

# MATTHEW R. WILKINS

Center for Science Outreach, Vanderbilt University  
Resident Scientist, Head Magnet Middle School

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## RESEARCH INTERESTS

K-12 STEM curriculum design; science communication; complex signal evolution; sexual selection; geographic variation in birdsong; female signaling; speciation; phenotype networks; phenotypic integration

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## OUTREACH MISSION STATEMENT

My aims are to: 1) communicate science to K-12 students, undergrads, and the general public through creative multimedia and 2) stimulate collaboration and synergy within the community of researchers striving to improve public engagement in science.

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## EDUCATION

- PhD (2014)            University of Colorado (CU): Ecology and Evolutionary Biology  
    Advisor:            Dr. Rebecca J. Safran  
    Dissertation:      Evolutionary divergence in sexual signals: Insights from within and among barn swallow populations
- BA (2006)            Vanderbilt University, *magna cum laude*: Double major in Ecology, Evolution, and Organismal Biology & Spanish Linguistics
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## ACADEMIC APPOINTMENTS

- Aug 2017-            Postdoctoral Fellow: Center for Science Outreach, Vanderbilt University; Resident Scientist at Head Magnet Middle School
- 2016-2017            Postdoctoral Research Fellow: School of Biological Sciences, University of Nebraska-Lincoln (Advisor: Dr. Dai Shizuka)
- 2014-2016            School of Biological Sciences Program of Excellence Postdoctoral Fellow, University of Nebraska-Lincoln (Advisors: Drs. Dai Shizuka & Eileen Hebets)
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## PEER-REVIEWED PUBLICATIONS

14. ESC Scordato, CCR Smith, GA Semenov, L Yu, **MR Wilkins**, W Liang, A Rubtsov, S Gombobaatar, K Koyama, S Turbek, C Stricker, M Wunder, RJ Safran. A continent-wide migratory divide reduces interbreeding across multiple barn swallow hybrid zones. *Ecology Letters* 23 (2): 231-241
13. PL Pap, A Fülöp, M Adamkova, J Cepak, R Michalkova, RJ Safran, AN Stermin, O Tomasek, CI Vágási, O Vincze, **MR Wilkins**, T Albrecht. (2014) Selection on multiple sexual signals in two Eastern-European populations of the barn swallow. *Ecology & Evolution* 9 (19): 11277-11287
12. **MR Wilkins**, ESC Scordato, G Semenov, H Karaardıç, D Shizuka, A Rubtsov, PL Pap, S-F Shen, and RJ Safran (2018) Global song divergence in barn swallows (*Hirundo rustica*): exploring the roles of genetic, geographic, and climatic distance in sympatry and allopatry. *Biological Journal of the Linnean Society* 123 (4): 825-849
11. MF Rosenthal, **MR Wilkins**, D Shizuka, EA Hebets (2018) Dynamic changes in display architecture and function across environments revealed by a systems approach to animal communication. *Evolution* 72 (5): 1134-1145

10. ESC Scordato, **MR Wilkins**, G Semenov, A Rubtsov, N Kane, RJ Safran (2017) Phenotypic and genomic variation in two avian hybrid zones. *Molecular Ecology* 26 (20): 5676-5691
9. JK Hubbard, AK Hund, II Levin, KJ McGraw, **MR Wilkins**, RJ Safran (2017) The importance of cross-validation, accuracy, and precision for measuring plumage color: a comment on Vaquero-Alba et al. *The Auk* 134 (1): 34-38
8. **MR Wilkins**, H Karaardıç, Y Vortman, TL Parchman, T Albrecht, A Petrzalkova, L Özkan, P Pap, JK Hubbard, A Hund, RJ Safran (2016) Phenotypic differentiation is associated with divergent sexual selection among closely related barn swallow populations. *Journal of Evolutionary Biology* 29 (12): 2410-2421
7. RJ Safran, Y Vortman, BR Jenkins, JK Hubbard, **MR Wilkins**, RJ Bradley, A Lotem (2016) The maintenance of phenotypic divergence through sexual selection: an experimental study in barn swallows *Hirundo rustica*. *Evolution* 70 (9): 2074-2084
6. RJ Safran, ESC Scordato, **MR Wilkins**, JK Hubbard, BR Jenkins, T Albrecht, SM Flaxman, H Karaardıç, Y Vortman, A Lotem, P Nosil, P Pap, S Shen, S-F Chan, T Parchman, NC Kane (2016) Genome-wide differentiation in closely related populations: the roles of selection and geographic isolation. *Molecular Ecology* 25 (16): 3769-4090 (Cover)
5. MN Vitousek, O Tomášek, T Albrecht, **MR Wilkins**, RJ Safran (2016) Signal traits and oxidative stress: a comparative study across populations with divergent signals. *Frontiers in Ecology & Evolution* 4 (56)
4. **MR Wilkins**, D Shizuka, MB Joseph, JK Hubbard, RJ Safran (2015) Multimodal signalling in the North American barn swallow: a phenotype network approach. *Proceedings of the Royal Society B: Biological Sciences* 282 (20151574)
3. RL Rodríguez, M Araya-Salas, DA Gray, M Reichert, L Symes, **MR Wilkins**, RJ Safran, G Höbel (2015) How acoustic signals scale with body size: common trends in static allometry across diverse taxa. *Behavioral Ecology* 26 (1): 168-177
2. **MR Wilkins**, N Seddon, RJ Safran (2013) Evolutionary divergence in acoustic signals: causes and consequences. *Trends in Ecology & Evolution* 28 (3): 156-166 (Cover)
1. RJ Safran, KJ McGraw, **MR Wilkins**, JK Hubbard, J Marling (2010) Positive carotenoid balance correlates with greater reproductive performance in a wild bird. *PLoS ONE* 5 (2): e9420

[Total Citations= 459](#)

#### *In Review*

- **MR Wilkins**, KJ Odom, L Benedict, RJ Safran. Dimorphism in song and plumage explained by selection on females, not males, in North American barn swallows

#### *In Revision*

- CD Francis CD\*, **MR Wilkins**\* Testing the strength and direction of selection using metabolic scaling theory: a case study in avian vocal communication

#### *In Preparation*

- **MR Wilkins**, AG Anderson, DL Campbell, JA Ufnar. Reef Fish in the Math Class: A Case Study on Interdisciplinary, Data-Centered Learning
- **MR Wilkins**, EJ Hudson, MD Merz<sup>‡</sup>, RJ Safran. Signal honesty and sexual selection: The role of trill rate in barn swallow communication.
- D Shizuka, **MR Wilkins**, RJ Safran. Comparing barn swallow phenotype networks: sexual selection and phenotypic integration.

\*-shared first author; <sup>‡</sup>-mentored student

## POPULAR PRESS PUBLICATIONS

- [“Scientists: Meet Twitter”](#) (with several co-authors) in *The Xylom*, May, 2019
  - [“More Recycling Won’t Solve Plastic Pollution”](#) in *Scientific American*, July 6, 2018
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## FUNDING/AWARDS

### *Fellowships*

- 2014-2017 University of Nebraska-Lincoln: Population Biology Program of Excellence Postdoctoral Fellowship (\$159,660)
- 2013 NSF NESCent Graduate Student Semester Fellowship (\$15,500)
- 2010-2013 NSF Graduate Research Fellowship Award (\$90,000)

### *Research and Travel Grants*

- 2017 UNL UCARE Grant for undergraduate mentee, Arich Knaub (\$2,400)
- 2016 UNL UCARE Grant for undergraduate mentee, Arich Knaub (\$2,400)  
UNL Postdoctoral Travel Grant (\$750)
- 2015 UNL UCARE Grant for undergraduate mentee, Allen Overholtzer (\$2,400)
- 2013 CU EBIO Graduate Student Research Grant (\$1,103)  
Beverly Sears Graduate Student Grant Award (\$1,000)
- 2012 Society for the Study of Evolution Travel Award (\$500)  
CU Graduate School Travel Grant (\$300)  
CU EBIO Graduate Student Research Grant (\$2,000)  
CU UGGS Travel Grant (\$300)  
CU UROP Grant for undergraduate assistant, Courtney van der Linden (\$800)  
CU UROP Grant for undergraduate assistant, Martin Merz (\$800)  
CU UROP Grant for undergraduate assistant, Matt Aberle (\$800)  
Beverly Sears Graduate Student Grant Award (\$1,000)
- 2011 Animal Behavior Society Student Research Grant (\$1,500)  
CU BURST Grant for undergraduate assistant, Martin Merz (\$2,450)  
CU EBIO Graduate Student Research Grant (\$1,500)  
Wilson Ornithological Society: Paul A. Stewart Grant (\$500)  
CU Graduate School Travel Grant (\$300)
- 2010 CU EBIO Graduate Student Research Grant (\$2,500)
- 2009 Beverly Sears Graduate Student Grant Award (\$1,000)  
CU EBIO Graduate Student Research Grant (\$2,500)  
American Ornithological Society: Joseph Grinnell Award (\$1,000)  
American Ornithological Society: Alexander Wetmore Award (\$1,500)

### *Outreach+Education Grants*

- 2020 Animal Behaviour Society Outreach grant (\$1,000)
- 2019 Dell STEAM Innovation Grant for the Head Middle EcoTeam (\$5,000)  
TVA STEM Grant for a garden and outdoor classroom at Head Middle (\$3,500)
- 2016 NASA Nebraska Space Grant in support of SciComm 2016 (\$2,000)

### *Entrepreneurial Grants*

- 2019 NSF I-Corps Node Microgrant through Vanderbilt’s Wond’ry to support Galactic Polymath (\$2,300)

## *Fundraising*

UNL SciComm 2015 support from Nebraska EPSCoR, Nebraska STEM, and the following UNL divisions: Materials Research Science and Engineering Center, Office of Research and Economic Development, and the School of Biological Sciences (\$5,800)

SciComm 2016 support from Nebraska EPSCoR, Doane University, and the following UNL divisions: Materials Research Science and Engineering Center, Office of Research and Economic Development, the Libraries, College of Arts and Sciences, Central Administration, Nebraska Science Program of Excellence, Student Government Association, and the departments of Physics, Biology, and Sociology (\$13,850)

## *Awards*

- 2020 [Goals Award](#) from the Center for Advancing Research Impact in Society (ARIS)
  - 2019 [Urban Green Lab](#)'s Sustainable Teacher Award for School Leadership
  - 2016 Short-listed for the European Society for the Study of Evolution [Stearns Graduate Student Prize](#)
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## **PUBLIC SPEAKING**

- 2019 Organized and moderated a panel at [Science Talk 2019](#) in Portland, OR: “Identifying Sources of Misinformation and Taking Action” with Drs. Seth Lewis, David Shiffman and Sarah Myhre  
  
“Plastic Pollution is a Bigger Problem Than You Think” at Warner Park Nature Center, Nashville, TN [Talk Link](#)
  - Feb 2016- Jun 2017 Organized (15x), emceed (10x), and presented (2x) at the Lincoln, Nebraska Chapter of Nerd Nite: A monthly event series featuring 3 nerdy presentations at a local pub
  - 2015 Presented “The Nightmares of Spiders,” UNL Libraries SciPop series: described numerous predators and parasitoids to students and the public
  - 2012-2013 Open mic standup comedy around Boulder, CO, including a few small showcases
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## **SCIENTIFIC PRESENTATIONS (First Author)**

### *Invited presentations*

- 2019 Keynote: “The Evolution of Complex Sexual Communication in Barn Swallows” [Evolution Education Workshop](#) at UVA’s Mountain Lake Biological Station
- 2017 “Sexual selection and the evolution of complex signals in barn swallows” Center for Evolution and Genomics, Uppsala University, Sweden
- 2016 “Comparing phenotype networks across barn swallow populations: phenotypic integration and sexual selection” Network Theory in Ornithology Symposium, North American Ornithological Conference in Washington, DC
- 2015 “Multimodal signaling in the North American barn swallow: a phenotype network approach” (talk) Warder Clyde Allee Symposium, Animal Behavior Society Meeting in Anchorage, AK.
- 2013 “The evolution of complex sexual signals and their role in reproductive isolation” (talk), California Polytechnic State University, San Luis Obispo, CA
- 2010 “The effects of complex mate choice on population divergence” (talk) Akdeniz University, Department of Biology, Antalya, Turkey

### *Contributed presentations*

- 2019 “Reef fish in the math class: Case study on the effectiveness of a Galactic Polymath STEAM lesson” (poster) Oak Ridge Postdoctoral Symposium, Oak Ridge National Laboratory, TN
- 2018 “From reef fish to climate change: Using real scientific datasets in K-12 math and science classes” (poster) SciComm 2018, Lincoln, NE
- “From reef fish to climate change: Using real scientific datasets in K-12 math and science classes” (poster) Science Talk, Portland, OR
- 2016 “Comparing phenotype networks across barn swallow populations: sexual selection and phenotypic integration” (talk) Evolution Conference, Austin, TX
- “Divergent sexual selection explains phenotypic differentiation among closely related barn swallow populations” (talk) American Society of Naturalists Meeting, Asilomar, CA
- 2014 “Multimodal signaling in the North American barn swallow: influences of intra- and intersexual selection on signal evolution” (talk) AOU/COS/SCO Joint Ornithological Meeting, Estes Park, CO
- “Multimodal signaling in the North American barn swallow: influences of intra- and intersexual selection on signal evolution” (talk) Evolution Conference, Raleigh, NC
- 2013 “Multimodal sexual signaling in the North American barn swallow” (talk) Animal Behavior Society Meeting, Boulder, CO
- “Multimodal sexual signaling in the North American barn swallow” (talk) Front Range Student Ecology Symposium, Ft. Collins, CO
- 2012 “An experimental test of the role of trill rate in sexual signaling in the barn swallow” (poster) North American Ornithological Conference, Vancouver, CA
- “Divergence in multimodal sexual signals across the Holarctic range of the barn swallow *Hirundo rustica*” (poster) First Joint Congress on Evolutionary Biology, Ottawa, Canada
- 2011 “The role of trills in communication and population divergence: A case study in the barn swallow *Hirundo rustica*” (talk) Guild of Rocky Mountain Ecologists and Evolutionary Biologists, CU Boulder Mountain Research Station, CO
- “Geographic variation in the song of the barn swallow, *Hirundo rustica*” (talk) AFO/COS/WOS Joint Ornithological Meeting, Kearney, NE
- 2010 “Geographic variation in the song of the barn swallow, *Hirundo rustica*” (poster) Animal Behavior Society, Williamsburg, VA
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### **PUBLISHED MULTIMEDIA**

#### *Films and Explainers*

- [The Tennessee Bottle Bill, Explained](#): made for TennCan, a grassroots effort to pass a container deposit bill in Tennessee; this video explains how this simple measure can help address plastic pollution
- [Pygids](#): a loving music video ode to a neglected group of arachnids that certainly aren't spiders :::)
- [One Minute Science: Sparrow Song](#), a short video explaining the PhD research of Dr. Emily Hudson
- [What is Condor Watch?](#), a video explaining a citizen science project studying condor social networks

#### *Photos in Scientific Journals*

- [Cover photo](#) for *Molecular Ecology* Vol 25, Issue 16, p. 3769–4090
- Fig 1 in Hebets EA, et al. [A systems approach to animal communication](#). *Proc. R. Soc. B* 2016

- Fig. 1 B and C in Levin II, et al. [Performance of Encounternet Tags: Field Tests of Miniaturized Proximity Loggers for Use on Small Birds](#). *PLoS one*. 2015
- Fig. 2 in Scordato ES and Safran RJ. [Geographic variation in sexual selection and implications for speciation in the Barn Swallow](#). *Avian Research*. 2014 Dec 24;5(1):1
- Box 1 in Vitousek MN et al. [An integrative view of the signaling phenotype: Dynamic links between signals, physiology, behavior and social context](#). *Current Zoology*. 2014 Dec 1;60(6)

#### Awards

- Most Awesome Video Award for “Pygids” in the [Arizona State Risk Innovation Science Showcase Video Contest](#)
- Best Film for “Pygids” at the [6th Annual Evolution Film Festival at the 2016 Evolution Meeting](#)
- Best Film for “Pygids” at the 20th International Conference on Arachnology in 2016

#### MEDIA COVERAGE

- Featured guest on podcast [Science! with Friends](#)
- Interview/quotes in *Ensis* piece [“Do ‘Environmentally Responsible’ Products Help The Planet? Or Do They Just Get Us To Buy More Stuff?”](#)
- Interview/photography profile for Earth Day on the [KEH Camera Spotlight Blog](#)
- Interviewed about plastic pollution on the 99% Invisible Podcast: [“National Sword”](#)
- Featured guest on NPR/WNYC Midday radio program [“Recycling Won’t Eradicate Plastic Pollution”](#)
- Featured guest on podcast Zero Waste Countdown [“Ep 28. It’s Not You, It’s the System”](#)
- Interviewed by ABC/KSRO Morning News Radio for my Scientific American piece on plastic pollution
- Profiled in Nebraska Today: [“Wilkins’ global trek maps song of the barn swallow”](#)
- Profiled at RealScientists.org: [Birds and Spiders, oh my! Matt Wilkins at Real Scientists](#)

#### K-12 TEACHING

- F2019-S2020 Reshaped the EcoTeam to include 5th and 6th graders; started a school garden; collaborated with band, English, math, science, and social studies teachers to develop quantitative, interdisciplinary lessons on crop origins, early human evolution and migration, acoustic analysis, Mesopotamian geography and history, order of operations applied to disaster recovery, the UN Sustainable Development Goals, the hidden costs of smoking, and more.
- F2018-S2019 Founded and led the Head Middle Magnet [EcoTeam](#), a project-driven enrichment sustainability course. Developed and co-taught numerous interdisciplinary lessons in collaboration with all subject teachers across grades 5-8.
- June 2018 Summer Academy at Vanderbilt for the Young. Weeklong intensive course for rising 3rd and 4th graders– “Secret Worlds: Introduction to Animal Communication”
- Spring 2018 Developed and co-taught a weeklong intensive [climate change PBL](#), involving math, social studies, english, and science classes. This culminated in [science communication posters](#), which students and the public voted on, the top 10 of which were put on display around the city.
- Fall 2017 Developed and co-taught weeklong courses on the 2017 Eclipse (G5-8 RTI), [evolution](#) (G5-8 STEAM) and [amphibian declines](#) (G5 Science); two lessons involving custom-built Shiny web apps to teach taxonomy/ [vocal scaling in birds](#) (G5 Math) and [the relationship between height and foot size](#) (G5 Science); a [three-day interdisciplinary Spanish course](#) on the intersection of Spanish language evolution, diversity, structure, grammar, as well as climate change, Puerto Rican hurricane recovery and chicano identity (G7-8 Spanish); a [media literacy unit about the connections between climate change and hurricanes](#) (G7 English); and a [two-day unit using data from a study on reef fish assortative mating](#) to reinforce concepts of scatter-plot, percent, fraction, and decimal (G6 Math).



## UNIVERSITY TEACHING

### *Lead Instructor*

- 2016 Field Animal Behavior (UNL: BIOS 468/868)
- 2015 Graduate Seminar: Understanding Biological Complexity (UNL: BIOS 998)

### *Teaching Assistant*

- 2014 General Biology Lab 2 (CU: EBIO 1240)
- 2010 General Biology Lab 2 (CU: EBIO 1240)
- 2009 General Biology Lab 1 (CU: EBIO 1230)  
General Biology Lab 2 (CU: EBIO 1240)
- 2008 General Biology Lab 1 (CU: EBIO 1230)

### *Guest Lecturer*

- 2014 Graduate Seminar: Species Concepts and Speciation (UNL: BIOS 998)  
Professionalism (UNL: BIOS 809)
- 2013 Evolution (CU: EBIO 3080)

### *Workshops and Training*

- 2014 General Biology Weekly Teaching Workshop, Spring (22 hours)  
Graduate Teaching Program Spring Workshop (5 hours)  
Collaborative Preparing Future Faculty Network Forum (5 hours)
- 2011 CITI Responsible Conduct of Research Training (6 hours)  
CU BURST Undergraduate Research Mentor Training (3 hours)
- 2010 General Biology Weekly Teaching Workshop, first half of Spring (11 hours)
- 2009 Graduate Teaching Program Fall Workshop (2 hours)  
General Biology Weekly Teaching Workshop, Fall & Spring (44 hours)
- 2008 General Biology Weekly Teaching Workshop, Fall (22 hours)  
Graduate Teaching Program Spring Workshop (6 hours)

### *Video consultation of teaching*

- 2014 Reviewed and evaluated my teaching performance in Gen Bio lab with lead graduate teacher (CU)
- 2009 Assessed my teaching performance in Gen Bio lab with lead graduate teacher (CU)

### *Certifications*

Certificate of College Teaching from the Graduate Teaching Program at CU Boulder

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## SERVICE

### *Professional Service*

Reviewer for: *Behavioral Ecology, Behavioral Ecology and Sociobiology, Bioacoustics, Biological Journal of the Linnean Society, Bird Conservation International, Chilean National Science and Technology Commission, Current Opinion in Plant Biology, Ethology, Evolution, Journal of Ethology, Journal of Evolutionary Biology, Journal of Ornithology, National Science Foundation, Proceedings of the Royal Society B, PLOS Biology, Royal Society Open Science, The Auk: Ornithological Advances, Wilson Journal of Ornithology*

Sometime Member of: American Association for the Advancement of Science; American Ornithological Society; American Society of Naturalists; Animal Behavior Society; National Science Teachers Association; Society for the Study of Evolution

#### *Other Activities*

- 2019 -Judged middle school STEAM projects at the Metro Nashville Public School STEAM Expo  
2016 -Judged undergrad presentations at the NAOC Ornithological Meeting in DC  
-Reviewed fellowship proposals for Graduate Women in Science  
-Judged grad student talks at the American Society of Naturalists meeting  
2015 -Reviewed undergraduate research grant applications for UCARE at UNL  
2009–2014 -Graduate Student Mentor at CU for Tim Szewczyk and David Zonana  
2008–2014 -Member of the Evolution Outreach Committee at CU  
2011–2012 -Member of the CU EBIO Colloquium Committee  
2010 -Judge for science fair at Adams Elementary School  
2008 -Judge for the EBIO Graduate Student Symposium at CU  
-Tutored ESL students from Boulder High School
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#### **STEM OUTREACH**

##### *Training*

- 2016 Science Communication workshop at Evolution 2016 (run by Jory Weintraub)  
2015 Organization for Tropical Studies 2-week course “Telling Stories about Science” on science communication in the digital age. Crash course instructors: Hillary Rosner, Michael Kotas (print journalism); Molly Webster, Pat Walters (radio/podcast production); Neil Losin and Morgan Heim (filmmaking). Produced stories in each format: [scientist profile](#), [podcast](#) & [film](#)

##### *Innovations in Science Communication & Outreach*

- Planned and ran [SciComm 2016 \(Sep 23-24\)](#), sequel to the 2015 event I organized. A 2-day meeting including a workshop coordinated with the National Alliance for Broader Impacts; a big science outreach event in downtown Lincoln; and a science communication symposium with 35 presentations and a keynote from TED speaker Melissa Marshall (180+ registrants from 12 states).
- In Feb 2016, founded [Numbat Media](#), a website and social media outlet showcasing science outreach projects and scientists’ stories from around the globe
- Organized [UNL SciComm 2015: A symposium on effective science communication](#). Recruited 14 speakers from 9 UNL departments, CU & Doane University to present on science communication, social and psychological issues affecting science literacy, to forge collaborations, and increase impact of these efforts. (120+ registrants: grad students, professors, administrators, & K-12 teachers) [Talks](#)
- Founded [Lincoln Chapter](#) of Nerd Nite—an organization that puts on a monthly talk series in 100+ cities around the world to grow community around curiosity, science, and creativity! (200+ members)

##### *Other Outreach/ Engagement*

- 2018 Led a strategic overhaul of [Vanderbilt CSO’s Twitter](#). Earned 1210% growth in followers between 1/5/18 (90 followers) and 12/31/18 (1177 followers)  
2017 Talked about birdsong with families at [Sunday with a Scientist](#), Nebraska State Museum (182 attendees)  
2016
  - Worked to reinvigorate [Condor Watch](#)’s flagging participation in their citizen science project. Produced a [video](#), leaderboard of top contributors, and a social media campaign
  - [Tweeted for “rotating curator” account @RealScientists](#) Sep 4-10, discussing my research, science communication and issues in Academia with 36.2k followers



- Tweeted for [@IAmSciComm](#) Jan 18-24, spurring [numerous discussions](#) about science communication & outreach with 3k followers
  - Spoke about arachnid diversity for “[SciPop Interactive](#)” through the UNL Libraries (55 attendees)
  - Volunteered for “[Investigate](#),” Nebraska State Museum. Described mating and competitive behavior of Amblypygids to parents & their kids. (245 attendees)
- 2015
- Presented “[Humor as a Learning Tool](#),” at UNL SciComm 2015, where I suggested that humor should be used more in “serious” science communication efforts.
- 2014
- Volunteered at “Eight-Legged Encounters”, part of NSF-funded program on “Informal Education with Arachnids” (CRPA – 1241482), hosted at the Denver Museum of Science and Nature (~3,500 attendees)
  - Worked at “Family Day—Evolution: Fit in Your World,” CU Museum of Natural History, organized by CU Evolution Outreach Committee (EOC) (~100 attendees)
- 2013
- Moderated panel on challenges of teaching controversial topics at the annual Teaching Evolution Workshop hosted by the CU EOC (~50 K-12 teachers attended)
  - Volunteered for the day at “Eight-Legged Encounters”, hosted at the Westminster, CO Butterfly Pavilion (~500 attendees)
  - Maintained a blog (with Dr. Liz Scordato) describing our field efforts during a barn swallow sampling expedition across Russia at [barnswallowproject.com](#)
  - Presented my research to four 7th grade science classes at Centennial Middle School in Boulder
- 2012
- Presented “Words as Genes 2.0: Using parallels with linguistics to teach concepts in biological evolution” at the CU EOC Teaching Evolution Workshop
- 2011
- Presented at opening of “Birding on the Bus”: a program to make riders of a Metro Denver bus route aware of the birds living along a rural/urban transect
  - Organized our lab’s second Site Owner Appreciation Day, where we met with landowners of our study sites to discuss the research of our lab group, which we could not undertake without their cooperation
  - Gave a module at the annual EOC Teaching Evolution Workshop titled: “Words as Genes: Natural Selection Applied to Language”
  - Presented research to 1st graders at Horizons K-8 Charter School, Boulder, CO
  - Moderator and facilitator for the symposium, “Biodiversity: From Evolution to Application,” organized by the CU EOC, targeted at undergraduates
- 2010
- Served as a judge at the Adams Elementary Science Fair, Boulder, CO
  - Presented a [module on sexual selection](#) at EOC Teaching Evolution Workshop
- 2009
- Started blog [transparentsci.blogspot.com](#): provides a narrative and photos about my work to inform and excite a broad audience about biological research
  - Featured in Turkish newspaper *Serik Postasi* with collaborator Dr. Hakan Karaardıç
  - Helped organize our lab’s first Site Owner Appreciation Day
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## MENTORSHIP

### Field and Lab Assistants Trained:

Lori Fraser, Connor Fitzhugh<sup>‡</sup>, Andrew Flynn<sup>‡</sup> (2008, CU); Alex Oesterle, Rachel Wildrick<sup>‡</sup> (2009, CU); Özgün Eker<sup>‡</sup>, Leyla Kaplan<sup>‡</sup> (2010, Akdeniz University, Turkey); Martin Merz<sup>‡</sup>, Ian Harold, Stephen Alderfer<sup>‡</sup>, Audrey Tobin (2011, CU); Caroline Glidden<sup>‡</sup>, Lauren Brooks, Abdul Hussein, Courtney Van Der Linden, Matt Aberle<sup>‡</sup>, Michelle Foreman, Allison Mitchell (2012, CU); Kate Zator<sup>‡</sup> (2013 CU); Sean Maguire, Taylor Bequette, Allen Overholtzer<sup>‡</sup>, Jake Eastman, Andrew Ehresman, Hanna Anderson, and Alex Hansen<sup>‡</sup> (2014-2015, UNL); Arich Knaub<sup>‡</sup> (2015-17, UNL)

**Total: 27 trained, 12 mentored (denoted by ‡)**

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## LANGUAGE SKILLS

English (native), Spanish (fluent), Portuguese (elementary), Catalan (elementary), some knowledge of Russian and Turkish

Updated: Feb 6, 2020