

Kasey D. Fowler-Finn, Ph.D.

Saint Louis University – Department of Biology – 324 Macelwane
3507 Laclede Ave, Saint Louis MO 63103. Phone: 314-977-7062
Email: fowlerfinn@slu.edu Website: <http://bio.slu.edu/fowlerfinn>

BACKGROUND

POSITIONS HELD

- 2014 – pres. Assistant Professor, Department of Biology, Saint Louis University.
Saint Louis, MO, USA
- 2009 – 2014 Postdoctoral Research Associate. University of Wisconsin-Milwaukee
Milwaukee, WI USA

EDUCATION

- 2009, Ph.D. University of Nebraska, Lincoln, NE USA. Advisor: EA Hebets.
Biology: Ecology, Evolution, Behavior. Thesis: *Exploring the maintenance of and selection on two distinct male morphs in a Schizocosa wolf spider.*
- 2004 – 2005 Ph.D. program, University of California-Berkeley, Berkeley CA USA
Advisor: EA Hebets. Environmental Science, Policy, Management.
- 2004 B.A. Cornell University. Ithaca, NY USA. Biology: Neurobiology and Behavior
(High honors, with Distinction)

SPECIAL TRAINING

- 2005 *Tropical Ecology*: Organization for Tropical Studies (Duke and U of Costa Rica)
- 2006 *Sensory Ecology*: Lund University, Sweden

RESEARCH INTERESTS

Evolution of complex traits in insects and arachnids. Contributions of genetic variation and plasticity in evolutionary diversification. Development and application of quantitative approaches to testing evolutionary hypotheses. Organisms studied: treehoppers (Hemiptera: Membracidae), daddy longlegs (Arachnida: Opiliones), and spiders (Arachnida: Araneae).

SCHOLARSHIP

PROPOSALS PENDING (invited full proposals)

- National Science Foundation.** “IOS: Genetic change and genetic accommodation allow singing insects to adapt to global warming.” Requested \$532,085
- National Science Foundation.** “Collaborative Research: ARTS: Integrative Taxonomy of Harvestmen from Eastern North America Emphasizing Multidimensional Analysis of Phenotype” Co-PI with J Schultz (U Maryland) and Hannah Wood (Smithsonian)
Requested \$1.3M (\$655,020 for PI Fowler-Finn)

GRANTS AWARDED (National funding agencies listed first in bold)

- 2011 – 2016 **National Science Foundation**, NSF IOS-1120790, Co-PI, with RL Rodriguez.
Awarded \$530,000.
- 2013 **National Science Foundation.** Research Experience for Undergraduates supplement. Co-PI with RL Rodriguez. \$8,500
- 2008 – 2009 **National Science Foundation.** Doctoral Dissertation Improvement Grant.
With EA Hebets. \$11,998
- 2008 **Animal Behavior Society** Student Research Award, PI. \$800.
- 2007 **Sigma Xi**, Grant-in-aid-of, PI. \$1,000

2015	Summer Research Award, Saint Louis University, PI. \$2,314
2014	Experiment.com, Crowd-sourced funding, PI. \$600.
2008	Blair Paxton Udale Grant, University of Nebraska, PI. \$2,000
2007	GANN research award, University of Nebraska School of Biological Sciences. PI. \$2,500
2007	Blair Paxton Udale grant. University of Nebraska School School of Biological Sciences, University of Nebraska, PI. \$1,500
2006	Initiative for Ecological and Evolutionary Analysis Research, Grant-In-Aid University of Nebraska School of Biological Sciences. PI. \$1,000.

PUBLICATIONS

**Student collaborator; **Undergraduate student collaborator*

18. **Fowler-Finn, K.D.**, Cruz, D., & Rodríguez, R.L. 2016. Local population density and group composition influence signal-preference relationships in *Enchenopa* treehoppers (Hemiptera: Membracidae). *Journal of Evolutionary Biology*. In press.
17. **Fowler-Finn, K.D.** & Rodríguez, R.L. 2016. The causes of variation in the presence of genetic covariance between sexual traits and preferences. *Biological Reviews*. 91(2): 511-533
16. **Fowler-Finn, K.D.**, Sullivan-Beckers, L., Runck, A. & Hebets, E.A. 2015. The complexities of female mate choice and male polymorphisms: Elucidating the role Special Issue, Current Zoology: Learning and sexual selection. 61(6): 1015-1035.
15. **Fowler-Finn, K.D.**, *Kilmer, K.T., **Hallet, A., Rodríguez, R. L. 2015. Variation in signal-preference genetic correlations in *Enchenopa* treehoppers (Hemiptera: Membracidae). *Ecology & Evolution*. 5(14): 2774-2786.
14. **Fowler-Finn, K.D.**, **Triana, E., & **Miller, O.G. 2014. Mating in the harvestman *Leiobunum vittatum* (Arachnida: Opionides): from premating struggles to solicitous tactile engagement. *Behaviour*. 151: 1663-1686
13. **Fowler-Finn, K.D.** **Al-Wathiqui, N, **Cruz, D., **Al-Wathiqui, M, Rodríguez, R.L. 2014. Male *Enchenopa* treehoppers (Hemiptera: Membracidae) vary mate-searching behaviour but not signaling behaviour in response to spider silk. *Naturwissenschaften*. 101: 211-220.
12. **Fowler-Finn, K.D.** & Rodríguez, R.L. 2013. Repeatability of mate preference functions in *Enchenopa* treehoppers (Hemiptera: Membracidae). *Animal Behaviour*. 85: 493-499.
11. R.L. Rodríguez, *Rebar, D.W. & **Fowler-Finn, K.D.** The evolution and evolutionary consequences of social plasticity in mate preferences. *Animal Behaviour*. 85(5): 1041-1047
10. **Fowler-Finn, K.D.**, *Rosenthal, M. & Hebets, E.A. Locomotor performance varies with adult phenotype in ornamented/non-ornamented wolf spiders. *Ethology*. 119(7): 570-580. — **Featured in Bionieuws article: “Mobiel met opvallend uiterlijk.” June 8, 2013.**
9. Rodríguez, R.L., **Hallet, A.C., *Kilmer, J.T, **Fowler-Finn, K.D.** 2013. Curves as traits: genetic and environmental variation in mate preference functions. *Journal of Evolutionary Biology*. 26: 434-442.
8. Bailey, N.W., **Fowler-Finn, K.D.**, *Rebar, D. and Rodríguez, R.L. 2013. *Commentary: Green Symphonies or wind in the willows? Testing acoustic communication in plants. Behavioral Ecology*. 24(4): 797-798.
7. **Pesek, M., Hebets, E.A., Sullivan-Beckers, L., & **Fowler-Finn, K.D.** Foreleg ornaments do not hinder foraging success in brush-legged wolf spiders. *Journal of Insect Biology*. 26(6): 837-849

6. **Fowler-Finn, K.D.** & Rodríguez, R.L. 2012. Experience-mediated plasticity in mate preferences: mating assurance in a variable environment. *Evolution*. 66(2): 459-468.
5. **Fowler-Finn, K.D.** & Rodríguez, R.L. 2012. The evolution of experience-mediated plasticity in mate preferences. *Journal of Evolutionary Biology*. 25(9): 1855-1863.
4. Rodríguez, R.L., Cocroft, R.B., **Haen, C. & **Fowler-Finn, K.D.** 2012. Males adjust signaling effort based on cues arising from the expression of female mate preferences. *Behavioral Ecology*. 23(6): 1218-1225.
3. **Fowler-Finn, K.D.** & Hebets, E.A. 2011. The degree of response to increased predation risk corresponds to male secondary sexual traits. *Behavioral Ecology*. 22(2): 268-275.
—Featured in IFLScience guest blog: <http://www.iflscience.com/guest-blog-nature-sex0>
2. **Fowler-Finn, K.D.** & Hebets, E.A. 2011. More ornamented males exhibit increased predation risk and antipredatory escapes, but not greater mortality. *Ethology*. 117(2): 102-114.
1. **Fowler-Finn, K.D.** and Hebets, EA. 2006. An examination of agonistic interactions in the whip spider *Phrynus marginemaculatus* (Arachnida; Amblypygi). *Journal of Arachnology* 34(1): 62-76. (Selected as a BioOne feature article)

NATIONAL FELLOWSHIPS AND AWARDS

2014	Early Career Fellowship, Mountain Lake Biological Station, University of Virginia
2004-2008	National Science Foundation, Graduate Research Fellowship
2007	Student poster award, 2 nd place, American Arachnological Society
2009	Animal Behavior Society, student travel award (declined by Fowler-Finn)

INVITED PRESENTATIONS

2016	Oklahoma State University, Stillwater, OK. (scheduled Nov, 2016)
2016	Southern Illinois University-Carbondale. Graduate student invited speaker
2016	Winter Animal Behavior Conference. Steamboat Springs, CO
2015	University of Missouri-Saint Louis. Saint Louis, MO.
2015	Mountain Lake Biological Station, University of Virginia (with artist Stephen Vitiello)
2015	Southern Illinois University, Edwardsville. Edwardsville, IL.
2014	Saint Louis Ecology, Evolution and Conservation Retreat. Edwardsville, IL.
2014	University of Missouri. Columbia, MO.
2014	University of Wisconsin, Milwaukee. Milwaukee WI.
2014	Mountain Lake Biological Station, University of Virginia
2014	Saint Louis University. Saint Louis, MO.
2013	Gettysburg College Department of Biology. Gettysburg, PA.
2013	Rice University. Department of Ecology and Evolution. Houston, TX.
2013	University of Louisiana-Lafayette. Lafayette, LA.
2013	Michigan State University – Kellogg Biological Station, informal talk.
2010	Warder Clyde Allee Program, Animal Behavior Society. Williamsburg, VA
2009	Department of Biological Sciences, U of Wisconsin-Milwaukee.
2003	Guest Lecturer for Introductory Neurobiology, Bowdoin College, Brunswick, ME

CONTRIBUTED PRESENTATIONS

2016	International Congress of Arachnology, Golden, CO USA
2016	Animal Behavior Society, Columbia MO USA
2015	Animal Behavior Society. Anchorage, AK USA
2013	American Arachnological Society Conference, Johnson City, TN USA
2013	Animal Behavior Society Conference, Boulder, CO USA
2012	American Arachnological Society Conference. Greenbay, WI USA (poster)

- 2011 Insect Sound and Vibration Conference, Columbia, MO USA
- 2010 Study for the Society of Evolution. Portland, OR USA
- 2009 MEEC, University of Nebraska-Lincoln, Lincoln, NE USA
- 2008 Study for the Society of Evolution. Minneapolis, MN USA
- 2008 Animal Behavior Society Conference, Snowbird, UT USA
- 2007 American Arachnological Society Conference, Selensgrove, PA USA (poster)
- 2007 Animal Behavior Society Conference, Burlington, VT USA (poster)
- 2006 American Arachnological Society Conference. Baltimore, MD USA
- 2003 American Arachnological Society Conference. Denver, CO USA

STUDENT CONTRIBUTED PRESENTATIONS *graduate student **undergraduate student

- 2016 *Temperature influences sexual signaling and mate preferences in Enchenopa binotata treehoppers (Hemiptera: Membracidae).* D Jocson*, M Smeester**, K Fowler-Finn. Animal Behavior Society, Columbia MO USA
- 2016 *Prior social environment can influence current social interactions and reproductive success.* T Shoenberger*, D Jocson*, P Makhaskar**, E Scott**, C Beckett**, M Smeester**, K Fowler-Finn. Animal Behavior Society, Columbia MO USA
- 2016 *Individual and contextual variation in jumping in Enchenopa treehoppers (Hemiptera: Membracidae).* M Smeester**, K Fowler-Finn. Animal Behavior Society, Columbia MO USA (undergraduate oral presentation)
- 2016 *Prior social environment can influence current social interactions and reproductive success.* T Shoenberger*, D Jocson*, P Makhaskar**, E Scott**, C Beckett**, M Smeester**, K Fowler-Finn. International Congress for Arachnology, Golden, CO USA (poster)

STUDENT GRANTS

- 2016 *Temperature influence on mating behavior of male and female Enchenopa binotata (Hemiptera: Membracidae).* Reis Biological Grant. PI: D Jocson, \$600.
- 2016 *The impact of social structure on behavioral plasticity.* Reis Biological Grant. PI: W Shoenberger, \$600
- 2012 Stipend for Undergraduate Research Fellowship. University of Wisconsin-Milwaukee. Awarded to O Miller. \$4,000

PROFESSIONAL SOCIETIES

- 2006 Sigma Xi Scientific Research Society inductee
- 2009 – pres Society for the Study of Evolution
- 2006 – pres Animal Behavior Society
- 2006 – pres American Arachnological Society
- 2006 International Society for Neuroethology

TEACHING

COURSES TAUGHT

- Undergraduate courses: Evolutionary Biology. Core course development and teaching for Biology Majors. Saint Louis University. Falls: 2014, 2015, 2016
- Graduate courses: Advanced Evolutionary Biology. Course development and teaching for graduate students in Biology. Saint Louis University. Spring 2016
- Teaching assistant courses:
 - Laboratory instructor: Introductory Biology, University of Nebraska. 2007
- Outreach education: Extensive experience in Outreach Education, with many targeting underrepresented and underserved groups (see Outreach, page 7). 2003 – present

UNDERGRAD MENTORSHIP

Academic mentor for 30 undergraduate Biology Major and Minor students at Saint Louis University. 2014 – 2016

UNDERGRAD RESEARCH MENTORSHIP

Summary: mentor for 32 undergraduate students: 17 women, eight minorities, two Latinas, seven first-generation college students, and a high school student. Of those for whom I have information: seven are attending/attended graduate school, three medical/dental school, and eight are first- or co-authors on peer-reviewed publications (**Represents a publication with undergraduate first- or co-authorship*).

Saint Louis University: 14 total – 8 women, three 1st-generation, 1 Lybian, 1 Latina
Humza Ahmed, Carli Beckett, Elizabeth Chaney, Alex Downey, Timothy Jeffries, Todd Johnson, Daniel Lee, Noah Leith, Allison Kempf, Pallavi Mhaskar, Fatma Mufti, Emily Scott, Morgan Smeester, Evian Perez

U of Wisconsin-Milwaukee (postdoc): 9 total – 4 women, two 1st-generation, 4 minorities, 1 Latina
**Allysa Cervantes-Hallet, *Owen Miller, *Christina Haen, *Emilia Triana, *Nooria Al-Wathiqi, *Misqal Al-Wathiqi, *Daniel Cruz, Keith Glenna, Owen Stefaniak

University of Nebraska (graduate student): 9 total – 5 women, two 1st-generation, 2 minorities:
Morgan Campbell, Dustin Franklin, Bronson Boosalis, *Mari Pesek (*1st-author*), Daniel Wickwire, Reed Stubbendieck, Tanaya Johnson (U of Mississippi), Nicole Samuels (U of Mississippi), Techla Shoenberger

GRADUATE STUDENT MENTORSHIP

Summary: M.S. advisor for 1 student, Ph.D. advisor for 1 student, and committee member for 3 Ph.D. candidates at Saint Louis University.

Currently advising:

Downen Jocson, M.S. student (Summer 2015 – present; 1st-generation college, Filipina)
Terry Shoenberger. Ph.D. student (Fall 2015 – present)

Graduate student committee member for:

Jesse Balaban-Feld (PhD candidate, Saint Louis University. 2014-present)
Elizabeth Angeli (PhD student, Saint Louis University, 2014-2015)
Laura Klein (PhD candidate, Saint Louis University. 2014-present)
Danelle Haake (PhD candidate, Saint Louis University. 2016-present)

PROFESSIONAL DEVELOPMENT

2016 “Witnessing Whiteness,” a 16-week workshop for awareness about racism and taking action against racial biases.

2013 Participation in “Live Blog: Instructional Rounds: Professional development through observation.”

2012 How can students shape their own learning? Teaching workshop. University of Wisconsin-Milwaukee.

SERVICE

PROFESSIONAL SERVICE

Peer reviewer for 37 manuscripts and 14 journals: *Animal Behaviour* (7), *Behavioral Ecology* (5), *Behavioral Ecology and Sociobiology* (1), *Behavioral Processes* (1), *Biological Journal of the Linnean Society* (2), *Canadian Journal of Zoology* (1), *Current Zoology* (1), *Ecological Entomology* (1), *Ethology* (5), *Evolution* (2), *Journal of Arachnology* (4), *PloS ONE* (4)

Grant proposal external reviewer: NSF Division of Environmental Biology, Evolutionary Processes cluster: 2014 (1 proposal)

Grant proposal reviewer: Animal Behavior Society student grant competition 2014, 2015, 2016 (3-7 grants/year).

Mentor for Latin American researchers via the Animal Behavior Society. Advising in data analysis, presentation, and writing for researchers from Latin American countries wishing to publish in the journal *Animal Behaviour*. 2013-present

Mentor for rising undergraduates in the Animal Behavior Society Turner Program. 2016

UNIVERSITY SERVICE

University-level – Saint Louis University:

2016 – present	Nominations Committee, Natural Sciences Representative
2015	Judge at Sigma Xi Research Symposium
2016 – present	Faculty Mentor, Certificate in University Teaching Skills (CUTS) for Justin Zweck (PhD student, Biology,)

College-level – Saint Louis University College of Arts & Sciences:

2016	Graduate Student Association Symposium Judge
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Department-level – Saint Louis University, Department of Biology:

2016 – present	Chair, Greenhouse Committee
2014 – 2016	Building Safety Committee
2014 – 2015	Neuroscience Search Committee member

SCIENTIFIC CONSULTING

2016	Army Corps of Engineers, consultation on acoustic bat monitoring program
2016	Consultation and identification of arachnids for David Bruns

PROFESSIONAL COLLABORATIONS

2014- present Collaboration with sound artist Stephen Vitiello to create sound installations based on vibrational insects sounds from my research. This has resulted in two products: (i) "A Scuttering Across the Leaves. Sept 3-13, 2015 at Virginia Tech's Moss Center for the Arts. Attracted >500 people over 10 days. Paired with 2 public talks about my research that attracted ~150 people. (ii) "A Scuttering Across the Leaves (Hoppers Mix)" presented at the first Beijing Media Art Biennial, China (September 2016)

OUTREACH EDUCATION

- 2016 Presenter at the USA Science and Engineering Festival, Washington D.C. ~300,000+ attended the Festival, ~30,000+ visited the exhibit (Eight-Legged Encounters)
- 2016 Bioblitz leader “Insects and Arachnids” at Forest Park, Saint Louis. 50 people of all ages attended my sessions.
- 2016 Presenter at the Animal Behavior Society Outreach Fair. U of Missouri, Columbia, MO
- 2015 Delivered two talks to a lay audience (~150 people) about my research at the opening of a collaborative art exhibit (A Scuttering Across the Leaves, Virginia Tech).
- 2014 Ran station about research during Mountain Lake Biological Station’s “Open House.”
- 2014 Featured in UWM’s Letters & Sciences IN-FOCUS article titled “New greenhouse enhances research and teaching.”
- 2013 Two listener-contributed stories to Technophiles Podcast (10,000+ subscribers): crowdfunding in biological research (<http://www.technophilespodcast.com/> Episode #139, Sept 3, 2013; Episode #140, Sept 11, 2013).
- 2012 Organized Milwaukee River Advocates Mini Bio Series, bringing community members into the field to study arthropods. Skills learned included collection, identification, and sound equipment to listen to insect signals. Participation of 3 graduate students.
- 2012 Organized two casual Neighborhood Biology Night Walks. Citizens learned basic biology, identification, and collection of moths, frogs, and spiders inhabiting the Milwaukee River Greenway. Participation of 3 graduate students.
- 2011 Provided insect sounds from research recordings to Victoria Bond (conductor and recorder, www.victoriabond.com) for musical composition. Participation of 1 undergrad.
- 2011 Girl Scout Camp, visiting scientist: spider and insect exploration.
- 2008 Established Spider Outreach education program (2nd-8th grade) with Lincoln Learning Centers, Lincoln NE. Involved: curriculum development, interactive presentations and inquiry-driven field trips with 8 classrooms. Participation of 4 graduate students and 1 post-doctoral fellow.
- 2008 Big Red Summer Academic Camps: mentor for 2 high school students (2008, 2009) in the Spider Camp.
- 2006 4-H National Science and Technology Conference spider walk.
- 2004 Oxford, MS Girl Scout troop spider walk.
- 2003 Spider outreach education presenter for local elementary school classes. Program organized by Dr. Linda Rayor, Cornell University. Ithaca, NY. (2003-2004)

IN THE NEWS

- 2016 Science News covered my research on daddy longlegs presented at the Animal Behavior Conference in Wild Things: *The weird mating habits of daddy longlegs*.
<http://www.sciencenews.org/blog/wild-thing/weird-mating-habits-of-daddy-longlegs>
- 2016 Live ~5 minute interview on nationally broadcast Irish Radio station on the Peter Meincroff show about my work on daddy longlegs.
- 2016 Quoted in Distractify about work on daddy longlegs mating:
<http://distractify.com/animals/2016/09/07/daddy-long-legs-invasion-coming-soon>
- 2015 National Radio coverage of my research, and personal interview on several shows (NPR)
 - WBUR Here & Now (10/19/15) <http://hereandnow.wbur.org/2015/10/19/insect-communication>
 - Philadelphia’s The Pulse’s Newsworks show (10/2/2015)<http://www.newsworks.org/index.php/local/the-pulse/86465-good-vibrations-these-bugs-do-their-sexting-via-plant-stem>
 - Saint Louis Public Radio – (9/15) <http://news.stlpublicradio.org/post/good-vibrations-these-bugs-do-their-sexting-plant-stem>.
- 2015 Research on wolf spiders mating and anti-predator behavior was featured in a guest blog article in IFLScience! <http://www.iflscience.com/guest-blog-nature-sex0>
- 2013 Article in Ethology on wolf spiders covered by Dutch science magazine Bioneiuis
- 2010 Omaha News highlighted the development of Mari Pesek’s career in Biology, and my role as her mentor. Mari received her Master’s degree from the University of Kansas in 2013 (<http://www.omaha.com/article/20100314/NEWS01/703149910>)