

## **Kenneth G. Karol**

The Lewis B. and Dorothy Cullman Program for  
Molecular Systematics Studies  
The New York Botanical Garden  
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### **Education**

Ph.D., Plant Biology. 2004. University of Maryland, College Park, MD  
Bachelor of Science, Botany. 1992. University of Wisconsin, Madison, WI

### **Professional Experience**

*Associate Curator*. 2014-Present. Cullman Program, The New York Botanical Garden, Bronx, NY  
*Adjunct Associate Professor*. 2008-Present. Biological Sciences, Fordham University, Bronx, NY  
*Guest Faculty*. 2008-Present. Biology, Sarah Lawrence College, Bronxville, NY  
*Doctoral Faculty*. 2007-Present. City University of New York, Plant Sciences Ph.D. Subprogram, Lehman College, Bronx, NY  
*Assistant Curator*. 2007-2014. Cullman Program, The New York Botanical Garden, Bronx, NY  
*Chair - Phycological Section, Botanical Society of America*. 2006-2009.  
*Postdoctoral Fellow*. 2006-2007. National Institutes of Health - National Research Service Award, Genomics/Biology, University of Washington, Seattle, WA  
*LBNA Guest Researcher*. 2005-2008. Department of Energy Joint Genome Institute, Walnut Creek, CA  
*Research Associate (post-doc)*. 2004-2006. US National Science Foundation Tree of Life Program, Biology, University of Washington, Seattle, WA  
*Graduate Student*. 1998-2004. Cell Biology and Molecular Genetics, University of Maryland, College Park, MD  
*Research Assistant*. 1999-2003. US National Science Foundation PEET Program, University of Maryland, College Park, MD  
*Graduate Admissions Committee*. 2001 & 2002. Cell Biology and Molecular Genetics, University of Maryland, College Park, MD  
*Executive Committee*. 1999-2000. Green Plant Phylogeny Research Coordination Group  
*Biological Research Technician*. 1997-1998. Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution, Washington, DC  
*Contract Researcher*. 1997. Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution, Smithsonian Institution, Washington, DC  
*Research Technician*. 1993-1996. Biological Sciences, DePaul University, Chicago, IL  
*Visiting Scientist*. 1995. Paleobotany, Université des Sciences et Techniques du Languedoc, Montpellier, France  
*Research Technician III*. 1993. Zoology, University of Wisconsin-Madison, Madison, WI  
*Research Technician II*. 1991-1993. Botany, University of Wisconsin-Madison, Madison, WI

### **Teaching Experience**

*Guest Faculty*. 2015. Plant Systematics and Evolution, Biology 3128R1. Sarah Lawrence College, Bronxville, NY  
*Guest Faculty*. 2014. Principles of Botany, Biology 3121R1. Sarah Lawrence College, Bronxville, NY  
*Guest Faculty*. 2013. Plant Systematics and Evolution, Biology 3128R. Sarah Lawrence College, Bronxville, NY  
*Guest Faculty*. 2012. Principles of Botany, Biology 3121R1. Sarah Lawrence College, Bronxville, NY  
*Guest Faculty*. 2011. Principles of Botany, Biology 3121R. Sarah Lawrence College, Bronxville, NY

*Guest Faculty*. 2011. Phylogenetic and Morphological Analysis of *Nitella flexilis* L., Biology 4002S (Heather Meyer, Senior Thesis). Sarah Lawrence College, Bronxville, NY

*Guest Faculty*. 2011. Molecular Phylogenetics of *Chara*: Sections *Chara* and *Desvauxia*, Biology 6404W (Julia Maritz, Independent Study). Sarah Lawrence College, Bronxville, NY

*Guest Faculty*. 2010. Molecular Systematics of a Cosmopolitan Green Algae Species Complex, Biology 6401W (Julia Maritz, Independent Study). Sarah Lawrence College, Bronxville, NY

*Guest Faculty*. 2009. Biodiversity and Seed Saving, Biology 6702I (Annabelle Dennis, Independent Study). Sarah Lawrence College, Bronxville, NY

*Guest Faculty*. 2009. Principles of Botany, Biology 3815R. Sarah Lawrence College, Bronxville, NY

*Guest Faculty*. 2008. Principles of Botany, Biology 3709R. Sarah Lawrence College, Bronxville, NY

*Guest Lecturer*. 2006. Inferring Phylogenies, Genetics 570 (Instructor: J. Felsenstein). University of Washington, Seattle, WA

*Guest Lecturer*. 2006. Phycology: Introduction to Algae, Biology 446 (Instructors: R.J. Waaland & R.A. Cattolico). University of Washington, Seattle, WA

*Graduate Teaching Assistant*. 1998-1999. Plant Biology 101, University of Maryland, College Park, MD

*Instructor*. 1998. Segundo Curso en Técnicas de Genética Molecular para la Conservación y Uso de la Biodiversidad, Centro Internacional de Agricultura Tropical (CIAT), Palmira, Colombia

*Teaching Assistant*. 1996. Phycology 361/461, DePaul University, Chicago, IL

*Undergraduate Independent Research Mentor*. 1998-2003. University of Maryland, College Park, MD

## Awards and Honors

*Sarah K. deCoizart Perpetual Charitable Trust*. 2014-2015. Starry Stonewort: Assessing the Threat of an Invasive Freshwater Macro-alga in the Northeast, \$100,000. The New York Botanical Garden, Bronx, NY

*NSF Research Grant DBI-1348920*. 2014-2016. CSBR: Expansion of the New York Botanical Garden Herbarium to Incorporate Newly Acquired Specimens and Improve Curation, \$479,475; with Principal Investigator Barbara M. Theirs and Co-Principal Investigators Roy E. Halling, Andrew Henderson and James Lendemer. The New York Botanical Garden, Bronx, NY

*NSF Research Grant EF-1304933*. 2013-2017. Digitization TCN: Collaborative Research: The Macroalgal Herbarium Consortium: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment, \$3,200,000 (\$694,370 to Co-PI Karol); forty-nine institutions, Principal Investigator Christopher D. Neefus (NHA) plus 5 collaborative proposals (MICH, NCU, NY, UC, WTU). The New York Botanical Garden, Bronx, NY

*NSF REU Site Grant DBI-1063076*. 2011-2017. REU Site: Calder Summer Undergraduate Research (CSUR) Program in Conservation and Urban Ecology, \$207,058; Senior Personnel with Principal Investigator John D. Wehr and Co-Principal Investigator James D. Lewis. Fordham University, Bronx, NY

*NSF Research Grant DEB-1036466*. 2010-2015. ATOL: Collaborative Research: Assembling the Green Algal Tree of Life (GrAToL), \$2,706,890 (\$561,000 to PI Karol); with Co-Principal Investigators Charles F. Delwiche, Louise A. Lewis, Paul O. Lewis, Juan M. Lopez-Bautista and Richard M. McCourt. The New York Botanical Garden, Bronx, NY

*NSF Research Grant DEB-1020660*. 2010-2015. Collaborative Research: Phylogeny and Systematics of the Characeae (Charales), \$445,000 (\$415,000 to PI Karol); with Co-Principal Investigator Richard M. McCourt. The New York Botanical Garden, Bronx, NY

*The Yosemite Fund*. 2008-2009. Unusual Lake Floras, \$174,526 (\$14,800 to K.G. Karol). The New York Botanical Garden, Bronx, NY

*National Institutes of Health - National Research Service Award*. 2006-2007. Genomics/Biology, University of Washington, Seattle, WA

*AAAS/Science Sponsored Membership*. 2004-2006. AAAS/Science Program for Excellence in Science. Nominated by the Dean of the Graduate School, University of Washington, Seattle, WA

*Graduate School Dean's Fellowship*. 2002-2003. University of Maryland, College Park, MD

*College Travel Award*. 2001, 2002. University of Maryland, College Park, MD

*Jacob K. Goldhaber Travel Award*. 2000. University of Maryland, College Park, MD

*Hoshaw Travel Award - Phycological Society of America*. 2000. San Diego, CA

*National Museum of Natural History Graduate Fellowship*. 1999. Smithsonian Institution, Washington, DC

*International Botanical Congress - Green Plant Phylogeny Research Coordination Group Travel Award*. 1999.

*Cell Biology and Molecular Genetics Outstanding Teaching Assistant*. 1998-1999. University of Maryland, College Park, MD

*Personal Recognition for Ingenuity, Drive and Excellence (PRIDE) Award*. 1998. Smithsonian Institution, Washington, DC

*Visiting Fellowship*. February-March 1996. University of New South Wales, Sydney, Australia.

*University Bookstore Academic Excellence Award*. 1991-1992. University of Wisconsin, Madison, WI

*US National Science Foundation - Research Experience for Undergraduates, Systematics*. 1990, 1992. (PIs, T.J. Givnish & K.J. Sytsma), University of Wisconsin, Madison, WI

# **Publications — Peer Reviewed Journals (\*contributed equally to this work)**

- Pérez, W., J.D. Hall, R.M. McCourt & K.G. Karol. 2014. Phylogeny of North American *Tolypella* (Charophyceae, Charophyta) based on plastid DNA sequences with a description of *Tolypella ramosissima* sp. nov. *J. Phycol.* 50: 776-789.
- Casanova, M.T. & K.G. Karol. 2014. A revision of ecorticate species of *Chara* (subg. *Charopsis*, sect. *Protochara* (Womersley and Ophel) Casanova and K.G. Karol, *comb. et stat. nov.*) (Characeae: Charophyceae). *Aust. Syst. Bot.* 27: 23-27.
- Meyer, R.S., S. Knapp, K.G. Karol, D.P. Little, M.H. Nee & A. Litt. 2013. Reply to J. Samuels: Taxonomic notes on several wild relatives of *Solanum melongena* L. *Mol. Phylo. Evol.* 69: 306-307.
- Zimmer, E.A., Y. Suh & K.G. Karol. 2012. Phylogenetic placement of a recently described taxon in the genus *Pleodendron* (Canellaceae). *Phytologia*, 94: 400-408.
- Meyer, R.S., K.G. Karol, D.P. Little, M.H. Nee & A. Litt. 2012. Phylogeographic relationships among Asian eggplants and new perspectives on eggplant domestication. *Mol. Phylo. Evol.* 63: 685-701.
- Banks, J., T. Nishiyama, M. Hasebe, J.L. Bowman, M. Gribskov, C. dePamphilis, V.A. Albert, N. Aono, T. Aoyama, B.A. Ambrose, N.W. Ashton, M.J. Axtell, E. Barker, M.S. Barker, J.L. Bennetzen, N.D. Bonawitz, C. Chapple, C. Cheng, L.G.G. Correa, M. Dacre, J. DeBarry, I. Dreyer, M. Elias, E.M. Engstrom, M. Estelle, L. Feng, C. Finet, S.K. Floyd, W.B. Frommer, T. Fujita, L. Gramzow, M. Gutensohn, J. Harholt, M. Hattori, A. Heyl, T. Hirai, Y. Hiwatashi, M. Ishikawa, M. Iwata, K.G. Karol, B. Koehler, U. Kolukisaoglu, M. Kubo, T. Kurata, S. Lalonde, K. Li, Y. Li, A. Litt, E. Lyons, G. Manning, T. Maruyama, T.P. Michael, K. Mikami, S. Miyazaki, S-I. Morinaga, T. Murata, B. Mueller-Roeber, D.R. Nelson, M. Obara, Y. Oguri, R.G. Olmstead, N. Onodera, B.L. Petersen, B. Pils, M. Prigge, S.A. Rensing, D.M. Riaño-Pachón, A.W. Roberts, Y. Sato, H.V. Scheller, B. Schulz, C. Schulz, E.V. Shakhov, N. Shibagaki, N. Shinohara, D.E. Shippen, I. Sørensen, R. Sotooka, N. Sugimoto, M. Sugita, N. Sumikawa, M. Tanurdzic, G. Theißen, P. Ulvskov, S. Wakazuki, J-K. Weng, W.W.G.T. Willats, D. Wipf, P.G. Wolf, L. Yang, A.D. Zimmer, Q. Zhu, T. Mitros, U. Hellsten, D. Loqué, R. Otilar, A. Salamov, J. Schmutz, H. Shapiro, E. Lindquist, S. Lucas, D. Rokhsar & I. Grigoriev. 2011. The *Selaginella* genome identifies genetic changes associated with the evolution of vascular plants. *Science*, 332: 960-963.
- Hall, J.D., K. Fučíková, C. Lo, L.A. Lewis & K.G. Karol. 2010. Assessing proposed DNA barcodes in the green algae. *Cryptogamie: Algol.*, 31: 529-555.
- Karol, K.G., K. Arumuganathan, J.L. Boore, A.M. Duffy, K.D.E. Everett, J.D. Hall, S.K. Hansen, J.V. Kuehl, D.F. Mandoli, B.D. Mishler, R.G. Olmstead, K.S. Renzaglia & P.G. Wolf. 2010. Complete plastome sequences of *Equisetum arvense* and *Isoetes flaccida*: implications for phylogeny and plastid genome evolution of early land plant lineages. *BMC Evol. Biol.*, 10:321.

- Karol, K.G., M.A. Jacobs, Y. Zhou, E.H. Sims, W.D. Gillett & R.A. Cattolico. 2010. Comparative analysis of complete mitochondrial genome sequences from two geographically distinct *Heterosigma akashiwo* (Raphidophyceae) strains. *Nova Hedwigia*, 136: 261-282.
- Oliver, M.J., A.G. Murdock, B.D. Mishler, J.V. Kuehl, J.L. Boore, D.F. Mandoli, K. Everett, P.G. Wolf & K.G. Karol. 2010. Chloroplast genome sequence of the moss *Tortula ruralis*: gene content, polymorphism, and structural arrangement relative to other green plant chloroplast genomes. *BMC Genomics*, 11:143.
- Casanova, M.T. & K.G. Karol. 2008. Monoecious *Nitella* species (Characeae, Charophyta) from south-eastern mainland Australia including *Nitella paludigena* sp. nov. *Aust. Syst. Bot.* 21: 201-216.
- Hall, J.D., K.G. Karol, R.M. McCourt & C.F. Delwiche. 2008. Phylogeny of the conjugating green algae based on chloroplast and mitochondrial nucleotide sequence data. *J. Phycol.*, 44: 467-477.
- Duplessis\*, M.R., K.G. Karol\*, E.T. Adman, L.Y.S. Choi, M.A. Jacobs & R.A. Cattolico. 2007. Chloroplast His-to-Asp signal transduction: a potential mechanism for plastid gene regulation in *Heterosigma akashiwo* (Raphidophyceae). *BMC Evol. Biol.*, 7:70.
- Casanova, M.T., M.D. de Winton, K.G. Karol & J.S. Clayton. 2007. *Nitella hookeri* A. Braun (Characeae, Charophyta) in New Zealand and Australia: implications for endemism, speciation and biogeography. *Charophytes*, 1: 2-18.
- Roper, J., S.K. Hanson, P.G. Wolf, K.G. Karol, D.F. Mandoli, K.D.E. Everett, J. Kuehl & J.L. Boore. 2007. The complete plastid genome sequence of *Angiopteris evecta* (G. Forst.) Hoffm. *Amer. Fern J.*, 97: 95-106.
- Hausner, G., R. Olsen, I. Johnson, D. Simon, E.R. Sanders, K.G. Karol, R.M. McCourt & S. Zimmerly. 2006. Origin and evolution of the chloroplast *trnK* (*matK*) intron: a model for evolution of group II intron RNA structures. *Mol. Biol. Evol.*, 23: 380-391.
- Drummond, C.S., J. Hall, K.G. Karol, C.F. Delwiche & R.M. McCourt. 2005. Phylogeny of *Spirogyra* and *Sirogonium* (Zygnematomyceae) based on *rbcL* sequence data. *J. Phycol.*, 41: 1055-1064.
- Wolf, P.G., K.G. Karol, D.F. Mandoli, J. Kuehl, K. Arumuganathan, M.W. Ellis, B.D. Mishler, D.G. Kelch, R.G. Olmstead & J.L. Boore. 2005. The first complete chloroplast genome sequence of a lycophyte, *Huperzia lucidula* (Lycopodiaceae): implications for land plant phylogeny. *Gene*, 350: 117-128.
- McCourt, R.M., C.F. Delwiche & K.G. Karol. 2004. Charophyte algae and land plant origins. *TREE* 19: 661-666.
- Sanders, E.R., K.G. Karol & R.M. McCourt. 2003. Occurrence of *matK* in a *trnK* group II intron in charophyte green algae, and phylogeny of the Characeae. *Amer. J. Bot.*, 90: 628-633.
- Whitlock, B.A., K.G. Karol & W.S. Alverson. 2003. Chloroplast DNA sequences confirm the placement of the enigmatic *Oceanopapaver* within Grewioideae (Malvaceae s.l., formerly Tiliaceae). *Int. J. Plant Sci.*, 64: 35-41.
- Delwiche, C.F., K.G. Karol, M.T. Cimino & K.J. Sytsma. 2002. Phylogeny of the genus *Coleochaete* and related taxa based on the chloroplast gene *rbcL*. *J. Phycol.*, 38: 394-403.
- Karol, K.G., R.M. McCourt, M.T. Cimino & C.F. Delwiche. 2001. The closest living relatives of land plants. *Science*, 294: 2351-2353.
- Karol, K.G., Y. Suh, G.E. Schatz & E.A. Zimmer. 2000. Molecular evidence for the phylogenetic position of *Takhtajania* in the Winteraceae: inference from nuclear ribosomal and chloroplast gene spacer sequences. *Ann. Mo. Bot. Gard.*, 87: 414-432.
- McCourt, R.M., K.G. Karol, J. Bell, M.F. Wojciechowski, K. Helm-Bychowski, A. Grajewska, N. Park & R.W. Howshaw. 2000. Phylogeny of the Zygnematales and Desmidiaceae (Chlorophyta: Charophyceae) based on *rbcL* sequences. *J. Phycol.*, 36: 747-758.
- Cimino, M.T., K.G. Karol & C.F. Delwiche. 2000. An artifact in the SSU rDNA sequence of *Chaetosphaeridium globosum* (Chlorophyta: Charophyceae). *J. Phycol.*, 36: 440-442.
- Karol, K.G., J.E. Rodman, E. Conti & K.J. Sytsma. 1999. Nucleotide sequence of *rbcL* and phylogenetic relationships of *Setchellanthus caeruleus* (Setchellanthaceae). *Taxon*, 48: 303-315.
- McCourt, R.M., K.G. Karol, M.T. Casanova & M. Feist. 1999. Monophyly of genera and species of Characeae based on *rbcL* sequences, with special reference to Australian and European *Lychnothamnus barbatus* (Characeae: Charophyceae). *Aust. J. Bot.*, 47 361-369.

- Rodman, J.E., P.S. Soltis, D.E. Soltis, K.J. Sytsma & K.G. Karol. 1998. Parallel evolution of glucosinolate biosynthesis inferred from congruent nuclear and plastid gene phylogenies. *Amer. J. Bot.*, 85: 997-1006.
- Alverson, W.S., K.G. Karol, D.A. Baum, M.W. Chase, S.M. Swensen, R.M. McCourt & K.J. Sytsma. 1998. Circumscription of the Malvales and relationships to other Rosids: evidence from *rbcL* sequence data. *Amer. J. Bot.*, 85: 876-887.
- Morton, C.M., S.C. Mori, G.T. Prance, K.G. Karol & M.W. Chase. 1997. Phylogenetic relationships of Lecythidaceae: A cladistic analysis using *rbcL* sequence and morphological data. *Amer. J. Bot.*, 84: 530-540.
- Morton, C.M., K.G. Karol & M.W. Chase. 1997. Taxonomic affinities of *Physena* (Physenaceae) and *Asteropeia* (Theaceae). *Bot. Rev.*, 63: 231-239.
- Park, N.E., K.G. Karol & R.M. McCourt. 1996. Phylogeny of *Gonatozygon* and *Genicularia* (Gonatozygaceae, Desmiales) based on *rbcL* sequences. *Eur. J. Phyco.*, 31: 309-313.
- Rodman, J.E., K.G. Karol, R.A. Price & K.J. Sytsma. 1996. Molecules, morphology, and Dahlgren's expanded order Capparales. *Syst. Bot.*, 21: 289-307.
- McCourt, R.M., K.G. Karol, M. Guerlesquin & M. Feist. 1996. Phylogeny of extant genera in the family Characeae (Charales, Charophyceae) based on *rbcL* sequences and morphology. *Amer. J. Bot.*, 83: 125-131.
- McCourt, R.M., K.G. Karol, S. Kaplan & R.W. Hoshaw. 1995. Using *rbcL* sequences to test hypotheses of chloroplast and thallus evolution in conjugating green algae (Zygnematales; Charophyceae). *J. Phycol.*, 31: 989-995.
- Rodman, J.E., K.G. Karol, R.A. Price, E. Conti & K.J. Sytsma. 1993. Nucleotide sequences of *rbcL* confirm the capparalean affinity of the Australian endemic Gyrostemonaceae. *Aust. Syst. Bot.*, 7: 57-69.
- Rodman, J.E., R.A. Price, K.G. Karol, E. Conti, K.J. Sytsma & J. Palmer. 1993. Nucleotide sequences of the *rbcL* gene indicate monophyly of mustard oil plants. *Ann. Mo. Bot. Gard.*, 80: 686-699.
- Chase, M.W., D.E. Soltis, R.G. Olmstead, D. Morgan, D.H. Les, B.D. Mishler, M.R. Duvall, R.A. Price, H.G. Hills, Y. Qiu, K.A. Kron, J.H. Rettig, E. Conti, J.D. Palmer, J.R. Manhart, K.J. Sytsma, H.J. Michaels, W.J. Kress, K.G. Karol, W.D. Clark, M. Hedren, B.S. Gaut, R.K. Jensen, K. Kim, C.F. Wimpee, J.F. Smith, G.R. Furnier, S.H. Strauss, Q. Xiang, G.M. Plunkett, P.M. Soltis, S. Swensen, S.E. Williams, P.A. Gadek, C.J. Quinn, L.E. Eguiarte, E. Golenberg, G.H. Learn, Jr., S.W. Graham, S.C.H. Barrett, S. Dayanandan & V.A. Albert. 1993. Phylogenetics of seed plants: an analysis of nucleotide sequences from the plastid gene *rbcL*. *Ann. Mo. Bot. Gard.*, 80: 528-580.
- Gadek, P.A., C.J. Quinn, J.E. Rodman, K.G. Karol, E. Conti, R.A. Price & E.S. Fernando. 1992. Affinities of the Australian endemic Akaniaceae: New evidence from *rbcL* sequences. *Aust. Syst. Bot.*, 5: 717-724.

## **Publications — Book Chapters**

- Hall, J.D., L.A. Lewis, R.M. McCourt, C.F. Delwiche, B.D. Mishler & K.G. Karol. Chlorophyta, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Mishler, B.D., J.D. Hall, R.M. McCourt, K.G. Karol, C.F. Delwiche & L.A. Lewis. Viridiplantae, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Karol, K.G., R.M. McCourt, B.D. Mishler, C.F. Delwiche & J.D. Hall. Charophyta, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Hall J.D., R.M. McCourt, C.F. Delwiche, B.D. Mishler & K.G. Karol. Phragmoplastophyta, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Karol, K.G., R.M. McCourt & J.D. Hall. Charophyceae, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Delwiche, C.F., K.G. Karol & J.D. Hall. Coleochaetophyceae, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Hall, J.D., C.F. Delwiche & K.G. Karol. Klebsormidiophyceae, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)

- Hall, J.D., R.M. McCourt & K.G. Karol. Zygnematophyceae, in: *Phylonyms: a Companion to the PhyloCode*, pp. xx-xx. de Queiroz, K., P.D Cantino & J. Gauthier (eds.). University of California Press, Berkeley. (accepted)
- Wolf, P.G & K.G. Karol. 2012. Plastomes of bryophytes, lycophytes and ferns, in: *Advances in Photosynthesis and Respiration. Vol. "Genomics of chloroplasts and mitochondria,"* Vol. 35, pp. 89-102. Bock, R. & V. Knoop (eds.). Springer, Dordrecht.
- Karol, K.G. & M.T. Casanova. 2007. Klebsormidiales, Coleochaetales and other early diverging lineages of the Charophyta, in: *Algae of Australia: Introduction*, pp. 356-362. McCarthy, P.M. & A.E. Orchard (eds.). Australian Biological Resources Study, Canberra; CSIRO Publishing, Melbourne.
- Feist, M., N. Grambast-Fessard, M. Guerlesquin, K.G. Karol, H.-N. Lu, R.M. McCourt, Q.-F. Wang & S.-Z. Zhang. 2005. Protista (Charophyta). in: *Treatise on Invertebrate Paleontology*, Part B, Vol. 1. Geological Society of America and the University of Kansas Press.
- Chapman, R.L., M.A. Buchheim, C.F. Delwiche, T. Friedl, V.A.R. Huss, K.G. Karol, L.A. Lewis, J. Manhart, R.M. McCourt, J.L. Olsen & D.A. Waters. 1998. Molecular systematics of the green algae, in: *Molecular Systematics of Plants II*, pp. 508-540. Soltis, D.E., P.S. Soltis & J.J. Doyle (eds.). Kluwer Academic Publishers, Boston.
- McCourt, R.M., S.T. Meiers, K.G. Karol & R.L. Chapman. 1996. Molecular systematics of the Charales, in: *Cytology, Genetics and Molecular Biology of the Algae*, pp. 323-336. Chaudhary, B.R. & S.B. Agrawal (eds.). SPB Academic Publishing, Amsterdam.

### Invited Papers

- Karol, K.G. 2014. From collections to clades: Insights into the evolution of green plants. *Botany Seminar Series*, The New York Botanical Garden, Bronx, NY
- Karol, K.G. 2013. From collections to clades: Insights into the evolution of green plants. *Botany Seminar Series*, National Museum of Natural History, Smithsonian Institution, Washington, DC
- Karol, K.G. 2011. Genes and genomes: What they reveal about freshwater green algal diversity and early land plant evolution. *Appalachian Laboratory Seminar Series*, University of Maryland Center for Environmental Science, Frostburg, MD
- Karol, K.G. 2010. Genes and genomes: What they reveal about the evolution of green plants. *Harvard University Herbaria Seminar Series*, Harvard University, Cambridge, MA
- Karol, K.G. 2009. Genes, gyrogonites and genomes: What they reveal about the evolution of green plants. University of Buffalo, Buffalo, NY
- Karol, K.G. 2008. Genes, gyrogonites and genomes: What they reveal about the evolution of green plants. Lehman College CUNY, Bronx, NY
- Karol, K.G. 2007. Genes, gyrogonites and genomes: What they reveal about the evolution of green plants. University of Washington, Seattle, WA
- Karol, K.G. 2004. Phylogenetic studies in the Characeae: the closest living relatives of land plants. University of California, Berkeley, CA
- Karol, K.G. 2002. Phylogenetic studies in the Characeae: the closest living relatives of land plants. *Harvard University Herbaria Seminar Series*, Harvard University, Cambridge, MA
- Karol, K.G., McCourt, R.M., Feist, M. & C.F. Delwiche. 2002. Estimating divergence times within the Charophyta: a Bayesian approach using fossil and DNA sequence data. *Green Algal Conquests of the Land: Many Conquests, One Victory?* Botany 2002, PSA Symposium, Madison, WI
- McCourt, R.M., Karol, K.G. & C.F. Delwiche. 2002. The roots of land plants: recent research on early-diverging lineages in the evolution of higher drier algae. *Green Algal Conquests of the Land: Many Conquests, One Victory?* Botany 2002, PSA Symposium, Madison, WI
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- Karol, K.G., R.M. McCourt, V. Proctor, M. Feist & C.F. Delwiche. 2000. Preliminary molecular analyses of tribe Nitelleae (Characeae) using *rbcL* sequence data. *The Third International Symposium on Extant and Fossil Charophytes*, Nanjing, Peoples Republic of China

## Postdoctoral Fellow

Hall, J.D., 2008-2011. Cullman Postdoctoral Fellow, The New York Botanical Garden, Bronx, NY

## Graduate Students

*Ph.D. Advisor* - Sleith, R.S., 2013-Present. City University of New York, Bronx, Plant Sciences Ph.D. Subprogram, Lehman College, Bronx, NY. Currently developing his Ph.D. project.

*Ph.D. Committee Member* - Whorley, S., 2013-Present. Anthropogenic effects on stream periphyton. Fordham University, Bronx, NY. Currently working on her Ph.D.

*Ph.D. Co-Advisor* - Wang, X., 2014. Organellar genome evolution and phylogeographic relationships among populations of freshwater brown algae: *Heribaudiella fluviatilis*, *Bodanella lauterborni* and *Pleurocladia lacustris*. Fordham University, Bronx, NY.

*Ph.D. Advisor* - Pérez, W., 2014 (M.Phil. 2010). A Systematic revision of North American *Tolypella* A. Braun (Charophyceae, Charophyta). City University of New York, Bronx, Plant Sciences Ph.D. Subprogram, Lehman College, Bronx, NY.

## Research Technicians

Havens, A.J., 2014-Present. deCoizart-Field Technician. Cullman Program, The New York Botanical Garden, Bronx, NY

Stewart, R.A., 2014-Present. deCoizart-Field Technician. Cullman Program, The New York Botanical Garden, Bronx, NY

Cavaliere, D.J., 2014-Present. NSF-Systematics Research Technician. Cullman Program, The New York Botanical Garden, Bronx, NY

Tiernan, N.M., 2014. NSF-Systematics Research Technician. Cullman Program, The New York Botanical Garden, Bronx, NY

Sleith, R.S., 2010-2012. NSF-Systematics Research Technician. Cullman Program, The New York Botanical Garden, Bronx, NY

Hancock, L.P., 2010-2012. NSF-Tree of Life Research Technician. Cullman Program, The New York Botanical Garden, Bronx, NY

## Undergraduate Students, Interns and Volunteers

Sanches, M.C., 2014-Present. NYBG Volunteer. Student at New York University, New York, NY

Perfect, E., 2014-Present. NYBG Volunteer. The School of Visual Arts – New York, postgraduate, New York, NY

Kahn, B.C.M., 2014. NYBG Volunteer. Student at Sarah Lawrence College, Bronxville, NY

Min, E., 2013-Present. NYBG Volunteer. Student at Sarah Lawrence College, Bronxville, NY

Porence, K., 2013. NSF-REU Calder Summer Undergraduate Research Fellow. Student at Juniata College, Huntingdon, PA

Janis, J.A., 2012-Present. NYBG Intern. Student at Sarah Lawrence College, Bronxville, NY

Stewart, R.A., 2012-Present. NYBG Intern. Student at Sarah Lawrence College, Bronxville, NY

Ospina, S.C., 2011. NYC Alliance Bridge to Doctorate Intern, New York, NY

Peavey, T.M., 2010-2011. NYBG Intern. Student at Fordham University, Bronx, NY

Eliach, A.M., 2010. NYBG Intern. Student at Sarah Lawrence College, Bronxville, NY

Maritz, J.M., 2009-2012. NYBG Intern. Student at Sarah Lawrence College, Bronxville, NY

Dennis, A.C., 2009. NYBG Intern. Student at Sarah Lawrence College, Bronxville, NY

Meyer, H.M., 2008-2011. NYBG Intern. Student at Sarah Lawrence College, Bronxville, NY

Cusumano, L.R., 2008-2009. NYBG Everett Intern. Student at Fordham University, Bronx, NY

## Public Service

*Appointed Member - Phycological Society of America Education Committee. 2012-Present.*

*Subject Editor – PhytoKeys. 2010-Present.*

*Advisory Board – Assembling the Heterokont Tree of Life. 2007-2012.*

*Student Award Judge – Phycological Society of America Annual Meeting, Honolulu HI. 2009.*

Reviewer of manuscripts and grant proposals – *Annals of Botany, Brittonia, European Journal of Phycology, Evolution, International Journal of Plant Sciences, Journal of Phycology, Molecular Biology and Evolution, Molecular Phylogenetics and Evolution, Phycologia, Systematic Biology*, and the US National Science Foundation (panelist and *ad hoc*).