

## NATHAN MOREHOUSE

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## PROFESSIONAL HISTORY

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**Assistant Professor** January 2017 – Present  
Department of Biological Sciences  
University of Cincinnati, Cincinnati, OH

**Assistant Professor** September 2011 – December 2016  
Department of Biological Sciences  
University of Pittsburgh, Pittsburgh, PA

**European Union Marie Curie International Incoming Fellow** June 2009 – June 2011  
Institut de Recherche sur la Biologie de l'Insecte  
Université de Tours, Tours, France  
Project Title: *Nutritional Ecology and Seasonal Color Polyphenism in a Butterfly*  
Major Collaborator: Jérôme Casas

**Ph.D. Biology** August 2002 – May 2009  
School of Life Sciences  
Arizona State University, Tempe, AZ  
Dissertation Title: *Limiting Nutrients, Female Choice, and Male Color*  
Major Advisor: Ronald L. Rutowski  
Committee: John Alcock, J. Marty Anderies, Jon Harrison, Kevin J. McGraw

**B.S. Biological Sciences, Distinction in Research** August 1996 – May 2000  
College of Agriculture and Life Sciences  
Cornell University, Ithaca, NY  
Research Thesis Title: *Sexual Dimorphism and Visual Tracking in Sarcophagid Flies*  
Research Thesis Advisor: Cole Gilbert

## RESEARCH INTERESTS

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Coevolutionary dynamics of reproductive traits, visual and behavioral ecology, evolution of sensory systems, color vision and learning, optical physics of animal coloration, reproductive protein evolution, nutritional ecology and physiology, hormonal and genetic regulation of nutrient allocation, quantitative genetics, life history evolution, sexual selection theory

## AWARDS AND DISTINCTIONS

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Warder Clyde Allee Award, Animal Behavior Society, 2010  
Council of Graduate Schools/University Microfilms International Distinguished  
Dissertation Award Nominee, 2009  
Frank Alois Pitelka Prize, International Society for Behavioral Ecology, 2008

## AWARDS AND DISTINCTIONS (CONT.)

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Best Oral Presentation, Graduates in Earth Life and Social Sciences Annual Symposium, Arizona State University, 2008  
Mentorship Award, Graduate and Professional Students Association, Arizona State University, 2006  
Teaching Excellence Award Nominee, Graduate and Professional Students Association, Arizona State University, 2005, 2006  
Partners Paving Pathways Honoree, National Science Teachers Association, 2003  
Distinction in Research, Cornell University, 2000  
Dean's List, Cornell University, 1997-2000  
National Merit Scholarship, 1996  
Xerox Award for Excellence in the Humanities and Social Sciences, 1996  
Valedictorian, C.G. Finney High School, 1996

## RESEARCH FUNDING AND FELLOWSHIPS (\$1,126,000 to date)

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### **Under Consideration**

NSF DEB Evolutionary Ecology, *Co-Evolution and Functional Divergence in a Male-Female Post-Copulatory Interaction*. Role: PI, co-PI: Nathan Clark, Co-I: Nathan Yates

### **Current, PI Status (\$710,000)**

NSF IOS Behavioral Systems, *Playing to the Visual Field: Female Gaze, Retinal Specializations, and the Evolution of Complex Male Courtship Displays in Habronattus Jumping Spiders*. Role: PI, \$710,000; Status: Awarded; Funding period: 2016-2019

### **Current, Senior Personnel/Collaborator**

NSF IOS Behavioral Systems, *Flexibility in sexual appetites: Can learned food preferences alter patterns of mate choice?* Role: Senior personnel (collaborator), PI: Lisa Taylor; Total award: \$557,000; Status: Awarded; Funding period: 2016-2019

### **Past (\$416,000)**

Office of the Provost's Year of the Humanities in the University funding for "What Does It Mean to Be Curious?" interdisciplinary discussion series, \$5,200, 2015-2016, [link](#)  
Experiment.com crowdfunding (90 public backers), \$7,357, 2015, [link](#)  
PERT Postdoctoral Fellowship, Center for Insect Science, University of Arizona, funding offered, 2011  
Gaylord Donnelly Postdoctoral Environmental Fellowship, Yale Institute for Biospheric Studies, Yale University, nominated, 2010  
Miller Research Fellowship, Miller Institute for Basic Research in Science, University of California, Berkeley, nominated, 2010  
Marie Curie International Incoming Fellowship, European Union Seventh Research Framework Programme, 172,168€, 2009-2011  
International Research Fellowship, National Science Foundation, funding offered, 2009  
Travel grants from various sources, including the International Society for Behavioral Ecology, the Center for Insect Science at the University of Arizona, and the Graduate College, School of Life Sciences, Center for Environmental Studies, and Graduate and Professional Students Association at Arizona State University, \$5,514, 2003-2008  
Division of Graduate Studies Dissertation Fellowship, ASU, \$19,000, 2007-2008  
Student Research Grant, Animal Behavior Society, \$1,000, 2007  
Grant in Aid of Research, Sigma Xi, ASU Chapter, \$400, 2007  
University Graduate Fellowship, Arizona State University, \$15,000, 2007  
Doctoral Dissertation Improvement Grant, National Science Foundation, \$12,000, 2007  
Division of Graduate Studies Workshop Grant, ASU, \$2,000, 2007  
Frontiers in Life Sciences Workshop Grant, School of Life Sciences, ASU, \$30,000, 2007  
Graduate and Professional Students Association Research Grant, ASU, \$2,000, 2006  
Faculty Emeriti Fellowship, Preparing Future Faculty Program, ASU, \$1,500, 2006  
University Graduate Fellowship, Arizona State University, \$15,000, 2006  
Grant In Aid of Research Award, Sigma Xi, \$500, 2006

## RESEARCH FUNDING AND FELLOWSHIPS (CONT.)

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NSF GK-12 Fellowship, Arizona State University, \$15,000, 2005-2006  
NSF Graduate Research Fellowship, Honorable Mention, 2004  
NSF GK-12 Fellowship, Arizona State University, \$27,500, 2003-2004  
Grant in Aid of Research, Vision Research Award, Sigma Xi, \$2,000, 2003  
University Graduate Scholarship, Arizona State University, \$10,500, 2002-2005  
Howard Hughes Undergraduate Research Fellowship, Cornell University, \$3,500, 1999

## PUBLICATIONS (29 publications, 738 citations, \*undergraduate authors)

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- In review/revision      McQueen, E.W. and **Morehouse, N.I.** In revision. *Rapid divergence of pheromone profiles between subspecies of the butterfly Pieris rapae.*
- Nallu, S., Hill, J., Don, K., Sahagun, C., Zhang, W., Meslin, C., Snell-Rood, E., Clark, N.L., **Morehouse, N.I.**, Bergelson, J., Wheat, C.W., and Kronforst, M.R. In review. *The molecular genetic basis of herbivory between butterflies and their host-plants.*
- 2017                              Meslin, C., Cherwin, T.S.\*, Plakke, M.S., Small, B.S.\*, Goetz, B.J.\*, **Morehouse, N.I.**, and Clark, N.L. 2017. *Structural complexity and molecular heterogeneity of a butterfly ejaculate reflect a complex history of selection. Proceedings of the National Academy of Sciences of the United State of America*, 114(27):E5406-E5413. doi: 10.1073/pnas.1707680114
- Press: [Science](#), [The Atlantic](#), [Newsweek](#), [New York Post](#), [I F-ing Love Science](#), [UC Magazine](#), [BioTechniques](#), [Axios](#), [Science Daily](#)
- Echeverri, S.A., **Morehouse, N.I.**, and Zurek, D.B. 2017. *Control of signaling alignment during the dynamic courtship display of a jumping spider. Behavioral Ecology*
- Press: [Popular Science](#)
- Morehouse, N.I.**, Buschbeck, E.K., Zurek, D.B., Steck, M., and Porter, M.L. 2017. *Molecular evolution of spider vision: New opportunities, familiar players. Biological Bulletin*
- 2016                              Limeri, L.B., and **Morehouse, N.I.** 2016. *The evolutionary history of the 'alba' polymorphism in the butterfly sub-family Coliadinae (Lepidoptera: Pieridae). Biological Journal of the Linnean Society*, 117(4):716-724. doi: 10.1111/bij.12697
- Taylor, L.A., Amin, Z.\*, Maier, E.B.\*, Byrne, K.J.\*, and **Morehouse, N.I.** 2016. *Flexible color-learning in an invertebrate predator: Habronattus jumping spiders can learn to prefer or avoid the color red when foraging. Behavioral Ecology*, 27(2):520-529. doi:10.1093/beheco/arv182
- Press: [Nature World News](#), [Science Daily](#), [Lab Manager](#)
- 2015                              Snell-Rood, E., Cothran, R., Espeset, A., Jeyasingh, P., Hobbie, S. and **Morehouse, N.I.** 2015. *Life history evolution in the anthropocene: Effects of increasing nutrients on traits and tradeoffs. Evolutionary Applications*, 8(7):635-649. doi: 10.1111/eva.12272
- Zurek, D.B., Cronin, T.W., Taylor, L.A., Byrne, K.\*, Sullivan, M., and **Morehouse, N.I.** 2015. *Spectral filtering enables trichromatic vision in colorful jumping spiders. Current Biology*, 25(10):R403-404. doi: 10.1016/j.cub.2015.03.033
- Press: [National Geographic](#), [Science](#), [Smithsonian](#), [LA Times](#), [Scientific American](#), [Natural History Magazine](#), [ScienceDaily](#), [Science World Report](#), [EurekAlert!](#), [Spiegel Online \(German\)](#), [Neue Zürcher Zeitung \(German\)](#), [Die Welt \(German\)](#), [人民网 \(Chinese\)](#), [N+1 \(Russian\)](#), [SINC \(Spanish\)](#), [Vozpópuli \(Spanish\)](#), [n-tv \(German\)](#), [The Scientist](#), [I F-ing Love Science](#), [Examiner.com](#), [NYC Today](#), [Phys.org](#), [Digital Journal](#), [Futurity](#), [Sci-News](#), [redOrbit](#), [Pitt News](#)

**PUBLICATIONS (CONT., \*undergraduate authors)**

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- Plakke, M.S., Deutsch, A.B.\*, Meslin, C., Clark, N.L. and **Morehouse, N.I.** 2015. *Dynamic digestive physiology of a female reproductive organ in a polyandrous butterfly*. **Journal of Experimental Biology**, 218:1548-1555. doi: 10.1242/jeb.118323
- Press: [Inside JEB](#), [Discover Magazine](#), [Throb](#), [Mental Floss](#)
- Meslin, C., Plakke, M.S, Deutsch, A.B.\*, Small, B.S.\*, **Morehouse, N.I.**, and Clark, N.L. 2015. *Digestive organ in the female reproductive tract borrows genes from multiple organ systems to adopt critical functions*. **Molecular Biology and Evolution**, 32(6):1567-1580. doi:10.1093/molbev/msv048
- 2014 **Morehouse, N.I.** 2014. *Condition-dependent ornaments, life histories, and the evolving architecture of resource-use*. **Integrative and Comparative Biology**, 54(4):591-600. doi:10.1093/icv/icu103
- Limeri, L.B. and **Morehouse, N.I.** 2014. *Sensory biases and the maintenance of color polymorphisms: Viewing the Colias 'alba' polymorphism through the male visual system*. **Functional Ecology**, 28(5):1197-1207. doi: 10.1111/1365-2435.12244
- Ligon, R.A., Dolezal, A.G., Hicks, M.R., Butler, M.W., **Morehouse, N.I.** and Ganesh, T.G. 2014. *Using ants, animal behavior, and the learning cycle to investigate scientific processes*. **American Biology Teacher**, 76:525-534. doi:10.1525/abt.2014.76.8.6
- Taylor, L.A., Maier, E.B.\*, Byrne, K.J.\*, Amin, Z.\* and **Morehouse, N.I.** 2014. *Colour use by tiny predators: Jumping spiders show colour biases during foraging*. **Animal Behaviour**, 90:149-157. doi: 10.1016/j.anbehav.2014.01.025
- Press: [SciLogs](#)
- 2013 Hua, J., **Morehouse, N.I.** and Relyea, R. 2013. *Pesticide resistance in amphibians: Induced resistance in susceptible populations, constitutive tolerance in tolerant populations*. **Evolutionary Applications**, 6(7):1028-1040. doi: 10.1111/eva.12083
- Press: [Discovery News](#), [Biome](#), [ScienceDaily](#), [Science Newslines](#), [EurekAlert!](#), [Phys.org](#), [Futurity](#)
- Morehouse, N.I.**, Mandon, N., Christides, J.P., Body, M., Bimbard, G. and Casas, J. 2013. *Seasonal selection and resource dynamics in a seasonally polyphenic butterfly*. **Journal of Evolutionary Biology**, 26:175-185. doi: 10.1111/jeb.12051
- 2011 Meadows, M.G., **Morehouse, N.I.**, Rutowski, R.L, Douglas, J.M. and McGraw, K.J. 2011. *Quantifying iridescent coloration in animals: A method for improving repeatability*, **Behavioral Ecology and Sociobiology**. 65(6):1317-1327. doi: 10.1007/s00265-010-1135-5
- Van Gossum, H., Bots, J, Van Heusden, J, Hammers, M., Katleen, H. and **Morehouse, N.I.** 2011. *Reflectance spectra and morph mating frequencies support intraspecific mimicry in the female colour polymorphic damselfly Ischnura elegans*. **Evolutionary Ecology**. 25(1):139-154. doi: 10.1007/s10682-010-9388-z
- 2010 **Morehouse, N.I.** and Rutowski, R.L. 2010. *In the eyes of the beholders: Female choice and avian predation risk associated with an exaggerated male butterfly color*. **American Naturalist**, 176(6):768-784. doi:10.1086/657043
- Press: [Science](#)
- Morehouse, N.I.**, Nakazawa, T., Booher, C.M., Jeyasingh, P.D. and Hall, M.D. 2010. *Sex in a material world: Why the study of sexual reproduction and sex-specific traits should become more nutritionally-explicit*. **Oikos**, 119(5):766-778. doi:10.1111/j.1600-0706.2009.18569.x
- \*\*Invited article

## PUBLICATIONS (CONT., \*undergraduate authors)

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- Morehouse, N.I.** and Rutowski, R.L. 2010. *Developmental responses to variable diet composition in the cabbage white butterfly, Pieris rapae: the role of nitrogen, carbohydrates and genotype.* **Oikos**, 119(4):636-645. doi:10.1111/j.1600-0706.2009.17866.x
- Lindstedt, C., **Morehouse, N.I.**, Pakkanen, H., Casas, J., Christides, J.P., Kempainen, K., Lindström, L. and Mappes, J. 2010. *Characterizing the pigment composition of a variable warning signal of *Parasemia plantaginis* larvae.* **Functional Ecology**, 24(4):759-766. doi: 10.1111/j.1365-2435.2010.01686.x
- 2009 **Morehouse, N.I.** and Rutowski, R.L. 2009. *Comment on "Floral iridescence, produced by diffraction optics, acts as a cue for animal pollinators."* **Science**, 325:1072-d. doi:10.1126/science.1173324
- Meadows, M.G., Butler, M.W., **Morehouse, N.I.**, Taylor, L.A., Toomey, M.B., McGraw, K.J. and Rutowski, R.L. 2009. *Iridescence: views from many angles.* **Journal of the Royal Society Interface**, 6:S107-113. doi:10.1098/rsif.2009.0013.focus  
\*\*Introduction to thematic journal issue organized by authors (including publication below)
- Shawkey, M.D., **Morehouse, N.I.** and Vukusic, P. 2009. *A protean palette: colour materials and mixing in birds and butterflies.* **Journal of the Royal Society Interface**, 6:S221-S231. doi:10.1098/rsif.2008.0459.focus
- 2007 **Morehouse, N.I.**, Vukusic, P. and Rutowski, R.L. 2007. *Pterin pigment granules are responsible for both broadband light scattering and wavelength selective absorption in the wing scales of pierid butterflies.* **Proceedings of the Royal Society of London B**, 274:359-366. doi:10.1098/rspb.2006.3730
- Press: [Chemistry World](#)
- McGraw, K.J., Toomey, M.B., Nolan, P.M., **Morehouse, N.I.**, Massaro, M. and Jouventin, P. 2007. *A description of unique fluorescent yellow pigments in penguin feathers.* **Pigment Cell Research**, 20:301-304. doi:10.1111/j.1600-0749.2007.00386.x
- Rutowski, R.L., Macedonia, J., Merry, J., **Morehouse, N.I.**, Yturralde, K., Taylor-Taft, L., Gaalema, D.\*, Kemp, D.J. and Papke, R.S., 2007. *Iridescent ultraviolet signaling in the Orange Sulphur butterfly (*Colias eurytheme*): Spatial, temporal and spectral properties.* **Biological Journal of the Linnean Society**, 90:349-364. doi:10.1111/j.1095-8312.2007.00749.x
- 2006 Merry, J., **Morehouse, N.I.**, Yturralde, K., and Rutowski, R.L., 2006. *Eyes of a patrolling butterfly: Visual field and eye structure in the Orange Sulphur, *Colias eurytheme* (Lepidoptera, Pieridae).* **Journal of Insect Physiology**, 52(3):240-248. doi:10.1016/j.jinsphys.2005.11.002
- Rutowski, R.L., Macedonia, J., **Morehouse, N.I.** and Taylor-Taft, L., 2005. *Pterin pigments amplify iridescent ultraviolet signal in males of the orange sulphur butterfly, *Colias eurytheme*.* **Proceedings of the Royal Society of London B**, 272:2329-2335. doi:10.1098/rspb.2005.3216  
\*\*Cover article

## INVITED PRESENTATIONS (56 total)

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- 2017 **Morehouse, N.I.** *Telescopes for eyes: What jumping spiders can teach us about seeing the world.* Department of Astronomy Colloquium, University of Washington, Seattle, WA, October, 2017.
- Morehouse, N.I.** *Colors, choices, and conflict: Evolutionary insights from the reproductive biology of butterflies.* Department of Biology/Genome Sciences Joint Seminar, University of Washington, Seattle, WA, October, 2017.

## INVITED PRESENTATIONS (CONT.)

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- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department of Entomology seminar, University of Kentucky, Lexington, KY, October, 2017.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department seminar, Miami University, Oxford, OH, September, 2017.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department seminar, Case Western Reserve University, Cleveland, OH, March, 2017.
- Morehouse, N.I.** *What can jumping spiders teach us about seeing the world?* University of Pittsburgh School of Medicine Winter Academy, Naples, FL, February, 2017.
- 2016
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department seminar, Wayne State University, Detroit, MI, December, 2016.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department seminar, Purdue University, West Lafayette, IN, November, 2016.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department seminar, Stephen F. Austin State University, Nacogdoches, TX, October, 2016.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Graduate student invited department seminar, University of Minnesota, Twin Cities, Saint Paul, MN, October, 2016.
- Morehouse, N.I.** *The evolution of seeing: Darwin, the dawn of photography, and the evolution of the eye.* Art-science seminar, University of Minnesota, Twin Cities, Saint Paul, MN, October, 2016.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Department seminar, John Carroll University, Cleveland, OH, September, 2016.
- Morehouse, N.I., Zurek, D.B., Taylor, L.A., and Cronin, T.** *Repeated evolution of color vision underlies rapid diversification of salticid male coloration.* Invited oral presentation, *Visual Information Acquisition, Processing, and Cognition Symposium*, 20<sup>th</sup> International Congress of Arachnology, Golden, CO, July, 2016.
- Morehouse, N.I.** *The evolution of looking and seeing: New insights from colorful jumping spiders.* Senior Vice Chancellor's Research Seminar, University of Pittsburgh, June, 2016.
- Morehouse, N.I.** *The evolution of seeing.* Art-science plenary, Evolution 2016, Austin, TX, June, 2016.
- Morehouse, N.I.** *Colors, choices, and conflict: Evolutionary insights from the reproductive biology of butterflies.* Graduate Student Association of Biological Sciences invited seminar speaker, Department of Biological Sciences, University of South Carolina, March, 2016.
- Morehouse, N.I.** and Clark, N.L. *Colors and conflict: Male-female coevolution in the reproductive traits and proteins of butterflies.* Department seminar, Department of Biology, College of Wooster, March, 2016.
- Morehouse, N.I.** *In the eyes of a (fly) tiger: Vision, predation, and complex courtship signaling in jumping spiders.* Department seminar, Department of Biological Sciences, University of Cincinnati, February, 2016.
- 2015
- Morehouse, N.I.** *In the eyes of a (fly) tiger: Vision, predation, and complex courtship signaling in jumping spiders.* Public lecture, Ecology Center, Utah State University, December, 2015.

## INVITED PRESENTATIONS (CONT.)

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**Morehouse, N.I.** *Colors, choices, and conflict: Evolutionary insights from the reproductive biology of butterflies.* Seminar, Ecology Center, Utah State University, December, 2015.

**Morehouse, N.I.** *Color in the undergrowth: Color vision, predation, and complex courtship signaling in jumping spiders.* VisCog group, Carnegie Mellon University, November, 2015.

**Morehouse, N.I.** *Colors, choices, and conflict: Evolutionary insights from the reproductive biology of butterflies.* Department seminar, Department of Biology, Carleton University, Ottawa, Canada, November, 2015.

**Morehouse, N.I.** *Colors, choices and conflict: Evolutionary insights from the reproductive biology of butterflies.* Tupper Seminar, Smithsonian Tropical Research Institute, Panama City, Panama, March, 2015.

**Morehouse, N.I.** *In the eyes of a tiger: Color vision and color signaling in jumping spiders.* Bambi Seminar, Smithsonian Tropical Research Institute, Barro Colorado Island, Panama, March, 2015.

2014

**Morehouse, N.I.** *Colors, choices and conflict: Evolutionary insights from the reproductive biology of butterflies.* Department seminar, Department of Biological Sciences, Duquesne University, Pittsburgh, PA, November, 2014.

**Morehouse, N.I.** *Colors, choices and conflict: Linking pre- and post-copulatory sexual selection in a butterfly.* Department seminar, Department of Entomology, Pennsylvania State University, State College, PA, October, 2014.

**Morehouse, N.I.** *Male ejaculates and female reproductive adaptations in the polyandrous butterfly, Pieris rapae.* Oral presentation, *Integrating Pre- and Post-Copulatory Sexual Selection in the Lepidoptera: New Insights and Future Directions Symposium*, 7<sup>th</sup> International Conference on the Biology of Butterflies, Türku, Finland, August 2014.

**Morehouse, N.I., Taylor, L.A. and Zurek, D.B.** *Visual ecology of terrestrial invertebrates: A discussion.* Oral presentation. *Color Signals in Terrestrial Invertebrates: Integrating Senders and Receivers Symposium*, 15<sup>th</sup> International Behavioral Ecology Congress, International Society for Behavioral Ecology, New York City, New York, August 2014.

**Morehouse, N.I.** *Colors, choices and conflict: Linking pre- and post-copula sexual selection in a butterfly.* Department seminar, Department of Biological Sciences, Mississippi State University, Mississippi State, MS, April, 2014.

**Morehouse, N.I.** *Colors, choices and conflict: Pre- and post-copula sexual selection in a butterfly.* Keynote address, 30<sup>th</sup> Annual Graduate Association of Biological Sciences Symposium, University of Maryland, Baltimore County, Baltimore, MD, March, 2014.

**Morehouse, N.I.** *Nutritional stress and the evolution of sexual ornamentation: A life history perspective.* Invited presentation. *Stress, Condition and Ornamentation Symposium*, Annual meeting, Society for Integrative and Comparative Biology, Austin, TX, January 2014.

2013

**Morehouse, N.I.** *Colors, gifts and conflict: Evolutionary insights from the weird, wonderful world of butterfly sex.* Department seminar, Biology Department, Slippery Rock University of Pennsylvania, Slippery Rock, PA, November 2013.

**Morehouse, N.I.** *Good genes, limiting nutrients and female choice: Evolution of exaggerated male coloration in the cabbage white butterfly, Pieris rapae.* Invited presentation, *New Insights into the Evolution of Insect Coloration Symposium*, Annual meeting, Entomological Society of America, Austin, TX, November, 2013.

## INVITED PRESENTATIONS (CONT.)

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- Morehouse, N.I.** *Two to tango: Conflict, cooperation and choice in butterfly reproduction.* Science 2013, University of Pittsburgh, Pittsburgh, PA, October, 2013.
- Morehouse, N.I.** *Flying colors: Innovation and evolution in butterfly coloration.* University-wide lecture, Science and Mathematics Department, Mount Aloysius College, Cresson, PA, October, 2013.
- Morehouse, N.I.** *Colors, gifts and conflict: Evolutionary dynamics in butterfly reproductive biology.* Department seminar, Department of Zoology, Oklahoma State University, Stillwater, OK, September, 2013.
- Morehouse, N.I.** *Color sense: Color vision and coloration in animal decision making.* Keynote speaker, Psi Chi Induction Ceremony, University of Pittsburgh, Pittsburgh, PA, March 2013.
- 2012
- Morehouse, N.I.** *Flying colors: New insights into the evolution of butterfly coloration.* Summer research seminar, Pymatuning Laboratory of Ecology, University of Pittsburgh, Linesville, PA, June, 2012.
- Morehouse, N.I.** *Resource dynamics and the evolution of bright colors: Insights from butterflies.* Department seminar, Department of Ecology, Evolution and Behavior, University of Minnesota, Saint Paul, MN, March, 2012.
- Morehouse, N.I.** *Resource dynamics and the evolution of bright colors: Insights from butterflies.* Jugata Seminar Series, Department of Entomology, Cornell University, Ithaca, NY, February, 2012.
- 2011
- Morehouse, N.I.** *Linking color evolution and nutritional ecology: New insights from butterflies.* Department seminar, Biology Department, University of Akron, Akron, OH, November, 2011.
- Morehouse, N.I.** *Ecological resource dynamics and color evolution in butterflies.* Department seminar, Université catholique de Louvain, Louvain-la-Neuve, Belgium, October 2011.
- Morehouse, N.I.** *Dynamiques ecologique et évolutif dans une polyphénisme saisonniers de couleur.* Kikikose Seminar Series, Université de Tours, Tours, France, October, 2011.
- Morehouse, N.I.** *Nutritional ecology and the evolution of bright coloration: Insights from butterflies.* Department seminar, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA, February 2011.
- 2010
- Morehouse, N.I.** *Trip the light fantastic: Evolution and innovation in butterfly color optics.* 17<sup>th</sup> Annual “Blodbad”, Stockholm University, Tovetorp, Sweden, November, 2010.
- Morehouse, N.I.** and Rutowski, R.L. *Genic capture by a nitrogen-rich color ornament in a nitrogen-limited butterfly.* Oral presentation, *Integrating Nutritional and Behavioral Ecology: Recent Insights and Future Directions Symposium*, 13<sup>th</sup> International Behavioral Ecology Congress, International Society for Behavioral Ecology, Perth, Australia, October, 2010.
- Morehouse, N.I.** *Co-évolution entre la coloration des mâles et le choix des femelles chez un papillon.* Kikikose Seminar Series, Université de Tours, Tours, France, September, 2010.
- Morehouse, N.I.** and Rutowski, R.L. *Limiting nutrients, bright colors and male genetic quality: Why female Pieris rapae prefer colorful mates.* Oral presentation, *Color Signals and Cues in the Lives of Butterflies: Perception, Learning and Function Symposium*, 6<sup>th</sup> International Conference on the Biology of Butterflies, Edmonton, Canada, June, 2010.
- Morehouse, N.I.** *L'écologie de la nutrition et l'évolution de la couleur polyphénisme saisonniers dans un papillon.* Journée IRBI, Université de Tours, Tours, France, June 2010.



## INVITED PRESENTATIONS (CONT.)

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- 2009 **Morehouse, N.I.** *Nature: the illustrative past and bright future of design.* Oral presentation representing Autodesk and the Biomimicry Institute, *Design and Sustainability Symposium*, Congress on the Future of Engineering Software 2009, Scottsdale, AZ, April, 2009.
- 2007 **Morehouse, N.I.** *The nutrient ecology of bright butterfly colors: Currencies, costs and evolutionary considerations.* Oral presentation, *Evolution and Development of Colour Patterns Symposium*, 5<sup>th</sup> International Conference on the Biology of Butterflies, Rome, Italy, July, 2007.
- Morehouse, N.I.** *Flying colors: Towards an evolutionary understanding of bright wing coloration in pierid butterflies.* Kikikose Seminar Series, Université de Tours, Tours, France, May, 2007.
- 2006 **Morehouse, N.I.** *Innovation on the wing: The fascinating world of butterfly colors.* Seminar Series, Department of Neurobiophysics, Rijksuniversiteit Groningen, Groningen, The Netherlands, August, 2006.
- Morehouse, N.I.** and Ramakrishna, B. *Sustainable partnerships between graduate and K-12 education: Science mentoring outreach as a case study.* Oral presentation, *Partnerships Between STEM Research and K-12 Classrooms Symposium*, AAAS-SWARM 81<sup>st</sup> Annual Meeting, Tulsa, OK, April, 2006.
- 2004 **Morehouse, N.I.** *Ephemeral beauty: Age-related degradation of butterfly coloration.* Oral presentation, *Hexapodium*, Center for Insect Science, University of Arizona, Tucson, AZ, November, 2004.
- Morehouse, N.I.** *Inquiry-based approaches to local insect populations.* Invited poster presentation, Annual meeting, Western Association of Graduate Schools, Phoenix, AZ, April, 2004.

## CONTRIBUTED PRESENTATIONS (27 total, 3 received awards)

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- 2017 **Morehouse, N.I.** *Color vision, female gaze, and the evolution of complex visual displays in jumping spiders.* Oral presentation, 1<sup>st</sup> Annual Sensorium: An Annual Symposium of Sensory Biology and Ecology, Cincinnati, OH, September, 2017.
- Morehouse, N.I.**, Zurek, D.B., Taylor, L.A., and Cronin, T. *Repeated evolution of color vision underlies rapid diversification of salticid male coloration.* Oral presentation, Annual Meeting, Society for Integrative and Comparative Biology, New Orleans, LA, January, 2017.
- 2016 **Morehouse, N.I.**, Saleh, N.W., Silverman, M.B., Hanss, C., Cherwin, T., Kirkby, C., *Striking a balance: Immune challenge elicits sex-specific trade-offs in reproductive investment in the cabbage white butterfly.* Oral presentation, Evolution 2016, Austin, TX, June 2016.
- Morehouse, N.I.**, Cronin, T.W., Taylor, L.A., Byrne, K., Sullivan, M.G., and Zurek, D.B. *Spectral filtering enables trichromatic vision in the principal eyes of Habronattus jumping spiders.* Oral presentation, Annual Meeting, Society for Integrative and Comparative Biology, Portland, OR, January 2016.
- 2015 **Morehouse, N.I.**, Meslin, C., Plakke, M.S., Deutsch, A.B., Small, B.S. and Clark, N.L. *Digestive organ in the female reproductive tract adopts critical functions by borrowing genes from multiple organ systems.* Evolution 2015, Guarujá, Brazil, June 2015.
- 2013 **Morehouse, N.I.**, Bartoch, C.M., Luna, E.N., Roberts, N.S. and Saleh, N.W. *Gifts, colors and the vagina dentata: Phenotypic plasticity, honest signaling and sexual conflict in a gift-giving butterfly.* 14th Congress of the European Society for Evolutionary Biology, Lisbon, Portugal, August, 2013.

## CONTRIBUTED PRESENTATIONS (CONT.)

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- Morehouse, N.I.**, Bartoch, C.M., Luna, E.N., Roberts, N.S. and Saleh, N.W. *Food, nuptial gifts and vaginae dentatae: Phenotypic plasticity and sexual conflict in a gift-giving butterfly*. Oral presentation, Annual Meeting, Society for Integrative and Comparative Biology, San Francisco, CA, January, 2013.
- 2012 **Morehouse, N.I.** and Casas, J. *Ecological resource dynamics of a seasonal color polyphenism*. Oral presentation, Evolution 2012, First Joint Congress on Evolutionary Biology, Ottawa, Canada, July, 2012.
- Morehouse, N.I.** and Casas, J. *Ecological resource dynamics of a seasonal color polyphenism*. Oral presentation, Annual meeting, Animal Behavior Society, Albuquerque, NM, June 2012.
- 2011 **Morehouse, N.I.**, Giraldo, M., Rutowski, R.L. and Vukusic, P. *Diverse photonics underlie mimetic convergence of blue butterfly coloration*. Oral presentation, Behavior 2011, joint meeting of the Animal Behavior Society and the International Ethological Conference, Bloomington, IA, July, 2011.
- 2010 **Morehouse, N.I.** and Rutowski, R.L. *The risks and rewards of resplendence: Viewing male butterfly color ornaments through the eyes of females and predators*. Oral presentation, 13<sup>th</sup> International Behavioral Ecology Congress, International Society for Behavioral Ecology, Perth, Australia, October, 2010.
- Morehouse, N.I.** *Female choice, limiting nutrients, genic capture and male butterfly colors*. Oral presentation, Warner Clyde Allee Session, Annual meeting, Animal Behavior Society, Williamsburg, VA, July, 2010.  
\*\*Awarded the Warner Clyde Allee Award
- 2008 **Morehouse, N.I.** and Rutowski, R.L. *Female choice for a nitrogen-rich color ornament in a nitrogen limited butterfly*. Oral presentation, 12<sup>th</sup> International Behavioral Ecology Congress, International Society for Behavioral Ecology, Ithaca, NY, August, 2008.  
\*\*Awarded the Frank Alois Pitelka Prize for Best Student Spoken Paper.
- Morehouse, N.I.**, Butler, M.W. and Webber, A. *Community outreach as a core training experience in graduate education*. Poster presentation, Center for the Integration of Research, Teaching, and Learning Forum 2008, University of Wisconsin, Madison, June, 2008.
- Morehouse, N.I.**, Giraldo, M.A., Rutowski, R.L. and Stavenga, D.G. *Diverse color production mechanisms are responsible for convergent blue structural coloration in a butterfly mimicry complex*. Oral presentation, Iridescence: More Than Meets the Eye, International conference, Tempe, AZ, February, 2008.
- Morehouse, N.I.**, Giraldo, M.A., Rutowski, R.L. and Stavenga, D.G. *Convergent evolution of blue structural coloration in a butterfly mimicry complex*. Oral presentation, 9<sup>th</sup> Annual Symposium, Graduates in Earth, Life and Social Sciences, Tempe, AZ, February, 2008.  
\*\*Awarded Best Oral Presentation Prize.
- 2007 **Morehouse, N.I.**, Rutowski, R.L. and Vukusic, P. *Innovative optics of bright wing colors in pierid butterflies: morphological determinants and implications for use as visual signals*. Oral presentation, Society for Integrative and Comparative Biology, Phoenix, AZ, January, 2007.
- Morehouse, N.I.**, and Davis, J.R. *A science mentoring model for partnerships between graduate research communities and public school classrooms*. Poster presentation, Annual Meeting, Society for Integrative and Comparative Biology, Phoenix, AZ, January, 2007.
- 2006 **Morehouse, N.I.**, Rutowski, R.L. and Vukusic, P. *Pigments as structural colors: Optical properties and evolutionary implications of pterin deposition in pierid butterflies*. Oral presentation, 11<sup>th</sup> International Behavioral Ecology Congress, International Society for Behavioral Ecology, Tours, France, July, 2006.

## CONTRIBUTED PRESENTATIONS (CONT.)

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- Morehouse, N.I.,** Rutowski, R.L. and Vukusic, P. *Pigments as structural colors: Optical properties and evolutionary implications of pterin deposition in pierid butterflies.* Oral presentation, 7<sup>th</sup> Annual Symposium, Graduates in Earth Life and Social Sciences, Tempe, AZ, February, 2006.
- Morehouse, N.I.,** Davis, J.R. and Ramakrishna, B. *Sustainable partnerships between graduate and K-12 education: Science mentoring outreach as a case study.* Oral presentation, 7<sup>th</sup> Annual Symposium, Graduates in Earth Life and Social Sciences, Tempe, AZ, February, 2006.
- 2005 **Morehouse, N.I.,** Rutowski, R.L. and Vukusic, P. *Pigments as structural colors: Optical properties and evolutionary implications of pterin deposition in pierid butterflies.* Oral presentation, Annual meeting, Animal Behavior Society, Snowbird, UT, August 2005.
- Morehouse, N.I.** and Rutowski, R.L. *Age-related degradation of butterfly coloration.* Poster session, Annual conference, Arizona Imaging and Microanalysis Society, Tempe, AZ, March, 2005.
- Morehouse, N.I.** and Rutowski, R.L. *Age-related degradation of butterfly coloration: Causes and implications,* Oral presentation, 6<sup>th</sup> Annual Symposium, Graduates in Earth Life and Social Sciences, Tempe, AZ, February, 2005.
- 2004 **Morehouse, N.I.** and Rutowski, R.L. *Age-related degradation of butterfly coloration.* General poster session, 10<sup>th</sup> International Behavioral Ecology Congress, International Society for Behavioral Ecology, Jyväskylä, Finland, July 2004.
- Morehouse, N.I.** *Local buggers: An inquiry-based approach to local insect populations.* Education poster session, Annual meeting, American Association for the Advancement of Science, Seattle, WA, February 2004.
- 2003 **Morehouse, N.I.** and Rutowski, R.L. *Age-related degradation of visual signals in the Alfalfa Butterfly (Colias eurytheme).* General poster session, Annual meeting, Animal Behavior Society, Boise, ID, July 2003.

## PRESENTATIONS TO LAY AUDIENCES (20 total)

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- 2016 **Morehouse, N.I.** *How do animals see color?* Elementary school classroom visits, Kentucky Avenue School, Pittsburgh, PA, April, 2016.
- Morehouse, N.I.** *How do animals see color?* Pitt World of Possibilities recruitment program, University of Pittsburgh, April, 2016.
- Morehouse, N.I.** *In the eyes of a (fly) tiger: Vision, predation, and complex courtship signaling in jumping spiders.* Middle school science classroom, Saltsburg Middle High School, Saltsburg, PA, March 2016.
- Morehouse, N.I.** *Singing, dancing, colors and cleverness: What animals have to tell us about attracting mates.* Public lecture, “The Birds and the Bees...After Dark” Event, Carnegie Museum of Natural History, Pittsburgh, PA, February, 2016.
- 2015 **Morehouse, N.I.** *Colors, choices and conflict: Evolutionary insights from the reproductive biology of butterflies.* Tri Beta Biological Honor Society, University of Pittsburgh, October, 2015.
- Morehouse, N.I.** *All about ants.* Kindergarten classroom, Environmental Charter School, Pittsburgh, PA, October, 2015.
- Morehouse, N.I.** *Colors on the wing and in the undergrowth: How do butterflies and jumping spiders use color?* Kindergarten classroom, Dillworth Elementary School, Pittsburgh, PA, May, 2015.

## PRESENTATIONS TO LAY AUDIENCES (CONT.)

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- Morehouse, N.I.** *Colors, choices and conflict: Evolutionary insights from the reproductive biology of butterflies.* Pitt Ecology Club, University of Pittsburgh, Pittsburgh, PA, April, 2015.
- Morehouse, N.I.** *How do jumping spiders see the world?* Assemble After-School Program, Pittsburgh, PA, April, 2015.
- 2014 **Morehouse, N.I.** *In the eyes of a tiger: Color vision and color signaling in jumping spiders.* Pitt Biology Club, University of Pittsburgh, Pittsburgh, PA, October, 2014.
- Morehouse, N.I.** *Colors, choices and conflict: The weird, wonderful world of butterfly reproduction.* Outside the Classroom Curriculum, University of Pittsburgh, Pittsburgh, PA, April 2014.
- 2013 **Morehouse, N.I.** *Light play: New insights from the colorful world of butterflies and spiders* Cloverwood Senior Living, Rochester, NY, December 2013.
- Morehouse, N.I.** *Flying colors: Innovation and evolution in butterfly coloration.* Café Scientifique, Carnegie Science Center, Pittsburgh, PA, May 2013.
- Morehouse, N.I.** *Evolution on the wing.* Pitt Ecology Club, University of Pittsburgh, Pittsburgh, PA, March 2013.
- Morehouse, N.I.** *Evolution on the wing.* Pitt Biology Club, University of Pittsburgh, Pittsburgh, PA, February 2013.
- 2012 **Morehouse, N.I.** *Flying colors.* The Children’s School, Carnegie Mellon University, Pittsburgh, PA, May, 2012.
- 2007 **Morehouse, N.I.** *Bling on the wing: The colorful world of butterflies.* Valley View School, Phoenix, AZ, March, 2007.
- Morehouse, N.I.** *Flying colors: New insights in to the world of bright butterfly coloration.* Emeritus College Colloquia Series, Arizona State University, February, 2007.
- 2006 **Morehouse, N.I.** *Innovation on the wing: the fascinating world of butterfly wing colors.* Ecology Explorers seminar, Global Institute of Sustainability, Arizona State University, July, 2006.
- 2004 **Morehouse, N.I.** *Insects in the classroom.* Oral presentation, Ecology Explorers seminar, Center for Environmental Studies, Arizona State University, Tempe, AZ, July, 2004.

## ART-SCIENCE COLLABORATIONS

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- 2016 **What Does It Mean to Be Curious?** November 2015 – present  
University of Pittsburgh, Pittsburgh, PA  
Conceived and co-directed a series of [interdisciplinary discussions](#) on curiosity in the arts and sciences with artist/librarian Kate Joranson (Frick Fine Arts Library, University of Pittsburgh) as part of the Year of the Humanities in the University initiative. Conversations included philosophers, artists, scientists, digital humanists, musicians, and educators ([link](#)), with \$5,200 in funding from the Provost’s Office, Humanities Center, University Library System, Department of Biological Sciences, and the Carnegie Museum of Natural History. This series is now entering its [second year](#) with funding through the Humanities Center.

## ART-SCIENCE COLLABORATIONS (CONT.)

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### **Art-Science Plenary at Evolution 2016** June 2016

Art.Science.Gallery and Austin Convention Center, Austin, TX

As part of the art-science programming associated with the international conference Evolution 2016, I was invited to give a special plenary combining evolutionary biology with the arts. In my presentation, I wove the deep evolutionary history of vision with two more modern stories: Darwin's life and the contemporaneous development of early photography. I gave this talk at Art.Science.Gallery in East Austin, and a second time at the convention center where Evolution 2016 was hosted. Both lectures were open to the general public.

### **All Around Us: Installations and Experiences Inspired by Bugs** April 2016

Wood Street Galleries, Pittsburgh, PA

Live streaming of audio and video footage of male courtship displays in the jumping spider *Habronattus pyrrithrix*, filmed during the gallery opening on an architectural stage built by collaborator and show curator Ali Momeni (School of Art, Carnegie Mellon University). Permanent installation of projected high resolution video footage of *H. pyrrithrix* courtship.

### **Evolution – Musical Compositions Inspired by Morehouse Lab Research** April 2016

Music Preparatory School, School of Music, Carnegie Mellon University, Pittsburgh, PA

Musical collaboration with three Creative Expressions composition classes taught by Jennie Dorris at the Music Preparatory School at Carnegie Mellon. The three classes wrote multi-movement compositions inspired by our research on jumping spider courtship, butterfly coloration, and butterfly life history. These compositions were performed, with visual media I developed, during the Music Preparatory School's Spring Showcase.

2008

### **Iridescence-Inspired Art and Fashion Show** February 2008

Arizona State University, Tempe, AZ

Conceived and co-organized an art show and fashion show as events during an international conference on the topic of iridescence in nature, titled *Iridescence: More than Meets the Eye*. This involved collaborations with national artists and local fashion designers in the Design School at Arizona State University.

## RESEARCH TRAINING EXPERIENCE

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### **European Union Marie Curie International Incoming Fellow** June 2009 – June 2011

Institut de Recherche sur la Biologie de l'Insecte, Université de Tours, France

### **Division of Graduate Studies Dissertation Fellow** August 2007 – May 2008

School of Life Sciences, Arizona State University, Tempe, AZ

### **Graduate Research Assistant** January – August 2006

School of Life Sciences, Arizona State University, Tempe, AZ

### **University Graduate Scholar** Summers, 2003-2005

School of Life Sciences, Arizona State University, Tempe, AZ

### **Independent Research/ Honors Thesis** May 1999 – May 2000

Professor Cole Gilbert, Dept. of Entomology, Cornell University, Ithaca, NY

### **Field/Research Assistant** October 1998 – July 1999, January 2000

Professor Alison Power, Dept. of Ecology, Cornell University, Ithaca, NY

## TEACHING EXPERIENCE

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### **Courses Taught as Faculty at Undergraduate Level**

BIOSC 1445 – Animal Communication, University of Pittsburgh

Spring 2013-2016

## TEACHING EXPERIENCE (CONT.)

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### **Courses Taught as Faculty at Graduate Level**

BIOL 8001 – Data Analysis, University of Cincinnati	Fall 2017
BIOL 9004 – Research Progress, University of Cincinnati	Spring 2017
BIOSC 2500 – Visual Ecology, University of Pittsburgh	Fall 2016
BIOSC 2450 – Seminar in Ecology, University of Pittsburgh	Spring 2015
BIOSC 2351 – Advanced Evolution, University of Pittsburgh	Fall 2012

### **Guest Lectures**

Visual Ecology of Jumping Spiders, Animal Behavior, College of Wooster	2016
Ecology, Sexual Selection, and Speciation, Advance Ecology, University of Pittsburgh	2015
Sexual Selection I & II, Advanced Evolution, University of Pittsburgh	2014
Research Ethics, A&S Research Seminar, University of Pittsburgh	2013, 2014
Visual Signaling in Butterflies, Animal Communication, University of Puerto Rico	2013
Sexual Selection in Butterflies, Insect Behavior, Cornell University	2012

### **Graduate Teaching Assistant**

August – December 2008

IND 464: Collaborative Design and Development I  
Innovation Space, College of Design, Arizona State University, Tempe, AZ

### **Graduate Teaching Assistant**

May – August 2008

School of Life Sciences Undergraduate Research Program  
Arizona State University, Tempe, AZ

### **Faculty Associate**

August 2006 – May 2007

Center for Research on Education in Science, Mathematics, Engineering and Technology  
Arizona State University, Tempe, AZ

### **NSF GK-12 Fellow**

Graduate Partners in Science Education, Program Coordinator	August 2005 – May 2006
Phoenix Preparatory Academy, Phoenix, AZ	
Desert Eagle Secondary School, 7 <sup>th</sup> and 8 <sup>th</sup> Grade Science	June 2003 – May 2004
Salt River Pima Maricopa Indian Community, AZ	

### **Graduate Teaching Assistant**

January – May 2005

Bio 100: Introductory Biology for Non-Majors  
August 2002 – May 2003  
Bio 415: Biometry  
August – December 2004  
School of Life Sciences, Arizona State University, Tempe, AZ

### **Substitute Science Teacher**

January – June 2001

Wilson Magnet High School  
Rochester City School District, Rochester, NY

## MENTORSHIP

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### **Postdoctoral Fellows (3 in lab, 5 total, \*career/teaching mentorship support)**

David Outomuro Priede, University of Cincinnati, 2017-present  
Daniel Zurek, University of Pittsburgh/Cincinnati, 2014-present  
Camille Meslin\*, University of Pittsburgh, 2012-2016  
Alison Hale\*, University of Pittsburgh, 2013  
Lisa Taylor, University of Pittsburgh, 2012-2013

### **Doctoral Students (5 in lab, 17 total)**

Alexis Dodson, *Dissertation Advisor*, University of Cincinnati, 2017-present  
David Morris, *Dissertation Advisor*, University of Cincinnati, 2017-present  
Melissa Plakke, *Dissertation Advisor*, University of Pittsburgh, 2013-present  
Uriel Garcilazo, *Dissertation Committee Member*, University of British Columbia, 2017-present  
Robert Tunison, *Dissertation Committee Member*, University of Cincinnati, 2017-present

**Doctoral Students (cont.)**

Sebastian Echeverri, *Dissertation Advisor*, University of Pittsburgh, 2014-2016  
Lisa Limeri, *Dissertation Advisor*, University of Pittsburgh, 2012-2016  
Layla Freeborn, *Dissertation Committee Member*, University of Pittsburgh, 2015-present  
Michelle Spicer, *Dissertation Committee Member*, University of Pittsburgh, 2015-present  
Yu-San Yang, *Dissertation Committee Chair*, University of Pittsburgh, 2015-present  
Sara Berk, *Dissertation Committee Member*, University of Montana, 2014-present  
Eric Griffin, *Dissertation Committee Member*, University of Pittsburgh, 2015-2016  
Nana Zhang, *Dissertation Advisor*, University of Pittsburgh, 2014-2016  
Alannie-Grace Grant, *Dissertation Committee Member*, University of Pittsburgh, 2014-2015  
Nathan Brouwer, *Dissertation Committee Member*, University of Pittsburgh, 2011-2015  
Matthew Koski, *Dissertation Committee Member*, University of Pittsburgh, 2011-2015  
RJ Bendis, *Dissertation Committee Chair*, University of Pittsburgh, 2011-2015  
Eden McQueen, *Research Rotation Advisor*, University of Pittsburgh, 2014  
Primož Pirih, *Zeergeleerde Opponent*, Promotie, Academieggebouw, Rijksuniversiteit Groningen, The Netherlands, March, 2011

**Masters Students (10 total)**

Trinity Walls, *Masters Committee Member*, University of Cincinnati, 2017-present  
Madeline Lallo, *Masters Committee Member*, University of Cincinnati, 2017-present  
Michael Czypinski, *Masters Committee Chair*, University of Pittsburgh, 2016  
Paul Crawford, *Masters Committee Member*, University of Pittsburgh, 2014-2015  
Sarah Hansen, *Masters Committee Member*, University of Maryland, Baltimore County, 2014-2015  
Andrew Lariviere, *Masters Committee Member*, University of Pittsburgh, 2012-2015  
Katherine LeCroy, *Research Rotation Advisor*, University of Pittsburgh, 2012-2013  
Alexandre Depoilly, *Project Mentor*, Université de Tours, Tours, France, 2011  
Elise Gilliard, *Project Mentor*, Université de Tours, Tours, France, 2010  
Corentin Paillusson, *Project Mentor*, Université de Tours, Tours, France, 2010

**Postgraduate Research Technicians**

Nicholas Saleh, *Research Technician/Lab Manager*, University of Pittsburgh, 2012-2014

**Postgraduate Students (1 in lab, 2 total)**

Patrick Butler, *Continuing Education Research Assistant*, University of Pittsburgh, 2014-2017  
Shaniqua Gladney, *Mentorship Committee*, Hot-Metal Bridge Program Diversity Initiative, University of Pittsburgh, 2016

**Undergraduate Students (62 total, all in lab)**

Varna Harrison, *Undergraduate Research Assistant*, University of Cincinnati, 2017-present  
Kaitlyn Cyncynatus, *Undergraduate Research Assistant*, University of Cincinnati, 2017-present  
Isabella Geeding, *Undergraduate Research Assistant*, University of Cincinnati, 2017-present  
Alexis Lowe, *Undergraduate Research Assistant*, University of Cincinnati, 2017-present  
Julia Kerstetter, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Stanton Young, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Ciara Kernan, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2016  
John Goté, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2017  
Nicholas Russo, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Zachary Zimmer, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2016  
Nicholas Bernstein, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Taha Ahmed, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Corey Forman, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Cecile Truong, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Katherine Tressel, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Allison Gerber, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Abigail Jarrett, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Jeffrey Lombardo, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Gina Pacella, *Undergraduate Research Assistant*, University of Pittsburgh, 2016

## MENTORSHIP (CONT.)

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### **Undergraduate Students (cont.)**

Kaitlyn Dodson, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Chidera Uzowihe, *Undergraduate Research Assistant*, University of Pittsburgh, 2016  
Kevin Zedack, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2016  
Keith Thomas, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2016  
Sinjon Bartel, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2015  
Margaret Mass, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2015  
Sean Harrington, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2016  
Kaylee Beckinger, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2016  
Matthew Huff, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2016  
Emma Schanzenbach, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2016  
Tamara Cherwin, *Undergraduate Research Assistant*, University of Pittsburgh, 2013-2016  
Kelly Dulin, *Undergraduate Research Assistant*, University of Pittsburgh, 2015-2016  
Breanna Goetz, *Undergraduate Research Assistant*, University of Pittsburgh, 2013-2015  
Amina Susic, *Undergraduate Research Assistant*, University of Pittsburgh, 2015  
Ellen Gerasimek, *Undergraduate Research Assistant*, University of Pittsburgh, 2015  
Margaret Stack, *Undergraduate Research Assistant*, University of Pittsburgh, 2015  
Allison Faust, *Undergraduate Research Assistant*, University of Pittsburgh, 2015  
Caroline Kirkby, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2015  
Alex Jordan, *Undergraduate Research Assistant*, Westminster College, 2014-2015  
Riley Timbs, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2015  
Erin Moss, *Undergraduate Research Assistant*, University of Pittsburgh, 2014-2015  
Kristen Tobin, *Undergraduate Research Assistant*, University of Pittsburgh, 2013-2015  
Zarreen Amin, *Undergraduate Research Assistant*, University of Pittsburgh, 2012-2014  
Molly Silverman, *Undergraduate Research Assistant*, University of Pittsburgh, 2013-2014  
Abigail Riley, *Undergraduate Research Assistant*, University of Pittsburgh, 2014  
Nishant Singh, *Undergraduate Teaching Assistant*, University of Pittsburgh, 2014  
Irtaza Asar, *Undergraduate Research Assistant*, University of Pittsburgh, 2011-2014  
Kevin Byrne, *Undergraduate Research Assistant*, University of Pittsburgh, 2012-2014  
Emily Maier, *Undergraduate Research Assistant*, University of Pittsburgh, 2012-2014  
Aaron Deutsch, *Undergraduate Research Assistant*, University of Pittsburgh, 2013-2014  
Celia Hanss, *Undergraduate Research Assistant*, University of Pittsburgh, 2013-2014  
Ashley O'Connor, *Undergraduate Research Assistant*, University of Pittsburgh, 2011-2014  
Abel Amare, *Undergraduate Research Assistant*, University of Pittsburgh, 2013  
Cassandra Bartoch, *Undergraduate Research Assistant*, University of Pittsburgh, 2011-2013  
Elizabeth Luna, *Undergraduate Research Assistant*, University of Pittsburgh, 2012-2013  
Natalie Roberts, *Undergraduate Research Assistant*, University of Pittsburgh, 2011-2012  
Swetha Patel, *Undergraduate Research Assistant*, Arizona State University, 2006-2009  
Sumaya Sidique, *Undergraduate Research Assistant*, Arizona State University, 2008-2009  
Kiran Thaker, *Undergraduate Research Assistant*, Arizona State University, 2008-2009  
Joseph Nuñez, *Undergraduate Research Assistant*, Arizona State University, 2008-2009  
Ian Sandoe, *Undergraduate Research Assistant*, Arizona State University, 2006-2007  
Adam Scow, *Undergraduate Research Assistant*, Arizona State University, 2004-2005  
Christina Murillo, *Undergraduate Research Assistant*, Arizona State University, 2003-2004

### **High School Students (3 total, all in lab)**

Peter Mischler, *High School Research Intern*, University of Pittsburgh, 2016  
Abi Sekhar, *High School Research Intern*, University of Pittsburgh, 2016  
Mohit Bhide, *High School Research Intern*, University of Pittsburgh, 2014-2015

## SERVICE

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### **Symposium Co-Founder/Organizer**

[Sensorium: An Annual Symposium of Sensory Biology and Ecology](#)

Department of Biological Sciences, University of Cincinnati

2017-present



**SERVICE (CONT.)**

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<b>Graduate Recruitment and Admissions Committee</b> Department of Biological Sciences, University of Cincinnati	2017-present
<b>Department Seminar Series Coordinator</b> Department of Biological Sciences, University of Cincinnati	2017-present
<b>Graduate Curriculum and Assessment Committee</b> Department of Biological Sciences, University of Pittsburgh	2014 – 2016
<b>Pymatuning Laboratory of Ecology Oversight Committee</b> Department of Biological Sciences, University of Pittsburgh	2015 – 2016
<b>Senior Recognition Ceremony Committee</b> Department of Biological Sciences, University of Pittsburgh	2013 – 2016
<b>Colleges Against Cancer</b> Faculty Advisor, University of Pittsburgh Chapter, Pittsburgh, PA	2014 – 2016
<b>Ecology and Evolution Faculty Search Committee (3 positions)</b> Department of Biological Sciences, University of Pittsburgh	2015 – 2016
<b>Sustainability Faculty Search Committee</b> Department of Biological Sciences, University of Pittsburgh	2015 – 2016
<b>Select Committee on the Chair</b> Department of Biological Sciences, University of Pittsburgh	2015 – 2016
<b>Department Annual Retreat Committee</b> Department of Biological Sciences, University of Pittsburgh	2011 – 2013, 2015
<b>Department Advisory Committee</b> Junior Faculty Member, Department of Biological Sciences, University of Pittsburgh	2013 – 2015
<b>Symposium Coordinator</b> Color Signals in Terrestrial Invertebrates: Integrating Senders and Receivers 15 <sup>th</sup> International Behavioral Ecology Congress, New York City, USA, August, 2014	November 2013 – August 2014
<b>Symposium Coordinator</b> Integrating Pre- and Post-Copulatory Sexual Selection in the Lepidoptera: New Insights and Future Directions 7 <sup>th</sup> International Conference on the Biology of Butterflies, Türku, Finland, August, 2014	September 2013 – August 2014
<b>Research Presenter/Display</b> SciTech Festival, Carnegie Science Center, Pittsburgh, PA, November, 2012	2012 – 2015
<b>Grand Awards Judge</b> Intel International Science and Engineering Fair, Pittsburgh, PA, May, 2012	May 2012
<b>Symposium Coordinator</b> Integrating Nutritional and Behavioral Ecology: Recent Insights and Future Directions 13 <sup>th</sup> International Behavioral Ecology Congress, ISBE, Perth, Australia, October, 2010	November 2009 – October 2010
<b>Steering Committee Member</b> WoodStoich 2009 Tohoku University, Sendai, Japan	August 2008 – August 2009

## SERVICE (CONT.)

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<b>Program Consultant</b>	August 2007 – May 2009
<b>Program Co-Founder/Director</b>	October 2004 – August 2007
Graduate Partners in Science Education (GPSE) School of Life Sciences, Arizona State University <a href="http://gpse.asu.edu">gpse.asu.edu</a>	
<b>Entomology Correspondent</b>	August 2003 – May 2009
“Ask a Biologist” Science Outreach Program School of Life Sciences, Arizona State University	
<b>Webmaster</b>	January 2003 – May 2009
Rutowski Lab School of Life Sciences, Arizona State University	
<b>Committee Member</b>	
Web Advisory Committee School of Life Sciences, Arizona State University	
<b>Conference Organizer</b>	February 2007 – February 2008
<a href="#">Iridescence: More Than Meets the Eye</a> , February 6-9, 2008 Frontiers in Life Sciences Conference Series School of Life Sciences, Arizona State University	
<b>Grant Reviewer</b>	September 2007
Graduate and Professional Students Association Research Grant Competition Graduate and Professional Students Association, Arizona State University	
<b>Committee Member</b>	July 2006 – August 2007
Campus Health Services Advisory Committee Arizona State University	
<b>Committee Member</b>	July 2006 – August 2007
Health and Counseling Student Action Committee Arizona State University	
<b>Graduate Student Body President</b>	May 2006 – May 2007
Graduate Scholars in the School of Life Sciences School of Life Sciences, Arizona State University	
<b>Committee Member</b>	January – May 2007
Undergraduate Programs Committee School of Life Sciences, Arizona State University	
<b>Committee Chair</b>	January – May 2007
Campus Health Advisory Board, Graduate and Professional Students Association Arizona State University	
<b>Committee Member</b>	August 2006 – May 2007
Graduate Programs Committee School of Life Sciences, Arizona State University	
<b>Student Mentor/Event Judge</b>	January 2004 – April 2007
Central Arizona Regional Science and Engineering Fair Phoenix Public Schools, Phoenix, AZ	
<b>Founder and Coordinator</b>	January 2005 – May 2006
Sexual Selection Reading Group School of Life Sciences, Arizona State University	

## SERVICE (CONT.)

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- Symposium Coordinator** October 2005 – April 2006  
Partnerships between STEM Research and K-12 Classrooms  
AAAS-SWARM 81<sup>st</sup> Annual Meeting, Tulsa, OK, April, 2006
- Committee Member** August 2002 – August 2006  
Graduates in Earth, Life and Social Sciences Annual Symposium  
Graduates in Earth, Life and Social Sciences, Arizona State University
- Coordinator/Webmaster** August 2003 – May 2004  
Graduate Student Seminar Series  
School of Life Sciences, Arizona State University
- Curriculum/Professional Development** June – August 2003  
NSTA Partners Paving Pathways Program, Butterfly Life Cycle Curriculum Development  
Gilbert Elementary School District, Gilbert, AZ

## CAREER DEVELOPMENT

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- Selected Participant** June 2008  
Aligning the Preparation of Graduate Students for STEM Early Faculty Careers  
CIRTL Forum 2008, University of Wisconsin, Madison
- Selected Participant** August 2005 – May 2007  
Preparing Future Faculty Program  
Division of Graduate Studies, Arizona State University, Tempe, AZ

## PEER REVIEW SERVICE

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*Advances in Insect Physiology*  
*Advances in the Study of Behavior*  
*American Naturalist*  
*Animal Behaviour*  
*Animal Cognition*  
*Biological Journal of the Linnaean Society*  
*Biology Letters*  
*Behavioral Ecology*  
*Behavioral Ecology and Sociobiology*  
*BMC Biology*  
*Evolution*  
*Evolutionary Biology*  
*Ecological Entomology*  
*Functional Ecology*  
*Insect Science*  
*Journal of Comparative Physiology A – Neuroethology, Sensory, Neural, and Behavioral Physiology*  
*Journal of Ecology*  
*Journal of Evolutionary Biology*  
*Journal of Experimental Biology*  
*Journal of Insect Behavior*  
*Journal of Insect Physiology*  
*Journal of the Royal Society Interface*  
*Naturwissenschaften*  
*New Phytologist*  
*Oecologia*  
*Physiological and Biochemical Zoology*  
*Physiological Entomology*  
*PLoS One*

## **PEER REVIEW SERVICE (CONT.)**

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*Proceedings of the Royal Society of London B – Biological Sciences*  
*Science*  
*Scientific Reports*

Animal Behavior Society	
<i>Ad hoc</i> grant review for student research grants	2013
Biotechnology and Biological Sciences Research Council, UK	
<i>Ad hoc</i> grant review	2013
National Science Foundation	
<i>Ad hoc</i> full proposal grant review	2012
Doctoral Dissertation Improvement Grant panelist (IOS)	2015
Full proposal panelist (DEB)	2015
<i>Ad hoc</i> full proposal grant review	2016
Marsden Fund, New Zealand	
<i>Ad hoc</i> grant review	2015
University of Pittsburgh	
McKinley/Pape/Darbaker grant review	2015, 2016
Office of Undergraduate Research Semester Undergraduate Research Awards grant review	2016
University of Cincinnati	
Weiman-Benedict grant review	2017
Czech Science Foundation, Czech Republic	
<i>Ad hoc</i> grant review	2017

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

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American Society of Naturalists  
Animal Behavior Society  
International Society for Behavioral Ecology  
International Society of Arachnology  
Lepidopterists' Society  
Sigma Xi, The Scientific Research Society  
Society for Integrative and Comparative Biology  
Society for Science & the Public  
Society for the Study of Evolution