

# James Michael Carpenter

## Curriculum Vitae

(November 2018)

**Positions:** Peter J. Solomon Family Curator, Hymenoptera,  
American Museum of Natural History (2010-present);  
Associate Curator (1992-1995); Curator (1995-2010)

Chair, Division of Invertebrate Zoology  
American Museum of Natural History (2012-present)

Professor, Richard Gilder Graduate School  
American Museum of Natural History (2008-present)

Adjunct Professor, City College of New York (1996-present)

Adjunct Senior Research Scientist, Earth Institute Center for Environmental  
Sustainability, Columbia University (2001-present)

Fellow, California Academy of Sciences (2004-present)

Graduate Faculty Scholar, University of Central Florida (2016-present)

Assistant Professor of Biology, Harvard University, and Assistant Curator in  
Entomology, Museum of Comparative Zoology (1984-1988); Associate Professor  
and Curator (1988-1991)

Adjunct Professor, Department of Entomology, Cornell University (1995-2011)

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**Personal:** Born 24 January 1956,  
Citizen of the U. S. A.  
Married to Amy Rachel Davidson 17 November 1993

**Education:** Michigan State University, 1974-1977, B.S. in Entomology  
Cornell University, 1977-1983, Ph.D. in Entomology  
Dissertation title: Phylogenetic Studies in Vespoidea (Hymenoptera)  
Smithsonian Institution, 1983-1984, Postdoctoral Fellow

## Research Interests

Phylogenetic relationships, taxonomy and behavior of Hymenoptera, especially Vespidae  
Cladistic theory; quantitative phylogenetic methods; applications of cladistic analysis

## Society Affiliations and Service

American Association for Zoological Nomenclature; Entomological Society of America; International Society of Hymenopterists (Secretary, 1988-1992; President-elect, 1995-1996; President, 1996-1998); International Union for the Study of Social Insects; New York Entomological Society; Society of Systematic Biologists (Council, 1988-1990); Willi Hennig Society (Fellow *honoris causa*; President, 1996-1998; Council, 1994-1996, 1998-2015, 2016-2017; Council Liaison to annual meeting, 2003, 2015; Nominating Committee and Scrutineer, annual election, multiple times)

Advisory Council, *Zoologica Scripta* (1999-present); Associate Editor, *Revista Brasileira de Entomologia* (2016-present; International Editorial Board, 2002-2013); Associate Editor, *Systematic Zoology* (1986-1987); Associate Editor, *Zoologia* (2016-present); Editor, *Cladistics* (1988-1990, Editor-in-Chief, 2005-2007, Administrative Editor, 2008-present); Editor, *Journal of the New York Entomological Society* (1993-1998); Editorial Advisory Board, *Sociobiology* (2012-present); Editorial Board, *Entomological Science* (2004-2019); Editorial Board, *Systematic Entomology* (1999-present); Editorial Board, *Tap chi Sinh hoc (Journal of Biological Studies)* (2016-2020); Editorial Board, *Thomas Say Publications in Entomology* (1988-1993); Editorial Board, *Terrestrial Arthropod Reviews* (2010-2012); Editorial Board, *Zoological Systematics* (2016-present); Scientific Board, *Zoosystema* (2007-present)

Member, Social Insects Specialist Group, Species Survival Commission, IUCN (2002-2005)

## Curatorial Experience

Research on Vespidae at the following major collections:

Academy of Natural Sciences of Philadelphia; Albany Museum, Grahamstown; American Entomological Institute, Gainesville; American Museum of Natural History, New York; Australian Museum, Sydney; Australian National Insect Collection, Canberra; Bernice P. Bishop Museum, Honolulu; Bohart Museum of Entomology, University of California at Davis; Brackenridge Field Laboratory, University of Texas, Austin; British Museum (Natural History), London; California Academy of Sciences, San Francisco; Canadian National Insect Collection, Ottawa; Carnegie Museum of Natural History, Pittsburgh; Coleção de Entomologia Pe. Jesus Santiago Moure, Departamento de Zoologia da Universidade Federal do Parana, Curitiba; Cornell University; Eidgenössische Technische Hochschule, Zürich; Finnish Museum of Natural History, Helsinki; Florida State Collection of Arthropods, Gainesville; Hope Entomological Collections, Oxford; Institute for Ecology and Biological Resources, Hanoi; Instituto de Biodiversidad, San Jose, Costa Rica; Instituto Miguel Lillo, Tucumán; Instituto Nacional de Pesquisas da Amazônia, Manaus; MacLeay Museum, Sydney; Michigan State University; Musée Royal de l'Afrique Central, Tervuren; Museo Argentino de Ciencias Naturales "Bernardino Rivadavia," Buenos Aires; Museo Civico di Storia Naturale, Venezia; Museo de Historia Natural

“Noel Kempff Mercado,” Santa Cruz, Bolivia; Museo di Zoologia “La Specola” degli Università di Firenze; Museo Nacional de Historia Natural del Paraguay; Museo Nacional de La Plata, La Plata; Museo Regionale di Scienze Naturali di Torino; Museo Zoologico, Università degli Studi di Napoli Federico II; Museu de Ciències Naturals de Barcelona; Museu Nacional, Rio de Janeiro; Museu Paraense Emílio Goeldi, Belém; Museu de Zoologia da Universidade de São Paulo; Museum of Biological Diversity, Ohio State University; Museum of Comparative Zoology, Harvard University; Muséum d’Histoire Naturelle, Genève; Muséum National d’Histoire Naturelle, Paris; Museum für Naturkunde der Humboldt-Universität, Berlin; Museum Victoria, Melbourne; Nationaal Natuurhistorisch Museum, Leiden; National Science Museum, Tokyo; Natural History Laboratory, Ibaraki University; Naturhistorisches Museum Bern; Naturhistorisches Museum Wien; Naturhistoriska Riksmuseet, Stockholm; Naturmuseum Senckenberg, Frankfurt am Main; Oregon State University; Queensland Museum, Brisbane; Raffles Museum of Biodiversity Research, National University of Singapore; Royal Ontario Museum, Toronto; Snow Entomological Museum, Lawrence; South African Museum, Cape Town; South African National Collection of Insects, Pretoria; South Australian Museum, Adelaide; Staatliches Museum für Naturkunde in Stuttgart; Texas A&M University, College Station; Transvaal Museum, Pretoria; United States National Museum, Washington; Universidad Nacional Autónoma de México, Mexico City; Universidad de Costa Rica, San Jose; Universidad Nacional San Antonio Abad de Cusco; Universidade de São Paulo, Ribeirão Preto; Universidade Estadual de Feira de Santana; Universidade Estadual Paulista, São José do Rio Preto; Universidade Federal de Lavras; Universidade Federal do Espírito Santo, Vitória; University of Adelaide; University of Alaska Museum; University of California at Berkeley; University of California at Riverside; University of Queensland, Brisbane; Western Australian Museum, Perth; Zoological Institute, Chinese Academy of Sciences, Beijing

## **Fieldwork**

Costa Rica (December 1979–January 1980), Suriname (January–February 1982), Trinidad (June–July 1982), Holland (June 1983), Jamaica (February–March 1984), Peru (December 1984–January 1985), Venezuela (May 1985), South Africa (December 1985–January 1986); Australia (December 1986–January 1987); Argentina (January 1989); Malaysia and Australia (August–September 1990); Costa Rica, Panama, Ecuador, Peru, Bolivia and Argentina (December 1990–January 1991); Argentina (September 1992); Chile (February 1994); Mongolia and China (June–July 1994); Argentina (September 1994); Costa Rica and Panama (March 1996); Italy (August 1996); Guyane (September–October 1996); South Africa (November–December 1996); Peru, Colombia and Brazil (April–May 1997); Brazil (July 1997); Brazil (November 1997); Puerto Rico (January 1998); Vietnam (April–May 1998); Central African Republic (July 1998); Brazil (September–October 1998); Australia (January 1999); Peru (March 1999); Mongolia (July–August 1999); Peru (March 2000); Vietnam (April–May 2000); Japan (July–August 2000); Egypt (September 2000); Mexico (October 2000); Peru (March 2001); Egypt (May–June 2001); Australia (January–February 2002); Peru (March 2002); Japan (July 2002); Australia (February 2004); Argentina (December 2004); Switzerland (July–August 2005); South Africa (January–February 2006); Paraguay (January–February 2007); France (June 2007); Japan (August 2007); Belize (April–May 2008); Puerto Rico (November–December 2008); Australia (February–March 2009); Singapore and Malaysia (June–July 2009); Hawaii (May 2010); Hungary (June 2010); Italy (September 2010); Spain (May 2011); Brazil (August 2011);

Brazil (July 2013); Australia (November 2013); Peru (July 2014); Brazil (February 2015); Alaska (July–August 2015); Alaska (August 2016); Alaska (July–August 2017); also widespread collecting in the contiguous states of the U. S. A.

## **Educational Activities**

### **Teaching Experience**

#### Richard Gilder Graduate School Courses

Independent Study: Advanced Taxonomy of Hymenoptera (2011)  
Insect Taxonomy (2012, 2016)  
Independent Study: Phylogeny and behavior: Theory and practice (2013)  
Independent Study: Morphological Character Coding (2014)  
Independent Study: Nesting Biology of Aculeate Hymenoptera (2015)

#### Harvard University Courses                    1985-1991

Cladistics  
Introduction to Insect Evolution and Diversity  
Quantitative Systematics  
Principles of Biodiversity

#### International Workshops

Análisis Filogenética: Teoría y Práctica (Tucumán; Argentina, March 11-15, 2002)  
Phylogenetic Analysis: Theory and Practice (Průhonice, Czech Republic, September 4-7, 2006)  
III Workshop em Sistemática Filogenética (São José do Rio Preto, Brazil, July 25-28, 2011)  
Mini-curso de taxonomia de vespas (Manaus, Brazil, July 1-3, 2013)  
N.E.S.H. – Núcleo de Excelência em Sistemática de Hymenoptera: Hymenoptera Genera Courses (Vitoria, Brazil, July 8-12, 2013)  
I Curso Sobre Vespas Neotropicais (Hymenoptera, Vespidae) (Lavras, Brazil, February 23-26, 2015)

### **Graduate committees**

(\* indicates major advisor)

Richard Gilder Graduate School: Philip Barden, Jeremy Frank\*, Anna Holden\*, Ansel Payne\*, Bernardo Santos\*, Carly Tribull\*

#### Partner Universities

City University of New York: Edmundo Gonzalez, Christine Johnson\*, Ellen Zimmerli  
Department of Entomology, Cornell University: Roberto Keller\*, Ted Schultz, Karen Sime

#### Non-Partner Universities

Department of Organismal and Evolutionary Biology, Harvard University: Glenn Adelson, Marc Allard\*, Gabriela Chavarría\*, David Maddison, Santiago Madriñan, Mark Moffett, William Piel, Kenneth Rice, Mark Skinner, Elizabeth Taylor, Leeanne Tennant, John

Tobin, Ward Wheeler  
Department of Ecology and Evolution, State University of New York at Stony Brook: Ines Horovitz  
Hazara University, Pakistan: Muzafar Shah  
Instituto de Biociências, Letras e Ciências Exatas, Universidade Estadual Paulista, Brazil: Yuri Grandinete  
Instituto Nacional de Pesquisas da Amazônia, Brazil: Alexandre Somavilla  
Museum National d'Histoire Naturelle, France: Adrien Perrard  
Natural History Laboratory, Ibaraki University, Japan: Lien P. T. Nguyen, Fuki Saito  
Programa de Pós-graduação em Ciências Biológicas, Universidade Federal do Paraná, Brazil: Marcel G. Hermes  
University of Central Florida: Patrick Piekarski  
University of Poonch, Pakistan: Muhammed Qasim  
University of Saskatchewan, Canada: Patrick Piekarski

### **Postdoctoral Advisees**

Adrien Perrard, Federico Lopez-Osorio (Gerstner Fellows)  
Donat Agosti, Jacques Dubois, Mar Ferrer-Suay, Zhiwei Liu, Susanne Schulmeister, John Wenzel (Kalbfleisch Fellows)  
Kurt Pickett (Roosevelt Fellow)

### **Masters Students**

Jeremy Law (Columbia University)  
Adrien Perrard (Annette Kade Fellow)

### **Undergraduate Interns**

Julia Howard (NSF Grant DEB-0843505)  
Stephanie Mindlin, Estelle Perera, Eve Zaritsky (AMNH REU program)

### **High School Interns**

Jeremy Frank (Scarsdale High School)

## **Fellowships and Grants**

Elected to Beta Beta Beta, Michigan State University Chapter, 1976  
National Science Foundation Graduate Fellowship, 1977-1980  
CanaColl Foundation: Research Grant for Curatorial Study (for curation at Biosystematics Research Institute), 1980  
Explorers Club: Grant in Aid of Exploration (for fieldwork in Suriname), 1982  
Sigma Xi: Grant in Aid of Research (for fieldwork in Suriname), 1982  
Grace H. Griswold Research Award (Cornell University; for fieldwork in Suriname), 1982  
CanaColl Foundation: Research grant for Curatorial Study (for curation at Biosystematics Research Institute), 1982  
Elected to Sigma Xi, Cornell University Chapter, 1982  
Cornell University: Graduate Fellowship, 1982  
National Science Foundation Dissertation Improvement Grant BSR-8216994: "Systematics of

Vespidae (Hymenoptera),” 1983; Co-PI with G. C. Eickwort  
Smithsonian Postdoctoral Fellowship, 1983-1984  
William F. Milton Fund Grant: “Phylogeny and biogeography of the Masarinae (Hymenoptera: Vespidae),” 1985  
Fulbright Collaborative Research Grant (Institute of International Education; for study in England), 1985-1986  
National Science Foundation Grant BSR-8508055: “The phylogenetic system of the Vespidae: The Masarinae (Hymenoptera),” 1985-1988  
National Science Foundation Grant BSR-8617129: “Improvement of the insect collections of the Museum of Comparative Zoology,” 1987-1989; Co-PI with E. O. Wilson and M. D. Bowers  
Barbour Fund Grant (Museum of Comparative Zoology; for fieldwork in Argentina)  
National Science Foundation Grant BSR-8817608: “The phylogenetic system of the Vespidae: The Polistinae (Hymenoptera),” 1989-1990  
National Science Foundation Research Experiences for Undergraduates Grant DIR-8901004: “An interdisciplinary program in ecology and evolution,” 1989-1992; Co-PI with B. Waldman, S. N. Austad, W. H. Bossert and M. D. Bowers  
Barbour Fund Grant, 1990 (Museum of Comparative Zoology; for fieldwork in Malaysia and Australia)  
National Science Foundation Grant BSR-8915774: “Computerization of the insect collections of the Museum of Comparative Zoology,” 1990-1992; Co-PI with E. O. Wilson  
National Science Foundation Grant BSR-9006102: “The phylogenetic system of the Vespidae: The Polistinae (Hymenoptera)” (renewal), 1990-1993  
National Science Foundation Grant DEB-9207624: “Relationships and classification of primitive hexapods and insects,” 1992-1994; Co-PI with Ward C. Wheeler  
National Science Foundation Grant DEB-9220342: “Arthropod collection improvement at the American Museum of Natural History,” 1994-1997; Co-PI with Norman I. Platnick and Randall T. Schuh  
Center for Biodiversity and Conservation Research Grant: “The diversity of social insects in the coastal rainforest of Brazil,” 1996-1997; Co-PI with Donat Agosti, Carlos Roberto Brandão and Jacques H. Delabie  
National Geographic Society Grant 5951-97: “Diversity of ants and social wasps in the coastal rainforest of Brazil,” 1997-1998; Co-PI with Donat Agosti, Carlos R. Brandão and Jacques H. Delabie  
Center for Biodiversity and Conservation Research Grant: “Quantitative Comparison of Social Insect Biodiversity at three sites in the Atlantic Forest of Brazil,” 1997-1998; Co-PI with Donat Agosti, Carlos R. Brandão and Jacques H. Delabie  
Center for Biodiversity and Conservation Research Grant: “Biological Investigations in the Congo Basin Rainforest: Systematic Inventories and Conservation Education at Dzanga-Sangha, Central African Republic,” 1998; Co-PI with Joel Cracraft, Nancy Simmons and Paula Mikkelsen  
National Science Foundation Grant DEB-9870232: “Collaborative research: Multi-taxa inventory of threatened conservation areas in Vietnam,” 1998-2003; Co-PI with Eleanor Sterling and Dan Harder  
Japan Society for the Promotion of Science Invitation Fellowship for Research in Japan S-00147, July 2000

Center for Biodiversity and Conservation Research Grant, under NASA award NAG5-8543: “The Biodiversity and Conservation of Siwa and Western Qattâra Depression, Egypt,” 2000-2001; Co-PI with Donat Agosti, Sasan Saatchi and Mostafa Saleh

National Science Foundation Grant EF-0341708: “AToL: Collaborative research: Large-scale phylogeny of Hymenoptera,” 2003-2008; Co-PI with Michael Sharkey, John Heraty and Michael Engel

Elected as Honorary Fellow, Californian Academy of Sciences, July 2004; Fellow from 2013

National Science Foundation Grant DBI-0446968: “Curation of the wasp nest collection of the American Museum of Natural History,” 2005-2007; Co-PI with Lisa Kronthal

National Science Foundation Grant DEB-0542640: “Phylogeny of the New World *Polistes* (Hymenoptera: Vespidae; Polistinae, *Polistes*, *Aphanilopterus*) based on combined morphological, molecular and behavioral evidence,” 2006-2009; Co-PI with Kurt Pickett and Ward Wheeler

Japan Society for the Promotion of Science Invitation Fellowship for Research in Japan S-07113, July-August 2007

National Science Foundation Grant DEB-0843505: “Taxonomy, phylogenetics, behavior and proteomics of the social wasp superorganisms (Hymenoptera: Vespidae; Vespinae),” 2009-2014; Co-PI with Bryan Ballif

Elected as Fellow *honoris causa*, Willi Hennig Society, June 2012

Stavros Niarchos Foundation: “Coevolution of pollen wasps and their plant hosts in Australia,” (for fieldwork in Australia), 2013

National Science Foundation, “Dissertation Research: A global molecular phylogeny of the problematic genus *Epyris* (Hymenoptera: Bethyilidae),” for dissertation research by Carly Tribull, 2015-2016

National Science Foundation, “Dissertation Research: Evolution of convergent functional systems in a hyperdiverse clade of parasitic wasps (Hymenoptera, Ichneumonidae, Cryptini),” for dissertation research by Bernardo Santos, 2015-2016

## Publications

### Scientific Articles

- Alcock, J., J. Carpenter, G. C. Eickwort, A. W. Hook, J. W. Krispyn and R. W. Matthews. 1979. Observations on the mating behavior of the empidid fly *Rhamphomyia pectoris* (Diptera). *Journal of the Georgia Entomological Society* 14 (4): 351-354.
- Eickwort, G. C., R. W. Matthews and J. Carpenter. 1981. Observations on the nesting behavior of *Megachile rubi* and *M. texana* with a discussion of the significance of soil nesting in the evolution of megachilid bees (Hymenoptera: Megachilidae). *Journal of the Kansas Entomological Society* 54 (3): 557-570.
- Carpenter, J. M. 1981 (1982). The phylogenetic relationships and natural classification of the Vespoidea (Hymenoptera). *Systematic Entomology* 7: 11-38.
- Carpenter, J. M. 1982. Vespoidea, Masaridae, Eumenidae, Vespidae. In Parker, S. (ed.), *Taxonomy and Classification of Living Organisms*: 676-677. McGraw-Hill Co., New York.
- Carpenter, J. M. and K. G. Ross. 1984. Colony composition in four species of Polistinae from Suriname, with a description of the larva of *Brachygastra scutellaris* (Hymenoptera:

- Vespidae). *Psyche* 91: 237-250.
- Carpenter, J. M. and J. M. Cumming. 1985. A character analysis of the North American potter wasps (Hymenoptera: Vespidae; Eumeninae). *Journal of Natural History* 19 (5): 877-916.
- Carpenter, J. M. 1986. Cladistics of the Chrysoidea (Hymenoptera). *Journal of the New York Entomological Society* 94 (3): 303-330.
- Carpenter, J. M. 1986. The genus *Pachodynerus* in North America (Hymenoptera: Vespidae; Eumeninae). *Proceedings of the Entomological Society of Washington* 88 (3): 572-577.
- Carpenter, J. M. 1986. A synonymic generic checklist of the Eumeninae (Hymenoptera: Vespidae). *Psyche* 93: 61-90.
- Carpenter, J. M. 1987. The identity of *Odynerus scudderi* Cameron and *O? bradleyi* Cameron (Hymenoptera: Vespidae; Eumeninae). *Psyche* 94: 77-80.
- Carpenter, J. M. 1987. On "The evolutionary genetics of social wasps" and the phylogeny of the Vespinae (Hymenoptera, Vespidae). *Insectes Sociaux* 34 (1): 58-64.
- Carpenter, J. M. 1987. Phylogenetic relationships and classification of the Vespinae (Hymenoptera: Vespidae). *Systematic Entomology* 12: 413-431.
- Carpenter, J. M. 1988. The phylogenetic system of the Stenogastrinae (Hymenoptera: Vespidae). *Journal of the New York Entomological Society* 96 (2): 140-175.
- Carpenter, J. M. 1988 (1987). A review of the subspecies concept in the eumenine genus *Zeta* (Hymenoptera: Vespidae). *Psyche* 94: 253-259.
- Carpenter, J. M. and M. C. Day. 1988. Nomenclatural notes on Polistinae (Hymenoptera: Vespidae). *Proceedings of the Washington Entomological Society* 90 (3): 323-328.
- Carpenter, J. M. 1988. Choosing among multiple equally parsimonious cladograms. *Cladistics* 4 (3): 291-296.
- Carpenter, J. M. and J. W. Wenzel. 1988. A new species and nest type of *Mischocyttarus* from Costa Rica (Hymenoptera: Vespidae; Polistinae), with descriptions of nests of three related species. *Psyche* 95: 89-99.
- Carpenter, J. M. 1989. Testing scenarios: Wasp social behavior. *Cladistics* 5 (2): 131-144.
- Carpenter, J. M. 1989 (1988). The phylogenetic system of the Gayellini (Hymenoptera: Vespidae; Masarinae). *Psyche* 95: 211-241.
- Carpenter, J. M. and J. W. Wenzel. 1990 (1989). Synonymy of the genera *Protopolybia* and *Pseudochartergus* (Hymenoptera: Vespidae; Polistinae). *Psyche* 96: 177-186.
- Carpenter, J. M. and A. P. Rasnitsyn. 1990. Mesozoic Vespidae. *Psyche* 97: 1-20.
- Vecht, J. van der and J. M. Carpenter. 1990. A catalogue of the genera of the Vespidae (Hymenoptera). *Zoologische Verhandelingen, Leiden* 260: 3-62.
- Carpenter, J. M. 1990. Of genetic distances and social wasps. *Systematic Zoology* 39 (4): 391-397.
- Ross, K. G. and J. M. Carpenter. 1991. Phylogenetic analysis and the evolution of queen number in eusocial Hymenoptera. *Journal of Evolutionary Biology* 4: 117-130.
- Carpenter, J. M. 1991. Phylogenetic relationships and the origin of social behavior in the Vespidae. In Ross, K. G. and R. W. Matthews (eds.), *The Social Biology of Wasps*: 7-32. Cornell University Press, Ithaca.
- Ross, K. G. and J. M. Carpenter. 1991. Population genetic structure, relatedness, and breeding systems. In Ross, K. G. and R. W. Matthews (eds.), *The Social Biology of Wasps*: 451-479. Cornell University Press, Ithaca.
- Carpenter, J. M. and J. van der Vecht. 1991. A study of the Vespidae described by William J.



- Fox (Insecta: Hymenoptera), with assessment of taxonomic implications. *Annals of the Carnegie Museum of Natural History* 60 (3): 211-241.
- Thorne, B. L. and J. M. Carpenter. 1992. Phylogeny of the Dictyoptera. *Systematic Entomology* 17: 253-268.
- Carpenter, J. M. 1992. Random cladistics. *Cladistics* 8 (2): 147-153.
- Carpenter, J. M. 1992. Distances, assumptions and social wasps. *Cladistics* 8 (2): 155-160.
- Carpenter, J. M. 1993. Biogeographic patterns in the Vespidae (Hymenoptera): Two views of Africa and South America. In Goldblatt, P. (ed.), *Biological Relationships between Africa and South America*: 139-155. Yale University Press, New Haven.
- Brothers, D. J. and J. M. Carpenter. 1993. Phylogeny of Aculeata: Chrysidoidea and Vespoidea (Hymenoptera). *Journal of Hymenoptera Research* 2 (1): 227-304.
- Carpenter, J. M., J. E. Strassmann, S. Turillazzi, C. R. Hughes, C. R. Solís and R. Cervo. 1993. Phylogenetic relationships among paper wasp social parasites and their hosts (Hymenoptera: Vespidae; Polistinae). *Cladistics* 9 (2): 129-146.
- Nixon, K. C. and J. M. Carpenter. 1993. On outgroups. *Cladistics* 9 (4): 413-426.
- Wenzel, J. W. and J. M. Carpenter. 1994. Comparing methods: Adaptive traits and tests of adaptation. In Eggleton, P. and R. I. Vane-Wright (eds.), *Phylogenetics and Ecology*: 79-101. Academic Press, London.
- Turillazzi, S., E. Francescato, A. Baldini Tosti and J. M. Carpenter. 1994. A distinct caste difference in *Polybioides tabidus* (Fabricius) (Hymenoptera: Vespidae). *Insectes Sociaux* 41: 327-330.
- Morrone, J. J. and J. M. Carpenter. 1994. In search of a method for cladistic biogeography: An empirical comparison of component analysis, Brooks Parsimony analysis, and three-area statements. *Cladistics* 10 (2): 99-153.
- Carpenter, J. M. 1994. Successive weighting, reliability and evidence. *Cladistics* 10 (2): 215-220.
- Chavarría, G. and J. M. Carpenter. 1994. "Total evidence" and the evolution of highly social bees. *Cladistics* 10 (3): 229-258.
- West-Eberhard, M. J., J. M. Carpenter and P. E. Hanson. 1995. The vespid wasps (Vespidae). In Hanson, P. and I. Gauld, (eds.), *The Hymenoptera of Costa Rica*: 561-587. The Natural History Museum, London.
- Silveira, O. T. and J. M. Carpenter. 1996 (1995). *Protopolybia bituberculata*, a new neotropical social wasp (Hymenoptera, Vespidae: Polistinae). *Journal of the New York Entomological Society* 103 (1): 48-54.
- Silveira, O. T. and J. M. Carpenter. 1996 (1995). A new species of *Agelaia* Lepeletier from Brazilian Amazonia (Hymenoptera, Vespidae, Polistinae). *Journal of the New York Entomological Society* 103 (1): 69-72.
- Carpenter, J. M. 1996. Phylogeny and biogeography of *Polistes*. In Turillazzi, S. and M. J. West-Eberhard (eds.), *Natural History and Evolution of Paper-Wasps*: 18-57. Oxford University Press, Oxford.
- Allard, M. W. and J. M. Carpenter. 1996. A rational choice for character weighting in parsimony analyses of eutherian mammal orders. In Nei, M. and N. Takahata (eds.), *Current Topics on Molecular Evolution*: 53-60. Institute of Molecular Evolutionary Genetics, Pennsylvania State University, and Graduate School for Advanced Studies, Hayama.
- Farris, J. S., M. Källersjö, V. A. Albert, M. Allard, A. Anderberg, B. Bowditch, C. Bult, J. M. Carpenter, T. M. Crowe, J. De Laet, K. Fitzhugh, D. Frost, P. Goloboff, C. J. Humphries,

- U. Jondelius, D. Judd, P. O. Karis, D. Lipscomb, M. Luckow, D. Mindell, J. Muona, K. Nixon, W. Presch, O. Seberg, M. E. Siddall, L. Struwe, A. Tehler, J. Wenzel, Q. Wheeler and W. Wheeler. 1996 (1995). Explanation. *Cladistics* 11 (2): 211-218.
- Carpenter, J. M., J. W. Wenzel and J. Kojima. 1996. Synonymy of the genus *Occipitalia* Richards, 1978, with *Clypearia* Saussure, 1854 (Hymenoptera: Vespidae; Polistinae, Epiponini). *Journal of Hymenoptera Research* 5: 157-165.
- Judd, T. M. and J. M. Carpenter. 1996. *Polistes dominulus* (Hymenoptera: Vespidae) found in Michigan. *Great Lakes Entomologist* 29 (1): 45-46.
- Carpenter, J. M. 1996. Distributional checklist of the species of the genus *Polistes* (Hymenoptera: Vespidae; Polistinae, Polistini). *American Museum Novitates* 3188: 1-39.
- Carpenter, J. M. 1997 (1996). Generic classification of the Australian pollen wasps (Hymenoptera: Vespidae; Masarinae). *Journal of the Kansas Entomological Society* 69 (4), supplement: 384-400.
- Carpenter, J. M. 1996. Uninformative bootstrapping. *Cladistics* 12 (2): 177-181.
- Allard, M. W. and J. M. Carpenter. 1996. On weighting and congruence. *Cladistics* 12 (3): 183-198.
- Nixon, K. C. and J. M. Carpenter. 1996. On simultaneous analysis. *Cladistics* 12 (3): 221-241.
- Whiting, M. F., J. C. Carpenter, Q. D. Wheeler and W. C. Wheeler. 1997. The Strepsiptera problem: Phylogeny of the holometabolous insect orders inferred from 18S and 28S ribosomal DNA sequences and morphology. *Systematic Biology* 46 (1): 1-68.
- Kojima, J. and J. M. Carpenter. 1997. Catalog of species in the polistine tribe Ropalidiini (Hymenoptera: Vespidae). *American Museum Novitates* 3199: 1-96.
- Nixon, K. C. and J. M. Carpenter. 1997 (1996). On consensus, collapsibility and clade concordance. *Cladistics* 12 (4): 305-321.
- Carpenter, J. M. 1997. Phylogenetic relationships among European *Polistes* and the evolution of social parasitism (Hymenoptera: Vespidae, Polistinae). *Mémoires du Muséum National d'Histoire Naturelle* 173: 135-161.
- Carpenter, J. M. and J. Kojima. 1997 (1996). Checklist of the species in the subfamily Stenogastrinae (Hymenoptera: Vespidae). *Journal of the New York Entomological Society* 104 (1-2): 21-36.
- Carpenter, J. M. and D. A. Grimaldi. 1997. Social wasps in amber. *American Museum Novitates* 3203: 1-7.
- Carpenter, J. M. 1997. A note on the names of paper wasp tribes (Insecta: Hymenoptera: Vespidae). *Natural History Bulletin of Ibaraki University* 1: 15-16.
- Carpenter, J. M. and J. Kojima. 1997. Checklist of the species in the subfamily Vespinae (Insecta: Hymenoptera: Vespidae). *Natural History Bulletin of Ibaraki University* 1: 51-92.
- Grimaldi, D., D. Agosti and J. M. Carpenter. 1997. New and rediscovered primitive ants (Hymenoptera: Formicidae) in Cretaceous amber from New Jersey, and their phylogenetic relationships. *American Museum Novitates* 3208: 1-43.
- Kojima, J. and J. M. Carpenter. 1997. A taxonomic note and nest description of an Australian paper wasp, *Polistes variabilis* (Fabricius) (Hymenoptera, Vespidae, Polistinae). *Japanese Journal of Systematic Entomology* 3 (2): 117-122.
- Agosti, D., D. A. Grimaldi and J. M. Carpenter. 1998. Oldest known fossil ants discovered. *Nature* 391: 447.
- Dejean, A., B. Corbara and J. M. Carpenter. 1998. Nesting site selection by wasps in the

- Guianese rain forest. *Insectes Sociaux* 45: 33-41.
- Carpenter, J. M., P. A. Goloboff and J. S. Farris. 1998. PTP is meaningless, T-PTP is contradictory: A reply to Trueman. *Cladistics* 14 (1): 105-116.
- Smethurst, M. E. and J. M. Carpenter. 1998 (1997). A new species of *Metapolybia* Ducke from Central America (Hymenoptera: Vespidae; Polistinae). *Journal of the New York Entomological Society* 105 (3-4): 180-185.
- Kojima, J., John W. Wenzel and J. M. Carpenter. 1998. The types of *Icaria galimatia* de Saussure, 1853, and *I. ignobilis* de Saussure, 1890, with establishment of their synonymy (Hymenoptera: Vespidae, Polistinae). *Entomological Science* 1 (3): 393-401.
- Kojima, J. and J. M. Carpenter. 1998. The type of *Icaria xanthura* de Saussure, 1854, a species of the neotropical polistine genus *Charterginus* Fox, with a note on the development of the "parategula" in *Charterginus* (Hymenoptera: Vespidae). *Entomological Science* 1 (3): 417-421.
- Carpenter, J. M. 1999. Taxonomic notes on paper wasps (Hymenoptera: Vespidae; Polistinae). *American Museum Novitates* 3259: 1-44.
- Amarante, S. T. P., C. R. F. Brandão and J. M. Carpenter. 1999. A new species of *Embolemus* Westwood from the Mata Atlântica of Brazil (Hymenoptera: Embolemidae). *American Museum Novitates* 3266: 1-7.
- Allard, M. W., J. S. Farris and J. M. Carpenter. 1999. Congruence among mammalian mitochondrial genes. *Cladistics* 15 (1): 75-84.
- Carpenter, J. M. and J. W. Wenzel. 1999. The relative abundance of swarm-founding social wasps in the Congo Basin (Insecta: Hymenoptera; Vespidae, Polistinae). *Natural History Bulletin of Ibaraki University* 3: 9-14.
- Carpenter, J. M. 1999. What do we know about chrysidoid relationships? *Zoologica Scripta* 28 (1-2): 215-231.
- Carpenter, J. M. and W. C. Wheeler. 1999. Towards simultaneous analysis of morphological and molecular data in Hymenoptera. *Zoologica Scripta* 28 (1-2): 251-260.
- Carpenter, J. M. and W. Wheeler. 1999. Cladística numérica, análisis simultáneo y filogenia de hexápodos. *Boletín de la Sociedad Entomológica Aragonesa* 26, Volumen Monográfico: 333-346.
- Carpenter, J. M. and C. K. Starr. 2000. A new genus of hover wasps from Southeast Asia (Hymenoptera: Vespidae; Stenogastrinae). *American Museum Novitates* 3291: 1-12.
- Carpenter, J. M., J. Kojima and J. W. Wenzel. 2000. *Polybia*, paraphyly and polistine phylogeny. *American Museum Novitates* 3298: 1-24.
- Nixon, K. C. and J. M. Carpenter. 2000. On the other "phylogenetic systematics." *Cladistics* 16 (3): 298-318.
- Carpenter, J. M. 2000. A vespid wasp from New Jersey Cretaceous amber. In Grimaldi, D. (ed.), *Studies on Fossils in Amber, with Particular Reference to the Cretaceous of New Jersey*: 333-337. Backhuys Publishers, Leiden.
- Garcete-Barrett, B. R. and J. M. Carpenter. 2000. A note on the taxonomy of the genus *Ceramiopsis* Zavattari (Hymenoptera: Vespidae; Masarinae). *Journal of the New York Entomological Society* 108 (1-2): 181-186.
- Carpenter, J. M. 2001. New generic synonymy in Stenogastrinae (Insecta: Hymenoptera; Vespidae). *Natural History Bulletin of Ibaraki University* 5: 27-30.
- Nixon, K. C., J. M. Carpenter and S. J. Borgardt. 2001. Beyond NEXUS: Universal cladistic data objects. *Cladistics* 17 (1), supplement: 53-59.

- Carpenter, J. M. 2001. Checklist of species of the subfamily Masarinae (Hymenoptera: Vespidae). *American Museum Novitates* 3325: 1-39.
- Wheeler, W. C., M. Whiting, Q. D. Wheeler and J. M. Carpenter. 2001. The phylogeny of the extant hexapod orders. *Cladistics* 17 (2): 113-169.
- Carpenter, J. M., B. Corbara and A. Dejean. 2001. *Protopolybia duckei* du Buysson, a valid species, not a synonym of *Protopolybia emortualis* (de Saussure). *Journal of the New York Entomological Society* 109 (1): 179-181.
- Farris, J. S., A. G. Kluge and J. M. Carpenter. 2001. Popper and likelihood versus "Popper\*". *Systematic Biology* 50 (3): 438-444.
- Wheeler, W. C., M. Whiting, Q. D. Wheeler and J. M. Carpenter. 2001. Erratum. *Cladistics* 17 (4): 403-404.
- Carpenter, J. M. and J. Kojima. 2002. Correction to the nomenclature in the genus *Dolichovespula* (Hymenoptera: Vespidae; Vespinae). *Entomological Science* 5 (3): 389-390.
- Schulmeister, S., W. C. Wheeler and J. M. Carpenter. 2002. Simultaneous analysis of the basal lineages of Hymenoptera (Insecta) using sensitivity analysis. *Cladistics* 18 (5): 455-484.
- Nguyen, L. P. T. and J. M. Carpenter. 2002. Vespidae of Vietnam (Insecta: Hymenoptera) I. Vespinae. *Journal of the New York Entomological Society* 110 (2): 199-211.
- Carpenter, J. M. and J. Kojima. 2002. A new species of paper wasp from Costa Rica (Hymenoptera: Vespidae; Polistinae, Epiponini). *Journal of the New York Entomological Society* 110 (2): 212-223.
- Carpenter, J. M. 2003. On "Molecular Phylogeny of Vespidae (Hymenoptera) and the Evolution of Sociality in Wasps." *American Museum Novitates* 3389: 1-20.
- Carpenter, J. M. 2003 (2002). Return to the subspecies concept in the genus *Zeta* (Hymenoptera: Vespidae; Eumeninae). *Boletín del Museo Nacional de Historia Natural del Paraguay* 14 (1-2): 19-24.
- Carpenter, J. M. and B. R. Garcete-Barrett. 2003 (2002). A key to the neotropical genera of Eumeninae (Hymenoptera: Vespidae). *Boletín del Museo Nacional de Historia Natural del Paraguay* 14 (1-2): 52-73.
- Carpenter, J. M. 2003. A new species of pollen wasp from Egypt (Hymenoptera: Vespidae; Masarinae). *Journal of the Kansas Entomological Society* 76 (2): 143-146.
- Carpenter, J. M. 2003. Critique of pure folly. *Botanical Review* 69 (1): 79-92.
- Nixon, K. C., J. M. Carpenter and D. W. Stevenson. 2003. The PhyloCode is fatally flawed, and the "Linnaean" system can easily be fixed. *Botanical Review* 69 (1): 111-120.
- Carpenter, J. M. and L. P. T. Nguyen. 2003. Keys to the genera of social wasps of South-East Asia. *Entomological Science* 6 (3): 183-192.
- Dubatolov, V., J. Kojima, J. M. Carpenter and A. Lvovsky. 2003. Subspecies of *Vespa crabro* in two different papers by Birula in 1925. *Entomological Science* 6: 215-216.
- Carpenter, J. M., F. S. do Nascimento, S. Mateus, F. B. Noll and J. Kojima. 2004. A revision of the genus *Asteloeca* (Hymenoptera: Vespidae; Polistinae). *American Museum Novitates* 3427: 1-12.
- Arévalo, E., Y. Zhu, J. M. Carpenter and J. E. Strassmann. 2004. The phylogeny of the social wasp subfamily Polistinae: evidence from microsatellite flanking sequences, mitochondrial COI sequence, and morphological characters. *BioMed Central Evolutionary Biology* 4: 8.
- Carpenter, J. M. and S. Mateus. 2004. Males of *Nectarinella* Bequaert (Hymenoptera, Vespidae,

- Polistinae). *Revista Brasileira de Entomologia* 48 (3): 297-302.
- Hunt, J. H. and J. M. Carpenter. 2004. Intra-specific nest form variation in some neotropical swarm-founding wasps of the genus *Parachartergus* (Hymenoptera: Vespidae: Epiponini). *Journal of the Kansas Entomological Society* 77 (4): 448-456.
- Carpenter, J. M. 2004. *Ancistroceroides* de Saussure, a potter wasp genus new for the United States, with a new key to the genera of Eumeninae of America north of Mexico (Hymenoptera: Vespidae). *Journal of the Kansas Entomological Society* 77 (4): 721-741.
- Carpenter, J. M. 2004. Synonymy of the genus *Marimbonda* Richards, 1978, with *Leipomeles* Möbius, 1856 (Hymenoptera: Vespidae; Polistinae), and a new key to the genera of paper wasps of the New World. *American Museum Novitates* 3465: 1-16.
- Giribet, G., G. D. Edgecombe, J. M. Carpenter, C. A. d'Haese and W. C. Wheeler. 2004. Is *Ellipura* monophyletic? A combined analysis of basal hexapod relationships with emphasis on the origin of insects. *Organisms Diversity and Evolution* 4: 319-340.
- Nguyen, L. P. T., F. Saito, J. Kojima and J. M. Carpenter. 2005. [An annotated distributional checklist of social wasps (Hymenoptera: Vespidae) of Viet Nam. In: *Proceedings of the First National Conference on Ecology and Biological Resources, Ha Noi, May 17, 2005*: 129-137. Vietnamese Academy of Science and Technology, Hanoi. [In Vietnamese with English summary.]
- Carpenter, J. M. and B. R. Garcete-Barrett. 2005. Revision of the genus *Parazumia* de Saussure (Hymenoptera: Vespidae; Eumeninae). *Folia Entomologica Mexicana* 44 (Supplemento 1): 21-34.
- Carpenter, J. M. and E. P. Perera. 2006. Phylogenetic relationships among yellowjackets and the evolution of social parasitism. *American Museum Novitates* 3507: 1-19.
- Nguyen, L. P. T., J. Kojima, F. Saito and J. M. Carpenter. 2006. Vespidae (Hymenoptera) of Vietnam 3: Synoptic key to the Vietnamese species of the polistine genus *Ropalidia*, with notes on taxonomy and distribution. *Entomological Science* 9 (1): 93-107.
- Nguyen, L. P. T., F. Saito, J. Kojima and J. M. Carpenter. 2006. Vespidae of Viet Nam (Insecta: Hymenoptera) 2. Taxonomic notes on Vespinae. *Zoological Science* 23: 95-104.
- Sarmiento, C. E. and J. M. Carpenter. 2006. Familia Vespidae. In Fernández, F. and M. J. Sharkey (eds.), *Introducción a los Hymenoptera de la Región Neotropical*: 539-556. Sociedad Colombiana de Entomología y Universidad Nacional de Colombia, Bogotá.
- Saito, F., L. P. T. Nguyen, J. M. Carpenter and J. Kojima. 2006. A new *Eustenogater* species (Hymenoptera: Vespidae; Stenogastrinae), the first hover wasp known to overwinter on the nest. *American Museum Novitates* 3534: 1-11.
- Carpenter, J. M., B. R. Garcete-Barrett and M. G. Hermes. 2006. Catalog of the Neotropical Masarinae. *Revista Brasileira de Entomologia* 50 (3): 335-340.
- West-Eberhard, M. J., J. M. Carpenter and P. E. Hanson. 2006. Familia Vespidae. In Hanson, P. E. and I. D. Gauld, *Hymenoptera de la Región Neotropical*. *Memoirs of the American Entomological Institute* 77: 617-644.
- Pickett, K. M., J. M. Carpenter and W. C. Wheeler. 2006. Systematics of *Polistes* (Hymenoptera: Vespidae), with a phylogenetic consideration of Hamilton's haplodiploidy hypothesis. *Annales Zoologici Fennici* 43: 390-406.
- Andena, S. R., F. B. Noll and J. M. Carpenter. 2007. Phylogenetic analysis of the Neotropical social wasps of the genus *Angiopolybia* Araujo, 1946 (Hymenoptera, Vespidae, Epiponini). *Zootaxa* 1427: 57-64.
- Andena, S. R., F. B. Noll, J. M. Carpenter and R. Zucchi. 2007. Phylogenetic analysis of the

- Neotropical *Pseudopolybia* de Saussure, 1863, with description of the male genitalia of *Pseudopolybia vespiceps* (Hymenoptera: Vespidae, Epiponini). *American Museum Novitates* 3586: 1-11.
- Goloboff, P. A., J. M. Carpenter, J. Salvador Arias and Daniel R. Miranda Esquivel. 2008. Weighting against homoplasy improves phylogenetic analysis of morphological data sets. *Cladistics* 24 (5): 758-773.
- Carpenter, J. M. 2008. Review of the Hawaiian Vespidae (Hymenoptera). *Bishop Museum Occasional Papers* 99: 1-18.
- Ebrahimi, E. and J. M. Carpenter. 2008. Catalog of the vespid wasps of Iran (Hymenoptera, Vespidae). *Zootaxa* 1785: 1-42.
- Dvořák, L. and J. M. Carpenter. 2008. The first record of the paper wasp *Polistes smithii neavei* von Schulthess, 1921, from the Middle East (Hymenoptera: Vespidae: Polistinae), with notes on the social wasp fauna of Yemen. *Zoology in the Middle East* 44: 119-120.
- Carpenter, J. M. and L. S. Kimsey. 2009. The genus *Euparagia* Cresson (Hymenoptera: Vespidae; Euparagiinae). *American Museum Novitates* 3643: 1-11.
- Corbara, B., J. M. Carpenter, R. Céréghino, M. Leponce, M. Gibernau and A. Dejean. 2009. Diversity and nest site selection of social wasps along Guianese forest edges: assessing the influence of arboreal ants. *Comptes rendus Biologies* 332: 470-479.
- Andena, S. R., F. B. Noll and J. M. Carpenter. 2009. Cladistic analysis of *Charterginus* Fox, 1898 (Hymenoptera, Vespidae, Epiponini). A neotropical genus of social wasps. *Journal of Natural History* 43 (19-20): 1183-1193.
- Andena, S. R., J. M. Carpenter and F. B. Noll. 2009. A phylogenetic analysis of *Synoeca* de Saussure, 1852, a neotropical genus of social wasps (Hymenoptera: Vespidae: Epiponini). *Entomologica Americana* 115 (1): 81-89.
- Carpenter, J. M., J. H. Hunt and J. E. Strassmann. 2009. *Mischocyttarus mexicanus cubicola*: Major extension of its range to Texas (Hymenoptera: Vespidae). *Entomologica Americana* 115 (1): 95-96.
- Carpenter, J. M., J. Gusenleitner and M. Madl. 2009. A catalogue of the Eumeninae (Hymenoptera: Vespidae) of the Ethiopian Region excluding Malagasy Subregion. Part I: Introduction, Key to Genera, Genera *Aethiopicodynerus* GUSENLEITNER 1997 to *Cyrtolabulus* van der VECHT 1969. *Linzer Biologische Beiträge* 41 (1): 513-638.
- Andena, S. R., J. M. Carpenter and K. M. Pickett. 2009. Phylogenetic analysis of species of the neotropical social wasp genus *Epipona* Latreille, 1802 (Hymenoptera: Vespidae; Polistinae, Epiponini). *Zookeys* 20: 385-398.
- Carpenter, J. M. and A. R. Davidson. 2009. Rediscovery of the Australian pollen wasp *Metaparagia doddi* (Hymenoptera: Vespidae; Masarinae). *American Museum Novitates* 3664: 1-6.
- Carpenter, J. M. 2009. *Vespula rufosignata* Eck, a synonym of *Vespula vulgaris* (Linnaeus) (Hymenoptera: Vespidae, Vespinae). *Boletín de la Sociedad Entomológica Aragonesa* 45: 292.
- Carpenter, J. M. and M. Madl. 2009. A catalogue of the Vespidae of the Malagasy Subregion (Insecta, Hymenoptera). *Linzer Biologische Beiträge* 41 (2): 1871-1935.
- Pickett, K. M., J. M. Carpenter and A. Dejean. 2009. "Basal" but not primitive: the nest of *Apoica arborea* de Saussure (Hymenoptera: Vespidae; Polistinae). *Zoosystema* 31 (4): 945-948.
- Dejean, A., J. M. Carpenter, M. Gibernau, M. Leponce and B. Corbara. 2010. Nest relocation

- and high mortality rate in a Neotropical social wasp: Impact of an exceptionally rainy La Niña year. *Comptes rendus Biologies* 333: 35-40.
- Safarek, G., O. Jovanovic, M. Vences, H. Kurrer, J. M. Carpenter and R. Dolch. 2010. Wasp predation on Malagasy frog egg clutches. *Salamandra* 46 (1): 53-54.
- Pickett, K. M. and J. M. Carpenter. 2010. Simultaneous analysis and the origin of eusociality in the Vespidae (Insecta: Hymenoptera). *Arthropod Systematics and Phylogeny* 68 (1): 3-33.
- West-Eberhard, M. J., J. M. Carpenter, L. F. F. Gelin and F. B. Noll. 2010. *Chartergellus golfitensis* West-Eberhard: a new species of Neotropical swarm-founding wasp (Hymenoptera: Vespidae, Polistinae) with notes on the taxonomy of *Chartergellus zonatus* Spinola. *Journal of Hymenoptera Research* 19 (1): 84-93.
- Carpenter, J. M. and T. R. Glare. 2010. Misidentification of *Vespula alascensis* as *V. vulgaris* in North America (Hymenoptera: Vespidae; Vespinae). *American Museum Novitates* 3690: 1-7.
- Dvořák, L. and J. M. Carpenter. 2010. New records of vespidae wasps from Yemen with synonymy in *Belonogaster* (Hymenoptera: Vespidae: Polistinae and Eumeninae). *Linzer Biologische Beiträge* 42 (1): 561-563.
- Carpenter, J. M., J. Gusenleitner and M. Madl. 2010. A catalogue of the Eumeninae (Hymenoptera: Vespidae) of the Ethiopian Region excluding Malagasy Subregion. Part II: Genera *Delta* de Saussure 1885 to *Zethus* Fabricius 1804 and species incertae sedis. *Linzer Biologische Beiträge* 42 (1): 95-315.
- Roskens, V. A., J. M. Carpenter, K. M. Pickett and B. A. Ballif. 2010. Preservation of field samples for enzymatic and proteomic characterization: analysis of proteins from the trophallactic fluid of hornets and yellowjackets. *Journal of Proteome Research* 9: 5484-5491.
- Carpenter, J. M., J. Gusenleitner and M. Madl. 2010. A catalogue of the Eumeninae (Hymenoptera: Vespidae) of the Ethiopian Region excluding Malagasy Subregion. Part III: Classification, additions, corrections and index. *Linzer Biologische Beiträge* 42 (2): 919-1004.
- Masciocchi, M., J. R. Beggs, J. M. Carpenter and J. C. Corley. 2010. Primer registro de *Vespula vulgaris* (Hymenoptera: Vespidae) en la Argentina. *Revista de la Sociedad Entomológica Argentina* 69 (3-4): 267-270.
- Carpenter, J. M., L. Dvořák, J. Kojima, L. T. P. Nguyen, A. Perrard and K. M. Pickett. 2011. Taxonomic notes on the Vespinae of Yunnan (Hymenoptera: Vespidae). *American Museum Novitates* 3709: 1-10.
- González-Hernández, A. and J. M. Carpenter. 2011. Avispas con aguijón (Insecta: Hymenoptera: Aculeata). In: Cruz Angón, A. (ed.), *La Biodiversidad en Veracruz: Estudio de Estado II*: 421-429. Comisión Nacional para el Conocimiento de la Biodiversidad, Gobierno del Estado de Veracruz, Universidad Veracruzana, Instituto de Ecología, A. C., México.
- Heraty, J., F. Ronquist, J. M. Carpenter, D. Hawks, S. Schulmeister, A. P. Dowling, D. Murray, J. Munro, W. C. Wheeler, N. Schiff, M. Sharkey. 2011. Evolution of the hymenopteran megaradiation. *Molecular Phylogenetics and Evolution* 60: 73-88.
- Dejean, A., R. Céréghino, J. M. Carpenter, B. Corbara, B. Hérault, V. Rossi, M. Leponce, J. Orivel and D. Bonal. 2011. Climate change impact on neotropical social wasps. *PLoS ONE* 6 (11): e27004. (DOI:10.1371/journal.pone.0027004)
- Carpenter, J. M. 2011. A new species of *Zethus* (Hymenoptera, Vespidae, Eumeninae). *Linzer Biologische Beiträge* 43 (2): 1123-1126.
- Carpenter, J. M. and J. A. Genaro. 2011. Vespidae (Insecta: Hymenoptera) of Puerto Rico, West

- Indies. *Insecta Mundi* 0202: 1-35.
- Sharkey, M. J., J. M. Carpenter, L. Vilhelmsen, J. Heraty, J. Liljeblad, A. P. G. Dowling, S. Schulmeister, D. Murray, A. R. Deans, F. Ronquist, L. Krogmann and W. C. Wheeler. 2012. Phylogenetic relationships among superfamilies of Hymenoptera. *Cladistics* 28: 80-112. (First published online 21 July 2011; DOI: 10.1111/j.1096-0031.2011.00366.x)
- Carpenter, J. M., L. Dvořák, and K. M. Pickett. 2012. *Dolichovespula albida* (Sladen), a valid species, not a synonym of *D. norwegica* (Fabricius) (Hymenoptera: Vespidae, Vespinae). *Entomologica Americana* 117 (3 & 4): 113-116.
- Andena, S. R. and J. M. Carpenter. 2012. A new species of *Metapolybia* (Hymenoptera: Vespidae; Polistinae, Epiponini). *Entomologica Americana* 117 (3 & 4): 117-120.
- Carpenter, J. M. 2012. Notes on types of some American wasps in the Spinola collection. *Entomologica Americana* 117 (3 & 4): 121-126.
- Nugroho, H., J. Kojima, and J. M. Carpenter. 2012 (2011). Checklist of vespid species (Insecta: Hymenoptera: Vespidae) occurring in Indonesian Archipelago. *Treubia* 38: 71-186.
- Hermes, M. G. and J. M. Carpenter. 2012. Are *Monobia* and *Montezumia* monophyletic? A cladistic analysis of their species groups based on morphological data (Hymenoptera, Vespidae, Eumeninae). *American Museum Novitates* 3733: 1-23.
- Nixon, K. C. and J. M. Carpenter. 2012. On homology. *Cladistics* 28 (2): 160-169. (First published online 8 September 2011; DOI: 10.1111/j.1096-0031.2011.00371.x)
- Farris, J. S. and J. M. Carpenter. 2012. Faith *et al.*'s (2011) "corroboration assessment" leads to verificationism. *Zootaxa* 3235: 62-64.
- Dejean, A., J. M. Carpenter, B. Corbara, P. Wright, O. Roux and L. M. LaPierre. 2012. The hunter becomes the hunted: when cleptobiotic insects are captured by their target ants. *Naturwissenschaften* 99: 265-273. (First published online 24 February 2012; DOI 10.1007/s00114-012-0895-3)
- Nixon, K. C. and J. M. Carpenter. 2012. More on homology. *Cladistics* 28 (3): 225-226. (First published online 3 January 2012; DOI: 10.1111/j.1096-0031.2011.00388.x)
- Ebrahimi, E. and J. M. Carpenter. 2012. Distribution pattern of the hornets *Vespa orientalis* and *V. crabro* in Iran (Hymenoptera: Vespidae). *Zoology in the Middle East* 56: 63-66.
- Perrard, A., C. Villemant, J. M. Carpenter and M. Baylac. 2012. Differences in caste dimorphism among three hornet species (Hymenoptera: Vespidae): forewing size, shape and allometry. *Journal of Evolutionary Biology* 25: 1389-1398. (First published online 3 May 2012; DOI 10.1111/j.1420-9101.2012.02527.x)
- Dejean, A., B. Corbara, F. Azémar and J. M. Carpenter. 2012. When attempts at robbing prey turn fatal. *Naturwissenschaften* 99: 579-582. (First published online 19 June 2012; DOI: 10.1007/s00114-012-0929-x)
- Andena, S. R. and J. M. Carpenter. 2012. A phylogenetic analysis of the social wasp genus *Brachygastra* Perty, 1833, and description of a new species (Hymenoptera: Vespidae: Epiponini). *American Museum Novitates* 3753: 1-38.
- Kimsey, L. S. and J. M. Carpenter. 2012. The Vespinae of North America (Vespidae, Hymenoptera). *Journal of Hymenoptera Research* 28: 37-65.
- Nixon, K. C. and J. M. Carpenter. 2012. More on errors. *Cladistics* 28 (5): 539-544. (First published online 21 June 2012; DOI: 10.1111/j.1096-0031.2012.00409.x)
- Carpenter, J. M., B. R. Garcete-Barrett and J. A. F. López. 2012. Las Vespidae (Hymenoptera: Vespoidea) de Guatemala. In Cano, E. B. and J. C. Schuster (eds.), *Biodiversidad de Guatemala* 2: 269-279. Universidad del Valle de Guatemala, Guatemala.
- Dvořák, L., H. Ghahari, J. M. Carpenter and R. Abbasi. 2012. On the distribution and taxonomy of vespine wasps of Iran (Hymenoptera: Vespidae: Vespinae). *Acta Musei Moraviae, Scientiae Biologicae* 97 (2): 69-86.
- Kumar, P. G., J. M. Carpenter and P. M. Sureshan. 2012. New record of the genus



- Cochlischnogaster* Dong and Otsuka (Hymenoptera: Vespidae: Stenogastrinae) from the Indian Subcontinent. *Records of the Zoological Survey of India* 112 (1): 113-119.
- Nixon, K. C. and J. M. Carpenter. 2013. More on absences. *Cladistics* 29 (1): 1-6. (First published online 3 October 2012; DOI: 10.1111/j.1096-0031.2012.00430.x)
- Perrard, A., K. M. Pickett, C. Villemant, J. Kojima and J. M. Carpenter. 2013. Phylogeny of hornets: a total evidence approach (Hymenoptera: Vespidae; Vespinae, *Vespa*). *Journal of Hymenoptera Research* 32: 1-15.
- Carpenter, J. M., S. R. Andena, F. B. Noll and J. W. Wenzel. 2013. Well, what about intraspecific variation? Taxonomic and phylogenetic characters in the genus *Synoeca* de Saussure (Hymenoptera, Vespidae). *Zootaxa* 3682 (3): 421-431.
- Nguyen, L. P. T. and J. M. Carpenter. 2013. Taxonomic notes on the species of the genus *Malayepipona* Giordani Soika (Hymenoptera: Vespidae: Eumeninae) from northern Vietnam, with description of three new species. *Raffles Bulletin of Zoology* 61 (2): 727-734.
- Kumar, P. G. and J. M. Carpenter. 2013. A taxonomic review of the genus *Antodynerus* de Saussure, 1855 (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent. *Zootaxa* 3731 (2): 267-278.
- Kumar, P. G., K. P. M. Shareef, K. Lambert and J. M. Carpenter. 2013. A taxonomic study on the Oriental genus *Apodynerus* Giordani Soika (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent. *Biosystematica* 7 (1): 23-31.
- Kumar, P. G., G. Srinivasan and J. M. Carpenter. 2013. A taxonomic study on the genus *Tropidodynerus* Blüthgen (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent. *Prommalia* 1: 162-174.
- Payne, A., P. M. Barden, W. C. Wheeler and J. M. Carpenter. 2013. Direct optimization, sensitivity analysis, and the evolution of the hymenopteran superfamilies. *American Museum Novitates* 3789: 1-19.
- Perrard, A., A. Nel and J. M. Carpenter. 2014. A new paper wasp from Late Eocene of France (Hymenoptera: Vespidae: Polistinae). *Zootaxa* 3753 (6): 542-548.
- Kumar, P. G., J. M. Carpenter and K. Lambert. 2014. A review of the genus *Epsilon* de Saussure (Hymenoptera: Vespidae: Eumeninae) from India. *Journal of Threatened Taxa* 6: 5380-5385.
- Andena, S. R. and J. M. Carpenter. 2014. Checklist das espécies de Polistinae (Hymenoptera, Vespidae) do semiárido brasileiro. In Bravo, F. and A. Calor (eds.), *Artrópodes do Semiárido: Biodiversidade e Conservação*: 169-180. Printmídia, Feira de Santana.
- Silva, M. da, F. B. Noll and J. M. Carpenter. 2014. The usefulness of the sting apparatus in phylogenetic reconstructions in vespids, with emphasis on the Epiponini: More support for the single origin of eusociality in the Vespidae. *Neotropical Entomology* 43: 124-142. (First published online 21 January 2014; DOI 10.1007/s13744-013-0179-4)
- Lopez-Osorio, F., K. M. Pickett, J. M. Carpenter, B. A. Ballif and I. Agnarsson. 2014. Phylogenetic relationships of yellowjackets inferred from nine loci (Hymenoptera: Vespidae, Vespinae, *Vespula* and *Dolichovespula*). *Molecular Phylogenetics and Evolution* 73: 190-201.
- Perrard, A., M. Arca, Q. Rome, F. Muller, J. Tan, S. Bista, H. Nugroho, R. Baudoin, M. Baylac, J.-F. Silvain, J. M. Carpenter and C. Villemant. 2014. Geographic variation of melanisation patterns in a hornet species: Genetic differences, climatic pressures or aposematic constraints? *PLoS ONE* 9 (4): e94162. (DOI:10.1371/journal.pone.0094162)
- Kumar, P. G., J. M. Carpenter and G. Sharma. 2014. A review of the genus *Paraleptomenes* Giordani Soika, 1970 (Hymenoptera: Vespidae: Eumeninae: Odynerini) from the Indian subcontinent, with the description of a new species from the eastern Himalayas. *Zootaxa*

- 3802 (1): 131-143.
- Kumar, P. G., K. P. M. Shareef, K. Lambert and J. M. Carpenter. 2014 (2013). A taxonomic review of the Oriental genus *Labus* de Saussure, 1867 (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent. *Biosystematica* 7 (2): 29-37.
- Nguyen, L. T. P., H. T. Dang, J. Kojima and J. M. Carpenter. 2014. An annotated distributional checklist of solitary wasps of the subfamily Eumeninae (Hymenoptera: Vespidae) of Vietnam. *Entomologica Americana* 120 (1-2): 7-17.
- Hermes, M. G., G. A. R. Melo and J. M. Carpenter. 2014. The higher-level phylogenetic relationships of the Eumeninae (Insecta, Hymenoptera, Vespidae), with emphasis on *Eumenes* sensu lato. *Cladistics* 30 (5): 453-484. (First published online 30 September 2013; DOI: 10.1111/cla.12059)
- Kumar, P. G., J. M. Carpenter, K. Lambert and K. P. M. Shareef. 2014. Additional notes on the genus *Apodynerus* Giordani Soika, 1993 (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent. *Halteres* 5: 46-50.
- Perrard, A., M. Baylac, J. M. Carpenter and C. Villemant. 2014. Evolution of wing shape in hornets: why is the wing venation efficient for species identification? *Journal of Evolutionary Biology* 27: 2665-2675. (First published online 27 October 2014; DOI: 10.1111/jeb.12523)
- Siddiqui, J. A., I. Bodlah, J. M. Carpenter, M. Naeem, M. Ahmad and M. A. Bodlah. 2015. Vespidae (Hymenoptera) of the Pothwar region of Punjab, Pakistan. *Zootaxa* 3914 (5): 501-524.
- Garcete-Barrett, B. R., U. Drechsel and J. M. Carpenter. 2015. *Parachartergus smithii* (de Saussure, 1854), a new record of social wasp from Paraguay (Hymenoptera: Vespidae: Polistinae). *Paraguay Biodiversidad* 1 (3): 12-15.
- Kumar, P. G., J. M. Carpenter and P. M. Sureshan. 2015. A taxonomic review of the genus *Cyrtolabulus* van der Vecht, 1969 (Hymenoptera: Vespidae: Eumeninae) from India. *Animal Diversity, Natural History and Conservation* 5: 49-55.
- Santos Junior, J. N. A. Dos, O. T. Silveira and J. M. Carpenter. 2015. Phylogeny of *Protopolybia* Ducke, 1905 and taxonomic revision of the *Protopolybia exigua* species-group (Hymenoptera: Vespidae, Polistinae), with description of four new species. *Zootaxa* 3956 (2): 151-182.
- Kumar, P. G. and J. M. Carpenter. 2015. Description of a new species of *Alastor* (Alastor) Lepeletier, 1841 (Hymenoptera: Vespidae: Eumeninae) from Telangana, India, with a key and a checklist of Oriental species. *Halteres* 6: 79-84.
- Kumar, P. G., G. Srinivasan and J. M. Carpenter. 2015. A new species of *Lissodynerus* Giordani Soika (Hymenoptera: Vespidae: Eumeninae) from Rutland Island, southern Andaman, India. *Journal of Threatened Taxa* 7 (10): 7664-7667.
- Azevedo, C. O., A. Dal Molin, A. Penteado-Dias, A. C. C. Macedo, B. Rodriguez-V., B. Z. K. Dias, C. Waichert, D. Aquino, D. R. Smith, E. M. Shimbor, F. B. Noll, G. Gibson, H. C. Onody, J. M. Carpenter, J. E. Lattke, K. dos S. Ramos, K. Williams, L. Masner, L. S. Kimsey, M. T. Tavares, M. Olmi, M. L. Buffington, M. Ohl, M. Sharkey, N. F. Johnson, R. Kawada, R. B. Gonçalves, R. M. Feitosa, S. Heydon, T. M. Guerra, T. S. R. da Silva and V. Costa. 2015. Checklist of the genera of Hymenoptera (Insecta) from Espírito Santo state, Brazil. *Boletim do Museu de Biologia Mello Leitão (Nova Série)* 37 (3): 313-343.
- Lopez-Osorio, F., A. Perrard, K. M. Pickett, J. M. Carpenter and I. Agnarsson. 2015. Phylogenetic tests reject Emery's rule in the evolution of social parasitism in yellowjackets and hornets (Hymenoptera: Vespidae, Vespinae). *Royal Society Open Science* 2: 150159.
- Santos, B. F., A. Payne, K. M. Pickett and J. M. Carpenter. 2015. Phylogeny and historical

- biogeography of the paper wasp genus *Polistes* (Hymenoptera: Vespidae): implications for the overwintering hypothesis of social evolution. *Cladistics* 31: 535-549. (First published online 24 December 2014; DOI: 10.1111/cla.12103)
- Kumar, P. G. and J. M. Carpenter. 2015. Description of a new species of *Leptochilus* (*Neoleptochilus*) Blüthgen, 1961 (Hymenoptera: Vespidae: Eumeninae) from India. *Journal of Threatened Taxa* 7 (11): 7786-7790.
- Carpenter, J. M., J. Kojima, L. Dvořák and A. Perrard. 2015. Taxonomic notes on Vespinae (Hymenoptera: Vespidae). *Entomologica Americana* 121 (1-4): 35-37.
- Kumar, P. G., J. M. Carpenter and P. M. Sureshan. 2016. Additions to the knowledge of the genus *Allorhynchium* van der Vecht from the Indian subcontinent with the description of a new species from Kerala (Hymenoptera: Vespidae: Eumeninae). *Halteres* 7: 29-34.
- Nguyen, L. T. P., D. D. Nguyen and J. M. Carpenter. 2016. Additions to the knowledge of the genus *Phimenes* (Hymenoptera: Vespidae: Eumeninae) from Vietnam. *Animal Systematics, Evolution and Diversity* 32 (1): 21-27.
- Nguyen, L. T. P. and J. M. Carpenter. 2016. Review of the *Polistes* (*Polistella*) “*Stenopolistes*” species-group (Hymenoptera: Vespidae: Polistinae) from Vietnam, with description of a new species and key to species. *Zootaxa* 4088 (4): 583-593.
- Amorim, D. S., C. M. D. Santos, F.-T. Krell, A. Dubois, S. S. Nihei, O. M. P. Oliveira, A. Pont, H. Song, V. K. Verdade, D. A. Fachin, B. Klassa, C. J. E. Lamas, S. S. Oliveira, C. J. B. de Carvalho, C. A. Mello-Patiu, E. Hajdu, M. S. Couri, V. C. Silva, R. S. Capellari, R. L. Falaschi, R. M. Feitosa, L. Prendini, J. P. Pombal Jr., F. Fernández, R. M. Rocha, J. E. Lattke, U. Caramaschi, M. Duarte, A. C. Marques, R. E. Reis, O. Kurina, D. M. Takiya, M. Tavares, D. S. Fernandes, F. L. Franco, F. Cuzzo, D. Paulson, B. Guénard, B. C. Schlick-Steiner, W. Arthofer, F. M. Steiner, B. L. Fisher, R. A. Johnson, T. D. Delsinne, D. A. Donoso, P. Ricardo Mulieri, L. D. Patitucci, J. M. Carpenter, L. Herman and D. Grimaldi. 2016. Timeless standards for species delimitation. *Zootaxa* 4137 (1): 121-128.
- Perrard, A., F. Lopez-Osorio and J. M. Carpenter. 2016. Phylogeny, landmark analysis and the use of wing venation to study the evolution of social wasps (Hymenoptera: Vespidae: Vespinae). *Cladistics* 32: 406-425. (First published online 10 September 2015; DOI: 10.1111/cla.12138)
- Perrard, A., F. Lopez-Osorio and J. M. Carpenter. 2016. Corrigendum. *Cladistics* 32: 426.
- Nguyen, L. T. P. and J. M. Carpenter. 2016. Taxonomic review of the genus *Zethus* Fabricius (Hymenoptera: Vespidae: Eumeninae) from Vietnam with descriptions of four new species. *Entomological Science* (First published online 8 July 2016; DOI: 10.1111/ens.12218; print edition 2017, 20: 24-32).
- Kumar, P. G., J. M. Carpenter and P. M. Sureshan. 2016. A taxonomic review of the genus *Antepipona* de Saussure, 1855 (Hymenoptera: Vespidae: Eumeninae) from India. *Zootaxa* 4150 (5): 501-536.
- Grandinete, Y. C., F. B. Noll and J. Carpenter. 2016. Three new species of tribe Odynerini (Hymenoptera, Vespidae, Eumeninae) from the Neotropical Region. *Zootaxa* 4162 (2): 391-400.
- Pannure, A., V. V. Belavadi and J. M. Carpenter. 2016. Taxonomic studies on potter wasps (Hymenoptera: Vespidae: Eumeninae) of south India. *Zootaxa* 4171 (1): 1-50.
- Loope, K. J. and J. M. Carpenter. 2016. *Polistes major major* and *Polistes apachus* (Hymenoptera: Vespidae) in Georgia, USA. *Florida Entomologist* 99 (3): 547-548.
- Lopez-Osorio, F., K. M. Pickett, J. M. Carpenter, B. A. Ballif and I. Agnarsson. 2016 (2017). Phylogenomic analysis of yellowjackets and hornets (Hymenoptera: Vespidae, Vespinae). *Molecular Phylogenetics and Evolution* 107: 10-15.
- Nematy, A., M. Khayrandish, E. Ebrahimi and J. M. Carpenter. 2016. First report of the paper wasp *Polistes rothneyi* Cameron (Hym.: Vespidae: Polistinae) from Iran. *Journal of Entomological Society of Iran* 36 (3): 235-237.
- Cerriaco, L. M. P., E. E. Gutiérrez, A. Dubois, *et al.* 2016. Photography-based taxonomy is inadequate, unnecessary, and potentially harmful for biological sciences. *Zootaxa* 4196

- (3): 435-445.
- Kumar, P. G., J. M. Carpenter and P. M. Sureshan. 2016. A taxonomic review of the genus *Parancistrocerus* Bequaert (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent with the description of three new species. *Halteres* 7: 136-156.
- Perrard, A., D. Grimaldi and J. M. Carpenter. 2017. Early lineages of Vespidae (Hymenoptera) in Cretaceous amber. *Systematic Entomology* 42: 379-386.
- Tan, J.-L., T. Zhou, Q.-Q. Tan, C. van Achterberg and J. M. Carpenter. 2017. Nest structure and all stages of the long-cheeked yellow jacket *Dolichovespula stigma* Lee (Hymenoptera: Vespidae), with a new synonym. *Journal of Natural History* 51 (13-14): 793-806 (First published online 24 Mar 2017; DOI: <http://dx.doi.org/10.1080/00222933.2017.1293748>).
- Dejean, A., H. Rodríguez-Pérez, J. M. Carpenter, F. Azémar and B. Corbara. 2017. The predatory behavior of the Neotropical social wasp *Polybia rejecta*. *Behavioural Processes* 140: 161-168.
- Pannure, A., V. V. Belavadi and J. M. Carpenter. 2017. A new species of the genus *Discoelius* Latreille, 1809 (Hymenoptera: Vespidae: Eumeninae) from India. *Zootaxa* 4272 (4): 583-586.
- Santos Junior, J. N. A. Dos, O. T. Silveira and J. M. Carpenter. 2017. A new species of the genus *Protopolybia* Ducke, 1905 (Hymenoptera, Vespidae, Polistinae), with taxonomic contributions to the *exigua* species-group. *Zootaxa* 4286 (3): 432-438.
- Shah, M., M. S. Khan, M. A. Rafi, H. Ahmed and J. M. Carpenter. 2017. Phylogenetic reconstruction of *Ropalida brevita* (Vespidae: Polistinae) using 12S rRNA and Cytochrome Oxidase 1 (Co1) genes. *Pakistan Journal of Zoology* 49 (4): 1535-1537.
- Nguyen, L. T. P., T. T. Vu, J. X. Q. Lee and J. M. Carpenter. 2017. Taxonomic notes on the *Polistes stigma* group (Hymenoptera, Vespidae: Polistinae) from continental Southeast Asia, with descriptions of three new species and a key to species. *Raffles Bulletin of Zoology* 65: 269-279.
- Kumar, P. G., J. M. Carpenter, L. Castro and P. M. Sureshan. 2017. A taxonomic review of the Indian species of the genus *Eumenes* Latreille (Hymenoptera: Vespidae: Eumeninae). *Zootaxa* 4317 (3): 469-498.
- Kumar, P. G., J. M. Carpenter and K. Lambert. 2017. A review of the genus *Pararrhynchium* de Saussure (Hymenoptera: Vespidae: Eumeninae) from India with the description of a new species. *Halteres* 8: 85-91.
- Kumar, P. G., J. M. Carpenter, G. Srinivasan, K. P. M. Shareef and K. Lambert. 2017. A taxonomic review of the genus *Stenodyneriellus* Giordani Soika (Hymenoptera: Vespidae: Eumeninae) from Indian Subcontinent with descriptions of two new species. *Insect Diversity and Taxonomy T.C. Narendran Commemorative Volume November 2017*: 161-190.
- Rafi, M. A., J. M. Carpenter, M. Qasim, A. Shehzad, A. Zia, M. R. Khan, M. I. Mastoi, F. Naz, M. Ilyas, M. Shah and A. R. Bhatti. 2017. The vespidae fauna of Pakistan. *Zootaxa* 4362 (1): 1-28.
- Piekarski, P. K., J. M. Carpenter and B. J. Sharanowski. 2017. New species of *Ancistrocerus* (Vespidae, Eumeninae) from the Neotropics with a checklist and key to all species south of the Rio Grande. *ZooKeys* 718: 139-154.
- Ferrer-Suay, M., J. M. Carpenter, C. Lebeau and J. Pujade-Villar. 2017. Designation of lectotypes for the Mexican species of *Andricus* described by Alfred Kinsey and comments about some generic synonymies (Hymenoptera: Cynipidae). *Entomologica Americana* 123 (1-4): 29-34.
- Kumar, P. G., L. Castro, J. M. Carpenter and A. H. Sheikh. 2017. First record of the genus *Pseudepipona* de Saussure, 1856 (Hymenoptera, Vespidae, Eumeninae) from India with the species *Pseudepipona (Pseudepipona) vicina* Gusenleitner, 1973 from the northern Himalaya. *Boletín de la Asociación Española de Entomología* 41 (3-4): 347-354.
- Qasim, M. J. M. Carpenter, M. A. Rafi, M. R. Khan and M. R. Khan. 2018. A new species of *Stenodynerus* (Hymenoptera, Vespidae, Eumeninae) from Pakistan. *Zootaxa* 4370 (3): 271-274.

- Corbara, B., P. Servigne, A. Dejean, J. M. Carpenter, F. Azémar and J. Orivel. 2018. A mimetic nesting association between a timid social wasp and an aggressive arboreal ant. *Comptes Rendus Biologies* 341: 182-188.
- Tan, J.-L., J. M. Carpenter and C. van Achterberg. 2018. Most northern Oriental distribution of *Zethus* Fabricius (Hymenoptera, Vespidae, Eumeninae), with a new species from China. *Journal of Hymenoptera Research* 62: 1-13.
- Tan, J.-L., J. M. Carpenter and C. van Achterberg. 2018. An illustrated key to the genera of Eumeninae from China, with a checklist of species (Hymenoptera, Vespidae). *ZooKeys* 740: 109-149.
- Santos Junior, J. N. A. Dos, O. T. Silveira and J. M. Carpenter. 2018. Taxonomic revision of the *Protopolybia sedula* species-group (Hymenoptera, Vespidae, Polistinae), with a new identification key to species. *Zootaxa* 4403 (1): 87-98.
- Nguyen, L. T. P., A. D. Nguyen, T. T. P. Nguyen, A. Perrard and J. M. Carpenter. 2018. Molecular phylogeny of the paper wasp subgenus *Polistes* (*Polistella*) Ashmead, 1904 (Hymenoptera: Vespidae: Polistinae) from Vietnam. *Journal of Asia-Pacific Entomology* 21: 638-644.
- Tan, J.-L., J. M. Carpenter and C. van Achterberg. 2018. Corrigenda: Tan, J.-L., J. M. Carpenter and C. van Achterberg. 2018. An illustrated key to the genera of Eumeninae from China, with a checklist of species (Hymenoptera, Vespidae). *ZooKeys* 740: 109-149. <https://doi.org/10.3897/zookeys.740.22654>. *ZooKeys* 753: 163-167.
- Kumar, P. G. and J. M. Carpenter. 2018. A taxonomic review of the genus *Vespula* Thomson (Hymenoptera: Vespidae: Vespinae) from the Indian subcontinent. *Halteres* 9: 86-110.
- Servigne, P., J. Orivel, F. Azémar, J. Carpenter, A. Dejean and B. Corbara. 2018. An uneasy alliance: a nesting association between aggressive ants and equally fierce social wasps. *Insect Science* 00: 1-11 (DOI 10.1111/1744-7917.12597)
- Tan, J.-L., C. van Achterberg, Y.-F. He and J. M. Carpenter. 2018. Northeast Asian *Allorhynchium* van der Vecht (Hymenoptera: Vespidae), with a key to Oriental species. *Zootaxa* 4434 (1): 49-64.
- Piekarski, P. K., J. M. Carpenter, A. R. Lemmon, E. Moriarty Lemmon and B. J. Sharanowski. 2018. Phylogenomic evidence overturns current conceptions of social evolution in wasps (Vespidae). *Molecular Biology and Evolution* (<https://academic.oup.com/mbe/advance-article-abstract/doi/10.1093/molbev/msy124/5040136>)
- Grandinette, Y. C., F. B. Noll and J. Carpenter. 2018. Taxonomic review of *Eumenes* Latreille, 1802 (Hymenoptera, Vespidae, Eumeninae) from the New World. *Zootaxa* 4459 (1): 1-52.
- Li, T.-J. and J. M. Carpenter. 2018. A taxonomic account of the genus *Labus* de Saussure, 1867 (Hymenoptera, Vespidae, Eumeninae) with descriptions of three new species. *Journal of Hymenoptera Research* 65: 23-46.
- Kumar, P. G., L. Castro, J. M. Carpenter and A. H. Sheikh. 2018. Additions to the knowledge of the genus *Symmorphus* Wesmael, 1836 (Hymenoptera: Vespidae: Eumeninae) in India with two new records of species. *Graellsia* 74 (2): e073.
- Pannure, A., V. V. Belavadi and J. M. Carpenter. 2018. Taxonomic notes on poorly known species of potter wasps (Vespidae: Eumeninae: Zethini) from India. *Oriental Insects* (First published online 26 Sept. 2018; DOI: <https://doi.org/10.1080/00305316.2018.1521345>)
- Somavilla, A., M. L. Oliveira, S. R. Andena and J. M. Carpenter. 2018. An illustrated atlas for male genitalia of the New World *Polistes* Latreille, 1802 (Vespidae: Polistinae). *Zootaxa* 4504 (3): 301-344.

### Popular Articles, Reviews and Abstracts

- Carpenter, J. M. 1983. Contemporary cladistics. [Review of Funk, V. A. and D. R. Brooks (eds.), *Advances in Cladistics* (New York Botanical Garden, Bronx, 1981).] *Journal of the New*

- York Entomological Society* 91 (2): 188-192.
- Menke, A. S. and J. Carpenter. 1984. *Nuclearbombus*, new subgenus (or how to eliminate bumblebee subgenera and learn to love the *Bombus*). *Bulletin of the Entomological Society of Canada* 16: 130.
- Carpenter, J. M. 1985. The clock of evolution needs repair. *Natural History* 94 (6): 6.
- Carpenter, J. M. 1985. Field guide for the Australian amateur. [Review of Goode, J., *Insects of Australia* (Angus & Robertson Publ., London, 1984).] *Bulletin of the Entomological Society of America* 31: 45-46.
- Carpenter, J. M. 1986. A mushrooming of coevolutionary studies. [Review of Wheeler, Q. D. and M. Blackwell (eds.), *Fungus-Insect Relationships: Perspectives in Ecology and Evolution* (Columbia University Press, New York, 1984).] *Bulletin of the Entomological Society of America* 32: 111-114.
- Carpenter, J. M. 1986. Robust cladistification: report on the fifth annual meeting of the Willi Hennig Society. *Cladistics* 2 (2): 187-194.
- Carpenter, J. M. 1987. A report on the Society for the Study of Evolution Workshop "Computer programs for inferring phylogenies." *Cladistics* 3 (1): 52-55.
- Carpenter, J. M. 1987. Cladistics of cladists. *Cladistics* 3 (4): 363-375.
- Carpenter, J. M. 1987. Cladistic biogeography. [Review of Humphries, C. J. and L. R. Parenti, *Cladistic Biogeography* (Clarendon Press, Oxford, 1986).] *Cladistics* 3 (4): 384-386.
- Carpenter, J. M. 1989. Editorial: DNA hybridization. *Cladistics* 5 (1): 1.
- Carpenter, J. M. 1989. Flashing wings, slashing stings. [Review of Gauld, I. and B. Bolton (eds.), *The Hymenoptera* (British Museum (Natural History), London, 1988).] *Cladistics* 5 (3): 315-317.
- Carpenter, J. M. 1989. Wing venation, rhopalosomatids and spider wasps. [Review of Day, M. C., *Spider Wasps* (R. Ent. Soc. Lond., London, 1988).] *Cladistics* 5 (3): 317-319.
- Carpenter, J. M. 1992. Incidit in Scyllam qui vult vitare Charybdim. [Review of Brooks, D. R. and D. A. McLennan, *Phylogeny, Ecology and Behavior* (University of Chicago Press, Chicago, 1991).] *Cladistics* 8 (1): 100-102.
- Carpenter, J. M. 1992. Comparing Methods. [Review of Harvey, P. H. and M. D. Pagel, *The Comparative Method in Evolutionary Biology* (Oxford University Press, Oxford, 1991).] *Cladistics* 8 (2): 191-195.
- Carpenter, J. M. 1994. [Review of Itô, Y., *Behaviour and Social Evolution of Wasps: The Communal Aggregation Hypothesis* (Oxford University Press, Oxford, 1993).] *Journal of the New York Entomological Society* 102 (3): 387-389.
- Brooks, D. R., D. A. McLennan, J. M. Carpenter, S. G. Weller and J. A. Coddington. 1995. Systematics, ecology, and behavior. *Bioscience* 45 (10): 687-695.
- Carpenter, J. M. and K. C. Nixon. 1997. Abstract: On consensus, collapsibility and clade concordance. *Cladistics* 13 (1-2): 167.
- Schmidt, J. O., A. E. Eno and J. M. Carpenter. 1999. Are we as toxinologists overlooking vouchers? *Toxicon* 38: 321-322.
- Carpenter, J. M. 2002. Abstract: A critique of pure folly. *Cladistics* 18 (2): 219.
- Nixon, K. C. and J. M. Carpenter. 2002. Abstract: Morphological data and identification. *Proceedings of the XIV International Congress of International Union for the Study of Social Insects*: 88. Hokkaido University, Sapporo.
- Carpenter, J. M. and E. P. Perera. 2002. Abstract: Phylogenetic Relationships among Yellowjackets and the Evolution of Social Parasitism (Hymenoptera: Vespidae,

- Vespinæ). *Proceedings of the XIV International Congress of International Union for the Study of Social Insects*: 153. Hokkaido University, Sapporo.
- Carpenter, J. M. 2003. Iquitos Peru. *Natural History* 112 (4A): 79.
- Polaszek, A., E. O. Wilson and J. M. Carpenter. 2004. Long live Linnaeus. *New Scientist* 184 (2469): 22.
- Carpenter, J. M. 2005. Editorial. *Cladistics* 21 (1): 1.
- Carpenter, J. M. 2006. Editorial. *Cladistics* 22 (2): 101.
- Carpenter, J. M. 2010. Abstract: Assembling the Tree of Life for Hymenoptera. *Cladistics* 26 (2): 205.
- Gambino, P. and J. Carpenter. 2011. Abstract: A review of the biology of social wasps in the Hawaiian Islands. *2011 Hawai'i Conservation Conference, Island Ecosystems: The year of the forest*: 28. Hawai'i Conservation Alliance, Honolulu.
- Engel, M. S., J. M. Carpenter and J. W. Wenzel. 2012. In Memoriam: Kurt Milton Pickett (1972-2011). *Journal of the Kansas Entomological Society* 85 (1): 84-88.
- Corbara, B., J. M. Carpenter and A. Dejean. 2017. Des fourmis et des guêpes: les liaisons dangereuses. *Espèces* 25: 26-33.

### Other Electronic Media

- Marques, O. M., J. M. Carpenter and A. Raw. 2000. Bibliografia sobre gêneros de Vespidae (Insecta, Hymenoptera, Vespoidea) registrados no Brasil. <http://www.oton.hpg.ig.com.br/Bibvespa.htm>; also available on CD-ROM.
- Carpenter, J. M. and O. M. Marques. 2001. Contribuição ao estudo dos vespídeos do Brasil. (Insecta, Hymenoptera, Vespoidea, Vespidae). Versão 1.0. Universidade Federal da Bahia Publicações Digitais 2.

### Eponymy

- APIDAE: Apinae; Meliponini  
*Lisotrigona carpenteri* Engel, 2000
- BETHYLIDAE: Pristocerinae  
*Trichiscus jimi* Azevedo, 2014
- VESPIDAE: Eumeninae  
*Euodynerus (Euodynerus) jimcarpenteri* Genaro, 2004  
*Pachodynerus carpenteri* Willink and Roig-Alsina, 1998  
*Pararhaphidoglossa carpenteri* Cooper, 2013  
*Pareumenes (Pareumenoides) carpenteri* Gusenleitner, 2012  
*Pseudalastor carpenteri* Borsato, 2003  
*Pseudodynerus carpenteri* Hermes and Melo, 2008  
*Zethus (Zethoides) carpenteri* Stange, 1997
- VESPIDAE: Masarinae  
*Quartinia carpenteri* Gess, 2012
- VESPIDAE: Stenogastrinae

*Parischnogaster carpenteri* Selis, 2018