

Elina L. Niño

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PROFESSIONAL EXPERIENCE

- Current **Assistant Specialist in Cooperative Extension - Apiculture**, Department of Entomology and Nematology, University of California at Davis, Davis, CA 95616
- 2012-2014 **USDA-NIFA-AFRI Postdoctoral Fellow**, Department of Entomology, The Pennsylvania State University, University Park, PA. Mentors: Dr. Christina M. Grozinger (PSU), Dr. Mariana Wolfner (Cornell), Dr. Chloe Silverman (PSU)
- Research leader on Socioeconomic studies of honey bee stock improvement programs and functional and evolutionary genomics of honey bee seminal proteins.
 - Research collaborator on genomic studies of the effects of IAPV on honey bees (D. Galbraith, PSU) and genomic effects of pathogen interactions in honey bees (R. Paxton and D. McMahon, Queen's University, Belfast, Northern Ireland, UK).
- 2007-2012 **Ph.D. Entomology**, The Pennsylvania State University, University Park, PA. Advisor: Dr. Christina M. Grozinger
Dissertation Title: "Multi-level Analysis of Reproductive Changes in Honey Bee Queens"
- Research leader on studies for behavioral, physiological and molecular characterization of honey bee queen post-mating changes and queen-worker interactions.
 - Research collaborator on the genomics of pheromone production studies (A. Hefetz and O. Malka, Tel Aviv University, Israel), and a project on the evolution of pheromone signaling in honey bees (A. Barron and M. Peso, Macquarie University, Australia).
- 2004-2006 **M.S. Entomology**, North Carolina State University, Raleigh, NC. Advisor: Dr. Wes Watson
Thesis Title: "Dung Beetles (Coleoptera: Scarabaeidae and Geotrupidae) in North Carolina Pasture Ecosystem"
- Research leader on projects studying the effects of dung beetles on nutrient cycling and grass growth and the effects of methoprene in laboratory and field settings.
 - Assistant for the "Bugs, Bones and Botany" forensic workshop.
- 2001-2003 **B.S. Animal Science**, Cornell University, Ithaca, NY
Student Laboratory Assistant (Veterinary Entomology), Department of Entomology, Cornell University, Ithaca, NY. Supervisor: Dr. Phillip Kaufman.
- Research assistant on the NY state mosquito survey, projects on darkling beetle management in poultry houses, and horse fly pan-trap testing.
- 1999-2001 **A.S. Liberal Arts and Sciences: Mathematics and Science** (Honors Concentration Degree), Fulton Montgomery Community College, Johnstown, NY

AWARDS AND HONORS

Grants, Fellowships, Scholarships:

- Academic Federation Research Travel Grant, UC Davis. "North American Beekeeping Conference and Tradeshow. Invited presentation: Queens, Princesses and Drones! Oh, my!" *Submitted*. (\$800)
- Cooperative Extension Specialist Travel Award, Agriculture and Natural Resources, UC. "Controlling the Asian citrus psyllid in urban gardens with honey bee safe pesticide applications". Collaborating advisor: Mary Bianchi, San Luis Obispo and Santa Barbara Counties. 2014-2015 (\$2000)

- California State Beekeepers Association. “Synergistic sublethal effects of amitraz and representatives of different pesticide classes on honey bee workers”. 2014-2015 (\$11,802)
- USDA-NIFA-AFRI Postdoctoral Fellowship. “Breeding honey bees: from evolutionary and functional genomics to sociology”. PI: E. L. Niño. Mentors: C. M. Grozinger, M. F. Wolfner, C. Silverman. 2012-2014 (\$122,838)
- PSU College of Agricultural Sciences Undergraduate Research Award (Summer 2014). “Dissecting the effects of seminal fluid on honey bee queen reproductive changes with a goal of improving bee breeding”. PI: Henry Klepser IV. Mentor: Elina L. Niño (\$3000)
- Alumni Association Dissertation Award, PSU, 2012 (\$5000)
- Lorenzo Langstroth Fellowship. Center for Pollinator Research, PSU, 2011 (tuition and assistantship)
- Michael E. Duke Memorial Scholarship. Department of Entomology, PSU, 2011 (\$1000)
- Foundation for the Preservation of Honey Bees Scholarship. Sacramento, CA, 2007 (\$2000)

National/International Recognition:

- John Henry Comstock Graduate Student Award, Entomological Society of America (Eastern Branch Winner), 2013
- The International Congress on Insect Neurochemistry and Neurophysiology Student Recognition Award in Insect Physiology, Biochemistry, Toxicology, and Molecular Biology, Knoxville, TN, 2012
- Lillian & Alex Feir Graduate Student Travel Award in Insect Physiology, Biochemistry or Molecular Biology, Entomological Foundation, Reno, NV, 2011 (\$300)
- Pesticides and Bee Colony Collapse, Entomological Society of America 2007 Annual Meeting Highlights – Part I in *The IPM Practitioner*. xxx (1/2): 10, 2008
- 1st Place Student Paper Presentation, American Bee Research Conference, Sacramento, CA, 2008
- 1st Place Poster Student Competition for the President’s Prize, Entomological Society of America, Indianapolis, IN, 2006

Regional Recognition:

- Eastern Apicultural Society Student Award Recipient, Warwick, RI, 2011 (\$500)
- Outstanding MS Student of the Year, North Carolina Entomological Society, Raleigh, NC, 2006 (\$250)
- 1st Place Poster Competition, North Carolina Entomological Society, Raleigh, NC, 2006 (\$200)

Local Recognition:

- Postdoctoral Travel Award, Office of Postdoctoral Affairs, PSU, 2013 (\$200)
- Yendol Travel Award, Department of Entomology, PSU, 2009, 2010, 2011 (total \$525)
- Travel Award, WISE Institute, PSU, 2010 (\$125)
- Debate Team Travel Award, Department of Entomology, PSU, 2010 (\$275)
- Sahakian Family Fund for Ag Research Travel Award, College of Ag Sciences, PSU, 2010 (\$500)
- Student Travel Award, Department of Entomology, NCSU, 2008 (\$250)
- Student Travel Award, University Graduate Student Association, NCSU, 2006, 2008 (total \$500)
- Distinguished Graduate in Liberal Arts and Sciences, Fulton-Montgomery Community College, Johnstown, NY, 2001

PUBLICATIONS

1. Galbraith, D., **E. L. Niño**, C. M. Grozinger, and A. Hefetz. Genomic analysis of the interactions between social environment and social communication systems in honey bees (*Apis mellifera*). (In revision, *Molecular Ecology*).
2. Fuller, Z. L., **E. L. Niño**, H. M. Patch, O. C. Bedoya-Reina, T. Baumgarten, E. Muli, F. Mumoki, J. McGraw, M. Frazier, D. Masiga, S. Schuster, W. Miller and C. M. Grozinger. Genome-wide analysis of signatures of selection in populations of African honey bees (*Apis mellifera*) using web-based tools. (*Submitted to Molecular Biology and Evolution*)

3. Malka, O., **E. L. Niño**, C. M. Grozinger, and A. Hefetz. (2014) Genomic analysis of the interactions between social environment and social communication systems in honey bees (*Apis mellifera*). (In revision, *Molecular Ecology*).
4. **Niño, E. L.**, O. Malka, A. Hefetz, D. R. Tarpy, and C. M. Grozinger. Pheromone production in two glands is differentially regulated by distinct mating factors in honey bee queens (*Apis mellifera* L.). (In Revision, *PLoS ONE*).
5. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. (2013) Differential effects of insemination volume and substance on reproductive changes in honey bee queens (*Apis mellifera* L.). *Insect Molecular Biology*. 22: 233–244.
6. Peso, M., **E. L. Niño**, C. M. Grozinger, and A. Barron. (2013) Effect of honey bee queen mating condition on worker ovary activation. *Insectes Sociaux*. 60(2): 123-133.
7. Avila, F. W., G. D. Findlay, A. Gothilf, and **E. L. Niño**. (2012) A BARD Workshop - Insect Reproductive Molecules: From Model Systems to Agricultural Applications. *Molecular Reproduction and Development*. 79(12): 816-820.
8. **Niño, E. L.**, O. Malka, A. Hefetz, P. Teal, J. Hayes, and C. M. Grozinger. (2012) Effects of honey bee (*Apis mellifera*) queen insemination volume on worker behavior and physiology. *Journal of Insect Physiology*. 58(8): 1082-1089.
9. Smith, J., M. Douglas, I. Grettenberger, S. Sidhu, **E. L. Niño**, and T. Bentley. (2012) Global climate change will have substantial long-term negative effects on arthropod diversity. *American Entomologist*. 58(2):99-103.
10. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. (2011) Genome-wide analysis of brain transcriptional changes in honey bee queens (*Apis mellifera* L.) exposed to carbon dioxide and physical manipulation. *Insect Molecular Biology*. 20(30): 387-398.
11. **Niño, E. L.**, C. E. Sorenson, S. P. Washburn, and D. W. Watson. (2009) Effects of the insect growth regulator, methoprene, on the dung beetle, *Onthophagus taurus* Schreber (Coleoptera: Scarabaeidae). *Environmental Entomology*. 38(2): 493-498.
12. Watson, D. W., **E. L. Niño**, K. Rochon, S. Denning, L. Smith, and J. Guy. (2007) Experimental evaluation of *Musca domestica* (Diptera: Muscidae) as a vector of Newcastle Disease Virus. *Journal of Medical Entomology*. 44(4): 666-671.

EXTENSION AND OUTREACH

Extension Publications:

1. UC Davis Apiculture Newsletter (bimonthly publication).
2. **Niño, E. L.**, D.R. Tarpy and C.M. Grozinger. 2008. "Behavioral, physiological, and molecular characterization of factors affecting reproductive quality of honey bee queens (*Apis mellifera* L.)". Proceedings of the 2008 American Bee Research Conference (ABRC-21st). American Bee Journal 148(6):558.
3. Watson, D. W., M. H. Poore, S. P. Washburn, J. P. Mueller and **E. Lastro**. 2005. "Pest Management Using Push-Pull Strategies to Control Horn Flies in Pastured Dairy Heifers and Steers". 45th Annual N. C. Dairy Conference Proceedings. Salisbury, NC.

Extension Workshops:

1. Organizer and instructor for the Queen Rearing Techniques Short Course, UCD (*March 2015*).
2. Organizer and instructor for the Annual Queen Rearing Workshop, PSU (2011-2013).
3. Organizer and instructor for the "Queen Rearing" short course and "Practical Queen Rearing Techniques" session. Eastern Apicultural Society Annual Meeting. West Chester, PA (2013).

Invited Extension Presentations:

4. **Niño, E. L.** 2014. "Approaches to Supporting Honey Bee Colony Health". Pesticide Applicators Professional Association. San Jose, CA.
5. **Niño, E. L.** 2014. "Apiary Health and Pesticides". Glenn County Growers Meeting. Glenn, CA.
6. **Niño, E. L.** 2014. "UC Davis Apiculture Program and Current Honey Bee Issues". San Francisco Beekeepers Association. San Francisco, CA.

7. **Niño, E. L.** 2014. "UC Davis Honey Bee Research and Extension". California Bee Breeders Association. Gilroy, CA.
8. **Niño, E. L.** 2014. "UC Davis Honey Bee Research and Extension". California Bee Breeders Association. Glenn, CA.
9. **Niño, E. L.** 2014. "UC Davis Honey Bee Research and Extension". Santa Clara Valley Beekeepers Association. San Jose, CA.
10. **Niño, E. L.** 2014. "Research at Harry H. Laidlaw Jr. Honey Bee Research Facility". Sacramento Area Beekeepers Association. Davis, CA.
11. **Niño, E. L.** 2014. "Current Topics in Honey Bee Research and Where we Stand with CCD". East Central Ohio Beekeepers Association. Newark, OH.
12. **Niño, E. L.** 2011. "Examination of Factors That Alter Queen Physiology and Queen-Worker Interactions". Loraine County Beekeepers Association. Oberlin, OH.
13. **Niño, E. L.**, J. Hayes, O. Malka, A. Hefetz, D. R. Tarpy, and C. M. Grozinger. 2010. "Factors affecting queen-worker interactions". PA State Beekeepers Annual Meeting. Lewisburg, PA.
14. **Niño, E. Lastro**, J. Hayes, and C. M. Grozinger. 2008. "Effects of insemination volume on supersedure rates in Florida". Honey Bee Technical Council. Gainesville, FL.
15. **Lastro, E.** and D. W. Watson. 2006. "Dung beetle activities and implications for grassland ecology and grazing animal management". Pastureland Ecology I. NRCS. Center for Environmental Farming Systems. Goldsboro, NC.
16. **Lastro, E.** and Bertone, M. 2006. "Dung beetles: What are they and why are they important to cattle pastures?" Pender Co. Cattleman's Assoc., Pender Co. Cooperative Extension. Burgaw, NC.
17. Watson, D. W. and **E. Lastro**. 2005. "Optimizing dung beetles in your pasture". Guilford Co. Cattleman's Assoc., Guilford Co. Cooperative Extension. Greensboro, NC.
18. Bertone, M. A., **E. Lastro** and D. W. Watson. 2005. "Dung beetle activities and implications for grassland ecology and grazing animal management". Pastureland Ecology I. NRCS. Center for Environmental Farming Systems. Goldsboro, NC.

Community Outreach:

1. California School for the Blind, 6th grade students - "What's in a Hive?" (2014)
2. Häagen-Dazs Honey Bee Haven Open House – Honey Bee Display (2014)
3. 30th Annual Spring Creek Festival – Pollinator Display (2013)
4. Wings in the Park – Managed the Display on Pollinator Biology (2012, 2013)
5. Exploration Days – Organized and Managed the Display on Honey Bee Biology (2011)
6. Delta Program Middle School and High School – Organized and Executed a Workshop on Honey Bee Queen Rearing for Students (2009)
7. Entomology Workshop for 3rd and 4th grade students – Honey Bee Biology and Products (2009)
8. Great Insect Fair – Judge for the "Build-a-Bug" contest; Managed the Display for PSU Honey Bee Group and Answered Questions from the Public (2009)
9. The National Honey Bee Awareness Day – Research Presentations for the Public (2009)
10. Ag Days – Organized and Managed the Honey Bee Biology Display; Managed the Display for PSU Honey Bee Group and Answered Questions from the Public (2009)
11. Bugfest – Organized and coordinated the Entomology Graduate Student Association Display; Managed a Display for NCSU Honey Bee Group; Answered Questions from the Public (2005, 2008)
12. Bugg Elementary School – General Honey Bee Biology Presentation (2008)
13. Raleigh Latin School – General Insect Biology Presentation (2008)
14. NC School of Math and Sciences – Guided students in experimental design and execution (2007)
15. Science Olympiad State Competition – Organized and prepared testing materials for Middle School and High School "Don't Bug Me!" competition (2006, 2007)
16. NC Math & Science Educational Network (MSEN) Summer Camp for Middle School and High School Students - Presentation "Careers in Entomology" (2007)
17. Bright Horizons at Forum Preschool - Basic Insect Biology and Behavior (2006)
18. Green Hope Elementary - Basic Insect Biology and Behavior (2006)
19. Oak Grove Elementary – Science Fair: "The Amazing Arthropods" (2006)
20. Middle Creek Elementary - Science Fair: "The Amazing Arthropods" (2005)
21. Knightdale Daycare Center – Basic Insect Biology and Behavior (2005)

22. North Ridge Country Club – Basic Insect Biology and Behavior (2005)
23. Childcare Network - Basic Insect Biology and Behavior (2005)
24. Duke Elementary School - Basic Insect Biology and Behavior (2005)
25. Lacey Elementary - Earth Day: “Role of Insects in Soil Nutrient Recycling” (2004)
26. Nature Explorers Summer Camp: “Exotic Insects and Honey Bees” (2004)
27. Washington GT Elementary – Family Science Night: “The Amazing Arthropods” (2004)

PROFESSIONAL COMMUNICATION

Invited talks:

1. **Niño, E. L.** 2014. “Apiculture Program at UC Davis”. California State Beekeepers Association Annual Convention. Valencia, CA.
2. **Niño, E. L.**, D. McMahon, R. Paxton, and C. M. Grozinger. 2014. “Gene expression in honey bee workers is dramatically altered by DWV but not by Nosema”. Entomological Society of America Annual Meeting. Portland, OR.
3. **Niño, E. L.** 2014. “Regulation of reproductive changes and the evolution of reproductive molecules in honey bees”. Insect reproductive molecules, BARD workshop. Cornell, Ithaca, NY.
4. **Niño, E. L.** 2013. “Regulation of reproductive changes in honey bee queens and implications for beekeepers”. Department of Entomology and Nematology seminar. UC Davis, Davis, CA.
5. **Niño, E. L.** 2013. “My path to entomology and honey bees and what my job really entails”. Biomedical Sciences Club Seminar. PSU, University Park, PA.
6. **Niño, E. L.** 2013. “Honey bee queen reproduction: Insights from a non-model organism”. Department of Biology Seminar. College of Wooster, Wooster, OH.
7. **Niño, E. L.** 2013. “Multi-level analysis of honey bee queen post-mating changes and queen-worker interactions”. Entomological Society of America Eastern Branch Annual Meeting. Lancaster, PA.
8. **Niño, E. L.** 2013. “Apian Academics: Colony Collapse Disorder and Other Current Topics in Bee Research.”, panelist. Princeton University, Princeton, NJ.
9. **Niño, E. L.**, O. Malka, A. Hefetz, J. Hayes, P. Teal, D. R. Tarpy, and C. M. Grozinger. 2011. “Honey bee queen (*Apis mellifera* L.) insemination volume modulates queen pheromone production and queen-worker interactions”. Entomological Society of America Annual Meeting. Reno, NV.
10. **Niño, E. L.**, O. Malka, J. Hayes, P. Teal, A. Hefetz, D. R. Tarpy, and C. M. Grozinger. 2011. “Queen bees and their pheromones”. Eastern Apicultural Society Annual Meeting. Warwick, RI.
11. **Niño, E. L.**, J. Hayes, O. Malka, A. Hefetz, D. R. Tarpy, and C. M. Grozinger. 2010. “Dissecting the factors affecting honey bee queen (*Apis mellifera* L.) post-mating changes and queen-worker interactions”. International Union for Study of Social Insects International Meeting. Copenhagen, Denmark.

Submitted presentations:

1. **Niño, E. L.**, M Wolfner, C. Silverman, and C. M. Grozinger. 2014. “Breeding honey bees: From evolutionary and functional genomics to sociology”. Portland, OR (poster presentation).
2. **Niño, E. L.** 2013. “Regulation of reproductive changes in honey bee queens. Entomological Society of America Annual Meeting”. Austin, TX (oral presentation).
3. **Niño, E. L.** 2013. “Changes in honey bee queen pheromone bouquet communicate mating status and quality”. International Conference on Pollinator Biology, Health and Policy. University Park, PA (poster presentation).
4. **Niño, E. L.** 2012. “Factors affecting queen mating behavior and physiology. Entomological Society of America Annual Meeting”. Knoxville, TN (oral presentation).
5. **Niño, E. L.** 2012. “Multi-level analysis of reproductive changes in honey bee queens (*Apis mellifera* L.)”. Doctoral defense seminar. University Park, PA (oral presentation).
6. **Niño, E. L.**, O. Malka, A. Hefetz, P. Teal, J. Hayes, D. R. Tarpy, and C. M. Grozinger. 2012. “What causes honey bee queen reproductive changes and how these changes affect worker behavior and physiology”. Insect Reproductive Molecules: From Model Systems to Agricultural Applications, BARD Workshop. Jerusalem, Israel (oral presentation).

7. **Niño, E. L.**, J. Hayes, D. R. Tarpy, and C. M. Grozinger. 2011. "Honey Bee Queen (*Apis mellifera* L.) Insemination Volume Modulates Queen Physiology and Queen-Worker Interactions". The Penn State Graduate Exhibition. University Park, PA (poster presentation).
8. **Niño, E. L.**, J. Hayes, O. Malka, A. Hefetz, D. R. Tarpy, and C. M. Grozinger. 2010. "Dissecting the factors affecting honey bee queen (*Apis mellifera* L.) post mating changes and queen-worker interactions". Entomological Society of America Annual Meeting. San Diego, CA (oral presentation).
9. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2009. "Post-mating changes in honey bee queens (*Apis mellifera* L.) triggered by chemical and physical stimulation". Entomological Society of America Annual Meeting. Indianapolis, IN (oral presentation).
10. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2009. "Molecular, physiological, and behavioral characterization of factors affecting reproductive quality of honey bee queens (*Apis mellifera* L.)". Center for Chemical Ecology Lab of the Month. University Park, PA (oral presentation).
11. **Niño, E. L.**, D. Barnes, T. Dowda, J. Flowers, J. Hayes, and C. M. Grozinger. 2008. "Effects of insemination volume on supersedure rates". 2008 Breakout Meeting, International Union for the Study of Social Insects – North American Section. Aceribo, PR (oral presentation).
12. Advani, S., **E. L. Niño**, and C. M. Grozinger. 2008. "Effects of insemination volume on supersedure rates". The 7th Annual NC State University Undergraduate Summer Research Symposium. HHMI Reaching Incoming Student Enrichment (RISE) Program. Raleigh, NC (poster presentation).
13. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2008. "Molecular, physiological, and behavioral characterization of factors affecting reproductive quality of honey bee queens (*Apis mellifera* L.)". 2nd Annual Entomology Graduate Student Symposium. Raleigh, NC (oral presentation).
14. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2008. "Molecular, physiological, and behavioral characterization of factors affecting reproductive quality of honey bee queens (*Apis mellifera* L.)". W.M. Keck Center for Behavioral Biology: Graduate Student and Postdoc Symposium. Raleigh, NC (oral presentation).
15. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2008. "Molecular, physiological, and behavioral characterization of factors affecting reproductive quality of honey bee queens (*Apis mellifera* L.)". American Bee Research Conference. Sacramento, CA (oral presentation).
16. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2007. "Two Commonly Used Insecticides Reduce Honey Bee Queen (*Apis mellifera* L.) Survival and Quality". North Carolina Entomological Society Annual Meeting. Raleigh, NC (poster presentation).
17. **Niño, E. L.**, D. R. Tarpy, and C. M. Grozinger. 2007. "Physiological and molecular mechanisms of post-mating changes in honey bee queen". Entomological Society of America Annual Meeting. San Diego, CA (oral presentation).
18. Overman, D., **E. Lastro Niño**, and C. M. Grozinger. 2007. "Effects of two insecticides on honey bee queen rearing and quality". The 6th Annual NC State University Undergraduate Summer Research Symposium. HHMI Reaching Incoming Student Enrichment (RISE) Program. Raleigh, NC (poster presentation).
19. **Lastro, E.**, and D. W. Watson. 2006. "*Onthophagus taurus* Schreber (Coleoptera: Scarabaeidae) activity improves soil richness and plant yield". North Carolina Entomological Society Annual Meeting. Raleigh, NC (poster presentation).
20. **Lastro, E.**, and D. W. Watson. 2006. "Impact of methoprene, an insect growth regulator on fecundity and survival of *Onthophagus taurus* (Coleoptera: Scarabaeidae)". Entomological Society of America Annual Meeting. Indianapolis, IN (poster presentation).
21. Watson, D. W., **E. Lastro**, K. Rochon, S. Denning, M. Stringham, J. Butler and H. Friend. 2006. "Insect repellents in the management of horn flies". 50th Annual Livestock Insect Workers Conference. Amarillo, TX (oral presentation).
22. **Lastro, E.** and D. W. Watson. 2006. "Effect of Dung Beetles on the Yield and Quality of Sorghum and Ryegrass in North Carolina". Annual Meeting of the Southeastern Branch of the Entomological Society of America. Wilmington, NC (oral presentation).
23. Watson, D. W., S. Denning, **E. Lastro**, K. Rochon, L. Smith, and J. Guy. 2006. "Using Attenuated Vaccines to Investigate the Vectoral Capacity of the House Fly, *Musca domestica* (L.)". Annual Meeting of the Southeastern Branch of the Entomological Society of America. Wilmington, NC (oral presentation).

24. Watson, D. W., J. S. Guy, D. I. Calibeo-Hayes and **E. Lastro**. 2006. "House flies as vectors of avian viruses. How important are they? Symposium Muscoid Flies, Pathogens, Dispersal and Control". Entomological Society of America Annual Meeting. Ft. Lauderdale FL (oral presentation).
25. **Lastro, E.**, D. W. Watson, M. Hucks, and M. Bertone. 2005. "Evaluating the effects of methoprene feed additive on dung beetle populations in North Carolina". 49th Annual Livestock Insect Workers Conference. Bozeman, MT (oral presentation).
26. Watson, D. W., C. Gore, **E. Lastro**, K. Rochon, S. Denning, M. Stringham and S. Jennings. 2005. "Sugar water solution of boric acid for the management of house flies in turkey production". 49th Annual Livestock Insect Workers Conference. Bozeman, MT (oral presentation).
27. Watson, D. W., **E. Lastro**, P. Mueller, and S. Washburn. 2005. "Use of Insect Repellants in the Management of Horn Flies". Annual Meeting of the Southeastern Branch of the Entomological Society of America. Tunica, MS (oral presentation).
28. Bertone, M., **E. Lastro**, M. Hucks and D. W. Watson. 2004. "Evaluating the effects of a methoprene feed additive on dung beetle (Coleoptera: Scarabidae and Geotrupidae) populations in North Carolina". 48th Annual Livestock Insect Workers Conference. Lake Placid, NY (oral presentation).

TEACHING EXPERIENCE

- 2013 **Lecturer – “Honey Bees and Humans” (undergrad level to be offered Fall 2013)**
 Dr. Christina Grozinger, Maryann Frazier, and Dr. Harland Patch, Department of Entomology, PSU
- Lecture: “Bee Physiology and Morphology”
 - Laboratory: “Dissecting the Honey Bee”
 - Lecture: “Honey Bee Mating and Reproduction”
- 2013 **Lecturer – “Concepts and Techniques in Molecular Ecology and Evolution” (grad level, 11 students)**
 Dr. Christina Grozinger and Dr. Harland Patch, Department of Entomology, PSU
- Lecture: “Phenotype to Genes – Gene Expression and Candidate Genes”
 - Laboratory: “Functional Genomics: cDNA synthesis; qRT-PCR”
 - Laboratory: “Functional Genomics: Analysis of qRT-PCR data”
 - Laboratory: “Functional Genomics: Microarray analysis”
- 2011 **Teaching Assistant – “Molecular Ecology” (grad level, 12 students)**
 Dr. Christina Grozinger and Dr. Harland Patch, Department of Entomology, PSU
- Developed, organized, and conducted sessions for functional genomics laboratories.
- 2009, 2010 **Lecturer – “Introduction to Beekeeping” (undergrad level, 10 students)**
 Maryann Frazier, Department of Entomology, PSU
- Lecture: “Queen Rearing and Instrumental Insemination”.
- 2009 **Teaching Assistant – “The Insect Connection” (undergrad level, 200 students)**
 Dr. Kelli Hoover, Department of Entomology, PSU
- 2008 **Teaching Assistant – “Medical and Veterinary Entomology” (grad level, 10 students)**
 Dr. D. Wes Watson, Department of Entomology, NCSU
- 2007 **Teaching Assistant – “Insects and People” (undergrad level, 50 students)**
 Dr. Ronald Kuhr and Dr. Clyde Sorenson, Department of Entomology, NCSU
- Developed handouts and live insect demos for class, conducted guest lectures on order Hymenoptera with focus on honey bees.
- 2003 **Teaching Assistant – “Insect Pest Management” (undergrad level, 20 students)**
 Dr. Ward Tingey, Department of Entomology, Cornell University
- Conducted guest lectures on various insect orders.

Teaching Workshops:

- 2013 **Schreyer Institute for Teaching Excellence**, PSU, University Park, PA
- “Improved Learning and Enhanced Teaching in Large Classes”
 - “Best Practices for PowerPoint: Tips for Teachers”
 - “Effective Group Work: Interactions, Collaborations and Assessment”
 - “GA 102: Beyond the Basics of Course Design”
 - “GA 103: Learning-Focused Assessment and Evaluation”

MENTORING

- Mentor to students participating in the Reaching Incoming Students Program at North Carolina State University (funded by Howard Hughes Medical Institute)
 - Sandhya Advani (2008) Honey Bee Queen Reproduction, Honey Bee Social Immunity
 - Dave Overman (2007) Pesticide Effects on Queen Survival
- Supervisor to undergraduate lab assistants: Amanda Hund, Alex McMenamin, Stephanie Damaris Narvaez, Janet Teeple.

PROFESSIONAL DEVELOPMENT AND SERVICE

- UC IPM Pest Management Guidelines Bee Toxicity Ratings, advisor
- CA Farm Bureau Federal Bee Commodity Advisory Committee, UCCE Liaison
- Honey and Pollination Center Advisory Board, member
- Laidlaw Research Facility Committee, member
- Multi-Media Committee, member
- Picnic Day Committee, member
- Häagen-Dazs Honey Bee Haven Committee, Chair
- Contributor for the Eastern Apicultural Society newsletter (July, 2013)
- Reviewer for: The FEBS Journal, Journal of Insect Physiology, Molecular Ecology, Insectes Sociaux, Insect Molecular Biology, Entomologia Experimentalis et Applicata, AoB Plants (1), Agriculture and Natural Resources Publications, University of California (1).
- Participant in the Pollinator Conservation Planning Short Course, The Xerces Society (2013)
- Completed an Instrumental Insemination Workshop held by Sue Cobey, UC Davis (2010)
- Member symposium co-organizer, “Host-Pathogen Interactions”. International Conference on Pollinator Biology, Health, and Policy. August 14-17, 2013, University Park, PA
- Member symposium co-organizer, “Anatomy of an Invasion: Requirements, Benefits and Possible Implications for Successful Invaders”, Entomological Society of America Annual Meeting 2012, Knoxville, TN
- Judge for the President’s Prize Student Poster Competition, Entomological Society of America Annual Meeting 2012, Knoxville, TN
- Judge for the Penn State Graduate Exhibition, 2011, University Park, PA
- Vice-president, Entomology Graduate Student Association, PSU (2011)
- WISE Recognition Awards Committee, WISE Institute, PSU (2011)
- Doctoral Candidacy Committee, Student Member, Entomology Department, PSU (2010)
- Social Committee, Student Member, Entomology Department, PSU (2010)
- Treasurer, Entomology Graduate Student Association, NCSU (2007)
- Treasurer, Entomology Graduate Student Association, NCSU (2006)
- Social Committee Co-Chair, Entomology Graduate Student Association, NCSU (2006)
- Outreach Committee Chair, Entomology Graduate Student Association, NCSU (2005, 2006)

PROFESSIONAL SOCIETIES

Entomological Society of America

American Association of Professional Apiculturists

International Union for the Study of Social Insects, North American Section

Eastern Apicultural Society (2011)

Center for Pollinator Research, PSU (2009-2014)

Center for Chemical Ecology, PSU (2009-2014)