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APPOINTMENTS

Professor in Practice (July 2013–present), Department of Ecology and Evolutionary Biology, Rice University, Houston, TX
Lecturer and Laboratory Coordinator (Oct 2009–July 2013), Department of Ecology and Evolutionary Biology, Rice University, Houston, TX
Research Collaborator (Nov 15, 2009–present), National Museum of Natural History, Smithsonian Institution, Washington, DC.
Resident Associate (July 2010–present), Baker College, Rice University, Houston, TX
Visiting Scientist (Sept 2007–Sept 2009), Department of Entomology, National Museum of Natural History, Smithsonian Institution, Washington, DC.

PREPARATION

NSF International Research Fellow (Dec 2008- Sept 2009), Department of Entomology, Smithsonian Institution, Washington, DC. Host: Ted R. Schultz, Ph.D.; (Nov 2007- Nov 2008) Universidade Estadual Paulista, Rio Claro, São Paulo, Brazil. Host: Mauricio Bacci, Jr., Ph.D.
Ph.D. in Ecology, Evolution, and Behavior, The University of Texas at Austin, Aug. 2007
Dissertation Title: *Biogeography and evolution of widespread leafcutting ants,* Atta *spp. (Formicidae, Attini)* Supervising Professor: Ulrich G. Mueller, Ph.D.
B.S. in Cell and Structural Biology, University of Illinois at Urbana-Champaign, May 2000

ADDITIONAL TRAINING

Symposium and Workshop on New Methods for Phylogenomics & Metagenomics, February 2013
HHMI/National Academies Summer Institute on Undergraduate Education in Biology, June 2011
Molecular Evolution Workshop, Smithsonian Institution, June 2009
Santa Fe Science Writing Workshop, Santa Fe, New Mexico, May 2006
Ant Course, California Academy of Sciences, Southwest Research Station, August 2002
Tropical Biology: An Ecological Approach, Organization for Tropical Studies, Costa Rica, 2001

COURSES TAUGHT AT RICE UNIVERSITY

EBIO 202: Introductory Biology II
EBIO 213: Introductory Lab Module in Ecology & Evolutionary Biology
EBIO 215: Undergraduate Biology Lab Teaching
EBIO 306: Undergraduate Independent Study
EBIO 319: Tropical Field Biology (*new course developed Summer 2012*)
EBIO 327: Biological Diversity Lab
EBIO 330: Insect Biology Lab
EBIO 403/404: Undergraduate Honors Research in Ecology and Evolutionary Biology
EBIO 412: Advanced Communication in the Biological Sciences (*new course developed Fall 2010)*

PEER-REVIEWED PUBLICATIONS

Meirelles, L.A., Mendes, T.D., Solomon, S.E., Bueno, O.C., Pagnocca, F.C., Rodrigues, A. (2013) Variable *Escovopsis*-inhibition activity of *Pseudonocardia* associated with *Trachymyrmex* ants, ***Environmental Microbiology and Environmental Microbiology Reports***
doi: 10.1111/1758-2229.12132

Mendes, T. D. Borges, W. S., Rodrigues, A., Solomon, S. E., Vieira, P. C., Duarte, M. C. T., Pagnocca, F. C. (2013) Anti-Candida properties of urauchimycins from actinobacteria associated with *Trachymyrmex* ants ***BioMed Research International*** vol. 2013, Article ID 835081, doi:10.1155/2013/835081.

Mueller, U.G., Mikheyev, A.S., Hong, E., Sen, R., Warren, D., Solomon, S.E., Ishak, H., Cooper, M., Miller, J., Shaffer, K., Juenger, T. (2011) Evolution of cold-tolerant fungi permits winter fungiculture by leafcutter ants at northern frontier of a tropical ant-fungus symbiosis ***Proceedings of the National Academy of Sciences*** doi: 10.1073/pnas.1015806108.

Mueller, U.G., Mikheyev, A.S., Solomons, S.E., Cooper, M. (2011) Frontier mutualism: Co-evolutionary patterns at the northern range limit of the leafcutter ant-fungus symbiosis ***Proceedings of the Royal Society, Series B*** doi: 10.1098/rspb.2011.0125.

Solomon, S.E., Lopes, C.T., Mueller, U.G., Rodrigues, A., Sosa-Calvo, J., Schultz, T.R., and Vasconcelos, H.L. (2011) Nesting biology and fungiculture of *Mycetagroicus cerradensis* (Formicidae: Attini): New light on the origins of higher attine agriculture ***Journal of Insect Science*** 11:12, http://insectscience.org/11.12.

Bacci, M., Solomon, S.E., Silva-Pinhati, A.C.O., Mueller, U.G. Martins, V.G., Carvalho, A.O.R., Vieira, L.G.E. (2009) Phylogeny of leafcutter ants in the genus *Atta* Fabricius (Formicidae: Attini) based on mitochondrial and nuclear DNA sequences. ***Molecular Phylogenetics and Evolution*** 51(3): 427-437. Epub 2008 Nov. 13, doi: 10.1016/j.ympev.2008.11.005.

Solomon, S.E., Bacci, M., Martins, J., Gonçalves Vinha, G., Mueller, U.G. (2008) Paleodistributions and comparative molecular phylogeography of leafcutter ants (*Atta* spp.) provide new insight into the origins of Amazonian diversity. ***PLoS ONE*** 3(7) e2738. doi:10.1371/journal.pone.0002738

Martins, J., Solomon, S.E., Mikheyev, A.S., Mueller, U.G., Ortiz, A., Bacci, M. (2007) Nuclear mitochondrial-like sequences in ants: evidence from *Atta cephalotes* (Formicidae: Attini). ***Insect Molecular Biology*** 16(6): 777-784.

Solomon, S.E. and Mikheyev, A. (2005) The ant (Hymenoptera: Formicidae) fauna of Cocos Island, Costa Rica. ***Florida Entomologist*** 88: 415–423.

Solomon, S.E., Mueller, U.G. Schultz, T.R. Currie, C.R., Price, S.L., Bacci, M., Oliveira da Silva-Pinhati, A.C., Vasconcelos, H. (2004) Nesting biology of the fungus growing ants *Mycetarotes* Emery (Attini, Formicidae), ***Insectes Sociaux*** 51: 333–338.

POPULAR WRITING

2014: "Conducting an Inventory of the Big Thicket" ***Rice At Large***, Winter 2014
"The Bird Watcher" ***Rice Magazine***, Spring 2014
2013: "Sex changes, beheadings, and resurrection" ***Rice Magazine***, Spring 2013
2012: "The Science of Communicating" ***Rice At Large***, Spring 2012
2011: "We're Not So Different, Slime Molds and Us" ***Slate Magazine***, January 19
2009: "Lucy 2.0: Famous Fossil Hominid Goes Digital" ***Wired.com***, February 6
2008: "Can Ants Eat Your Computer?" ***Slate Magazine***, May 20
2007: "Do We Need the Original Lucy Fossil" ***Slate Magazine***, September 7
2006: "Slipping under Texas" ***The Daily Texan***, January 26
"Protecting paradise" ***The Daily Texan***, April 10
"Palm weevils constitute balanced diet" ***The Daily Texan***, May 4
"Jumping and jiving with poison frogs" ***The Daily Texan***, June 15

BOOKS

"Future Humans: The Ongoing Evolution of *Homo sapiens*", Yale University Press (under contract)

PUBLISHED CONFERENCE PROCEEDINGS

Solomon, S.E., Bacci, M., Martins, J., Gonçalves Vinha, G., Mueller, U.G. (2007) Phylogeography of leafcutter ants (Atta spp.) (Hymenoptera: Formicidae) and implications for the origins of Neotropical species diversity [Expanded Abstract]. ***Biológico*** 69(2): 317-318.

Solomon, S.E. and Mikheyev, A. (2003) The ant fauna of Cocos Island, Costa Rica [Abstract] ***Integrative and Comparative Biology*** 43(6): 1004.

TALKS AND PRESENTATIONS

2014: **University of Texas at Tyler**, Invited Seminar Presentation
"Evolution in Insect and Human Societies"

2013: **Rice University**, Guest lecture in ENST 302 (Environmental Issues: Rice Into the Future)
"Biodiversity on the Rice University Campus"

Rice University, Guest lecture in EBIO 124 (Introduction to Ecology and Evolutionary Bio)
"History of Evolutionary Thought"

Evolution 2013, Snowbird, UT
"Meta-analysis of species-level phylogenies provides insight into biogeographical context of Amazonian speciation" (poster)

Rice University, Guest lecture in EBIO 520 (Student Seminar in EEB)
"Course Design"

2012: **Rice University**, Guest lecture in ENST 302 (Environmental Issues: Rice Into the Future)
"Biodiversity on the Rice University Campus"

Rice University, Guest lecture in EBIO 520 (Student Seminar in EEB)
"Giving Effective Oral Presentations"

2011: **Rice University**, Department of Ecology and Evolutionary Biology
"Applying Scientific Teaching Methods to Undergraduate Education"

2009: **National Zoological Park**, Smithsonian Institution, Washington, DC
"Ants of the Amazon"

Rice University, Guest lecture in BIOS 325 (Ecology)
"Biogeography: Species Distributions and Diversity"

Rice University, Department of Ecology and Evolutionary Biology
"Ecology and Evolution of the Higher Attine Symbiosis"

2008: **Smithsonian Institution**, Department of Entomology, Washington, DC
"Systematics and phylogeography of higher attine ants (Formicidae: Attini): Implications for the origins of Amazonian species diversity"

Universidade Estadual Paulista, Rio Claro, SP, Brazil
"Applications for DNA sequence information: Phylogeography"

Universidade Estadual Paulista, Rio Claro, SP, Brazil
"Systematics and phylogeography of higher attine ants (Formicidae: Attini): Implications for the origins of Amazonian species diversity"

2007: **XVIII Simpósio de Mirmecologia**, São Paulo, SP, Brazil
"Phylogeography of leafcutter ants (*Atta* spp.) (Hymenoptera: Formicidae) and implications for the origins of Neotropical species diversity"

Evolution 2007, Christchurch, New Zealand
"The origins of Amazonian diversity: Comparative molecular phylogeography and paleodistribution modeling of widespread leafcutter ants (*Atta* spp.)"

2006: **International Union for the Study of Social Insects**, International Congress, Washington, DC
"The origins of tropical diversity: phylogeography of leafcutter ants (*Atta*)"

2005: **Evolution 2005**, Fairbanks, AK
"Diversification of a Neotropical ant: Molecular phylogeography of *Atta* spp."

2004: **Society for Integrative and Comparative Biology**, New Orleans, LA
"The ant fauna of Cocos Island, Costa Rica."

International Union for the Study of Social Insects, North American Section, Payson, AZ
"Intraspecific diversity: geographic variation and subspecies taxonomy of a leafcutting ant, *Atta cephalotes*" (poster)

Association for Tropical Biology and Conservation, Miami, FL
"Intraspecific diversity: geographic variation and subspecies taxonomy of a leafcutting ant, *Atta cephalotes*" (poster)

Evolution 2004, Fort Collins, CO
"Intraspecific diversity: geographic variation and subspecies taxonomy of a leafcutting ant, *Atta cephalotes*" (poster)

GRANTS, FELLOWSHIPS, AND AWARDS

2013: Thicket of Diversity Research Grant
New Methods for Phylogenomics and Metagenomics Travel Award
2012: Charles Duncan Award for Instruction in Natural Sciences
2011-2012: National Academies Education Fellow in the Life Sciences
2011: Brown Foundation Teaching Grant
2010: Smithsonian Postdoctoral Fellowship (*declined*)
2007–2010: NSF International Research Fellowship
2005–2007: NSF IGERT Fellowship in computational phylogenetics
2004–2007: NSF Doctoral Dissertation Improvement Grant
2005: Hartman Graduate Fellowship
Zoology Scholarship Endowment for Excellence
2004: Amazon Conservation Association Research Grant
Hartman Graduate Fellowship
2003: Hamilton Graduate Fellowship
Hartman Graduate Fellowship
Dorothea Bennett Memorial Graduate Fellowship
2002: Zoology Scholarship Endowment for Excellence
University Teaching Award, Nominee
OTS/STRI Post-Course Fellowship
2001: Dorothea Bennett Memorial Graduate Fellowship (2X)
2000: Dean's Excellence Award

STUDENT TRAINING AND MENTORSHIP

2014: **Angela Yang** (BS Student, Rice University): Ant community dynamics in the Big Thicket National Preserve
2013: **Brittney Olivarez** (BS Student, Rice University): Insect diversity on the Rice campus
2012-2013: **George Romar** (BS Student, Rice University): The biogeographic context of recent speciation among Amazonian biota
2011-2012: **Effie Rahman** (BS Student, Rice University): Molecular characterization of social form of Red Imported Fire Ants (*Solenopsis invicta*); Review of *Nylanderia fulva* natural history
2010-2011: **Alexander K. Wu** (BS Student, Rice University): Preparation and identification of ant specimens from Cocos Island, Costa Rica
2008-2009: **Cauê T. Lopes** (MS student, Universidade Federal de Uberlandia, Brazil): Ant diversity surveys of major Brazilian ecoregions
2006–2007: **Divya Seval** (BS student, U. Texas): PCR and sequencing of mtDNA and nDNA
2005–2006: **Ame Wongsa**, **Lingda Tao**, **Shanila Tillekeratne**, **Carter Poage** (BS students, U. Texas): Identification and curation methodology of Fijian ants
2005: **Sangamithra Narasimhan** (BS student, U. Texas): PCR amplification of mtDNA from ants

2004–2006: **Heather Luong** (BS student, U. Texas): PCR amplification and sequencing of mtDNA and nDNA
2004–2005: **Kenmon Kuon** (BS student, U. Texas): Quantification of color in ants
2004: **Sin Park** (BS student, U. Texas): Extraction of fungal DNA from preserved material
2003–2004: **Shelly Haferkamp** (BS student, U. Texas): PCR and sequencing of mtDNA

EDITORIAL SERVICE

Peer-reviewer: *Evolution*, *Oecologia, Journal of Biogeography, Molecular Ecology, Insectes Sociaux, Mycologia, Zoology, Entomological News, Journal of Applied Entomology, Journal of Insect Behavior, Annals of the Entomological Society of America*
Language Editor: *Oecologia Brasiliensis*

SERVICE AND OUTREACH

2014: Guest, "Houston Matters" KUFH Radio FM 88.7, Feb 18
2013: Co-presenter, Rice Science Café, April 2
Reviewer, Assessments for chs. 26, 27, & 28 in *How Life Works,* W.H. Freeman & Co.
Science Accuracy Reviewer, STEMscopes online K-12 Science Curriculum
2012: Chair, Undergraduate Curriculum Committee, EEB Dept, Rice University
Organizer, Bellaire High School AP Biology class visit to Rice University
Reviewer, *How Life Works,* Ch 21, Evolution: Change Over Time, W.H. Freeman & Co.
Science Accuracy Reviewer, STEMscopes online K-12 Science Curriculum
Judge, Centennial Research Poster Competition, Rice University
Judge, 2012 Rice Undergraduate Research Symposium
Marshall, Rice University Centennial Academic Procession; 2012 Commencement
2011: Committee Member, Educational Technologies Committee, Rice University
Organizer, Bellaire High School AP Biology class visit to Rice University
Reviewer, *How Life Works,* chapter 23, Evolutionary Patterns: Phylogeny and Fossils
Science Accuracy Reviewer, STEMscopes online K-12 Science Curriculum
Judge, 2011 Rice Undergraduate Research Symposium
Marshall, 2011 Commencement
2009: Participant in exhibit opening, National Museum of Natural History, May 30
2006: Guest Presentation, UT Science Summer Camp (Austin, TX)
Participated in insect exhibit, Explore UT (Austin, TX)
2005: Guest Presentation, Matthews Elementary School (Austin, TX), 2nd Grade
2003: Guest Presentation, UT Science Summer Camp (Austin, TX)
2002: Guest Lecture, Lake Travis Middle School (Austin, TX), 7th Grade
Designed and participated in ant exhibit, Explore UT (Austin, TX)

MEDIA COVERAGE

The Rice Thresher, Smithsonian.com's *"Around The Mall", "Radio Hotline with Dennis Price"* (WEBR Radio, Fairfax, VA) *Science Daily*, *The Daily Texan*, *Folha de São Paulo* (Brazil), *Folha Online* (Brazil), *Ciencia Hoje* (Brazil), Radio Netherlands Worldwide's *Earthbeat*

ADDITIONAL SKILLS

Fluent in Portuguese and Spanish; Advanced SCUBA Diver (PADI); Adult CPR (American Red Cross)

WEBSITES

Rice: http://www.owlnet.rice.edu/~ses4/
Smithsonian: http://entomology.si.edu/StaffPages/SolomonS.html
Wild Rice: http://wild.rice.edu
Science Blog: http://anthunter.blogspot.com