

# Allison J. Miller

Department of Biology, Saint Louis University  
3507 Laclede Avenue, St. Louis, MO 63103-2010  
314-977-7653 (tel) 314-977-3658 (fax)  
amille75@slu.edu/ajmiller4233@gmail.com

## CURRENT POSITION

- 2006 - Assistant Professor, Department of Biology, Saint Louis University, St. Louis, Missouri  
2006 - Research Associate, Missouri Botanical Garden, St. Louis, Missouri

## EDUCATION

- 2004 Ph.D. in Evolution, Ecology, and Population Biology, Washington University, St. Louis, Missouri  
1998 M.S. in Botany, Colorado State University, Fort Collins, Colorado  
1996 B.S. in Botany, Miami University, Oxford, Ohio

## ADDITIONAL COURSES

- 2005 National Science Foundation, Science Environment for Ecological Knowledge (SEEK) Early Career Faculty and Postdoctoral Training Ecoinformatics Workshop, Albuquerque, New Mexico  
2000 Organization for Tropical Studies (OTS) Tropical Plant Systematics Course, Costa Rica

## PROFESSIONAL EXPERIENCE

- 2005 **Instructor**, Department of Ecology and Evolutionary Biology, University of Colorado  
2004 – present **Associate Curator of Botany**, University of Colorado Museum  
2004 – 2006 **Postdoctoral Research Associate**, University of Colorado Museum  
1998 – 2004 **Graduate Research Fellow**, Washington University in St. Louis  
1998 – 2004 **Graduate Researcher**, Missouri Botanical Garden  
1997 – 1998 **Plant Collector**, Colorado State University  
1997 – 1998 **Herbarium Assistant**, Colorado State University  
1996 – 1998 **Teaching Assistant**, Colorado State University  
1995 **Research Fellow**, Howard Hughes Medical Institute Summer Research Internship, Miami University  
1994 **Range Technician Assistant**, USDA Forest Service, Bitterroot National Forest (Sula, Montana)

## RESEARCH INTERESTS

- Plant evolutionary biology including population genetics, domestication, phylogeography, and systematics
- Impacts of human selection on cultivated fruit trees, including changes in the amount and structure of genetic variation in cultivated populations and evolution of breeding systems
- Applications of GIS data to understanding the ecological and human-mediated factors affecting the geographic distributions of Mesoamerican tree crops
- Geographic origin(s) of New World Temperate and Tropical domesticated trees
- Evolution of Anacardiaceae

## FUNDS GRANTED

- 2005 University of Colorado Museum Research Fund (\$5150)
- 2001 National Science Foundation Doctoral Dissertation Improvement Grant (\$15,000)
- 2001 Organization for Tropical Studies Graduate Research Fellowship (\$3,000)
- 2001 Washington University Danforth Plant Sciences Fund (to support undergraduate participation in field research) (\$4,000)
- 2001 Botanical Society of America Karling Graduate Student Award (\$500)
- 2000 Organization for Tropical Studies Post-Course Research Award (\$500)
- 1997 Graduate Research Award, American Society of Plant Taxonomists (\$400)
- 1995 Student Research Award, Miami University Academic Challenge (\$500)

## FIELD EXPERIENCE

- 2005 Mexico (Jalisco, Nayarit)
- 2002 Mexico (Chiapas, Colima, Guerrero, Jalisco, Nayarit, Oaxaca, Veracruz, Yucatan)
- 2001 Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Puerto Rico
- 2000 Costa Rica, Nicaragua
- 1999 Spain (Canary Islands)
- 1997 United States (Arizona, California, Colorado, New Mexico)

## PUBLICATIONS

- Yi, T., **A.J. Miller**, and J. Wen. 2007. *In Press*. The phylogeny of *Rhus* (Anacardiaceae) based on sequences of nuclear *NIA-i3* intron and chloroplast *trnC-D* suggests reticulate evolution. *Systematic Botany*.
- Miller, A.J.** and J.H. Knouft. 2006. GIS-based characterization of the wild and cultivated niches of a Mesoamerican fruit tree, *Spondias purpurea* (Anacardiaceae). *American Journal of Botany* 93(12): 1757-1767.
- Pell, S., J.D. Mitchell, **A.J. Miller** and Tatyana A. Lobova. 2006. Anacardiaceae. The Families and Genera of Vascular Plants. K. Kubitzki, ed. Springer-Verlag, Heidelberg.
- Miller, A.J.** and B.A. Schaal. 2006. Domestication and the distribution of genetic variation in wild and cultivated populations of the Mesoamerican fruit tree *Spondias purpurea* L. (Anacardiaceae). *Molecular Ecology* 15: 1467-1480.
- Miller, A.J.** and B.A. Schaal. 2005. Domestication of a Mesoamerican cultivated fruit tree. *Proceedings of the National Academy of Science* 102 (36): 12801-12806.
- Yi, T., **A. J. Miller** and J. Wen. 2004. Phylogenetic and biogeographic diversification of *Rhus* (Anacardiaceae) in the Northern Hemisphere. *Molecular Phylogenetics and Evolution* 33 (3): 861-879.
- Miller, A.J.**, J. Wen, and D.A. Young. 2001. Systematics of *Rhus*: Phylogenetic and biogeographic inferences based on ITS sequence data. *International Journal of Plant Sciences* 162(6): 1401-1407.
- Kiss, J.Z., M.M. Guisinger, **A.J. Miller**. 1997. What is the threshold amount of starch necessary for full gravitropic sensitivity? *Advances in Space Research* 21: 1197-1202.
- Kiss, J.Z., M.M. Guisinger, **A.J. Miller**, and K. S. Stackhouse. 1997. Reduced gravitropism in hypocotyls of starch-deficient mutants of *Arabidopsis*. *Plant and Cell Physiology* 38(5): 518-525.

## MANUSCRIPTS SUBMITTED AND IN PREPARATION

- Miller, A.J.** Crop Plants: Evolution. *In Review*. *Encyclopedia of Life Sciences*. John Wiley and Sons.
- Miller, A.J.** Characterization of the *Spondias purpurea* lineage in Mesoamerica based on nuclear and chloroplast and nuclear sequence data. (*To be submitted to the Journal of the Torrey Botanical Society*).

**Miller, A.J.** and J. Wen. Molecular Data in the Study of Ethnobotany. (*In prep for Botanical Review*).

#### **BOOK REVIEWS AND NON PEER-REVIEWED PUBLICATIONS**

- Miller, A.J.** 2006. *In Press*. Book Review: Darwin's Harvest. New Approaches to the Origins, Evolution, and Conservation of Crops. Edited by Timothy J. Motley, Nyree Zerega, and Hugh Cross. Columbia University Press, 61 W. 62<sup>nd</sup> Street, New York, NY 10023. 2006. ISBN 0-231-13316-2. *Brittonia*.
- Miller, A.J.** and H.M.C. Sevens. 2005. Identifying and correcting gender imbalance. A Success Story. *Association for Women in Science Magazine* 34(2): 21-23.

#### **TEACHING EXPERIENCE**

- 2006 Instructor, *Evolutionary Biology*, Saint Louis University
- 2005 Instructor. *Plants and Society*, University of Colorado
- 2005 Instructor. *Evolución y Domesticación* (three day course), Universidad de Guadalajara
- 2002 Teaching Assistant. *Plants and Civilization*, Washington University
- 2002 Instructor. *Evolución y Domesticación* (three day course), Universidad de Guadalajara
- 2001 Head Teaching Assistant. *Biology*, Washington University
- 1999 Teaching Assistant. *Ecology*, Washington University
- 1998 Lab Instructor. *Introductory Plant Biology Laboratory*, Colorado State University
- 1997 Lab Instructor. *Plant Identification Laboratory*, Colorado State University
- 1997 Lab Instructor. *Processes in Biology Laboratory*, Colorado State University
- 1996 Lab Instructor. *Attributes of Living Systems Laboratory*, Colorado State University
- 1996 Undergraduate Teaching Assistant. *Plants, Humanity, and the Environment*, Miami University
- 1995 Undergraduate Teaching Assistant. *Introductory Botany Laboratory*, Miami University

#### **AWARDS AND FELLOWSHIPS**

- 2006 Residence Life Academic Teaching Award, University of Colorado
- 2003 Dean's Award for Teaching Excellence, Washington University
- 1998-04 Washington University Graduate Fellowship
- 1996-98 Colorado State University Graduate Student Teaching Assistantship
- 1996 Young Botanist Recognition Award, Botanical Society of America
- 1995 Howard Hughes Medical Institute Summer Research Internship
- 1995 Arthur T. and Anna H. Evans Scholarship, Miami University

#### **SERVICE**

- 2005 Judge, Boulder Valley Science Fair
- 2003 Evolution Teaching Team, Young Scientist Program, Washington University
- 2003 Chair, Graduate Research Symposium, Washington University
- 2001-04 Graduate Student Senator, Washington University
- 1997-98 Colorado State University Botanical Society
- 1996-98 Secretary, Colloquium in the Life Sciences, Colorado State University
- 1995 Secretary, Miami University Botanical Society

#### **PROFESSIONAL SOCIETIES**

- American Society of Plant Taxonomists
- Association of Women in Science
- Botanical Society of America
- Society for Economic Botany
- Society for the Study of Evolution

## LANGUAGE

Spanish (good reading, writing, speaking abilities)

## SELECTED REVIEWS

*American Journal of Botany, Brittonia, Genetica, Molecular Ecology, Molecular Phylogenetics and Evolution, Systematic Botany*

## INVITED SEMINARS

- 2006 University of Missouri – St. Louis
- 2006 Miami University Botany Centennial Alumni Symposium
- 2006 New York Botanical Garden Science Department
- 2006 Saint Louis University Department of Biology
- 2006 Missouri Botanical Garden GIS Working Group
- 2005 University of Colorado Department of Ecology and Evolutionary Biology
- 2005 Torrey Botanical Society, New York Botanical Garden
- 2005 Meetings of the Society of Economic Botany (SEB), Fort Worth, TX. Invited speaker for SEB Symposium “Economic Importance of the Anacardiaceae”
- 2005 Universidad de Guadalajara, Departamento de Ecología y el Cuerpo Académico Cambios Globales en Zonas Semiáridas. Guadalajara, México (presented in Spanish)
- 2004 Chicago Botanic Garden, Education Department
- 2004 Northwestern University, Program of Biological Sciences
- 2003 The Morton Arboretum, Science Department
- 2003 New York Botanical Garden, Department of Science
- 2002 Universidad de Guadalajara. Comité Sociedad de Alumnus Biología, Guadalajara, México. (presented in Spanish)
- 2002 Universidad Nacional Autónoma de México. Instituto de Biología, Ciudad México (D.F.), México. (presented in Spanish)
- 2001 Universidad del Valle de Guatemala. El Instituto de Investigaciones de la Universidad del Valle de Guatemala, Guatemala City, Guatemala

## CONTRIBUTED PRESENTATIONS (first author unless otherwise noted)

Botanical Society of America 2006, Chico, CA. “GIS-based characterization of the ecological niches of wild and cultivated populations of the Mesoamerican fruit tree *Spondias purpurea* (Anacardiaceae)” with Jason Knouft.

Evolution Annual Meetings 2005, Fairbanks, AK. “Domestication and the distribution of genetic variation in cultivated and wild populations of the Mesoamerican fruit tree *Spondias purpurea* (Anacardiaceae).”

Society of Economic Botany Annual Meeting 2005, Fort Worth, TX. “Domestication and the distribution of genetic variation in cultivated and wild populations of the Mesoamerican fruit tree *Spondias purpurea* (Anacardiaceae)”

Botany Meetings 2003, Mobile, AL. “Examining the origins of jocotes: phylogeographic evidence from the chloroplast region *trnG-trnS*.” with Barbara Schaal.

Evolution Annual Meetings 2003, Chico, CA. “Evolution of a Mesoamerican fruit tree (*Spondias purpurea* L.) based on chloroplast sequence data” with Barbara Schaal.

Botany Meetings 2002, Madison, WI. “Genetic variation in a Central American fruit tree (*Spondias purpurea* L., Anacardiaceae) based on DNA sequence data” with Barbara Schaal.

Botany Meetings 1998, Baltimore, MD. “Phylogenetic analysis of *Rhus* (Anacardiaceae)” with David Young and Jun Wen.

Botany Meetings 1997, Montreal, Quebec. “Taxonomic history of the sumac genus (*Rhus*, Anacardiaceae)” with Jun Wen.

Plant Physiology meetings 1995. “Gravitropism in roots of intermediate-starch mutants of *Arabidopsis*. American Society of Plant Physiologists” presented by John Kiss with T. Caspar, J. Wright, and **A.J. Miller**. *Plant Physiology* 108(s): 24.

Gravitational and Space Biology Meetings 1995, Arlington, Virginia. “The response to gravity is correlated to the amount of starch in *Arabidopsis*” presented by John Kiss with M.M. Guisinger, **A.J. Miller** and J.B. Wright. *ASGSB Bulletin* 9:38.