

MARIANA ABARCA

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Education

- 2010 - 2016 **Ph.D.** in Biological Sciences. The George Washington University, Advisor: John T. Lill. Dissertation: Phenology of Black Cherry and Eastern Tent Caterpillars: the Impact of Global Climate change.
- 2007 - 2009 **M.S.** in Environmental Biology. Graduated with honors. Universidad Nacional Autónoma de México, Instituto de Ecología, Advisor: Karina Boege. Thesis: Construcción de Refugios de *Gephyra cynisca* (Lepidoptera: Pyralidae) efectos sobre la depredación y la calidad alimenticia del follaje.
- 2001 - 2007 **B. S.** in Biology. Universidad Nacional Autónoma de México, Facultad de Ciencias. Advisor: Karina Boege. Thesis: Biología reproductiva y herbivoría en una especie distylica (*Psychotria horizontalis*).

Publications

- Abarca, M.** and Lill, J. 2015. Warming affects hatching time and early season survival of eastern tent caterpillars. *Oecologia*, 169:901-912.
- Abarca, M.**, Boege K., and Zaldivar-Riverón A. 2014. Shelter-building behavior and natural history of two pyralid caterpillars feeding on *Piper stipulaceum*. *Journal of Insect Science*. 14:39.
- Abarca, M.** and Boege, K. 2011. Fitness costs and benefits of shelter building and leaf trenching behavior in a pyralid caterpillar. *Ecological Entomology*, 36: 564-573.

Scholarships, Grants and Fellowships (US dollars)

2015. Harlan Graduate Summer Scholarship: Stipend
2014. Washington Biologists' Field Club Grant: \$992
2014-2015. Isabella Osborn King Endowment Fellowship: Tuition award and stipend
2013. NPS George M. Wright Climate Change Youth Initiative Fellowship: \$19,864
2013. GW Chapter Sigma Xi grant: \$900
2013-2014. Harlan Graduate Scholarship: Tuition award and stipend
2013. UFF Graduate Research Fellowship: Stipend
2013. Harlan Graduate Summer Scholarship: Stipend
2012. Washington Biologists' Field Club Grant: \$2912

2012-2013 Weintraub Fellowship: Tuition award and stipend
2010- 2014 National Science Council (CONACyT)- Mexico. PhD. Fellowship: Stipend
2009. Ecological Society of America Long Range Grant: Travel grant, \$400
2007-2009. National Science Council (CONACyT)- Mexico. Masters Fellowship: Stipend

Professional Experience

Post Doctoral Fellow

January 2016. Georgetown University, Dr. Leslie Ries Laboratory.

Professorial lecturer in biology

Spring 2016. Masters course: Environmental Science II, at The George Washington University, Environmental Policy Masters Program.

Fall 2015. Undergraduate course: Plant- Animal Interactions at The George Washington University, Washington, DC.

Guest Lectures

2014 & 2015. Plant offense and defense for the class: Plant comparative structure and function at The George Washington University (Prof. Amy Zanne).

Teaching assistantships

2010-2012. The George Washington University, lab instructor for the courses:

Biology of Nutrition and Health, fall 2010, fall 2011.

Ecology and Evolution of Organisms, spring 2011, spring 2012.

Internships

2015. Dr. John Parker, Terrestrial Ecology Lab, Smithsonian Environmental Research Center, MD, USA.

2009. Dr. Karina Boege's Laboratory (Plant-Animal interactions) in the Instituto de Ecología, UNAM, Mexico.

Professional Service

Peer Reviewer for *Ecological Entomology*, *Journal of Plant*

Interactions, *Ecography*, *Ecology and Evolution*, *Basic and Applied Ecology*, and *Journal of the Lepidopterists' Society*.

Volunteer for *Green Kids* (2011, 2012), a non-profit environmental education organization serving elementary school students in Maryland, USA.

Judge for science fair (2011, 2012, 2014), Forest Knolls Elementary School, Montgomery County, MD, USA.

Contributed Professional Presentations

Abarca, M., Lill, J.T., 2015. Geographic variation in the seasonal responses of eastern tent caterpillars and their egg parasitoids. ESA 100th Annual meeting, Baltimore, Maryland.

Abarca, M., Lill, J.T., 2015. Phenology of black cherry and eastern tent caterpillars: The impact of global climate change. The George Wright Society Biennial Conference on Parks, Protected Areas and Cultural Sites, Oakland, California.

Abarca, M., Lill, J.T., 2014. How will Eastern tent caterpillars react to climate change? ESA 99 th Annual meeting, Sacramento, California. (Natural history chapter award honorable mention)

- Abarca, M.**, Lill J. T., Frank-Bolton, P., and Leontie, R. 2012. Dealing with variable spring conditions: The strategy of eastern tent caterpillars (*Malacosoma americanum*). Entomological Society of America Annual meeting, Knoxville TN, USA.
- Abarca, M.** and Boege, K. 2009. Anti- predator and food quality- improving function of leaf shelters built by *Gephyra cynisca*, (Pyralidae). ESA 94th Annual meeting, Albuquerque, New Mexico.
- Abarca, M.** and Boege, K. 2006. Biología reproductiva y herbivoría en *Psychotria horizontalis*, Rubiaceae (Reproductive biology and herbivory of *Psychotria horizontalis*, Rubiaceae). Congreso Mexicano de Ecología, Morelia, Michoacán, Mexico.

Invited Talks

- Abarca, M.** 2016. Phenological responses of eastern tent caterpillars and their egg parasitoids. Presented at the 1181 Regular meeting of the Entomological Society of Washington and at Blandy Experimental Farm, University of Virginia.
- Abarca, M.** 2015. Regional variation in the response of eastern tent caterpillars to global Climate change. Smithsonian Environmental Research Center. Maryland, USA
- Abarca, M.** 2013. Phenology of black cherry and eastern tent caterpillars: The impact of global climate change. To volunteers of the Insect Zoo and Butterfly Pavilion, Smithsonian National Museum of Natural History.
- Abarca, M.** 2008. Impacto de la calidad de las plantas y del ataque de los enemigos naturales en el desarrollo y el comportamiento de *Gephira cynisca*, Lepidoptera:Pyralidae. (Effect of plant quality and natural enemy attack on the development and behavior of *Gephira cynisca*, Lepidoptera: Pyralidae), Estación de Biología de Chamela, UNAM, Mexico.

Media Presence and Outreach

2014. Developed and presented the display: “Have you seen a change?” Explaining the effects of climate change on phenology and plant-insect interactions. Rock Creek Park Nature Center, Washington, DC.
2014. Authored a column about the natural history of selected insect species for El Ideógrafo, a digital platform for the communication of science and culture (in Spanish) <http://ideografo.com/>
2012. Research featured in cover article: St. Ours D. 2012. (Ed.) The Caterpillar factor: How climate change affects plant-animal interactions. Columbian College of Arts and Sciences Magazine. Fall/ Winter 2012.

Special Workshops and Coursework

2015. ESA/AAAS Communicating Climate Science Workshop. AAAS Headquarters, Washington, DC.
2009. “Ultimate and proximate mechanisms of cooperative behaviour” Professor: Michael Taborsky. University of Berne (Suiza). In Tlaxcala, Tlaxcala, Mexico.
2009. XIV Bases Biológicas de la Conducta (Biological basis of behavior). UAT-UNAM, Tlaxcala, Tlaxcala, Mexico.

Scientific Societies

Sigma Xi (2012 – 2015)

Entomological Society of America (2012 – present)

Ecological Society of America (2009 – present)

Languages

Spanish and English (bilingual)

Computer languages

Microsoft Office, R.