

Amy C. Murillo, Ph.D.
Curriculum Vitae

Department of Entomology • University of California
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Education

University of California	Riverside, CA
Ph.D. Entomology	2011-2016
Major: Medical & Veterinary Entomology	
Minors: Integrated Pest Management, Animal Behavior	
Dissertation: “Studies of Northern Fowl Mite Host-Parasite Interactions and Evaluation of Novel Control Strategies in Poultry”	
North Carolina State University	Raleigh, NC
M.S. Entomology	2009-2011
Thesis: “A Study of the Sugarcane Beetle (Coleoptera: Scarabaeidae) in North Carolina Turfgrass”	
Purdue University	West Lafayette, IN
B.S. Entomology <i>with distinction</i>	2006-2009
Dean’s Scholars Program	

Research Experience

University of California	Riverside, CA
<i>Assistant Professor of Entomology</i>	July 2020 - <i>present</i>
<i>UCR Chancellor’s Postdoctoral Fellow</i>	2018-2020
<i>USDA NIFA Postdoctoral Fellow</i>	2017-2018
<i>Project Scientist</i>	7/2016-12/2016
<i>Graduate Research Assistant</i>	2011-2016
North Carolina State University	Raleigh, NC
<i>Graduate Research Assistant</i>	2009-2011
Dow AgroSciences , Field Research Station	Fowler, IN
<i>Summer Research Intern</i>	2008
Purdue University	West Lafayette, IN
<i>Undergraduate Research Assistant</i>	2007-2009

Research Grants & Fellowships

Pending
Jan 2023 – Dec 2028 PI: M. Erasmus Co-PI: **A. Murillo**, L. Brito
“PARTNERSHIP: Using genomics and individual animal protective factors to combat ectoparasitic mites and improve laying-hen welfare”
USDA-NIFA
Total Costs: \$799,805

Received – Direct costs totaling \$1,381,172

Nov 2022 – Oct 2025 PI: J. Jellyman Co-PI: **A. Murillo**, A. Gerry

“Remote sensing to evaluate sustainable pest management of biting flies in cattle”

CSU-ARI Integrated Pest Management Program

Total Costs: \$286,864

Sept 2022 – Aug 2023 PI: J. Jellyman Co-PI: **A. Murillo**, A. Gerry

“Wearable sensors to record cattle fly-repelling behavior”

CSU-ARI

Total Costs: \$59,811

Jan 2022 – Dec 2023 PI: **A. Murillo** Co-PI: E. Keogh

“Sensor technology for cattle behavior”

UCR RED Seed grant

Total Costs: \$23,609

August 2021 – July 2023 PI: **A. Murillo**

“Essential oil treatment effects on laying hen production, welfare, behavior, and northern fowl mite infestations”

Egg Industry Center

Total Costs: \$93,372

September 2021 – June 2022 PI: **A. Murillo**

“Poultry Red Mite Effects on Egg-Layer Welfare, Behavior, and Economic Output”

UC Senate Regent’s Faculty Fellowship

Total Costs: \$6,000

March 2021 – Sept 2021 PI: **A. Murillo**

“Natural and synthetic pesticide screening for control of poultry ectoparasites”

USDA-NIFA Animal Health

Total Costs: \$4,219

July 2020 – December 2024 PI: **A. Murillo** Co-PIs: D.W. Watson, K. Anderson

“Prevalence of poultry mites in egg-layer production systems in the US”

Boehringer Ingelheim

Total Costs: \$49,367

January 2020 – December 2020 PI: **A. Murillo** Co-PI: Alec Gerry

“Efficacy and Safety of a Natural Pyrethrin Formulation Applied to Laying Hens for the Control of Northern Fowl Mites *Ornithonyssus sylviarum* (Mesostigmata: Macronyssidae)”

Control Solutions

Total Costs: \$25,796

December 2019 – December 2021 PI: A. Gerry Co-PIs: **A. Murillo**

“Evaluation of the field effectiveness of fluralaner solution administered to breeding chickens for control of northern fowl mite”

Merck-Intervet

Total Costs: \$289,816

December 2019 – December 2020 PI: A. Gerry Co-PI: **A. Murillo**

“Dose confirmation study for northern fowl mite control in layer chickens”

Merck-Intervet

Total Costs: \$128,769

July 2018 – June 2019 PI: **A. Murillo**

UCR Chancellor's Postdoctoral Fellowship

Total Costs: \$152,611

February – April 2018 Co-PI: **A. Murillo**

“*Dermanyssus gallinae* (red mite) reduction testing”

Imerys

Total Costs: \$8,205

January 2017 – December 2018 PI: **A. Murillo**

“Poultry ectoparasite effects on animal welfare parameters in cage-free management systems”

USDA NIFA Postdoctoral Fellowship

Total Costs: \$150,689

December 2016 – February 2017 Co-PI: **A. Murillo**

“Confirmation of fluralaner effectiveness for mite control in poultry breeder systems”

Merck-Intervet

Total Costs: \$21,868

September 2013 – December 2016 Co-PI: **A. Murillo**

“Adapting ectoparasite control to welfare-driven changes in poultry production systems”

USDA Western Regional IPM

Total Costs: \$99,801

Peer-Reviewed Publications

1. Hubbard, C. and **A. Murillo**. Concentration dependent feeding on imidacloprid by behaviorally resistant house flies, *Musca domestica* L. (Diptera: Muscidae) Journal of Medical Entomology. DOI: 10.1093/jme/tjac130
2. Jarrett, R., M. Erasmus, **A. Murillo**, K. Scoles, and D. M. Karcher. 2022. Laying hen production and welfare in a cage-free setting is impacted by the northern fowl mite. Journal of Applied Poultry Research. 31: 1-21. DOI: 10.1016/j.japr.2022.100290
3. Mercer, R., A. Alae, A. Abdoli, N. Shakibay, S. Singh, **A. Murillo**, E. Keogh. 2022. Introducing the Contrast Profile: A Novel Time Series Primitive that Allows Real World Classification. Data Mining and Knowledge Discovery 36, 877–915. (Refereed) <https://doi.org/10.1007/s10618-022-00824-5>
4. Mercer, R. S. Alae, A. Abdoli, S. Singh, **A. Murillo**, and E. Keogh. 2021. Matrix Profile XXIII: Contrast Profile: A Novel Time Series Primitive that Allows Real World Classification. 2021 IEEE International Conference on Data Mining. pp. 1240-1245, DOI: 10.1109/ICDM51629.2021.00151.
5. **Murillo, A.**, C. Hubbard, N. Hinkle, and A. Gerry. 2021. Big problems with little house fly, *Fannia canicularis* (Diptera: Fanniidae). Journal of Insect Pest Management. 12:40. DOI: 10.1093/jipm/pmaa023.
6. Machtinger, E., A. Gerry, **A. Murillo**, J. Talley. 2021. Animal production in the United States and impacts of filth fly pests. Journal of Insect Pest Management. 12: 41. DOI: 10.1093/jipm/pmab026
7. Mercer, R., Alae, S., Abdoli, A., Singh, S., **Murillo, A.**, & Keogh, E. (2021) Matrix Profile XXIII: Contrast Profile: A Novel Time Series Primitive that Allows Real World

- Classification. In 2021 IEEE International Conference on Data Mining (ICDM) (pp. 1240-1245). (Refereed)
8. **Murillo, A.** and B. Mullens. 2020. Collecting and monitoring for northern fowl mite (Acari: Macronyssidae) and poultry red mite (Acari: Dermanyssidae) in Poultry Systems. *Journal of Insect Science*. 20: 1-7. DOI: 10.1093/jisesa/ieaa032.
 9. **Murillo, A.**, A. Abdoli, R. Blatchford, E. Keogh, A. Gerry. 2020. Parasitic mites alter chicken behaviour and negatively impact animal welfare. *Scientific Reports*. 10: 1-12. DOI: 10.1038/s41598-020-65021-0.
 10. Abdoli, A., S. Alae, S. Imani, **A. Murillo**, A. Gerry, L. Hickie, E. Keogh. 2020. Fitbit for Chickens? Time Series Data Mining Can Increase the Productivity of Poultry Farms. In *Proceedings of the 26th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining*.
 11. Alae, S., A. Abdoli, C. Shelton, **A. Murillo**, A. Gerry, and E. Keogh. 2020. Features or Shape? Tackling the False Dichotomy of Time Series Classification. SIAM International Conference on Data Mining, Cincinnati, OH. 7-9 May 2020. arXiv:1912.09614.
 12. Abdoli, A., **A. Murillo**, A. Gerry, E. Keogh. 2019. Time series classification: lessons learned in the (literal) field while studying chicken behavior. In *Proceedings of the IEEE Big Data Conference*. arXiv:1912.05913.
 13. **Murillo**. 2019. Highlights in the field of veterinary entomology, 2018. *Journal of Medical Entomology*. 56: 1194-1198. DOI: 10.1093/jme/tjz111.
 14. Abdoli, A., **A. Murillo**, A. Gerry, E. Keogh. 2018. Time series classification to improve poultry welfare. In *Proceedings of the IEEE International Conference on Machine Learning and Applications*. arXiv:1811.03149.
 15. **Murillo, A.**, D. Cox, and B. Mullens. 2018. Longevity of fly baits exposed to field conditions. *Journal of Economic Entomology*. 111: 967-973. DOI: 10.1093/jee/toy016.
 16. Wong, N., E. McDermott, **A. Murillo**, and B. Mullens. 2018. Field distribution and density of *Culicoides sonorensis* (Diptera: Ceratopogonidae) eggs in dairy wastewater habitats. *Journal of Medical Entomology*. 55: 392-397. DOI: 10.1093/jme/tjx203.
 17. **Murillo, A.** and B. Mullens. 2017. A review of the biology, ecology, and control of the northern fowl mite, *Ornithonyssus sylviarum* (Acari: Macronyssidae). *Veterinary Parasitology*. 246: 30-37. DOI: 10.1016/j.vetpar.2017.09.002.
 18. Mullens, B., **A. Murillo**, H. Zoller, A. Heckerroth, F. Jirjis, and A. Flochlay Sigognault. 2017. Comparative *in vitro* evaluation of contact activity of fluralaner, spinosad, phoxim, propoxur, permethrin, and deltamethrin against the northern fowl mite, *Ornithonyssus sylviarum*. *Parasites & Vectors*. 10: 358. DOI: 10.1186/s13071-017-2289-z.
 19. Mullens, B., **A. Murillo**, and A. Gerry. 2017. The rapidly changing landscape of poultry pest control: what lies ahead? In *Proceedings of the sixty-sixth Western Poultry Disease Conference*.
 20. **Murillo, A.** and B. Mullens. 2016. Timing diatomaceous earth-filled dustbox use for management of northern fowl mites (Acari: Macronyssidae) in Cage-Free Poultry Systems. *Journal of Economic Entomology*. 109: 2572-2579. DOI: 10.1093/jee/tow165.
 21. **Murillo, A.** and B. Mullens. 2016. Sulfur dust bag: a novel technique for ectoparasite control in poultry systems. *Journal of Economic Entomology*. 109: 2229-2233. DOI: 10.1093/jee/tow146.
 22. **Murillo, A.**, M. Chappell, J. Owen, and B. Mullens. 2016. Northern fowl mite (*Ornithonyssus sylviarum*) effects on metabolism, body temperatures, skin condition, and egg

- production as a function of hen MHC haplotype. *Poultry Science*. 95: 2536-2546. DOI:10.3382/ps/pew175.
23. **Murillo, A.** and B. Mullens. 2016. Diversity and prevalence of ectoparasites of backyard chicken flocks in southern California. *Journal of Medical Entomology*. 53: 707-711. DOI: 10.1093/jme/tjv243.
 24. Smith, T., J. Beuzelin, A. Catchot, **A. Murillo**, and D. Kerns. 2015. Biology, ecology and management of the sugarcane beetle (Coleoptera: Scarabaeidae) in sweetpotato and corn. *Journal of Integrated Pest Management*. 6: 13. DOI: 10.1093/jipm/pmv012.
 25. **Murillo, A.**, A. Gerry, N. Gallagher, N. Peterson, and B. Mullens. 2014. Laboratory and field assessment of cyantraniliprole relative to existing fly baits. *Pest Management Science*. 71: 752–758. DOI: 10.1002/ps.3847.

Extension Publications

1. **Murillo, A.** 2021. Pests of Backyard Poultry. UC IPM Newsletter.
2. Nair, S., D. Gouge, **A. Murillo**. 2020. Backyard Chickens and Ectoparasites: Introduction and Management. University of Arizona Cooperative Extension.
3. Hubbard, C. and **A. Murillo**. Backyard Poultry Fly Control. UC Cooperative Extension *Poultry Ponderings*. Fall 2016.
4. **Murillo, A.** and A. Gerry. 2016. Bed Bug. University of California Division of Agriculture and Natural Resources Extension Bulletin.
5. **Murillo, A.** and A. Gerry. 2016. Litter Beetle. University of California Division of Agriculture and Natural Resources Extension Bulletin.
6. **Murillo, A.** and A. Gerry. 2016. Chicken Mite. University of California Division of Agriculture and Natural Resources Extension Bulletin.
7. **Murillo, A.** and A. Gerry. 2016. Sticktight Flea. University of California Division of Agriculture and Natural Resources Extension Bulletin.
8. **Murillo, A.** and B. Mullens. Backyard Chicken Ectoparasites. UC Cooperative Extension *Poultry Ponderings*. Winter 2016.
9. **Murillo, A.** and B. Mullens. Quantifying Parasitism Energy Costs. UC Cooperative Extension *Poultry Ponderings*. Winter 2014.
10. **Murillo, A.** and B. Mullens. 2012. Northern Fowl Mite. University of California Division of Agriculture and Natural Resources Extension Bulletin.
11. **Murillo, A.** and T. Hockett. 2012. The Sugarcane Beetle (*Euethola humilis*). Handbook of Turfgrass Insect Pests, Eds. R. Brandenburg and C. Freeman. Entomological Society of America.

Book Chapters

1. **Murillo, A.** 2021. Poultry Ectoparasites. In *Merck Veterinary Manual*.
2. **Murillo, A.** 2021. Air Sac Mite in Poultry. In *Merck Veterinary Manual*.
3. Gerry, A. and **A. Murillo**. 2018. Promoting Biosecurity through Insect Management at Animal Facilities. In J. Dewulf and F. Van Immerseel (Eds.) *Biosecurity in Animal Production and Veterinary Medicine*.

4. Mullens, B. and **A. Murillo**. 2017. The Future of Poultry Pest Management. In J. Mench (Ed.) *Advances in Poultry Welfare*.
5. Mullens, B. and **A. Murillo**. 2017. Parasites in Laying Hen Systems. In P. Hester (Ed.) *Egg Production: Innovations and strategies for improvement*.

Popular Press

Murillo, A. What's Crawling on your Chicken? *Backyard Poultry Magazine*. July/August 2015.

Murillo, A. Backyard Chickens May Have Mites, Lice and Fleas. *Entomology Today*. 13 April 2015.

Popular Press Coverage

- 2021 Iowa Farmer Today:** 'Chicken backpacks' set scene for advanced tech
- 2020 UCR:** Parasite infestations revealed by tiny chicken backpacks
The Counter: Tiny, sensor-equipped chicken backpacks might help farmers detect parasite infestations in real time
Bloomberg: A Fitbit-Like Device for Chickens Might Mean More Eggs
Popular Mechanics: Chickens Wearing Backpacks? Chickens Wearing Backpacks
AgNet West: Chicken Fitbit Helps Identify Mite Infestations in Poultry
Capital Press: Fitbits for chickens: Tiny 'backpacks' detect parasite infestations
- 2018 Digital Trends:** A Fitbit for chickens? Sounds silly, but it could revolutionize poultry farms
New Scientist: Smart mini-backpacks for chickens can monitor their welfare on farms.
- 2016 Entomology Today:** Battling Chicken Mites with Bags of Brimstone
Popular Science: How to Keep Your Backyard Chickens Bug-Free
Live Science: Fowl Play: Diverse Parasites Infest Backyard Chickens
Entomology Today: Backyard Chickens Harbor Greater Diversity of Ticks, Mites, and Lice than Farm-raised Chickens.
Entomology Today: Dust Baths and Longer Beaks Can Make Cage-free Chickens into Mite-free Chickens

Professional Presentations

All presented by A. Murillo unless indicated with *

1. **Murillo, A.** Mites, lice, and fleas, oh my! A regional survey of backyard chickens. *Invited Speaker*. Society of Vector Ecology 8th International Congress, Honolulu, HI. September 2022.
2. Hubbard, C.* and **A. Murillo**. Concentration dependent detection of imidacloprid in behaviorally resistant house flies (*Musca domestica* L.). Livestock Insect Worker's Conference. June 2022.
3. **Murillo, A.** How Mites and Lice Affect Chicken Welfare & Health. *Invited Speaker*. Poultry Extension Collaboration. 17 May 2022. Virtual presentation.
4. Argueta-Guzman, M.*, M. West, M. Sankovitz, **A. Murillo**, Q. McFrederick, and E. Wilson Rankin. Scientific terminology and pathogen spillover in bees: Why language
5. describing complex biological processes matters. Magda Pacific Branch Meeting of the Entomological Society of America. April 10-13, 2022

6. Chu, H.* and **A. Murillo**. Poster: “An Evaluation of Trapping Methodology for a Southern California Blow Fly Survey”. Riverside, CA. March 2022. Poster presented UCR Urban Pest Management Conference
7. Hubbard, C.*, and **A. Murillo**. Concentration dependent detection of imidacloprid in behaviorally resistant house flies (*Musca domestica* L.). Livestock Insect Worker Conference Annual Meeting, Dallas, Texas. 6-9 June 2022.
8. Hubbard, C.*, A. Gerry, and **A. Murillo**. What we know about stability of behavioral resistance to imidacloprid in the house fly. S1076 Multi-State Research Virtual Meeting. 11 January 2022.
9. Chu, H.* and **A. Murillo**. Oral Presentation: “The Distribution and Diversity of Calliphoridae in Southern California”. Virtual (S1076). January 2022 – presenter
10. **Murillo, A.** Ectoparasite effects on chicken behavior. *Invited Speaker*. Entomological Society of America Annual Meeting, Denver, CO. November 2021. *Virtual presentation*.
11. Hubbard, C.* and **A. Murillo**. Stability of behavioral resistance to imidacloprid in the house fly (*Musca domestica*). Entomological Society of America Annual Meeting, Denver, CO. November 2021.
12. **Murillo, A.** Ectoparasite Control Update. *Invited Speaker*. California Egg Quality Assurance Program, 29 September 2021.
13. **Murillo, A.** Pest Management: Insect and Arthropods. *Invited Speaker*. 2021 Pest Health Management School. 24-25 May 2021.
14. **Murillo, A.** Adapting ectoparasite control to management changes in egg production. *Invited Speaker*. Western Integrated Pest Management Center IPM Hour. 12 May 2021.
15. **Murillo, A.** How Mites and Lice Affect Chicken Welfare and Behavior. *Invited Speaker*. Department of Entomology Seminar Series. Washington State University. 29 March 2021
16. **Murillo, A.** How Mites and Lice Affect Chicken Welfare and Behavior. *Invited Speaker*. Department of Entomology Seminar Series. University of Minnesota. 9 March 2021.
17. **Murillo, A.** Publish & Flourish. *Invited Speaker*. President’s Postdoctoral Fellowship Program Winter Retreat. 8 December 2020.
18. **Murillo, A.**, A. Abdoli, R. Blatchford, A. Gerry. On-animals sensors detect chicken behavior changes caused by chewing louse infestations. Entomological Society of America Annual Meeting, Virtual. 11-25 November 2020.
19. **Murillo, A.** Mites and other Poultry Ectoparasites. *Invited Speaker*. Merck Animal Health. Virtual. 18 June 2020.
20. **Murillo, A.** Mites and Other Poultry Pests. *Invited Speaker*. Avian Veterinarians of Egg Producers. 6 March 2020.
21. **Murillo, A.**, R. Blatchford, A. Abdoli, A. Gerry. Chicken body louse effects on poultry behavior and welfare. Entomological Society of America Annual Meeting, St. Louis, MO. 17-20 November 2019.
22. Jarrett, R.*, M. Erasmus, D. Jones, K. VanDeWater, **A. Murillo**, D. Karcher. Impact of northern fowl mites on cage-free layer performance from 17 to 48 weeks of age. Poultry Science Association Annual Meeting, Montréal, Canada. 15-18 July 2019.

23. **Murillo, A.**, A. Abdoli, R. Blatchford, A. Gerry. On-Animal Sensors to Assess Chicken Body Louse Effects on Poultry Behavior and Welfare. Livestock Insect Worker's Conference/ American Association of Veterinary Parasitologists/World Association for the Advancement of Veterinary Parasitology, Madison, WI. 7-11 July 2019.
24. **Murillo, A.**, A. Abdoli, R. Blatchford, A. Gerry. Using On-Animal Sensors to Assess Northern Fowl Mite Effects on Poultry Behavior and Welfare. Entomological Society of America Annual Meeting, Vancouver, Canada. 11-14 November 2018.
25. **Murillo, A.** Veterinary Entomology Highlights 2018. *Invited Speaker*. Entomological Society of America Annual Meeting, Vancouver, Canada. 11-14 November 2018.
26. **Murillo, A.** Poultry Ectoparasite Effects on Animal Welfare Parameters in Cage-Free Management Systems. USDA Project Director's Meeting, Washington, D.C. 6-8 August 2018.
27. **Murillo, A.**, A. Abdoli, R. Blatchford, A. Gerry. Using On-Animal Sensors to Assess Northern Fowl Mite Effects on Poultry Behavior and Welfare. Poultry Science Association Annual Meeting, San Antonio, TX. 23-26 July 2018.
28. **Murillo, A.**, A. Abdoli, R. Blatchford, A. Gerry*. Using On-Animal Sensors to Assess Northern Fowl Mite Effects on Poultry Behavior and Welfare. Livestock Insect Worker's Conference, San Juan, Puerto Rico. 17-20 June 2018.
29. Alireza, A.*, **A. Murillo**, E. Keogh, A. Gerry. Time Series Data Mining to Understand Chicken Behavior and Improve Poultry Welfare. UCR Computer Science Symposium, Riverside, CA. 7 June 2018.
30. **Murillo, A.** Mite Pests of Poultry. *Invited Speaker*. Merck Animal Health Fluralaner Launch, Cancún, Mexico. 6 June 2018.
31. **Murillo, A.**, A. Abdoli, R. Blatchford, A. Gerry. Using Technology to Assess Ectoparasite Effects on Poultry Behavior and Welfare. Entomological Society of America Annual Meeting, Denver, CO. 5-8 November 2017.
32. **Murillo, A.**, A. Abdoli, A. Gerry. Using Technology to Examine Host-Parasite Interactions. Poster presented at the 7th International Congress of the Society of Insect Vectors, Mallorca, Spain. 1-6 October 2017.
33. Mullens, B.*, **A. Murillo**, A. Gerry. The "Other" Poultry Mite, *Ornithonyssus sylviarum*. Third Ann. Mtg. of COST Action 1404, Improving current understanding and research for sustainable control of the poultry red mite, *Dermanyssus gallinae*, Oeiras, Portugal. 19-22 September 2017.
34. **Murillo, A.** and A. Gerry. Using Technology to Assess Ectoparasite Effects on Chicken Behaviors. Livestock Insect Workers Conference, Savannah, GA. 25-28 June 2017.
35. Wong, N.*, E. McDermott, **A. Murillo**, B. Mullens. Field Distribution and Density of *Culicoides sonorensis* (Diptera: Ceratopogonidae) Eggs in Dairy Wastewater Habitats. Livestock Insect Workers Conference, Savannah, GA. 25-28 June 2017.
36. **Murillo, A.** Adapting Ectoparasite Control to Welfare-Driven Changes in Poultry Production Systems. *Invited Speaker*. Department of Poultry Science. Auburn, University, AL. 20 February 2017.
37. **Murillo, A.** and B. Mullens. Ectoparasite Diversity on Backyard Chicken Flocks. Poultry Science Association Annual Meeting. 11-14 July 2016.
38. **Murillo, A.** and B. Mullens. Ectoparasite Diversity on Backyard Chicken Flocks. Livestock Insect Workers Conference, Oklahoma City, OK. 26-29 June 2016.

39. **Murillo, A.** Practical Poultry Ectoparasite Control. *Invited Speaker*. UC Davis Winter Conference. 20 February 2016.
40. **Murillo, A.** Practical Poultry Ectoparasite Identification. *Invited Speaker*. UC Davis Winter Conference. 20 February 2016.
41. **Murillo, A.** and B. Mullens. A novel technique for deployment of sulfur dust for ectoparasite control in poultry. Entomological Society of America Annual Meeting, Minneapolis, MN. 15-18 November 2015.
42. **Murillo, A.** and B. Mullens. Investigations on blood-feeding and host responses caused by the northern fowl mite, *Ornithonyssus sylviarum*. Acarological Society of America Annual Meeting, Minneapolis, MN. 15 November 2015.
43. **Murillo, A.** Quantifying the Physiological Cost of Parasitism and Adapting to Welfare-driven Changes in Poultry Production. *Invited Speaker*. Western University College of Veterinary Medicine Parasitology Club. Pomona, CA. 15 October 2015.
44. **Murillo, A.** and B. Mullens. Adapting Ectoparasite Control to Welfare-Driven Changes in Poultry Production Systems. Poultry Science Association Annual Meeting, Louisville, KY. 27-30 July 2015.
45. **Murillo, A.** and B. Mullens Adapting Ectoparasite Control to Welfare-Driven Changes in Poultry Production Systems. Livestock Insect Workers/American Association of Veterinary Parasitologists Conference, Boston, MA. 11-14 July 2015.
46. Senties-Cué G.*, S. Carnaccini, **A. Murillo**, and C. Corsiglia. Unusual mite infestation in broiler chickens. American Association of Avian Parasitologists Annual Meeting, Boston, MA. 11-14 July 2015.
47. **Murillo, A.** Adapting Ectoparasite Control to Welfare-Driven Changes in Poultry Production Systems. *Invited Speaker*. Department of Animal Science Seminar Series. University of California, Davis, CA. 1 June 2015.
48. **Murillo, A.**, K. Chau, A. Gerry, and B. Mullens. Fly Feeding Behavior After Exposure to Insecticidal Baits in the Laboratory. Poster presented at 24th Annual UC Riverside Urban Pest Management Conference, Riverside, CA. 25 March 2015.
49. **Murillo, A.** and B. A. Mullens. Adapting Ectoparasite Control to Welfare-Driven Changes in Poultry Production Systems. Entomological Society of America Annual Meeting, Portland, OR. *President's prize winner*. 16-19 November 2014.
50. Mullens, B., A. Gerry and **A. Murillo**. To Kill a Fly: A 50-year History of Evolving Poultry IPM Approaches in California. Poster presented at Entomological Society of America Annual Meeting, Portland, OR. 16-19 November 2014.
51. **Murillo, A.** and B. Mullens. Adapting Ectoparasite Control to Welfare-Driven Changes in Poultry Production Systems. Department of Entomology Graduate Student Seminar Day, UCR, Riverside, CA. *Second place in student competition*. 25 September 2014.
52. **Murillo, A.**, M. Chappell, J. Owen, and B. Mullens. Quantifying the Physiological Cost of Parasitism by the Northern Fowl Mite on Egg-laying Hens. Livestock Insect Workers Conference, San Diego, CA. 21- 25 June 2014.
53. **Murillo, A.**, A. Gerry, N. Gallagher*, N. Peterson, and B. Mullens. Laboratory Screening and Field Evaluation of Four Commercially Available Scatter Baits and One Novel Bait Against *Musca domestica* and *Fannia canicularis*. National Conference on Urban Entomology, San Antonio, TX. 18-21 May 2014.
54. **Murillo, A.**, A. Gerry, N. Gallagher, N. Peterson, and B. Mullens. Comparative Activity of Toxic Fly Baits Under Field and Laboratory Conditions in Southern California. Poster

- presented at 23rd Annual UC Riverside Urban Pest Management Conference, Riverside, CA. 25 March 2014.
55. **Murillo, A.**, M. Chappell, J. Owen, and B. Mullens. The Cost of Parasitism: Metabolic Aspects of the Northern Fowl Mite-Hen Interaction. Entomological Society of America Annual Meeting, Austin, TX. *President's Prize Runner-up*. 10-13 November 2013.
 56. **Murillo, A.**, M. Chappell, J. Owen, and B. Mullens. What the Cluck is on my Butt?! An Investigation into the Metabolic costs of an ectoparasite (*Ornithonyssus sylviarum*) infestation on egg-laying hens. Poster presented at Department of Entomology Graduate Student Seminar Day, UCR, Riverside, CA. 19 September 2013.
 57. **Murillo, A.**, A. Gerry, N. Gallagher, N. Peterson, and B. Mullens. Laboratory Screening and Field Evaluation of Four Commercially Available Scatter Baits and One Novel Bait Against *Musca domestica* and *Fannia canicularis*. Livestock Insect Workers Conference, Nebraska City, NE. 23-26 June 2013.
 58. **Murillo, A.** The Cost of Parasitism: Metabolic Aspects of the Northern Fowl Mite-Hen Interaction. Department of Entomology Graduate Student Seminar Day, UCR, Riverside, CA. *Second place in student competition*. 20 September 2012.
 59. **Lockwood Murillo, A.** and R. Brandenburg. The sugarcane beetle *Euetheola humilis* (Coleoptera: Scarabaeidae) discovers North Carolina turfgrass. Poster presented at Entomological Society of America Annual Meeting, Reno, NV. 13-16 November 2011.
 60. **Lockwood, A.** and R. Brandenburg. Not So Sweet: The Sugarcane Beetle. Department of Entomology Graduate Student Symposium, NCSU, Raleigh, NC. 11 February 2011.
 61. **Lockwood, A.** and R. Brandenburg. The Sugarcane Beetle (*Euetheola humilis*) Discovers Turfgrass. *Invited Speaker*. Entomological Society of America Annual Meeting, San Diego, CA. 12-15 December 2010.
 62. **Lockwood, A.** and R. Brandenburg. The Sugarcane Beetle (*Euetheola humilis*) Discovers Turfgrass. Department of Entomology Graduate Student Symposium, NCSU, Raleigh, NC. 12 February 2010.
 63. **Lockwood, A.** 2009. Sugarcane Beetle *Euetheola humilis*. Carolinas Golf Course Superintendents Association Conference, Myrtle Beach, SC. 18 November 2009.

Select Invited Extension & Outreach Presentations

1. **Murillo, A.** Bugs and Backyard Chickens. Riverside Insect Fair, Riverside, CA. Virtual. 14 April 2021.
2. **Murillo, A.** Research in Veterinary Entomology: Promoting Animal Health and Welfare. UCR Pre-Veterinary Club. Riverside, CA. 5 April 2021.
3. **Murillo, A.** The Effects and Control of External Parasites on Cage Free Layers. US Poultry & Egg Seminar. Nashville, TN. 17 September 2019.
4. **Murillo, A.** Protecting Your Chickens from Ectoparasites and Newcastle Disease. 4-H Animal Field Day. Walnut, CA. 22 September 2018.
5. **Murillo, A.** Vector Control. California Poultry Federation Quality Assurance Seminar. Modesto, CA. 22 August 2018.
6. **Murillo, A.** Backyard Flock Pests and Management. California Poultry Federation Backyard Poultry Workshop. Stockton, CA. 27 January 2018.
7. **Murillo, A.** Managing the Persistent Pests in Poultry Production. DE Ag Week. Harrington, DE. 8 January 2018.

8. **Murillo, A.** Backyard Chicken Ectoparasites. Poultry for 4-H. Silverado, CA. 6 December 2017.
9. **Murillo, A.** Backyard Chicken Ectoparasites & How to Control Them. 4-H Animal Field Day. Walnut, CA. 23 September 2017.
10. **Murillo, A.** Fly Control. Fly Camp Training 2017. Dauphin, PA. 23 March 2017.
11. **Murillo, A.** Integrated Pest Management. Fly Camp Training 2017. Dauphin, PA. 23 March 2017.
12. **Murillo, A.** Basic Fly Identification. Fly Camp Training 2017. Dauphin, PA. 23 March 2017.
13. **Murillo, A.** Fly Control. Fly Camp Training 2017. Williamsport, PA. 22 March 2017.
14. **Murillo, A.** Integrated Pest Management. Fly Camp Training 2017. Williamsport, PA. 22 March 2017.
15. **Murillo, A.** Basic Fly Identification. Fly Camp Training 2017. Williamsport, PA. 22 March 2017.
16. **Murillo, A.** Horse Parasites. 4-H groups of Douglas-Sarpy Counties, NE. Omaha, NE. 29 January 2017.
17. **Murillo, A.** Flock Pests and Management Techniques. California Poultry Federation 4-H Training Workshop. San Luis Obispo, CA. 5 Nov 2016.
18. **Murillo, A.** Economic Effects of Mites in a Cage-free Environment. California Egg Quality Assurance Program. Modesto, CA. 30 September 2016.
19. **Murillo, A.** Economic Effects of Mites in a Cage-free Environment. California Egg Quality Assurance Program. Ontario, CA. 28 September 2016.
20. **Murillo, A.** Examining Your Chickens for Ectoparasites. Poultry Clinic for 4-H. La Habra, CA. 25 May 2016.
21. **Murillo, A.** Research in Veterinary Entomology. UCR Pre-Veterinary Club. Riverside, CA. 19 May 2016.
22. **Murillo, A.** Backyard Flock Pests and Management Techniques. California Poultry Federation Backyard Poultry Workshop. Oakland, CA. 12 March 2016.
23. **Murillo, A.** Backyard Flock Pests and Management Techniques. California Poultry Federation Backyard Poultry Workshop. Pomona, CA. 22 August 2015.
24. **Murillo, A.** Backyard Poultry Parasites. 6th Annual Tour de Cluck, Davis, CA. 30 May 2015.
25. **Murillo, A.** Backyard Poultry Parasites. Poultry Clinic for 4-H. San Jacinto, CA. 25 April 2015.
26. **Murillo, A.** and B. Mullens. Backyard Flock Pests and Management Techniques. California Poultry Federation Backyard Poultry Workshop. San Bernardino, CA. 14 March 2015.

Student Instruction

09/2021-present	Hannah Chu, PhD Candidate, Entomology, <i>major professor</i>
09/2021-present	Jacqueline Holquinn, MS Student, Entomology, <i>co-advisor</i>
10/2022-present	Jaqueline Torres, undergraduate, Entomology, <i>research advisor</i>

Teaching Experience

University of California, Riverside, CA

Instructor

ENTM 202: Graduate course in Insect Pest Management, Winter 2022

ENTM 255: Medical and Veterinary Entomology Seminar, Fall 2022, 2021, 2022

ENTM 126: Medical and Veterinary Entomology, Winter 2021

Co-Instructor

ENTM 128: Principles of Insect Pest Management, Winter 2022
 ENTM 257: CIBER Seminar, Spring 2020

Guest Lecturer

- **Murillo, A.** (2022) “Veterinary Entomology.” Discovering Faculty in CNAS, University of California, Riverside, CA. (2 classes)
- **Murillo, A.** (2021) “An Introduction to Mites.” Invisible Itches, Department of Entomology, University of Kentucky, Lexington, KY.
- **Murillo, A.** (2020) “Parasitic Mites affect Chicken Welfare and Behavior.” Scicomm: Exploring Effective Communication Methods in The Life Sciences, Department of Entomology, University of California, Riverside, CA.
- **Murillo, A.** (2020) “Mites of Medical and Veterinary Importance.” Medical and Veterinary Entomology, Department of Entomology, University of California, Riverside, CA.
- **Murillo, A.** (2019) “Insect Vectors of Human Disease.” Natural History of Insects, Department of Entomology, University of California, Riverside, CA.
- **Murillo, A.** (2018) “Mites of Medical and Veterinary Importance.” Medical and Veterinary Entomology, Department of Entomology, University of California, Riverside, CA. *Lecture and Lab Sections*
- **Murillo, A.** (2017) “Poultry Pests.” Agricultural Entomology, Department of Entomology, University of California, Riverside, CA.
- **Murillo, A.** (2017) “Livestock Ectoparasites.” Agriculture Biology, Eureka High School, Eureka, IL. *Via Distance Education*; 3 classes with 60 students total
- **Murillo, A.** (2016) “Livestock Ectoparasites.” Agriculture Biology, Eureka High School, Eureka, IL. *Via Distance Education*; 2 classes with 50 students total

Teaching Assistant

BIOL 157: Parasitology, Fall 2013

- Responsible for teaching discussions (parasite identification) and creating and grading evaluations; 60 undergrad/graduate students; with Dr. E. Platzer
- ENTM 126: Medical & Veterinary Entomology, Winter 2013
- Responsible for teaching laboratory sections and creating and grading evaluations; **guest lecturer** for “Ticks” and “Mites”; 40 undergrad/graduate students; with Dr. B. Mullens

North Carolina State University, Raleigh, NC

Facilitator

Graduate Student Summer Teaching Institute, Summer 2011

- Pilot training course to introduce graduate students to fundamentals of teaching at the college level
- Led course with workshops focused on course organization, active learning strategies, classroom management, learning styles, and classroom assessment; 30 graduate students; with Dr. Barbi Honeycutt

Teaching Assistant

ENT 495: Insects and Human Disease, Fall 2010

- Pilot online undergraduate course for distance education

- Responsible for constructing weekly power point lectures for instructor; **guest lecturer** for “Mites” (created, annotated, and recorded lecture material for online viewing); with Dr. J. Harper
ENT 201: Insects and People, Fall 2010
- Responsible for weekly presentations; **guest lecturer** for “Insect Control”; preparation and evaluation of assignments for traditional and distance education students; 150 undergraduates; with Dr. C. Sorenson
ENT 063: Ornamental and Turfgrass Insects, Spring 2010
- Responsible for teaching laboratory lectures; creating and evaluating assessments including insect collections; 30 undergraduates; with Dr. M. Waldvogel

Guest Lecturer

- **Lockwood, A.** (2011) “Pesticide Safety.” Advanced Turf Management, Department of Crop Science, North Carolina State University, Raleigh, NC.

Purdue University, West Lafayette, IN

Co-Instructor

Insect Collecting, Fall 2008, Purdue University, West Lafayette, IN

- “Super Saturday” program: developed and taught a six-week course for 5th-8th graders

Scholarships & Awards

- 2022** Public Health Entomology for All Travel Grant, Entomological Society of America Meeting
- 2020** Entomological Society of America Medical, Urban, and Veterinary Entomology Early Career Professional Award
- 2018** UCR Chancellor’s Postdoctoral Fellowship
- 2015** Entomological Society of America (ESA) MUVE Section Student Scholarship
Livestock Insect Worker’s Conference (LIWC) Student Travel Grant Award
Honorable Mention, student oral presentation at LIWC/AAVP Annual Meeting
UCR Dissertation Year Program Fellowship
Carl Strom/Western Exterminator Scholarship in Urban Entomology
Pacific Egg and Poultry Association 2015 Student Merit Award
Pacific Egg and Poultry Association Long Family Trust / Chilson Memorial Scholarship
- 2014** Pacific Egg and Poultry Association Joe Haddy and Jim Eastman Memorial Scholarship
Grand Prize, Carl Strom/Western Exterminator Scholarship in Urban Entomology
Second Place, UCR Dept. of Entomology Student Seminar Day oral presentation
First Place, President’s Prize, student oral presentation at ESA Annual Meeting
- 2013** UCR Graduate Research Mentorship Program Fellowship
Pacific Egg and Poultry Association Western Poultry Scholarship & Research Foundation
ESA’s MUVE Section Student Travel Grant Award
President’s Prize runner-up, student oral presentation at ESA Annual Meeting
Livestock Insect Worker’s Conference Student Travel Grant Award
- 2012** *Second Place*, UCR Dept. of Entomology Student Seminar Day oral presentation
- 2011** UCR Dean’s Distinguished Fellowship

Academic & Professional Service

Co-Editor

“The Arthropods.” In Parasitic Diseases. Eds. Griffin, D., Gwadz, R., Hotez, P., Knirsch, C., Despommier, D. 2017. 6th ed. <<http://www.parasiteswithoutborders.com/parasitic-diseases-6th-edition>>

Manuscript Reviewer

Acta Parasitologica, Animals, Canadian Entomologist, Clinical Microbiology, Experimental and Applied Acarology, Frontiers, International Journal for Parasitology: Parasites and Wildlife, International Journal of Acarology, Iowa State Extension Publication, Journal of Chemical Ecology, Journal of Economic Entomology, Journal of Medical Entomology, Medical and Veterinary Entomology, Parasites & Vectors, Parasitology Research, Pathogens, Pest Management Science, PLOS ONE, Veterinary Parasitology, Veterinary Research Communications, Veterinary World, World Poultry Journal

Grant Reviewer

2020 – NC3R

University of California, Riverside, CA

Department of Entomology

Tenure-track Position Search Committee, Member, Jan 2022-present

Seminar Committee, Chair, Sept 2021- present

Museum Committee, Sept 2020-present

Qualifying Exam Committees: Fall 2020, Winter 2021, Spring 2021 (chair)

Inclusivity Committee: Jan 2021-Jun 2021

Ad Hoc Committee: 5-year appraisal, Fall 2020; Merit, Fall 2021; Promotion, Fall 2021

PhD Defense: Summer 2022

Master’s student Thesis Committee: Spring 2020

Outreach Coordinator: Winter 2013.

Student Representative: Seminar Committee, 2012-13.

Acarological Society of America

President-elect, January 2022-present

Entomological Society of America

Member: ESA MUVE Section nominations committee

Co-chair: MUVE Section Veterinary Initiatives, 2017-present.

Student Competition Judge: ESA Annual Meeting, 2019.

Moderator: ESA Annual Meeting, 2018.

Student Competition Judge: ESA Annual Meeting, 2017.

Entomology Graduate Student Association

Committee Chair: Hospitality Committee, 2015-2016.

Student Representative: Constitution Committee, 2014.

Co-chair: Fundraiser Committee, 2012-14.

North Carolina State University, Raleigh, NC

Entomological Society of America

Co-moderator: Communicating Challenges in Turfgrass & Ornamental Pest Management. Member Symposium at the Entomological Society of America Annual Meeting, Reno, NV. 13-16 Nov 2011.

Entomology Graduate Student Association

Secretary: Entomology Graduate Student Association, 2010-2011.

Outreach Coordinator: Entomology Graduate Student Association, 2009-2010.

Department of Entomology

Student Representative: Museum Council, 2009-2011.

Professional Training

Certificate Course in Arbovirology, Rickettsiology and Arthropod Containment, University of Texas Medical Branch, Galveston, TX. 17 – 25 April 2018.

Medical and Veterinary Acarology Short Course, Ohio State University, Columbus, OH. 25 June – 6 July 2012.

Certificate of Accomplishment in Teaching, NCSU, Raleigh, NC. Spring 2011.

Patents

Pending: 2020: Hybrid (Shape-Feature) Behavior Classification Algorithm for Chickens Increase the Productivity of Poultry Farms

Professional Memberships

Entomological Society of America, 2009-*present*.

Livestock Insect Worker's Conference, 2013-*present*.

Acarological Society of America, 2014-*present*.

Poultry Science Association, 2014-*present*.

USDA Multistate S1076, 2020-*present*.