIBUTION: Madagascar.

fluviatilis (Meade-Waldo)

Icaria fluviatilis Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 449 (key), 451, female (in subgenus *Icariola*) – "Mimika River" [S. W. New Guinea] (?London).

Ropalidia fluviatilis; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 17 (redescription; distr.), 26 (*fluvialis* [!]). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: Southwestern New Guinea.

formosa (de Saussure)

Icaria formosa de Saussure, 1853, Ét. Fam. Vesp. 2: 37, female – "Les Indes Orientales" (London). – Smith, 1857, Cat. Hym. Br. Mus. 5: 98 (cat.); 1871, J.

Proc. Linn. Soc. Zool. 11: 378 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat. [erroneously recorded from India]); 1904, Genera Insectorum 19: 73 (cat.; as 1894). – Bingham, 1897, Fauna Br. India Hym. 1: 387 (key), 392.

Icaria hova de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 104, 113 (key), 131, fig. A (ethology), pl. 4 figs. 2, 2b, female, male – "*Madagascar* . . . aux environs d'Andrangoloaka (Imerina)" (Genève, Paris). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217, 228. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia hova; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 342 (cat.; distr.). – van der Vecht, 1941, Treubia 18: 105 (syn. of *formosa* de Saussure). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85, 87 (key), fig. 5.

Ropalidia formosa; van der Vecht, 1941, Treubia 18: 105 (erroneously described from Oriental Region; syn.: *Icaria hova* de Saussure). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list; syn.: *hova* (de Saussure)). – Wenzel, 1987, J. Kansas Entomol. Soc. 60: 549 (ethology). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 297, figs. 33–38 (larva). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 108. – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Itô, 1993, Behav. Soc. Evol. Wasps: 20 (*formosae* [!]; ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Madagascar.

fraterna (de Saussure)

Icaria fraterna de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216 (key), 225, female, male – "Madagascar; Imerina" (Genève). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 65.

Ropalidia fraterna; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 83 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (in subgenus *Icariola*; nest). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 87 (key), fig. 14.

DISTRIBUTION: Madagascar.

fulvopruinosa (Cameron)

Odynerus (*Leionotus*) *fulvopruinosa* Cameron, 1906, Tijdschr. Entomol. 49: 225, female – "Etna Bay" (unique Amsterdam) [2nd-6th metasomal segments lacking (noted in original description), with a label on which are "*Leionotus fulvopruinosus* Cam. Type New Guinea" (in Cameron's handwriting) and "Holotype sec. J. v.d.Vecht '33" (in van der Vecht's handwriting)].

Ropalidia fulvopruinosa; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest), 56 (list), 63 (key), 67, figs. 12, 25, 33, 41 (in subgenus *Ropalidia*; redescription.; distr.; nest). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 213 (in subgenus *Ropalidia*; cat.). – Kojima and Spradbery, 1987, Kontyû, 55: 603, fig. 8 (larva).

DISTRIBUTION: New Guinea; Australia (Queensland).

galimatia (de Saussure)

Icaria galimatia de Saussure, 1853, Ét. Fam. Vesp. 2: 36, female, male – "Madagascar" (coll. Guérin-Méneville; current depository unknown); 1854, Ét. Fam. Vesp. 2: 249. Table Alphabétique (*galimatias* [!]). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Icaria gallimathias de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 125 [unjustified emendation of *Icaria galimatia* de Saussure].

Icaria madecassa de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113, 114 (key), 125, pl. 18 fig. 16 (female) [unnecessary replacement name for *Icaria gallimathias* de Saus-

sure]; 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216, 224 (female). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 64. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (syn. of *R. galimatia* (de Saussure)).

Icaria madecassa var. *flavopicta* de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217 (key), 224, female – "Madagascar meridionalis et centralis;. . .Nossi-Bé" (?Genève). Junior primary homonym of *Icaria flavopicta* Smith, 1857.

Ropalidia galimatia; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (cat.; syn.: *Icaria madecassa* de Saussure; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 83 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (list). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 87 (key), fig. 15.

DISTRIBUTION: Madagascar.

gemmea Cheesman

Ropalidia gemmea Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 22, female, male "Papua, Owen Stanley Mts., Kokoda, 1200 ft." (holotype female London); also from Mondo. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 129 (key).

DISTRIBUTION: New Guinea.

gracilenta Richards

Ropalidia gracilenta Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 61 (key), 98, figs. 11, 15, female (in subgenus *Icariola*) – "**New South Wales**, near Ballina, North Creek" [Australia] (Sydney); also from Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym: 214 (in subgenus *Icariola*; cat.). – Kojima, 1987, J. Aust. Entomol. Soc. 26: 146, figs. 59–68 (larva); Kojima, 1987, J. Aust. Entomol. Soc. 26: 149 (male; nest).

DISTRIBUTION: Australia (New South Wales, Queensland).

gracilis (Smith)

Icaria gracilis Smith, 1859, J. Proc. Linn. Soc. Zool. 3: 167, female – "Aru" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1865, J. Proc. Linn. Soc. Zool. 8: 90 (listed); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 73 (cat.) [error: year of publication 1868].

Ropalidia gracilis; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50 (*gracillis* [!]; "probablement un *Parapolybia*"). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 18 (syn.: *Icaria deceptor* Smith, 1863; redescription of type; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58, 99 (in subgenus *Icariola*; list; female).

DISTRIBUTION: New Guinea.

grandidieri (de Saussure)

Icaria grandidieri de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 120, pl. 4 figs. 5, 5b, female, male – "*Madagascar*" (Genève, Paris). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 215, 221 (female, male). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 64; 1931, Mitt. Schweiz. Entomol. Ges. 15 (2): 51, fig. 3 (compared to *Icaria shestakovi* n. sp.).

Ropalidia grandidieri; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 342 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 83 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 58 (in subgenus *Icariola*; nest; list). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 297, figs. 26–30 (larva). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 83 (distr.), 86, 87 (key), fig. 3.

DISTRIBUTION: Madagascar.

granulata borneensis van der Vecht

Ropalidia granulata borneensis van der Vecht, 1941, Treubia 18: 190, female – "Borneo: . . . Bettotan near Sandakan" (Leiden); 1962, Zool. Verh., Leiden 57: 37 (distr.; nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest). – Macalintal and Starr, 1996, Mem. Ent. Soc.

Washington 17: table 1 (in subgenus *Icariola*).

Ropalidia granulata; Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: table 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Borneo; Malay Peninsula.

granulata granulata van der Vecht

Ropalidia granulata van der Vecht, 1941, Treubia 18: 113 (key), 189, female – "Malay Peninsula, Pahang, Kuala Teku" (Leiden); also from Sumatra. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key), 37 (distr.).

DISTRIBUTION: Malay Peninsula; Sumatra.

gregaria gregaria (de Saussure)

?*Polistes bioculata* Fabricius 1804, Syst. Piez.: 278, female – "nova Cambria" (Kovenhavn). – de Saussure, 1853, Ét. Fam. Vesp. 2: 41 (species dubiae; ? *Icaria*). – Dalla Torre, 1894, Cat. Hym. 9: 117 (syn.: *Icaria artifex* de Saussure). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 86 ("... examined the female type of *P. bioculata* ... It is in bad condition and might be either *R. gregaria* or *R. fasciata*. From the colour, it can hardly have been captured in New South Wales. We propose to ignore the name").

Icaria gregaria de Saussure, 1854, Ét. Fam. Vesp.: 236, female – "La Nouvelle Hollande" (coll. Romand; type depository unknown); 1862, Stett. Entomol. Ztg. 23: 137. – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia gregaria; Tillyard, 1926, Insects Aust. New Zealand: 297. – van der Vecht, 1941, Treubia 18: 104 (syn.: *Icaria cohni* du Buysson, *I. impetuosa* Smith, *I. spilocephala* Cameron), 111 (key), 149 (distr. [including subspecies *spilocephala*]). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 20 (male). – van der Vecht, 1962, Zool. Verh., Leiden 57: 27 (distr.; nest). – Baltazar, 1966, Pac. Insects Monogr. 8: 291 (in subgenus *Anthreneida*; cat.). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58, 64, 65, 83, 94 (in subgenus *Icariola*; nest; list; larva in key; description). – Kojima, 1982, Biotropica 14: 272 (in subgenus *Icariola*; nest); 1982, New Entomol. 31: 17 (ethology); 1984, Kontyû, 52: 52, fig. 2 (larva from the Philippines); 1984, Kontyû, 52: 525 (key), 528, 530, 531 (in subgenus *Icariola*; distr.; male genitalia). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 349 (colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Itô, 1993, Behav. Soc. Evol. Wasps: 87 (in subgenus *Icariola*; ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

Ropalidia gregaria gregaria; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (nest), 62 (key), 86 (in subgenus *Icariola*; "two [subspecies] can be recognized in the Australia-New Guinea region. The forms of Malaya will require separate study."). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 214 (in subgenus *Icariola*; cat.). – Itô, 1986, J. Aust. Entomol. Soc. 25: 309 (ethology). – Kojima, 1987, J. Aust. Entomol. Soc. 26: 145, figs. 52—58 (larva). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Itô and Yamane, 1992, J. Ethol. 10: 63 (ethology). – Itô, 1993, Behav. Soc. Evol. Wasps: 27, 46, 66, 68 (in subgenus *Icariola*; ethology). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 250 (in subgenus *Icariola*; distr.).

DISTRIBUTION: Philippine Is. excluding Palawan; Sulawesi; Australia (Northern Territory).

gregaria spilocephala (Cameron)

Icaria spilocephala Cameron, 1906, Tijdschr. Entomol. 49: 230, female – "Etna Bay" [New Guinea] (lectotype Amsterdam). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. gregaria* (de Saussure)).

Icaria cohni du Buysson, 1909, Bull. Soc. Entomol. France 1909: 306, male – "Bougainville" (Paris). – van der Vecht,

1941, Treubia 18: 104 (syn. of *R. gregaria* (de Saussure)). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 86 (*kohni* [!]; syn. of *R. gregaria spilocephala* (Cameron)).

Icaria picta; du Buysson, 1911, Abh. Senckenb. Naturforsch. Ges. 34: 229 (distr.).

Ropalidia cohni; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

?*Ropalidia cyathiformis*; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51 (recorded from New Guinea; syn: *variegata* Smith, *picta* de Saussure) [misidentification?].

Ropalidia spilocephala; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

Ropalidia gregaria inquieta Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 20, female, male – "Papua, . . . Mafulu, 4000 ft." (lectotype male London); also from 3 other localities in New Guinea. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 86 (designation of lectotype [error in locality: Mafalu]; syn. of *R. gregaria spilocephala*).

Ropalidia gregaria var. *tolerans* Cheesman, 1952, Ann. Mag. Nat. Hist. 12 (5): 3 (as subspecies), 21 (as var.), female – "Cyclops Mts. Sabron" [New Guinea] (lectotype London). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 86 (designation of lectotype; syn. of *R. gregaria spilocephala*).

Ropalidia gregaria spilocephala; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 62 (key), 86 (syns.: *Icaria kohni* [!] du Buysson, *Ropalidia gregaria inquieta* Cheesman, *Ropalidia gregaria* var. *tolerans* Cheesman; possibly syn. of *Icaria impetuosa* Smith; "I examined the holotype male [!] in the Zoological Museum, Amsterdam."; description; nest). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 636 (nest; colony population). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 250 (in subgenus *Icariola*; distr.).

Ropalidia gregaria; Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 180 (distr.).

DISTRIBUTION: East Australia; New Guinea; New Ireland; Solomon Is.; Fiji.

guttatipennis (de Saussure)

?*Polistes punctum* Fabricius, 1804, Syst. Piez.: 273 – "nova Cambria" (Kobenhavn). – Dalla Torre, 1894, Cat. Hym. 9: 152 (unidentified sp.).

?*Vespa punctum*; Jurine, 1807, Nouv. Méth. Class. Hym.: 169.

Icaria guttatipennis de Saussure, 1853, Ét. Fam. Vesp. 2: 40, pl. 5 fig. 8, female – "Le Sénégal" (Paris). – Smith, 1856, Trans. R. Entomol. Soc. London (2) 3, Proc.: 129 (ethology); 1857, Cat. Hym. Br. Mus. 5: 97, pl. 6 (cat.; nest). – Radoszkowski, 1881, J. Sci. Math. Phys. Nat. Lisboa 8 (31): 204. – André, 1889, Le Naturaliste: 189 (ethology). – Kohl, 1891, Ann. Naturforsch. Hofmus. Wien 9: 343. – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.). – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 125, 126 (compared to *I. ambigua* n. sp.). – Magretti, 1898, Ann. Mus. Civ. Stor. Nat. Genova (2) 19 (= 39): 35. – du Buysson, 1898, Ann. Soc. Entomol. France 66, 2—3: 361. – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 66. – von Schulthess, 1913, Mitt. Zool. Mus. Berlin 6, Heft 3: 340; 1914, Dtsch. Entomol. Z. 1914: 290 (distr. [erroneously recorded from Asia]). – du Buysson, 1914, *in* Voy. Alluaud et Jeannel, Afr. Or., Rés. Sci., Ins. Hym., 3, Vesp.: 156. – Roubaud, 1916, Ann. Sci. Nat. Zool. (10) 1 (1): 141 (ethology). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.).

Ropalidia guttatipennis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 250 (key), 342, figs. 243–245, pl. 1 fig. 11 (cat.; syn.: *Icaria politica* de Saussure; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 187 (*Rhopalidia* [!]; Zaire). – Verlaine, 1930 (1929), Bull. Ann. Soc. R. Belge.

Entomol. 69: 283 (ethology). – van der Vecht, 1959, Arch. Neerl. Zool. 13, suppl.: 245 (?syn. of *R. punctum* (Fabricius)). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Kojima and King, 1986, New Entomol. 35: 4, figs. 1–11 (larva). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Dejean and Turillazzi, 1992, Trop. Zool. 5: 237–247 (trophobiosis with homopterans).

DISTRIBUTION: Senegal; Gambia; Côte d'Ivoire; Cameroon; Equatorial Guinea; Gabon; Congo; Zaire; Tanzania; Kenya; Somalia; Angola; South Africa (Transvaal, Kwazulu-Natal).

hirsuta Richards

Ropalidia hirsuta Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 62 (key), 81, female (in subgenus *Icariola*) – "**Northern Territory**, Port Darwin" [Australia] (London). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (Northern Territory).

hongkongensis hongkongensis (de Saussure)

Icaria hongkongensis de Saussure, 1854, Ét. Fam. Vesp. 2: 239, female – "La Chine. Hong-Kong" (London). – Smith, 1857, Cat. Hym. Br. Mus. 5: 99 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 73 (cat.).

Ropalidia hongkongensis; Dover, 1926, China J. Sci. Arts 4: 233 (distr.). – Liu, 1936–37, Peking Nat. Hist. Bull. 11: 206, 340 (cat.). – van der Vecht, 1941, Treubia 18: 110 (key), 139 (in *stigma* group; female, male; distr.). – Lee, 1981, Wuyi Sci. J. 1: 198 (in subgenus *Anthreneida*; distr.); 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 48, pl. 3 fig. 3 (in subgenus *Anthreneida*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

Ropalidia hongkongensis hongkongensis; Lee, 1982, Hornets from Agric. Regions China: 83 (*honkongensis*[!]; key), 83, pl. 3 fig. 3 (in subgenus *Anthreneida*). – Das and Gupta, 1984 (1983), Orient. Insects 17: 418 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 111, 132 (in *stigma* group of subgenus *Anthreneida*; key).

DISTRIBUTION: South China; Hong Kong.

hongkongensis juncta van der Vecht

Ropalidia hongkongensis juncta van der Vecht, 1941, Treubia 18: 141, male, female – "Tjiboerial near Buitenzorg, W.-Java" (holotype female Leiden); also from Bangka; Myanmar; India; 1962, Zool. Verh., Leiden 57: 22 (in subgenus *Anthreneida*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 418 (cat.; distr.); 1989, Orient. Insects Monogr. 11: 132, map 19 (in *stigma* group of subgenus *Anthreneida*; key; female; distr.).

DISTRIBUTION: India (Meghayala); Myanmar; Bangka; Java.

horni Sonan

Ropalidia horni Sonan, 1938, Arb. Morphol. Tax. Entomol. 5: 260, female — "Zamboanga, South Mindanao, Philippines" (Eberswalde). – van der Vecht, 1941, Treubia 18: 112 (key), 171 (female, male; fig; distr.); 1962, Zool. Verh., Leiden 57: 33 (distr.). – Baltazar, 1966, Pac. Insects Monogr. 8: 292 (in subgenus *Anthreneida*; cat.). – Yoshikawa et al. 1969, Nat. Life S. E. Asia 6: 166 (in subgenus *Anthreneida*; colony population). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola* list). – Kojima, 1982, Biotropica 14: 272 (in subgenus *Icariola*; nest). – Jeanne et al., 1983, Zoomorphologie 103: 155 (in subgenus *Anthreneida*; morphology). – Kojima, 1984, Kontyû, 52: 53, 54, fig. 4 (larva); 1984, Kontyû, 52: 525 (key), 529 (*Popalidia* [!] by miss type-setting; in subgenus *Icariola*; distr.), 530, 531 (male genitalia). – Kojima and Tano, 1985, Kontyû 53: 524, 525 (distr.). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Starr, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 527 (nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Wash-

ington 17: fig. 1, table 1 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Palawan; Panay; Samar; Leyte; Mindanao; North Borneo.

humboldti Cheesman

Ropalidia maculiventris humboldti Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 5, female – "Hollandia" [New Guinea] (London); also from 4 other localities in New Guinea; and Waigeu Is.

Ropalidia humboldti; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Ropalidia*; morphology).

DISTRIBUTION: New Guinea.

ignobilis (de Saussure)

Icaria ignobilis de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114 (key), 127, pl. 4 figs. 7, 7b, female, male – "*Madagascar*" (Genève, Paris). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216, 224 (female, male), 225 (perhaps small form of *Icaria madecassa* de Saussure). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.).

Icaria madecassa var. *ignobilis*; von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 64–65.

Ropalidia galimatia var. *ignobilis*; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 341 (cat.; distr.).

Ropalidia ignobilis; FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 85 (distr.; nest). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 299, figs. 44–46 (larva). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest); 1992, Insectes Soc. 39: 31 (caste dimorphism).

DISTRIBUTION: Madagascar.

impetuosa (Smith)

Icaria impetuosa Smith, 1860 (1861), J. Proc. Linn. Soc. Zool. 5: 131, female – "Batchian; Amboyna" (lectotype Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 41 (distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.); 1904, Genera Insectorum 19: 73 (cat.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. gregaria* (de Saussure)).

Ropalidia impetuosa; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list), 86 (possible syn.: *Ropalidia gregaria spilocephala* (Cameron)).

DISTRIBUTION: Ceram; Bacan; Ambon.

incurva Cheesman

Ropalidia incurva Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 7, female, male – "Papua, Mondo, 4000 ft" (holotype female London).

DISTRIBUTION: Eastern New Guinea.

insolens Cheesman

Ropalidia novaeguineae insolens Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 24, female – "Japen, Mt. Baduri, 1000 ft." (lectotype London); also from Humboldt Bay and Waigeo.

Ropalidia insolens; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 129 (key). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: New Guinea.

integra Cheesman

Ropalidia integra Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 22, female, "male" – "Papua, Kokoda, 1200 ft" (holotype female London). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 128 (key), 129 ("Described from . . . female type, male paratype. The specimen in the London NH labelled type is a female . . . but is, I think, a specimen of *R. deminutiva* Cheesman. The paratype, though labelled male, is . . . a female without a gaster . . . It is a very different species and agrees with the description. I have transferred the type label to this specimen."). – Kojima, 1996, Zool. Meded., Leiden 70: 328, figs. 13, 26.

DISTRIBUTION: New Guinea.

interjecta (de Saussure)

Icaria interjecta de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 216 (key), 225, female, male – "Madagascar. – Nossi-Bé" (Genève). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 65.

Ropalidia interjecta; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 342 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 87 (key), fig. 17.

DISTRIBUTION: Madagascar.

interrupta interrupta van der Vecht

Ropalidia variegata interrupta van der Vecht, 1941, Treubia 18: 158, female – "Thursday Island" [Australia] (Cambridge).

Ropalidia interrupta interrupta; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58, 90 (in subgenus *Icariola*; list; distr.). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (Thursday Is.).

interrupta flavinoda van der Vecht

Ropalidia variegata flavinoda van der Vecht, 1941, Treubia, 18: 158, female – "Cape York" [Australia] (Cambridge).

Ropalidia interrupta flavinoda; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 91. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (Queensland).

irrequieta (Kohl)

Icaria irrequieta Kohl, 1907, Denkschr. K. Akad. Wiss. Wien, Math. -Naturw. Kl. 71 (1): 222, pl. 2 figs. 1, 13, 14, female – "Südarabien (Ras Farták)" (?Wien).

Ropalidia irrequieta; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 342 (cat.).

DISTRIBUTION: Yemen.

irritata (Smith)

Icaria irritata Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 42, female – "Mysol" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (*irritator* [!]; distr.); 1865, J. Proc. Linn. Soc. Zool. 8: 90 (listed); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 63 (distr.); 1913, Bijdr. Dierkd. 19: 76 (distr.).

Ropalidia irritata; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 9 (redescription of type; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list).

DISTRIBUTION: Western New Guinea.

ivorina Cheesman

Ropalidia ivorina Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 25, female – "Papua, Kokoda, 1200 ft" (London); also from Mafulu (4000 ft). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58, (in subgenus *Icarielia*; list), 129 (key). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: Eastern New Guinea.

jacobsoni flavoscutellata Das and Gupta

Ropalidia jacobsoni flavoscutellata Das and Gupta, 1984 (1983), Orient. Insects 17: 419. Nomen nudum.

Ropalidia jacobsoni flavoscutellata Das and Gupta, 1989, Orient. Insects Monogr. 11: 146 (key), 147, fig. 28I, map 24, female, male (in *sumatrae* group of subgenus *Anthreneida*) – "India: Assam: Rongooni" (holotype female Calcutta).

DISTRIBUTION: India (Assam).

jacobsoni jacobsoni (du Buysson)

Icaria jacobsoni du Buysson, 1908, Notes Leyden Mus. 30: 123, female – "aux environs de Batavia" [Java] (lectotype Leiden); also from another locality. – van der Vecht, 1941, Treubia 18: 157 (designation of lectotype).

Ropalidia variegata jacobsoni; van der Vecht, 1941, Treubia 18: 104, 156 (key), 157 (distr.). – 1962, Zool. Verh., Leiden 57: 29 (in subgenus *Anthreneida*; ethology; distr.). – Yoshikawa, 1964, Nat. Life S. E. Asia 3: 396, pl. 4 figs. 5, 6, 8, 10, pl. 7 fig. 19 (nest). – Iwata, 1969, Kontyû, 37: 438 (in subgenus *Anthreneida*; nest); 1976, Evol. Instinct: 295,

297, 198 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (distr.). – Yamane, 1986, Monit. Zool. Ital. (n. ser.) 20: 135 (in subgenus *Icariola*; ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 349, 353, 374 (colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 395 (ethology). – Itô, 1993, Behav. Soc. Evol. Wasps: 27, 41, 52, 71 (ethology).

Ropalidia jacobsoni; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (list). – Kojima and Yamane, 1984, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 17: 110, figs. 30–36 (larva). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key), 36 (distr.).

Ropalidia jacobsoni jacobsoni; Das and Gupta, 1984 (1983), Orient. Insects 17: 418 (cat.); 1989, Orient. Insects Monogr. 11: 113, 146, map 24 (in *sumatra* group of subgenus *Anthreneida*; key; female, male; distr.).

DISTRIBUTION: India; Myanmar; Bangka; Sumatra; Java; Sulawesi.

jaculator (Smith)

Odynerus fallax Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 40, female – "Mysol" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 137 (distr.).

Odynerus jaculator Smith, 1871, J. Proc. Linn. Soc. Zool. 11: 377. Replacement name for *O. fallax* Smith, 1863, non 1861.

Odynerus tertius Dalla Torre, 1889, Wien. Entomol. Ztg. 8: 125. Unnecessary replacement name for *Odynerus fallax* Smith, 1863, non 1861 and de Saussure, 1852; 1894, Cat. Hym. 9: 100 (cat.); 1904, Genera Insectorum 19: 55 (cat.).

DISTRIBUTION: New Guinea (Misool).

javanica van der Vecht

Ropalidia flavopicta; van der Vecht, 1940, Entomol. Meded. Ned. Indië 6: 47, pl. 5 (nest). – Richards and Richards, 1951, Trans. R. Entomol. Soc. London 102: 8 (nest: calyptodomous, laterinidial). – Berland and Grassé, 1951, *in* Grassé, Traé Zool. 10 (2): 1165 (nest). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 496, 498, 512 (in subgenus *Icarielia*; nest).

Ropalidia flavopicta javanica van der Vecht, 1962, Zool. Verh., Leiden 57: 49 (key), 54, female, male, nest (in subgenus *Icarielia*) – "East Java, Blawan" (holotype female Leiden); also from Flores. – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Icarielia*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 50 (nest). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 212 (colony population).

Ropalidia flavopicta flavopicta; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (nest, citing van der Vecht, 1940).

Ropalidia javanica; Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 334, figs. 45, 49, 52, 56, 75–77 (taxonomy; distr.).

DISTRIBUTION: Java; Flores.

kurandae Richards

Ropalidia kurandae Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (nest), 62 (key), 65 (larva in key), 106, figs. 29, 35, 40, female, male, nest (in subgenus *Icariola*) – "**Queensland Q2**, Cairns north of Ellis beach" (holotype female Canberra); also from numerous other localities in Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 639 (nest, colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 203, 212, 225 (colony population). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 180 (distr.). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 250 (in subgenus *Icariola*; distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 328; 1996, Zool. Meded., Leiden 70: 350.

DISTRIBUTION: Australia (Queensland); New Guinea.

latebalteata (Cameron)

Icaria latebalteata Cameron, 1902, J. Straits Br. R. Asiat. Soc. 37: 100, female – "Kuching, Sarawak" (London). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Cameron, 1906, Tijdschr. Entomol. 49: 231 (*latibalteata* [!]; compared to *I. spilocephala* n. sp.).

Ropalidia latebalteata; Dover, 1931 (1930), J. Fed. Mal. St. Mus. 16: 257 (Selangor, Perak). – van der Vecht, 1941, Treubia 18: 113 (key), 178 (female; distr.); 1962, Zool. Verh., Leiden, 57: 35 (in subgenus *Anthreneida*; distr.). — Kojima and Yamane, 1984, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 17: 105, figs. 8–15 (in subgenus *Anthreneida*; larva). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key), 36 (distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Anthreneida*; morphology).

DISTRIBUTION: Malay Peninsula; Borneo; Sumatra.

latetergum Richards

Ropalidia latetergum Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (list), 65 (key), 69, female (in subgenus *Polistratus*) – "**Queensland Q2**, Kuranda" [Australia] (Melbourne), 122 (key). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 214 (in subgenus *Polistratus*; cat.). – Kojima, 1993, New Entomol. 42: 4 (biology). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 180 (distr.). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 250 (in subgenus *Polistratus*; distr.).

DISTRIBUTION: Australia (North Queensland).

laticincta laticincta van der Vecht

Ropalidia laticincta laticincta van der Vecht, 1962, Zool. Verh., Leiden 57: 14, male, female (in subgenus *Anthreneida*) – "Sumba, Waikarudi" (holotype male Basel); also from Timor, Roti, Wetar, Roma, Kisar, Moluccas.

Ropalidia laticincta; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: Sumba; Roti; Timor; Wetar; Romang; Kisar; Moluccas.

laticincta floresiana van der Vecht

Ropalidia laticincta floresiana van der Vecht, 1962, Zool. Verh., Leiden 57: 16, male, female – "Flores, Boa Wae, 450 m" (holotype male Leiden).

DISTRIBUTION: Flores.

lefebvrei (Le Guillou)

Polistes lefebvrei Le Guillou, 1841, Rev. Zool. 1841: 325, female – "*Triton-Bay*" [New Guinea] (Paris); 1841, Ann. Soc. Entomol. France 10: 322.

?Icaria lefebvrei; de Saussure, 1854, Ét. Fam. Vesp. 2: 241 (unidentified species).

Icaria lefebvrei; Smith, 1857, Cat. Hym. Br. Mus. 5: 95 (cat.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Hym. Cat. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – du Buysson, 1911, Abh. Senckenb. Naturforsch. Ges. 34: 229 (taxonomy; distr.).

Ropalidia lefebvrei; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

DISTRIBUTION: New Guinea.

leopoldi Bequaert

Ropalidia leopoldi Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 47, female – "Nouvelle-Guinée hollandaise. Lac d'Angi-Gita" [Anggi Gita] (Brussels). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 129 (key). – Kojima and Spradbery, 1987, Kontyû, 55: 606, figs. 28–36 (larva). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 649 (nest). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Kojima and Kojima, 1994, Tropics 4: 49 (caste differentiation). – Kojima, 1996, Zool. Meded., Leiden 70: 328, figs. 11, 24.

Icaria spec.; von Schulthess, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 40 (Nouvelle-Guineé, Lac de Angi-Gita).

DISTRIBUTION: New Guinea.

lepida van der Vecht

Ropalidia lepida van der Vecht, 1962, Zool. Verh., Leiden 57: 42 (key), 43 (fig.), 66, female, male (in subgenus *Icarielia*) – "Luzon: . . . Damalon" [Philippines] (holotype female Leiden). – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Icarielia*; cat.). – Kojima, 1982, Kontyû 50: 109, 110 (in subgenus *Icarielia*; key). – Kojima and Tano, 1985, Kontyû 53: 525, 526 (distr.; fig.; male genitalia). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 328, figs. 2, 15.

DISTRIBUTION: Luzon; Mindanao.

longipetiolata (Cameron)

Icaria longipetiolata Cameron, 1911, Nova Guinea 9, Zool. 2: 189, female – "Lorentz River" (lectotype Amsterdam). – van der Vecht, 1941, Treubia 18: 105 (subfamily Polybiinae).

Ropalidia longipetiolata; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50 ("probablement un *Parapolybia*"). — Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 128 (key). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: New Guinea.

loriana (du Buysson)

Polybia loriana du Buysson, 1909, Ann. Mus. Civ. Stor. Nat. Genova (3) 4 [= 44]: 314, female – "Nouvelle Guinée S. E. Moroka 1300 m" (Paris).

Parapolybia loriana; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 158, pl. 11 fig. 5 (female).

Ropalidia loriana; van der Vecht, 1966, Zool. Verh., Leiden 82: 6. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 128 (key). – Kojima and Spradbery, 1987, Kontyû, 55: 607, figs. 37–41 (larva). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 633 (nest; colony population). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351 (colony population). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: New Guinea.

lugubris (Smith)

Icaria lugubris Smith, 1858, J. Proc. Linn. Soc. Zool. 2: 115, female – "Borneo (Sarawak)" (lectotype Oxford). – de Saussure, 1862, Stettin. Entomol. Ztg. 23: 134. – Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – van der Vecht, 1962, Zool. Verh., Leiden 57: 36 (designation of lectotype).

Ropalidia krishna Dover and Rao, 1922, J. Asiat. Soc. Bengal (n. ser.) 18: 246, female – "Calcutta and environs" [India] (Calcutta). – Dover, 1925 (1924), J. Asiat. Soc. Bengal (n. ser.) 20: 302 (syn. of *Ropalidia lugubris* (Smith)).

Ropalidia lugubris; Dover, 1925 (1924), J. Asiat. Soc. Bengal (n. ser.) 20: 302 (syn: *R. krishna*). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list).

Ropalidia sumatrae lugubris; van der Vecht, 1941, Treubia 18: 104, 185 (distr.); 1962, Zool. Verh., Leiden 57: 36 (in subgenus *Anthreneida*; distr.). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Anthreneida*). – Das and Gupta, 1984 (1983), Orient. Insects 17: 425 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 136, map 20 (in *sumatrae* group of subgenus *Anthreneida*; distr.).

DISTRIBUTION: India (West Bengal); Borneo.

luzonensis Kojima

Ropalidia flavopicta flavobrunnea; van der Vecht, 1962, Zool. Verh., Leiden 57: 59 [partim].

Ropalidia luzonensis Kojima, 1996, Zool. Meded., Leiden 70: 343, figs. 98–100, 102–106, female – "Philippines, Montalba [probably Montalban, outside Quezon City, Luzon, 14°44′N, 121°07′E]" (Leiden); the unique holotype "is listed under *R. flavopicta flavobrunnea* by van der Vecht (1962: 59)".

DISTRIBUTION: Luzon.

mackayensis Richards

Ropalidia mackayensis Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 62 (key), 105,

fig. 14, female, male (in subgenus *Icariola*) – "**Queensland Q2**, 35 miles SE. of Ayr" [Australia] (holotype female Canberra); also from numerous other localities in Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 203, 212, 225 (colony population). – Kojima, 1993, New Entomol. 42: 4 (biology). – Itô, 1993, Behav. Soc. Evol. Wasps: 89 (in subgenus *Icariola*; ethology). – Kojima, 1996, Zool. Meded., Leiden 70: 328; 1996, Zool. Meded., Leiden 70: 350.

DISTRIBUTION: Australia (Queensland).

maculata (Radoszkowski)

Icaria maculata Radoszkowski, 1881, J. Sci. Math. Phys. Nat. Acad. Lisboa 8, (31): 204, male – "Angola" (type depository unknown). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 342 ("a very doutful species").

DISTRIBUTION: Angola.

maculiventris maculiventris Guérin-Méneville

Ropalidia maculiventris Guérin-Méneville, 1831, *in* Duperrey, Voyage Coquille, Zool., Atlas, Ins.: pl. 9 fig. 8 – "Dory" [= Manokwari, New Guinea] (Genova); 1838, , *in* Duperrey, Voyage Coquille, Zool. 2, Texte 2nd part, 1st div.: 266 (*Rhopalidia* [!]). – Ducke, 1913: Dtsch. Entomol. Z. 1913: 331 (*Rhopalidia* [!]; correct name of *Icaria maculipennis* [!] de Saussure). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist., 39: 244; 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Guiglia, 1948 (1947–49), Ann. Mus. Civ. Stor. Nat. Genova, 63: 177 (*Rhopalidia*; type: a damaged specimen from "Austr. Voy. Coquille" ex coll. Guérin-Méneville in MCG). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 4 (female; distr. [erroneously recorded from Celebes and Borneo]). – van der Vecht, 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3g (morphology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list). – Kojima, 1984, Kontyû, 52: 359, figs. 28–33 (larva). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 643 (colony population; nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Ropalidia*; morphology).

Icaria maculiventris; de Saussure, 1853, Ét. Fam. Vesp. 2: 23. – Smith, 1857, Cat. Hym. Br. Mus. 5: 95 (cat.); 1859, Proc. Linn. Soc. Zool. 3: 167 (female; distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 41 (distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.) [error: Sulawesi]; 1865, J. Proc. Linn. Soc. Zool. 8: 90 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym., 9: 119 (cat. [erroneously recorded from "Australia"]); 1904, Genera Insectorum 19: 74 (cat., as 1894). – Schulz, 1904, Berl. Entomol. Z., 49: 225 (Papua) [partim]. – Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 62 (distr.). – du Buysson, 1911, Abh. Senckenb. Naturforsch. Ges. 34: 229 (distr.). – Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: (distr. [erroneously recorded from Borneo]).

DISTRIBUTION: New Guinea.

maculiventris pratti Cheesman

Ropalidia pratti Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 6, female, male – "Papua, Kokoda" (holotype female London); also from Ekeikei. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list). — Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Ropalidia*; morphology).

Ropalidia maculiventris pratti; Kojima and Spradbery, 1987, Kontyû, 55: 601, figs. 1–7 (larva) – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 351, 354 (colony population).

DISTRIBUTION: Eastern New Guinea.

magnanima albitarsis van der Vecht

Ropalidia magnanima albitarsis van der Vecht, 1941, Treubia 18: 125, female – "Tenasserim: . . . Haundraw Valley" [Myanmar] (London); also from Viet-

nam; 1962, Zool. Verh., Leiden 57: 9 (in subgenus *Anthreneida*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 419 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 110, 116 (key), map 14 (distr.).

DISTRIBUTION: Myanmar; Vietnam.

magnanima anthracina Das and Gupta

Ropalidia magnanima anthracina Das and Gupta, 1984 (1983), Orient. Insects 17: 419. Nomen nudum.

Ropalidia magnanima anthracina Das and Gupta, 1989, Orient. Insects Monogr. 11: 110, 115 (key), 116, figs. 25g, 27a, map 14, male (in *marginata* group of subgenus *Anthreneida*) – "Burma: Kamaeng in Myitkyina District" (Calcutta).

DISTRIBUTION: Myanmar.

magnanima magnanima van der Vecht

Icaria guttatipennis; Bingham, 1897, Fauna Br. India, Hym. 1: 386 (key), 387 (female; distr.) [misidentification of *guttatipennis* from Africa].

Ropalidia guttatipennis; Dover, 1929, Bull. Raffles Mus. 2: 46 (distr.) [misidentification of *guttatipennis* de Saussure].

Ropalidia magnanima magnanima van der Vecht, 1941, Treubia 18: 109 (key), 125, male, female – "Burma: . . . Schwego Myo" (holotype female Venezia); also from Tenasserim; 1962, Zool. Verh., Leiden 57: 9 (in subgenus *Anthreneida*; distr.; type location stated to be "London"). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Das and Gupta, 1984 (1983), Orient. Insects 17: 419 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 110, 116, map 14 (in *marginata* group of subgenus *Anthreneida*; key).

DISTRIBUTION: Myanmar; Malay Peninsula.

malaisei van der Vecht

Ropalidia malaisei van der Vecht, 1962, Zool. Verh., Leiden 57: 42 (key), 65, male, female (in subgenus *Icarielia*) – "Burma: North East Burma, . . . Punkataung, Road Sadon-Myitkyina" (holotype female Leiden); also from Sadon. – Das and Gupta, 1984 (1983), Orient. Insects 17: 427 (in subgenus *Icarielia*; cat.); 1989, Orient. Insects Monogr. 11: 113 (key), 151, map 25 (in subgenus *Icarielia*). – Gusenleitner, 1996, Linz. Biol. Beitr. 28: 16 (compared to *R. obscura* n. sp.). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 328, 340.

DISTRIBUTION: Myanmar.

malayana (Cameron)

Icaria malayana Cameron, 1903, J. Straits Br. R. Asiat. Soc. 39: 171, female – "Sarawak" (London).

Icaria parvimaculata Cameron, 1907, J. Straits Br. R. Asiat. Soc. 48: 25, female – "Marup" [N. Borneo] (London). – Kojima, 1996, Zool. Meded., Leiden 70: 351 (syn. of *R. malayana*).

Ropalidia delicata Dover, 1931 (1930) J. Fed. Mal. St. Mus. 16: 257, female – "Kuala Lipis (Bencha Forest Reserve), Pahang, F.M.S." (London). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. malayana* (Cam.)). – Kojima, 1996, Zool. Meded., Leiden 70: 351 (syn. of *R. malayana*).

Ropalidia malayana; van der Vecht, 1941, Treubia 18: 104 (syn.: *R. delicata* Dover), 112 (key), 174 (taxonomy; female, male; distr.); 1962, Zool. Verh., Leiden 57: 34 (in subgenus *Anthreneida*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57, 58 (in subgenus *Anthreneida* and *Icariola*; list). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key), 36 (distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 349, 350, 357 (key), figs. 1, 2, 5, 7–9, 14, 15, 18, 19, 21, 26, 27 (taxonomy; syn.: *Icaria parvimaculata*, *Ropalidia delicata*).

Ropalidia malayana var. *parvimaculata*; van der Vecht, 1941, Treubia 18: 104, 176 (taxonomy; female; distr.); 1962, Zool. Verh., Leiden 57: 34 (in subgenus *Anthreneida*; distr.).

Ropalidia malayana parvimacula [!]; Gusenleitner, 1996, Linz. Biol. Beitr. 28: 18 (compared to *R. vietnama* n. sp.).

DISTRIBUTION: Malay Peninsula; Sumatra; Sunda Shelf; Borneo.

marginata jucunda (Cameron)

Icaria jucunda Cameron, 1898, Mem. Proc. Manchr. Lit. Philos. Soc. 42 (11): 46, female – "New Guinea" (Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – Cameron, 1906, Tijdschr. Entomol. 49: 230 (compared to *I. pruinosa* n. sp.).

Icaria pruinosa Cameron, 1906, Tijdschr. Entomol. 49: 228, female – "Digoel" [New Guinea] (lectotype Amsterdam). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. marginata jucunda* (Cam.)).

Ropalidia jucunda; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

Ropalidia pruinosa; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

Ropalidia marginata jucunda; van der Vecht, 1941, Treubia 18: 104 (syn: *I. pruinosa* Cameron), 124 (distr.); 1962, Zool. Verh., Leiden 57: 13 (specimens from the Philippines placed under *jucunda* in 1941 paper are to be in *sundaica*). – Baltazar, 1966, Pac. Insects Monogr. 8: 292 (in subgenus *Anthreneida*; cat.). – Richards 1978,: 60 (key), 100 (in subgenus Icariola; female, male; distr.). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 6 (compared to *R. spatulata*). – Yamane and Okazawa, 1981, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 14: 69, fig. 4 (larva). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.). – Spradbery and Kojima, 1989, Jpn. J. Entomol. 57: 637 (colony population; parasite). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 352 (colony population).

DISTRIBUTION: New Guinea; New Britain; Australia (Thursday Is., Queensland).

marginata marginata (Lepeletier)

Vespa ferruginea Fabricius, 1793, Entomol. Syst. 2: 280 – "India orientali" (Kobenhavn). Junior primary homonym of *Vespa ferruginea* Gmelin, 1790, and *Vespa ferruginea* Olivier, 1792.

Polistes ferruginea; Fabricius, 1804, Syst. Piez.: 277.

Epipona marginata Lepeletier, 1836, Hist. Nat. Insectes Hym. 1: 541, male, female – "Inde" (coll. Serville, ?Torino). – Smith, 1852, Ann. Mag. Nat. Hist. (2)9: 47.

Icaria marginata; de Saussure, 1854, Ét. Fam. Vesp. 2: 237 (taxonomy; "Indes Orientales"). – Smith, 1857, Cat. Hym. Br. Mus. 5: 97 (cat.). – de Saussure, 1862, Stettin. Entomol. Ztg. 23: 139. – Gribodo, 1884, Ann. Mus. Civ. Stor. Nat. Genova (2) 1 (= 21): 355. – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 387 (key), 388 (distr.).

Icaria ferruginea; de Saussure, 1853, Ét. Fam. Vesp. 2: 38 ("Indes Orientales"). – Smith, 1857, Cat. Hym. Br. Mus. 5: 97(cat.); 1858, J. Proc. Linn. Soc. Zool. 2: 115 (distr.); 1858 (1859), J. Proc. Linn. Soc. Zool. 3: 22 (distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 42 (distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.). – Horne, 1870, Trans. Zool. Soc. London 7: 169 (ethology) [misidentification?]. – Smith, 1871, J. Proc. Linn. Soc. Zool. 11: 378 (distr.) [misidentification?]. – André, 1889, Le Naturaliste: 189. [misidentification?]. – Dalla Torre, 1894, Cat. Hym. 9: 118 (cat.) [misidentification?]. – Bingham, 1897, Fauna Br. India, Hym. 1: 386 (key), 387 (female; distr.). – Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 495 (male). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.) [misidentification?].

Ropalidia ferruginea; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 247 [misidentification?]. – Dover and Rao, 1922, J. Asiat. Soc. Bengal (n. ser.) 18: 244 [misidentification?]. – Salt and Bequaert, 1929, Psyche 36: 263 (record of stylopized specimen). – Dover, 1931 (1930), J. Fed. Malay. St. Mus. 16: 257 (distr.). – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 85, pl. 5 fig. 5 (in subgenus *Anthreneida*); 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 49 (in subgenus *Anthreneida*; fe-

male, distr.) [error: year of publication 1792].

Ropalidia marginata; Dover and Rao, 1922, J. Asiat. Soc. Bengal (n. ser.) 18: 244. – Gadgil and Mahabal, 1974, Curr. Sci. 43: 482 (ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list), 64 (key), 65 (larva in key). – Gadagkar, 1980, Curr. Sci. 49: 772 (ethology). – Belavadi and Govindan, 1981, Colemania 1: 95 (in subgenus *Icariola*; ethology). – Gadagkar et al., 1982, Proc. Symp. Ecol. Anim. Pop. Zool. Surv. India 4: 49; 1982, Proc. Indian Acad. Sci. Anim. Sci. 91: 539 (ecology). – Gadagkar and Joshi, 1982, *in* Breed et al., Biol. Soc. Insects: 187 (ethology); 1983, Anim. Behav. 31: 26 (ethology). – Gadagkar, 1985, Proc. Indian Acad. Sci. Anim. Sci. 94: 319 (ethology). – Muralidharan et al., 1986, J. Genet. 65: 153 (ethology). – Gadagkar et al., 1988, Proc. R. Soc. London B Biol. Sci. 233: 175 (ethology). – Venkataraman et al., 1988, Behav. Ecol. Sociobiol. 23: 271 (ethology). – Gadagkar, 1990, Proc. R. Soc. London B Biol. Sci. 329: 20 (ethology). – Gadagkar et al., 1990, Proc. Indian Acad. Sci. Anim. Sci. 99: 141 (ethology). – Gadagkar, 1990, *in* Veeresh et al., Soc. Insects Environ.: 9 (ethology). – Venkataraman and Gadagkar, 1990, *in* Veeresh et al., Soc. Insects Environ.: 71 (ethology). – Chandrashekara and Gadagkar, 1990, *in* Veeresh et al., Soc. Insects Environ.: 73 (ethology); 1990, *in* Veeresh et al., Soc. Insects Indian Perspec.: 153 (ethology). – Chandran and Gadagkar, 1990, *in* Veeresh et al., Soc. Insects Environ.: 78 (ethology). – Nair et al., 1990, *in* Veeresh et al., Soc. Insects Environ.: 79 (ethology). – Chandrashekara et al., 1990, *in* Veeresh et al., Soc. Insects Environ.: 81 (ethology). – Gadagkar et al., 1990, *in* Veeresh et al., Soc. Insects Environ.: 227 (ethology). – Belavadi and Veeresh, 1990, *in* Veeresh et al., Soc. Insects Environ.: 481 (prey record). – Gadagkar, 1990, *in* Veeresh et al., Soc. Insects Indian Perspec.: 129 (ethology). – Chandrashekara and Gadagkar, 1991, Ethology 87: 269 (ethology); 1991, Insectes Soc. 38: 213 (ethology). – Gadagkar et al., 1991, Naturwissenschaften 78: 523 (castes). – Gadagkar et al., 1991, Entomon, 16: 167 (ethology). – Gadagkar et al., 1991, Ecol. Entomol. 16: 435 (ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 349, 352, 354 (colony population). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 459, 460, 464 (biology). – Chandrashekara and Gadagkar, 1992, J. Insect Behav. 5: 193 (ethology). – Venkataraman and Gadagkar, 1992, Insectes Soc. 39: 285 (ethology). – Gadagkar et al., 1993, Experientia 49: 714 (ethology); 1993, *in* Keller, Queen Number Soc. Insects: 188 (ethology). – Itô, 1993, Behav. Soc. Evol. Wasps: 51, 74, 131, 133 (ethology). – Raghuwanshi, 1993, Ind. J. Zool. Spectrum 3 (1-2): 5 (morphology). – Raghuwanshi and Pathak, 1993, Ind. J. Zool. Spectrum 4 (1-2): 19 (physiology). – Gadagkar, 1994, *in* Agrawal, Perspect. Entomol. Res.: 263 (ethology). – Gadagkar and Bonner, 1994, J. Biosci. 19 (2): 219 (ethology). – Premnath et al., 1994, *in* Lenoir et al., Insect. Soc.: 242 (ethology). – Gadagkar, 1995, Curr. Sci. 68: 185 (ethology); 1995, *in* Ramamurthi and Bali, Readings Behav.: 8 (ethology); 1995, *in* Ramamurthi and Bali, Readings Behav.: 135 (ethology). – Itô, 1995, Pac. Sci. 49: 42 (ethology). – Premnath et al., 1995, Behav. Ecol. 6 (2): 117 (ethology); 1995, *in* Ramamurthi and Bali, Readings Behav.: 160 (ethology). – Shakarad and Gadagkar, 1995, Ecol. Entomol. 20 (3): 273 (ethology); 1995, *in* Ramamurthi and Bali, Readings Behav.: 144 (ethology). – Arathi and Gadagkar, 1995, *in* Ramamurthi and Bali, Readings Behav.: 153 (ethology). – Venkataraman and Gadagkar, 1995, Proc. Indian Natl. Sci. Acad. Part B Biol. Sci. 61 (4): 299–313 (ethology). – Gadagkar, 1996, *in* Turillazzi and West-Eberhard, Nat. Hist. Evol. Paper Wasps: 248 (ethology); 1996, J. Indian Inst. Sci. 75 (3): 333 (ethology); 1996, Insectarium 33 (4): 18 (ethology). – Strassmann et al., 1996, Mol. Ecol. 5 (3): 459 (genetics). – Premnath et al.,

1996, Behav. Ecol. Sociobiol. 39: 125 (ethology).

Ropalidia marginata marginata; van der Vecht, 1941, Treubia 18: 109 (key), 117 (fig.; taxonomy; distr.); 1962, Zool. Verh., Leiden 57: 11 (in subgenus *Anthreneida*; distr.). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Anthreneida*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 419 (cat.; distr.); 1989, Orient. Insects Monogr. 11: 110, 118, map 15 (in *marginata* group of subgenus *Anthreneida*; key; female, male; fig.; distr.).

Ropalidia marginata indica van der Vecht, 1941, Treubia 18: 121 ("holotype" from Amballa) [replacement name for *Vespa ferruginea* Fabricius, 1793]; 1962, Zool. Verh., Leiden 57: 5 (clarification that this is a replacement name for *ferruginea* Fabricius, and not to be considered as a new taxon).

DISTRIBUTION: Pakistan; India; Sri Lanka.

marginata rufitarsis van der Vecht

Icaria guttatipennis; Bingham, 1897, Fauna Br. India, Hym. 1: 386 (key), 387 (misidentification of *guttatipennis* from Africa; female; distr.). – Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 501 (misidentification?; compared to *I. wroughtoni*, n. sp.).

Ropalidia marginata rufitarsis van der Vecht, 1941, Treubia 18: 122, female – "Tenasserim: Haundraw Valley" [Myanmar] (London); also from Bhamo and Tavoy; 1962, Zool. Verh., Leiden 57: 12 (in subgenus *Anthreneida*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 420 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 118 (key), 119, map 15 (in *marginata* group of subgenus *Anthreneida*).

DISTRIBUTION: Myanmar.

marginata sundaica van der Vecht

?*Polistes sumatrae* Fabricius, 1804, Syst. Piez.: 273 – "Sumatra" (Kobenhavn); non *Ropalidia sumatrae* (Weber) [= *Vespa sumatrae* Weber, 1801].

?*Icaria ferruginea*; Smith, 1871, J. Proc. Linn. Soc. Zool. 11: 378. – Gribodo, 1884, Ann. Mus. Civ. Stor. Nat. Genova (2) 1 [= 21]: 356.

Icaria marginata; Cameron, 1905, Tijdschr. Entomol. 48: 73. – Fullaway, 1913, Proc. Hawaii. Entomol. Soc. 2: 283 (distr.). – von Schulthess, 1927, Suppl. Entomol. 16: 83 (distr.); 1932, Res. Scient. Voy. ind. Or. Neerl Leopold 4, 5: 40.

Ropalidia ferruginea; Dover, 1929, Bull. Raffles Mus. 2: 46; 1931, J. Fed. Malay St. Mus. 16: 257.

Ropalidia marginata var. *sundaica* "v. d. Vecht (in lit.)" Bequaert and Yasumatsu, 1939, Tenthredo 2: 315. Nomen nudum.

Ropalidia marginata sundaica Esaki, 1939, Vol. Jubilare pro Prof. S. Yoshida: 238. Nomen nudum.

Ropalidia marginata var. *sundaica* Yasumatsu, 1940, Akitu 2: 184. Nomen nudum.

Ropalidia marginata sundaica van der Vecht, 1941 Treubia 18: 122, female, male – "Koeripan, between Batavia and Buitenzorg, W. Java" (holotype female Leiden); also from Mariana Is.; Malay Peninsula; Bangka; Borneo; Karimata Djawa Isl. – Yasumatsu, 1945, Mush 16: 35 (distr.). – van der Vecht, 1962, Zool. Verh., Leiden 57: 12 (distr.; bionomics). – Baltazar, 1966, Pac. Insects Monogr. 8: 292 (in subgenus *Anthreneida*; cat.). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest). – Kojima, 1984, Kontyû, 52: 55, fig. 5 (larva); 1984, Kontyû 52: 523 (key), 526, 530, 531 (in subgenus *Icariola*; fig.; distr.; male genitalia;). – Miyano, 1994, Nat. Hist. Res., spec. issue, (1): 209 (distr.); 1994, Nat. Hist. Res., spec. issue, (1): 237 (ethology; nest). – Yamane, 1991, Proc. Jpn. Soc. Syst. Zool. 45: 55 (distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: table 1 (in subgenus *Icariola*). – Kusigemati et al., 1996, Occasion. Pap. Kagoshima Univ. Res. Center S. Pacif. 30: 12 (distr.).

Ropalidia marginata (Lepeletier); Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key), 35 (distr.).

DISTRIBUTION: Malay Peninsula; Borneo; Bangka; Sumatra; Java; Kariman Djawa; Lesser Sunda Is.; Sulawesi; Talud Is.; Tukang Besi Is.; Philippine Is.; Mariana Is.; Palau Is.; Volcano Is.

mathematica binotata van der Vecht

"*Icaria variegata* var., non type!"; de Saussure, 1853, Ét. Fam. Vesp. 2: 25. – von Schulthess, 1927, Suppl. Entomol. 16: 83 (distr.).

Ropalidia mathematica binotata van der Vecht, 1941, Treubia 18: 131, female, male – "W. Java, Tapos on Mt. Gedeh (800 m)" (holotype female Leiden); also from Bali; Sumatra; Bangka; 1962, Zool. Verh., Leiden 57: 19 (distr.; biology; nest). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (nest). – Kojima and Yamane, 1984, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 17: 114, figs. 43–49 (larva).

Ropalidia mathematica; Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key), 35 (distr.).

DISTRIBUTION: Bangka; Sumatra; Java; Bali; Sumbawa; Flores; Karimon Djawa; Straits Sunda.

mathematica mathematica (Smith)

Polybia mathematica Smith, 1860 (1861), J. Proc. Linn. Soc. Zool. 5: 90, female – "Makassar" [Sulawesi] (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 139 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 384 (cat). – Dalla Torre, 1894, Cat. Hym. 9: 164 (cat.); 1904, Genera Insectorum 19: 78 (cat.). – van der Vecht, 1966, Zool. Verh., Leiden 82: 6 (= *Ropalidia mathematica*).

Parapolybia mathematica; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (syn. of *Icaria stigma* Smith, according to Meade-Waldo, in litt.).

Ropalidia mathematica mathematica; van der Vecht, 1941, Treubia 18: 110 (key), 130 (in *stigma* group; female; distr.); 1962, Zool. Verh., Leiden 57: 18 (in subgenus *Anthreneida*; distr.: Celebes; Flores). – Das and Gupta, 1984 (1983), Orient. Insects 17: 420 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 111, 133 (in subgenus *Anthreneida*; key; distr. [record from Java probably erroneous]).

Ropalidia mathematica; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: Sulawesi; Lombok; Flores; ?Java.

mathematica nigroplagiata (Cameron)

Icaria nigroplagiata Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 498, female – "Khasia Hills" [India] (Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Ropalidia mathematica nigroplagiata; van der Vecht, 1941, Treubia 18: 104, 132 (distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 421 (cat.; distr.); 1989, Orient. Insects Monogr. 11: 111, 133 (key), 134, map 19 (in *stigma* group of subgenus *Anthreneida*; female; distr.).

DISTRIBUTION: India (Meghalaya, Uttar Pradesh, Tripura).

mathematica sumbaensis van der Vecht

Ropalidia mathematica sumbaensis van der Vecht, 1962, Zool. Verh., Leiden 57: 20, female, male (in subgenus *Anthreneida*) – "Sumba: Langgaliru" (holotype female Basel); ? also from Timor.

DISTRIBUTION: Sumba; ?Timor.

mathematica torrida (Smith)

Icaria torrida Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 42, female – "Ceram" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – von Schulthess, 1927, Suppl. Entomol. 16: 83 (distr.) [misidentification?].

Ropalidia torrida; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

Ropalidia mathematica torrida; van der Vecht, 1941, Treubia 18: 104, 133 (distr.); 1962, Zool. Verh., Leiden 57: 20 (in subgenus *Anthreneida*; distr.; "Perhaps this form will eventually prove to

be closer to *R. socialis* or *unicolor* than to *R. mathematica.*").

DISTRIBUTION: Moluccas.

melania Richards

Ropalidia melania Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (nest), 57 (list), 65 (larva in key), 122 (key), 126, female, nest (in subgenus *Polistratus*) – "**New Guinea**: Morobe District, Wau" (London). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Polistratus*; morphology).

DISTRIBUTION: New Guinea.

mimikae (Meade-Waldo)

Icaria mimikae Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 448 (key), 450, female (in subgenus *Icariastrum*) – "Mimika River" [New Guinea] (London).

Ropalidia mimikae; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 9 (redescription of the type).

DISTRIBUTION: New Guinea.

minor (de Saussure)

Icaria hova var. *minor* de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217 (key), 228, female – "In Madagascar vulgaris" (Genève).

Ropalidia hova var. *minor*; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 342 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 84 (nest).

Ropalidia hova minor; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (in subgenus *Icariola*; nest).

Ropalidia minor; Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 88 (key), fig. 11.

DISTRIBUTION: Madagascar.

modesta (Smith)

Icaria modesta Smith, 1858, J. Proc. Linn. Soc. Zool. 2: 115, female – "Borneo (Sarawak)" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.).

Icaria fulvipennis Gribodo, 1892 (1891), Bull. Soc. Entomol. Ital., 23: 245, female – "Marang (Sumatra)" (Genova). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 73 (cat.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. modesta* (Smith)).

Icaria ungulata Bingham, 1897, Fauna Br. India, Hym. 1: 387 (key), 391, female – "Tenasserim" [Myanmar] (London). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Dover, 1931 (1930), J. Fed. Malay St. Mus. 16: 257 (distr.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. modesta* (Smith)).

Ropalidia ungulata; Dover, 1931 (1930), J. Fed. Mal. St. Mus. 16: 257 (distr.).

Ropalidia modesta; van der Vecht, 1941, Treubia 18: 104 (syn: *I. fulvipennis* Gribodo, *I. ungulata* Bingham), 112 (key), 187 (taxonomy; fig.; distr.); 1962, Zool. Verh., Leiden 57: 36 (in subgenus *Anthreneida*; ethology; distr.). – Richards , 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 57 (in subgenus *Anthreneida*; nest; list). – Das and Gupta, 1984 (1983), Orient. Insects 17: 421 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 112 (key), 135, map 20 (*sumatrae* group of subgenus *Anthreneida*; female; fig.; distr.). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key).

DISTRIBUTION: Myanmar; Thailand; Malay Peninsula; Borneo; Sumatra; Java.

mondoensis Cheesman

Ropalidia mondoensis Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 6, female – "Papua, Mafulu, 4000 ft" (London); also from Mondo (5000 ft). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list).

DISTRIBUTION: Eastern New Guinea.

montana Carl

Icaria montana Carl, 1930, Memoires du "Globe" 49: 22. Nomen nudum.

Ropalidia montana; Carl, 1934, Rev. Suisse Zool. 41: 675, figs. 1–6, 8—13, female, male, nest – "le versant méridional des Nilgiris . . . Coonoor" [India] (Genève). – Richards and Richards, 1951, Trans. R. Entomol. Soc. London 102: 6 (nest

[incorrectly as "pharagmocyrrarus"]). – Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): 1164. – van der Vecht, 1962, Zool. Verh., Leiden 57: 42 (key), 70 (in subgenus *Icarielia*; distr.); 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3c (morphology). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Icarielia*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55, 59 (in subgenus *Icarielia*; nest; list), 128 (key). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Icarielia*; distr.). – Yamane et al., 1983, Insectes Soc. 30: 416 (biology). – Jeanne et al., 1983, Zoomorphologie 103: 155 (in subgenus *Icarielia*; morphology). – Das and Gupta, 1984 (1983), Orient. Insects 17: 427 (in subgenus *Icarielia*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 113 (key), 148, map 25 (in subgenus *Icarielia*; female; distr.). – Belavadi and Veeresh, 1990, *in* Veeresh et al., Soc. Insects Environ.: 481 (prey record). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 349, 352 (colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 497, 501, 512 (in subgenus *Icarielia*; nest). – Downing, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 548, 551 (morphology). – Jeanne and Hunt, 1992, J. Biosci. 17: 1–14 (biology); 1992, Entomol. Mon. Mag. 128: 139 (associates). – Itô, 1993, Behav. Soc. Evol. Wasps: 85, 87, 88, 89, 132 (in subgenus *Icarielia*; ethology). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 328, figs. 9, 22.

DISTRIBUTION: India (Kerala, Karnataka, Tamil Nadu).

mutabilis mutabilis Richards

Ropalidia mutabilis mutabilis Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (nest), 60 (key), 94, female, male, nest (in subgenus *Icariola*) – "**Northern Territory**, Downs Homestead, 2 miles ENE. Victoria River, 16°24′S., 131°02′E." [Australia] (holotype female Canberra); also from numerous other localities in Northern Territory, and Western Australia. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (Northern Territory, Western Australia).

mutabilis torresiana Richards

Ropalidia mutabilis torresiana Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 96, female – "**Queensland Q3**, Iron Range" [Australia] (Canberra); also from two other localities in Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 216 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (Queensland).

nigerrima van der Vecht

Ropalidia nigerrima van der Vecht, 1962, Zool. Verh., Leiden 57: 38 (key), 39, female – "Berangas, South East Borneo" (Leiden). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key), 36 (distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Paraicaria*; morphology).

DISTRIBUTION: Borneo; Sumatra.

nigra (Smith)

Icaria nigra Smith, 1859, J. Proc. Linn. Soc. Zool. 3: 167, female – "Aru" (lectotype Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 41 (distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1865, J. Proc. Linn. Soc. Zool. 8: 90 (listed); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat); 1904, Genera Insectorum 19: 74 (cat.). — Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (syn.: *Ancistrocerus catharinae* (Cam.) as var.).

Icaria morosa Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 42, female – "Waigiou" (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 119, female, (cat.); 1904, Genera Insectorum 19: 74 (cat.) – Schulz, 1904, Berl. Entomol. Z. 49: 226 (distr.). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 10 (syn. of *Ropalidia nigra* (Smith)).

Icaria spilostoma Cameron, 1906, *in* Wich-

mann, Nova Guinea 5, Zool. 1: 62, female, male – "Manokwari" [New Guinea] (lectotype female London, no. 18873). – Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 448 (distr.); 1915, Br. Orn. Union Exp. N. Guinea, London sep.: 10 (as 1912). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *Ropalidia nigra* (Smith)). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 10 (syn. of *Ropalidia nigra* (Smith)).

Odynerus sariensis Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 63, female – "Siari" (lectotype Amsterdam). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *Ropalidia nigra* (Smith)).

Odynerus confraternus Cameron, 1911, Nova Guinea 9, Zool. 2 : 192, female – "Lorentz River" (lectotype Amsterdam). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *Ropalidia nigra* (Smith)).

Icaria confraternus; Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 506.

Ancistrocerus catharinae Cameron, 1913, Bijdr. Dierkd. 19: 78, female – "Waigeu" (lectotype Amsterdam). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (var. of *Icaria nigra*) – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *Ropalidia nigra* (Smith)).

Icaria nigra var. *catharinae*; Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406.

Ropalidia confraterna; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50.

Ropalidia nigra; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 50. – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syns.: *Icaria spilostoma* Cameron, *Odynerus sariensis* Cameron, *Odynerus confraternus* Cameron, *Ancistrocerus catharinae* Cameron). – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 10 (redescription of type female, description of male; syns.: *Icaria morosa* Smith, *Icaria spilostoma* Cameron; distr. [erroneously recorded from Makasar in Celebes]). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Polistratus*; list, syn.: *spilostoma* (Cameron)), 121 (key).

Ropalidia spilostoma; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

Ropalidia morosa; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

DISTRIBUTION: New Guinea.

nigrescens van der Vecht

Ropalidia flavopicta nigrescens van der Vecht, 1962, Zool. Verh., Leiden 57: 58 (key), 59, female (in subgenus *Icarielia*) – "Los Baños" [Philippines] (Gainesville). – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Icarielia*; cat.).

Ropalidia nigrescens; Kojima, 1982, Kontyû 50: 109 (key), 116 (in subgenus *Icarielia*; female, male; larva; distr.) – Jeanne et al., 1983, Zoomorphologie 103: 155 (in subgenus *Icarielia*; morphology). - Kojima and Jeanne, 1986, Biotropica 18: 324 (nest). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 497, 501 (in subgenus *Icarielia*; nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: 112, tables 1, 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 326.

DISTRIBUTION: Luzon.

nigrior Richards

Ropalidia nigrior Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (nest), 59 (list), 63 (key), 113, 128 (key), fig. 45, female, nest (in subgenus *Icarielia*) – "**Queensland Q3**, Iron Range" [Australia] (Canberra); also from two other localities in Queensland; and New Guinea (probably). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 217 (in subgenus *Icarielia*; cat.). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 180 (distr.). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: Australia: Queensland; ?New Guinea.

nigrita Das and Gupta

Ropalidia nigrita Das and Gupta, 1984 (1983), Orient. Insects 17: 421. Nomen nudum.

Ropalidia nigrita Das and Gupta, 1989, Orient. Insects Monogr. 11: 111 (key), 130, figs. 24b, 24n, 25n, 26F, 26f, 26H, 26h, 27K, 27n, map 19, male, female (in *stigma* group of subgenus *Anthreneida*) – "India: Manipur: Moirang, 500 m" (holotype male Calcutta); also from another locality in Manipur.

DISTRIBUTION: India: Manipur.

nigrofemorata (Cameron)

Icaria nigrofemorata Cameron, 1910, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Vesp.: 170, female – "Usambara" [Tanzania] (?Stockholm). — von Schulthess, 1913, Ark. Zool. 8 (17): 13 (the type has lost its metasoma and cannot be identified). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (citing von Schulthess, 1913).

DISTRIBUTION: Tanzania.

nilssoni Giordani Soika

Ropalidia nilssoni Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 79, 83, 86 (key), "male" [female] – "Madagascar: Saonierana, Ivongo Rantabade" (Uppsala).

DISTRIBUTION: Madagascar.

nitidula (de Saussure)

Icaria nitidula de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 122, pl. 18 fig. 17, female – "*Madagascar*" (?Berlin). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217, 227 (male). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia nitidula; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (cat.; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 58 (in subgenus *Icariola*; nest; list). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85 (key).

DISTRIBUTION: Madagascar.

nobilis (Gerstaecker)

Icaria nobilis Gerstaecker, 1857, Monatsber. K. Preuss. Akad. Wiss. Berlin: 464, female – "Mossambique" (?Berlin); 1862, *in* Peters, Reise Mossambique, Zool. V: 470, pl. 30 fig. 9 (female). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114, 333, footnote (female). – Kohl, 1893 (1892), Jahrb. Hamburg. Wiss. Anst. 10 (2): 189. – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – Stadelmann, 1898, Dtsch. Ost-Afrika 4, Hym.: 33. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia nobilis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (cat.; probable syn. of *R. guttatipennnis* (de Saussure); distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 187 (*Rhopalidia* [!]; distinct from *guttatipennnis*; distr.). – Salt, 1927, Psyche 34: 185 (distr.; record of stylopized specimen). – Salt and Bequaert, 1929, Psyche 36: 263 (record of stylopized specimen). – FitzGerald, 1940, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 15: 34 (distr.; nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Giordani Soika, 1981, Boll. Soc. Entomol. Ital. 113: 173, fig. 1 (compared to *R. unidentata* n. sp.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Tanzania (including Zanzibar); Mozambique.

novaeguineae (von Schulthess)

Parapolybia novaeguineae "de Saussure nom. mus." von Schulthess, 1913 (April), Mitt. Schweiz. Entomol. Ges. 12: 154 (key), 162 (description based on notes received from Meade-Waldo) – "Neu-Guinea" (London).

Polybia novaeguineae du Buysson, 1913 (July), Bull. Soc. Entomol. France 1913: 297, female – locality not stated, but evidently from New Guinea (Oxford, London [with a label "*Polybia Novae-Guineae* Sauss." written by Smith]) [junior secondary homonym of *Ropalidia novaeguineae* (von Schulthess)]. – van der Vecht, 1966, Zool. Verh., Leiden 82: 6 (syn. of *Ropalidia novaeguineae* (von Schulthess)).

Ropalidia novae guineae [!]; Cheesman,

1952, Ann. Mag. Nat. Hist. (12) 5: 3, 23 (redescription of a type of *Polybia novaeguineae* du Buysson).

Ropalidia novaeguineae; van der Vecht, 1966, Zool. Verh., Leiden 82: 6. — Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (in subgenus *Icarielia*; listed as *R. novaeguineae* (von Schulthess)), 129 (*R. novaeguineae* (du Buysson); key). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: New Guinea.

novissima Giordani Soika

Ropalidia novissima Giordani Soika, 1944, Atti Ist. Ven. Sci., Lett. Arti Cl. Sci. Mat. Nat. 103 (2): 176, female – "*Africa orientale:* Banno" (Venezia); 1952 (1951), Riv. Biol. Colon. 11: 88 (distr.); 1973, Boll. Mus. Civ. Stor. Nat. Venezia 24: 37 (holotype in coll. Giordani Soika).

DISTRIBUTION: Ethiopia.

nursei van der Vecht

Ropalidia rufoplagiata nursei van der Vecht, 1941, Treubia 18: 167, female – "India: . . . Bombay Pres., Matheran" (London). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Anthreneida*). – Das and Gupta, 1984 (1983), Orient. Insects 17: 422 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 137 (key), 138 (in *sumatrae* group of subgenus *Anthreneida*).

Ropalidia nursei; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list).

DISTRIBUTION: India (Maharashtra).

obscura Gusenleitner

Ropalidia obscura Gusenleitner, 1996, Linz. Biol. Beitr. 28: 15, figs. 2, 4, female (in subgenus *Icariellia* [!]) – "Thailand, Ching Mai, Province: Doi Suthep" (holotype San Francisco). – Kojima, 1996, Zool. Meded., Leiden 70: 328.

DISTRIBUTION: Thailand.

obscurior Giordani Soika

Ropalidia obscurior Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 79, 87 (key), 89, female, male – "MADAGASCAR: Rogez, dintorni" (holotype female Venezia); also from two other localities in Madagascar.

DISTRIBUTION: Madagascar.

ochracea van der Vecht

Ropalidia flavopicta ochracea van der Vecht, 1962, Zool. Verh., Leiden 57: 49 (key), 56, female, male (in subgenus *Icarielia*) – "Central Sumba, Lokojengo" (holotype female Basel); also from elsewhere on Sumba.

Ropalidia ochracea; Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 336, figs. 46, 57, 78–80 (taxonomy; distr.).

DISTRIBUTION: Sumba.

opifex van der Vecht

Ropalidia opifex van der Vecht, 1962, Zool. Verh., Leiden 57: 42 (key), 68, female (in subgenus *Icarielia*) – "Malaya: Selangor . . . Kuala Lumpur, Ampang" (London); also from Borneo; biology. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55, 59 (in subgenus *Icarielia*; nest; list), 128 (key). – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 93, pl. 3 fig. 7 (in subgenus *Icarielia*); 1982, Zool. Res. 3: 86 (in subgenus *Icariolia* [!]; distr.); 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 51, pl. 3 fig. 7 (in subgenus *Icarielia*; female; distr.); 1987, *in* Forest Insects Yunnan: 1348 (in subgenus *Icariolia* [!]; key). – Maschwitz et al., 1990, J. Nat. Hist. 24: 1311 (in subgenus *Icarielia*; nest). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 328, figs. 1, 14.

DISTRIBUTION: Malay Peninsula; Borneo; China (Yunnan).

opulenta (Smith)

Icaria opulenta Smith, 1857, Cat. Hym. Br. Mus. 5: 99, female – "Borneo (Sarawak)" (lectotype London); 1858, J. Proc. Linn. Soc. Zool. 2: 115 (male). — de Saussure, 1862, Stettin. Entomol. Ztg. 23: 133. – Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia opulenta; van der Vecht, 1941,

Treubia, 18: 113 (key), 185 (ref.; female, male; fig.; distr.); 1962, Zool. Verh., Leiden 57: 36 (in subgenus *Anthreneida*; designation of lectotype; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Anthreneida*; morphology).

DISTRIBUTION: Borneo.

ornaticeps (Cameron)

Icaria ornaticeps Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 496, female – "Khasia Hills" [India] (Oxford, London); also from Sarawak; 1903, J. Straits Br. R. Asiat. Soc. 39: 173. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 100 (syn. of *Icaria flavopicta* Smith). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.). – van der Vecht, 1962, Zool. Verh., Leiden 57: 49 (record from Sarawak is erroneous).

Ropalidia flavopicta ornaticeps; van der Vecht, 1962, Zool. Verh., Leiden 57: 49 (in subgenus *Icarielia*; taxonomy; distr.). – Yoshikawa, 1964, Nat. Life S. E. Asia 3: pl. 6 figs. 15, 16, pl. 7 fig. 17 (in subgenus *Icariela*[!]; nest). — Iwata, 1969, Kontyû, 37: 439 (in subgenus *Icarielia*; nest); 1976, Evol. Instinct: 295 (in subgenus *Icarielia*; ethology). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Icarielia*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 427 (in subgenus *Icarielia*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 150 (key), 151, map 25 (in subgenus *Icarielia*; female, male; fig.; distr.).

Ropalidia ornaticeps; Yoshikawa et al., 1969, Nat. Life S. E. Asia 6: 167, pl. 51 (in subgenus *Icarielia*; nest; colony population). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 352 (colony population) [citing Yoshikawa et al. (1969), without nomenclatural consideration]. – Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 336, figs. 47, 50, 53, 58, 59, 61, 81–87 (taxonomy; distr.).

DISTRIBUTION: India; Myanmar; Thailand; Cambodia; Malay Peninsula; Vietnam.

ornatipes (Cameron)

Icaria ornatipes Cameron, 1908, Dtsch. Entomol. Z. 1908: 564, female – "Borneo . . . Kuching" (holotype London).

Ropalidia ornatipes; van der Vecht, 1941, Treubia, 18: 113 (key), 180 (ref.; female; fig.; distr.); 1962, Zool. Verh., Leiden 57: 35 (in subgenus *Anthreneida*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key).

DISTRIBUTION: Borneo; Sumatra.

palawana Kojima and Tano

Ropalidia palawana Kojima and Tano, 1985, Kontyû 53: 520, female – "Palawan, Mantalingajan, Pingisan 600 m" [Philippines] (Kobenhavn). – Kojima, 1996, Zool. Meded., Leiden 70: 326, 341 (distr.).

DISTRIBUTION: Palawan.

papuana (Cameron)

Polybia papuana Cameron, 1913, Bijdr. Dierkd. 19: 77, female – "Waigeu" (lectotype Amsterdam). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *R. festina* (Smith)); 1966, Zool. Verh., Leiden 82: 6.

Ropalidia papuana; van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

pendula (Smith)

Icaria pendula Smith, 1857, Cat. Hym. Br. Mus. 5: 98, female – "India (Bareily)" (London); 1871, J. Proc. Linn. Soc. Zool. 11: 378 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. variegata* (Smith)).

Ropalidia pendula; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: India.

petulans Cheesman

Ropalidia fluviatilis petulans Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2 (*petulaus* [!]), 18, female – "Japen Is., Mt. Baduri, 1000 ft." (London) [according to the label in the drawer, missing].

Ropalidia petulans; Richards, 1978, Aust. J.

Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).
DISTRIBUTION: New Guinea.

phalansterica (de Saussure)
Icaria phalansterica de Saussure, 1853, Ét. Fam. Vesp. 2: 35, pl. 4 fig. 3, pl. 5 fig. 1, female – "Madagascar" (Genève, Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.). – André, 1889, Le Naturaliste: 189 (ethology). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 115 (key), 140 (female, male). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 218, 232. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 65 (ethology).
Ropalidia phalansterica; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 85 (Madagasar: Perinet, Nossi-Bé Is.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 83 (probable syn.: *R. pulchella* (de Saussure); distr.), 86, 87 (key), fig. 8.
DISTRIBUTION: Madagascar.

philippinensis (de Saussure)
Icaria philippinensis de Saussure, 1854, Ét. Fam. Vesp. 2: 240, female – "Les Iles Philippines" (London). – Smith, 1857, Cat. Hym. Br. Mus. 5: 99 (cat.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.) – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – Casto de Elera, 1895, Cat. Sist. Fauna Filip. 2: 243 (listed). – Ashmead, 1904, J. N. Y. Entomol. Soc. 12: 7 (distr.); 1904, Proc. U.S. Natl. Mus. – Brown, 1906, Philipp. J. Sci. 1: 688 (listed from the Philippines).
Ropalidia philippinensis; van der Vecht, 1941, Treubia 18: 110 (key), 163 (Philippine Is.: Mindanao, Luzon). – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Anthreneida*; cat.). – Kojima, 1984, Kontyû, 52: 524 (key), 527 (in subgenus *Icariola*).
DISTRIBUTION: Luzon; Mindanao.

pilosa (Smith)
Icaria pilosa Smith, 1858 (1859), J. Proc. Linn. Soc. Zool. 3: 22, male — "Celebes" (lectotype Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – van der Vecht, 1941, Treubia 18: 117 (designation of lectotype).
Ropalidia pilosa; van der Vecht, 1941, Treubia, 18: 109 (key), 116 (ref.; female, male; fig.; distr.); 1962, Zool. Verh., Leiden 57: 9 (in subgenus *Anthreneida*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list). – Kojima, 1996, Zool. Med. ed., Leiden 70: 350.
DISTRIBUTION: Sulawesi.

plebeiana Richards
?*Icaria plebeja* de Saussure, 1863, Mém. Soc. Phys. Hist. Nat. Genève 17: 235, female – "Nouvelle-Hollande" (coll. Heyden and de Saussure; current depository unknown). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.; cites de Saussure, 1862, but distribution is in Australia); 1904, Genera Insectorum 19: 7[illegible] (cat.; as 1894).
Rhopalidia [!] sp.; McKeown, 1942, Australian Insects: 195 (nest).
Ropalidia plebeiana Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest), 58 (*plebiana* [!]; in subgenus *Icariola*; list; syn.: *R. plebeja* (de Saussure, 1863) non 1862, 62 (key), 65, (larva in key), 75, figs. 7–8, 17, female, male, intersex – "**New South Wales**, Nelligen" [Australia] (holotype female Canberra); also from other localities in New South Wales, and Victoria, ACT, Queensland. – Hook and Evans, 1982, J. Aust. Entomol. Soc. 21: 271 (ethology). – Itô, 1985, J. Ethol. 3: 21 (biology). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 216 (*plebiana* [!]; in subgenus *Icariola*; cat.). – Itô and Higashi, 1987, Appl. Entomol. Zool. 22: 519 (biology). – Kojima, 1987, J. Aust. Entomol. Soc. 26: 143, figs. 23–33 (larva); 1993, Jpn. J. Entomol. 61: 213 (ethology). – Itô et al., 1988, Res. Popul.

Ecol. 30: 279 (biology). – Yamane et al., 1990, *in* Veeresh et al., Soc. Insects Environ.: 679 (ethology). – Yamane et al., 1991, Insectes Soc. 38: 105 (ethology). – Yamane, 1991, Insectarium 28 (5): 144 (ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 349, 352, 354 (colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Itô, 1993, Behav. Soc. Evol. Wasps: 76 (ethology). – Kojima and Spradbery, 1994, Aust. Entomol. 21: 113 (distr.; ethology). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 250 (in subgenus *Icariola*; distr.). – Makino et al., 1994, Insectes Soc. 41: 411 (ethology).

DISTRIBUTION: Australia (east coastal area, Canberra).

plebeja (de Saussure)

Icaria plebeja de Saussure, 1862, Stettin. Entomol. Ztg. 23: 138, female – "Gorontalo" [Sulawesi] (Leiden).

Ropalidia plebeja: van der Vecht, 1941, Treubia 18: 111 (key), 169 (redescription of the type); 1962, Zool. Verh., Leiden 57: 33 (in subgenus *Anthreneida*; distr.).

DISTRIBUTION: Sulawesi.

politica (de Saussure)

Icaria politica de Saussure, 1854, Ét. Fam. Vesp. 2: 240 (perhaps var. of *guttatipennis* de Saussure), female, male – "Le Sénégal" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 97 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia politica; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).

DISTRIBUTION: Senegal.

pomicolor (de Saussure)

Icaria pomicolor de Saussure, 1853, Ét. Fam. Vesp. 2: 32, pl. 5 fig 3, female – "Madagascar" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 95 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 117. – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 214. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia pomicolor; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 85 (distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 88 (key).

DISTRIBUTION: Madagascar.

prasina (de Saussure)

Icaria prasina de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 215, 216 (key), 220, female – "Madagascar, Imerina" (Genève). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia prasina; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85, 87 (key).

DISTRIBUTION: Madagascar.

proletaria Richards

Ropalidia proletaria Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 60 (key), 96, female (in subgenus *Icariola*) – "**North Queensland**" [Australia] (London); also ? from Northern Territory. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 216 (in subgenus *Icariola*; cat.).

DISTRIBUTION: Australia (North Queensland, ?Northern Territory).

pseudomalayana Kojima

Ropalidia malayana; van der Vecht, 1941, Treubia 18: 174–176 [partim]; 1962, Zool. Verh., Leiden 57: 34 [partim].

Ropalidia pseudomalayana Kojima, 1996, Zool. Meded., Leiden 70: 349, 356, 357 (key), figs. 4, 6, 12, 13, 17, 22–25, 28, 34–40, female – "Borneo: Sarawak, Sarikei Dist., Rejang Delta" (Leiden); also from two other localities in Borneo; Bangka.

DISTRIBUTION: Borneo; Bangka.

pulchella (de Saussure)

Icaria pulchella de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 215 (key), 223, fig. 4, female – "Nossi-Bé"

(Genève). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia pulchella; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 343 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 83 (probable syn. of *R. phalansterica* (de Saussure)).

DISTRIBUTION: Madagascar.

ranavali (de Saussure)

Icaria ranavali de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114 (key), 138, pl. 18 figs. 18, 18c, female, male – "*Madagascar*" (Genève, Berlin, ?Paris). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 218, 230. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia ranavali; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 84, 86, 87, fig. 9 (distr.; probable var. of *R. venustula* (de Saussure); key).

DISTRIBUTION: Madagascar.

reactionalis (de Saussure)

Icaria reactionalis de Saussure, 1853, Ét. Fam. Vesp. 2: 28, female – "La Nouvelle-Guinée" (coll. Guérin-Méneville, current depository unknown). – Smith, 1857, Cat. Hym. Br. Mus. 5: 95 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia reactionalis; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 22 (group of *festina*; female).

DISTRIBUTION: New Guinea.

regina (de Saussure)

Icaria regina de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 215 (key), 220, female – "Madagascar. Antananarivo" (Genève). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia regina; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85 (key).

DISTRIBUTION: Madagascar.

revolutionalis (de Saussure)

Icaria revolutionalis de Saussure, 1853, Ét. Fam. Vesp. 2: 29, pl. 5 fig. 7, female – "La Nouvelle Hollande ou la Tasmanie" (Paris); 1863, Mém. Soc. Phys. Hist. Nat. Genève 17, 1: 235 (*revolutinalis* [!]). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia revolutionalis; Richards, 1978 Aust. J. Zool. Suppl. Ser. 61: 53, 58 (list), 60 (key), 91, figs. 18, 24, 32, 39, 43 (in subgenus *Icariola*; female, male, nest; distr.; biology). – Owen, 1979, Toxicon 17: 519–523 (venom analysis [according to Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 216, species identification doubtful]). – Hook and Evans, 1982, J. Aust. Entomol. Soc. 21: 271 (biology; nest). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 216 (in subgenus *Icariola*; cat.). – Kojima, 1987, J. Aust Entomol. Soc. 26: 144, figs. 34–43 (la va). – Itô, 1987, J. Ethol. 5: 115 (etho ogy). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 349, 353, 374 (colony population). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 460 (biology). – Itô, 1993, Behav. Soc. Evol. Wasps: 25, 27, 28, 29, 32, 57, 66, 71, 72, 79, 87, 105, 124, 125, 126 (in subgenus *Icariola*; ethology). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 251 (in subgenus *Icariola*; distr.).

DISTRIBUTION: Australia (Queensland).

romandi cabeti (de Saussure)

Icaria cabeti de Saussure, 1853, Ét. Fam. Vesp. 2: 26, pl. 4 fig. 2, pl. 5 fig. 2, female – "La Tasmanie" (lectotype Paris). – Dalla Torre, 1894, Cat. Hym. 9: 118 (*cabetii* [!]; cat.); 1904, Genera Insectorum 19: 73 (cat.). – du Buysson, 1911, Abh. Senckenb. Naturforsch. Ges. 34: 229 (compared to *R. lefebvrei* (Le Guillou)). – Richards 1978, Aust. J. Zool. Suppl. Ser. 61: 111 (designation of lectotype).

Ropalidia cabeti; Tillyard, 1926, Ins. Aust. New Zealand: 297 (nest). – Mackeown, 1942, Australian Insects: 190 (*Rhopalidia* [!]; nest). – van der Vecht, 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3d (morphology).

Ropalidia romandi cabeti; Richards 1978, Aust. J. Zool. Suppl. Ser. 61: 54, 59 (list), 63 (key), 65 (larva in key), 110 (in subgenus *Icarielia*; female, male; biology; nest). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 217 (in subgenus *Icarielia*; cat.). – Kojima, 1987, J. Aust. Entomol. Soc. 26: 146, figs. 68–79 (larva). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 251 (distr.). — Yamane and Itô, 1994, Psyche 101: 145 (nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: table 1.

Ropalidia romandi; Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 203, 212, 225 (colony population). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 353 (colony population). – Kojima, 1993, New Entomol. 42: 4 (biology). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 179 (distr.). – Itô, 1993, Behav. Soc. Evol. Wasps: 81, 85, 86, 87, 132 (in subgenus *Icarielia*; ethology). – Kojima, 1993, Jpn. J. Entomol. 61: 835 (ethology); 1994, J. Ethol. 12: 1 (ethology); 1994, J. Aust. Entomol. Soc. 33: 45 (ethology). – Yamane and Itô, 1996 (1994), Psyche 101: 145 (nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: table 2 (in subgenus *Icarielia*; morphology). – Kojima, 1996, Insectes Soc. 43: 411 (colony cycle).

DISTRIBUTION: Australia (Queensland, New South Wales).

romandi romandi (Le Guillou)

Polistes romandi Le Guillou, 1841, Rev. Zool. 4: 325, female – "*Australie Sept.*" [North Australia] (Paris); 1841, Ann. Soc. Entomol. France 10: 322.

?*Icaria romandi*; de Saussure, 1853, Ét. Fam. Vesp. 2: 41. – Smith, 1957, Cat. Hym. Br. Mus. 5: 96 (cat.).

Icaria romandi; Dalla Torre, 1894, Cat. Hym. 9: 120 (*romandii* [!]; cat.); 1904, Genera Insectorum 19: 74 (cat.). du Buysson, 1911, Abh. Senckenb. Naturforsch. Ges. 34: 229 (compared to *R. lefebvrei* (Le. Guillou)).

Ropalidia romandi romandi; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (list), 63, 65 (key), 109 (in subgenus *Icarielia*; female, male), 129 (key). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 217 (in subgenus *Icarielia*; cat.). – Borsato, 1994 (1993), Boll. Soc. Entomol. Ital. 125 (3): 251 (distr.). – Kojima, 1996, Zool. Meded., Leiden 70: 328, figs. 10, 23.

DISTRIBUTION: Australia (Northern Territory).

rufocollaris atrata van der Vecht

Ropalidia rufocollaris atrata van der Vecht, 1941, Treubia 18: 139, female, male – "Siam, Doi Setep" (holotype female Cambridge); also from Luang Prabang.

DISTRIBUTION: Thailand; Laos.

rufocollaris rufocollaris (Cameron)

Icaria rufocollaris Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 497, female – "Khasia Hills" [India] (London, Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 74 (*ruficollaris* [!]; cat.). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Ropalidia rufocollaris; Dover, 1925 (1924), J. Asiat. Soc. Bengal (n. ser.) 20: 301 (*ruficollis* [!]; var. of *R. artifex*). – van der Vecht, 1941, Treubia 18: 110 (key), 137 (in *stigma* group; male; fig.; distr.); 1962, Zool. Verh., Leiden 57: 22 (in subgenus *Anthreneida*; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Anthreneida*).

Ropalidia rufocollaris rufocollaris; Das and Gupta, 1984 (1983), Orient. Insects 17: 421 (in subgenus *Anthreneida*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 111 (key), 125, map 17 (in *stigma* group of subgenus *Anthreneida*; female, male; distr.).

DISTRIBUTION: India (Meghalaya, Assam,

Sikkim, Tipura; Uttar Pradesh, West Bengal); Tibet; Myanmar; Thailand.

rufoplagiata gravelyi Dover and Rao

Ropalidia gravelyi Dover and Rao, 1922, J. Asiat. Soc. Bengal (n. ser.) 18: 244, female – "Kavalai, Cochin State, 1,000–3,000 ft." [India] (Calcutta).

Ropalidia rufoplagiata var. *gravelyi*; van der Vecht, 1941, Treubia 18: 104.

Ropalidia rufoplagiata gravelyi; van der Vecht, 1941, Treubia 18: 168 (distr.); 1962, Zool. Verh., Leiden 57: 33 (in subgenus *Anthreneida*; ethology). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 32 (in subgenus *Anthreneida*; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 422 (in subgenus *Anthreneida*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 137 (key), 138, map 21 (in *sumatrae* group of subgenus *Anthreneida*; female; fig.; distr.).

DISTRIBUTION: India (Uttar Pradesh, Karnataka, Kerala); Myanmar; Thailand; Malay Peninsula; Sumatra.

rufoplagiata rufoplagiata (Cameron)

Icaria rufoplagiata Cameron, 1905, Tijdschr. Entomol. 48: 71, male, female – "Tjandi near Semarang" (lectotype female Amsterdam) [also with a label on which are "*Icaria rufoplagiata* Cam. Type, Java" (in Cameron's handwriting) and "Holotype design. by J. v.d.Vecht '33" (in van der Vecht's handwriting)]. – van der Vecht, 1941, Treubia 18: 167 (designation of lectotype).

Ropalidia rufoplagiata; van der Vecht, 1941, Treubia 18: 111 (key), 165 (fig.; distr.).

Ropalidia rufoplagiata rufoplagiata; van der Vecht, 1962, Zool . Verh., Leiden 57: 32 (in subgenus *Anthreneida*; distr.; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 54, 57 (in subgenus *Anthreneida*; nest; list). – Das and Gupta, 1984 (1983), Orient. Insects 17: 422 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 112, 137, map 21 (in *sumatrae* group of subgenus *Anthreneida*; key).

DISTRIBUTION: India; Bangka; Java; Sumbawa.

sakalava (de Saussure)

Icaria sakalava de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217 (key), 228, female – "Madagascar, Antananarivo" (Genève). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 65 (male).

Ropalidia sakalava; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 83, fig. 4 (distr.), 85, 87 (key).

DISTRIBUTION: Madagascar.

santoshae Das and Gupta

Ropalidia santoshae Das and Gupta, 1984 (1983), Orient. Insects 17: 422. Nomen nudum.

Ropalidia santoshae Das and Gupta, 1989, Orient. Insects Monogr. 11: 111 (key), 123, figs. 24l, 25l, 26C, 26c, 27f, map 27, male, female (*stigma* group of subgenus *Anthreneida*) – "India: Meghalaya: Shillong: Mawmluh" (holotype male Calcutta); also from Sikkim, Arunachal Pradesh, West Bengal.

DISTRIBUTION: India (Sikkim, Arunachal Pradesh, West Bengal, Meghalaya).

schulthessi (de Saussure)

Icaria schulthessi de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 117, pl. 18 figs. 14, 14b, female – "*Madagascar* . . . dans l'Est" (Zürich). – Dalla Torre, 1894, Cat. Hym. 9: 120 (*schulthessii* [!]; cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 214. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia schulthessi; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 85 (nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (in subgenus *Icariola*; nest). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86, 87 (key), fig. 10.

DISTRIBUTION: Madagascar.

scitula (Bingham)

Icaria scitula Bingham, 1897, Fauna Br. In-

dia, Hym. 1: 387 (key), 392, female – "Rangit Valley, Sikhim" [India] (London). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia scitula; van der Vecht, 1941, Treubia 18: 110 (key), 142 (male; distr.); 1962, Zool. Verh., Leiden 57: 42 (key), 47 (in subgenus *Icarielia*; taxonomy; distr.). – Richards, 1978, Austr. J. Zool. Suppl Ser. 61: 58 (in subgenus *Icariola*; list). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15 (in subgenus *Icarielia*). – Das and Gupta, 1984 (1983), Orient. Insects 17: 428 (in subgenus *Icarielia*; cat.); 1989, Orient. Insects Monogr. 11: 113 (key), 152, map 12 (in subgenus *Icarielia*). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 328, figs. 7, 20.

DISTRIBUTION: India (Sikkim, West Bengal, Meghalaya); Myanmar.

scottiana (de Saussure)

Icaria scottiana de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 124, female – "*Madagascar* . . . dans le Sud-Est" (Genève). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 214. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia scottiana; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 86 (key).

DISTRIBUTION: Madagascar.

semihyalinata (Meade-Waldo)

Icaria semihyalinata Meade-Waldo, 1912, Ann. Mag. Nat. Hist. (8) 9: 449 (key), 451, female (in subgenus *Icariola*) – "Mimika River" [New Guinea] (London).

Ropalidia semihyalinata; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 24 (*semihyalineata* [!]; redescription). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 56 (in subgenus *Ropalidia*; list).

DISTRIBUTION: New Guinea.

sepicana Richards

Ropalidia sepicana Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (list), 122 (key), 127, figs. 22, 27, female, male (in subgenus *Polistratus*) – "**New Guinea**: Sepik district, Sepik River, Kondanggei" (holotype female Canberra); also from two other localities in New Guinea.

DISTRIBUTION: New Guinea.

sericea (Cameron)

Icaria sericea Cameron, 1905, Tijdschr. Entomol. 48: 73, female – "Sikkim Himalaya" [India] (London). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.). – van der Vecht, 1962, Zool. Verh., Leiden 57: 49 (probable syn. of *Ropalidia flavopicta ornaticeps* (Cameron)), 50 (locality label "Sikkim" apparently incorrect).

Ropalidia sericea; Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list). – Kojima, 1996, Zool. Meded., Leiden 70: 340 (probably in *R. flavopicta* group; "valid species and the locality label of the type is correct").

DISTRIBUTION: India (Sikkim).

sexmaculata (Cameron)

Icaria sexmaculata Cameron, 1911, Nova Guinea 9, Zool 2: 188, female – "Bivak Island" (lectotype Amsterdam); also from another locality in New Guinea.

Ropalidia sexmaculata; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.

DISTRIBUTION: New Guinea.

shestakovi (von Schulthess)

Icaria shestakovi von Schulthess, 1931, Mitt. Schweiz. Entomol. Ges. 15 (2): 51, fig. 2, male, female – "Madagascar" (Zürich).

Ropalidia shestakovi; Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 83 (distr.), 86, 87 (key), fig. 2.

DISTRIBUTION: Madagascar.

socialis socialis (de Saussure)

Icaria socialis de Saussure, 1862, Stettin. Entomol. Ztg. 23: 136, female – "Probablement l'archipel indien" (Leiden). – Dalla Torre, 1894, Cat. Hym. 9: 120 (cat.); 1904, Genera Insectorum 19: 74

(cat.). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. mathematica unicolor* (Smith)), 133.

Ropalidia mathematica unicolor (Smith); van der Vecht, 1941, Treubia 18: 104 (syn.; *I. socialis* de Saussure), 133.

Ropalidia socialis socialis; van der Vecht, 1962, Zool. Verh., Leiden 57: 21 (in subgenus *Anthreneida*; taxonomy; distr.; "Whether *R. socialis* is indeed conspecific with *R. unicolor* cannot be determined with certainty at this moment.").

DISTRIBUTION: Timor.

socialis trimaculata van der Vecht

Ropalidia socialis trimaculata van der Vecht, 1962, Zool. Verh., Leiden 57: 21, female – "Sumba, Pogobina" (Basel).

DISTRIBUTION: Sumba.

socialistica (de Saussure)

Icaria socialistica de Saussure, 1853, Ét. Fam. Vesp. 2: 27, pl. 4 fig. 6., female – "La Tasmanie" (lectotype Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 96 (cat.) – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 81 (designation of lectotype; type locality probably erroneous).

Ropalidia socialistica; Tillyard, 1926, Insects Aust. New Zealand: 297. — Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (list), 62, 64 (key), 81, figs. 10, 28, 38 (in subgenus *Icariola*; female, male; distr.). – Hook and Evans, 1982, J. Aust. Entomol. Soc. 21: 271 (nest; biology). – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 216 (in subgenus *Icariola*; cat.). – Itô, 1993, Behav. Soc. Evol. Wasps: 89, 134 (in subgenus *Icariola*; ethology).

DISTRIBUTION: Australia (New South Wales, Queensland, Northern Territory).

spatulata van der Vecht

Icaria ferruginea (Fabricius); de Saussure, 1853, Ét. Fam. Vesp. 2: 38, female, fig. (misidentification of *V. ferruginea* Fabricius, 1793). – Horne, 1870, Trans. Zool. Soc. London 7(3): 169 (ethology). – André, 1889, Le Naturaliste: 189 (nest). – Bingham, 1897, Fauna Br. India, Hym. 1: 386 (key), 387 (distr.). – Rothney, 1903, Trans. R. Entomol. Soc. London, 1903: 107. – Maxwell-Lefroy, 1909, Indian Insect Life (Calcutta): 215, fig. 120 (ethology).

Ropalidia marginata indica van der Vecht, 1941, Treubia 18: 121 (new name for *Vespa ferruginea* Fabricius, 1793, non *Vespa ferruginea* Gmelin, 1790, non *Icaria ferruginea* auctt.) [partim; specimens from India: Haryana: Ambala belong here].

Ropalidia spatulata van der Vecht, 1962, Zool. Verh., Leiden 57: 9, male (in subgenus *Anthreneida*) – "S. India, Kerala State, Walayar Forest, 700 ft." (Leiden); also from Haryana, Maharashtra, Tamil Nadu; and Pakistan [partim]. – Yoshikawa, 1964, Nat. Life S. E. Asia 3: 396, pl. 3 fig. 4, pl. 4 fig. 11 (nest). – Iwata, 1969, Kontyû, 37: 437 (in subgenus *Anthreneida*; nest); 1976, Evol. Instinct: 295, 297 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 4 (key), 6, 32 (in subgenus *Anthreneida*; female; fig.; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 422 (in subgenus *Anthreneida*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 110 (key), 119, map 16 (in *marginata* group of subgenus *Anthreneida*; female, male; distr.). – Byragi-Reddi and Subba Reddi, 1994, Proc. Indian Natl. Sci. Acad. Part B Biol. Sci. 60 (1): 57 (pollination of *Vitex negundo* (Verbenaceae). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: India (Kerala).

stigma nigrolineata van der Vecht

Ropalidia stigma nigrolineata van der Vecht, 1962, Zool. Verh., Leiden 57: 18, female, male – "Burma . . . Shan States Road, 40 km east of Taunggyi" (holotype female Stockholm); also from Taunggyi. – Das and Gupta, 1984 (1983), Orient. Insects 17: 422 (in subgenus *Anthreneida*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 127 (key),

129, map 18 (*stigma* group of subgenus *Anthreneida*).

DISTRIBUTION: Myanmar.

stigma rufa van der Vecht

Ropalidia stigma rufa van der Vecht, 1941, Treubia 18: 130, female – "N.E. Assam, Sadiya" [India] (Calcutta); also from Dibrugarh, Meghalaya; and Hainan Is. – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 4 (key), 7, 32 (in subgenus *Anthreneida*; fig., ethology; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 422 (in subgenus *Anthreneida*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 127 (key), 129, map 18 (in subgenus *Anthreneida*; female; distr.).

DISTRIBUTION: India (Assam, Meghalaya); Nepal; China (Hainan).

stigma stigma (Smith)

Polybia stigma Smith, 1858, J. Proc. Linn. Soc. Zool. 2: 114, male – "Borneo (Sarawak)" (Oxford) ("probably the male of *P. decorata*"); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 384 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 384 (female, distr.). – Dalla Torre, 1894, Cat. Hym. 9: 166 (cat.); 1904, Genera Insectorum 19: 78 (cat.). – von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (according to Meade-Waldo (i. litt.), same as *P. mathematica* Smith and *Icaria*). – van der Vecht, 1966, Zool. Verh., Leiden 82: 6 (= *Ropalidia stigma* (Smith)).

?*Icaria bioculata* (Fabricius); de Saussure, 1867, Reise Novara Zool. 2 (Hym.): 22.

Icaria artifex; Smith, 1871, J. Proc. Linn. Soc. Zool. 11: 379 (? India; Java) [misidentification] . – Bingham, 1897, Fauna Br. India, Hym. 1: 386 (key), 389 (female; distr.). – Cameron, 1905, Tijdschr. Entomol. 48: 71 (distr.); 1907, J. Strait Br. R. Asiat. Soc. Bengal 48: 26. – Maxwell-Lefroy, 1909, Indian Insect Life: 215, fig. 120 (nest). – von Schulthess, 1914, Zool. Jahrb. Syst. 37: 259.

Parapolybia stigma; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (incertae sedis; *Icaria* according to Meade-Waldo, in litt.):

Icaria stigma; du Buysson, 1913, Bull. Soc. Entomol. France 1913: 296. – von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges., 12: 164.

Ropalidia artifex; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 247. – Dover, 1925 (1924), J. Asiat. Soc. Bengal (n. ser.) 29: 301; 1931, J. Fed. Malay St. Mus. 16: 257 (taxonomy; distr.). – Carl, 1934, Rev. Suisse Zool. 41: fig. 7 (male genitalia).

Ropalidia stigma stigma; van der Vecht, 1941, Treubia 18: 110 (key), 126 (in *stigma* group; fig.; distr.); 1962, Zool. Verh., Leiden 57: 16, fig. 2g (in subgenus *Anthreneida*; distr.; nest). – Baltazar, 1966, Pac. Insects Monogr. 8: 293 (in subgenus *Anthreneida*; cat.). – Yoshikawa et al., 1969, Nat. Life S. E. Asia 6: 166 (in subgenus *Anthreneida*; colony population). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53 (in subgenus *Icariola*; nest). – Das and Gupta, 1984 (1983), Orient. Insects 17: 423 (in subgenus *Anthreneida*; cat.; distr.). — Kojima, 1984, Kontyû, 52: 524 (key), 527 (in subgenus *Icariola*; fig.; distr.). – Kojima and Yamane, 1984, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 17: 112, figs. 37–42 (larva). – Kojima and Tano, 1985, Kontyû 53: 523 (distr.). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 111 (key), 127, map 18 (in subgenus *Anthreneida*; female, male; fig.; distr.). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 353 (colony population).

Ropalidia stigma; Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 34 (key), 35 (distr.). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: India; Sri Lanka; Myanmar; Thailand; Malay Peninsula; Vietnam; Borneo; Sumatra; Java; Bali; Philippine Is.

subclavata (de Saussure)

Icaria subclavata de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 134, pl. 4 figs. 6, 6b, female, male – "*Madagascar*" (Genève).

– Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 218, 232. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.).

Ropalidia subclavata; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 85 (distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 84, fig. 6 (distr.), 86, 87 (key).

DISTRIBUTION: Madagascar.

sumatrae (Weber)

Vespa sumatrae Weber, 1801, Observ. Entomol. Kiliae: 103 – "Sumatra" (?Berlin).

Vespa mutillata Illiger, 1802, Magaz. Insektenk. 1: 189 – "Sumatra" (Berlin). – de Saussure, 1854, Ét. Fam. Vesp. 2: 241 (syn. of *Icaria sumatrae* (Weber)). – Dalla Torre, 1894, Cat. Hym. 9: 121 (syn. of *Anthreneida sumatrae*) – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. sumatrae* (Weber)).

Polistes pubescens Fabricius, 1804, Syst. Piez.: 279 – "Sumatra" (Kobenhavn) (?syn.: *Vespa mutillata* Illiger, *Vespa sumatrae* Weber). – de Saussure, 1853, Ét. Fam. Vesp. 2: 42 (species dubiae; ? *Icaria*); 1854, Ét. Fam. Vesp. 2: 241 (syn. of *Icaria sumatrae* (Weber)). – Dalla Torre, 1894, Cat. Hym. 9: 121 (syn. of *Anthreneida sumatrae*). – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. sumatrae* (Weber)).

Eumenes formicaria Fabricius, 1804, Syst. Piez.: 288 – "America meridionali" (female and male Kobenhavn). – de Saussure, 1875, Smithson. Misc. Coll. 254: 379 (? *Montezumia* or a *Polistes*). – Dalla Torre, 1894, Cat. Hym. 9: 24 (cat.; unidentified sp.); 1904, Genera Insectorum 19: 25 (cat.; unidentified sp.). – Schulz, 1912, Berlin. Entomol. Z. 57: 88 (label on types reads "Sumatra"; syn. of *Icaria speciosa* de Saussure). – van der Vecht, 1941, Treubia 18: 104 (syn. of *Ropalidia sumatrae* (Weber)). – Das and Gupta, 1984 (1983), Orient. Insects 17: 424 (*formicaris* [!]).

Anthreneida coronata White, 1841. Ann. Mag. Nat. Hist. (1) 7: 321 male – locality unknown (London) [metasoma missing]. – de Saussure, 1853, Ét. Fam. Vesp. 2: 246 (distr.). – Smith, 1857, Cat. Hym. Br. Mus. 5: 100 (cat.). — van der Vecht, 1941, Treubia 18: 104 (syn. of *R. sumatrae* (Weber)).

Icaria sumatrae; de Saussure, 1854, Ét. Fam. Vesp. 2: 241 (taxonomy; distr.). – Smith, 1857, Cat. Hym. Br. Mus. 5: 98 (cat.; syns.: *Vespa multillata* Illiger, *Polistes pubescens* Fabricius); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.).

Icaria speciosa de Saussure, 1855, Rev. Mag. Zool. (2) 7: 374, male – "Sumatra" (Kobenhavn). – Smith, 1857, Cat. Hym. Br. Mus. 5: 98 (cat.); 1858, J. Proc. Linn. Soc. Zool. 2: 115 (distr.). – de Saussure, 1862, Stettin. Entomol. Ztg. 23: 134. – Smith, 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 379 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 387 (key), 390 (fig.; distr.). – Dalla Torre, 1894, Cat. Hym. 9: 119 (cat.); 1904, Genera Insectorum 19: 74 (cat.). – Brown, 1906, Philipp. J. Sci. 1: 688 (erroneously listed from the Philippines). – Schulz, 1912, Berlin. Entomol. Z. 57: 88 (syn.: *Eumenes formicaria* Fabricius). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (syn.: *Icaria rufinoda* Cam.). – von Schulthess, 1914, Zool. Jarhb. Syst. 37: 259; 1927, Suppl. Entomol. 16: 83. — von Schulthess, 1932, Res. Scient. Voy. Ind. Or. Néerl. Leopold 4 (5): 40. – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. sumatrae* (Weber)).

Icharia [!] *marangensis* Gribodo, 1892 (1891), Boll. Soc. Entomol. Ital. 23: 243, female – "Marang (Sumatra) . . . Perak (Malacca)" (Genova). – Dalla Torre, 1894, Cat. Hym. 9: 119 (*Icaria*; cat.); 1904, Genera Insectorum 19: 74 (*Icaria*; cat.). – von Schulthess, 1914, Zool. Jahrb. Syst. 37: 259. – van der Vecht, 1941, Treubia 18: 104 (*Icaria*; syn. of *R. sumatrae* (Weber)).

Anthreneida sumatrae; Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.; syn.: *Vespa multillata* Illiger, *Polistes pubescens* Fabricius, *Anthreneida coronata* White).

Icaria rufinoda Cameron, 1904, J. Straits. Br. R. Asiat. Soc. 41: 121, female – "Singapore" (London). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (syn. of *Icaria speciosa*) – van der Vecht, 1941, Treubia 18: 104 (syn. of *R. sumatrae* (Weber)).

Ropalidia speciosa; Dover, 1929, Bull. Raffles Mus. 2: 47; 1931, J. Fed. Malay St. Mus. 16: 256. – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 90, pl. 3 fig. 4 (in subgenus *Anthreneida*); 1982, Zool. Res. 3: 86 (*Popalidia* [!]; in subgenus *Anthreneida*; distr.); 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 51, pl. 3 fig. 4 (in subgenus *Anthreneida*; female, male; distr.); 1987, *in* Forest Insects Yunnan: 1348 (in subgenus *Anthreneida*; key).

Ropalidia sumatrae; van der Vecht, 1941, Treubia 18: 104 (syn.: *Icaria marangensis* Gribodo, *Vespa mutillata* Illiger, *Polistes pubescens* Fabricius, *I. rufinoda* Cameron, *Eumenes formicaria* Fabricius, *Anthreneida coronata* White, *I. speciosa* de Saussure), 113 (key), 181 (taxonomy; female, male; fig.; distr.). – Baltazar, 1966, Pac. Insects Monogr. 8: 293 ("erroneous record from the Philippines"). – van der Vecht, 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3f (morphology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Anthreneida*; list; syn.: *speciosa* (de Saussure)). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key), 36 (distr.). – Itô, 1993, Behav. Soc. Evol. Wasps: 89, 134 (*sumatorae* [!]; in subgenus *Anthreneida*; ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Anthreneida*; morphology).

Ropalidia sumatrae sumatrae; van der Vecht, 1962, Zool. Verh., Leiden 57: 35, pls. 1 and 3 (in subgenus *Anthreneida*; ethology). – Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest). – Kojima and Yamane, 1984, Rep. Fac. Sci. Kagoshima Univ. (Earth Sci. Biol.) 17: 107, figs. 16–22 (larva). – Das and Gupta, 1984 (1983), Orient. Insects 17: 424 (in subgenus *Anthreneida*; cat.; distr.); 1989, Orient. Insects Monogr. 11: 112 (key), 136, map 20 (in *sumatrae* group of subgenus *Anthreneida*; distr.).

DISTRIBUTION: Myanmar; Thailand; Malay Peninsula; Singapore Vietnam; China (Yunnan); Borneo; Bangka; Sumatra.

taiwana birmanica van der Vecht

Ropalidia taiwana birmanica van der Vecht, 1962, Zool. Verh., Leiden 57: 23, male female (in subgenus *Anthreneida*) – "North East Burma, Sadon, 1200 m" (holotype male Stockholm); also from two other localities in Myanmar. – Das and Gupta, 1984 (1983), Orient. Insects 17: 425 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 135, map 20 (in *sumatrae* group of subgenus *Anthreneida*; key).

DISTRIBUTION: Myanmar.

taiwana taiwana Sonan

Ropalidia taiwana Sonan, 1935, Trans. Nat. Hist. Soc. Formosa 25: 199 (key), 201, female, male – "Shinchiku" [Taiwan] (holotype female Wufeng); also from Hori, Koshun, Urai, Hassen-zan. – van der Vecht, 1941, Treubia, 18: 111 (key), 143 (female, male; fig.). – Tano, 1980, Hymen. Comm. (11): 17 (distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 425 (in subgenus *Anthreneida*; cat.); 1989, Orient. Insects Monogr. 11: 111, 135 (in *sumatrae* group of subgenus *Anthreneida*; key). – Starr, 1992, Bull. Natl. Mus. Nat. Sci. 3: 116 (key; syn.: *R. formosana* Kuo). – Itô, 1993, Behav. Soc. Evol. Wasps: 20 (ethology).

Ropalidia taiwana taiwana; Iwata, 1976, Evol. Instinct: 295 (in subgenus *Anthreneida*; ethology). – Lee, 1982, Hornets from Agric. Regions China: 83 (key), 92, pl. 2 fig. 3 (in subgenus *Anthreneida*); 1985, Econ. Insect Fauna China 30 Hym.: Vespoidea: 46 (key), 52, pl. 2 fig. 3 (in subgenus *Anthreneida*; female; distr.).

Ropalidia taiwana var. *koshunensis* Sonan, 1935, Trans. Nat. Hist. Soc. Formosa 25: 199 (key), 202, female – "Kuraru (Koshun)" [Taiwan] (Wufeng).

Ropalidia taiwana koshunensis; Iwata, 1969, Kontyû 37: 367 (in subgenus *Anthreneida*; ethology); 1969, Kontyû 37: 438 (in subgenus *Anthreneida*; nest; biology); Iwata, 1976, Evol. Instinct: 295, 297 (ethology; in subgenus *Anthreneida*). – Tano, 1980, Hymen. Comm. (11): 17 (distri.). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 353 (colony population). – Itô, 1993, Behav. Soc. Evol. Wasps: 51 (*koshuensis* [!]; ethology).

Ropalidia formosana Kuo, 1987, *in* Kuo and Yeh, J. Natl. Chiayi Inst. Agric. 16: 84, male, female – "Chiai" (holotype male Wufeng). – Starr, 1992, Bull. Natl. Mus. Nat. Sci. 3: 116 (examination of "cotypes"; syn. of *R. taiwana*).

DISTRIBUTION: North Myanmar; South China; Taiwan.

thailandia Gusenleitner

Ropalidia thailandia Gusenleitner, 1994, Linz. Biol. Beitr. 26: 325–329, female (in subgenus *Icarielia*) – "Thailand: Phang Nga, Takus Pa., KHAO SOK N. P." (Linz).

DISTRIBUTION: Thailand.

timida van der Vecht

Ropalidia timida van der Vecht, 1962, 42 (key), 62, plate 6, female, male (in subgenus *Icarielia*) – "Singapore" (holotype female London); also from Malaya; Borneo; Sumatra; ethology. – Pagden, 1976, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 79: 508 (ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 55 (in subgenus *Icarielia*; nest), 58 (in subgenus *Icariola*; list). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 35 (key), 37 (distr.). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 212 (colony population). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 353 (colony population). – Itô, 1993, Behav. Soc. Evol. Wasps: 89 (in subgenus *Icarielia*; ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology). – Kojima, 1996, Zool. Meded., Leiden 70: 325, 326, 328, figs. 8, 21.

DISTRIBUTION: Malay Peninsula; Borneo; Sumatra.

tomentosa (Gerstaecker)

Icaria tomentosa Gerstaecker, 1857, Monatsber. K. Preuss. Akad. Wiss. Berlin: 464, female – "Mossambique" (?Berlin); 1862, *in* Peters, Reise Mossamb., Zool. 5: 471, pl. 30 fig. 10 (female). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.). – von Schulthess, 1899, Bull. Soc. Vaudoise Sci. Nat. (4) 35: 269 (distr.). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – du Buysson, 1914, *in* Voy. Alluaud et Jeannel, Afr. Or., Rés. Sci., Ins. Hym. 3: 156. – von Schulthess, 1923, *in* Michaelsen, Beitr. Kennt. Land- und Süsswasserfauna Deutsch-Südwestafrikas 2 (2): 135 (distr.).

Ropalidia tomentosa; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; probable syn.: *R. aethiopica* (du Buysson); distr.). – FitzGerald, 1940, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 15: 34 (distr.; nest). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

DISTRIBUTION: Kenya; Mozambique; Namibia.

trichophthalma Richards

Ropalidia trichophthalma Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest), 62 (key), 102, female, male (in subgenus *Icariola*) – "**Queensland Q2**, Forest road near Ingham" [Australia] (holotype female Canberra); also from numerous other localities in Queensland. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 217 (in subgenus *Icariola*; cat.). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 203, 212, 225 (colony population). – Kojima, 1993, New Entomol. 42: 4 (biology). – Naumann, 1993, *in* Naumann et al., Cape York Penin. Sci. Exp. Wet Season 1992 Rep. 2: 179 (distr.). – Itô, 1993, Behav. Soc. Evol. Wasps: 89, 134 (in subgenus *Icariola*; ethology). – Macalintal and Starr, 1996, Mem. Ent. Soc.

Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).
DISTRIBUTION: Australia (Queensland).

turneri Richards
Ropalidia turneri Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest), 62 (key), 65 (larva in key), 73, figs. 13, 21, 31, 36, female, male (in subgenus *Icariola*) – "**Queesnland Q2**, Kuranda, 1100 ft" [Australia] (holotype female Canberra); also from 6 other localities in Queensland. – Yamane and Okazawa, 1981, Rep. Fac. Sci. Kagoshima Univ. 14: 69, fig. 5 (larva from New Guinea) [probably *R. cristata* Kojima, according to Kojima, 1989]. – Cardale, 1985, Zoolog. Cat. Australia 2, Hym.: Vesp. Sphec.: 215 (in subgenus *Icariola*; cat.). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 404 (ethology). – Kojima, 1993, New Entomol. 42: 4 (biology). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).
DISTRIBUTION: Australia (Queensland).

unicolor (Smith)
Icaria unicolor Smith, 1859, J. Proc. Linn. Soc. Zool. 3: 168, female – "Key Island" [= Kei] (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 138 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 380 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.); 1904, Genera Insectorum 19: 74 (cat.).
Ropalidia mathematica unicolor; van der Vecht, 1941, Treubia 18: 133 (distr.; specimens from Timor were placed in *Ropalidia socialis socialis* in his 1962 paper).
Ropalidia unicolor; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51 ("probablement un *Parapolybia*"). – van der Vecht, 1962, Zool. Verh., Leiden 57: 21 (in subgenus *Anthreneida*; Kei Is.) – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list).
DISTRIBUTION: Kei Is.

unidentata Giordani Soika
Ropalidia unidentata Giordani Soika, 1981, Boll. Soc. Entomol. Ital. 113: 172, 175, fig. 2, "male" [female] – "Tanzania: Dar Es Salaam" (Monaco).
DISTRIBUTION: Tanzania.

variabilis (de Saussure)
Icaria variabilis de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114 (key), 135, pl. 18 fig. 15, female, male – "*Madagascar*" (Genève, Paris). – Dalle Torre, 1894, Cat. Hym. 9: 121 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 218, 231. – Dalle Torre, 1904, Genera Insectorum 19: 74 (cat.).
Ropalidia variabilis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 344 (cat.; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 53, 58 (in subgenus *Icariola*; nest; list). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 84), 86 (key), 87, fig. 7 (distr.).
DISTRIBUTION: Madagascar.

variegata dichroma van der Vecht
Ropalidia variegata dichroma van der Vecht, 1941, Treubia 18: 157, female, male – "Timor" (holotype female Leiden); 1962, Zool. Verh., Leiden 57: 31 (in subgenus *Anthreneida*; distr.).
DISTRIBUTION: Timor.

variegata variegata (Smith)
Epipona variegata Smith, 1852, Ann. Mag. Nat. Hist. (2) 9: 48, female – "Poona" [India] (London).
Icaria variegata; de Saussure, 1854, Ét. Fam. Vesp. 2: 237, pl. 4, fig. 3a (nest) [error: "La China"]. – Smith, 1857, Cat. Hym. Br. Mus. 5: 97 (cat.). – Horne, 1870, Trans. Zool. Soc. London 7: 169, pl. 20 figs. 8, 9 (ethology). – Smith, 1871, J. Proc. Linn. Soc. London 11: 378 (in subgenus *Epipona*). – André, 1889, Le Naturaliste: 189 (nest). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 386 (key), 388 (distr.). – Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 495 (male). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.; *I. picta* de Saussure and *I. pendula* Smith are placed under this species with a query.). – Schulz, 1912, Berlin. Entomol. Z. 57: 88 (syn. of *Icaria cyathiformis* (Fabricius)). – von Schul-

thess, 1927, Suppl. Entomol. 16: 83 (distr.) [misidentification?].

Ropalidia variegata; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 247. — Dover and Rao, 1922, J. Asiat. Soc. Bengal (n. ser.) 18: 244. – Dover, 1925 (1924), J. Asiat. Soc. Bengal (n. ser.) 20: 302; 1929, Bull. Raffles Mus. 2: 47 (distr.); 1931 (1930), J. Fed. Malay St. Mus. 26: 257 (distr.). – van der Vecht, 1941, Treubia 18: 104 (syn.: *I. pendula* Smith). – Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): 1163, fig. 1032. – Davis, 1966, Nature 210: 966 (ethology); 1996, Entomol. News 77: 271 (ethology). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 59 (in subgenus *Icariola*; list) [error: author (de Saussure)]. – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 458, 460, 463 (biology). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 487 (nest). – Itô, 1993, Behav. Soc. Evol. Wasps: 20, 51, 52, 66, 105 (ethology). – Theraulez and Bonabeau, 1995, J. Theor. Biol. 177: fig. 1a (nest). – Macalintal and Starr, 1996, Mem. Ent. Soc. Washington 17: tables 1, 2 (in subgenus *Icariola*; morphology).

Ropalidia variegata variegata; van der Vecht, 1941, Treubia 18: 112 (key), 154 (distr.); 1962, Zool. Verh., Leiden 57: 29 (in subgenus *Anthreneida*; taxonomy; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 54 (nest). – Yamane and Yamane, 1979, Insecta Matsumurana, n. ser. 15: 4 (key), 11, 32 (in subgenus *Anthreneida*; fig.; ethology; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 425 (in subgenus *Anthreneida*; cat.; distr.). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 113 (key), 144, map 24 (in *sumatrae* group of subgenus *Anthreneida*; female, male; fig.; distr.).

DISTRIBUTION: Pakistan; India (Punjab, Delhi, Uttar Pradesh, Bihar, West Bengal, Gujarat, Madhya Pradesh, Maharashtra, Karnataka, Tamil Nadu); Nepal; Myanmar; Malay Peninsula; China.

velutina (de Saussure)

Icaria velutina de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 114 (key), 129, pl. 4 figs. 4, 4b, female – "*Madagascar*" (Genève). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217, 227 (male). – Dalla Torre, 1904, Genera Insectorum 19: 75 (cat.).

Ropalidia velutina; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 345 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 85 (distr.). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 82 (distr.), 85 (key).

DISTRIBUTION: Madagascar.

venustula (de Saussure)

Icaria venustula de Saussure, 1900, Abh Senckenb. Naturforsch. Ges. 26 (2) 218, 219 (key), 231, male – "Madagascar; Imerina" (Genève). – Dalla Torre 1904, Genera Insectorum 19: 75 (cat.).

Ropalidia venustula; Bequaert, 1918, Bul Am. Mus. Nat. Hist. 39: 345 (cat distr.). – Giordani Soika, 1991, Lav. Soc Ven. Sci. Nat. 16: 84 (probable var. of *ranavali* (de Saussure); distr.), 86 (key).

DISTRIBUTION: Madagascar.

vietnama Gusenleitner

Ropalidia vietnama Gusenleitner, 1996, Linz. Biol. Beitr. 28: 15, 17, figs. 6, 7, female, nest (in subgenus *Anthreneida*) – "Vietnam, Nam Cat Tien, 11°26′N 107°26′E" (holotype Linz).

DISTRIBUTION: Vietnam.

vitripennis (de Saussure)

Icaria vitripennis de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113 (key), 130, female – "*Madagascar*" (London) – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 217, 229 (female). – Dalla Torre, 1904, Genera Insectorum 19: 75 (cat.).

Ropalidia vitripennis; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 345 (cat.; distr.). – FitzGerald, 1950, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 25: 83 (distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icariola*; list). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 300, figs. 47,

48 (larva). – Giordani Soika, 1991, Lav. Soc. Ven. Sci. Nat. 16: 85 (key).
DISTRIBUTION: Madagascar.

wollastoni (Meade-Waldo)
Icaria wollastoni Meade-Waldo, 1912, Ann. Mag. Nat. Hist (8) 9: 448 (key), 449, female (in subgenus *Icariastrum*) – "Mimika River" [S. W. New Guinea] (London).
Ropalidia wollastoni; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51. – Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 6 (redescription of the type).
Icaria sericea Cameron, 1911, Nova Guinea 9, Zool. 2: 188, female – "Bivak Island" (lectotype Amsterdam). Junior primary homonym of *I. sericea* Cameron, 1905. NEW SYNONYMY.
Ropalidia sericea; Bequaert, 1932, Rés. Scient. Voyage Indes Or. Néerl. Léopold de Belgique 4 (5): 51.
DISTRIBUTION: New Guinea.

wudai wudai Cheesman
Ropalidia wudai Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 14, female – "Papua, Kokoda, 1200 ft" (London); also from Owen Stanley Range. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Polistratus*; list).
DISTRIBUTION: Northeastern New Guinea.

wudai trullissima Cheesman
Ropalidia wudai trullissima Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 2, 15, female – "Dutch New Guinea, Cyclops Mts., 930 ft." (London). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Polistratus*; list).
DISTRIBUTION: Northwestern New Guinea.

xanthura (de Saussure)
Icaria xanthura de Saussure, 1854, Ét. Fam. Vesp. 2: 236, female – "Madagascar" (coll. Baly; current depository unknown); 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 113, 125 (female). – Dalla Torre, 1894, Cat. Hym. 9: 121 (cat.); 1904, Genera Insectorum 19: 75 (cat.).
Ropalidia xanthura; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 345 (cat.; distr.). – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 57 (in subgenus *Polistratus*; list), 121 (key). – Kojima, 1988, J. Kansas Entomol. Soc. 61: 297, figs. 31–32 (larva). – van der Vecht and Carpenter, 1990, Zool. Verh., Leiden 260: 47 ("erroneously placed in *Polistratus* by Richards (1978)").
DISTRIBUTION: Madagascar.

zonata (Cameron)
Icaria zonata Cameron, 1906, *in* Wichmann, Nova Guinea 5, Zool. 1: 61, female – "Moaif" [New Guinea] (lectotype Amsterdam); also from another locality in New Guinea. – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8)7: 100 (syn. of *I. festina*). – van der Vecht, 1934, Tijdschr. Entomol. 77, Verslag: 8 (syn. of *R. festina* (Smith)).
Ropalidia zonata; Cheesman, 1952, Ann. Mag. Nat. Hist. (12) 5: 3, 22. – Richards, 1978, Aust. J. Zool. Suppl. Ser. 61: 58 (in subgenus *Icarielia*; list), 129 (key). – Kojima, 1996, Zool. Meded., Leiden 70: 328.
DISTRIBUTION: New Guinea.

Species originally described as ***Icaria*** (= *Ropalidia*) or having been erroneously placed in ***Ropalidia***, now placed in other genera

Icaria aberrans Gribodo, 1892 (1891), Boll. Soc. Entomol. Ital. 23: 246. female – "India" (Genova). – Dalla Torre, 1894, Cat. Hym. 9: 117 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 387 (key), 391 (female). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). = *Charterginus aberrans* (Gribodo) (Epiponini), fide Richards, 1978, Soc. Wasps Am.: 131.
Icaria annulipes Cameron, 1913 = *Polybia. orientalis*, fide Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406. See *Parapolybia varia varia*.
Icaria aterrima Kirby, 1900, Bull. Liverpool Mus. 3: 23, female – "Abd-el-Kuri" (London); 1903, *in* Forbes, Nat. Hist. of Sokotra, Zool. Hym.: 256, pl. 16 fig. 8. – Dalla Torre, 1904, Gen. Ins. 19: 73 (cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 305 (?syn. of *Odynerus*

melanchrous Kohl). = *Leptochilus aterrimus* (Eumeninae), fide Giordani Soika, 1974, Boll. Mus. Civ. Stor. Nat. Venezia 25: 73 (in subgenus *Lionotulus*; syn.; distr.). [= *Pseudopterocheilus* sp., according to unpublished note by van der Vecht, 1979, on a label in a drawer at the Natural History Museum, London.]

Icaria cameroni Dalla Torre, 1904 = *Parapolybia varia* (Fabricius).

Icaria carinata Cameron, 1900 = *Parapolybia varia* (Fabricius), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 31.

Icaria carinifera Schulz, 1907, Berlin. Entomol. Z. 51: 328 = *Parapolybia varia* (Fabricius).

Icaria flavobilineata Cameron, 1902, J. Straits. Asiat. Soc. 37: 102, "Kuching, Sarawak" = *Polistes flavobilineatus* (Polistini), fide Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 102.

Icaria fulvinerva Cameron, 1900 = *Parapolybia indica* var. *fulvinerva* (Cameron), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 30.

Icaria fuscipennis Cameron, 1900 = *Polybia* (*Parapolybia*) *orientalis* de Saussure, fide Meade-Waldo 1911, Ann. Mag. Nat. Hist. (8) 7: 108. See *Parapolybia varia varia.*

Icaria grossepunctata Kirby, 1900, Bull. Liverpool Mus. 3: 20, female – "Sokotra: Goahal Valley, E. Sokotra"; 1903, *in* Forbes, Nat. Hist. of Sokotra, Zool. Hym.: 249, pl. 16 fig. 5. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 284 (?syn. of *Labus socotrae* Kohl, 1907). = *Cyrtolabulus grossepunctatus* (Eumeninae), fide Giordani Soika, 1974, Boll. Mus. Civ. Stor. Nat. Venezia 25: 74.

Icaria leptogaster Cameron, 1901 = *Polybioides raphigastra* (de Saussure), syn. by van der Vecht, 1966, Zool. Verh., Leiden 82: 13.

Icaria quadrimaculata Cameron, 1900 = *Parapolybia varia* (Fabricius), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 30.

Icaria rubriscutis Cameron MS (newly published by Meade-Waldo in 1911, Ann. Mag. Nat. Hist. (8) 7: 108) = *Polybia* (*Parapolybia*) *sumatrensis* de Saussure, fide Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108. See *Polybioides raphigastra.*

Icaria singapurensis Cameron, 1904 = *Polybia orientalis* de Saussure, syn. by Dover, 1929, Bull. Raffles Mus. 2: 46. See *Parapolybia varia varia.*

Icaria sulciscutis Cameron, 1901 = *Polybia* (*Parapolybia*) *sumatrensis* de Saussure, syn. by Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108; = *Polybia sulciscutis* (Cameron), fide Schulz, 1907, Berlin. Entomol. Z. 51: 328. See *Polybioides raphigastra.*

Icaria tinctipennis Cameron, 1900 = *Parapolybia indica tinctipennis* (Cameron), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 29.

Icaria wroughtoni Cameron, 1900 = *Polybia* (*Parapolybia*) *orientalis* de Saussure, fide Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406. See *Parapolybia varia varia.*

Odynerus petiolatus Smith, 1859, J. Proc. Linn. Soc. Zool. 3: 164, "Aru", "Key" = *Ropalidia petiolata*; Bequaert, 1932 Rés. Scient. Voyage Indes Or. Néer Léopold de Belgique 4 (5): 50 = *Pachymenes* (Eumeninae), according to an unpublished note by van der Vecht.

Genus ***Parapolybia*** de Saussure

Parapolybia de Saussure, 1854, Ét. Fam. Vesp. 2: 207, division of subgenus *Polybia* of genus *Polybia* Lepeletier (3 species).

Type species: *Polybia indica* de Saussure, 1854, by subsequent designation of Bingham, 1897, Fauna Br. India, Hym. 1: 382.

Lit.: von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 152 (raised to generic rank). – van der Vecht, 1966, Zool. Verh., Leiden 82: 5, 21–40 (revision of East Asian and Indo-Australian species). – Gadagkar, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 149–190 (ethology).

Species list

escalerae (Meade-Waldo)

Polybia escalerae Meade-Waldo, 1911, Ann.

Mag. Nat. Hist. (8) 7: 109, female (in subgenus *Parapolybia*) – "Dupulán Baktiari, S. W. Persia" (London).

Parapolybia escalerae; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 159. – van der Vecht, 1966, Zool. Verh., Leiden 82: 21 (distr.). – Gusenleitner, 1988, Linz. Biol. Beitr. 20: 714 (distr.).

DISTRIBUTION: Turkey; Iran; Pakistan.

indica bioculata van der Vecht

Polybia indica (de Saussure); Bingham, 1897, Fauna Br. India, Hym. 1: 383, 384, fig. 115 (female).

Parapolybia indica bioculata van der Vecht, 1966, Zool. Verh., Leiden 82: 26 (key), 29, fig. 11c, female – "Birma: Tenasserim . . . Haundraw Valley" (London). – Lee, 1982, Hornets from Agric. Regions China: 98 (key), 102, pl. 1 fig. 1 (female); 1982, Zool. Res. 3: 85 (distr.). – Das and Gupta, 1984 (1983), Orient. Insects17: 429 (cat.). Lee, 1985, Econ. Insect Fauna China, 30 Hym.: Vespoidea: 55 (key; female), pl. 1 fig. 1; 1987, *in* Forest Insects Yunnan: 1350 (key). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 179, map 27 (distr.).

DISTRIBUTION: Myanmar; South China.

indica fulvinerva (Cameron)

Icaria fulvinerva Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 504, female – "Khasia Hills" [India] (lectotype Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.). – van der Vecht, 1966, Zool. Verh., Leiden 82: 30 (designation of lectotype).

Parapolybia indica var. (or subsp.) *fulvinerva*; van der Vecht, 1966, Zool. Verh., Leiden 82: 26 (key), 30.

Parapolybia indica fulvinerva; Das and Gupta, 1984 (1983), Orient. Insects17: 429 (cat.); 1989, Orient. Insects Monogr. 11: 179, map 27 (distr.).

DISTRIBUTION: India (Meghalaya).

indica indica (de Saussure)

Polybia indica de Saussure, 1854, Ét. Fam. Vesp. 2: 207, pl. 26 fig. 3, female (in division *Parapolybia*) – "La Chine" (Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 133 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 164 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 383 (key), 384 (distr.) [partim]. — Dalla Torre, 1904, Genera Insectorum 19: 77 (cat.). – Dover, 1926, China J. Sci. Arts. 4: 234 (distr.). – Dover, 1929, Bull. Raffles Mus. 2: 46 (distr.). – van der Vecht, 1966, Zool. Verh., Leiden 82: 27 (material reported by Bingham partly subspecies *bioculata*, and perhaps partly *P. varia* (Fabricius)).

Stelopolybia indica; du Buysson, 1913, Bull. Soc. Entomol. France 1913: 298.

Parapolybia indica; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 154, pl. 11 fig. 1, pl. 11B fig. 7 (distr.). – Liu, 1936–37, Peking Nat. Hist. Bull. 11 (3): 205, 340 (cat.; distr.). – Sonan, 1944, Trans. Nat. Hist. Soc. Taiwan 34: 342 (key; distr.). – Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): 1151. – Iwata, 1969, Kontyû 37: 439 (nest). – Matsuura, 1975, Shokubutsu-boeki, 29: 294, 295 (nest); 1976, Nankiseibutsu 18: 5. – Sekijima et al., 1980, Bull. Fac. Agric. Mie Univ. 61: 11 (ethology). – Jeanne et al., 1983, Zoomorphologie 103: 155, fig. 17 (morphology). – Kojima, 1983, Kontyû 41: 17–19 (ethology). – Sugiura et al., 1983, Bull. Fac. Agric. Mie Univ. 66: 11 (ethology); 1983, Bull. Fac. Agric. Mie Univ. 66: 27 (ethology). – Yamane and Maeta, 1985, Kontyû 53: 576. – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 356 (colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 394 (ethology). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 458 (biology). – Starr, 1992, Bull. Natl. Hist. Mus. Nat. Sci., Taichung 3: 132 (presence in Taiwan requires confirmation). – Kojima, 1992, Insectes Soc. 39: 275 (ethology); 1992, Ethol. Ecol. Evol. 4: 183 (ethology). – Itô, 1993, Behav. Soc. Evol. Wasps: 7, 20, 133 (ethology). – Yamane et al., 1995, Proc. Japan. Soc. Syst. Zool. 54: 75 (syn.: *P. takasogona*), 77 (key).

Parapolybia takasagona Sonan, 1944, Trans. Nat. Hist. Soc. Taiwan 34: 342 (key),

344, female, male – "Taipei, Tamaru, Rato" [in Chinese characters] [Taiwan] (holotype female Wufeng). – Kuo and Yeh, 1987, J. Natl. Chiayi Inst. Agric. 16: 82 (fig.). – Starr, 1992, Bull. Natl. Hist. Mus. Nat. Sci., Taichung 3: 112, figs. 28b, 30 (syn.: *nodosa* van der Vecht; distr.; ethology). – Yamane et al., 1995, Proc. Japan. Soc. Syst. Zool. 54: 75 (redescription of the type; syn. of *Parapolybia indica*).

Parapolybia indica indica; van der Vecht, 1966, Zool. Verh., Leiden 82: 26(key), 27, fig. 11a-b (distr.). – Iwata, 1969, Kontyû 37: 437–443 (nest). – Giordani Soika, 1976, Ann. Hist. -Nat. Mus. Natl. Hung. 68: 287 (distr.). – Iwata, 1976, Evol. Instinct: 301, 303, 305–306 (ethology). – Lee, 1981, Wuyi Sci. J. 1: 198 (distr.); 1982, Nat. Enemies Ins. 4: 55 (distr.); 1982, Hornets from Agric. Regions China: 98 (key; female, male), pl. 1 fig. 10; 1982, Zool. Res. 3: 85. – Das and Gupta, 1984 (1983), Orient. Insects17: 429 (cat.). – Lee, 1985, Econ. Insect Fauna China, 30 Hym.: Vespoidea: 55 (key), 56, pl. 1 fig. 10 (female, male); 1987, *in* Forest Insects Yunnan; 1349 (key). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 177 (key), 178, map 27 (distr.). – Lee and Ma, 1992, *in* Icono. Forest Insects Hunan China: 1325 (distr.).

DISTRIBUTION: India; Myanmar; Borneo; China; Taiwan; Korea; Japan.

indica tinctipennis (Cameron)

Icaria tinctipennis Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 503, female – "Khasia Hills" [India] (Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Parapolybia indica tinctipennis; van der Vecht, 1966, Zool. Verh., Leiden 82: 26 (key), 29. – Das and Gupta, 1984 (1983), Orient. Insects17: 429 (cat.); 1989, Orient. Insects Monogr. 11: 179, fig. 30a, map 27 (distr.).

DISTRIBUTION: India (Assam, Meghalaya).

nodosa van der Vecht

Parapolybia nodosa van der Vecht, 1966, Zool. Verh., Leiden 82: 25 (key), 39, female – "Formosa: . . . Pilam" (Leiden); also from 4 other localities in Taiwan; Myanmar (Tenasserim); China (Fukien); India (Umbaso); Thailand. – Tano, 1976, Hym. Comm. (3): 8, 10 (key; distr.). – Yamane and Yamane, 1979, Insecta Matsumurana n. ser. 15: 4 (key), 15, 32 (male; fig.; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 432 (cat.). – Yamane, 1984, Zool. Jahrb. Syst. 111: 119 (ethology). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 177 (key), 183, map 29 (female, male; distr.). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 488 (nest). – Starr, 1992, Bull. Natl. Hist. Mus. Nat. Sci., Taichung 3: 113 (syn. of *takasagona*).[4] – Yamane et al., 1995, Proc. Japan. Soc. Syst. Zool. 54: 75 (taxonomy), 77 (key).

DISTRIBUTION: India; Nepal; Myanmar; Thailand; China; Taiwan.

persica (Meade-Waldo)

Polybia persica Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108, female (in subgenus *Parapolybia*) – "Kuh Sefid, S. W. Persia" (London).

Parapolybia persica; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 160. – van der Vecht, 1966, Zool. Verh., Leiden 82: 21.

DISTRIBUTION: Iran.

[4] Starr (1992: 113–114) suggested that van der Vecht's (1966) failure to mention *P. takasagona* was due to "his aversion to the language spoken by his wartime captors." Van der Vecht was indeed forced into brutal servitude by the Japanese army during the Second World War, and thus it is plausible that this harsh experience could have resulted in an aversion to Japanese. However, we do not believe van der Vecht was the kind of taxonomist to allow animosity against a language to affect his scientific work. We also must disagree with Starr's suggestion that van der Vecht's failure to cite Sonan's (1944) paper was due to anything other than simple oversight. Consider the following facts: (1) the Zoological Record did not list *P. takasagona*; (2) the number (no. 245) of Trans. Nat. Hist. Soc. Taiwan, in which *P. takasogona* was described, was (and is) rarely available in Europe, because of the War, despite the previous circulation of the journal in Europe; (3) the reprints of the paper were not distributed worldwide; and (4) van der Vecht did cite papers published in Japanese, in other works (see 1968, Bijdr. Dierkd. 38: 97–109).

varia furva van der Vecht

Parapolybia varia subsp. (or var.?) *furva* van der Vecht, 1966, Zool. Verh., Leiden 82: 39, female, male – "New Guinea: West New Guinea, Vogelkop . . . Kebar Val., West of Manokwari, 550 m" (holotype female Honolulu).

DISTRIBUTION: N. W. New Guinea.

varia varia (Fabricius)

Vespa varia Fabricius, 1787, Mant. Insectorum 1: 293 – "China" (Kobenhavn). – Gmelin, 1790, Syst. Nat., Ed. 13, 1 (5): 2754. – Olivier, 1792, Encycl. Méth. Insectes 6: 674. – Fabricius, 1793, Entomol. Syst. 2: 282.

Polistes varia; Fabricius, 1804, Syst. Piez.: 279. – de Saussure, 1852, Ét. Fam. Vesp. 1: 265 (unidentified species, "*Eumenes* ?"). – Dalla Torre, 1894, Cat. Hym. 9: 135 (*varius*; unidentified); 1904, Genera Insectorum 19: 72 (*varius*; unidentified).

Polybia orientalis de Saussure, 1854, Ét. Fam. Vesp. 2: 208, pl. 26 fig. 2, female (in subgenus *Parapolybia*) – "La Chine" (London, no. 18.738). – Smith, 1857, Cat. Hym. Br. Mus. 5: 133 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 165 (cat.) – Bingham, 1897, Fauna Br. India, Hym. 1: 383, fig. 116 (key; distr.). – Dalla Torre, 1904, Genera Insectorum 19: 78 (cat.). – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108 (in subgenus *Parapolybia*; *Icaria fuscipennis* as var.). – Schulz, 1912, Berlin Entomol. Z. 57: 86, 101 (syn. of *Polybia varia* (Fabricius)). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (in subgenus *Parapolybia*; syn.: *Icaria wroughtoni* Cameron, *I. fuscipennis* Cameron, *I. annulipes* Cameron). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.). – Dover and Rao, 1922, J. Proc. Asiat. Soc. Bengal (n. ser.) 18: 243 (distr.). – Matsumura and Uchida, 1926, Insecta Matsumurana 1: 35 (*Polibia* [!]; distr.). – Dover, 1926, China J. Sci. Arts 4: 234; 1929, Bull. Raffles Mus. 2: 46 (syn.: *Icaria singapurensis* Cameron; distr.). – Matsumura, 1930, Thous. Insects Japan. Rev. 2: 10, pl. 2 fig. 8; 1931, 6000 Illust. Insects Japan-Emp.: 15. – Dover, 1931, J. Fed. Malay St. Mus. 16: 258 (distr.).

Polybia artifex Smith, 1860 (1861), J. Proc. Linn. Soc. Zool. 5: 90, female – "Makassar" [Sulawesi] (Oxford); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 139 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 384 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 162 (cat.); 1904, Genera Insectorum 19: 76 (cat.). – von Schulthess, 1913. Mitt. Schweiz. Entomol. Ges. 12: 164 (var. of *Parapolybia orientalis*, close to "*carinata* Smith").

Icaria quadrimaculata Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 496, male – "Bengal, probably Barrackpore" (Oxford). – Rothney, 1903, Trans. R. Entomol. Soc. London 1903: 107. – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.). – van der Vecht, 1966, Zool. Verh., Leiden 82: 30 (syn. of *P. varia* (Fab.)).

Icaria carinata Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 499, male – "Khasia Hills" [India] (Oxford). Junior primary homonym of *Icaria carinata* de Saussure, 1890. – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Icaria wroughtoni Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 500 – "Poona" (holotype female London, no. 18.730). – Dalla Torre, 1904, Genera Insectorum 19: 75 (cat.). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (syn. of *Polybia orientalis* de Saussure). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Icaria fuscipennis Cameron, 1900, Ann. Mag. Nat. Hist. (7) 6: 501, female – "Khasia Hills" [India] (Oxford). – Dalla Torre, 1904, Genera Insectorum 19: 73 (cat.). – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108 (var. of *Polybia orientalis* de Saussure). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (syn. of *Polybia orientalis* de Saussure). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Icaria cameroni Dalla Torre, 1904, Genera Insectorum 19: 73, replacement name for *Icaria carinata* Cameron, 1900, non de Saussure, 1890.

Icaria singapurensis Cameron, 1904, J. Straits Br. R. Asiat. Soc. 41: 120, female – "Singapore" (Singapore). – Dover, 1929, Bull. Raffles Mus. 2: 46 (syn. of *Polybia orientalis* de Saussure). – Liu, 1936–37, Peking Nat. Hist. Bull. 2: 347.

Icaria carinifera Schulz, 1906, Berlin. Entomol. Z. 51: 328, replacement name for *Icaria carinata* Cameron, 1900, non de Saussure, 1890.

Polybia varia; Schulz, 1912, Berlin. Entomol. Z. 57: 86, 101 (syn.: *Polybia orientalis* de Saussure).

Icaria annulipes Cameron, 1913, Ind. For. Rec. 4: 115, female, male – "Dehra Dun" [India: Uttar Pradesh] (London, no. 18.732a & b). – Meade-Waldo and Morley, 1914, Ann. Mag. Nat. Hist. (8) 14: 406 (syn. of *Polybia orientalis* de Saussure). – Aiyar, 1916, J. Bombay Nat. Hist. Soc. 24: 714 (cat.).

Stelopolybia disticha du Buysson, 1913, Bull. Soc. Entomol. France 1913: 298, female – "Chine: Kiang-si . . .; Chang-Hai" (Paris). – van der Vecht, 1966, Zool. Verh., Leiden 82: 31 (syn. of *Parapolybia varia* (Fabricius)).

Stelopolybia orientalis; du Buysson, 1913, Bull. Soc. Entomol. France 1913: 298, 299.

Parapolybia orientalis; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 155, pl. 11 fig. 3, 11B fig. 8 (male; distr.); 1927, Suppl. Entomol., Berlin 16: 83 (distr.). – Ma, 1936, Entomol. Phytopath. 4: 66. – Yasumatsu, 1937, Fukuoka Hakubutsugaku-Zasshi 2(2): 70 (distr.).

Parapolybia orientalis var. "*carinata* Smith i. litt."; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 155, 156, pl. 11B fig. 9. – van der Vecht, 1966, Zool. Verh., Leiden 82: 31 ("evidently von Schulthess misread the label on a specimen of *Icaria carinata* Cameron").

Parapolybia disticha; von Schulthess, 1927, Suppl. Entomol., Berlin 16: 83 (distr.). – Liu, 1936–37, Peking Nat. Hist. Bull. 11: 205, 337 (cat.). – Sonan, 1944, Trans. Nat. Hist. Soc. Taiwan 34: 342 (key; distr.). – Kim, 1970, Illust. Encycl. Fauna Flora Korea 11, Insecta 3: 803 (distr.).

Parapolybia varia; Liu, 1936–37, Peking Nat. Hist. Bull. 11 (3): 205, 348 (cat.; distr.). – Sonan, 1944, Trans. Nat. Hist. Soc. Taiwan 34: 342 (key), 343 (distr.). – Yano, 1952, *in* Icono. Ins. Japan. 2nd ed.: 1458. – Ishikawa, 1965, *in* Icono. Insects Japan. Color Nat. Ed. 3: 292. – van der Vecht, 1966, Zool. Verh., Leiden 82: 25 (key), 30, figs. 8–12, pl. 3 (syn.: *Polybia orientalis* de Saussure, *P. artifex* Smith, *Icaria quadrimaculata* Cameron, *I. carinata* Cameron, *I. wroughtoni* Cameron, *I. fuscipennis* Cameron, *I. singapurensis* Cameron, *I. annulipes* Cameron, *Stelopolybia disticha* du Buysson; distr.: "occurrence in the Moluccas requires confirmation"); 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 418, fig. 3i (morphology). – Iwata, 1969, Kontyû 37: 441 (nest). – Kim, 1970, Illust. Encycl. Fauna Flora Korea 11, Ins. 3: 544, 802, pl. 50 fig. 618 (syn.: *Polybia orientalis* de Saussure, *Polistes varius* "Dalla Torre" [!], *Icaria singapurensis* Cameron). – Matsuura, 1975, Shokubutsu-boeki 29: 294; 1976, Nankiseibutsu 18: 5. – Iwata, 1976, Evol. Instinct: 303, 305—306 (ethology). – Tano, 1976, Hym. Comm. (3): 8, 10 (key; distr.; nest). – Yamane, 1976, Insectarium 13: 206 (ethology). – van der Vecht, 1979, Entomol. Ber. (Amsterdam) 33: 30 (distr.). – Yamane and Terayama, 1983, Mem. Kagoshima Univ. Res. Ctr. S. Pacific 3: 169–173 (trigonalyid parasite). – Jeanne et al., 1983, Zoomorphologie 103: 155, fig. 8 (morphology). – Yamane, 1984, Zool. Jahrb. Syst. 111: 119 (nest); 1985, J. Ethol. 3: 27 (ethology). – Das and Gupta, 1984 (1983), Orient. Insects 17: 430 (cat.). – Lee, 1987, *in* Forest Insects Yunnan; 1349 (key). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 177 (key), 180, map 28 (female, male; fig.; distr.). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 356, 358, 381 (colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 394 (ethology). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 460 (biology). – Downing, 1991, *in* Ross and Matthews, Soc. Biol. Wasps:

549 (morphology). – Starr, 1992, Bull. Natl. Hist. Mus. Nat. Sci., Taichung 3: 111–112, figs. 26–27, 28a, 29 (distr.; ethology). – Lee and Ma, 1992, *in* Icono. Forest Insects Hunan China: 1325 (distr.). – Itô, 1993, Behav. Soc. Evol. Wasps: 7, 20, 22, 41 (ethology). – Yamane et al., 1995, Proc. Japan. Soc. Syst. Zool. 54: 77 (key).

Parapolybia varia varia; Giordani Soika, 1976, Ann. Hist. -Nat. Mus. Natl. Hung. 68: 287 (distr.). – Lee, 1981, Wuyi Sci. J. 1: 198 (distr.); 1982, Hornets from Agric. Regions China: 98 (key), 100, pl. 2 fig. 1 (female, male); 1982, Zool. Res. 3: 85 (distr.); 1985, Econ. Insect Fauna China, 30 Hym.: Vespoidea: 55 (key), 57, pl. 2 fig. 1 (female, male).

DISTRIBUTION: India; Nepal; Myanmar; Thailand; Malay Peninsula; Singapore; Borneo; Sulawesi; Sumbawa; Sumba; Philippine Is.; Riouw-Archipelago (= Kepulauan Riau); China; Korea; Japan.

Indo-Australian species originally described as ***Parapolybia*** or ***Polybia***, now placed in other genera

Polybia andrei du Buysson, 1913, Bull. Soc. Entomol. France 1913: 296, male – "Presqu'ile de Malacca: Pérak" (Paris) = *Polistes meadeanus* (von Schulthess) (Polistini), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 5.

Polybia decorata Smith, 1858 = *Ropalidia decorata* (Smith), fide du Buysson, 1913, Bull. Soc. Entomol. France 1913: 296, as *Icaria decorata.*

Polybia limatula Smith, 1863 = *Ropalidia conservator* (Smith), fide Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 448, as *Icaria conservator.*

Polybia loriana du Buysson, 1909 = *Ropalidia loriana* (du Buysson), by van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

Polybia luctuosa Smith, 1858, J. Proc. Linn. Soc. Zool. 2: 114, female – "Borneo (Sarawak)"; 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 139 (distr.); 1971, J. Proc. Linn. Soc. Zool. 11: 384 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 164 (cat.); 1904, Genera Insectorum 19: 77 (cat.). – von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164 (incertae sedis): According to van der Vecht (1966, Zool. Verh., Leiden 82: 6), the type is lost and the identity of this species is uncertain. Van der Vecht considered that this species is probably a *Polistes*. Judging from the fact that the species that Smith described as *Polybia* have the first metasomal segment more or less petiolate, *Polybia luctuosa* might be, if it is *Polistes*, *P. meadeanus* or its related species, or otherwise be Ropalidiini. However, we could not find any Ropalidiini or *Polistes* species from Borneo that match the description of *Polybia luctuosa*. Unless the type is found, it is better to ignore this name.

Polybia mathematica Smith, 1860 = *Ropalidia mathematica* (Smith), by von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 164, as *Icaria mathematica.*

Parapolybia meadeana von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 161, figs. 2, 12, 13, female, male – "Kina Balu, Borneo" and "Perak, Sawarak [Sarawak!]" (London). = *Polistes meadeanus* (Polistini), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

Parapolybia novaeguineae von Schulthess, 1913 = *Ropalidia novaeguineae*, fide van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

Polybia novaeguineae du Buysson, 1913 = *Ropalidia novaeguineae* (von Schulthess), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

Polybia papuana Cameron, 1913 = *Ropalidia papuana* (Cameron), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

Polybia shelfordi du Buysson, 1913, Bull. Soc. Entomol. France 1913: 297, female – "Kuching (Borneo)" (Oxford) = *Polistes meadeanus* (von Schulthess) (Polistini), fide van der Vecht, 1966, Zool. Verh., Leiden 82: 6.

Polybia stigma Smith, 1858 = *Ropalidia stigma* (Smith), fide du Buysson, 1913, Bull. Soc. Entomol. France 1913: 296, as *Icaria stigma.*

Genus ***Polybioides*** du Buysson

Polybioides du Buysson, 1913, Bull. Soc.

Entomol. France 1913: 299, genus (3 species).

Type species: "*Polybioides tabidus* (F.)" [= *Vespa tabida* Fabricius, 1781], by subsequent designation of Ducke, 1914, Zool. Jahrb. Syst. 36: 330.

Lit.: Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 239–240 (key to African species). – van der Vecht, 1966, Zool. Verh., Leiden 82: 5–21 (revision of Oriental species).

Species list

angustus van der Vecht

Polybioides angustus van der Vecht, 1966, Zool. Verh., Leiden 82: 13 (key), 20, female – "Palawan: . . . S. slope of Mt. Balabag, Mantalingajan Range, 2800 ft." (Chicago). – Tano, 1996, Entomol. J. Fukui 19: 8 (distr.).

DISTRIBUTION: Palawan.

gracilis van der Vecht

Polybia sumatrensis de Saussure; Bingham, 1897, Fauna Br. India, Hym. 1: 383, 385 [partim].

Polybioides gracilis van der Vecht, 1966, Zool. Verh., Leiden 82: 13 (key), 19, female – "Tenasserim: . . . Ataran Valley" (London); also from other localities in Tenasserim; and Vietnam. – Das and Gupta, 1984 (1983), Orient. Insects 17: 432 (cat.); 1989, Orient. Insects Monogr. 11: 185, fig. 31, map 30 (female; distr.).

DISTRIBUTION: Myanmar; Malay Peninsula; Vietnam.

melainus (Meade-Waldo)

Polybia melaina Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 110, female, male (in subgenus *Parapolybia*) – "Between Salt Lake and Wawamba, near Mount Ruwenzori, Uganda" (lectotype female London). – von Schulthess, 1912, Wiss. Ergebn. Dtsch. Z. Afrik. Exp., (1907–08), 4, Lf. 10: 292 (distr.). – Bequaert, 1928, Ann. Mag. Nat. Hist. (10) 2: 173 (designation of lectotype).

Polybia tabida var. *melaina*; von Schulthess, 1913, Mitt. Zool. Mus. Berlin 6 (3): 341 (distr.).

Parapolybia tabida var. *melaina*; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12(4): 163 (female; distr.).

Polybioides tabida var. *melaina*; du Buysson, 1914, *in* Voy. Alluaud et Jeannel, Afr. Or., Rés. Sc., Ins. Hym., 3, Vesp.: 164.

Polybioides melaina; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 240, 337, fig. 239 (key; cat.; ethology; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 186 (*melaenaina* [!]; distr.). – Bequaert, 1922, Rev. Zool. Afr. 10: 316 (ethology; distr.). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Bequaert, 1928, Ann. Mag. Nat. Hist. (10) 2: 173; 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9, 10 (distr.). — Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): 1163, fig. 1023E (nest). – Bergmans and Brosnens, 1953, Cerc. Zool. Congol. 21 (1): 12—14 (ethology). – Walrecht, 1963, Biol. Jaarb. Dodonaea 31: 244 (nest). – van der Vecht, 1966, Zool. Verh., Leiden 82: 6, 7 (*melainus*; taxonomy; ethology). — Iwata, 1976, Evol. Instinct: 301, 305 (*melanius* [!]; ethology). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 493, fig. 14.31, 512 (*melainus*; nest).

DISTRIBUTION: Zaire; Uganda.

psecas du Buysson

Polybioides psecas du Buysson, 1913, Bull. Soc. Entomol. France 1913: 299, female – "Espèces indo-malaises" (Paris). – von Schulthess, 1927, Suppl. Entomol., Berlin 16: 84 (distr.). – van der Vecht, 1966, Zool. Verh., Leiden 82: 12 (key), 17, figs. 2, 5, 7 (male; syn.: *Polybia pendleburyi* Dover; distr.). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 37 (distr.).

Polybia pendleburyi Dover, 1927, Proc. R. Entomol. Soc. London 1: 40, female – "Bukit Kutu, Selangor, 3500 ft." (London). – Dover, 1931, J. Fed. Malay. St. Mus. 16: 259 (distr.). – van der Vecht, 1966, Zool. Verh., Leiden 82: 17 (syn. of *psecas*).

DISTRIBUTION: Thailand; Malay Peninsula; Borneo; Sumatra; Nias.

raphigastra (de Saussure)

Polybia raphigastra de Saussure, 1854, Ét. Fam. Vesp. 2: 204, female (in division

My) – "L'Amérique? Etiqueté par erreur de Pulo-Pinang (Asie)" [the original label was presumably correct] (Torino). – Dalla Torre, 1894, Cat. Hym. 9: 165 (cat.); Genera Insectorum 19: 78 (*rhaphigastra* [!]; "Amerika"; cat.). – Ducke, 1910, Ann. Mus. Natl. Hung. 8: 541 (not *Polybia*). – Schulz, 1911, Zool. Ann. Würzburg 4: 201 (syn.: *Icaria sulciscutis* Cameron). – von Schulthess, 1914, Zool. Jahrb. Syst. 37: 261 (distr.). – Dover, 1931 (1930), J. Fed. Malay. St. Mus. 16: 259 (*rhaphigastra* [!]; [incorrectly] said to be "widely distributed all over the Indo-Malayan region").

Polybia sumatrensis de Saussure, 1855, Rev. Mag. Zool. (2) 7: 374, "male" [female] – "Sumatra" (holotype female London, no. 18.737). – Smith, 1858, J. Proc. Linn. Soc. Zool. 2: 113 (distr.); 1863 (1864), J. Proc. Linn. Soc. Zool. 7: 139 (distr.); 1871, J. Proc. Linn. Soc. Zool. 11: 384 (cat.). – Dalla Torre, 1894, Cat. Hym. 9: 166 (cat.). – Bingham, 1897, Fauna Br. India, Hym. 1: 385 (female; distr.) [partim]. – Dalla Torre, 1904, Genera Insectorum 19: 78 (cat.). – Bingham, 1905, Fasc. Malay. 3: 49 (distr.). – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108 (in subgenus *Parapolybia*; syn.: *Icaria sulciscutis* Cameron, 1901, *Icaria rubriscutis* Cameron MS). – Dover, 1927, Proc. Entomol. Soc. London 1: 40; 1929, Bull. Raffles Mus. 2: 46 (distr.).

Icaria leptogaster Cameron, 1901, Proc. Zool. Soc. London 1901 (2): 29, female – "Patalung, Malay Peninsula" (Cambridge, U. K.). – Dalla Torre, 1904, Genera Insectorum 19: 74 (cat.; error: "Malayische Inseln"). – von Schulthess, 1913, Mitt. Schweiz. Ent Ges. 12: 164 (perhaps identical with *Parapolybia sulciscutis* = *rhaphigastra*).

Icaria sulciscutis Cameron, 1901, Proc. Zool. Soc. London 1901 (2): 30, female – "Bukit Tomah, Singapor" [Bukit Timah] (holotype female London, no. 18.729). – Dalla Torre, 1904, Gen. Ins 19: 74 (cat.). – Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108 (syn. of *sumatrensis*). – Schulz, 1911, Zool. Ann. Wurzburg 4: 201 (syn. of *raphigastra*).

Polybia sulciscutis; Schulz, 1907, Berlin. Entomol. Z. 51: 328–331, fig. 4 (male; distr.).

"*Icaria rubriscutis* Cameron MS" Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 108 (syn. of *Polybia sumatrensis* de Saussure). Unavailable under Article 11(e) of the Code.

Parapolybia rhaphigastra [!]; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12: 153 (key), 156, pl. 11 fig. 4, pl. 11B fig. 10 (syn.: *Polybia sumatrensis* de Saussure, *Icaria sulciscutis* Cameron, *I. rubriscutis* Cameron MS; distr.).

Polybioides sumatrensis; du Buysson, 1913, Bull. Soc. Entomol. France 1913: 299 (key).

Polybioides raphigastra; von Schulthess, 1927, Suppl. Entomol., Berlin 16: 84 (*rhaphigastra* [!]; distr.). – Pagden, 1958, Malay. Nat. J. 12: 113 (ethology). – van der Vecht, 1966, Zool. Verh., Leiden 82: 9, 12 (key), 13, figs. 1, 4, 6, pls. 1–2 (syn.: *Polybia sumatrensis* de Saussure, *Icaria leptogaster* Cameron, *Icaria sulciscutis* Cameron; male; ethology; distr.); 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 417, fig. 3b (morphology). – Iwata, 1976, Evol. Instinct: 302, 304 (ethology). – Das and Gupta, 1984 (1983), Orient. Insects 17: 432 (cat.). – Kojima and Yamane, 1990, *in* Sakagami et al., Nat. Hist. Soc. Wasps Bees Eq. Sumatra: 37 (distr.). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 358 (colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 498, 501, fig. 14.30, 512 (ethology). – Turillazzi and Francescato, 1994, Rend. Fis. Accad. Lincei (9) 5 (4): 367 (ethology).

DISTRIBUTION: Malay Peninsula; Borneo; Sumatra; Nias; Natuna I.

tabidus (Fabricius)

Vespa tabida Fabricius, 1781, Spec. Insect. 1: 468 – "Africa aequinoctiali" (holotype female London); 1787, Mant. Ins., 1: 293. – Gmelin, 1790, Syst. Nat. ed. 13, 1 (5): 2754. – Olivier, 1792, Encycl. Méthod. Ins. 6: 673. – Fabricius, 1793,

Entomol. Syst.: 281. – de Saussure, 1853, Ét. Fam. Vesp. 2: 42 (species dubiae; ? *Icaria*).

Polybia tabida; de Saussure, 1854, Ét. Fam. Vesp. 2: 209, pl. 24 fig. 4 (female). – Smith, 1857, Cat. Hym. Br. Mus. 5: 133 (cat.). – Kohl, 1894, Ann. Naturhist. Hofmus. Wien, 9: 343. – Dalla Torre, 1894, Cat. Hym. 9: 166 (cat.); 1904, Genera Insectorum 19: 78 (cat.). – Tullgren, 1904, Ark. Zool. 1: 456 (distr.). – Schulz, 1906, Spolia Hym.: 323; 1912, Berlin. Entomol. Z. 57: 85. – von Schulthess, 1913, Mitt. Zool. Mus. Berlin 6(3): 341 (syn.: *Polybia bucula* du Buysson; distr.); 1914, Dtsch. Entomol. Z. 1914: 290.

Polybia bucula du Buysson, 1902, Bull. Soc. Entomol. France 1902: 253, female – "Assinie . . .; Congo français: rivigère de San Benito . . .; entre Sam Quito et N'jole; N'Kogo, Ogooué . . .; Cameroun" (London). – von Schulthess, 1913, Mitt. Zool. Mus. Berlin 6(3): 341 (syn. of *Polybia tabida* de Saussure). – Richards, 1969, Mem. Soc. Entomol. Ital. 48: 83–84 (?distinct species).

Parapolybia tabida; von Schulthess, 1913, Mitt. Schweiz. Entomol. Ges. 12 (4): 152 (key), 162, pl. 11 fig. 6; pl. 11B fig. 11 (syn.: *Polybia bucula* du Buysson; distr.).

Polybioides tabida; du Buysson, 1913, Bull. Soc. Entomol. France 1913: 299; 1914, *in* Voy. Alluaud et Jeannel, Afr. Or., Rés. Sc., Ins. Hym., 3, Vesp.: 163 (distr.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 239 (key), 338, fig. 238 (ethology; cat.; distr.). – Bouvier, 1919, Bull. Soc. Entomol. France 1918: 278 (ethology). – Schouteden, 1919, Rev. Zool. Afr. 6: 186 (distr.). – Bequaert, 1922, Rev. Zool. Afr. 10: 310, 315 (ethology; distr.). – Bischoff, 1927, Biol. Hym.: 271 (nest). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): 1163 (nest). – van der Vecht, 1966, Zool. Verh., Leiden 82: 6, 7 (*tabidus*; taxonomy; ethology); 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: 417, fig. 3a (*tabidus*; morphology). – Richards, 1969, Mem. Soc. Entomol. Ital. 48: 83–87 (*tabidus*; ethology). – Darchen, 1976, C. R. Séances Acad. Sci. (D) 282: 457 (*tabidus*; ethology). – Iwata, 1976, Evol. Instinct: 305 (*tabidus*; ethology). – Giordani Soika, 1977, Steenstrupia 4: 128 (*tabidus*; distr.). – Jeanne et al., 1983, Zoomorphologie 103: 155 (*tabidus*; morphology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 358 (*tabidus*; colony population). – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 493, fig. 14.31, 497, 498, 512 (*tabidus*; nest). – Dejean and Turillazzi, 1992, Trop. Zool. 5: 237 (trophobiosis with homopterans). – Francescato et al., 1993, Actes Coll. Insectes Soc. 8: 121 (swarming behavior). – Itô, 1993, Behav. Soc. Evol. Wasps: 89 (ethology). – Dejean et al., 1994, J. Afr. Zool. 108 (3): 251 (*tabidus*; ethology). – Turillazzi et al., 1994, Insectes Soc. 41: 327 (*tabidus*; caste polymorphism). – Francescato et al., 1994, Ethol. Ecol. Evol. 6: 422 (swarming behavior). – Dejean and Fotso, 1995, Ethol. Ecol. Evol. 7: 11 (*tabidus*; nesting associations).

DISTRIBUTION: Liberia; Côte d'Ivoire; Ghana; Nigeria; Cameroon; Equatorial Guinea; Gabon; Congo; Zaire; Uganda; Kenya.

tabidus* var. *isabellinus (von Schulthess)

Polybia tabida var. *isabellina* von Schulthess, 1913 (March), Mitt. Zool. Mus. Berlin 6(3): 341, female – "Port, Westafrika" (Berlin, Zürich).

Parapolybia tabida var. *isabellina* von Schulthess, 1913 (April), Mitt. Schweiz. Entomol. Ges. 12(4): 163 (as "nov. var."; female; distr.).

Polybioides tabida var. *isabellina*; Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 338 (cat.); 1922, Rev. Zool. Afr. 10: 316 (distr.). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.).

DISTRIBUTION: Ghana; Cameroon; Equatorial Guinea; Zaire.

Genus ***Belonogaster*** de Saussure

Belonogaster de Saussure, 1854, Ét. Fam. Vesp. 2: 235, genus, replacement name for *Raphigaster* de Saussure, 1853.

Type species: *Vespa juncea* Fabricius, 1781, by subsequent designation of Bingham, 1897, Fauna Br. India, Hym. 1: 468.

Raphigaster de Saussure, 1853, Ét. Fam. Vesp. 2: 12, genus (7 species). Non *Raphigaster* Laporte, 1832.

Belenogaster Walker, 1871, List Hym. Collected by J. K. Lord, Egypt and Arabia etc. (London): 39; Kirby, 1881, Proc. Zool. Soc. London: 649. Incorrect spelling of *Belonogaster* de Saussure.

Lit.: Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 31–114 (revision). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 11–31 (revision of Malagasy species). – Gadagkar, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 149–190 (ethology).

Species list

abyssinica du Buysson

Raphigaster junceus var. de Saussure, 1853, Ét. Fam. Vesp. 2: pl. 2 fig. 2.

Belonogaster abyssinicus du Buysson, 1906, Bull. Soc. Entomol. France 1906: 190, female, male – "Abyssinie" (lectotype female Paris); 1909, Ann. Soc. Entomol. France 78 (2): 214, 223, 263, pl. 4 fig. 4, pl. 5 fig. 6 (ethology). – von Schulthess, 1912, Soc. Entomol. 27: 42 (compared to *B. atratus* n. sp.); 1913, Mitt. Zool. Mus. Berlin 6 (3): 338. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 328 (cat.). – Scott, 1933, Ann. Mag. Nat. Hist. 12: 120 (Ethiopia; Eritrea). – Giordani Soika, 1939, Atti Mus. Civ. Stor. Nat. Trieste 14 (11): 170 (distr.); 1940, Atti Mus. Civ. Stor. Nat. Trieste 14 (18): 286 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 44–45 (key), 96, fig. 71 (*abyssinica*; designation of lectotype; distr.).

DISTRIBUTION: Ethiopia; Eritrea; Djibouti.

acaulis Richards

Belonogaster acaulis Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34 (key), 61, fig. 18, female – "**South Africa:** Natal National Park" (London).

DISTRIBUTION: South Africa.

adenensis adenensis Giordani Soika

Belonogaster abyssinicus adenensis Giordani Soika, 1957, Br. Mus. (Nat. Hist.), Exp. S. W. Arabia 1937–38, 1 (31): 484, female, male – "Western Aden Protectorate: Jebel Jihaf, 7100 ft" (holotype female London); 1973, Boll. Mus. Civ. Stor. Nat. Venezia 24: 47.

Belonogaster adenensis adenensis; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 46 (key), 99, fig. 77 (distr.); 1985 (1984), Fauna Saudi Arabia 6: 436, 437 (key), 438 (distr.).

DISTRIBUTION: Yemen.

adenensis somaliensis Richards

Belonogaster adenensis somaliensis Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 46 (key), 100, female, male – "**Somali Republic**" (holotype female London); also from Ethiopia.

DISTRIBUTION: Somalia; Ethiopia.

ambiko Hensen and Blommers

Belonogaster ambiko Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 14, figs. 5–6, male – "Madagascar; (Tamat.); Périnet; 950 m; 48°16E, 18°56S" (Leiden).

DISTRIBUTION: Madagascar.

apicalis de Saussure

Belonogaster apicalis de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 208, female – "Madagascar" (lectotype Genève). – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 230 (ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 329 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 47(key), 105, figs. 85–86 (designation of lectotype; distr.). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 15.

DISTRIBUTION: Madagascar.

arabica Giordani Soika

Belonogaster grisea arabicus Giordani Soika, 1957, Br. Mus. (Nat. Hist.), Exp. S. W. Arabia 1937–38, 1 (31): 484, female, male – "Western Aden Protectorate: Dhala, 4800–5500 ft."(holotype female London); also from other localities;

1973, Boll. Mus. Civ. Stor. Nat. Venezia 24: 47.

Belonogaster arabica; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 45 (key), 96, figs. 72–73 (distr.).; 1985 (1984), Fauna Saudi Arabia 6: 436, 437 (key), 438 (distr.).

DISTRIBUTION: Yemen; Saudi Arabia.

atrata von Schulthess

Belonogaster atratus von Schulthess, 1912, Soc. Entomol. 27: 41, female — "Westafrika, Uelleburg" (lectotype Zürich); 1913, Mitt. Zool. Mus. Berlin 6 (3): 337, fig. 1 (female). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34 (key), 59 (*atrata*; designation of lectotype).

DISTRIBUTION: Cameroon.

aurata Richards

Belonogaster aurata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34 (key), 59, fig. 14, female – "**Nigeria:** Lagos" (London).

DISTRIBUTION: Nigeria.

barbata Richards

Belonogaster barbata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39 (key), 92, fig. 66, female – "**Congo:** Voka" (Paris).

DISTRIBUTION: Congo.

betsileo Hensen and Blommers

Belonogaster brevipetiolata; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 101, fig. 80 (male) [partim].

Belonogaster betsileo Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 15, figs. 7–8, male – "Betsileo, Madagascar" (London).

DISTRIBUTION: Madagascar.

bicolor de Saussure

Belonogaster bicolor de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 208, female – "Madagascar" (lectotype Genève). – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 47 (key), 104 (designation of lectotype; distr.). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 16, fig. 10 (syn.: *malagassus* de Saussure; distr.).

Belonogaster malagassus de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 210, female – "Madagascar" (lectotype Genève). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*malagassa*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 230. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 110 (?syn. of *eumenoides* de Saussure). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 16 (designation of lectotype; syn. of *bicolor*).

Belonogaster malagassus var. de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 210.

Belonogaster prasinus var. *bicolor*; du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 229. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 336 (cat.).

DISTRIBUTION: Madagascar.

bimaculata Richards

Belonogaster bimaculata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 37, 45 (key), 78, figs. 49–50, female, male – "**Zambia:** Abercorn" (holotype female London); also from 6 other localities in Zambia.

DISTRIBUTION: Zambia.

brachystoma Kohl

Belonogaster brachystomus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 322 (key), 326, 334, pl. 15 fig. 78, pl. 17 fig. 136, female, male – "Ostafrika Delagoa-Bay" (lectotype male Wien). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*brachystoma*; cat.); 1904, Genera Insectorum 19: 80 (*brachystoma*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217, 219, 252, 265. – von Schulthess, 1914, Dtsch. Entomol. Z. 1914: 290 (compared to *B. rothkirchi* n. sp.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 329 (cat.). – Giordani Soika, 1961, S. Afr. Anim. Life 8: 450 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39, 41 (key), 68, figs. 33–34 (*brachystoma*; distr.).

DISTRIBUTION: Zambia; Zimbabwe; Tanzania (including Zanzibar); Malawi; Mozam-

bique; South Africa (Kwazulu-Natal, Transvaal).

brevipetiolata de Saussure

Belonogaster brevipetiolatus de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 98, pl. 4 fig. 1, female, male – "*Madagascar*. – Fianarantsoa (pays des Betsileo.) et environs d'Andgrangoloaka (à la limite est de la province d'Imerina) ... Côte sud ... *Nosibé*" (Genève). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 321, 323 (key), 334, pl. 15 fig. 83, pl. 16 figs. 95, 99, 120. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 114 (*brevipetiolata*; cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*brevipetiolata*; cat.). — du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 227, 263, pl. 6 fig. 1 (ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 329 (cat.). – van der Vecht, 1968, Proc. K. Ned. Akad. Wet. Ser. C Biol. Med. Sci. 71: fig. 4d (*brevipetiolata*; morphology). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 33, 46 (key), 101, fig. 79 (*brevipetiolata*; nest; distr.) [partim, not male]. – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 16, figs. 11, 12 (*brevipetiolata*; compared to *B. erythrocephala* n. sp.; distr.).

DISTRIBUTION: Madagascar.

brevitarsus Richards

Belonogaster brevitarsus Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 39, 42 (key), 92, figs. 67, 68, male, female – "**Uganda:** Mabira forest, Chagwe, 3500–3800 ft, [1070–1160 m]" (holotype male London); also from two other localities in Uganda; and Kenya; Zaire; Rwanda.

DISTRIBUTION: Uganda; Kenya; Rwanda; Zaire.

brunnea brunnea Ritsema

Belonogaster brunneus Ritsema, 1874, Tijdschr. Entomol. 17: 177, 202, female – "Neder-Guinea" [labeled "Congo" (= Congo River)] (unique Leiden). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 334. – Dalla Torre, 1894, Cat. Hym. 9: 114 (*brunea* [!]; cat. [erroneously recorded from "Austr., New Guinea"]). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 335. – Dalla Torre, 1904, Genera Insectorum 19: 80 (*brunea* [!]; cat.; recorded from "Unter-Guinea"). – du Buysson, 1909, Ann Soc. Entomol. France 78 (2): 217, 219, 245, 264, pl. 6 fig. 2 (male; ethology); 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 162. – Schulz, 1906, Spolia Hym.: 226. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 234, 329 (cat.; syn.: *B. distinguendus* Kohl). – Salt and Bequaert, 1929, Psyche 36: 262 (distr.; record of stylopized specimen). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 8, 9, 10 (distr.). – Benoit, 1956, Ann. Mus. R. Congo Belge 8 (Sci. Zool.) 51: 552 (distr.).

Belonogaster distinguendus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 322, 323 (key), 328, 335, pl. 15 figs. 79–81, 94, pl. 16 fig. 98, pl. 17 fig. 141, female, male – "Westafrika: Chutes de Samlia, Riv. N. Gamio, Mocquereys Grand Bana . . ." (lectotype male Wien). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*distinguenda*; cat.); 1904, Genera Insectorum 19: 80 (*distinguenda*; cat.). — Schulz, 1905, Hym. Studien: 15. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 329 (syn. of *B. brunneus* Ritsema). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 64 (designation of lectotype; marked as "Syn. n.").

Belonogaster brunnea brunnea; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38, 41–43 (key), 64, figs. 23–25 (distr.).

DISTRIBUTION: Sierra Leone; Liberia; Ghana; Nigeria; Bioko; Gabon; Congo; Zaire; Rwanda; Burundi.

brunnea nigriclava Richards

Belonogaster brunnea nigriclava Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38, 43 (key), 66, figs. 26–27,

male, female – "**Uganda:** Mt Kokanjero, SW. Mt Elgon, 6400 ft [1950m]" (holotype male London); also from 12 other localities in Uganda; and Kenya; Zambia; Malawi; Tanzania; Zaire.

DISTRIBUTION: Uganda; Kenya; Zaire; Tanzania; Zambia; Malawi.

brunnescens Richards

Belonogaster brunnescens Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38, 45 (key), 70, male, female – "**Zimbabwe:** Mashonaland" (holotype male London); also from Ethiopia; Gabon; Congo; Zaire; Zimbabwe; Zambia; Kenya; Uganda; Mozambique; Malawi; Tanzania (Zanzibar); South Africa (Transvaal).

DISTRIBUTION: Ethiopia; Kenya; Uganda; Tanzania (including Zanzibar); Congo; Zaire; Gabon; Malawi; Zambia; Zimbabwe; Mozambique; South Africa (Transvaal).

clypeata clypeata Kohl

Belonogaster clypeatus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 321 (key), 328, 335, pl. 15 figs. 88, 91, pl. 17 figs. 124, 144, 149, female, male – "Deutsch-Mozambique" (lectotype male Wien); also from Madagascar [error]. – Dalla Torre, 1894, Cat. Hym. 9: 114 (*clypeata*; cat.). – Stadelmann, 1898, Deutsch Ost-Afrika 4, Hym.: 35. – von Schulthess, 1899, Bull. Soc. Vaud. Sci. Nat. (4) 35: 269 (distr.). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*clypeata*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217, 219, 244, 264, pl. 2 figs. 9, 10, pl. 5 figs. 1, 2 (ethology); 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 162. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 329 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 185 (distr.). – Giordani Soika, 1935, Mem. Estud. Mus. Zool. Univ. Coimbra (1) 82: 14 (distr.). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.). – Guiglia, 1940, Boll. Lab. Zool. Gen. Agrar. Fac. Agrar. Portici 31: 278 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 67 (designation of lectotype).

Belonogaster clypeata clypeata; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34, 41 (key), 67, figs. 28–31 (distr.).

DISTRIBUTION: Uganda; Tanzania (including Zanzibar); Zaire; Malawi; Zambia; Zimbabwe; Mozambique; South Africa (Transvaal, Kwazulu-Natal, Western Cape).

clypeata fuscata Richards

Belonogaster clypeata fuscata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34, 41 (key), 67, female, male – "**Uganda:** Ankole-Toro border, east of Lake George, 4500 ft [1370 m]" (holotype female London); also from five other localities in Uganda; and Zambia; Angola; Zaire.

DISTRIBUTION: Uganda; Zaire; Zambia; Angola.

dayi Hensen and Blommers

Belonogaster dayi Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 16, figs. 9, 36, 37, 42, male, female – "Madagascar: Tamat.; Périnet" (holotype female London); also from 3 other localities in Madagascar; nest is also noted.

DISTRIBUTION: Madagascar.

discifera Hensen and Blommers

Belonogaster discifera Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 18, figs. 13, 14, male, female – "Rép. Malgache, Manjakandriana, Mandraka, 1300 m" (holotype male Amsterdam); also from other locality in Madagascar. – Wenzel, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 506 (nest).

DISTRIBUTION: Madagascar.

dubia Kohl

Belonogaster dubius Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 322, 323 (key), 329, 335, pl. 15 figs. 79, 80, 94, pl. 16 fig. 100, pl. 18 fig. 145, female, male – "Ostafrika: Dar es Salaam" (lectotype male Wien). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*dubia*; cat.). – Stadelmann, 1898, Deutsch Ost-Afrika 4, Hym.: 35 – Dalla Torre, 1904,

Genera Insectorum 19: 80 (*dubia*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 215, 219, 235, 263 (ethology). – Roubaud, 1910, C. R. Acad. Sci. Paris 151: 553–556 (ethology). – von Schulthess, 1913, Mitt. Zool. Mus. Berlin 6 (3): 338; 1913, Ark. Zool. 8 (17): 14 (syn.: *B. massaicus* Cameron). – du Buysson, 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 161. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 235 (key), 236 (ethology), 330 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 184 (distr.). – von Schulthess; 1929, Rev. Zool. Bot. Afr. 17 (2): 187 (distr.). – Salt and Bequaert, 1929, Psyche 36: 262 (record of stylopized specimen). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 8, 9, 10 (distr.). – Guiglia, 1940, Boll. Lab. Zool. Gen. Agrar. Fac. Agrar. Portici 31: 279 (distr.). – Marino Piccioli, 1968, Monit. Zool. Ital. (n. ser.) 2, Suppl.: 203 (ethology). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 38, 43 (key), 53, figs. 10, 11 (*dubia*; designation of lectotype; syn.: *B. occidentalis* Tullgren, *B. massaicus* Cameron; distr.). – Kojima and Keeping, 1988, Kontyû, 56: 817 (*dubia*; larva).

Belonogaster saevus var. de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 92, in footnote (female).

Belenogaster [!] *occidentalis* Tullgren, 1904, Ark. Zool. 1: 455, pl. 25, fig. 14, female, male – [Cameroon] "Itoki" (lectotype male Stockholm); also from Bonge, Ekundu; Tanzania: Dar-es-Salaam. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 336 (syn. of *B. saevus* de Saussure). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 54 (*Belonogaster*; designation of lectotype).

Belonogaster massaicus Cameron, 1910, *in* Sjöstedt, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Hym. 6: 171, female – "*Kilimandjaro:* Kibonoto 1000–1200 m" [Tanzania] (lectotype Stockholm). – von Schulthess, 1913, Ark. Zool. 8 (17): 14 (syn. of *B. dubius*). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 54 (designation of lectotype; marked as "Syn. n.").

DISTRIBUTION: Senegal; Gambia; Guinea; Liberia; Côte d'Ivoire; Ghana; Niger; Nigeria; Bioko; Congo; Zaire; Uganda; Rwanda; Kenya; Tanzania; Angola; Zambia; Malawi; Zimbabwe; Mozambique; South Africa (Transvaal, Kwazulu-Natal).

erythrocephala Hensen and Blommers

Belonogaster brevipetiolata; de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 98, pl. 4 fig. 1 [partim]. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 101, fig. 79, female [partim].

Belonogaster erythrocephala Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 19, figs. 15, 16, male, female – "Rép. Malgache, Nosy Be, Dzamandzar" (holotype male Amsterdam); also from two other localities in Madagascar.

DISTRIBUTION: Madagascar.

eumenoides de Saussure

Belonogaster eumenoides de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 94, pl. 17 fig. 12, female – "*Madagascar* . . . aux environs d'Andrangoloaka" (lectotype Genève); also from another locality. – Dalla Torre, 1894, Cat. Hym. 9: 114 (cat.). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 209. – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – du Buysson, 1909, Ann Soc. Entomol. France 78 (2): 215, 234, 263, pl. 4 fig. 6 (male; ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 330 (syn.: *pomicolor* de Saussure, *ornatus* de Saussure; cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 47 (key), 110, figs. 91, 92 (designation of lectotype; ?syn.: *malagassus* de Saussure; distr.) [partim]. – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 20, figs. 2, 17–19, 43 (female, male; nest; distr.).

?*Belonogaster pictus* de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key) [Junior primary hom-

onym of *Belonogaster pictus* Kohl, 1894].

DISTRIBUTION: Madagascar.

facialis du Buysson

Belonogaster facialis du Buysson, 1908, Bull. Soc. Entomol. France 1908: 65, female – "Afrique orientale anglaise: Boura, Wa-Taïta" [Kenya] (lectotype Paris); also from Senegal; and Congo; 1909, Ann. Soc. Entomol. France 78 (2): 215, 238; 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 161. – von Schulthess, 1913, Ark. Zool. 8 (17): 14 (syn.: *sex-maculatus* Cameron). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 330 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34, 44 (key), 80, figs. 51–53 (designation of lectotype; distr.).

DISTRIBUTION: Senegal; Congo; Kenya; Uganda; Tanzania (including Zanzibar); Zambia; Malawi; Mozambique; South Africa (Kwazulu-Natal).

fanemitra Hensen and Blommers

Belonogaster fanemitra Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 22, figs. 20, 38, 39, male, female – "Madagascar, Sambirano, Manongarivo, 1150 m" (holotype female Paris); also from other locality in Madagascar.

DISTRIBUTION: Madagascar.

ferruginea Richards

Belonogaster ferruginea Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 52, female – "**Grande Comore:** La Grille (Guiri), 850–900 m" (Paris).

DISTRIBUTION: Comoros.

filiformis (de Saussure)

Raphigaster filiformis de Saussure, 1853, Ét. Fam. Vesp. 2: 18, pl. II fig. 4, female – "Djidda en Arabie" (lectotype Paris). – Smith, 1857, Cat. Hym. Br. Mus. 5: 94 (syn. of *Belonogaster macilentus* (Fabricius)). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*Rhaphigaster*[!]). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 100 (designation of lectotype).

Belonogaster filiformis; Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Dalla Torre, 1894, Cat. Hym. 9: 114. – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 335. – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 216–217, 257. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 330 (cat.; "perhaps a variety of *B. griseus* (Fabricius)"). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 45 (key), 100, fig. 78 (distr.); 1985 (1984), Fauna Saudi Arabia 6: 436, 437 (key), 438 (distr.).

DISTRIBUTION: Saudi Arabia.

filiventris (de Saussure)

Raphigaster filiventris de Saussure, 1853, Ét. Fam. Vesp. 2: 16, pl. 2 fig. 5, female – "Le Sénégal?" (Paris). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*Rhaphigaster*[!]).

Belonogaster filiventris; Smith, 1857, Cat. Hym. Br. Mus. 5: 94 (cat.). — Dalla Torre, 1894, Cat. Hym. 9: 114 (cat.), 116 (?syn. of *B. longistyla*). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123; 1895, Mem. R. Accad. Sci. Bologna (5) 5: 335. – Bingham, 1903, Ann. Mag. Nat. Hist. (7) 12: 47, 68. – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 216, 218, 241, 264, pl. 4 fig. 1, pl. 6 fig. 3 (male; ethology); 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 162. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 331 (cat.; syn.: *B. braunsii* Kohl, *B. kohli* Schulz, *B. gracilis* Cameron). – Salt, 1927, Psyche 34: 185 (distr.; record of stylopized specimen). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Salt and Bequaert, 1929, Psyche 36: 262 (record of stylopized specimen). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.). – Giordani Soika, 1961, S. Afr. Anim. Life 8: 450 (distr.). – Marino Piccioli, 1968, Monit. Zool. Ital. (n. ser.) 2, Suppl.: 203–206 (ethology). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36, 42 (key), 75, figs. 45–47

(syn.: *B. gracilis* Cameron, *B. sexmaculatus* Cameron, *B. buyssoni* Meade-Waldo; distr.).

Belonogaster gracilis Cameron, 1910, *in* Sjöstedt, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Hym. 6: 173, female – "*Kilimandjaro:* Kibonoto, cultivated zone, 1300–1900 m" [Tanzania] (lectotype Stockholm). – von Schulthess, 1913, Ark. Zool. 8 (17): 14 (syn. of *B. filiventris* (de Saussure)). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 76 (designation of lectotype; marked as "Syn. n.").

Belonogaster sexmaculatus Cameron, 1910, *in* Sjöstedt, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Hym. 6: 174, male – "*Kilimandjaro:* Kibonoto, cultivated zone" [Tanzania] (Stockholm). – von Schulthess, 1913, Ark. Zool. 8 (17): 14 (syn. of *B. facialis* du Buysson). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 76 (syn. of *B. filiventris* (de Saussure)).

Belonogaster buyssoni Meade-Waldo, 1911, Ann. Mag. Nat. Hist. (8) 7: 99, female – "Iganga Busoga, S. Nigeria" (London). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 329 (cat.; "Probably a synonym of *B. pusillus* Kohl"); 1928, Ann. Mag. Nat. Hist. (10) 2: 173 (the type is from Uganda, not S. Nigeria, as stated by error in the original description). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 76 (syn. of *B. filiventris* (de Saussure)).

DISTRIBUTION: Liberia; Nigeria; Cameroon; Zaire; Uganda; Kenya; Tanzania; Angola; Zambia; Malawi; Zimbabwe; Mozambique; South Africa (Kwazulu-Natal, Transvaal, Western Cape).

flava Richards

Belonogaster flava Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 75, figs. 43, 44, female – "**Uganda:** Budongo Forest, Unyoro, 3400 ft [1040 m]" (London); also from Cameroon.

DISTRIBUTION: Uganda; Cameroon.

freyi du Buysson

Belonogaster freyi du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217 (key), 255, female – "Afrique australe" (Genève). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 331 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39, 44 (key), 69, fig. 37 (syn.: *indicus* var. *claripennis*; distr.).

Belonogaster indicus var. *claripennis* du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217, 219, 259, pl. 4 fig. 9, female, male – "Afrique orientale allemande: Kigonsera; Ouganda" [Tanzania] (holotype female Paris). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 333 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 69 (syn. of *B. freyi* du Buysson).

DISTRIBUTION: Zaire; Kenya; Tanzania; Zambia; Malawi; Zimbabwe; Botswana; South Africa (Kwazulu-Natal, Free State, Transvaal).

fuscipennis du Buysson

Belonogaster griseus var. *fuscipennis* du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 251, 264, female, male – "Congo français: Haute Sanga" (lectotype female Paris). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 332 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 186 (distr.). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 86 (designation of lectotype).

Belonogaster fuscipennis; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39 (key), 86 (distr.).

DISTRIBUTION: Congo; Zaire; Sudan.

grisea (Fabricius)

Vespa grisea Fabricius, 1775, Syst. Entomol.: 372 – "Sierra Leon Africae" (holotype female London); 1781, Spec. Insectorum 1: 468; 1787, Mant. Insectorum 1: 293. – Gmelin, 1790, Syst. Nat., ed 13, 1 (5): 2753. – Olivier, 1792, Encycl. Méthod. Insectes 6: 672. – Fabricius, 1793, Entomol. Syst. 2: 279.

Sphex grisea; Christ, 1791, Naturg. Insekten.: 313.

Eumenes grisea; Fabricius, 1804, Syst. Piez.: 286.

Raphigaster rufipennis; de Saussure, 1853, Ét. Fam. Vesp. 2: 15, pl. 2 fig. 6, (female) [Misidentification of *Sphex rufi-*

pennis DeGeer]. – Dalla Torre, 1894, Cat. Hym. 9: 115 (*Rhaphigaster* [!]; syn of *B. grisea*).

Belonogaster rufipennis; Smith, 1857, Cat. Hym. Br. Mus. 5: 93. – Saunders, 1872, Trans. R. Entomol. Soc. London 1872: 36 (record of stylopized specimen). – Radoszkowski, 1876, Horae Soc. Entomol. Ross. 12, 2: 141; 1881, J. Sci. Math. Phys. Nat. Acad. Lisbon 8 (31): 203. – Fox, 1891, Entomol. News 2: 42. — Schletterer, 1891, Ann. Soc. Entomol. Belg. 35: 28. – Distant, 1892, A Naturalist in the Transvaal: 210. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123 (*rufipennis*?). – Dalla Torre, 1894, Cat. Hym. 9: 115 (syn. of *B. grisea*). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 335. — du Buysson, 1898, Ann. Soc. Entomol. France 66, 2–3: 362. [Misidentification of *Sphex rufipennis* DeGeer]. – Dalla Torre, 1904, Genera Insectorum 19: 80 (syn. of *B. grisea*). – Salt and Bequaert, 1929, Psyche 36: 263 (syn. of *B. griseus* (Fabr.); record of stylopized specimen).

Belonogaster griseus; Smith, 1857, Cat. Hym. Br. Mus. 5: 94 (cat.). – Saunders, 1872, Trans. R. Entomol. Soc. London 1872: 36 (record of stylopized specimen). – Radoszkowski, 1881, J. Sci. Math. Phys. Nat. Acad. Lisboa 8 (31): 203. – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 115 (*grisea*; cat.; syn.: *Vespa macilenta* Fabricius, *B. rufipennis* de Saussure). – Magretti, 1898, Ann. Mus. Civ. Genova (2), 19: 37. – Bingham, 1903, Ann. Mag. Nat. Hist. (7) 12: 47. – Dalla Torre, 1904, Genera Insectorum 19: 80 (*grisea*; cat.; as 1894). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 64. – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217, 218, 247, 264, pl. 2 figs. 11–12, pl. 4 fig. 8, pl. 5 fig. 3 (male; ethology). – Cameron, 1910, Ann. Transvaal Mus. 2, 3: 155. – Roubaud, 1910, C. R. Acad. Sci. Paris 151: 553 (ethology). – von Schulthess, 1912, Wiss. Ergebn. D. Z. Afrik. Exp., (1907–08), 4, Lf. 10: 291; 1912, Soc. Entomol. 27: 41 (compared to *B. atratus* n. sp.); 1913, Mitt. Zool. Mus. Berlin 6 (3): 339; 1914, Dtsch. Entomol. Z. 1914: 288. – du Buysson, 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 162. – Roubaud, 1916, Ann. Sci. Nat. Zool. (10), 1, 1: 110, 139 (ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 236 (key), 237, 331 (cat.; distr.; syn.: *B. macilenta* (Fabricius), *B. linearis* (Olivier), *B. rufipennis* (de Saussure), *B. pictus* Kohl, *B. erythrospilus* Cameron, *B. fulvipennis* de Saussure). – Schouteden, 1919, Rev. Zool. Afr. 6: 185 (distr.). – von Schulthess, 1922, Dtsch. Entomol. Z.: 400 (distr.); 1928, Senckenbergiana 10 (3/4): 96 (distr.); 1929, Rev. Zool. Bot. Afr. 17 (2): 187 (distr.). – Salt and Bequaert, 1929, Psyche 36: 262 (record of stylopized specimen). – Bequaert, 1933, Ann. Mag. Nat. Hist. 12: 117 (distr.). – Giordani Soika, 1935, Mem. Estud. Mus. Zool. Univ. Coimbra (1) 82: 13 (distr.). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 8, 9, 10 (distr.). – Guiglia, 1938, Ann. Mus. Civ. Stor. Nat. Genova 58: 182 (distr.); 1939, Mem. Soc. Entomol. Ital. 17: 192 (distr.); 1940, Boll. Lab. Zool. Gen. Agrar. Fac. Agrar. Portici 31: 279 (var.?). – FitzGerald, 1940, Proc. R. Entomol. Soc. London Ser. A Gen. Entomol. 15: 35 (distr.). – Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): fig. 1008–1. – Benoit, 1956, Ann. Mus. R. Congo Belge 8 (Sci. Zool.) 51: 552 (distr.). – Marino Piccioli, 1968, Monit. Zool. Ital. (n. ser.) 2, Suppl.: 203 (ethology). – Marino Piccioli and Pardi, 1970, Monit. Zool. Ital. (n. ser.) 3, Suppl.: 197 (ethology.). – Pardi and Marino Piccioli, 1970, Monit. Zool. Ital. (n. ser.) 3, Suppl. (11): 235 (ethology). – Pardi, 1977, Boll. Inst. Entomol. Univ. Bologna 33: 281 (ethology). – Marino Piccioli and Pardi, 1978, Monit. Zool. Ital. (n. ser.) 10, Suppl.: 179 (ethology). – Pardi and Marino Piccioli, 1981, Monit. Zool. Ital. (n. ser.) 14, Suppl. (9): 131

(ethology). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39, 45 (key), 87, fig. 62 (*grisea*; syn.: *B. pictus* Kohl, *B. griseus* var. *pallens* du Buysson, ?*B. braunsii* Kohl, *B. erythrospilus* Cameron; distr.). – Jeanne et al., 1983, Zoomorphologie 103: 155, figs. 7, 12, 18 (*grisea*; morphology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 354, 355, 357 (*grisea*; colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 393 (*gresea*; ethology). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 463 (*grisea* biology). – Downing, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 549 (*grisea*; morphology). – Itô, 1993, Behav. Soc. Evol. Wasps: 20, 40, 104, 131, 132 (ethology).

Belonogaster fulvipennis [!]; de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 87 footnote, 90 [misspelling of *rufipennis*]. – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Dalla Torre, 1894, Cat. Hym. 9: 115 (cat.); 1904, Genera Insectorum 19: 80 (cat.).

Belonogaster pictus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 320, 323 (key), 324, 337, pl. 16 fig. 118, pl. 18 figs. 142, 146, 152, 156, female, male – "Camerun"; (lectotype female Wien); also from other localities. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*picta*; cat); 1904, Genera Insectorum 19: 80 (*picta*; cat.). – Tullgren, 1904, Ark. Zool. 1: 454 (*Belenogaster* [!]). – Cameron, 1906, Trans. S. Afr. Philos. Soc. 16 (4): 327. – Schulz, 1906, Spolia Hym.: 321. – Maidl, 1913, Sitz. Ber. K. Akad. Wiss. Wien, Math. Naturw. Kl. 122 (4), Abt. 1: 560. – Zavattari, 1909, Il Ruwenzori, Parte Scientif. 1, Zool.: 211. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 88 (designation of lectotype).

?*Belonogaster braunsii* Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 323 (key), 331, 334, female – "Südafrika: Port Natal" (type depository unknown). – Dalla Torre, 1894, Cat. Hym. 9: 114 (cat.); 1904, Genera Insectorum 19: 80 (*braunsi* [!]; cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 331 (syn. of *filiventris* (de Saussure)). – Giordani Soika, 1961, S. Afr. Anim. Life 8: 450 (*braunsi* [!]; syn. of *filiventris* (de Saussure)). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 88 (?syn. of *grisea*).

Belonogaster griseus var. *pallens* du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 216, 250, 265, female, male – "Dakar" (lectotype female Paris). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 332 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 186 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 88 (designation of lectotype).

Belonogaster erythrospilus Cameron, 1910, *in* Sjöstedt, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Hym. 6: 172, female, male – "*Meru* low lands, Ngare na nyuki" [Tanzania] (lectotype male Stockholm); also from Kilimandjaro and Usambara. – von Schulthess, 1913, Ark. Zool. 8 (17): 14 (syn. of *grisea*). – Bequaert, 1933, Ann. Mag. Nat. Hist. 12: 117 (perhaps color form of *griseus*). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 88 (designation of lectotype, listed as both female and male; ?syn. of *B. grisea*).

DISTRIBUTION: Senegal; Guinea-Bissau; Guinea; Sierra Leone; Liberia; Ghana; Nigeria; Chad; Sudan; Cameroon; Bioko; Gabon; Central African Republic; Congo; Zaire; Uganda; Rwanda; Burundi; Kenya; Tanzania (including Zanzibar); Angola; Zambia; Malawi; Zimbabwe; Mozambique; Botswana; South Africa (Transvaal, Kwazulu-Natal, Western Cape); Swaziland.

guerini (de Saussure)

Raphigaster guerini de Saussure, 1853, Ét. Fam. Vesp. 2: 17, pl. 2 fig. 3, female – "Madagascar" (Genova). – Dalla Torre, 1894, Cat. Hym. 9: 115 (*Rhaphigaster* [!]).

Belonogaster guerini; Smith, 1857, Cat. Hym. Br. Mus. 5: 91 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 91 (male). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Dalla Torre,

1894, Cat. Hym. 9: 115 (*guerinii* [!]; cat.). – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – von Schulthess, 1899, Bull. Soc. Vaudoise Sci. Nat. (4), 35: 269 (distr.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 208. – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903—1905, Wiss. Ergebn. 2 (2): 65. – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 225, pl. 5 figs. 8–14 (ethology; distr. erroneous). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 332 (cat.; distr. erroneous). – Salt and Bequaert, 1929, Psyche 36: 262 (record of stylopized specimen). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 46 (key), 102, fig. 81 (distr.). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 23, fig. 44 (distr.; nest).

DISTRIBUTION: Madagascar.

guichardi Richards

Belonogaster guichardi Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 44 (key), 94, fig. 70, male, female – "**Oman:** Dhofar, Ayun Pools, 700 m" (holotype male London); also from two other localities in Oman; 1985 (1984), Fauna Saudi Arabia 6: 436, 437 (key), 438 (Oman).

DISTRIBUTION: Oman.

hildebrandti de Saussure

Belonogaster hildebrandti de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 95, pl. 17 fig. 11, female, male – "*Madagascar*, région centrale" (lectotype female Berlin). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Dalla Torre, 1894, Cat. Hym. 9: 115 (*hildebrandtii* [!]; cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 210. – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 232, pl. 4, fig. 5, pl. 5 figs. 5, 7 (ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 333 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 47 (key), 108, fig. 90 (designation of lectotype; distr.). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 23 (sexes associated by Richards doubtfully conspecific).

DISTRIBUTION: Madagascar.

hirsuta Richards

Belonogaster hirsuta Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 41 (key), 55, male – "**Tanzania:** Mahali peninsula, Kungwe Camp" (London).

DISTRIBUTION: Tanzania.

indica de Saussure

Raphigaster indicus de Saussure, 1853, Ét. Fam. Vesp. 2: 17, female – "Les Indes Orientales. Bombay" (Paris). – Dalla Torre, 1894, Cat. Hym. 9: 115 (*Rhaphigaster* [!]).

Belonogaster indicus; Smith, 1857, Cat. Hym. Br. Mus. 5: 94 (cat.); 1871, J. Proc. Linn. Soc. Zool. 11: 378 (cat.). – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 87. – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 335. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 115 (*indica*; cat.). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 335 – Bingham, 1897, Fauna Br. India, Hym. 1: 382, fig. 114 (female, male; distr.). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*indica*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 258 (female). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 333 (cat.). – Berland and Grassé, 1951, *in* Grassé, Traité Zool. 10 (2): 1152. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 31, 35 (key), 58 (*indica*; redescription of the type). – Das and Gupta, 1984 (1983), Orient. Insects 17: 432 (*indica*; cat.); 1989, Orient. Insects Monogr. 11: 186 (key), 187, map 30 (*indica*; distr.).

DISTRIBUTION: India.

jordani Richards

Belonogaster jordani Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38 (key), 83, female – "**Angola:** Quirimbo" (London).

DISTRIBUTION: Angola.

juncea colonialis Kohl

Belonogaster colonialis Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 320, 323 (key), 335, pl. 15 figs. 72, 84, pl. 17 figs. 132, 139, female, male – "Ostafrika: Dar-es-Salaam" (lectotype male Wien). – Dalla Torre, 1894, Cat. Hym. 9: 114; 1904, Genera Insectorum 19: 80 (cat.). – Fox, 1896, Proc. Acad. Nat. Sci. Philadelphia 48: 555. – Stadelmann, 1898, Dtsch. Ost-Afrika 4, Hym.: 35. – Bingham, 1909, Trans. Zool. Soc. London 19 (2): 181. – Zavattari, 1909, Il Ruwenzori, Parte Scientif. 1, Zool.: 210. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 334 (syn. of *B. juncea*). – Giordani Soika, 1961, S. Afr. Anim. Life 8: 451. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 48 (designation of lectotype).

Belonogaster junceus var. *colonialis*; Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.).

Belonogaster juncea colonialis; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 44 (key), 48 (distr.). – Keeping and Crewe, 1983, J. Entomol. Soc. South. Africa 46: 309 (ethology.). – Kojima and Keeping, 1984, J. Entomol. Soc. South Africa 48: 234–237 (larva).

DISTRIBUTION: Congo; Zaire; Uganda; Kenya; Tanzania (including Zanzibar); Angola; Zambia; Malawi; Zimbabwe; Mozambique; South Africa (Transvaal, Kwazulu-Natal).

juncea juncea (Fabricius)

Vespa juncea Fabricius, 1781, Spec. Insectorum 1: 468 – "Africa aequinoctiali" (holotype female London); 1787, Mant. Insectorum 1: 293. – Gmelin, 1790, Syst. Nat., ed. 13, 1 (5): 2754. – Christ, 1791, Naturg. Inseckten 6: 673. — Olivier, 1792, Encycl. Méthod. Insectes 6: 673.

?*Vespa guineensis* Fabricius, 1793, Entomol. Syst. 2: 277 – "Guinea" (holotype female Kiel). – Dalla Torre, 1894, Cat. Hym. 9: 115 (syn of *B. juncea*).

Vespa cinerea Fabricius, 1793, Entomol. Syst. 2: 279 – "Africa aequinoctiali" (?London, Kiel). – Jurine, 1807, Nouv. Méth. Class. Hym.: 172 (*cinereus*; female, male). – Dalla Torre, 1894, Cat. Hym. 9: 165 (syn. of *B. juncea*).

Zethus guineensis; Fabricius, 1804, Syst. Piez.: 283.

Zethus cinereus; Fabricius, 1804, Syst. Piez.: 283.

Polistes cinerea; Latreille, 1809, Gen. Crusta. Insestes 4: 142.

Raphigaster junceus; de Saussure, 1853, Ét. Fam. Vesp. 2: 14, pl. 2 fig. 2 (female, male). – Dalla Torre, 1894, Cat. Hym. 9: 115 (*Rhaphigaster* [!]).

Raphigaster guineensis; Smith, 1856, Trans. R. Entomol. Soc. London (2) 3, Proc.: 129 (ethology). – Dalla Torre, 1894, Cat. Hym. 9: 115 (*Rhaphigaster* [!]; syn of *B. juncea* (Fabr.)).

Belonogaster junceus; Smith, 1857, Cat. Hym. Br. Mus. 5: 93 (cat.; syn.: *Vespa juncea* Fabricius, *Vespa Guineensis* Fabricius, *Vespa cinerea* Fabricius); 1859, Trans. R. Entomol. Soc. London (2) 5 (3): 130 (record of stylopized specimen). – Gerstaecker, 1862, *in* Peters, Naturwiss. Reise Mossambique, Hym.: 468; 1871, Arch. Naturg. 38, 1: 351. – Walker, 1871, List Hym. Egypt: 39. – Gerstaecker, 1873, *in* v. d. Denken's Reisen in Ost-Afrika 3, 2, Gliederth.: 324. – Ritsema, 1874, Tijdschr. Entomol. 17: 177, 201, 210. – Magretti, 1884, Ann. Mus. Civ. Genova 21: 599 (ethology). – Gribodo, 1884, Ann. Mus. Civ. Genova 21: 289. – Schletterer, 1891, Ann. Soc. Entomol. Belgique 35: 28. – von Schulthess, 1893, Entomol. Nachr. 19: 18. – Kohl, 1893 (1892), Jahrb. Hamburg. Wiss. Anst. 10 (2): 186; 1894, Ann. Naturhist. Hofmus. Wien 9: 336. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 115 (*juncea*; cat.; syn.: *Vespa juncea* Fabricius, *V. Guineensis* Fabricius, *V. cinerea* Fabricius). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 334. – Magretti, 1898, Ann. Mus. Civ. Genova (2), 19: 36. – Stadelmann, 1898, Dtsch. Ost-Afrika 4, Hym.: 35. – Bingham, 1903, Ann Mag. Nat. Hist. (7) 12: 48. – Dalla Torre, 1904, Genera Insectorum 19: 80, pl.

5, fig. 6 (*juncea*; cat.; as in 1894). – Tullgren, 1904, Ark. Zool. 1: 453 (*Belenogaster* [!]; ethology). – du Buysson, 1908, *in* A. Chevalier, L'Afrique Centrale Française: 707; 1909, Ann. Soc. Entomol. France 78 (2): 213, 220, 263, pl. 2 figs. 1–7, pl. 3 figs. 1–7, pl. 4 figs. 3, 12–13, pl. 5 fig. 4, pl. 7 fig. 2 (female, male; ethology). – Bingham, 1909, Trans. Zool. Soc. London 19, 2: 181. – Roubaud, 1910, C. R. Acad. Sci. Paris 151: 553–556 (ethology). – Cameron, 1910, Ann. Transvaal Mus. 2, 3: 156; 1910, *in* Sjöstedt, Wiss. Ergebn. Schwed. Zool. Exp. Kilimandjaro 2 (8), Hym. 6: 171. – Schulz, 1911, Zool. Ann. Würzburg 4: 200. – von Schulthess, 1912, Wiss. Ergebn. D. Z. Afrik. Exp., (1907–08), 4, Lf. 10: 291; 1912, Soc. Entomol. 27: 41; 1913, Mitt. Zool. Mus. Berlin 6 (3): 337; 1913, Ark. Zool. 8 (17): 14. – Maidl, 1913, Sitz. Ber. K. Akad. Wiss. Wien, Math. Naturw. Kl. 122, Abt. 1 (4): 560. – von Schulthess, 1914, Dtsch. Entomol. Z. 1914: 288. – du Buysson, 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 160. – Roubaud, 1916, Ann. Sci. Nat. Zool. (10) 1 (1): 110–139 (ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 236 (key), 333 (syns: *Vespa cinerea* Fabricius, *Raphigaster guineensis* (Smith), *B. colonialis* Kohl; cat.; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 184 (distr.; misidentified by von Schulthess as *abyssinicus*). – von Schulthess, 1922, Denkschr. Akad. Wiss. Wien, Math. Naturh. Kl. 98 (6): 96 (distr.). – Salt, 1927, Psyche 34: 185 (distr.; record of stylopized specimen). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 95 (distr.); 1929, Rev. Zool. Bot. Afr. 17 (2): 186 (distr.). – Salt and Bequaert, 1929, Psyche 36: 262 (record of stylopized specimen). – Guiglia, 1932 (1931), Mem. Soc. Entomol. Ital. 10: 118 (distr.). — Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933—1935) 11: 8, 9, 10 (distr.). – Guiglia, 1939, Mem. Soc. Entomol. Ital. 18: 88; 1940, Boll. Lab. Zool. Gen. Agrar. Fac. Agrar. Portici 31: 279 (distr.). – Giordani Soika, 1940 (1939), Mem. Soc. Entomol. Ital. 17: 99 (distr.); 1952 (1951), Riv. Biol. Colon. 11: 88 (distr.); 1961, S. Afr. Anim. Life 8: 451 (Zambia; Zimbabwe; South Africa: Transvaal). – Richards, 1969, Mem. Soc. Entomol. Ital. 48: 87–93 (ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 354, 355 (*juncea*; colony population). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 463 (*juncea*; biology). – Itô, 1993, Behav. Soc. Evol. Wasps: 20 (*juncea*), 132 (*juncus* [!]; ethology).

Belonogaster juncea juncea; Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 44 (key), 47, figs. 1–5 (?syn.: *Vespa guineensis* Fabricius; distr.). – Das and Gupta, 1984 (1983), Orient. Insects 17: 433 (cat.). – Richards, 1985 (1984), Fauna Saudi Arabia 6: 426 (*j. junceus*), 436, 437, 438, fig. 10 (key; distr.; list). – Das and Gupta, 1989, Orient. Insects Monogr. 11: 186 (key), 188, fig. 32, map 30. – Dejean and Turillazzi, 1992, Trop. Zool. 5: 237—247 (trophobiosis with homopterans). – Francescato et al., 1994, Ethol. Ecol. Evol. Spec. Issue 3: 53–56 (ethology). – Tindo et al., 1994, *in* Lenoir et al., Insect. Soc.: 532 (ethology).

DISTRIBUTION: Libya; Senegal; Gambia; Mali; Chad; Sudan; Guinea; Sierra Leone; Liberia; Côte d'Ivoire; Ghana, Togo; Benin Republic; Nigeria; Cameroon; Eritrea; Ethiopia; Gabon; Congo; Zaire; Uganda; Rwanda; Kenya; Tanzania; Angola; Zambia; Malawi; Mozambique; South Africa; Saudi Arabia; India.

kelnerpillautae Richards

Belonogaster kelnerpillautae Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 77, female – "**Congo:** Dimonika" (Paris); also from other locality in Congo.

DISTRIBUTION: Congo.

kohli Schulz

Belonogaster kohli Schulz, 1906, Spolia Hym.: 322, female – "Insel Fernando Po" [Malabo (Santa Isabel)] (London). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 331 (syn. of *B. filiventris* (de

Saussure)). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35 (key), 53, fig. 9 (Bioko, Congo, Uganda).

DISTRIBUTION: Bioko; Congo; Uganda.

lateritia Gerstaecker

Belonogaster lateritius Gerstaecker, 1857, Monatsber. K. Preuss. Akad. Wiss. Berlin 1857: 463, female – "Mossambique" (Berlin); 1862, *in* Peters, Naturwiss. Reise Mossambique, Hym.: 468, pl. 30 fig. 7. – Kohl, 1893 (1892), Jahrb. Hamburg. Wiss. Anst. 10 (2): 186; 1894, Ann. Naturhist. Hofmus. Wien 9: 336. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*lateritia*; cat.). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 335. – Dalla Torre, 1904, Genera Insectorum 19: 80 (*lateritia*; cat.). – du Buysson, 1908, Résultats Scientif. *in* Voy. Afrique d'Ed. Foá: 593; 1909, Ann. Soc. Entomol. France 78 (2): 216, 218, 256, 264 (male; ethology). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 235 (key), 238, 334 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 186 (distr.). – von Schulthess, 1922, Dtsch. Entomol. Z.: 400 (distr.); 1923, *in* Michaelsen, Beitr. Kennt. Land- und Süsswasserfauna Deutsch-Südwestafrikas 2 (2): 135 (distr.). — Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933—1935) 11: 9 (distr.). – Guiglia, 1940, Atti Mus. Civ. Stor. Nat. Trieste 14 (19): 288. – Giordani Soika, 1961, S. Afr. Anim. Life 8: 450 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36, 37, 44 (key), 72, figs. 32, 38 (*lateritia*; syn.: *B. elegans* Gerstaecker, *B. fleckii* Kohl, *B. agilis* Kohl; distr.). – Jeanne et al., 1983, Zoomorphologie 103: 155 (*lateritia*; morphology).

Belonogaster elegans Gerstaecker, 1857, Monatsb. K. Akad. Wiss. Berlin: 463, female – "Mossambique" (type depository unknown); 1862, *in* Peters, Naturwiss. Reise Mossambique, Hym.: 469, pl. 30 fig. 8. – Kohl, 1893 (1892), Jahrb. Hamburg. Wiss. Anst. 10 (2): 187; 1894, Ann. Naturhist. Hofmus. Wien 9: 321, 323 (key), 335, pl. 15 fig. 76, pl. 17 figs. 128, 131 (male). – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 114 (cat.). – Gribodo, 1895, Mem. R. Accad. Sci. Bologna (5) 5: 334. – Stadelmann, 1898, Dtsch. Ost-Afrika 4, Hym.: 35. – von Schulthess, 1899, Bull. Soc. Vaud. Sci. Nat. (4), 35: 269 (distr.). – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – Zavattari, 1909, Il Ruwenzori, Parte Scientif. 1, Zool.: 211, 271. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 72 (syn. of *B. lateritia* Gerstaecker).

Belonogaster agilis Kohl, 1893 (1892), Jahrb. Hamburg. Wiss. Anst. 10 (2): 187, figs. 1, 4, 9, 10, 15, female, male – "Ost-Afrika: Mbusini (Usegua)" [Angola] (lectotype male Wien); 1894, Ann. Naturhist. Hofmus. Wien 9: 321, 323 (key), 327, 334, pl. 15 fig. 73, pl. 16 figs. 96, 115, pl. 17 figs. 134, 151, 155. – Dalla Torre, 1894, Cat. Hym. 9: 114 (cat.); 1904, Genera Insectorum 19: 80 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 72 (designation of lectotype; syn. of *B. lateritia* Gerstaecker).

Belonogaster fleckii Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 322 (key), 332, 335, female – "Südwestafrika: Damaraland" (lectotype Wien). – Dalla Torre, 1894, Cat. Hym. 9: 115 (cat); 1904, Genera Insectorum 19: 80 (*flecki* [!]; cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 334 (syn. of *B. lateritius* var. *agilis* Kohl). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 72 (designation of lectotype; syn. of *B. lateritia* Gerstaecker).

Belonogaster lateritius var. *agilis*; du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 257. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 334 (cat.; syn.: *B. fleckii* Kohl).

Belonogaster lateritius var. *elegans*; du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 257, 264. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 334 (cat.). – Salt and Bequaert, 1929, Psyche 36: 262 (record of stylopized specimen). – Giordani Soika, 1935, Mem. Estud.

Mus. Zool. Univ. Coimbra (1) 82: 14 (distr.).

DISTRIBUTION: Somalia; Kenya; Tanzania; Malawi; Angola; Zambia; Zimbabwe; Mozambique; Namibia; Botswana; South Africa (Western Cape, Free State, Natal, Transvaal); Lesotho.

leonhardii du Buysson

Belonogaster leonhardii du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217, 252, female – "Ouganda anglais: Iraouer" (lectotype Paris). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (cat.); 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.). – Benoit, 1956, Ann. Mus. R. Congo Belge 8 (Sci. Zool.) 51: 553 (*leonhardi* [!]). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36, 43 (key), 87 (designation of lectotype), figs. 60–61 (distr.).

DISTRIBUTION: Uganda; Burundi; Zaire.

leonina Richards

Belonogaster leonina Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39, 43 (key), 90, figs. 63–65, male, female – "**Sierra Leone:** Mattru" (holotype male London); also from Congo; Gabon; Uganda.

DISTRIBUTION: Sierra Leone; Gabon; Congo; Uganda.

levior Richards

Belonogaster levior Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34, 41 (key), 58, female, male – "**Uganda:** Budongo Forest, Unyoro, 3400 ft [1040 m]" (holotype female London); also from Congo; Liberia.

DISTRIBUTION: Liberia; Congo; Uganda.

libera Richards

Belonogaster libera Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 42 (key), 86, male – "**Liberia:** Robertsport" (Leiden).

DISTRIBUTION: Liberia.

longitarsus Richards

Belonogaster longitarsus Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 45 (key), 97, figs. 74–76, male, female – "**Uganda:** banks of Victoria Nile near Masindi Port, 3400 ft [1040m]" (holotype male London); also from three other localities in Uganda; and Zambia; Kenya; Mozambique; South Africa; Tanzania; Angola.

DISTRIBUTION: Kenya; Uganda; Tanzania; Angola; Zambia; Mozambique; South Africa (Transvaal, Kwazulu-Natal, Western Cape).

macilenta (Fabricius)

Vespa macilenta Fabricius, 1781, Spec. Insect. 1: 468 – "Africa aequinoctiali" (holotype male London); 1787, Mant. Insect. 1: 293. – Gmelin, 1790, Syst. Nat. ed. 13, 1 (5): 2754. – Olivier, 1792, Encycl. Méthod. Insect. 6: 673. – Fabricius, 1793, Entomol. Syst. 2: 280. – de Saussure, 1853, Ét. Fam. Vesp. 2: 15 (syn. of *Raphigaster rufipennis*). – Dalla Torre, 1894, Cat. Hym. 9: 115 (syn. of *B. grisea*); 1904, Genera Insectorum 19: 80 (syn. of *B. grisea*). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 331 (syn. of *B. grisea* (Fabricius)).

Zethus macilentus; Fabricius, 1804, Syst. Piet.: 283.

Belonogaster macilentus; Smith, 1857, Cat. Hym. Br. Mus. 5: 94 (syn.: *Raphigastrer filiformis* de Saussure, *Zethus macilentus* (Fabricius)). – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36, 37 (key), 81, figs. 55–57 (*macilenta*; syn.: *B. pusillus* Kohl; distr.).

Belonogaster pusillus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 320, 323 (key), 325, 337, pl. 15 figs. 75, 77, pl. 16 fig. 116, pl. 17, figs. 137, 140, 143, 148, female, male – Westafrika: Sierra Leone (?Brussels). – Dalla Torre, 1894, Cat. Hym. 9: 116 (*pusilla*; cat.); 1904, Genera Insectorum 19: 80 (*pusilla*; cat.). – Tullgren, 1904, Ark. Zool 1: 454 (*Belenogaster* [!]). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 215, 218, 239, 264, pl. 4 fig. 2 (ethology); 1914, *in* Voy. Alluaud et Jeannel Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 161. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 235 (key), 236, 336 (cat.; distr.). – Salt and Bequaert, 1929, Psy-

che 36: 263 (record of stylopized specimen). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 81 (syn. of *macilenta*).

DISTRIBUTION: Sierra Leone; Guinea-Bissau; Liberia; Côte d'Ivoire; Ghana; Nigeria.

maculata Richards

Belonogaster maculata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 71, female – "**Uganda:** eastern Mbale district, S. of Mt Elgon, 2700–3000 ft [820–915 m]" (Oxford); also from other locality in Uganda; and Kenya.

DISTRIBUTION: Uganda; Kenya.

madecassa (de Saussure)

Raphigaster madecassus de Saussure, 1853, Ét. Fam. Vesp. 2: 16, pl. 2 fig. 7, female – "Madagascar" (Genova).

Belonogaster madecassus; Smith, 1857, Cat. Hym. Br. Mus. 5: 94. – de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 98. – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 337. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*madecassa*; cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 211. – Dalla Torre, 1904, Genera Insectorum 19: 80 (*madecassa*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 261. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 46 (key), 103, figs. 82, 83 (*madecassa*; distr.). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (*madecassum* [!]; key), 23, figs. 1, 3, 21, 22, 45 (*madecassa*; syn.: *keiseri* Richards; nest; distr.).

Belonogaster longistylus de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 97, pl. 17 fig. 13, female – "*Madagascar*" (lectotype Genève). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 336. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*longistyla*; cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*longistyla*; cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903–1905, Wiss. Ergebn. 2 (2): 64. – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 231. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 103, 108, 113 (*longestylus* [!]; syn. of *B. madecassa* de Saussure). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 23 (*longestylus* [!]; syn. of *B. madecassa*).

Belonogaster keiseri Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 46 (key), 104, fig. 84, male – **Madagascar:** Diego-Suarez, Joffreville (Leiden). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 23 (syn. of *B. madecassa* de Saussure).

DISTRIBUTION: Madagascar; Comoros.

mandraka Hensen and Blommers

Belonogaster mandraka Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 23, fig. 23, female – "Rép. Malgache, Manjakandriana, Mandraka, 1200 m" (unique Amsterdam).

DISTRIBUTION: Madagascar.

maromandia Richards

Belonogaster maromandia Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 47 (key), 108, female – "**Madagascar:** Province de Amalalava, Maromandia" (Paris). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 24, figs. 40, 41 (male; distr.).

DISTRIBUTION: Madagascar.

menelikii Gribodo

Belonogaster menelikii Gribodo, 1879, Ann. Mus. Civ. Genova (1) 14: 342, female – "Mahal-Uonz" (Genova); 1881, Ann. Mus. Civ. Genova 16: 288 (male); 1884, Ann. Mus. Civ. Genova 20: 384; 1884, Ann. Mus. Civ. Genova 21: 288. – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 320, 323 (key), 337, pl. 15 figs. 81, 92, pl. 17 fig. 135. – Gribodo, 1894, *in* Emery et al., Mem. R. Accad. Sci. Bologna (5) 4: 123. – Dalla Torre, 1894,

Cat. Hym. 9: 116 (cat.). – Fox, 1896, Proc. Acad. Nat. Sci. Philadelphia 48: 555. – Dalla Torre, 1904, Genera Insectorum 19: 80 (*meneliki* [!]; cat.). – Schulz, 1911, Zool. Ann. Würzburg 4: 200. – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 38, 43 (key), 52, 113, fig. 8 (*meneliki* [!]; distr.).

Belonogaster griseus var. *menelikii*; du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 250, 265, pl. 7 fig. 1 (ethology) [partim]; 1914, *in* Voy. Alluaud et Jeannel Afr. Or. Rés. Sci., Ins. Hym. 3, Vesp.: 163. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 332 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 186 (distr.). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Guiglia, 1932 (1931), Mem. Soc. Entomol. Ital. 10: 119 (*meneliki* [!]; distr.). – Bequaert, 1933, Ann. Mag. Nat. Hist. 12: 116 (possibly distinct species; distr.; records by du Buysson, 1909, Schouteden, 1919, von Schulthess, 1928, dubious). – Guiglia, 1939, Mem. Soc. Entomol. Ital. 17: 192 (*meneliki* [!]); 1939, Mem. Soc. Entomol. Ital. 18: 88 (*meneliki* [!]); 1940, Atti Mus. Civ. Stor. Nat. Trieste 14 (19): 288 (*meneliki* [!]). – Giordani Soika, 1940, Atti Mus. Civ. Stor. Nat. Trieste 14 (18): 286 (*meneliki* [!]; distr.); 1952 (1951), Riv. Biol. Colon. 11: 88 (*meneliki* [!]; distr.). – Iwata, 1966, Mushi 39: 57 (ethology); 1976, Evol. Instinct: 303, 307, 308 (ethology).

DISTRIBUTION: Ethiopia.

multipunctata Richards

Belonogaster multipunctata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 55, female – "**Uganda:** Entebbe, 3800–4000 ft [1160—1220 m], forest within 4 miles [6.5 km] of Kitabi Hill" (Oxford).

DISTRIBUTION: Uganda.

neavei Richards

Belonogaster neavei Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 39, 45 (key), 89, male, female – "**Kenya:** Masongaleni, *ca* 38°2'E, 2°4'S, 3000 ft [915 m]" (holotype male London); also from 6 other localities in Kenya; and Zambia; Malawi; Tanzania; South Africa.

DISTRIBUTION: Kenya; Tanzania; Zambia; Malawi; South Africa (Transvaal).

nigricans Richards

Belonogaster nigricans Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 77, fig. 48, female – "**Congo:** Dimonika" (holotype Paris); also from 3 other localities in Congo.

DISTRIBUTION: Congo.

nitida Richards

Belonogaster nitida Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40 (key), 60, figs. 15, 16, male – "**Nigeria:** Eastern province, Oguta, east of Onitsha" (unique London).

DISTRIBUTION: Nigeria.

ornata de Saussure

Belonogaster ornatus de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key), 209, female, male – "Madagascar" (lectotype male Genève). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*ornata*; cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 330 (syn. of *B. eumenoides* de Saussure). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 110 (?syn. of *B. eumenoides* de Saussure). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 25, figs. 24, 25 (*ornata*; designation of lectotype; syn.: *pomicolor* de Saussure; distr.).

Belonogaster pomicolor de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207, 209, female, male – "Madagascar" (lectotype female Genève). – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 330 (syn. of *B. eumenoides* de Saussure). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 110 (?syn. of *eumenoides* de Saussure). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 25, 26 (designation of lectotype; syn. of *B. ornata* de Saussure).

DISTRIBUTION: Madagascar.

pennata Richards

Belonogaster pennata Richards, 1982, Bull.

Br. Mus. (Nat. Hist.) Entomol. 44: 36, 43 (key), 51, fig. 7, female, male – "**Zaire:** Shaba prov. (Katanga), Kambove, 4000–5000 ft [1220–1500 m]" (holotype female London); also from 6 other localities in Zaire; and Gabon; Congo; Rwanda; Angola; Kenya; Uganda; Tanzania; Zambia; Malawi; Zimbabwe; South Africa.

DISTRIBUTION: Gabon; Congo; Zaire; Uganda; Kenya; Rwanda; Tanzania; Angola; Zambia; Malawi; Zimbabwe; South Africa.

petiolata (DeGeer)

Vespa petiolata DeGeer, 1778, Mém. Hist. Insectes 7: 610, pl. 45, fig. 10 – "Cap-de-Bonne-Esperance" (holotype female Stockholm). – Göze, 1783, *in* DeGeer, Abh. Gesch. Insekten 7: 217, T. 45, F. 10. – Retzius, 1783, Gen. Spec. Insect. 6: 64.

?*Vespa linearis* Olivier, 1792, Encycl. Méthod. Ins. 6: 673 – "Cap de Bonne Espérance" (lost). – Dalla Torre, 1894, Cat. Hym. 9: 116 (?syn. of *B. petiolata*). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 331 (syn. of *B. grisea* (Fabricius)).

?*Polistes linearis*; Latreille, 1809, Gen. Crust. Insectes 4: 142.

Belonogaster brachycerus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 323, 324, 331, pl. 15 fig. 82, pl. 17 fig. 138, female – Südafrika: Cap b. sp. (type depository unknown). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*brachycera*; cat.); 1904, Genera Insectorum 19: 80 (*brachycera*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 217, 218, 254, 264 (male; ethology). – von Schulthess, 1914, Dtsch. Entomol. Z. 1914: 290 (compared to *B. rothkirchi* n. sp.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (syn. of *B. petiolata* (DeGeer)).

?*Belonogaster linearis*; Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 336. – Dalla Torre, 1894, Cat. Hym. 9: 116 (cat.); 1904, Genera Insectorum 19: 80 (cat.).

Belonogaster petiolatus; Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 337. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*petiolata*; cat.; error: "*Polistes petiolata* Lepeletier, Encycl. méthod. Insect. X. 1825 p. 173 n. 16" [absent in Lepeletier, 1825]); 1904, Genera Insectorum 19: 80 (*petiolata*; cat.). – Tullgren, 1904, Ark. Zool. 1: 461 (*Belenogaster* [!]). – Schulz, 1912, Berlin. Entomol. Z. 57: 62. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (cat.; syn.: *B. brachycerus* Kohl). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 37, 43 (key), 71, figs. 36, 37 (*petiolata*; syn.: *B. brachycerus* Kohl, ?*V. linearis* Olivier; distr.). – Keeping and Crewe, 1983, J. Entomol. Soc. South. Africa 46: 309 (*petiolata*; ethology.). – Kojima and Keeping, 1984, J. Entomol. Soc. South. Africa 48: 237 (*petiolata*; larva). – Keeping et al., 1986, J. Chem. Ecol. 773 (*petiolata*; ethology). – Keeping and Crewe, 1987, *in* Eder and Rembold, Chem. Biol. Soc. Insects: 383 (*petiolata*; ethology). – Keeping, 1990, J. Insect Behav. 3 (1): 85 (*petiolata*; ethology); 1990, Ethology 85: 1 (*petiolata*; ethology); 1990, J. Entomol. Soc. South. Africa 54: 17 (*petiolata*; ethology). – Spradbery, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 354, 355, 357, 373 (*petiolata*; colony population). – Jeanne, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 393 (*petiolata*; ethology). – Ross and Carpenter, 1991, *in* Ross and Matthews, Soc. Biol. Wasps: 464 (*petiolata*; biology). – Keeping, 1992, Behav. Ecol. Sociobiol. 31: 211 (*petiolata*; ethology). – Itô, 1993, Behav. Soc. Evol. Wasps: 20, 34, 104 (*petiolata*; ethology). – Keeping, 1995, Insectes Soc. 42 (3): 317 (*petiolata*; ethology).

DISTRIBUTION: Malawi; Zimbabwe; South Africa (Western Cape, Free State, Transvaal, Kwazulu-Natal); Lesotho.

pileata Richards

Belonogaster pileata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 37, 41 (key), 62, figs. 21, 22, female, male – "**Kenya:** Tareta forest (near Tanzanian border)" (holotype female London); also from three other localities in Kenya; and Tanzania; Malawi.

DISTRIBUTION: Kenya; Tanzania; Malawi.

prasina de Saussure

Belonogaster prasinus de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 89 (key), 92, pl. 19 fig. 5, female, male – "*Madagascar* . . . aux environs de Fort-Dauphin" (lectotype male Genève); also from 2 other localities. – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 337. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*prasina*; cat.). – de Saussure, 1900, Abh. Senckenb. Naturforsch. Ges. 26 (2): 207 (key). – Dalla Torre, 1904, Genera Insectorum 19: 80 (*prasina*; cat.). – von Schulthess, 1907, Voeltzkow, Reise in Ostafrika 1903—1905, Wiss. Ergebn. 2 (2): 65. – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 214, 228. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 335 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 47 (key), 107, figs. 87, 89 (*prasina*; designation of lectotype; distr.). – Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 26 (*prasina*; distr.).

DISTRIBUTION: Madagascar.

principalis Richards

Belonogaster principalis Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38 (key), 82, female – "**Guinea-Bissau:** Principé I., between Roca Esperanza and Roca Sundi" [sic] (unique London).

DISTRIBUTION: Principé.

punctata Richards

Belonogaster punctata Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 42 (key), 84, male – "**Cameroun:** Kumba" (unique London).

DISTRIBUTION: Cameroon.

punctilla Richards

Belonogaster punctilla Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38 (key), 83, female – "**Uganda:** Mpanga forest, Toro, 4800ft [1460m]" (unique London).

DISTRIBUTION: Uganda.

pusilloides Richards

Belonogaster pusilloides Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 37, 43 (key), 80, fig. 54, female, male – "**Uganda:** top of escarpment, east of Batiaba, L. Albert, 3200 ft [980m]" (holotype female London); also from two other localities in Uganda; and Kenya; Congo; South Africa.

DISTRIBUTION: Congo; Uganda; Kenya; South Africa (Kwazulu-Natal).

rothkirchi von Schulthess

Belonogaster rothkirchi von Schulthess, 1914, Soc. Entomol. 29: 4, male – "Kamerunberg, Soppo" (lectotype Zürich); 1914, Dtsch. Entomol. Z.: 288 (fig.). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 336 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 42, 45 (key), 85, fig. 59 (designation of lectotype).

DISTRIBUTION: Cameroon.

saeva de Saussure

Belonogaster saevus de Saussure, 1890, *in* Grandidier, Hist. Madagascar 20, Hym. 1: 92, footnote, female – "l'Afrique tropicale" (type depository unknown). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 337. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*saeva*; cat.); 1904, Genera Insectorum 19: 80 (*saeva*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 215, 219, 242, 264, pl. 4 figs. 10, 11 (male). – von Schulthess, 1912, Wiss. Ergebn. D. Z. Afrik. Exp., (1907–08), 4, Lf. 10: 291; 1913, Mitt. Zool. Mus. Berlin 6 (3): 338. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 234 (key), 336 (cat.; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 184 (distr.). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.). – Giordani Soika, 1977, Steenstrupia 4: 127 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 38, 48 (key), 61, figs. 19, 20 (*saeva*; distr.).

DISTRIBUTION: Sierra Leone; Ghana; Cameroon; Congo; Zaire; Uganda; Kenya; Tanzania; Malawi; South Africa (Cape of Good Hope).

saussurei Kirby

Belonogaster saussurei Kirby, 1881, Proc. Zool. Soc. London: 649, female, male –

"Socotra" (lectotype male London). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 337. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*saussureii* [!]; cat.). – Kirby, 1898, Proc. Zool. Soc. London: 386; 1903, *in* Forbes, Nat. Hist. of Sokotra, Zool. Hym.: 248, pl. 16 fig. 2 (*Belenogaster* [!]; syn.: *B. tricolor* Taschenberg; ethology). – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – Kohl, 1907, Denkschr. K. Akad. Wiss. Wien, Math. Naturh. Kl. 71 (1): 223, pl. 5 figs. 18, 20, 31. – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 262. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 336 (cat.; syn.: *B. tricolor* Taschenberg). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 40, 44 (key), 93, fig. 69 (designation of lectotype; syn.: *B. tricolor* Taschenberg; distr.); 1985 (1984), Fauna Saudi Arabia 6: 436, 437 (key; distr.), 438 (list).

Belonogaster tricolor Taschenberg, 1883, Z. Ges. Naturw. Halle 56: 175, female – Insel Socotra (Socotora) (type depository unknown). – Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 337. – Dalla Torre, 1894, Cat. Hym. 9: 116 (cat.). – Kirby, 1903, *in* Forbes, Nat. Hist. of Sokotra, Zool. Hym.: 248 (*Belenogaster* [!]; syn. of *B. saussurei*). – Dalla Torre, 1904, Genera Insectorum 19: 80 (cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 261. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 336 (syn. of *B. saussurei* Kirby).

DISTRIBUTION: Yemen (including Socotra).

scutifera Hensen and Blommers

Belonogaster scutifera Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 26, figs. 26–28, male, female – "Madagascar Est: Ambodivoangy" (holotype male Tervuren); also from other locality in Madagascar.

DISTRIBUTION: Madagascar.

somereni Richards

Belonogaster somereni Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 35, 44 (key), 50, fig. 6, male, female – "**Kenya:** Teita Hills (*ca* 38°3′E, 2°4′S)" (holotype male London); also from Tanzania; Zimbabwe; Zambia; Malawi; Mozambique; South Africa; Niger.

DISTRIBUTION: Niger; Kenya; Tanzania; Zambia; Malawi; Zimbabwe; Mozambique; South Africa (Free State, Kwazulu-Natal).

tanosy Hensen and Blommers

Belonogaster tanosy Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 27, figs. 29–31, male, female – "Madagascar, Fort Dauphin, 500 m" (holotype male London); also from four other localities in Madagascar.

DISTRIBUTION: Madagascar.

tarsata Kohl

Belonogaster tarsatus Kohl, 1893 (1892), Jahrb. Hamburg. Wiss. Anst. 10 (2): 187, figs. 2, 5, 7, 8, 11, 16, female, male – "Ost-Afrika: Mbusini (Usegua . . .)" (lectotype male Wien); 1894, Ann. Naturhist. Hofmus. Wien 9: 321, 323 (key), 333, 337, pl. 15 figs. 85, 86, pl. 16 figs. 97, 119, pl. 17 figs. 150, 153, 154. – Dalla Torre, 1894, Cat. Hym. 9: 116 (*tarsata*; cat.). – Stadelmann, 1898, Deutsch Ost-Afrika 4, Hym.: 35. – Dalla Torre, 1904, Genera Insectorum 19: 80 (*tarsata*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 215, 219, 237, 263, pl. 4 fig. 7. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 336 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 37, 44 (key), 73, figs. 39–41 (*tarsata*; designation of lectotype; distr.).

DISTRIBUTION: Tanzania (including Zanzibar).

tessmanni von Schulthess

Belenogaster [!] *tessmanni* von Schulthess, 1910, Soc. Entomol. 25: 45, female, male – "Spanisch Guinea . . . Uelleborg, . . . Benitogebiet . . . Alcu Benitogebiet . . . Spanisch Guinea Hinterland, Nkolontangan" (Berlin); 1913, Mitt. Zool. Mus. Berlin 6 (3): 339. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 337 (*Belonogaster*; cat.); 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (*Belonogaster*; ?Zaire). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 101 (*Belonogaster*; types not found; "I have not

been able to identify this species with any certainty, though it is probably distinct") [error: type locality Guinea-Bissau].

DISTRIBUTION: Equatorial Guinea; Cameroon; ?Zaire.

tipuliformis Hensen and Blommers

Belonogaster tipuliformis Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 28, fig. 32, female – "Madagascar; (Tamat.); Périnet; 950 m; 48°16E, 18°56S" (holotype Leiden); also from two other localities in Madagascar.

DISTRIBUTION: Madagascar.

trandraka Hensen and Blommers

Belonogaster trandraka Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 12 (key), 30, figs. 33, 34, female – "Madagascar Est: Ambodivoangy" (Tervuren).

DISTRIBUTION: Madagascar.

turbulenta Kohl

Belonogaster turbulentus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 323 (key), 330, 337, pl. 15 fig. 87, pl. 16 fig. 101, pl. 17 fig. 147, female – "Westafrika: Sierra Leone" (Wien). – Dalla Torre, 1894, Cat. Hym. 9: 116 (*turbulenta*; cat.); 1904, Genera Insectorum 19: 80 (*turbulenta*; cat.). – Tullgren, 1904, Ark. Zool. 1: 454 (*Belenogaster* [!]). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 215, 216, 240, 264, pl. 2 fig. 13. – von Schulthess, 1913, Mitt. Zool. Mus. Berlin 6 (3): 338; 1914, Dtsch. Entomol. Z. 1914: 290 (compared to *B. rothkirchi* n. sp.) – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 235 (key), 236, 337 (cat.; distr.). – Schouteden, 1919, Rev. Zool. Afr. 6: 185 (distr.). – von Schulthess, 1928, Senckenbergiana 10 (3/4): 96 (distr.). – Salt and Bequaert, 1929, Psyche 36: 263 (record of stylopized specimen). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 8, 9, 10 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 36 (key), 74, fig. 42 (*turbulenta*; distr.).

DISTRIBUTION: Sierra Leone; Congo; Zaire.

turgida Kohl

Belonogaster turgidus Kohl, 1894 (1893), Ann. Naturhist. Hofmus. Wien 9: 322 (key), 333, 337, pl. 15 fig. 74, pl. 16 fig. 114, female – "Fernando Po" (Wien). – Dalla Torre, 1894, Cat. Hym. 9: 116 (*turgida*; cat.); 1904, Genera Insectorum 19: 80 (*turgida*; cat.). – du Buysson, 1909, Ann. Soc. Entomol. France 78 (2): 260. – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 337 (cat.). – Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 34 (key), 60, fig. 17 (*turgida*).

DISTRIBUTION: Bioko.

ugandae Richards

Belonogaster ugandae Richards, 1982, Bull. Br. Mus. (Nat. Hist.) Entomol. 44: 42 (key), 54, fig. 12, male – "**Uganda:** eastern Mbale district, S. of Mt Elgon, 3700–3900 ft [1130–1190m]" (London).

DISTRIBUTION: Uganda.

vadoni Hensen and Blommers

Belonogaster vadoni Hensen and Blommers, 1987, Tijdschr. Entomol. 130: 14 (key), 30, female – "N. E. Madagascar, Fampanambo" (Tervuren).

DISTRIBUTION: Madagascar.

vasseae du Buysson

Belonogaster vasseae du Buysson, 1906, Bull. Soc. Entomol. France 1906: 189, female – "bassin inférieur du Zambèze, de la vallée de la Muza, à une altitude de 1.000 à 1.200 mètres" (lectotype Paris); 1909, Ann. Soc. Entomol. France 78 (2): 213, 219, 263, pl. 2 fig. 8 (ethology). – von Schulthess, 1912, Soc. Entomol. 27: 42; 1913, Mitt. Zool. Mus. Berlin 6 (3): 337. — du Buysson, 1914, *in* Voy. Alluaud et Jeannel, Afr. Or., Rés. Sci., Ins. Hym. 3, Vesp.: 160 (male). – Bequaert, 1918, Bull. Am. Mus. Nat. Hist. 39: 234, 337 (cat.). – Schouteden, 1919, Rev. Zool. Afr. 6: 184 (distr.). – Bequaert, 1938, Explor. Parcs Nation. Congo Belge Miss. G. F. de Witte (1933–1935) 11: 9 (distr.). – Benoit, 1956, Ann. Mus. R. Congo Belge 8 (Sci. Zool.) 51: 552 (distr.). – Giordani Soika, 1977, Steenstrupia 4: 127 (distr.). – Richards, 1982, Bull. Br. Mus. (Nat.

Hist.) Entomol. 44: 35, 41 (key), 56, fig. 13 (designation of lectotype; distr.).

DISTRIBUTION: Cameroon; Congo; Zaire; Uganda; Rwanda; Kenya; Tanzania; Angola; Zambia; Malawi; Zimbabwe; Mozambique.

Species originally described as ***Belonogaster***, now placed in another genus

Belenogaster [!] *bidentatus* Kirby, 1884, Ann. Mag. Nat. Hist. (5) 13: 410, female [male, according to Bequaert, 1928] – "Pandana, Fiji, Aug. 1874" (London). – Dalla Torre, 1894, Cat. Hym. 9: 114 (*bidentata*; cat.) = *Eumenes* [*Delta*] *insularis* Smith, 1857, syn. by Bequaert, 1928, Ann. Mag. Nat. Hist. (10) 2: 164.

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INDEX OF ROPALIDIINI

Species, subspecies, and varieties are indexed. Genus names are given in parentheses; when they are regarded as valid in the latest citations, the generic names are given in boldface; when they are synonyms or belong to non-ropalidiine genera, the generic names of the original descriptions are not boldfaced.

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