

Curriculum Vitae

Nicholas M. Teets

Assistant Professor

Department of Entomology

University of Kentucky, Lexington, KY 40546

Telephone: (859) 257-7459 **Email:** n.teets@uky.edu

EDUCATION:

- 2012 PhD in Entomology, Ohio State University, Columbus, OH
Advisor: Professor David L. Denlinger
Thesis title: Cellular and Molecular Mechanisms of Environmental Stress Tolerance in Insects
- 2007 B.S. in Zoology, Minor in Mathematics, Miami University, Oxford, OH
Summa Cum Laude, Honors with Distinction
Advisor: Professor Richard E. Lee, Jr.
Thesis title: *In vivo* and *in vitro* rapid cold-hardening in the Antarctic midge, *Belgica antarctica*: Evidence of a role for calcium

EXPERIENCE:

- 2016-present Assistant Professor, Department of Entomology, University of Kentucky (80% research, 20% teaching)
- 2013-2016 Postdoctoral Associate, Department of Entomology and Nematology, University of Florida, Advisor: Dr. Daniel A. Hahn (100% Research)
- 2012-2013 Postdoctoral Researcher, Department of Evolution, Ecology, and Organismal Biology, Ohio State University, Advisor: Dr. David L. Denlinger (100% Research)
- 2007-2012 Graduate Research Fellow, Ohio State University, Advisor: Dr. David L. Denlinger
- 2005-2007 Honors Research, Miami University Laboratory for Ecophysiological Cryobiology, Advisor: Dr. Richard E. Lee
- 2003-2004 Undergraduate Research Assistant, Miami University Department of Zoology, Advisor: Dr. Sheldon Guttman

TEACHING:

- 2016-present Instructor, Department of Entomology, University of Kentucky. Courses taught: Integrative Organismal Entomology, Insect Climate Change Biology, Honors Course in Climate Change, Online Insect Biology
- 2014 Instructor, Molecular Biology Techniques Course, Department of Entomology and Nematology, University of Florida
- 2010,2012 Instructor, PAST Foundation Summer Entomology Course (2010: Ohio State University, 2012: Kelley's Island Field School)

- 2009,2011 Lab Instructor, Graduate Level Insect Physiology, Department of Entomology, Ohio State University
- 2004-2007 Supplemental Instructor, Department of Chemistry, Miami University
- 2004-2007 Peer-Led Team Learning Workshop Leader, Department of Chemistry, Miami University

GRANTS and FELLOWSHIPS

- 2019-2022 NSF Office of Polar Programs. **Project title:** NSFGE0-NERC: Mechanisms of Adaptation to Terrestrial Antarctica through Comparative Physiology and Genomics of Antarctic and sub-Antarctic Insects, (PI; \$726,060 over 3 years)
- 2018-2022 NSF RII Track-2 FEC. **Project title:** From Genome to Phenome in a Stressful World: Epigenetic regulatory mechanisms mediating thermal plasticity in *Drosophila*. (Co-PI; \$879,119 for my lab over 4 years)
- 2018-2020 NSF IUCRC Center for Arthropod Management Technology. **Project title:** Molecular mechanisms of diapause in the corn rootworm complex. (PI; \$150,000 over 2 years)
- 2017-2021 United States Department of Agriculture Biotechnology Risk Assessment Grant Program. **Project title:** Impact of Genotype and Environmental Variables on Transgene Effectiveness for Conditional Lethality Systems in Insects. (PI; \$500,000 over 4 years)
- 2016 University of Kentucky College of Food, Agriculture and Environment Research Activity Award. **Project title:** Transcriptional mechanisms of overwintering diapause in convergent lady beetles. (co-PI; \$5,000 for 1 year)
- 2016-2018 Kentucky Science and Engineering Foundation Research and Development Excellence Program. **Project title:** Calcium-dependent signaling mechanisms governing rapid cold hardening in insects. (\$30,000 for 1 year)
- 2015-2018 USDA NIFA Fellowships Program. **Project title:** Improving the efficacy of Sterile Insect Technique by enhancing male performance with targeted overexpression of antioxidant defense systems. (\$149,998 for 2 yrs)
- 2007,2012 Distinguished University Fellowship, Ohio State University (\$36,000 + tuition)
- 2007-2011 College of Biological Sciences Dean's Fellowship, Ohio State University (\$84,000 + tuition)

GRANTS AND FELLOWSHIPS FOR ADVISEES

- 2018-2020 **Mark Garcia:** USDA NIFA Agriculture and Food Research Initiative Education and Workforce Development Fellowships Program. **Project title:** *Drosophila suzukii* Population Collection: A Tool for Integrating Evolutionary Principles into Pest Management. (\$165,000, 2 yrs).
- 2018-2020 **Leslie Potts:** USDA NIFA Agriculture and Food Research Initiative Education and Workforce Development Fellowships Program. **Project title:** Winter Warming Effects on Spiders as Biological Control Agents. (\$95,000, 2 yrs)

PUBLICATIONS:

26. **Teets, N.M.**, Dias, V.S., Pierce, B.K., Schetelig, M.F., Handler, A.M., and Hahn, D.A. 2019. Overexpression of an antioxidant enzyme improves male mating performance after stress in a lek-mating fruit fly. *Proceedings of the Royal Society B* **286**, 20190531.
25. Kawarasaki, Y., **Teets, N.M.**, Philip, B.N., Potts, L.J., Gantz, J.D., Denlinger, D.L., Lee, R.E. 2019. Characterization of drought-induced rapid cold-hardening in the Antarctic midge, *Belgica antarctica*. *Polar Biology* **42**, 1147-1156.
24. Garcia, M.J., and **Teets, N.M.** 2018. Cold stress results in sustained locomotor and behavioral deficits in *Drosophila melanogaster*. *Journal of Experimental Zoology Part A* **331**, 192-200.
23. Spacht, D.E., **Teets, N.M.**, and Denlinger, D.L. 2018. Two isoforms of Pepck in *Sarcophaga bullata* and their distinct expression profiles through development, diapause, and in response to stresses of cold and starvation. *Journal of Insect Physiology* **111**, 41-46.
22. Halbritter, D.A., **Teets, N.M.**, Williams, C.M., and Daniels, J.C. 2018. Differences in winter cold hardiness reflect the geographic range disjunction of *Neophasia menapia* and *Neophasia terlooii* (Lepidoptera: Pieridae). *Journal of Insect Physiology* **107**, 204-211.
21. **Teets, N.M.**, and Hahn, D.A. 2018. Genetic variation in the shape of cold survival curves in a single fly population suggests potential for selection from climate variability. *Journal of Evolutionary Biology* **31**, 543-555.
20. **Teets, N.M.**, and Denlinger, D.L. 2016. Quantitative phosphoproteomics reveals signaling mechanisms associated with rapid cold hardening in a chill-tolerant fly. *Journal of Proteome Research* **15**, 2855-2862.
19. Dean, C.A.E., **Teets, N.M.**, Kostal, V., Simek, P., Denlinger, D.L. 2016. Enhanced stress responses and metabolic adjustments linked to diapause and onset of migration in the large milkweed bug, *Oncopeltus fasciatus*. *Physiological Entomology* **41**, 152-161.
18. Terhzaz, S., **Teets, N.M.**, Cabrero, P., Henderson, L., Ritchie, M.G., Nachman, R.J., Dow, J.A.T., Denlinger, D.L., Davies, S.A. 2015. Insect capa neuropeptides impact desiccation and cold tolerance. *Proceedings of the National Academy of Sciences U.S.A.*, **112**, 2882-2887.
17. Kelley, J. L., Peyton, J. T., Fiston-Lavier, A.-S., **Teets, N. M.**, Yee, M. C., Johnston, J. S., Bustamante, C. D., Lee, R. E. and Denlinger, D. L. 2014. Compact genome of the Antarctic midge is likely an adaptation to an extreme environment. *Nature Communications* **5**, 4611.
16. Kawarasaki, Y., **Teets, N. M.**, Denlinger, D. L. and Lee, R. E. 2014. Alternative overwintering strategies in an Antarctic midge: freezing versus cryoprotective dehydration. *Functional Ecology* **28**, 933-943.

15. Kawarasaki, Y., **Teets, N. M.**, Denlinger, D. L. and Lee, R. E. 2014. Wet hibernacula promote inoculative freezing and limit the potential for cryoprotective dehydration in the Antarctic midge, *Belgica antarctica*. *Polar Biology* **37**, 753-761.
14. **Teets, N. M.** and Denlinger, D. L. 2014. Surviving in a frozen desert: Environmental stress physiology of terrestrial Antarctic arthropods. *Journal of Experimental Biology* **217**, 84-93.
13. Kawarasaki, Y., **Teets, N. M.**, Denlinger, D. L. and Lee, R. E. 2013. The protective effect of rapid cold-hardening develops more quickly in frozen versus supercooled larvae of the Antarctic midge, *Belgica antarctica*. *Journal of Experimental Biology* **216**, 3937-3945.
12. **Teets, N. M.** and Denlinger, D. L. 2013. Physiological mechanisms of seasonal and rapid cold-hardening in insects. *Physiological Entomology* **38**, 105-116.
11. **Teets, N. M.**, Yi, S. X., Lee, R. E. and Denlinger, D. L. 2013. Calcium signaling mediates cold sensing in insect tissues. *Proceedings of the National Academy of Sciences U.S.A.* **110**, 9154-9159.
10. **Teets, N. M.** and Denlinger, D. L. 2013. Autophagy in Antarctica: Combating dehydration stress in the world's southernmost insect. *Autophagy* **9**, 629-631.
9. **Teets, N. M.**, Kawarasaki, Y., Lee, R. E. and Denlinger, D. L. 2013. Expression of genes involved in energy mobilization and osmoprotectant synthesis during thermal and desiccation stress in the Antarctic midge, *Belgica antarctica*. *Journal of Comparative Physiology B* **183**, 189-201.
8. **Teets, N. M.**, Peyton, J. T., Colinet, H., Renault, D., Kelley, J. L., Kawarasaki, Y., Lee, R. E. and Denlinger, D. L. 2012. Gene expression changes governing extreme dehydration tolerance in an Antarctic insect. *Proceedings of the National Academy of Sciences U.S.A.* **109**, 20744-20749. **Recommended by Faculty of 1000**
7. **Teets, N. M.**, Peyton, J. T., Ragland, G. J., Colinet, H., Renault, D., Hahn, D. A. and Denlinger, D. L. 2012. Combined transcriptomic and metabolomic approach uncovers molecular mechanisms of cold tolerance in a temperate flesh fly. *Physiological Genomics* **44**, 764-777. **Recommended by Faculty of 1000**
6. **Teets, N. M.**, Kawarasaki, Y., Lee, R. E. and Denlinger, D. L. 2012. Energetic consequences of repeated and prolonged dehydration in the Antarctic midge, *Belgica antarctica*. *Journal of Insect Physiology* **58**, 498-505. **Featured in a New Scientist magazine article as well as "Outside JEB" in the Journal of Experimental Biology**

5. Goto, S. G., Philip, B. N., **Teets, N. M.**, Kawarasaki, Y., Lee, R. E. and Denlinger, D. L. 2011. Functional characterization of an aquaporin in the Antarctic midge *Belgica antarctica*. *Journal of Insect Physiology* **57**, 1106-1114.
4. **Teets, N. M.**, Kawarasaki, Y., Lee, R. E. and Denlinger, D. L. 2011. Survival and energetic costs of repeated cold exposure in the Antarctic midge, *Belgica antarctica*: a comparison between frozen and supercooled larvae. *Journal of Experimental Biology* **214**, 806-814.
3. Michaud, M. R., **Teets, N. M.**, Peyton, J. T., Blobner, B. M. and Denlinger, D. L. 2011. Heat shock response to hypoxia and its attenuation during recovery in the flesh fly, *Sarcophaga crassipalpis*. *Journal of Insect Physiology* **57**, 203-210.
2. Benoit, J. B., Lopez-Martinez, G., **Teets, N. M.**, Phillips, S. A. and Denlinger, D. L. 2009. Responses of the bed bug, *Cimex lectularius*, to temperature extremes and dehydration: levels of tolerance, rapid cold hardening and expression of heat shock proteins. *Medical and Veterinary Entomology* **23**, 418-425.
1. **Teets, N. M.**, Elnitsky, M. A., Benoit, J. B., Lopez-Martinez, G., Denlinger, D. L. and Lee, R. E. 2008. Rapid cold-hardening in larvae of the Antarctic midge *Belgica antarctica*: cellular cold-sensing and a role for calcium. *American Journal of Physiology – Regulatory, Integrative, and Comparative Physiology* **294**, R1938-R1946. **Featured in “Outside JEB” in the Journal of Experimental Biology**

AWARDS and HONORS:

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| 2019 | Invited Speaker, Arthropod Genomics Symposium, Manhatta, KS (covered meeting registration and travel costs) |
| 2019 | Bobby Pass Excellence in Grantsmanship Award, University of Kentucky College of Food, Agriculture, and Environment (\$1000) |
| 2017 | National Science Foundation Travel Award to attend Scientific Council on Antarctic Research Biology Symposium (\$1800) |
| 2016 | Entomological Society of America Early Career Professional Research Award (\$1000 + meeting registration; awarded to one early career member) |
| 2015 | Runner-up, University of Florida Postdoc Research Symposium oral presentations (\$100) |
| 2015 | Selected to participate in New Generation of Polar Researchers Leadership Symposium, May 2-9, 2015. |
| 2013 | Entomological Society of America John Henry Comstock Award for excellence in graduate research (\$1000 + meeting travel expenses) |
| 2013 | First Place, Ohio Agricultural Research and Development Center Student Poster Competition (\$500) |
| 2013 | Ohio Agricultural Research and Development Center William E. Krausse Director’s Award for Excellence in Graduate Research (\$1000) |
| 2012 | Skip Nault Research Award, Department of Entomology, Ohio State University (\$500) – given annually to the top student-authored paper in the department |

- 2012 Entomological Society of America International Congress of Entomology Travel Award (\$3000) – for travel to International Congress of Entomology in Daegu, South Korea
- 2012 National Science Foundation Antarctic Service Medal – awarded to individuals with at least six weeks of field research experience at a US Antarctic base
- 2011 First Place, Physiology, Biochemistry, and Toxicology Section of the Entomological Society of America Student Paper Competition
- 2011 Ohio State University Ray Travel Award (\$750) – for travel to the Entomological Society of America Annual Meeting in Reno, NV
- 2011 NSF Travel Award (\$400) – for travel to the Society for Experimental Biology meeting in Glasgow, UK
- 2010 First place in PhD student competition, Ohio Valley Entomological Association (\$350)
- 2010 Delong Travel Award (\$1000) – for travel to Entomological Society of America Annual Meeting in San Diego, CA
- 2009 First place in PhD student competition, Ohio Valley Entomological Association (\$350)
- 2003-2007 National Merit Scholarship
- 2003-2007 Miami University Harrison Scholarship (4 years of full tuition)

INVITED PRESENTATIONS:

21. Teets, N.M. Mechanisms of environmental stress tolerance in Antarctica's only endemic insect. Arthropod Genomics Symposium, Manhattan, KS, June 13, 2019.
20. Teets, N.M. Impact of genotype and environmental variables on transgene effectiveness for conditional lethality systems in insects. USDA NIFA Biotechnology Risk Assessment Grants Program Annual Project Director's Meeting, June 6, 2019.
19. Teets, N.M. Winter climate change and insects: Is warmer always better? Household Commercial Products Association Impact2019 Conference, Washington, DC, May 2, 2019.
18. Teets, N.M., Garcia, M.J., and Nadeau, E.A.W. From cells to populations: Towards an integrative understanding of how insects cope with low temperature stress. P-IE Section Symposium: Stressors Across Space and Time: Energy Sources, Enemies, and Environmental Influences. Entomological Society of America annual meeting, Vancouver, BC, November 14, 2018.
17. Teets, N.M. GMO 101: The future of agriculture, or are Mark and KC slowly killing us? Palmer Station Science Lecture, January 30, 2018.
16. Teets, N.M. Genetic approaches for improving the management of invasive fruit flies. Ohio State University Department of Entomology, November 15, 2017.

15. Teets, N.M. Taking shape of insect cold tolerance: Genetic underpinnings and evolutionary implications of variation in the shape of cold survival curves. University of Kentucky Department of Biology, September 22, 2017.
14. Teets, N.M. Stress biology of insects: Genetic mechanisms and practical applications. University of Western Ontario, April 11, 2017.
13. Teets, N.M. A primer on genome editing technologies and their use in insects. XXV International Congress of Entomology, Orlando, FL, September 26, 2016.
12. Teets, N.M. and Hahn, D.A. Leveraging natural genetic variation to identify molecular mechanisms of cold tolerance. XXV International Congress of Entomology, Orlando, FL, September 25, 2016.
11. Teets, N.M. Making sexy flies with transgenics: Strategies to improve Sterile Insect Technique. Early-Career Investigators in Insect Physiology, Biochemistry, Toxicology, and Molecular Biology Symposium, Entomological Society of America North Central Branch Meeting, Cleveland, OH, June 7, 2016.
10. Teets, N.M. Insect stress biology: From basic mechanisms to practical applications. University of Cincinnati Department of Biology Seminar Series, January 25, 2016.
9. Teets, N.M. Cellular and molecular physiology of environmental stress tolerance: How basic principles can inform novel pest control strategies. Highlighting a Career of Defining and Meeting Grand Challenges in Entomology: A Symposium in Honor of David L. Denlinger, Entomological Society of America, Portland, OR, November 18, 2014.
8. Teets, N.M. and Denlinger, D.L. Combining transcriptomics and metabolomics to reveal extreme adaptations in an Antarctic insect. Integrated Insect Omics: From Transcriptomics to Interactomics Symposium, Entomological Society of America, Austin, TX, November 13, 2013.
7. Teets, N.M. Entomology in Antarctica: Mechanisms of stress tolerance in the world's southernmost insect. University of Florida Department of Entomology and Nematology Seminar Series, September 19, 2013.
6. Teets, N.M., Peyton, J.T. and Denlinger, D.L. Drying out to survive the winter: Using RNA-Seq to identify genes involved in overwintering in the Antarctic midge, *Belgica antarctica*. New Complexities in the Regulation of Insect Diapause and Cold Hardiness Symposium, XXIV International Congress of Entomology, Daegu, Korea, August 21, 2012.
5. Teets, N.M. Entomology in Antarctica: Mechanisms of survival in the world's southernmost insect. Public outreach lecture in Kelley's Island, Ohio. June 7, 2012.

4. Teets, N.M., Kawarasaki, Y., Lee, R.E. and Denlinger, D.L. An energetic comparison of cold tolerance strategies in the Antarctic midge, *Belgica antarctica*: The world's southernmost insect. Molecular Physiology of Epithelial Transport in Insects Symposium, Society for Experimental Biology, Glasgow, UK, July 2, 2011.
3. Teets, N.M. and Kawarasaki, Y. Buggers! Entomology in Antarctica. Station Science Talk at Palmer Station, Antarctica, April 2011.
2. Teets, N.M., Lee, R.E. and Denlinger, D.L. Cellular cold-sensing and signal transduction: the calcium connection. Cold Case Files: Integrative Perspectives on Physiological and Molecular Responses of Insects to Low Temperature Symposium, Entomological Society of America, Indianapolis, IN, December 16, 2009.
1. Sarquis, J.L. and Teets, N.M. Peer-led team learning: A new teaching strategy or an old strategy with a new name? Eastern Kentucky University Chemical Education Seminar, February 17, 2006.

CONTRIBUTED PRESENTATIONS

35. Teets, N.M., Kawarasaki, Y., Potts, L.J., Gantz, J.D., Philip, B.P., Denlinger, D.L., Lee, R.E. Rapid cold hardening provides sublethal benefits in an Antarctic extremophilic insect. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 6, 2019.
34. Teets, N.M., Dias, V., Schetelig, M.F., Handler, A.M., Hahn, D.A. Making macho males by transgenic overexpression of a mitochondrial antioxidant enzyme. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 6, 2019.
33. Garcia, M.J., Srirarm, A., Littler, A., Teets, N.M. Genetic variance in cold tolerance and its molecular underpinnings. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 6, 2019.
32. Perez-Galvez, F.R., Teets, N.M. Genetic and environmental factors influencing the efficacy of transgenic Sterile Insect Technique. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 5, 2019.
31. Kawarasaki, Y., Teets, N.M., Philip, B.N., Potts, L.J., Gantz, J.D., Denlinger, D.L., Lee, R.E. Characterization of drought-induced rapid cold-hardening in the Antarctic midge, *Belgica antarctica*. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 5, 2019.
30. Littler, A.S., Srirarm, A., Garcia, M.J., Teets, N.M. Out in the cold: Genetic correlation of cold tolerance traits in *Drosophila melanogaster*. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 5, 2019.

29. Potts, L.J., Teets, N.M. Overwintering spiders: Physiological responses to the winter season. Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL, January 4, 2019.
28. Teets, N.M., Kawarasaki, Y., Potts, L.J., Gantz, J.D., Philip, B.N., Denlinger, D.L., Lee, R.E. Sublethal benefits of rapid cold hardening in Antarctica's only endemic insect. Entomological Society of America Annual Meeting, Vancouver, BC, November 14, 2018.
27. Garcia, M. J., Teets, N. M. Neuromuscular performance as a measure of thermal tolerance. Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA, January 4, 2018.
26. *Drosophila suzukii* Population Collection (DSPC): A tool for studying local adaptation in an invasive pest. Entomological Society of America Annual Meeting, Denver, CO, November 6, 2017.
25. Teets, N.M. A tiny genome for a tiny midge: physiology and genomics of the world's southernmost insect. Scientific Council on Antarctic Research Biology Symposium, Leuven, Belgium, July 11, 2017.
24. Mercer, N., Teets, N.M., Bessin, R., and Obrycki, J. Impact of winter feeding on overwintering *Hippodamia convergens* (Coccinellidae) survival and spring reproduction. Entomological Society of America North Central Branch Meeting, Indianapolis, IN June 5, 2017.
23. Potts, L., and Teets, N.M. Biochemical adaptations of overwintering spiders. American Arachnological Society Annual Meeting, Queretaro, Juriquilla, Mexico, July 24-28. 2017.
22. Chen, C., Teets, N.M., Powell, T. and Hahn, D. Metabolic mechanisms mediating the miserable months: Metabolomics of periodic arousal in insect diapause. Contributed Paper, International Congress of Entomology, Orlando, FL, September 29, 2016.
21. Simoes Dias, V., Teets, N.M., Schetelig, M., Handler, A., Hahn, D. and Araujo, G. Can transgenic flies overexpressing antioxidant enzymes blunt radiation-induced oxidative stress and improve mating success? Student Paper Competition, International Congress of Entomology, Orlando, FL, September 29, 2016. ***Awarded second place in category.***
20. Spacht, D., Teets, N.M. and Denlinger, D.L. The role of PEPCK in insect diapause, development, and stress response. Student Poster Competition, International Congress of Entomology, Orlando, FL, September 27, 2016.
19. Teets, N.M., Handler, A.M. and Hahn, D.A. Testing the role of oxidative stress in sexual selection with transgenic overexpression of antioxidant defense systems in the Caribbean

- fruit fly, *Anastrepha suspensa*. Cellular and Molecular Biology Contributed Papers, Society for Integrative and Comparative Biology, West Palm Beach, FL, January 5, 2015.
18. Teets, N.M. and Denlinger, D.L. Quantitative phosphoproteomics reveals signaling events associated with rapid cold hardening in a temperate flesh fly. Thermal Physiology Poster Session, Society for Integrative and Comparative Biology, West Palm Beach, FL, January 5, 2015.
 17. Cogley, T.R., Teets, N.M., Morgan, T.J. and Hahn, D.A. Survival of the Coldest: Developing methods to quantify autophagy during cold hardening in *Drosophila melanogaster*. Thermal Physiology Poster Session, Society for Integrative and Comparative Biology, West Palm Beach, FL, January 5, 2015.
 16. Dean, C.A.E. and Teets, N.M. The effect of diapause on stress tolerance in migratory milkweed bugs, *Oncopeltus fasciatus*. Physiology, Biochemistry, and Toxicology Poster Session, Entomological Society of America, Portland, OR, November 18, 2014.
 15. Teets, N.M. and Denlinger, D.L. Calcium signaling mediates cold sensing and triggers rapid cold hardening in insect tissues. Physiology, Biochemistry, and Toxicology Ten Minute Papers, Entomological Society of America, Austin, TX, November 10, 2013.
 14. Teets, N.M. and Denlinger, D.L. Calcium signaling mediates cold sensing and triggers rapid cold hardening in insect tissues. Ohio Agricultural Research and Development Center Annual Conference, Wooster, OH April 25, 2013.
 13. Teets, N.M., Peyton, J.T. and Denlinger, D.L. Uncovering the molecular mechanisms of cold tolerance in a temperature flesh fly using a combined transcriptomic and metabolomic approach. Ohio Agricultural Research and Development Center Annual Conference, Wooster, OH, April 26, 2012.
 12. Teets, N.M., Peyton, J.T. and Denlinger, D.L. Uncovering molecular mechanisms of cold tolerance in a temperature flesh fly using a combined transcriptomic and metabolomic approach. Ohio State University Department of Evolution, Ecology, and Organismal Biology Darwin Presentations, April 12, 2012.
 11. Kawarasaki, Y., Teets, N.M., Kobelkova, A., Denlinger, D.L. Lee, R.E. Rapid cold-hardening in the frozen state increases cold tolerance in the Antarctic midge, *Belgica antarctica*. Thermobiology Poster Session, Annual Meeting of the Society for Integrative and Comparative Physiology, Charleston, SC, January 4, 2012.
 10. Teets, N.M. and Denlinger, D.L. Cellular cold-sensing in the goldenrod gall fly, *Eurosta solidaginis*, involves a calcium/calmodulin signaling axis. Graduate Student Ten-Minute Paper Competition, Physiology, Biochemistry, and Toxicology Section, Entomological Society of America, Reno, NV, November 14, 2011. **First Place, Student Competition for the President's Prize**

9. Teets, N.M. and Denlinger, D.L. Cellular cold-sensing in the goldenrod gall fly, *Eurosta solidaginis*, involves a calcium/calmodulin signaling axis. Department of Entomology Delong Competition, November 8, 2011.
8. Teets, N.M., Kawarasaki, Y., Lee, R.E. and Denlinger, D.L. Survival and energetic costs of repeated cold exposure in the Antarctic midge, *Belgica antarctica*: a comparison between frozen and supercooled larvae. Graduate Student Ten-Minute Paper Competition, Integrative Physiological and Molecular Insect Systems Section, Entomological Society of America, San Diego, CA, December 13, 2010.
7. Teets, N.M., Kawarasaki, Y., Lee, R.E. and Denlinger, D.L. Survival and energetic costs of repeated cold exposure in the Antarctic midge, *Belgica antarctica*: a comparison between frozen and supercooled larvae. Ohio Valley Entomological Association, Columbus, OH, October 29, 2010. **First Place, PhD Category.**
6. Teets, N.M. and Denlinger, D.L. The role of calcium signaling during cellular cold-sensing and rapid cold-hardening in the goldenrod gall fly, *Eurosta solidaginis*. Department of Entomology Delong Competition, May 25, 2010. **Award for best talk.**
5. Teets, N.M., Phelan, P.L and Denlinger, D.L. Metabolomic analysis of seasonal cold acclimation in the goldenrod gall fly, *Eurosta solidaginis*. Graduate Student Ten-Minute Paper Competition, Integrative Physiological and Molecular Insect Systems Section, Entomological Society of America, Indianapolis, IN, December 14, 2009.
4. Teets, N.M. and Denlinger, D.L. The role of calcium signaling during cellular cold-sensing and rapid cold-hardening in the goldenrod gall fly, *Eurosta solidaginis*. Ohio Valley Entomological Association, Cincinnati, OH, November 6, 2009, **First Place, PhD Category.**
3. Teets, N.M. and Denlinger, D.L. Role of heat shock proteins during thermal stress in the milkweed bug, *Oncopeltus fasciatus*. Graduate Student Ten-Minute Paper Competition, Integrative Physiological and Molecular Insect Systems Section, Entomological Society of America, Reno, NV, November 17, 2008.
2. Teets, N.M., Elnitsky, M.A., Benoit, J.B., Lopez-Martinez, G., Denlinger, D.L. and Lee, R.E. Role of calcium and calmodulin in the cold tolerance of the Antarctic midge, *Belgica antarctica*. M.S. Student Paper Competition, North Central Branch of the Entomological Society of America, Columbus, OH, March 25, 2008.
1. Teets, N.M., Elnitsky, M.A., Benoit, J.B., Lopez-Martinez, G., Denlinger, D.L. and Lee, R.E. *In vivo* and *in vitro* rapid cold-hardening in the Antarctic midge, *Belgica antarctica*. Hibernation and Extreme Environments Poster Session, American Physiological Society Intersociety Conference: Comparative Physiology 2006: Integrating Diversity, Virginia Beach, VA, October 10, 2006.

PROFESSIONAL DEVELOPMENT AND TRAINING:

- 2018 University of Kentucky Center for Enhancement of Teaching and Learning Distance Learning Workshop Series, September 19-October 17, 2018.
- 2017 University of Kentucky/University of Tennessee Grant Writer's Workshop, Knoxville, TN, March 16-17 2017.
- 2015 Insect Genetic Technologies Research Coordination Network Technical Course, August 17-21, 2015, Rockville, MD – Week-long intensive course on transgenic and genome editing technologies in both model and non-model insects
- 2015 Next Generation of Polar Researchers Leadership Symposium, May 2-9, 2015, Wrigley Marine Science Center, Catalina Islands, CA – Weeklong professional development symposium for recent PhDs working in Arctic and Antarctic systems
- 2014 University of Florida College of Agriculture and Life Sciences Teaching Enhancement Symposium, August 19, 2014, Gainesville Florida.

PROFESSIONAL AFFILIATIONS:

International Congress of Entomology
Entomological Society of America
Sigma Xi
Society for Experimental Biology
American Physiological Society
Society for Integrative and Comparative Biology
Ohio Valley Entomological Association

PROFESSIONAL SERVICE

Entomological Society of America:

- 2019 Judge for North Central Branch Comstock Award and Graduate Student Scholarship.
- 2018 Writer, ESA Science Policy Position Statement on Climate Change
- 2018 Student competition, judge; judging panel for Lillian and Alex Feir Travel Award
- 2017 Student competition judge, ESA annual meeting
- 2016 Session Moderator, International Congress of Entomology Meeting
- 2016 Judging Panel, Student Paper Competition, North Central Branch Meeting
- 2016 Judging Panel, STEP Travel Award Applications
- 2016 Judging Panel, International Graduate Student Showcase for XXV International Congress of Entomology
- 2014-2016 Physiology, Biochemistry and Toxicology Awards Committee
- 2011 Symposium Organizer and Moderator
- 2009-2011 Student Affairs Committee Representative

Society for Integrative and Comparative Biology

2019 Judge for student poster competition
2015 Moderator and Judge

Ohio Valley Entomological Association

2018 Judge for student talks
2009-2015 Judge for student talks

External PhD Examiner

2013 Jan Rozsypal, University of South Bohemia, Czech Republic
2017 Lauren Des Marteaux, University of Western Ontario, Canada
2017 Scott Hotaling, Department of Biology, University of Kentucky

Proposal Reviewer (2015-present)

National Science Foundation, University of Texas San Antonio, Elsevier Global Book Production

Journal Reviewer (2010-present)

Journal of Insect Physiology, Journal of Applied Biology, Journal of Thermal Biology, Insect Molecular Biology, Proceedings of the Royal Society B: Biological Sciences, Archives of Insect Biochemistry and Physiology, Environmental Entomology, Journal of Experimental Biology, Physiological Entomology, Journal of the Kansas Entomological Society, Canadian Journal of Zoology, FEBS Letters, African Journal of Microbiological Research, Proceedings of the National Academy of Sciences USA, PLoS One, Animal Biology, Journal of Medical Entomology, PeerJ, International Journal of Molecular Sciences, Insect Biochemistry and Molecular Biology, Scientific Reports, Evolution, Comparative Biochemistry and Physiology, BMC Genomics, BMC Evolutionary Biology, International Journal of Circumpolar Health, Pest Management Science, Autophagy, Physiological Genomics,

Institutional Service

2016-present Curriculum Committee, Department of Entomology, University of Kentucky
2016-present Faculty Secretary, Department of Entomology, University of Kentucky
2010-present Undergraduate research mentor (14 students total)
2012 Panel Member and reviewer, Ohio Agricultural Research and Development Center SEEDS grant competition
2010-2011 Curriculum Committee, Department of Entomology, Ohio State University
2008-2010 Seminar Committee, Department of Entomology, Ohio State University

Outreach and Education (2007-present)

- 2018 Instructor for Living Arts and Sciences Science Explorers Program, an after-school STEM program for underprivileged schools.
- 2007-present: Various presentations about insects and Antarctica at local libraries, elementary schools, summer camps, etc. (>30 total presentations)