

## Curriculum Vitae

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### Travis D. Marsico, Ph.D.

Arkansas State University  
Department of Biological Sciences  
PO Box 599  
State University, Arkansas 72467  
870-680-8191  
tmarsico@astate.edu

### Education

#### **University of Notre Dame, August 2004 to August 2008**

Doctor of Philosophy in Biology; degree conferred January 2009  
Jessica J. Hellmann, advisor

#### **University of Arkansas, August 2001 to June 2004**

Master of Science in Biology; degree conferred August 2004  
Johnnie L. Gentry, advisor

#### **Arkansas Tech University, August 1998 to May 2001**

Bachelor of Science in Biology; degree conferred May 2001  
George P. Johnson, advisor

### Professional Experience

#### **Arkansas State University, January 2010 to present**

Assistant Professor of Botany  
Curator, Arkansas State University Herbarium (STAR)

#### **Mississippi State University, August 2008 to December 2009**

Post-doctoral Research Associate

- Collaborative research on phylogeography of cactophagous moths and evolutionary ecology of interactions between these moths (both native and invasive species) and their native pricklypear hosts

### Contract/Consulting Work

#### **United States Geological Survey / US Environmental Protection Agency, March 2011 to December 2011**

Botanist, Arkansas unit of National Wetlands Condition Assessment

### Publications

#### **Peer-Reviewed Scientific Literature (undergraduate authors underlined>**

##### **In Prep**

- Foard, M. and **T. D. Marsico**. Invasion frameworks support *Ligustrum sinense* (Chinese privet) initially invades altered habitats and subsequently out-competes native biodiversity.
- **Marsico, T. D.**, L. E. Wallace, K. E. Sauby, C. P. Brooks, M. E. Welch, and G. N. Ervin. Geographic patterns of genetic diversity for Florida populations of *Melitara prodenialis* Walker, a native pricklypear cactus borer.

##### **Published**

- Stephens, F. A., A. M. Woodard, and **T. D. Marsico**. 2012. Comparison between eggsticks of two cactophagous moths, *Cactoblastis cactorum* and *Melitara prodenialis* (Lepidoptera: Pyralidae). Florida Entomologist 95(4): 939-943.

- Sauby, K. E., **T. D. Marsico**, G. N. Ervin, and C. P. Brooks. 2012. The role of host identity in determining the distribution of the invasive moth *Cactoblastis cactorum* (Lepidoptera: Pyralidae) in Florida. *Florida Entomologist* 95(3): 561-568.
- Woodard, A. M., G. N. Ervin, and **T. D. Marsico**. 2012. Host plant defense signaling in response to a coevolved herbivore combats introduced herbivore attack. *Ecology and Evolution* 2: 1056-1064. DOI: 10.1002/ece3.224.
- Harris, K. M., M. B. Foard, and **T. D. Marsico**. 2012. Understanding floristic diversity through a database of Greene County specimens. *Journal of the Arkansas Academy of Science* 66: 94-105.
- Stewart, J. M., **T. D. Marsico**, D. Burge, and J. J. Hellmann. 2012. Largest known *Quercus garryana* Douglas ex Hook. clone discovered on a steep slope at the boundary of Larrabee State Park, Washington, USA. *International Oaks* 23: 68-75.
- Schartel, T. E., **T. D. Marsico**, and C. P. Brooks. 2011. First records of the parasitoid *Temelucha sinuata* Cushman (Hymenoptera: Ichneumonidae) in Mississippi and Florida, U.S.A. *Entomological News* 122: 376-377.
- **Marsico, T. D.**, L. E. Wallace, G. N. Ervin, C. P. Brooks, J. E. McClure, and M. E. Welch. 2011. Geographic patterns of genetic diversity from the native range of *Cactoblastis cactorum* (Berg) support the documented history of invasion and multiple introductions for invasive populations. *Biological Invasions* 13: 857-868. DOI: 10.1007/s10530-010-9874-9.
- **Marsico, T. D.**, J. W. Burt, E. K. Espeland, G. W. Gilchrist, M. A. Jamieson, L. Lindström, G. K. Roderick, S. Swope, M. Szűcs, and N. D. Tsutsui. 2010. Underutilized resources for studying the evolution of invasive species during their introduction, establishment, and lag phases. *Evolutionary Applications* 3: 203-219.
- **Marsico, T. D.** and J. J. Hellmann. 2009. Dispersal limitation inferred from an experimental translocation of *Lomatium* (Apiaceae) species outside their geographic ranges. *Oikos* 118: 1783-1792.
- Pelini, S. L., J. D. K. Dzurisin, K. M. Prior, C. M. Williams, **T. D. Marsico**, B. J. Sinclair, and J. J. Hellmann. 2009. Translocation experiments with butterflies reveal limits to enhancement of poleward populations under climate change. *Proceedings of the National Academy of Sciences of the United States of America* 106: 11160-11165.
- **Marsico, T. D.**, J. J. Hellmann, and J. Romero-Severson. 2009. Patterns of seed dispersal and pollen flow in *Quercus garryana* (Fagaceae) following post-glacial climatic changes. *Journal of Biogeography* 36: 929-941.
- **Marsico, T. D.** 2006. Life history and environmental factors influence population density and stage structure in *Hydrophyllum brownei*. *American Midland Naturalist* 156(1): 178-188.
- **Marsico, T. D.** 2005. The vascular flora of Montgomery County, Arkansas. *Sida* 21(4): 2389-2423.
- MacRoberts, B. R., M. H. MacRoberts, and **T. D. Marsico**. 2005. Preliminary survey of the vascular flora of the Ouachita Mountains Biological Station, Polk County, Arkansas. *Bulletin of the Museum of Life Sciences*, No. 13, Louisiana State University in Shreveport. 19 pp.
- **Marsico, T. D.** 2004. Vascular plant species inventory of Richardson Bottoms Wildlife Viewing Area. *Journal of the Arkansas Academy of Science* 58: 121-130.
- **Marsico, T. D.** 2003. On the rare endemic *Hydrophyllum brownei* Kral & Bates (Browne's waterleaf): New population information and a recommendation for change in status. *Journal of the Arkansas Academy of Science* 57: 100-110.

#### Book Review

- **Marsico, T. D.** 2005. The Monarch Butterfly: Biology and Conservation, K. S. Oberhauser and M. J. Solensky, Cornell University Press, 2004. *American Midland Naturalist* 154: 479-480.

#### Educational Piece

- **Marsico, T. D.** 2006. Herbaceous species' northern range margins—Does rarity matter for range shifts? *Friends of Beacon Hill Park Newsletter*. Victoria, British Columbia.

### Contributions Noted

- University of Notre Dame. 2009 (June 25). Insights into how climate change might impact species' geographic ranges. ScienceDaily. Retrieved 10 July 2009 from [www.sciencedaily.com/releases/2009/06/090623150617.htm](http://www.sciencedaily.com/releases/2009/06/090623150617.htm)
- Rignnette, J. 2007. Test plots on Beacon Hill. In Beacon Hill Park History 1842-2006, Chapter 21. <<http://islandnet.com/beaconhillpark/contents/chapter21.htm>>
- Witsell, T. 2005. Montgomery County flora inventory yields 1,111 taxa of vascular plants. Claytonia 25(1): 2.

### Agency reports

- **Marsico, T. D.** and D. Burge. 2011. National Wetland Condition Assessment (NWCA) 2011; Results from the Arkansas Vegetation Laboratory.
- **Marsico, T. D.** and M. Foard. 2011. 2011 Shelby Farms Park Conservancy Vascular Plant Inventory Report. Prepared for Dr. Cheryl Goudie and the University of Memphis Environmental Research Center.
- **Marsico, T. D.** and M. Foard. 2011. 2011 Northern Crowley's Ridge Vascular Plant Inventory Report. Prepared for Theo Witsell at the Arkansas Natural Heritage Commission.

### Teaching

#### Courses taught at ASU

- Biology of Plants Laboratory (undergraduate)
- Biology of Plants Lecture (undergraduate)
- Dendrology (undergraduate / graduate)—course developed by Marsico
- Global Change Biology (graduate)—course developed by Marsico
- Making Connections Biology (first-year-experience undergraduate)
- Mechanisms of Speciation (graduate)
- Plant Systematics (undergraduate / graduate)—course developed by Marsico

#### Course taught at Mississippi State

- Global Change Biology (graduate)—course developed by Marsico

### Grants

- Determining Influences of Stream Channelization and an Invasive Species on Rate of Canopy Tree Growth in an Urban Park (January 2013-January 2014); Tree Fund, Jack Kimmel International Grant Program; **\$6,284**; PI
- Selection of Hairy Root Cultures to Optimize Production of Plant Defense Compounds (July 2012-June 2013); Arkansas State University Faculty Research Award; **\$8,733**; PI
- The Experiential Learning Fellowship (ELF) Program (August 2011-July 2016); NSF; **\$567,185**; PI
- Mechanisms and impacts of Chinese privet invasion in the Southeast United States (July 2011-June 2012); Judd Hill Foundation; **\$5,560**; PI
- Identification of Biological Methods for Evaluating Wetland Water Quality Conditions in Arkansas (May 2011-September 2013); United States Environmental Protection Agency; **\$317,661**; Co-PI
- Crowley's Ridge Botanical Inventory (April 2010-May 2011); Arkansas Natural Heritage Commission; **\$20,000**; PI
- Botanical Inventory of Shelby Farms Park Conservancy (July 2010-May 2011); subcontract from the University of Memphis; **\$5,000**
- The Phylogeography of *Cactoblastis cactorum* in its Native Argentina as a Baseline for Predicting Local Adaptation and Species Invasion (July 2010-June 2011); Arkansas State University Faculty Research Award; **\$3,860**; PI
- Arkansas Biosciences Institute Faculty Grant (January 2010-June 2010); Arkansas State University; **\$30,000**; PI

## **Honors/Awards**

### **Fellowships**

- Arthur J. Schmitt Presidential Fellowship, University of Notre Dame (2004-2008)
- Biology Department Senior Fellowship, Arkansas Tech University (2001)

### **Scholarships**

- Arkansas Native Plant Society Aileen McWilliam Scholarship (2000, 2002)
- Arkansas Tech University Honors Scholarship (1998-2001)
- Arkansas Academic Challenge Scholarship (1998-2001)

### **Awards**

- Anastasia Woodard was winner of the Botanical Society of America Southeastern Section Student Poster Award at the Association of Southeastern Biologists meeting, Charleston, WV (2013)
- 3<sup>rd</sup> Place Poster Award for Faculty/Staff in the Biological Division at the NSF Bioinformatics Workshop to Foster Collaborative Research, Little Rock, AR (2013)
- 3<sup>rd</sup> Place Award to graduate student Anastasia Woodard for poster presentation at P3 Research Symposium, Heber Springs, AR (2011)
- Great Lakes Climate Change Summit Travel Award (2007)
- Certificate of Academic Excellence, Arkansas Tech University's School of Physical and Life Sciences (2001)

## **Professional Activities**

### **Students Advised**

#### **Graduate Students**

##### Research Advisor

David Burge (June 2011-present), M.S. student, EVS program  
 Kari Harris (January 2012-present), M.A. student, Biology program  
 Meghan Foard (August 2010-present), Ph.D. student, EVS program  
 John Kilmer (January 2013-present), M.S. student, Biology program  
 Anastasia Woodard (May 2010-present), Ph.D. student, MBS program

##### Thesis Committee Member

Melissa Bobowski (present), M.S. student, Biology program  
 Jignesh Chandarana (graduated December 2010), M.S., Biology program  
 Jennifer Cobb (present), M.S. student, EVS program  
 Ann Marie Coile (graduated May 2013), M.S., Biology program  
 Christopher Foshee (present), M.S. student, Biology program  
 Praneeth Kamana (graduated May 2011), M.S., Biology program  
 John Kelly (present), M.S. student, Biology program  
 Daniel Itsvanko (present), M.S. student, EVS program  
 Dinesh Neupane (present), Ph.D. student, EVS program  
 Jonathan Stanley (present), Ph.D. student, EVS program  
 Nathan Stephens (graduated August 2011), M.S., Biology program  
 J. Phillip Stewart (present), M.S. student, Biology program  
 Rachel Welicky (present), Ph.D. student, EVS program  
 Amy Wynia (present), M.S. student, Biology program

#### **Undergraduate Honors Theses**

##### Research Advisor

Kari Harris (graduated December 2011): Understanding floristic diversity through a database of Greene County specimens

##### Thesis Committee Member

Jeremiah Salinger (graduated May 2012): Current status and anthropogenic management concerns of the caribou (*Rangifer tarandus*) in North America  
 Hannah Blair (graduated May 2013): Comparative lipid synthesis and acyl saturation of psychrophilic and psychrotolerant *Geomyces* spp. fungi

Cheyenne Gerdes (graduated May 2013): Biochemical and biomechanical effects of *Geomyces destructans* proteases on bat wing tissue

### **Undergraduate Students**

#### Arkansas State University

Candace Arnold (September 2010-December 2010), volunteer  
Hannah Blair (September 2010-May 2011)  
Christopher Burkhart (January 2012-present), ELF Program  
Nikki Davis (March 2013-April 2013)  
Kari Harris (June 2010-December 2011), McNair scholar, University Honors  
Rebecca Kennedy (January 2012-May 2013), ELF Program  
Starlene Loerch (January 2012-present), ELF Program  
Taylor Mackey (May 2012-June 2012)  
Eric Maxwell (February 2010-May 2010)  
Emily Mizell (September 2010-June 2012)  
Lysbeth Perez (June 2010-August 2010), NSF REU RISE student  
Kassandra Riley (February 2012-present)  
Faye Stephens (June 2010-August 2010), NSF REU RISE student  
Elisha Throesch (March 2013-April 2013)  
Hunter Whitehurst (March 2013-present)  
Alexander Worm (January 2012-present), ELF Program

#### Mississippi State University

Elizabeth Stepp (January 2009-May 2009)

#### University of Notre Dame

Ashley Braun  
Mary Kate Claiborne  
James Giordano  
Cynthia Sulzbach

### **Laboratory Volunteer (non-student)**

#### Arkansas State University

Rick Bray (February 2012-May 2012)

### **Non-student Employee**

#### Arkansas State University

Martina Garda (May 2012-August 2012)

### **Organizations**

American Association for the Advancement of Science  
Arkansas Native Plant Society  
Association of Southeastern Biologists  
Botanical Society of America  
Ecological Society of America  
Entomological Society of America  
Florida Entomological Society  
International Biogeography Society  
International Oak Society  
Plant Powered Production (Arkansas EPSCoR, ASSET II)  
Society of Herbarium Curators

### **University Service**

Institutional Biosafety Committee (April 2012-March 2015)  
Molecular Biosciences Ph.D. Program Committee (February 2011-present)  
Department of Biological Sciences, Botany Program Committee (January 2010-present)  
Search Committee member, Ornithologist/Conservation Biologist, Department of Biological Sciences (Fall 2012-Spring 2013)

Search Committee member, Research Development Specialist, Office of Research and Technology Transfer (Spring/Summer 2012)  
Search Chair, Cell/Molecular Biologist, Department of Biological Sciences (Spring 2012)  
Plant Powered Production, Next-generation Sequencing Committee (October 2010-June 2011)

#### **Publication Editorial Board**

Ecology and Evolution (April 2011-March 2014)

#### **Funding proposal reviews**

NSF, DDIG Panel (2013)  
NSF, ad hoc reviewer  
Marsden Fund Council (New Zealand) (2011)  
EPA STAR Fellowship Review Panel (2011)

#### **Manuscript reviews**

Biological Journal of the Linnean Society  
Conservation Biology  
Diversity and Distributions  
Ecological Economics  
Ecology and Evolution  
Economic Entomology  
Evolutionary Applications  
Florida Entomologist  
Global Ecology and Biogeography  
Insect Science  
Journal of the Arkansas Academy of Science  
Silvae Genetica

#### **Professional Meetings (undergraduate authors underlined; presenters italicized)**

Presented

- *Burge, D. R. L., T. D. Marsico, J. Cobb, and J. L. Bouldin.* Land-use practices in relation to wetland water quality of the Cache River, AR, USA. Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013)
- *Burkhart, C. R., K. M. Harris, and T. D. Marsico.* (Poster) Improvement of digital herbarium specimens through image stitching. Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013)
- *Foard, M. and T. D. Marsico.* Understanding the role of hydrology in the invasion of Chinese privet (*Ligustrum sinense* Lour.). Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013)
- *Harris, K. M., C. R. Burkhardt, R. D. Kennedy, S. M. Loerch, A. J. Worm, and T. D. Marsico.* Digitizing specimens in a small herbarium: A template for other collections working with limited resources. Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013)
- *Marsico, T. D., M. P. Hardin, A. M. Woodard, and X. Huang.* Comparison of gene expression profiles between a native cactus borer (*Melitara prodenialis*) and an invasive cactus borer (*Cactoblastis cactorum*) to assess unique responses to food source. Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013)
- *Riley, K., A. M. Woodard, and T. D. Marsico.* (Poster) Can they finish together? Development of a standard operating procedure for synchronization of a laboratory colony with two species of cactus-feeding moths (Lepidoptera: Pyralidae). Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013)
- *Woodard, A. M., C. De Moraes, M. Mescher, and T. D. Marsico.* A pricklypear's cry decoded: Characterization of plant volatiles released by *Opuntia humifusa* (Cactaceae) in response to native and newly-associated cactus-boring moth herbivory (Lepidoptera: Pyralidae). Association of Southeastern Biologists 2013 Annual Meeting, Charleston, West Virginia (10-13 April 2013); Winner of the Botanical Society of America Southeastern Section Student Poster Award

- **Marsico, T. D.**, M. P. Hardin, A. M. Woodard, and X. Huang. (Poster) Aligning two pyralid moth transcriptomes to the annotated silkworm genome. NSF Bioinformatics Workshop to Foster Collaborative Research, Little Rock, Arkansas (3-5 March 2013); 3<sup>rd</sup> Place Poster Award for Faculty/Staff in the Biological Division
- **Marsico, T. D.** and A. M. Woodard. Do recent invasion frameworks downplay the community context of species invasions? A case study using an invasive phytophagous insect. 97<sup>th</sup> Annual Meeting of the Ecological Society of America, Portland, Oregon (5-10 August 2012)
- **Marsico, T.**, B. Bennett, M. Huss, and F. Medina-Bolivar. Recent advances in formal botanical education at Arkansas State University: an eye to the future. 3<sup>rd</sup> Annual Meeting of the American Council for Medicinally Active Plants, Jonesboro, Arkansas (22-25 May 2012)
- Harris, K. M., M. B. Foard, and **T. D. Marsico**. Understanding floristic diversity through a database of Greene County specimens. 96<sup>th</sup> Annual Arkansas Academy of Science Meeting, Southern Arkansas University, Magnolia, Arkansas (13-14 April 2012)
- Woodard, A. M., R. A. F. Warby, B. Rougeau, and **T. D. Marsico**. Identification of cactus-derived volatile organic compounds induced by cactus boring moth herbivory using SPME sampling and GC/IT-MS analysis. Joint Southeastern/Southwestern Branch Meeting, Entomological Society of America, Little Rock, Arkansas (4-7 March 2012)
- **Marsico, T. D.**, A. M. Woodard, and G. N. Ervin. (Poster) Host plant defense signaling in response to a coevolved herbivore combats introduced herbivore attack. Gordon Research Conference: Plant Volatiles, Ventura, California (29 January-3 February 2012)
- Woodard, A., J. Hubstenberger, F. Medina-Bolivar, G. Phillips, and **T. D. Marsico**. (Poster) Biosynthesis of defense-priming volatiles from *Opuntia* associated with cactus boring moth (Lepidoptera: Pyralidae) herbivory. Gordon Research Conference: Plant Volatiles, Ventura, California (29 January-3 February 2012)
- **Marsico, T. D.** (Invited Symposium speaker) Consequences of direct defenses induced by cactus-derived VOCs for the invasive cactus borer, *Cactoblastis cactorum* (Lepidoptera: Pyralidae). Entomology 2011, Reno, Nevada (13-16 November 2011)
- Woodard, A., J. Hubstenberger, F. Medina-Bolivar, G. Phillips, and **T. D. Marsico**. (Poster) Biosynthesis of defense-priming volatiles from *Opuntia* associated with cactus boring moth (Lepidoptera: Pyralidae) herbivory. Entomology 2011, Reno, Nevada (13-16 November 2011)
- Burge, D., **T. D. Marsico**, and B. Justus. (Poster) Arkansas wetland flora structure 2011. Natural Areas Conference, Tallahassee, Florida (1-4 November 2011)
- **Marsico, T. D.** Plant recognition and defense against coevolved insect herbivores: insights from a pricklypear/cactus borer study system. Arkansas P3 Center Symposium, Heber Springs, Arkansas (26-28 July 2011)
- Woodard, A. M., G. N. Ervin, and **T. D. Marsico**. (Poster) Defense priming as a mechanism to combat newly-associated insect herbivores. Arkansas P3 Center Symposium, Heber Springs, Arkansas (26-28 July 2011); 3<sup>rd</sup> place award
- Woodard, A., G. Ervin, and **T. Marsico**. Defense priming as a mechanism to combat newly-associated insect herbivores. Botany 2011, Healing the Planet, St. Louis, Missouri (9-13 July 2011)
- Foard, M. and **T. Marsico**. (Poster) Chinese privet invasion decreases botanical species richness in a riparian forest. Botany 2011, Healing the Planet, St. Louis, Missouri (9-13 July 2011)
- **Marsico, T. D.**, G. N. Ervin, and C. P. Brooks. (Poster) Putting hypothesized native-range phylogeographic patterns of *Cactoblastis cactorum* to the test using genetic and climatic data. International Biogeography Society 5<sup>th</sup> International Conference, Heraklio, Crete, Greece (7-11 January 2011)
- **Marsico, T. D.**, A. M. Woodard, and G. N. Ervin. (Poster) Potential eavesdropping may cue inducible defenses against an invasive herbivore. Entomological Society of America Annual Conference, San Diego, CA (12-15 December 2010)
- Harris, K. M., M. B. Foard, and **T. D. Marsico**. (Poster) The Greene County vascular flora project. 2010 McNair Research Conference, University of Arkansas, Fayetteville, AR (4-5 November 2010)
- **Marsico, T. D.** (Invited Faculty Presentation) Plant-plant signaling may cue inducible defenses against an invasive herbivore. Arkansas INBRE Research Conference, Fayetteville, AR (15-16 October 2010)

- **Marsico, T. D.**, A. M. Woodard, and G. N. Ervin. (Poster) Novel defenses in invasion resistance: potential eavesdropping may cue inducible defenses against an invasive herbivore. Arkansas P3 Center Symposium, Winthrop Rockefeller Institute, Petit Jean, AR (15-17 August 2010)
- **Perez, L.** and **T. D. Marsico**. (Poster) Testing multiple mitochondrial and nuclear genes for utility in *Cactoblastis cactorum* phylogeographic research. Research Internships in Science of the Environment (RISE) Student Symposium, Arkansas State University, Jonesboro, AR (5 August 2010)
- **Stephens, F.**, A. Woodard, and **T. D. Marsico**. (Poster) Analysis for a field key for identification of cactophagous moth eggsticks. Research Internships in Science of the Environment (RISE) Student Symposium, Arkansas State University, Jonesboro, AR (5 August 2010)
- **Marsico, T. D.**, A. M. Woodard, and G. N. Ervin. Novel defenses in invasion resistance: potential eavesdropping may cue inducible defenses against an invasive herbivore. 95<sup>th</sup> Ecological Society of America Annual Meeting, Pittsburgh, Pennsylvania (1-6 August 2010)
- **Woodard, A. M.**, **T. D. Marsico**, and G. N. Ervin. (Poster) Evaluating differential defense response in two native cactus species. Biological Undergraduate Research Program Symposium, Mississippi State University, Starkville, Mississippi (16 April 2010)
- **Marsico, T. D.**, G. N. Ervin, C. P. Brooks, B. A. Counterman, L. E. Wallace, and M. E. Welch. (Poster) Using next-generation sequencing approaches to investigate reciprocal recognition and response in plant-herbivore interactions. 7<sup>th</sup> Annual MidSouth Computational Biology and Bioinformatics Society (MCBIOS) Conference, Arkansas State University, Jonesboro, Arkansas (19-20 February 2010)
- **Sauby, K. E.**, **T. D. Marsico**, G. N. Ervin, and C. P. Brooks. Host community composition as a driver of the invasion of the exotic cactus moth, *Cactoblastis cactorum*. 94<sup>th</sup> Ecological Society of America Annual Meeting, Albuquerque, New Mexico (2-7 August 2009)
- **Sauby, K. E.**, **T. D. Marsico**, G. N. Ervin, and C. P. Brooks. Host community composition as a driver of the invasion of an exotic herbivore. 6<sup>th</sup> Annual Southeastern Ecology and Evolution Conference, University of Florida, Gainesville, Florida (27-29 March 2009)
- **Marsico, T. D.**, C. P. Brooks, L. E. Wallace, M. E. Welch, and G. N. Ervin. (Poster) Genetic diversity within the native ranges of two cactophagous pyralid moths. Synthesizing Ecology and Evolution for the Study of Invasive Species, a workshop, Granlibakken Conference Center, Lake Tahoe, California (19-22 March 2009)
- **Marsico, T. D.** Different patterns of seed dispersal are related to abundance in co-occurring *Lomatium* species. Southeastern Population Ecology and Evolutionary Genetics (SEPEEG), University of Georgia, Rock Eagle 4-H Center, Georgia (24-26 October 2008)
- **Welch, M. E.**, C. Brooks, R. Brown, G. Ervin, **J. McClure**, **T. D. Marsico**, and L. Wallace. The phylogeography of the invasive cactus moth *Cactoblastis cactorum* in its native range. SEPEEG, University of Georgia, Rock Eagle 4-H Center, Georgia (24-26 October 2008)
- **Marsico, T. D.** and J. J. Hellmann. Dispersal limitation at poleward range boundaries. 93<sup>rd</sup> Ecological Society of America Annual Meeting, Milwaukee, Wisconsin (3-8 August 2008)
- **Marsico, T. D.** Constraints on geographic range shifts under climate change. NDEER 2007: Energy and the Environment, University of Notre Dame, Notre Dame, Indiana (10 October 2007)
- **Marsico, T. D.** and J. J. Hellmann. (Poster) Dispersal limitation to climate-driven poleward range shifts: evidence from a *Lomatium* germination experiment. Challenges of Climate Change in the Great Lakes Region, University of Michigan Biological Station, Pellston, Michigan (26-27 July 2007)
- **Marsico, T. D.** and J. J. Hellmann. Understanding factors limiting species' ranges to predict range shifts under climate change. Botany and Plant Biology Joint Congress, Chicago, Illinois (7-11 July 2007)
- **Giordano, J.**, **T. D. Marsico**, and J. J. Hellmann. (Poster) Growth comparison of three *Lomatium* species under increased temperature and CO<sub>2</sub>. Botany and Plant Biology Joint Congress, Chicago, Illinois (7-11 July 2007)
- **Marsico, T. D.**, J. J. Hellmann, and J. Romero-Severson. When the range periphery is an island: Understanding population structure in the core and periphery of the *Quercus garryana* species range. Midwest Ecology and Evolution Conference (MEEC), Kent State University, Kent, Ohio (9-11 March 2007)
- **Gonzales, E.** and **T. D. Marsico**. The poop on endozoochory in Garry oak ecosystems. Garry Oak Research Colloquium 2007, Victoria, British Columbia, Canada (20 February 2007)



- **Marsico, T. D.** (Poster) Are you primed? Using microsatellite markers to understand oak dispersal in a modified world. Plant Conservation in an Era of Global Climate Change, School of the Chicago Botanic Garden, Chicago, Illinois (21 October 2005)
- **Marsico, T. D.** Vascular plant inventory of Richardson Bottoms Wildlife Viewing Area. 88<sup>th</sup> Annual Meeting of the Arkansas Academy of Science, Arkansas State University, Jonesboro (2-3 April 2004)
- **Marsico, T. D.** On the rare endemic *Hydrophyllum brownei* Kral & Bates (Browne's Waterleaf): New population information and a recommendation for change in status. 87<sup>th</sup> Annual Meeting of the Arkansas Academy of Science, University of Arkansas, Fayetteville (4-5 April 2003)

#### Attended

- 51<sup>st</sup> Annual Systematics Symposium, Latin American Biogeography, Missouri Botanical Garden, St. Louis (8-10 October 2004)
- Inaugural meeting of the Ancient Cross Timbers Consortium, Gilcrease Museum, Tulsa, Oklahoma (30 April 2004)
- Midwest Ecology and Evolution Conference (MEEC), University of Notre Dame, Indiana (5-7 March 2004)
- Rare and Invasive Plants of Arkansas Conference, University of Arkansas Center for Continuing Education, Fayetteville (23-24 October 2003)
- 50<sup>th</sup> Annual Systematics Symposium, Species Reconsidered, Missouri Botanical Garden, St. Louis (10-11 October 2003)
- Upland Oak Ecology Symposium: History, Current Conditions, and Sustainability, Radisson Hotel, Fayetteville, Arkansas (7-10 October 2002)
- 48<sup>th</sup> Annual Systematics Symposium, Biological Invasions, Missouri Botanical Garden, St. Louis (12-13 October 2001)
- 85<sup>th</sup> Annual Meeting of the Arkansas Academy of Science, University of Central Arkansas, Conway (April 2001)

#### Invited Seminars

- Stop and Smell the Roses: They Are Trying to Tell You Something! Arkansas Native Plant Society Spring Meeting (May 2012)
- Activities at the Arkansas State University Herbarium (STAR), Craighead County Master Gardeners monthly meeting, (March 2012)
- Sending the Alarm: Evidence for Defense Priming Against Insect Herbivores by Eavesdropping Plants, University of Arkansas (September 2010)
- Insect Invasions and the Role of Host Plant Defenses, University of Central Arkansas (April 2010)
- Next-Generation Sequencing Platforms: The Similarities, Differences, and Applications of High-Throughput Technologies, Arkansas State University (February 2010)
- The Genetics of Colonizing Species, Arkansas State University (April 2009)
- Past and Present Geographic Range Shifts: A Conservation Perspective, Mississippi State University (May 2008)
- Predicting Plant Responses to Climate Change: Evidence from the Past, Present, and Future, Hampden-Sydney College (February 2008) and University of Findlay (February 2008)
- Unlocking the Mysteries of Long-Distance Dispersal, Wittenberg University (November 2007)
- Factors Limiting Species' Ranges and the Importance of Abundance, University of Tennessee (February 2007)

#### Science Seminar Speakers Hosted at ASU

- Dr. Jessica Hellmann, Department of Biological Sciences, University of Notre Dame. Constraints on species' range change under climate change: studies in genomic biology and ways that humans might help (24 April 2013)
- Dr. Esra Ozdenerol, Department of Earth Sciences, University of Memphis, Tennessee. The accuracy of detection of Chinese privet in Shelby Farms Park using the Woldview-2 Imagery (15 February 2012)
- Dr. Jessica Gurevitch, Department of Ecology and Evolution, Stony Brook University, New York. Biological invasions: a conceptual framework and systematic review (9 March 2011)

- Dr. Gary Ervin, Department of Biological Sciences, Mississippi State University, Mississippi. Combining biological datasets and predictive modeling in conservation planning (16 February 2011)
- Dr. Erin Espeland, USDA ARS NPARL, Sydney, MT. Transgenerational plasticity as a force to enhance or constrain local adaptation in invasive species (20 October 2010)
- Dr. Sally Entekin, Department of Biological Sciences, University of Central Arkansas. Anthropogenic alterations change aquatic food web structure of headwater streams (17 March 2010)

### **Public Service and Outreach**

- Volunteer Herbaceous Plant Hike Leader, Arkansas Master Naturalist program, Bioblitz 2013; Village Creek State Park (20 April 2013)
- Volunteer Lecture, Hughes Town and Country Garden Club; Plant nomenclature and using dichotomous keys (19 April 2013)
- Volunteer Tutor, Country Garden Apartments; tutor low-income, minority, elementary school students in science, math, and literacy each week (September 2012 – December 2012)
- On-site Organizer, Arkansas Native Plant Society Meeting held in Jonesboro (May 2012)
- Volunteer Educator, Northeast Arkansas Master Naturalists course; Botany lesson (March 2012)
- Volunteer Educator, St. Francis, Cross, Woodruff, and Crittenden Counties Master Gardeners Course; Botany lesson (February 2012)
- Volunteer Educator, Craighead County Master Gardeners Course; Botany lesson (January 2012)
- Volunteer Lecture, Educational outreach to 3<sup>rd</sup> graders at Fox Meadow Intermediate Center, Carnivorous plants (October 2011)
- Volunteer Lecture, Outreach to the Greene County Master Gardeners' Association through a discussion of Japanese garden project (February 2011)
- Lead Volunteer, Chef David's Kidz Wishgrant Foundation, Leader of team to implement a Japanese garden for a child who underwent a heart transplant, Kennett, Missouri (Summer and Fall 2010)
- Tour Guide, Lyle Entomology Quarantine Insect Rearing Facility, Mississippi State University, for Annual Insect Camp (June 2009)
- Speaker, South Bend Elkhart Audubon Society monthly meeting (January 2008)
- Invited speaker, Grand Buddy program global change forum, Stanley Clark School, South Bend, Indiana (November 2006)
- Invited participant, BioBlitz 2006, St. Patrick's County Park, St. Joseph County, Indiana (September 2006)
- Science Fair Judging:  
 Northern Indiana Regional Science and Engineering Fair, University of Notre Dame, Indiana (March 2006 & March 2007)  
 Intel International Science and Engineering Fair (ISEF), Indianapolis, Indiana (June 2006)  
 Kennedy Elementary School Science Fair, South Bend, Indiana (February 2005)  
 Northwest Arkansas Regional Science and Engineering Fair, University of Arkansas, Fayetteville (March 2004)
- Speaker, Native Trees, Shrubs, & Vines Identification Workshop, University of Arkansas, Fayetteville (May 2003)
- Herbarium Tour Guide, University of Arkansas Museum's Open House, Fayetteville (October 2002)
- Speaker, A Native Plant Identification Workshop for Beginners, University of Arkansas, Fayetteville (September 2001)