CHRISTINE WHITNEY MILLER

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ACADEMIC POSITIONS

Easter Term 2018	Visiting Fellow of Sidney Sussex College, Dept. of Zoology, University of Cambridge
2017 – Present	Associate Professor, Entomology and Nematology Department, University of Florida
2011 – 2017	Assistant Professor, Entomology and Nematology Department, University of Florida
2007 – 2011	Assistant Research Scientist, University of Florida

EDUCATION

The University of Montana – Missoula
Ph.D, Organismal Biology and Ecology, 2007. Advisor: Dr. Douglas J. Emlen.

Wesleyan University, Middletown, CT
B.A. Biology, 1998.

HONORS, FELLOWSHIPS, GRANTS, and AWARDS

University of Florida, College of Agriculture and Life Sciences Undergraduate Teacher of the Year Award, 2018.

UF Term Professorship Award, April 2017-April 2020, $15,000. Award to recognize UF faculty for outstanding recent accomplishments.

National Award, USDA Agriculture and Food Sciences Excellence in Teaching, "New Teacher" category. $2000. Awarded at a ceremony in Washington D.C., November 2017.

UF Internationalizing the Curriculum Grant, $5000, support to bring in international course content and active learning activities as part of the Learning Without Borders initiative at UF.

UF Interdisciplinary Research on Invasive Species Seed Grant, 2018-2019, $64,500.

National Science Foundation CAREER Award, Behavioral Systems Program, $822,000. Feb. 2016 – Jan. 2021. "CAREER: Fighting behavior, performance, and the evolution of shape" PI: Christine W. Miller

United States Department of Agriculture, NIFA, Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program (WAMS), $90,000**.** September 2016-August 2018. "Increasing student diversity in food and agriculture-related STEM disciplines through undergraduate classroom-based research experiences" PI: Adam Dale, Co-PIs: Christine Miller & Anne Donnelly.

National Institutes of Health, Maximizing Access to Research Careers (MARC) U-STAR Program, $2,350,594. September 2016-August 2021. "GatorSTAR: A New MARC U*STAR Program at the University of Florida." PI: David Julian, Co-PIs: Christine Miller, Ryan Duffy, & David Miller.

UF International Center, Global Fellow Award 2016, $4000; **UF International Center, Faculty Development Grant 2015**, $5000

UF Excellence Award for Assistant Professors 2014, $5000

HHMI-UF Science for Life Distinguished Mentor Award 2013, $10,000. Award for excellence in mentoring undergraduate students through authentic research.

UF/IFAS Early-Career Seed Grant 2013, $55,000. Title: Social networks in a pest, the squash bug.

UF Faculty Enhancement Opportunity Program 2013, $5,317.

National Science Foundation, Behavioral Systems Program, $325,394. September 2009 – September 2013. "Selection in heterogeneous environments: a multi-trait perspective" PI: Christine W. Miller.

National Evolutionary Synthesis Center (NESCent) Postdoctoral Fellowship, 2007-2009 (I declined).

Smithsonian Tropical Research Institute, Short Term Fellowship, $1000, 2005; **Ernst Mayr Fellowship**, $4850, 2004; **Research Award**, $1138, 2004; **Graduate Student Fellowship,** $3700, 2003.

NSF Graduate Research Fellowship Program, $121,500. 2003.

PEER-REVIEWED PUBLICATIONS

[U]Denotes undergraduate author, [G]Denotes graduate student author, [P]Denotes postdoctoral author

1. Somjee, U.[G], H.A. Woods, M. Duell[G], & **C.W. Miller.** *Accepted*. The hidden cost of sexually selected traits: the metabolic expense of maintaining a sexually selected weapon.
2. Joseph, P.N.[G], Z. Emberts[G], D.A. Sasson[P], & **C.W. Miller**. 2018. Males that drop a sexually-selected weapon grow larger testes. ***Evolution***. DOI: 10.1111/evo.13387.
3. Somjee, U.[G], **C.W. Miller**, N.J. Tatarnic, & L.W. Simmons. 2018. Experimental manipulation reveals a trade-off between weapons and testes. ***Journal of Evolutionary Biology***. DOI: 10.1111/jeb.13193.
4. Cattau, C.E.[G], R.J. Fletcher, **C.W. Miller**, R.T. Kimball, & W.M. Kitchens. 2018. Rapid morphological change of a top predator with the invasion of a novel prey. ***Nature Ecology and Evolution***.
5. Emberts, Z., C.M St. Mary, T.J. Herrington, & C.W. Miller. 2018. Males missing their sexually selected weapon have decreased fighting ability and mating success in a competitive environment. ***Behavioral Ecology and Sociobiology.*** 72: 81. https://doi.org/10.1007/s00265-018-2494-6.
6. Allen, P.E., A.G. Dale, S.I. Diyaljee, N.J. Ector, D. Petit-Bois, J.T. Quinn, A.C. Ranieri, J.A. Sanchez, H.M. Smith, D.X. Tran, A.M. Winsor, & C.W. Miller. 2018. Long-term sperm storage in the cactus-feeding bug, *Narnia femorata* (Hemiptera: Coreidae). ***Annals of the Entomological Society of America.***
7. Cirino L.A.[G], Z. Emberts[G], P.N. Joseph[G], P.E. Allen[G], D. Lopatto, & **C.W. Miller**. 2017. Broadening the voice of science: promoting scientific communication in the undergraduate classroom. ***Ecology and Evolution***. DOI: 10.1002/ece3.3501.
8. Allen, P.E.[G] & **C.W. Miller.** 2017. Novel host leads to the elimination of dimorphism in a sexually-selected male weapon. ***Proceedings of the Royal Society of London (B).*** 284: 20171269. DOI: 10.1098/rspb.2017.1269. *Selected for recognition at the 11th Annual University of Florida IFAS FAES Research Awards Ceremony on Thursday, May 17th, 2018.*
9. Emberts, Z.[G], **C.W. Miller** & C. St.Mary. 2017. Cut your losses: self-amputation of injured limbs increases survival. ***Behavioral Ecology.*** 28: 1047-1054. DOI: 10.1093/beheco/arx063
10. Emberts, Z., **C. W. Miller,** D. Li, W.S. Hwang, & C.M St. Mary. 2017. Multiple male morphs in the leaf-footed bug *Mictis longicornis* (Hemiptera: Coreidae). ***Entomological Science.*** 20: 396–401. DOI: 10.1111/ens.12268.
11. Nolen, Z.J.[U], P.E. Allen[G], & **C.W. Miller.** 2017. Seasonal resource value and male size influence male aggressive interactions in the leaf footed cactus bug, *Narnia femorata.* ***Behavioral Processes.*** 138: 1-6. DOI: 10.1016/j.beproc.2017.01.020.
12. Cirino, L.A.[G]& **C.W. Miller.** 2017. Seasonal effects on the population, morphology and reproductive behavior of *Narnia femorata* (Hemiptera: Coreidae). ***Insects.*** 8: 1-16. DOI:10.3390/insects8010013.

13. **Miller, C.W.,** G. McDonald, & A.J. Moore. 2016. The tale of the shrinking weapon: seasonal changes in nutrition affect weapon size and sexual dimorphism, but not contemporary evolution. ***Journal of Evolutionary Biology***. 29: 2266-2275. DOI: 10.1111/jeb.12954.
14. McCullough, E., **C.W. Miller**, & D.J. Emlen. 2016 Why sexually-selected weapons are not ornaments. ***Trends in Ecology and Evolution***. 31: 742-751. DOI: 10.1016/j.tree.2016.07.004.
15. Emberts, Z.[G], C. St. Mary, & **C.W. Miller.** 2016. Coreidae (Insecta: Hemiptera) Limb Loss and Autotomy. ***Annals of the Entomological Society of America***, DOI: 10.1093/aesa/saw037.
16. Joseph, P.N.[G], D.A. Sasson, P.E. Allen[G], U. Somjee[G], & **C.W. Miller.** 2016. Adult nutrition, but not inbreeding, affects male primary sexual traits in the leaf-footed cactus bug *Narnia femorata* (Hemiptera: Coreidae). ***Ecology & Evolution***. 6: 4792-4799. DOI:10.1002/ece3.2246.
17. Sasson, D.A.[G], P.R. Munoz, S.A. Gezan, & **C.W. Miller.** 2016. Resource quality affects weapon and testis size and the ability of these traits to respond to selection in the leaf-footed cactus bug, *Narnia femorata*. ***Ecology and Evolution***, 6: 2098-2108. DOI - 10.1002/ece3.2017.
18. Somjee, U.[G], P.E. Allen[G], & **C.W. Miller.** 2015. Different environments lead to a reversal in the expression of weapons and testes in the heliconia bug, *Leptoscelis tricolor* (Hemiptera: Coreidae). ***Biological Journal of the Linnean Society***, 115:802-809.
19. Hamel, J. A.[P], S.A. Nease[U], & **C.W. Miller.** 2015. Male mate choice and female receptivity lead to reproductive interference. ***Behavioral Ecology and Sociobiology*** 69: 951-956. *Featured in the Inkfish Blog and IFLScience.
20. Gillespie, S.R.[U], M.S. Tudor[G], A.J. Moore, and **C.W. Miller**. 2014. Sexual selection is influenced by both developmental and adult environments. ***Evolution*** 68: 3421-3432.
21. **Miller, C.W.** and E. Svensson. 2014. Sexual selection in complex environments. ***Annual Review of Entomology*** 59: 427-445.
22. **Miller, C.W.** and U. Somjee.[G] 2014. Male-male competition. In ***Oxford Bibliographies in Evolutionary Biology***. Ed. Jonathan Losos. New York: Oxford University Press.
23. Addesso, K.M.[P], K.A. Short[G], A.J. Moore, and **C.W. Miller**. 2014. Context-dependent female mate preferences in leaf-footed cactus bugs. ***Behaviour*** 151: 479-492.
24. Helmey-Hartman, W.[G] and **C.W. Miller.** 2014. Context-dependent mating success in *Murgantia histrionica* (Hemiptera: Pentatomidae). ***Annals of the Entomological Society of America***: 107: 264-273.
25. **Miller, CW**, J.A. Hamel[P], W. Helmey-Hartman[G], K. Holmes[U], and D. Lopatto. 2013. Expanding your research team: learning outcomes when a research laboratory partners with an undergraduate classroom. ***Bioscience*** 63: 754-762.
26. **Miller, C.W.**, R.J. Fletcher, and S.R. Gillespie[U]. 2013. Conspecific and heterospecific cues override habitat quality to influence egg production. ***Plos One*** 8 (7): e70268.
27. **Miller, C.W.** 2013. Sexual selection: Male-male competition. In: J. Losos, Editor, The ***Princeton Guide to Evolution***. Princeton University Press.
28. Procter, D.S.[G], A.J. Moore, and **C.W. Miller.** 2012. The form of sexual selection arising from male-male competition depends on the presence of females in the social environment. ***Journal of Evolutionary Biology*** 25: 803-812.
29. Austin, J.D., **C.W. Miller**, and R.J. Fletcher, Jr. 2012. What role can natural selection and phenotypic plasticity play in wildlife adaptation to climate change? In: J. Brodie, E. Post, J. Berger, and D. Doak, Editors, ***Conserving Wildlife Populations in a Changing Climate***. University of Chicago Press.

30. **Miller, C.W.,** R.J. Fletcher, Jr., B.D. Anderson[U], and L.D. Nguyen[U]. 2012. Natal social environment affects habitat selection later in life. ***Animal Behaviour*** 83: 473-477.
31. **Miller, C.W.** and D.J. Emlen. 2010. Dynamic effects of oviposition site on offspring sexually-selected traits and scaling relationships. ***Evolutionary Ecology*** 242: 375-390.
32. **Miller, C.W.** and D.J. Emlen. 2010. Across and within population differences in the scaling relationship of a sexually-selected trait. ***Annals of the Entomological Society of America*** 103: 209-215.
33. **Miller, C.W.** and S.D. Hollander[U]. 2010. Predation on heliconia bugs, *Leptoscelis tricolor* (Hemiptera: Coreidae): examining the influences of crypsis and predator color preferences. ***Canadian Journal of Zoology*** 88: 122-128.
34. Nageon de Lestang, F.[U] and **C.W. Miller.** 2009. Effects of diet on the development and survivorship of *Narnia femorata* nymphs (Hemiptera: Coreidae). ***Florida Entomologist*** 92: 511-512.
35. **Miller, C.W.** 2008. Seasonal effects on offspring reproductive traits through maternal oviposition behavior. ***Behavioral Ecology*** 19: 1297-1304.
36. Fletcher, R.J., Jr., and **Miller, C.W.** 2008. The type and timing of social information alters offspring production. ***Biology Letters*** 4: 482-485.
37. **Miller, C.W.** and A.J. Moore. 2007. A potential resolution to the lek paradox through indirect genetic effects. ***Proceedings of the Royal Society (London) B***. 274: 1279-1286.
38. Fletcher, R.J. and **C.W. Miller**. 2006. On the evolution of hidden leks and implications for reproductive and habitat selection behaviours. ***Animal Behaviour*** 71: 1247-1251.

POPULAR PRESS AND OTHER PUBLICATIONS

- Kurdmongkoltham, P. and **C.W. Miller.** Insects, a delectable wonder. Blog post. ***What's Bugging You, UF IFAS***, October 2015. http://blogs.ifas.ufl.edu/entnemdept/2015/10/15/insects-a-delectable-wonder/
- Prade, P. and **C.W. Miller.** Real zombies are among us. Blog post. ***What's Bugging You, UF IFAS***, October 2015. http://blogs.ifas.ufl.edu/entnemdept/2015/10/26/real-zombies-are-among-us/
- **Miller, C.W.** 2013. Engage students in science. ***The Gainesville Sun.*** November 7, 2013.
- Halbeck, D.H., F.D. Bennett, and **C.W. Miller.** 2012. The cactus moth, *Cactoblastis cactorum*. Featured Creatures, http://entomology.ifas.ufl.edu/creatures/BFLY/cactus_moth.htm
- **Miller, C.W.** 2011. The heliconia bug, *Leptoscelis tricolor*. Featured Creatures, http://entnemdept.ufl.edu/creatures/misc/bugs/heliconia_bug.htm

TEACHING and LEADERSHIP EXPERIENCE

Principles of Entomology, Fall and/or Spring semesters Undergraduate/Graduate Course and Laboratory	2008-present
Classroom-based research experience (6 total semesters) Authentic undergraduate research in a classroom setting	2012 – present
Animal Weapons, Graduate seminar	Fall 2015
Seminar on the Seminar Series, Graduate seminar	Fall 2014
Behavioral Plasticity and Evolution, Graduate seminar	Spring 2012
Sexual selection, Graduate seminar	Spring 2008
UF CALS Teacher's College, participant and graduate	Fall 2008
Advances in Evolution, University of Montana Graduate/Undergraduate course	Fall 2006

MENTORING through RESEARCH

Graduate students advised: Wendy Helmey-Hartman, Pablo Allen, Ummat Somjee, Daniel Sasson (major advisor: Jane Brockmann), Lauren Cirino, Paul Joseph, Zach Emberts (co-advised with Colette St. Mary), Daniela Wilner

Visiting International Students: Duncan Procter (University of Exeter, 2010), Grant McDonald (Oxford University, 2010), Katherine Short (University of Exeter, 2011), Iain Gordon (University of Exeter, 2011), Aitor Alvarez-Fernandez (Oxford University, 2011)

Undergraduate Mentor and Recipient of 2013 Howard Hughes Medical Institute Distinguished Mentor Award. Together with my graduate students and postdocs, I have mentored over 100 undergraduates in my laboratory in the past ten years. Students have authored eleven peer-reviewed publications, presented at fifteen local and national meetings (e.g. Animal Behavior, Society for Integrative and Comparative Biology, Evolution, and Entomological Society of America), won local and national awards (e.g. Two Animal Behavior Society Turner Awards, UF Best Undergraduate Paper Award). I have hosted ten UF University Scholars' Program students, two HHMI Science for Life students, and one College of Agriculture and Life Sciences internship student. In addition, I brought Classroom Undergraduate Research Experience (CURE) courses to UF undergraduates, leading to teaching publications and awards.

INVITED SEMINARS

University of Cambridge, U.K. Department of Zoology, Invited Seminar Speaker, 2018.
University of Saint Andrews, U.K. School of Biology, Invited Seminar Speaker, 2018.
University of Minnesota, Department of Ecology, Evolution and Behavior, Invited Colloquium Speaker 2014.
University of Kentucky Symposium in Ecology, Evolution and Behavior. Keynote Speaker, 2014.
University of South Florida, Department of Biology, Invited Seminar Speaker, 2012.
University of Central Florida, Department of Biology, Invited Seminar Speaker, 2011.
University of Missouri, Evolution and Ecology Seminar Series, Invited Speaker, 2010.
University of Florida, Department of Biology, Invited Seminar Speaker, 2007, 2013.
Montana State University, Entomology Program. Invited Seminar Speaker, 2006.
Smithsonian Tropical Research Institute, Tupper Seminar Series. Invited Seminar Speaker, 2004.

SYMPOSIUM TALKS

University of Florida, Fusing Research and Teaching Symposium. Featured speaker on bringing authentic research into the classroom. 2017.
University of Florida, CALS Teaching Enhancement Symposium 2017, 2016, 2013, 2012 (five presentations total). Gainesville, FL. Invited presentations and workshops on best practices in graduate mentoring, undergraduate classroom instruction, and undergraduate mentoring.
Behaviour 2015, Cairns, Australia. Invited Symposium Speaker, 2015.
Entomological Society of America Annual Meeting, Invited Symposium Speaker, 2015.
University of Florida, Center for Undergraduate Research, Integrating Research Workshop. Featured speaker on bringing authentic research into the classroom. 2015.
University of Florida, Tropical Connections: Career Development Workshop for Post-Doctoral and Senior Graduate Scientists, Featured Speaker. 2015.
Winter Animal Behavior Conference 2014, 2013, 2010, 2009. Steamboat Springs, CO. Invited Speaker.
Entomological Society of America Annual Meeting, Invited Symposium Speaker, 2010.
Gordon Conference – Genes and Behavior, Italy. Invited "Data blitz" Speaker, 2008.

MEMBERSHIP in PROFESSIONAL SOCIETIES

Society for the Study of Evolution
Entomological Society of America
European Society for Evolutionary Biology
Society for Integrative and Comparative Biology
American Society of Naturalists
Animal Behavior Society
British Ecological Society
International Society for Behavioural Ecology

SERVICE to SCIENTIFIC COMMUNITY

2016 – Present	**Associate Editor and Editorial Board Member** for *Functional Ecology*
2010, 2012, 2015, 2017	**Service on panels at the National Science Foundation, Washington D.C.**
2011 – 2016	**Editorial Board Member** and **Reviewing Editor** for the *Journal of Evolutionary Biology*
2010 – Present	**Ad hoc grant proposal reviewer for the National Science Foundation**

SERVICE to UNIVERSITY

2017	**Panelist and Reviewer,** Global Fellows Program, Office for Global Research Engagement, University of Florida International Center.
2017	**Graduate Curriculum Revision Committee,** Entomology & Nematology Department, University of Florida
2017	**Research Retreat Committee**, Entomology & Nematology Department, University of Florida
2015 – 2017	**Long-Range Strategic Planning Committee for Undergraduate Research,** University of Florida Center for Undergraduate Research.
2015 – 2017	**Scholarship & Leadership Awards Committee**, University of Florida, College of Agriculture and Life Sciences
2007 – Present	**Graduate Committee Member** for 20 graduate students
2012 – 2014	**Graduate Admissions Committee,** University of Florida, Entomology and Nematology Department.
2012 – 2014	**Administrative Committee,** University of Florida, Entomology and Nematology Department.
2009 – 2014	**Seminar Committee Director.** Organized the University of Florida Entomology and Nematology Departmental Seminar Series and mentored students in professional development.

Manuscript Reviewer for multiple journals including: *Evolution; Evolutionary Ecology; Nature Communications; Biology Letters; Animal Behaviour;* and *American Naturalist.*

Session Moderator, Behaviour 2015 (3 sessions), Society for Integrative and Comparative Biology 2011, Evolution Annual Meeting 2005.

RECENT MAJOR OUTREACH EVENTS and MEDIA ATTENTION

2017 NSF Research Feature: https://www.youtube.com/watch?time_continue=9&v=mFLn20j4kYo

Bug Week featured topic "Insect Weapons" with accompanying blog post and insect weapon coloring book.

Interviewed by RFD-TV in Nashville, TN for the Market Day Report and Live Agriculture News. It airs in 50M homes via A.M. radio and SiriusXM 147.

My teaching program was featured in the November 15th edition of the AgriPulse newsletter

2016 Florida Museum's Science Café program, "The Amazing World of Insect Combat and Courtship". Public lecture to 87 participants from the local community.

Updated October 2018