

Luke Reding

Section of Integrative Biology
University of Texas at Austin
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Education

[University of Texas at Austin](#)
Ph.D. Candidate. Ecology, Evolution, and Behavior.
GPA: 3.9

[College of William and Mary](#)
B.S. Biology with Honors. Minor: Mathematics
Departmental Honors, *Summa Cum Laude*, Phi Beta Kappa
GPA: 3.8

Publications

[Reding, L](#) and M. E. Cummings. Rational choice of social groups in mosquitofish. *In review, Biology Letters*

[Reding, L](#) and M. E. Cummings. Rational mate choice decisions vary by age and exploratory style in female swordtails. *In revision, Ethology*

[Reding, L.](#) and M. E. Cummings. Context-dependent preferences vary by multicomponent signals in a swordtail. 2017. *Animal Behavior*. doi:10.1016/j.anbehav.2017.05.017

[Reding, L.](#) and M. E. Cummings. 2016. Does sensory expansion benefit asexual species? An olfactory discrimination test in Amazon mollies. *Behavioral Ecology*. doi: 10.1093/beheco/arv168

[Reding, L.](#) 2015. Increased hatching success as a direct benefit of polyandry in birds. *Evolution*. doi: 10.1111/evo.12553

[Reding, L. P.](#), H. A. Murphy & J. P. Swaddle. 2013. Sexual selection hinders adaptation in experimental populations of yeast. *Biology Letters* 9:20121202. doi: 10.1098/rsbl.2012.1202

Awards and Fellowships

[University Graduate Continuing Fellowship](#), (2017): \$40,000
[Dean's Prestigious Supplemental Award](#) (2014): \$1,000
[Center for Perceptual Studies Conference Travel Grant](#) (2014): \$500
[National Science Foundation Graduate Research Fellowship](#) (2013): \$96,000
[Preemptive Recruitment Fellowship](#), UT Austin (2012): \$23,000 (tuition and stipend)
[Turner Award, Animal Behavior Society](#) (2011)
[Student Conference Travel Award](#), funded by a HHMI grant through the College of William & Mary (2011): \$300

Reviewer For

Journal of Animal Ecology
Behavioral Ecology and Sociobiology
Environmental Science & Technology
Journal of Evolutionary Biology

Research Funding

UT EEB DDIG-like grant (2016): \$8000
Animal Behavior Society Student Research Award (2016): \$1000
Texas EcoLab Grant (2012): \$1600
UT EEB Startup Grant (2012): \$2000
Dintersmith Fellowship, William and Mary (2011): \$6000
Bruce Grant Award (2011): \$1000
HHMI Freshman Research Project, through William and Mary (2009): \$500

Teaching Experience

Teaching Assistant for Bio 311D: Introductory Biology for science majors

- 4.4/5 Instructor Rating, Fall 2013
- 4.5/5 Instructor Rating, Spring 2014
- 4.8/5 Instructor Rating, Summer 2014

Computer skills

Statistics: R
General Programming: R (4/5), Python (3/5), bash(2/5), Go (2/5)
Video analyses: ffmpeg
Illustration: GIMP, Inkscape
Animation: Blender

Graduate coursework

Biology: Introduction to Ecology, Evolution & Behavior; Sexual Selection and the Brain; Population Genetics; Supervised Teaching in the Biological Sciences, Methods in Ecological Genomics
Statistics: Introduction to Statistical Methods I & II; Data Analysis
Other: Texas Venture Labs

Guest Lecturer

Animal Behavior, UT Austin: Sexual selection, four 90 minute lectures on sexual selection, differential investment theory, sexual conflict, human evolution; Spring 2017

Animal Behavior, St. Edwards University: Delivered guest lecture on sexual selection and mating preferences for Dr. Realynn Hayes' Animal Behavior course, Fall 2017

Outreach

- **GK-12 Program Associate**
 - This program pairs graduate students in the sciences with teachers in local school districts teaching STEM disciplines with the goal of educating young people about science and bolstering ties between the university and the community
 - Through this program I have:
 - 26 January 2017. Judged science fair at Bryker Woods Elementary School
 - 7 March 2015. Helped orchestrate a dinosaur puppet show for young children at *Explore UT* day.
 - 28 February 2015. Helped ~150 4th and 5th grade girls learn about spectroscopy and light for UT's *Introduce a Girl to Engineering Day*. Photos [here](#).
 - 4 February 2015. Served as a science fair judge at Burnet Middle School.
 - 15 January 2015. Served as a science fair judge at Blackland Prairie Elementary.
 - The Cummings lab hosted a group of middle schoolers through the *GirlAdvocates!* program in 2014. We designed a series of hands-on activities to expose them to the sorts of work scientists do.
- **Undergraduate mentoring**
 - Luke Allen Stahl (Fall 2013 - Fall 2014)
 - Lynette Strickland (Summer 2014, minority)
 - Mitch Anderson (Spring - Fall 2015)
 - Joseph Xin (Spring 2015 - Spring 2016, minority)
 - Mariana Canek (Spring - Fall 2015, minority)
 - Avery Trudell (Spring - Summer 2015)
 - Aurelia Allen (Spring 2016 - Spring 2017)
 - Rachel Ellerd (Summer 2016 - present)
 - Rachel Koeter (Summer 2016 - present)
 - Sam Meyers (Fall 2016)
 - Samantha Kagel (Fall 2016)
 - Kathryn Kaihlanen (Fall 2016)
- **Mentoring of high school students**
 - Fall 2015 - Spring 2016 I mentored a high school student, Mystee Atles, who devised and completed an independent project on her own.
 - Summer 2016, 2017 I mentored Quin Hricik, a local high school student on various projects
 - Fall 2016 - Spring 2017 I mentored high school student Isaac Carol
 - Summer 2017 I mentored Shreya Thiagarajan
- **Middle school tutoring**

I tutor 8th grade students weekly in science and math weekly at Webb Middle School in Austin. The student body of Webb is 86% Hispanic and 97% economically disadvantaged.

Presentations

Brain, Behavior, and Evolution Seminar, UT Austin, January 2017
“(Ir)rationality of mate choice behavior in swordtails”

Brain, Behavior, and Evolution Seminar, UT Austin, October 2015
“Decision rules and mate choice in swordtails”

Animal Behavior Society, August 2014
“Do asexual mollies use chemical cues to avoid associating with infected individuals?”

Graduate Seminar in Brain, Behavior, & Evolution, UT Austin (Talk),
October 2012
“Can sexual selection drive extinction processes? An examination from
birds to yeast”

Honors Colloquium, College of William and Mary (Talk), February 2012
“Sexual selection and extinction in yeast”

Southeastern Population Ecology and Evolutionary Genetics Meeting
(Poster Presentation), October 2011
“Does sexual selection drive extinction and speciation processes in yeast?”

Biology Homecoming Reception, Biology Department, William and Mary
(Poster Presentation), October 2011
“Does sexual selection drive extinction and speciation processes in yeast?”

William and Mary Summer Research Showcase (Poster Presentation),
September 2011
“Does sexual selection drive extinction and speciation processes in yeast?”

Joint Meeting of the Animal Behavior Society and the International
Ethological Conference (Contributed Talk), July 2011
“Does sexual selection predict extinction threat risk in African birds?”