**Todd David Johnson, Ph.D.**

Louisiana State University, Department of Entomology

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http://www.forestentomology.com | https://scholar.google.com/citations?user=C8d1I70AAAAJ

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**Research Statement**

I am a behavioral and chemical ecologist who uses laboratory bioassays and field experiments to ask fundamental and applied questions about trees, their herbivores, and the natural enemies of herbivorous insects in forest ecosystems. The central focus of my research program is to identify and describe the underlying factors that contribute to the evolution and maintenance of chemical diversity within insects and plants, and how this ultimately affects their behavior and fitness. The results from my research will provide a better understanding of the ecological interactions of insects and plants within a tri-trophic framework, informing management of insects that are beneficial or damaging to forest ecosystems.

**Education**

**University of Illinois at Urbana-Champaign, Urbana, IL Ph.D. Entomology, awarded 2019**

**Advisor:** Lawrence M. Hanks, Professor of Entomology, Dept. of Entomology

**Committee:** Brian Allan, May Berenbaum, Andrew Suarez

**Relevant Coursework:** Applied Multivariate Methods, Behavioral Ecology, Fundamentals of Insect Pest Management, Genomic Analysis of Insects, Insect Classification and Evolution, Insect Ecology, Insect Physiology, Seminars: Chemical Ecology, Genomics, Mutualism, Phytochemicals in Pest Management, Speciation

**Dissertation project:** “[Response by natural enemies to signals and cues associated with beetles in the family Cerambycidae](https://www.ideals.illinois.edu/handle/2142/106310)”

**University of Wisconsin-Madison, Madison, WI M.S. Entomology, awarded 2013**

**Advisor:** Kenneth F. Raffa, Professor of Forest Entomology, Dept. of Entomology

**Committee:** David G. Hogg, Shawn Steffan, Daniel K. Young

**Relevant Coursework:** Univariate Statistics, Regression Analysis, Insects and Diseases in Forest Resource Management, Introduction to Entomology, Plant-Microbe Interactions, Seminar in Pollination Biology

**Thesis project: “**[The behavior of parasitoids of the invasive emerald ash borer, *Agrilus planipennis*, and Hymenoptera and Coleoptera associated with three native *Agrilus* species](http://search.library.wisc.edu/catalog/ocn868070467)”

**Moravian College, Bethlehem, PA B.S. Biology, awarded 2009**

**Relevant Course work:** Botany, Field Botany, Ecology, Ecology of Tropical Forests, Plant-Insect interactions, GIS, Organic Chemistry, Biochemistry, Molecular Genetics, Genomics

**Independent Research Project:** Studied propagation techniques of *M. patula* as well its role in remediation at the Lehigh Gap, a superfund site contaminated with heavy metals. Advisor: Diane Husic, Spring 2007

**Muhlenberg College, Allentown, PA Fall 2008 – Summer 2009**

**Independent Research Project in Niesenbaum Lab:** Quantifying mycorrhizal colonization of spicebush (*Lindera benzoin*) under different light environments and in the presence and absence of black walnut (*Juglans nigra*). Advisors: Katherine Goodrich, Richard Niesenbaum

**Academic Appointments**

**Louisiana State University**

**Assistant Professor of Forest Entomology Sept. 2022 – Present**

**Department of Entomology**

Ongoing projects include: (1) Conservation of bottomland forest ecosystems, (2) Behavioral and chemical ecology of classical biological agents, (3) Chemical diversity and its role in mediating interactions between insects and plants

**University of New Hampshire**

**Postdoctoral Research Associate May 2019 – June 2022**

**Dept. of Nat. Res. Environment, Garnas Lab**

**Postdoctoral project:** Research evaluating the role of ontogeny on defensive metabolite production in green and white ash, as well as studying the impacts of ontogeny on the fitness of the invasive emerald ash borer (Coleoptera: Buprestidae: *Agrilus planipennis*) and the introduced biological control agents, *Spathius galinae* and *Tetrastichus planipennisi*. This project has involved substantial field and lab work over three field seasons, felling and sampling of hundreds of ash trees, and the analysis of univariate and multivariate data with R and Python.

**University of Illinois at Urbana-Champaign**

**Research Assistant Sp 2015, 2019; Fa 2016, 2018; Su 2014 – 2018**

**Department of Entomology, Hanks Lab**

Field and laboratory research on the chemical ecology of cerambycid beetles and their associates (i.e., potential competitors and natural enemies). This included the collection of volatile pheromones of cerambycids with aerations and SPME, identification and comparison of pheromones with authentic standards in GC/MS, and validation of identified compounds with subtractive trapping studies in the field. Additional work involved preliminary isolation of putative pheromones from elaterid and staphylinid beetles with SPME, as well as literature reviews and analysis of data collected of bycatch from traps.

**University of Wisconsin-Madison**

**Reader/Grader Fall 2012**

**Department of Zoology, Biology 151/3**

Responsible for grading undergraduate essays with respect to scientific accuracy and clarity.

**University of Wisconsin-Madison**

**Research Assistant August 2011 – August 2013**

**Department of Entomology, Raffa Lab**

Continued to coordinate and execute monitoring and analysis of Wisconsin's five year biological control release program, a multi-agency effort (UW-Madison, WI Dept. Natural Resources, WI Dept. Agriculture Trade & Consumer Protection, USDA-APHIS), of three introduced parasitoids, from the emerald ash borer's home range, in an attempt to control the destructive pest.

**Research Intern August 2010 – August 2011**

**Department of Entomology, Raffa Lab**

Studied the microbial associations of three buprestids, the invasive emerald ash borer and two native species of *Agrilus*, twolined chestnut borer (*Agrilus bilineatus*) and bronze birch borer (*Agrilus anxius*). I also began preliminary work examining the behavior of two parasitoids of *A. planipennis*, *Spathius floridanus* and *Spathius agrili.* Lastly, I was responsible for coordinating and executing Wisconsin's first biological control release against the emerald ash borer, a multi-agency effort (UW-Madison, WI Dept. Natural Resources, WI Dept. Agriculture Trade & Consumer Protection, USDA-APHIS), of three exotic parasitoids from the native range of EAB, to slow the growth of populations of this destructive pest.

**University of North Carolina at Chapel Hill**

**Department of Biology, Peet Lab**

**Plant Ecology Research Technician to Jackie White (Ph.D. candidate). June 2010 – August 2010**

Mapped and identified tree seedlings and herbaceous plant cover in the Roanoke River floodplain. The goal of the project was to assess recruitment and survival of these plants under altered flooding regimes at different distances from the river.

**23rd Annual Carolina Vegetation Survey**

**Volunteer June 2010**

Worked with researchers of local universities, as well as state and federal organizations to assess the composition and status of vegetation communities with the Blue Mountain region of North Carolina. Duties included setup of quadrats and identification of plants in the field, as well as pressed plants with dichotomous keys.

**New York State Museum**

**Collections Assistant November 2009 – January 2009**

Processed collections data for the New York State Bryology Collection. Advisors: N. Miller, L. Leonardi

**University of Pittsburgh**

**Pymatuning Laboratory of Ecology Summer 2008**

**Department of Biological Sciences**

**Field Assistant to Thomas Pendergast IV (Ph.D. candidate**)

Worked on a study evaluating the impacts of bottom-up and top-down pressures on competition among species of plants in an old field ecosystem. Duties included identification of plants to species, collection of leaf (i.e., chlorophyll, PAR, SPAD), herbivore presence, and soil (i.e., cores) data. Additionally, processed slides containing mycorrhizae for future analysis. Entered data into Microsoft Excel.

**Certifications**

**Woodland School Chainsaw Training Level II Fall 2012**

**Forest Industry Safety Technology Alliance (FISTA) Summer 2011**

**Professional Development**

Univ. of Illinois Graduate College Mentoring Workshop **April 2017**

[21st Century Scientist Workshop - Representation in Science](http://21centurysci.com/workshop/) **April 2016**

[Hymenoptera Course](http://hymcourse.org/)  **August 2014**

[Univ. of Illinois Center for Innovation in Teaching and Learning Reading Group](http://citl.illinois.edu/professional-development/reading-groups) **Spring 2014**

**Professional Skills**

**Extensive Experience:** Ecological field and lab work; plant & insect identification; field and laboratory bioassays with insects; insect colony maintenance; pheromone collection, identification, and validation; GC/MS; SPME; tree felling (≤12 in dbh); standard microbiological techniques, public speaking, science communication, grant and technical writing

**Some Experience:** HPLC

**Statistics and programing experience:** R (intermediate), SAS (beginner), Python (beginner), UNIX (beginner)

**Grants and Awards**

Total = $367,269; Alone = $230,425

**Animal Behav. Soc.**

*Student Travel Award* *=* $500

Animal Behavior Society 2018 Meeting $500

**Entomol. Soc. of Am.**

*Student ten-minute paper competition* = $300

North Central Branch 2017 Meeting Ph.D. Student competition $100

3rd place, PhD Paper Session I

North Central Branch 2016 Meeting Ph.D. Student competition $200

2nd place, P-IE, sysEB Session: Ecology II

*Travel Awards* = $1,250

North Central Branch 2018 Meeting Student Travel Scholarship $200

North Central Branch 2017 Meeting Student Travel Scholarship $250

North Central Branch 2016 Meeting Student Travel Scholarship $250

National Meeting 2015 USDA AFRI Student Travel Award $500

North Central Branch 2015 Meeting Student Travel Scholarship $250

*Program Enhancement Funds* = $6,530

North Central Branch 2018 Meeting Program Enhancement Fund $1,240

With Kayla Perry (The Ohio State University)

North Central Branch 2018 Meeting Program Enhancement Fund $2,390

With Amanda Skidmore (University of Kentucky)

North Central Branch 2017 Meeting Program Enhancement Fund $1,500

With Rachael Sitz (Colorado State University)

North Central Branch 2016 Meeting Program Enhancement Fund $700

With Kayla Perry (The Ohio State University)

North Central Branch 2015 Meeting Program Enhancement Fund $700

With Joseph Wong (University of Illinois Urbana-Champaign)

**Int. Soc. Chem. Ecol.**

*Travel Awards*  = $700

2019 Student Travel Award $700

**Louisiana Department of Forestry and Agriculture**

*Contracts* = $50,000

2023-2024: Southern pine beetle counting (Contract No. 2000802432, Louisiana State University) $50,000

**Univ. of Illinois at Urbana-Champaign**

*Research Grants* = $1,000

Francis M. and Harlie M. Clark 2016 Research Support Grant $1,000

*Travel Awards* = $475

Grad. College Spring 2017 Conference Travel Award $150

Grad. College Fall 2014 Conference Travel Award $325

**USDA-APHIS**

*Cooperative Agreements* = $130,314

2020-2021: Patterns and consequences of complex interactions between ash tree size and resistance to emerald ash borer and effects on parasitoids in the northeast, *with* J.R. Gould (USDA-APHIS), J.R. Garnas (Univ. New Hampshire) $130,314

**US Forest Service**

*Competitive Grants* = $131,000

2023-2025: Assessing the impact of emerald ash borer on the health of bottomland ash species and the abundance of their specialist arthropod associates in subtropical Louisiana, Emerging Pests Program (Agreement #: 23‐DG‐11083150‐108; Louisiana State University) $131,000

*Cooperative Agreements* = $45,000

2022-2023: Bipartisan Infrastructure Law Fiscal Year 2022 Invasive Species Funding (Agreement #: 23-DG-11083150-103; Louisiana State University) $45,000

**Grant reviews**

*The Ohio State University College of Food Agricultural and Environmental Sciences Internal Grant Program* (1 – 2023)

**Grants and Awards under my supervision**

Grants = $13,000; Awards = $350; Total = $13,350

*Grants*

Louisiana State University College of Agriculture. 2024 Undergraduate Level II Research $4,000

Grant award to Daniel Debutts (Louisiana State University) for the study of the “Significance of different soil types on *Pinus taeda* and *Pinus palustris* volatile production”

Louisiana State University College of Agriculture. 2024 Undergraduate Level I Research Grant. $3,000

award to Daniel Debutts (Louisiana State University) for the study of the “Significance of different soil types on *Pinus taeda* and *Pinus palustris* volatile production”

Univ. Illinois at Urbana-Champaign School of Integr. Biol. 2018 Camp Family Scholarship $6,000

award to Nicholas Mendes (University of Illinois at Urbana-Champaign) for the study of behavioral responses of staphylinid beetles to putative pheromones and other attractants.

*Awards*

Louisiana State University Department of Entomology Graduate Student Symposium. 2023. 1st place award given to Vanshika Jindal for her 3 minute thesis proposal presentation. $amount

Entomol. Soc. of Am. North Central Branch 2015 Meeting Student Travel Scholarship $250

award to Suzanne Vachula (University of Illinois at Urbana-Champaign) to give her poster, *Testing for kairomonal attraction of dipterans to pheromones of Cerambycid beetles*

Entomol. Soc of Am North Central Branch 2015 Student competition 3rd place poster $100

award to Suzanne Vachula (University of Illinois at Urbana-Champaign) for her poster, *Testing for kairomonal attraction of dipterans to pheromones of Cerambycid beetles*

**Refereed Articles**

%**undergraduate researcher**

8. **Johnson, T.D.,** M.L. Buffington, M.W. Gates, R.R. Kula, and E. Talamas. 2021. Deployment of aggregation-sex pheromones of longhorned beetles (Coleoptera: Cerambycidae) facilitates the discovery and identification of their parasitoids. [J. Chem. Ecol. 47: 28–42](https://link.springer.com/article/10.1007/s10886-020-01238-7)*.*

7. Hanks, L.M., J.A. Mongold-Diers, R.F. Mitchell, Y. Zou, J.C.H. Wong, L.R. Meier, **T.D. Johnson**, and J.G. Millar. 2019. The role of minor pheromone components in segregating 14 species of longhorned beetles (Coleoptera: Cerambycidae) of the subfamily Cerambycinae. [J. Econ. Entomol. 112: 2236–2252](https://bioone.org/journals/Journal-of-Economic-Entomology/volume-112/issue-5/toz141/The-Role-of-Minor-Pheromone-Components-in-Segregating-14-Species/10.1093/jee/toz141.short).

6. **Johnson, T.D**., E. Hanson%, and A. Yu%. 2019. Adults of the cerambycid beetle *Megacyllene caryae* use both olfactory and visual information to locate mates. [Entomol. Exp. et Appl. 167: 500–506](https://onlinelibrary.wiley.com/doi/abs/10.1111/eea.12781?af=R).

5. Millar, J.G., R.F. Mitchell, L.R. Meier, **T.D. Johnson**, J.A. Mongold-Diers, L.M. Hanks. 2017. (2*E*,6*Z*,9*Z*)-2,6,9-Pentadecatrienal as a male-produced aggregation-sex pheromone of the cerambycid beetle *Elaphidion mucronatum*. [J. Chem. Ecol. 43: 1056–1065](https://link.springer.com/article/10.1007/s10886-017-0905-1).

4. Diesel N.M., Y. Zou, **T.D. Johnson**, D.A. Diesel, J.G. Millar, J.A. Mongold-Diers, and L.M. Hanks. 2017. The rare North American cerambycid beetle *Dryobius sexnotatus* shares a novel pyrrole pheromone component with species in Asia and South America. [J. Chem. Ecol. 43: 739–744](https://link.springer.com/article/10.1007/s10886-017-0875-3).

3. **Johnson, T.D**., J.A. Pfammatter, J.P. Lelito, and K.F. Raffa. 2016. Evaluation of tree mortality and parasitoid recoveries on the contiguous western invasion front of emerald ash borer. [Agr. For. Entomol. 18: 327–339](http://onlinelibrary.wiley.com/doi/10.1111/afe.12164/abstract).

2. Leung, W., ...**T.D. Johnson**, ...S.C.R. Elgin 2015. Drosophila Muller F elements maintain a distinct set of genomic properties over 40 million years of evolution. [G3. 5: 719–740](http://www.g3journal.org/content/5/5/719).

1. **Johnson, T.D**., J.P. Lelito, and K.F. Raffa. 2014. Responses of two parasitoids, the exotic *Spathius agrili* Yang and the native *Spathius floridanus* Ashmead, to volatile cues associated with the emerald ash borer, *Agrilus planipennis* Fairmaire. [Biol. Control 79:110–117](http://www.sciencedirect.com/science/article/pii/S1049964414000991).

*Submitted*

1. **Johnson, T.D.**,C. Coupe%, D. Wilbur%, C. Ziadeh%, J.R. Gould, and J.R. Garnas. 202X. Evaluating the impacts of tree ontogeny and species on tri-trophic interactions between an invasive woodborer and its parasitoids in naïve hosts.

*To be submitted*

#. **Johnson, T.D.,** J.J. Duan. 202X. The Ecology, Economics, and Management of *Agrilus* spp.

*In preparation* (listed in order of intended submission; titles are tentative)

#. **Johnson, T.D.**, B.A. Aflague, S. Long%, J.R. Garnas, and R. Minocha. 202X. Site and time of year explain changes in composition of primary and secondary metabolites in two species of ash (Oleaceae: *Fraxinus*) exposed to abiotic and biotic stressors in New Hampshire, USA.

#. **Johnson, T.D.**, B. Rice, and L.M. Hanks. 202X. Response by natural enemies to eggs and pheromones of the cerambycid *Xylotrechus colonus* (Cerambycinae: Clytini) in field bioassays.

#. **Johnson, T.D.**, C. Coupe, C.M. Rigsby, B.A. Aflague, J.R. Gould, and J.R. Garnas. 202X. Ontogeny and defensive induction explain the phloem chemistry of two species of ash (Oleaceae: *Fraxinus*) in New Hampshire, USA.

#. **Johnson, T.D.**. 202X Behavioral response by two species of ants in the genus *Camponotus* exposed to aggregation-sex pheromones of cerambycid beetles and alarm pheromones of conspecifics.

#. **Johnson, T.D.**, S.J. Krauth, E.C. Bernard, M.L. Draney, R.J. Gagne, M.W. Gates, G.A.P. Gibson, J.T. Huber, N.F. Johnson, I. Mikó, E.L. Mockford, J.L. Mottern, J.S. Strazanac, D.K. Young, J. Woolley, R.L. Zuparko, and K.F. Raffa. 202X. Biodiversity under the bark: four new species of Oobius Triaptizin are among arthropods collected from trees infested by three native species of *Agrilus*.

**Invited Commentary**

1. **Johnson, T.D.**, J.G. Whitehill. 2023. A phoenix glimmers within the ashes: generalized defensive traits suggest hope for plants under attack by invasive pests.*Invited commentary* on *Gossner et*. *al*. New Phytologist. <https://doi.org/10.1111/nph.19230>

**Science Communication (non-peer reviewed)**

**+equal contributions**

8. **Johnson, T.D.** 2020. [What goes up must come down–the completion of field research on emerald ash borer at Doe Farm](https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/unh_doe_farm_5th_update_14oct20.pdf). *Doe Farm Newsletter*.16 October 2020.

7. **Johnson, T.D.** 2020. [Another update regarding emerald ash borer research at Doe Farm](https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/update_eab_research_at_doe_farm_2sept20.pdf). *Doe Farm Newsletter*. 4 September 2020.

6. **Johnson, T.D.** 2020. [A second update regarding emerald ash borer research at Doe Farm](https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/doe_farm_unh_eab_study_update_29jul20.pdf). *Doe Farm Newsletter*. 31 July 2020.

5. **Johnson, T.D.** 2020. [Emerald ash borer research update](https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/update-1_24june2020.pdf) at [Doe Farm](https://www.ci.durham.nh.us/boc_conservation/doe-farm). *Doe Farm Newsletter*. 24 June 2020.

4. Anderson, N.+, Halsey, S+., **Johnson, T.D.**+, T. Josek+, and E. Welsh+. 2018. [The world has a place for pesky blood suckers](http://www.news-gazette.com/news/local/2018-02-18/environmental-almanac-the-world-has-place-pesky-blood-suckers.html).*The News Gazette*. (Also read on [WILL Radio](https://will.illinois.edu/environmentalalmanac/program/dont-be-ticked-off-come-to-the-insect-fear-film-festival))

3. **Johnson, T.D.**, and C.A.E. Dean. 2017. [Humans and arthropods, who should fear whom?](https://will.illinois.edu/environmentalalmanac/program/insects-and-other-arthropods-vs.-humans-who-should-fear-whom) *The News Gazette* (Also read on WILL Radio).

2. **Johnson, T.D.**, Gibson, J., and T. Josek. 2016. [Bugs go Boom](http://www.news-gazette.com/arts-entertainment/local/2016-02-21/rob-kanterenvironmental-almanac-bugs-go-boom.html). *The News Gazette*. (Also read on WILL Radio).

1. Duennes, M.A., and **T.D. Johnson**. 2014. [Pesticides should be small tool in management plan](http://www.news-gazette.com/news/local/2014-02-16/environmental-almanac-pesticides-should-be-small-tool-management-plan.html). *The News Gazette*. (Also read on WILL Radio).

**Scientific Presentations**

**$undergraduate student, \*graduate student %research technician**

*Invited presentations*

19. **T.D. Johnson**. 2025. TBD. University of Georgia, Warnell School of Forestry and Natural Resources, Athens, GA.

18. **T.D. Johnson** et al. 2024. TBD. *In:* ***title of symposium.*** Entomological Society of America National Meeting, Phoenix, AZ.

17. **T.D. Johnson** et al. 2024. TBD. *In:* ***title of symposium.*** Botanical Society of America National Meeting, East Lansing, MI.

16. **T.D. Johnson**. 2024. Characterizing ecological interactions of arthropods in forests under global change. Department of Entomology, University of California Davis, Davis, CA.

15. **T.D. Johnson**. 2023. Ongoing research in the forest entomology group: Optimizing the conservation and health of forests in the Southeastern United States. *In: Forestry, wildlife, and natural resources session,* Louisiana State University AgCenter Annual Conference. Baton Rouge, LA.

14. **T.D. Johnson**. 2023. Using behavioral and chemical ecology to build fundamental and applied knowledge about forest arthropods in Louisiana. East Texas Forest Entomology Seminar, Lake Kurth, TX.

13. **T.D. Johnson**. 2022. Using behavioral and chemical ecology to build fundamental and applied knowledge about forest insects. Department of Entomology, The Ohio State University, Columbus OH.

12. **T.D. Johnson**. 2022. Using behavioral and chemical ecology to build fundamental and applied knowledge about forest insects. Department of Entomology, Louisiana State University, Baton Rouge, LA.

11. **T.D. Johnson**, C. Coupe%, D. Wilbur$, C. Ziadeh\*, J. Gould, and J.R. Garnas. 2022. Impacts of tree species and size on the survival and fitness of emerald ash borer and its parasitoids in New Hampshire. *In: Critical entomology issues, emerald ash borer*, Northeastern Forest Pest Council, Portland, ME.

10. **T.D. Johnson**, C. Coupe%, C.M. Rigsby, B. Aflague**\***, J. Gould, and J.R. Garnas. 2021. Impacts of tree ontogeny and biotic stressors on the composition of secondary metabolites within the phloem tissue of two species of ash (Oleaceae: *Fraxinus*) in New Hampshire. *In: Highlighting Early Career Professionals in Forest Health*, North American Forest Insect Work Conference, Virtual Meeting.

9. **T.D. Johnson**, B. Aflague**\***, J. Gould, and J.R. Garnas. 2020. Using natural variation in tree resistance to herbivores to manage invasive insects. University of New Hampshire Postdoctoral Association February Meeting, Durham, NH.

8. **T.D. Johnson**, B. Rice, and L.M. Hanks. 2019. Response by natural enemies to eggs and pheromones of the cerambycid *Xylotrechus colonus* (Cerambycinae: Clytini) in field bioassays. *In: Semiochemicals of Wood-boring Beetles*, Entomological Society of America National Meeting, St. Louis, MO.

7. **T.D. Johnson**. 2019. The use of sensory information by insects to locate resources and mates. University of Illinois at Urbana-Champaign Wildlife Society, Urbana, IL.

6. K.F. Raffa, **T.D. Johnson**, and J.P. Lelito. 2014. Emerald ash borer biological control: field and laboratory research. Wisconsin Dept. of Agriculture, Trade, and Consumer Protection & Dept. of Natural Resources Plant Pest Survey Summit, Madison, WI.

5. **Johnson, T.D**, J.P. Lelito, and K.F. Raffa. 2014. Emerald ash borer biological control: field and laboratory research. Lac Lawrann Conservancy, West Bend, WI.

4**. Johnson, T.D**., and K.F. Raffa. 2013. Insect diversity and emergence patterns in trees colonized by three *Agrilus* spp. in Wisconsin. University of Wisconsin-Madison Arboretum Science Day, Madison, WI.

3. **Johnson, T.D**., J.P. Lelito, and K.F. Raffa 2013. EAB biological control: evaluation of field releases and laboratory studies of host-location behavior.Wisconsin Dept. of Agriculture, Trade, and Consumer Protection & Dept. of Natural Resources Plant Pest Survey Summit, Fitchburg, WI.

2. **Johnson, T.D**., J.P. Lelito, and K.F. Raffa. 2012. Biological control of emerald ash borer (*Agrilus planipennis* Fairmaire) in Wisconsin. University of Wisconsin-Madison Arboretum Science Day,Madison, WI.

1. **Johnson, T.D.**, J.P. Lelito, K.F. Raffa. 2012. Update on biological control of emerald ash borer in Wisconsin. Wisconsin Dept. of Agriculture, Trade, and Consumer Protection & Dept. of Natural Resources Plant Pest Survey Summit, Madison, WI.

*Submitted presentations*

Domestic

15. C. Kuetsinya, M. Pandey, J. McKenny, J.R. Meeker, T. Scholwalter, **T.D. Johnson**. 2023. When does prescribed burn reduce Southern pine beetle (*Dendroctonus frontalis* Zimmerman) spot incidence? A case study from the Bienville and Homochitto National Forests in Mississippi. *In:* *Characterizing ecological interactions in forests under global change*, Entomological Society of America National Meeting, National Harbor, MD.

14. C. Kuetsinya, M. Pandey, J. McKenny, J.R. Meeker, T. Scholwalter, **T.D. Johnson**. 2023. When does prescribed burn reduce Southern pine beetle (*Dendroctonus frontalis* Zimmerman) spot incidence? A case study from the Bienville and Homochitto National Forests in Mississippi. *Southern Pine Beetle Working Group* at Southern Forest Insect Work Conference, Raleigh, NC.

13. **T.D. Johnson**, C.C. Coupe, C. Ziadeh, D. Wilbur, J.R. Gould, J.R. Garnas. 2022. Performance of emerald ash borer (*Agrilus planipennis*, Coleoptera: Buprestidae) larvae is apparently regionally specific, and may have implications for population dynamics and biological control. Southern Forest Insect Work Conference, Lexington, KY.

12. **T.D. Johnson**, C.C. Coupe, C. Ziadeh, D. Wilbur, J.R. Gould, J.R. Garnas. 2021. Larval feeding behavior and risk of parasitism according to host tree species, size, and level of infestation by the phloem feeding emerald ash borer, *Agriulus planipennis* Fairemaire (Coleoptera: Buprestidae). Entomological Society of America National Meeting, Denver, CO.

11. **T.D. Johnson**. 2021. Overview of ongoing research. University of New Hampshire Natural Resources and the Environment Seminar Series, Durham, NH.

10. **T.D. Johnson**, B. Rice, and L.M. Hanks. 2020. Response by natural enemies to eggs and pheromones of the longhorned beetle, *Xylotrechus colonus* (Coleoptera: Cerambycidae) in field bioassays. University of New Hampshire Natural Resources and the Environment Seminar Series, Durham, NH.

9. **T.D. Johnson**. 2019. Use of sensory information by insects to locate resources and mates. PhD Exit Seminar, University of Illinois at Urbana-Champaign, Department of Entomology, Urbana, IL.

8. **Johnson, T.D.**, and L.M. Hanks 2018. Testing the sensory overload hypothesis using alarm pheromones of two species of ants in the genus *Camponotus*. Animal Behavior Society Conference, Milwaukee, WI.

7. **Johnson, T.D.**, and L.M. Hanks. 2018. Response by two species of ants in the genus *Camponotus* exposed to different concentrations of their alarm pheromones. Entomological Society of America North Central Branch Meeting, Madison, WI.

6. **Johnson, T.D.**, B. Rice, and L.M. Hanks. 2017. Using cameras to quantify response by natural enemies to eggs and pheromones of cerambycid beetles in field bioassays. Entomological Society of America National Meeting, Denver, CO.

5. **Johnson, T.D.**, and L.M. Hanks. 2017. Using eggs and pheromones of the cerambycid beetle *Xylotrechus colonus* (Fabricius) to study interactions with natural enemies in the field. Entomological Society of America North Central Branch Meeting, Indianapolis, IN.

4. **Johnson, T.D.,** E. Hanson$, A. Yu$, and L.M. Hanks. 2016. Visual cues, tree diameter, and edge effects influence responses to chemical cues by a cerambycid beetle and associated insects. Entomological Society of America North Central Branch Meeting, Cleveland, OH.

3. **Johnson, T.D.**, and L.M. Hanks. 2015. Responses of parasitoid wasps to pheromones of cerambycid beetles. Entomological Society of America National Meeting, Minneapolis, MN.

2. **Johnson, T.D.**, and L.M. Hanks. 2014. Parasitic wasps are attracted to the sex pheromones of various species of cerambycids. Entomological Society of America National Meeting, Portland, OR.

1. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2013.Responses of two parasitoids of the emerald ash borer, *Agrilus planipennis* Fairmaire, the introduced *Spathius agrili* Yang, and the native *Spathius floridanus* Ashmead, to volatile host-associated cues. Entomological Society of America National Meeting, Austin, TX.

International

4. **Johnson, T.D.**, C. Coupe, J.R. Gould, and J.R. Garnas. 2022. Impacts of application of methyl jasmonate at different times prior to egg hatch on the survival of larval emerald ash borer, its parasitoids, and the chemistry of two species of ash in New Hampshire. Joint meeting of the Entomological Society of America and Entomological Society of Canada. Vancouver, Canada.

3. **Johnson, T.D.**, B. Aflague**\***, J. Gould, and J.R. Garnas. 2022. Ontogeny and defensive induction explain the phloem chemistry of two species of ash (Oleaceae: *Fraxinus*) in New Hampshire, USA. *In: Systematics, biogeography, and ecology of Cerambycidae and Buprestidae*, International Congress of Entomology, Helsinki, Finland. *Symposium/talk cancelled due to COVID.*

2. **Johnson, T.D.**, and L.M. Hanks. 2016. Responses of parasitoid wasps to eggs and pheromones of cerambycid beetles in field bioassays.International Congress of Entomology, Orlando, FL, USA.

1. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2014. Responses of two parasitoids of the emerald ash borer, *Agrilus planipennis* Fairmaire, the introduced *Spathius agrili Spathius agrili* Yang, and the native *Spathius floridanus* Ashmead, to volatile host-associated cues.International Society of Chemical Ecology Meeting, Urbana, IL.

*Presentations under my supervision*

6. Sanford, A.P., C. Wood Johnson, **T.D. Johnson**. 2023. Generating baseline data on arthropod communities of three species of ash (Fraxinus spp.) ahead of the emerald ash borer invasion in southeastern Louisiana.Entomological Society of America National Meeting, National Harbor, MD.

5. Sanford, A.P., C. Wood Johnson, **T.D. Johnson**. 2023. Generating baseline data on arthropod communities of three species of ash (Fraxinus spp.) ahead of the emerald ash borer invasion in southeastern Louisiana. Louisiana State University Graduate Student Symposium, Baton Rouge, LA.

4. Jindal, V., **T.D. Johnson**. 2023. Assessing response of two biological control agents of the emerald ash borer to five species of ash trees. Louisiana State University Graduate Student Symposium, Baton Rouge, LA.

3. Sharma, C., **T.D. Johnson**. 2023. Impact of bottom-up effects on the reproductive ecology of two species of longhorned beetle. Louisiana State University Graduate Student Symposium, Baton Rouge, LA.

2. Mendes, N. **$**, and **T.D. Johnson**. 2019. Using two types of traps to evaluate response by beetles in the family Staphylinidae to plant volatiles. University of Illinois at Urbana-Champaign Undergraduate Research Symposium, Urbana, Illinois.

1. Mendes, N. **$**, and **T.D. Johnson**. 2019. Using two types of traps to evaluate response by beetles in the family Staphylinidae to plant volatiles. Indiana University Bloomington Center for the Integrative Study of Animal Behavior Animal Behavior Conference, Bloomington, Indiana.

*Co-authored presentations*

1.V. Manrique, J.U. Toledo, R. Diaz, **T.D. Johnson**. 2023. Building partnerships to enhance research and education in entomology and related fields. *In: Basic animal and plant biology*, Louisiana State University AgCenter Annual Conference. Baton Rouge, LA.

*Invited posters*

1. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2014. Responses of two parasitoids, the exotic Spathius agrili Yang and the native Spathius floridanus Ashmead, to volatile cues associated with the emerald ash borer, Agrilus planipennis Fairmaire. *In:* ***Challenges in Managing the Emerald Ash Borer (Agrilus planipennis) and Similar Invasive Woodborers on the Horizon,*** Entomological Society of America National Meeting, Portland, OR.

*Submitted posters*

10. **Johnson, T.D.**, B. Aflague**\***, J. Gould, and J.R. Garnas. 2020. Ontogeny and defensive induction shape the diversity of secondary metabolites within green ash (Oleaceae: *Fraxinus*) in New Hampshire. Northeastern Forest Pest Council Meeting, Portland, ME.

9. Johnson, T.D., B. Aflague**\***, J. Gould, and **J.R. Garnas.** 2020. Ontogeny and defensive induction shape the diversity of secondary metabolites within green ash (Oleaceae: *Fraxinus*) in New Hampshire. USDA Interagency Forum on Invasive Species, Annapolis, MD.

8. **Johnson, T.D.**, B. Aflague**\***, J. Gould, and J.R. Garnas. 2019. Ontogeny and defensive induction shape the diversity of secondary metabolites within green ash (Oleaceae: *Fraxinus*) in New Hampshire. Entomological Society of America National Meeting, St. Louis, MO.

7. **Johnson, T.D.**, M. Buffington, M.W. Gates, R.R. Kula, E. Talamas, and L.M. Hanks. 2019. Identification of natural enemies by proxy: deployment of aggregation-sex pheromones of longhorned beetles (Coleoptera: Cerambycidae) facilitates the discovery and identification of their parasitoids. International Society of Chemical Ecology Meeting, Atlanta, GA.

6. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2015. Responses of two parasitoids, the exotic *Spathius agrili* Yang and the native *Spathius floridanus* Ashmead, to volatile cues associated with the emerald ash borer, Agrilus planipennis Fairmaire. Phytochemical Society of North America Meeting, Urbana, IL.

5. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2015. Evaluation of the potential of establishment of three introduced parasitoids of the emerald ash borer in Wisconsin. Entomological Society of America North Central Branch Meeting, Manhattan, KS.

4. **Johnson, T. D.**, S. J. Krauth, M. Gates, J. Huber, N.F. Johnson, I. Mikó, J. Strazanac, J. Woolley, R. Zuparko, and K. F. Raffa. 2014. Parasitoids emerging from trees colonized by native *Agrilus* in Wisconsin. Entomological Society of America North Central Branch Meeting, Des Moines, IA.

3. **Johnson, T.D.**, S. Krauth, J.P. Lelito, and K.F. Raffa. 2012. Parasitoids and associated insects emerging from trees colonized by native *Agrilus* in Wisconsin**.** Entomological Society of America National Meeting,Knoxville, TN.

2. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2011. Attraction of native and introduced *Spathius* spp. to host-related cues. Emerald Ash Borer Research and Technology Development Meeting, Wooster, OH.

1. **Johnson, T.D**., K. Goodrich, and R. Niesenbaum. 2009. Getting to the roots of it: are mycorrhizae in *Lindera benzoin* influenced by light environment and the presence of juglone? Lehigh Valley Ecology and Evolution Society Meeting, Allentown, PA.

*Posters under my supervision*

2. C. Kuetsinya\*, M. Pandey, J. McKenny, J.R. Meeker, C.A. Steiner, T. Scholwalter, M. Stout, **T.D. Johnson**. 2023. Environmental variables explain differences in the population dynamics of southern pine beetle (*Dendroctonus frontalis*) after prescribed burns in the Bienville and Homochitto National Forests in Mississippi. East Texas Forest Entomology Seminar, Lake Kurth, TX.

1. Vachula, S.$, **T.D. Johnson**, and L.M. Hanks. 2015. Testing for kairomonal attraction of dipterans to pheromones of cerambycid beetles. Entomological Society of America North Central Branch Meeting, Manhattan, KS.

*Outreach presentations*

3. **Johnson, T.D.**, B. Aflague**\***, J.R. Gould, and J.R. Garnas. 2020. [Understanding natural variation in ash resistance to insect attack to manage the emerald ash borer](https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/pa%20ge/19571/eab_presentation_to_lsc_14may20.pdf). Town of Durham Land Stewardship Subcommittee Meeting, Virtual Presentation.

2. **Johnson, T.D.** Research conducted in the Hanks lab. 10 July 2015. AgDiscovery. (x2)

1. **Johnson, T.D.**, J.P. Lelito, and K.F. Raffa. 2013.Biological control of the emerald ash borer (*Agrilus planipennis* Fairmaire) at River Edge Nature Center in Newburg, Wisconsin. River Edge Nature Center, Newburg, WI. (x2)

*Presentations given for others*

1. Bauer, L.S., J. Duan, J. Gould, and R. Van Driesche. 2015. Classical biological control: long-term management of emerald ash borer in forested ecosystems. *In:* ***Forest Entomology,*** Entomological Society of America North Central Branch Meeting, Manhattan, KS.

*Coauthored presentations*

1. J.R. Garnas, **T.D. Johnson**, B. Aflague, C. Coupe, J.R. Gould. 2022. Divergent phloem chemistry in green v. white ash across tree sizes: potential impacts on emerald ash borer performance. International Union of Forestry Organizations meeting, Lisbon, Portugal.

**Conference Proceedings**

1. **Johnson, T.D.**, C.C. Coupe, C. Ziadeh, D. Wilbur, J.R. Gould, J.R. Garnas. 2022. Performance of emerald ash borer (*Agrilus planipennis*, Coleoptera: Buprestidae) larvae is apparently regionally specific and may have implications for biological control. p. 32-33. *In* Darr, M., K. DeWitt (eds.), Proceedings of the 61st Annual Southern Forest Insect Work Conference, 21-23 June 2022, Lexington, Kentucky. https://bugwoodcloud.org/mura/sfiwc/assets/File/Proceedings/SFIWC2022Proceedings.pdf

2. **Johnson, T.D.**, J. P. Lelito, and K. F. Raffa. 2013. Attraction of introduced and native *Spathius* spp. to host-related cues. p. 110. *In* Parra, G., D. Lance, V. Mastro, R. Reardon, and C. Benedict (eds.), Proceedings of 2011 emerald ash borer research and technology development meeting, 12-13 October 2011, Wooster, Ohio. [USDA Forest Health Technology Enterprise Team Publication FHTET-2011-06.](https://www.fs.fed.us/foresthealth/technology/pdfs/EAB_FHTET-2011-06.pdf) USDA Forest Service, Morgantown, WV.

**Symposia Organized**

9. K. Perry, **T.D. Johnson**. 2023. Characterizing ecological interactions in forests under global change. Entomological Society of America National Meeting, National Harbor, MD. Speakers: Allison Gardiner (UMaine), Todd D. Johnson (Louisiana State), Angela Mech (UMaine), Holly Munro (National Council for Steam and Air Improvement), Celso Oliveira (Wisconsin-Madison) Kayla Perry (Ohio State), Katherine Turo (Rutgers) Samuel Ward (Ohio State).

8. **T.D. Johnson**, and D.L. Peterson. 2022. Exploiting host-location behaviors and host-plant resistance to manage invasive woodborers. International Congress of Entomology, Helsinki, Finland.Speakers: Jess Hartshorn (Clemson), Xavier Martini (Florida), Caterina Villari (Georgia), Peter Silk (Natural Resources Canada), Sybille Unsicker (Max Plank Institute for Chemical Ecology), Justin Whitehill (Univ. British Columbia).

7. **T.D. Johnson**, and A. Skidmore. 2018. A Sensible Symposium: Exploring the roles of sight, smell, taste, and touch in insect behavior. Entomological Society of America North Central Branch Meeting, Madison, WI. Speakers: Laura S. Beckers (Murray State), Christelle Guedot (Wisconsin-Madison), Eileen Hebets (Nebraska), Tanya Josek (Illinois), Robert F. Mitchell (Wisconsin-Oshkosh), Christian Ortiz (Michigan), Donnie L. Peterson (Wright State).

6. **T.D. Johnson**, and K. Perry. 2018. Forest Entomology. Entomological Society of America North Central Branch Meeting, Madison, WI. Speakers: Hillary Barker (Wisconsin-Madison), Nicholas Fountain-Jones (Minnesota), Matthew Garcia (Wisconsin-Madison), Rebecca Gray (WI Dept. Nat. Res.), Jessica Hartshorn (MN Dept. Nat. Res.), Kevin Rice (Missouri).

5. **T.D. Johnson**, and K. Perry. 2017. Forest Entomology. Entomological Society of America North Central Branch Meeting, Indianapolis, IN. Speakers: Don Cipollini (Wright State), Matthew Ginzel (Purdue), Emily Franzen (Xavier University), Larry Long (NC State), Chris Riley (Ohio State), Rachael Sitz (Colorado State).

4. Sitz, R., and **T.D. Johnson**. 2017. Plant-insect interactions in the face of climate change. Entomological Society of America North Central Branch Meeting, Indianapolis, IN. Speakers: Meghan Bennet (North Dakota), Leslie Decker (Michigan), Linus Gog (Illinois), Ralph Grundel (USGS), Kathryn Ingerslew (Purdue), Laura Ingwell (Purdue), Rebecca McCulley (Kentucky), Henry Vu (Notre Dame).

3. **T.D. Johnson**, and K. Perry. 2016. Forest Entomology. Entomological Society of America North Central Branch Meeting, Cleveland, OH. Speakers: Vince D'Amico (US Forest Service) Daniel Herms (Ohio State), Robert Marquis (Missouri), Robert Mitchell (Wisconsin-Oshkosh), Caterina Villari (Ohio State).

2. **T.D. Johnson**, and J. Wong. 2015. Forest Entomology. Entomological Society of America North Central Branch Meeting, Manhattan, KS. Speakers**:** Bruce Barrett (Missouri) Leah Bauer (USFS), Wendy Bethel (Ohio State), Matt Ginzel (Purdue), Chris MacQuarrie (Natural Resources Canada) Rodrigo Mercader (Washburn University).

1. **T.D. Johnson**, L. M. Meier, and J. Wong. 2014. Forest Entomology. Entomological Society of America North Central Branch Meeting, Des Moines, IA. Speakers: Kelly Estes (IL CAPS), Christopher Pierce (USDA APHIS), Lynn Rieske-Kinney (Kentucky), Leelen Solter (Illinois), Rob Vennete (Minnesota), Cody Wienk (NPS).

**Media Coverage of Work**

*Traditional media* (*e.g., newspapers, radio, television*)

6. Coverage of postdoctoral work by Stacie Hernandez. [The future of ash trees in New England: looking at the research](https://issuu.com/nh_forest_society/docs/forest_notes_winter_2022). Society for the Protection of New Hampshire Forests, Forest Notes. Winter 2022.

5. Coverage of masters research by Susan Bence. [How do we fight emerald ash borer? Let us count the ways](http://www.wuwm.com/post/how-do-we-fight-emerald-ash-borer-let-us-count-ways-0).Lake Effect. Milwaukee Public Radio, WUWM, 17 May 2013.

4. Coverage of masters research by Susan Bence. [Emerald ash borer proves a challenging foe](http://wuwm.com/post/emerald-ash-borer-proves-challenging-foe#stream/0). Lake Effect. Milwaukee Public Radio, WUWM, 4 August 2011.

3.Coverage of masters research. [Wasp releases to control Emerald ash borer](http://www.fox6now.com/news/witi-20110608-wasp-release-story%2C0%2C7217105.story).Fox News 6, 8 June 2011.

2. Coverage of masters research by Lee Bergquist. [It’s bug vs. bug in latest attempt to save ash trees](http://www.jsonline.com/news/ozwash/123466839.html). Milwaukee Journal Sentinel. 8 June 2011

1.Coverage of masters research by Chuck Quirmbach. [Wasps used to help save trees from invasive bugs](http://www.wpr.org/wasps-used-help-save-trees-invasive-bugs). Wisconsin Public Radio. 8 June 2011

*Social media*

1. Emerald ash borer research [featured](https://www.facebook.com/ForestSociety/photos/a.205213418491/10160261610928492) on the Society for Protection of New Hampshire Forests Facebook page. 12 October 2021.

**Interviews**

15. Interviewed by Ashlynn Baillo about cicada population ecology. February 2024. The Reveille. Interview not included in piece.

14. Interviewed by Hyojung Jin about *Johnson et al.* 2021 J. Chem. Ecol. June 2023. Graduate Survey of Entomology (ENY 5006), University of Florida.

13. Interviewed by Sarah Schaier about emerald ash borer research in New Hampshire. November 2021. University of New Hampshire, *In* Thrive magazine with [video interview](https://media.unh.edu/media/Protecting%2BNew%2BHampshire%2BForests/1_3hi2gjfk/235709403).

12. Interviewed by Rachael Bolek about the ecology of buprestids. November 2018. Environmental writing course, University of Illinois at Urbana-Champaign.

11. Interviewed by Kayla Raflores about the 35th annual Insect Fear Film Festival. Daily Illini. Did not run piece.

10. Interviewed by Lizzie Jedrasek. [Insect fear film festival gives creepy-crawlies a good name](http://readbuzz.com/2018/02/26/insect-fear-film-festival-gives-creepy-crawlies-good-name/). 26 February 2018.

9. Interviewed by Kelsey Pugh about the 35th annual Insect Fear Film Festival. Audio journalism project. 19 February 2018.

8. Interviewed by Therese Pokorney. [The 35th annual Insect Fear Film Festival comes to Foellinger Auditorium](http://www.smilepolitely.com/culture/the_35th_annual_insect_fear_film_festival_comes_to_foellinger_auditorium_th/). Smile Politely. 20 February 2018.

7. Interviewed by Todd Hunter about the 35th annual Insect Fear Film Festival. Todd's Time Capsule. 19 February 2018.

6. Interviewed by Ashley Huddson. [34th annual Insect Fear Film Festival celebrates U of I alum Paul Hertzberg](http://smilepolitely.com/culture/the_34th_annual_insect_fear_film_festival_celebrates_ui_alum_paul_hertzbe/). Smile Politely. 23 February 2017

5. Interviewed by Ryan Leskis. [34th annual Insect Fear Film Festival](http://mix945.com/showandtellci/34th-annual-insect-film-fear-festival-with-todd/). Show & Tell, Mix 94.5. 22 February 2017.

4. Interview. 33rd Annual Insect Fear Film Festival. WCIA 3 News. 27 February 2016

3. Interviewed by Rebecah Pulsifer. [33rd Annual Insect Fear Film Fest brings bugs to the big screen](http://smilepolitely.com/culture/33rd_annual_insect_fear_film_fest_brings_bugs_to_the_big_screen/). Smile Politely. 25 February 2016

2. Interviewed about pheromones [Love Fact or Fiction](http://www.dailyillini.com/article/2016/02/the-science-behind-love). Daily Illini. 10 February 2016

1. Interviewed about [Outreach for the 32nd Insect Fear Film Festival](http://www.illinoishomepage.net/story/d/story/32nd-annual-insect-fear-film-festival/92569/pEha_Xc1gE-rH_-ulrIgTQ). WCIA 3. 26 February 2015

**Teaching**

**Louisiana State University**

***Instructor of Record***

**Forest Entomology (ENTM 4018) Fall 2024 (even years)**

Insects and related arthropods are critical to the functioning of forests globally. Emphasis on how community and cultural values, as well as other competing interests (e.g., financial, political) influence our definitions of forest health and drive management decisions. Focus placed on identification and management of insects that are especially beneficial or detrimental to forests throughout the Southeastern United States, and the processes that drive their abundance, diversity, and distribution.

**Insect Ecology (ENTM 4040) Fall 2023 (odd years)**

How abiotic and biotic interactions shape the abundance, diversity, and distribution of insects and related arthropods in terrestrial and aquatic systems, especially within the context of global change. Strong emphasis on ecological intuition; how patterns observed by ecologists lead to natural and manipulative experiments to understand processes that structure ecological interactions between insects and other organisms.

***Guest Lectures***

**Invasive Species Ecology (ENTM 4020)**

11. Lecture (1 hr) on Impacts of invasive woodborers on managed and natural forests  **February 2024**

**General Entomology (ENTM 7001)**

10. Lecture (1 hr) on the ecology and evolution of pheromones use  **November 2023** by insects and applications to forest health.

**Insect Behavior (ENTM 4100)**

9. Lecture (1 hr) on insect chemical communication **October 2023**

**Entomology seminar (ENTM 7007)**

8. Lecture (30 min) on giving accessible and effective scientific presentations **August 2023**

**Entomology seminar (ENTM 7007)**

7. Lecture (15 min) on giving scientific presentations **January 2023**

**Insect Chemical Ecology (ENTM 7008)**

6. Lecture (1 hr) on the ecology and evolution of pheromones use  **November 2022** by insects and applications to forest health.

**Teaching Seminar**

5. Lecture (1 hr) Impacts of climate change on urban and managed **April 2022** forestry in the Southeastern United States.

**The Ohio State University**

**Teaching Seminar**

4. Lecture (1 hr). My teaching philosophy and vision for forest health **May 2022** at The Ohio State University.

**University of New Hampshire**

**Guest Lectures**

**Forest Entomology (NR 506) Fall 2021**

3. Lecture (1 hr) on the ecology and evolution of pheromones use by insects and applications to forest health.

**Forest Health (NR 882) Fall 2020**

2. Lecture (1 hr) on the ecology and evolution of pheromones use by insects and applications to forest health.

1. Series of field interviews describing my postdoctoral research on the role of tree ontogeny on interactions between the invasive emerald ash borer, its biological control agents, and host trees in New Hampshire

**Oyster Review Cooperative School District**

**Explorations in Science and Math Fall 2020, 2021**

In the fall of 2020, local elementary school teacher, Ellen Ervin, interviewed me about my postdoctoral research studying the role of tree ontogeny on interactions between the invasive emerald ash borer, its’ biological control agents, and host trees in New Hampshire. [This interview](https://www.youtube.com/watch?v=H6m2gcU5Q38) is featured in a lesson on the emerald ash borer and how scientists develop and carry out research questions. In the fall of 2021, with Jeff Garnas, consulted on the development of an outdoor activity for 4th grade students to understand how the presence of different species of trees in the understory as compared to the canopy may reflect future trajectories of forest composition.

**Skype a Scientist Spring 2021**

The goal of [Skype a Scientist](https://www.skypeascientist.com/) is to “connect classrooms, groups and public all over the globe with scientists.” (1) Homeschool students (K-7th grade), Ogden Community of Schools, Ogden, IA.

**University of Illinois Urbana-Champaign**

**Teaching Assistant,**

**Biology in Today's World (IB 100) (Online) Fall 2017**@

**Environmental Biology (IB 105) (Online) Spring 2017@, 2018**@

**Introduction to Entomology (IB 401) Lab (2 sections/week) Fall 2014**

**Integrative Biology (IB 150) Organismal & Evol. Biol. Discussion (4 sections/week) Spring 2014\***

**Integrative Biology (IB 151) Organismal & Evol. Biol. Lab (2 sections/week) Fall 2013**

\*list of teachers ranked as excellent by their students, @No evaluations for this course

**Mentoring**

$Student coauthor on publication, &Student or research technician coauthor on presentation #Acknowledgement in publication %Award under my supervision

**Graduate Student Committees**

**Louisiana State University**

**Chair**

Andrew Sanford – MS Entomology – In progress

Vanshika Jindal – MS Entomology – In progress

Chiranjivi Sharma – MS Entomology – In progress

**Member**

Oluwatosin Ogundairo – PhD Chemistry – In progress; **I haven’t heard from Tosin about this since it was discussed- need to check in.**

**One-on-one mentorship of graduate students on research projects.**

**Louisiana State University**

**Oluwatosin Ogundairo September 2023 – January 2024**

Doctoral Candidate in Chemistry

Research Assistant (50%)

Assisting in processing targeted and untargeted metabolomic data describing ash defensive responses under biotic stressors.

**Vanshika Jindal August 2023 – Present**

Masters Candidate in Entomology

Research Assistant (50%)

Comparing behavioral responses of two classical biological control agents (*Spathius agrili*, *Spathius galinae*) of the emerald ash borer to multiple genotypes of five species ash threatened with extinction.

**Chiranjivi Sharma August 2023 – Present**

Masters Candidate in Entomology

Research Assistant (50%)

Impact of host-choice on the larval development and adult reproductive ecology of two polyphagous longhorned beetles, *Neoclytus acuminatus* and *Xylotrechus colonus*.

**Andrew Sandford April 2023 – Present**

Masters Candidate in Entomology

Research Assistant (50%)

Arthropod biodiversity associated with Carolina, green, and pumpkin ash (*Fraxinus* spp.) in southeastern Louisiana

**Christopher Kuetsinya Jan 2023 – August 2023**

Masters Candidate in Experimental Statistics

Research Assistant (50%)

The most important pest of pine trees in the southern United States is the southern pine beetle (SPB), *Dendroctonus frontalis*. While populations of SPB are typically low, conditions can arise that cause rapid growth in populations leading to outbreaks. When outbreaking, SPB can cause extreme ecological and economic harm. Prescribed burns are used as a preventative measure to minimize the likelihood of SPB outbreaks. While burns are often successful at keeping populations low, sometimes they fail to do so. Understanding the environmental factors that increase or decrease the likelihood of SPB population outbreaks is critical for the continued management of this insect. We are currently evaluating a dataset from two national forests in Mississippi where SPB populations either increased or decreased after a prescribed burn. Our analysis of these multiyear datasets will inform future managers of the role of environmental factors in predicting the success of SPB management.

**One-on-one mentorship of undergraduate and post-baccalaureate students on directed (i.e., my projects) and independent research projects.**

**Louisiana State University**

**Colton Elliot**

Undergraduate worker (10 hr/week) **September 2023 – Present**

**Jeremiah McKeey**

Undergraduate worker (16 hr/week) **September 2023 – Present**

**Raven Willis**

Undergraduate worker (12 hr/week) **September 2023 – Present**

**Vi Le**

Undergraduate worker (12 hr/week) **August 2023 – January 2024**

Undergraduate worker (40 hr/week) **July 2023 – August 2023**

**Ridley Graugnard**

Undergraduate worker (17 hr/week) **August 2023 – Present**

Undergraduate worker (40 hr/week) **May 2023 – August 2023**

**Daniel Debutts**

Undergraduate worker (5 hr/week) **August 2023 – Present**

Undergraduate worker (40 hr/week) **May 2023 – August 2023**

Undergraduate worker (10 hr/week) **January 2023 – May 2023**

**Marie-Pascale Delahoussaye**

Undergraduate worker (40 hr/week) **May 2023 – July 2023**

**University of New Hampshire**

**Casey Coupe**& **May 2019 – May 2022**

Research Technician (~ 40 hr/wk)

**Dalton Wilbur**& **April 2020 – June 2020; January 2021 – March 2021**

Research Technician (10 hr/wk)

**Chris Ziadeh**& **March 2020 – June 2020**

Research Technician (up to 40 hr/wk)

**Kenneth Windstein May 2019 – August 2019**

Research Technician (up to 40 hr/wk)

**University of Illinois Urbana-Champaign**

**Veronica Casey**#

IB 390 Research Student (4 hr/wk) **September 2018 – December 2018**

**Juan Cruz-Garcia**#

IB 390 Research Student (4 hr/wk) **September 2018 – December 2018**

**Emily Althoff#**

IB 390 Research Student (6 hr/wk) **January 2018 – May 2018**

IB 390 Research Student (4 hr/wk) **September 2017 – December 2017**

IB 390 Research Student (8 hr/wk) **January 2017 – May 2017**

**Nicholas Mendes%**

IB 490 Research Student (4 hr/wk) **September 2018 – May 2019**

Summer Research Student (40 hr/wk) **June 2018 – September 2018**

IB 390 Research Student (4 hr/wk) **September 2016 – June 2018**

**Kaylynn Pingad# September 2017 – December 2017**

IB 390 Research Student (4 hr/wk)

**Rebecca Back September 2017 – October 2017**

Volunteer Research Student (4 hr/wk)

**Julia Monk#**

IB 390 Research Student (4 hr/wk) **January 2017 – May 2017**

IB 390 Research Student (8 hr/wk) **September 2016 – December 2016**

**Briana Banks**

Volunteer Research Student (2 hr/wk) **September 2016 – December 2016**

**Jacob Vilker#**

IB 390 Research Student (4 hr/wk) **September 2016 -–December 2016**

 **January 2016 – May 2016**

**Elizabeth Hanson**$

IB 390 Research Student (4 hr/wk) **September 2015 – January 2016**

 **January 2015 – May 2015**

**Allen Yu**$

IB 390 Research Student (8 hr/wk) **September 2015 – May 2016**  **January 2015 – May 2015**

**Jolanta Szkodon#**

Volunteer Research Student (2 hr/wk) **September 2015 – April 2016**

**Brian Willis**

IB 390 Research Student (6 hr/wk) **January 2015 – May 2015**

**Horace Zeng**

Volunteer Research Student (3 hr/wk) **January 2015 – February 2015**

**Suzanne Vachula**&**#**

IB 390 Research Student (8 hr/wk) **September 2014 – December 2014**

[IB 490](http://sib.illinois.edu/research_undergrad#3) Research Student (8 hr/wk) **January 2015 – June 2015**

**Kaleb Lukens#**

[IB 390](http://www.life.illinois.edu/ib/390/) Research Student (6 hr/wk) **September 2014 – December 2014**

**University of Wisconsin-Madison**

**Jade Kochanski**#

Research Technician (9 hr/wk) **November 2012 – June 2013**

**Haley Melampy**

Research Technician (5 hr/wk) **May 2013 – August 2013**

[**Bio 152**](https://introbio.wiscweb.wisc.edu/wp-content/uploads/sites/260/2017/09/4-IP-FAQs-updated-2017.pdf) **Research Student (10 hr/wk)** **January 2013 – May 2013**

**Adam Krause**#

Research Technician (40 hr/wk) **May 2012 – August 2012**

**One-on-one mentorship of graduate students on various aspects of academia, including but not limited to, securing graduate admissions or a post-doctoral position, obtaining funding, etc.**

[**Ecology and Evolution Mentor Match**](https://eebmentormatch.com/) **July 2021 – 2023**

Developed by Samniqueka Halsey and Terry McGlynn, the goal of EEB Mentor match is to “help students in minoritized groups gain admission to, and fellowships for, grad school.” My participation in this program has been to assist one student meet their goal of gaining acceptance to graduate school in ecology and evolution, with a focus on plant-insect interactions. Our work together has included extensive correspondence over email and Zoom meetings, and editing of: emails to prospective advisors, NSF GFRP application materials, and graduate school applications. They interviewed for admission into EEB/Entomology programs for Fall 2022. This individual successfully obtained admission into a graduate program starting in Fall 2023.

**Animal Behavior Society (ABS)**

**Mentor for Virtual Mentoring Program July 2020, 2021**

As part of the Animal Behavior Society Annual Conference, mentoring sessions are organized to connect individuals of different career stages to discuss topics related to science, scientific careers, academia, etc. Two formal meetings are held as part of this program: Prior to the ABS meeting, introductions are made and goals are discussed for the conference. After the meeting, goals are revisited and any other questions/concerns are addressed.

**Service to Scientific Journals**

**Editorial Service**

**Agricultural and Forest Entomology**

Associate Editor **November 2023 – Present**

Editorial Board **May 2021 – November 2023**

**Manuscript Reviews** (Since 2014; n = 23)

<https://publons.com/researcher/3564439/todd-d-johnson/>

Agricultural and Forest Entomology (8), American Midland Naturalist (1), Arthropod-Plant Interactions (1), Biological Control (3), Chemoecology (1), Entomologia Experimentalis et Applicata (2), Environmental Entomology (4), Frontiers in Ecology and Evolution (1), Journal of Economic Entomology (1) New Phytologist (1)

**Professional Service**

**Southern Forest Health Work Conference (Previously Southern Forest Insect Work Conference)**

**Program Co-chair 2024**

**Student Competition Judge 2023**

**Session Moderator 2023**

**Entomological Society of America**

**Session Moderator 2021**

Co-moderated a 2 hrsession featuring talks on forest entomology. Introduced and kept speakers on time, as well as facilitated the question and answer period at the end of each presentation.

[**Student Competition Judge**](https://www.entsoc.org/awards/student/competition) **2021 – 2022**

Judged student talks for scientific content and presentation.

**Student Presentation Upload Room Volunteer 2013; 2015 – 2016**

Assisted attendees with uploading, previewing, and modifying their presentations at the national meeting.

**Student Social Media Volunteer 2012**

Assisted attendees with using social media to share their experiences at national meeting

**Univ. New Hampshire College of Life Sciences and Agriculture April 2021**

**Undergraduate Research Conference**

**Poster Judge**

**Entomological Society of America North Central Branch (ESA NCB)**

**Student Affairs Committee (SAC) August 2015 – March 2018**

Chair (2017) [Advocated and acted as a representative for students](https://www.entsoc.org/sites/default/files/files/2018_NCB_SAC_Report.pdf) in entomology and affiliated departments in the ESA North Central Branch. Developed and led a successful amendment to the ESA NCB constitution making the Chair-elect of the SAC a position elected by students from the entire branch, making the Chair and Chair-elect of the SAC members of the ESA NCB Executive Committee, and giving the Chair of the SAC voting privileges on the ESA NCB Executive Committee. Sought feedback from SAC members to develop short and long term goals for the SAC, as well as lead meetings of the SAC at the branch and national ESA meetings. Primary organizer for the SAC Symposium, Luncheon, and Student Mixer at the NCB meeting.

Chair-elect (2016) Assisted the Chair of the SAC.

Representative to NCB program committee (2015, 2016)

**Univ. of Illinois at Urbana-Champaign**

**Graduates in Ecology and Evolutionary Biology Symposium, Urbana, IL 2015 – 2018**

Student judge **2015, 2018**

Holistically graded scientific presentations according to content and style.

Abstract coordinator  **2016, 2017**

Worked with the Chair of the GEEB Symposium to coordinate the scientific program. Managed multiple calls for abstracts, as well as proofread and organized abstracts for inclusion into the scientific program.

Session moderator  **2015**

Responsible for keeping scientific presentations on schedule and moderating question/answer sessions.

**Undergraduate Research Symposium 2017**

**Poster Judge**

**International Society of Chemical Ecology**

**Annual Meeting, Urbana, IL, USA 2014**

**Meeting volunteer and session moderator**

Assisted in the acceptance of talks to the conference by reading abstracts for clarity, grammar, and scientific accuracy, as well as the determination of session titles and placement. Co-moderated a 1 hr session on "Invasives and biological control".

**University Service**

**Dean’s Representative**

Spring 2024 - Geography & Anthropology (1)

**New Employee Orientation Committee January 2023 – Present**

**Departmental Service**

**Louisiana State University, Department of Entomology**

**Committees**

Graduate Coordination Committee  **September 2022 – Present**

Seminar and Graduate Student Symposium Committee **September 2022 – Present**

Student and Faculty Awards Committee **September 2022 – Present**

**Graduate Student Symposium**

Judge **2022, 2023**

**University of Illinois Entomology Graduate Student Association January 2015 – January 2019**

**Chair of Public Relations for the** [**Insect Fear Film Festival**](http://www.life.illinois.edu/entomology/egsa/ifff.html)

Write press releases, coordinate interviews for the festival, work with advertisers, social media.

**Secretary and Webmaster September 2013 – 2014**

Kept accurate minutes of meetings and communicated these minutes to the graduate population. Updated EGSA website as needed.

**Outreach Events**

39. NOLA Bugfest 14 Oct 2023

38. Educational session for 4-H students at Louisiana State University. 20 & 21 Jun 2023

 Explanation of research and tour of forest entomology laboratory (15 minutes/group; 6 groups)

37. Louisiana State University AgCenter AgMagic 1 Apr 2023

36. Allerton Family Campout. 22 Sep. 2018

35. University of Illinois Urbana-Champaign Majors & Minors Fair. 17 Sep. 2018

34. University of Illinois Urbana-Champaign Pollinatarium. 11 Jul. 2018

33. University of Illinois Urbana-Champaign Natural History Building Open House. 20 Oct. 2017

32. University of Illinois Urbana-Champaign Majors & Minors Fair. 4 Oct. 2017

31. Allerton Family Campout. 23 Sep. 2017

30. University of Illinois Urbana-Champaign Pollinatarium. 14 Sep. 2017

29. University of Illinois Urbana-Champaign Pollinatarium. 8 Sep. 2017

28. University of Illinois Urbana-Champaign Pollinatarium. 4 Oct. 2016

27. University of Illinois Urbana-Champaign Pollinatarium. 22 Sep. 2016

26. Science Night. Leal Elementary School. 29 April 2016

25. The ABC's of Entomology. Univ. of Illinois Urbana-Champaign Dept. Entomology. 24 Feb. 2016

24. University of Illinois Urbana-Champaign Pollinatarium. 6 Oct. 2015

23. University of Illinois Urbana-Champaign Pollinatarium. 21 Sept. 2015

22. University of Illinois Urbana-Champaign Pollinatarium. 14 May 2015

21. Experimental Design Unit. Illinois State Science Olympiad. 18 Apr. 2015

20. Annual Science Night. Robeson Elementary School. 26 Feb. 2015

19. REACT Halloween Family Event. Orpheum Children's Science Museum. 25 Oct. 2014

18. University of Illinois Urbana-Champaign [Pollinatarium](http://www.life.illinois.edu/pollinatarium/). 11 Sep. 2014

17. Illini Mentoring Program. Prairie Elementary School. 3 May 2014

16. Insect Fear Film Festival. University of Illinois Urbana-Champaign. Feb. 2014 **–** 2019

15. Illinois Reads, Patricia Murphy author of 'Bugs and Us'. Barnes and Noble. 21 Nov. 2013

14. [EnLiST program](http://engage.illinois.edu/entry/716). Booker T. Washington STEM school. 27 Sep. 2013

13. Science Fair. Immaculate Heart of Mary School. 25 Apr. 2013

12. Aldo Leopold Day. Wisconsin Institutes for Discovery. 2 Mar. 2013

11. Saturday Science, The Science of Love. Wisconsin Institutes for Discovery. 2 Feb. 2013

10. Calling All Families Program. Hoard Historical Museum. 17 Nov. 2012

9. Insect Ambassador Booth. Wisconsin Science Festival. 29 Sep. 2012

8. Insect Ambassador Presentation. La Petite Academy. 13 Aug. 2012

7. Biocore Science Night. Delafield Elementary School. 27 Apr. 2012

6. Science Expo. Wisconsin Institutes for Discovery. 14 Apr. 2012

5. Science Night. Crestwood Elementary School. 27 Mar. 2012

4. Biocore Science Night. Lodi Elementary School. 18 Feb. 2012

3. Darwin Day. Wisconsin Institutes for Discovery. Feb. 2012 & 2013

2. MLK Youth Service Day, A Discovery of Science. Wisconsin Institutes for Discovery 16 Jan. 2012

1. Saturday Science, Bugs, Bugs, and More Bugs.Wisconsin Institutes for Discovery. 8 Oct. 2011

**Professional Affiliations**

**Animal Behavior Society March 2018 – Present**

**Entomological Society of America March 2012 – Present**

**International Organization for Biological Control December 2015 – Present**

**International Society of Chemical Ecology February 2014 – Present**

**Ecological Society of America October 2010 – January 2012**

**References**

*Doctoral advisor Postdoctoral supervisor*

Lawrence M. Hanks, Ph.D. Jeff R. Garnas, Ph.D.

Professor Associate Professor

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*Masters advisor Research collaborator*

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(608) 262-1125

kfraffa@wisc.edu

Additional references upon request.

**Links for flattened CV**

Links in order of appearance (excluding links to publications)

1. Response by natural enemies to signals and cues associated with beetles in the family Cerambycidae: <https://www.ideals.illinois.edu/handle/2142/106310>
2. The behavior of parasitoids of the invasive emerald ash borer, *Agrilus planipennis*, and Hymenoptera and Coleoptera associated with three native *Agrilus* species: <http://search.library.wisc.edu/catalog/ocn868070467>
3. 21st Century Scientist Workshop - Representation in Science: <http://21centurysci.com/workshop/>
4. Hymenoptera Course: <http://hymcourse.org/>
5. Univ. of Illinois Center for Innovation in Teaching and Learning Reading Group: <http://citl.illinois.edu/professional-development/reading-groups>
6. What goes up must come down–the completion of field research on emerald ash borer at Doe Farm:https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation\_commission/page/19571/unh\_doe\_farm\_5th\_update\_14oct20.pdf
7. Another update regarding emerald ash borer research at Doe Farm: <https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/update_eab_research_at_doe_farm_2sept20.pdf>
8. A second update regarding emerald ash borer research at Doe Farm: <https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/doe_farm_unh_eab_study_update_29jul20.pdf>
9. Emerald ash borer research update at Doe Farm: <https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/page/19571/update-1_24june2020.pdf>
10. The world has a place for pesky blood suckers: http://www.news-gazette.com/news/local/2018-02-18/environmental-almanac-the-world-has-place-pesky-blood-suckers.html
11. Humans and arthropods, who should fear whom?: <https://will.illinois.edu/environmentalalmanac/program/insects-and-other-arthropods-vs.-humans-who-should-fear-whom>
12. Bugs go Boom: <http://www.news-gazette.com/arts-entertainment/local/2016-02-21/rob-kanterenvironmental-almanac-bugs-go-boom.html>
13. Pesticides should be small tool in management plan: <http://www.news-gazette.com/news/local/2014-02-16/environmental-almanac-pesticides-should-be-small-tool-management-plan.html>
14. Understanding natural variation in ash resistance to insect attack to manage the emerald ash borer: [https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation\_commission/pa ge/19571/eab\_presentation\_to\_lsc\_14may20.pdf](https://www.ci.durham.nh.us/sites/default/files/fileattachments/conservation_commission/pa%20ge/19571/eab_presentation_to_lsc_14may20.pdf)
15. The future of ash trees in New England: looking at the research: https://issuu.com/nh\_forest\_society/docs/forest\_notes\_winter\_2022
16. How do we fight emerald ash borer? Let us count the ways: <http://www.wuwm.com/post/how-do-we-fight-emerald-ash-borer-let-us-count-ways-0>
17. Emerald ash borer proves a challenging foe: <http://wuwm.com/post/emerald-ash-borer-proves-challenging-foe#stream/0>
18. Wasp releases to control Emerald ash borer: [http://www.fox6now.com/news/witi-20110608-wasp-release-story,0,7217105.story](http://www.fox6now.com/news/witi-20110608-wasp-release-story%2C0%2C7217105.story)
19. It’s bug vs. bug in latest attempt to save ash trees: <http://www.jsonline.com/news/ozwash/123466839.html>
20. Wasps used to help save trees from invasive bugs: <http://www.wpr.org/wasps-used-help-save-trees-invasive-bugs>
21. Featured: <https://www.facebook.com/ForestSociety/photos/a.205213418491/10160261610928492>
22. Interviewed by Sarah Schaier about emerald ash borer research in New Hampshire. November 2021. University of New Hampshire, *Forthcoming in* Thrive magazine with video interview to be posted online.: https://media.unh.edu/media/Protecting+New+Hampshire+Forests/1\_3hi2gjfk/235709403
23. Insect fear film festival gives creepy-crawlies a good name: <http://readbuzz.com/2018/02/26/insect-fear-film-festival-gives-creepy-crawlies-good-name/>
24. The 35th annual Insect Fear Film Festival comes to Foellinger Auditorium: <http://www.smilepolitely.com/culture/the_35th_annual_insect_fear_film_festival_comes_to_foellinger_auditorium_th/>
25. 34th annual Insect Fear Film Festival celebrates U of I alum Paul Hertzberg:https://smilepolitely.com/culture/the\_34th\_annual\_insect\_fear\_film\_festival\_celebrates\_ui\_alum\_paul\_hertzbe/
26. 34th annual Insect Fear Film Festival: <http://mix945.com/showandtellci/34th-annual-insect-film-fear-festival-with-todd/>
27. 33rd Annual Insect Fear Film Fest brings bugs to the big screen: <http://smilepolitely.com/culture/33rd_annual_insect_fear_film_fest_brings_bugs_to_the_big_screen/>
28. Love Fact or Fiction: <http://www.dailyillini.com/article/2016/02/the-science-behind-love>
29. Outreach for the 32nd Insect Fear Film Festival: <http://www.illinoishomepage.net/story/d/story/32nd-annual-insect-fear-film-festival/92569/pEha_Xc1gE-rH_-ulrIgTQ>
30. Explorations in Science and Math interview: <https://www.youtube.com/watch?v=H6m2gcU5Q38w>
31. Skype a Scientist: <https://www.skypeascientist.com/>
32. IB 490: <http://sib.illinois.edu/research_undergrad#3>
33. IB 390: <http://www.life.illinois.edu/ib/390/>
34. Bio 152: <https://introbio.wiscweb.wisc.edu/wp-content/uploads/sites/260/2017/09/4-IP-FAQs-updated-2017.pdf>
35. Ecology and Evolution Mentor Match: <https://eebmentormatch.com/>
36. Student Competition Judge: <https://www.entsoc.org/awards/student/competition>
37. Advocated and acted as a representative for students: <https://www.entsoc.org/sites/default/files/files/2018_NCB_SAC_Report.pdf>
38. Insect Fear Film Festival: <http://www.life.illinois.edu/entomology/egsa/ifff.html>
39. Pollinatarium: <http://www.life.illinois.edu/pollinatarium/>
40. EnLiST program: <http://engage.illinois.edu/entry/716>