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Education

2013 - 20 **Ph.D. in Biology**

New Mexico State University

Ph.D. mentor: Dr. Timothy Wright

2007 - 11 **B.S. in Biology and Spanish**

Haverford College

Senior thesis mentors: Dr. Robert Fairman, Dr. Roberto Castillo-Sandoval

Professional Appointments

2024 **Assistant Professor, 1855 Professor of Data Science**

Michigan State University

Integrative Biology and Computational Mathematics, Science, and Engineering departments

2021 - 24 **NSF Postdoctoral Research Fellow**

The Rockefeller University, University of Cincinnati

Postdoc co-mentors: Dr. Erich Jarvis, Dr. Elizabeth Hobson

Peer-reviewed Publications and Accepted Manuscripts

*former undergraduate mentee

10. Araya-Salas, M., **Smith-Vidaurre, G.**, Chaverri, G., Brenes, J.C., Chirino, F., Elizondo-Calvo, J., A. Rico-Guevara. (2023). ohun: an R package for diagnosing and optimizing automatic sound event detection. *In press*. *Methods in Ecology and Evolution*. DOI.

9. **Smith-Vidaurre, G.**, Pérez-Marrufo, V.*, Hobson, E.A., Salinas-Melgoza, A., and T.F. Wright. (2023). Individual identity information persists in learned calls of introduced parrot populations. *PLOS Computational Biology*, 19(7): e1011231. DOI. Open-access [code](#) and [data](#).

8. Estien, C.O., O'Connell, C.L., Francis, X., **Smith-Vidaurre, G.**, Kluever, B.M., Hobson, E.A., and A. van der Marel. (2022). Temporary behavioral responses to playbacks by a pest parrot and implications for management. *Animal Behavior and Cognition*, 9(4), 363-384. DOI.

7. **Smith-Vidaurre, G.**, Pérez-Marrufo, V.*, and T.F. Wright. (2021). Individual vocal signatures show reduced complexity following invasion. *Animal Behavior*, 179: 15 - 39. DOI. Open-access [code](#) and [data](#).

6. **Smith-Vidaurre, G.**, Araya-Salas, M., and T.F. Wright. (2020). Individual signatures outweigh social group membership in contact calls of a communally nesting parrot. *Behavioral Ecology*, 31: 448-458. DOI. Open-access [code](#) and [data](#).

5. Araya-Salas, M., **Smith-Vidaurre, G.**, González-Gómez, P., Mennill, D., and T.F. Wright. (2019). Social group signatures in hummingbird displays provide evidence of co-occurrence of vocal and visual learning. *Proceedings of the Royal Society B*, 286: 20190666. DOI. Open-access [data](#).

4. Wright, T. F., Lewis, T. C., Lezama-López, M., **Smith-Vidaurre, G.**, and Dahlin, C. R. (2018). Yellow-naped Amazon (*Amazona auropalliata*) populations are markedly low and rapidly declining in Costa Rica and Nicaragua. *Bird Conservation International*, 29(2): 291-307. DOI.

3. Araya-Salas, M., **Smith-Vidaurre, G.**, and M. Webster. (2017). Assessing the effect of sound file compression and background noise on measures of acoustic signal structure. *Bioacoustics* 28: 57-73. DOI.

2. Hobson, E.A., **Smith-Vidaurre, G.**, and A. Salinas-Melgoza. (2017). History of nonnative Monk Parakeets in Mexico. *PLOS ONE* 12(9): e0184771. DOI. Open-access [data](#).

1. Araya-Salas, M. and **Smith-Vidaurre, G.** (2016). warbleR: an R package to streamline analysis of animal acoustic signals. *Methods in Ecology and Evolution* 8: 184-191. DOI.

Selected Manuscripts in Review or in Preparation

*former undergraduate mentee

2. **Smith-Vidaurre, G.**, Molina, T., Jarvis, E.D., and E.A. Hobson. Automated tracking of avian parental care behavior. *In prep.* MS available upon request.

1. **Smith-Vidaurre, G.**, and E.A. Hobson and E.D. Jarvis. An integrated perspective on learned vocal identity signaling. *In prep.* MS proposal available upon request.

Book Chapters

1. Russello, M.R., **Smith-Vidaurre, G.**, and T.F. Wright. Genetics of invasive parrot populations. *Naturalized parrots of the world: Distribution, ecology, and impacts of the world's most colorful colonizers*. Stephen Pruett-Jones (Ed). Princeton University Press, 2021.

Software

2. Molina, T., and **Smith-Vidaurre, G.**. Abissmal: **A**utomated **B**ehavioral Tracking by Integrating **S**ensors that **S**urvey **M**ovements **A**round a Target **L**ocation. Will be made available on GitHub: lastralab/Abissmal. Repository access available upon request.

1. Araya-Salas, M., **Smith-Vidaurre, G.**. 2015. warbleR: an R package to streamline bioacoustic analysis. URL: <http://cran.r-project.org/package=warbleR>.

Fellowships, Grants, and Research Funding (\$478,470 total)

Leon Levy Scholarship in Neuroscience, New York Academy of Sciences (\$226,470, declined)	2023
NSF Broadening Participation Postdoctoral Research Fellowship (\$207,000)	2021 - 24
NMSU Whaley Fieldwork Award, Biology Department (\$2,000)	2017
Fulbright Study/Research Grant in Uruguay (\$14,000)	2016
<i>Funded 9 months in Uruguay for PhD with Dr. Timothy Wright and Fulbright mentor Dr. Enrique Lessa</i>	
Experiment.com crowdfunding with Dr. Kevin Burgio (\$4,000)	2016
American Ornithologists' Union Carnes Award (\$3,000)	2016
Private donation from Michael and Susan Achey (\$7,000)	2014
NMSU College of Arts and Sciences Graduate Tuition Fellowship (\$15,000)	2013 – 17

Honors and Awards

NMSU Outstanding Graduate Award, College of Arts and Sciences	2020
NMSU Biology Department Graduate Award for Excellence in Research	2019
NMSU Graduate School Merit-Based Enhancement Award	2016, 2019
NMSU Biology Department Graduate Award for Excellence in Teaching	2016
NMSU Biology Department Star, College of Arts and Sciences Award	2016
Nominee for Thomas J. Watson Fellowship, Haverford College	2011
Manuel J. and Elisa P. Asensio Prize for best senior thesis in Spanish	2011
<i>Presentation Awards:</i> NMSU Biosymposium Best Graduate Talk (2020), NMSU Biosymposium Best Graduate Poster (2015, 2018), NMSU Graduate Research and Arts Symposium (GRAS) Honorable Poster Mention (2015).	
<i>Travel and Diversity Awards:</i> Gordon Research Conference on Neural Mechanisms of Acoustic Communication (2022), Society for Integrative and Comparative Biology (SICB: 2016, 2019), Animal Behavior Society (2015, 2019), NMSU College of Arts and Sciences (2015, 2019), American Ornithologist's Society (AOS: 2018, 2020)	

Invited talks

University of Utah, School of Biological Sciences	Mar 2023
<i>The evolutionary flexibility of vocal communication shaped by social learning</i>	
Michigan State University, Department of Computational Mathematics, Science, and Engineering	Feb 2023

<i>The evolutionary flexibility of vocal communication shaped by social learning</i>	
Montclair State University, Department of Biology	Feb 2023
<i>The evolutionary flexibility of vocal communication shaped by social learning</i>	
Bridging Brains and Bioacoustics virtual seminar series	Nov 2022
<i>An integrated perspective on learned vocal identity signaling</i>	
Social Competency symposium, 59th Animal Behavior Society meeting	Jul 2022
<i>Social systems, cognition, and identity signaling can provide new insights into vocal communication</i>	
Allee Competition symposium, 58th Animal Behavior Society meeting	Aug 2021
<i>Resilience and sensitivity of learned vocalizations to the social environment</i>	
Integrated Behavioral Research Group seminar, EEB Department, Princeton University	Mar 2021
<i>Monk parakeet calls exhibit resilience and sensitivity to invasion</i>	
Coffee with Scientists talk	Nov 2020
Deptment of History and Philosophy of Science, University of Cambridge	
<i>Understanding urban history from an ecological perspective</i> , with Fedorova, N. and Logan, C.J.	
Departmental seminar, Department of Biological Sciences, University of Cincinnati	Oct 2020
<i>Learned calls of monk parakeets exhibit sensitivity and resilience to invasion</i>	
Naturalized parrots symposium at the North American Ornithological Conference	Aug 2020
Symposium title: <i>The global rise of naturalized parrots: status, lessons learned, and emerging issues</i>	
Symposium talk: <i>Genetics of invasive parrots: insights into origins, invasion patterns and adaptation</i> with Russello, M.A. and Wright, T.F.	

Workshops and Working Groups

Attended Joint lab retreat to discuss collaborative projects on animal social behavior	Aug 2021
Organized by Dr. Elizabeth Hobson (University of Cincinnati) and Dr. Gerald Carter (the Ohio State University)	
Attended NextProf Science, University of Michigan	May 2020, 21
Attended Complex Networks Winter Workshop	Jan 2021
Co-delivered workshop on bioacoustics in R	10 Apr 2018
<i>Packages for streamlined bioacoustics analyses in R</i>	
AOS annual meeting, Tucson, AZ with Dr. Marcelo Araya-Salas	
Delivered workshop on bioacoustics in R	7 Aug 2017
<i>warbleR: a package for streamlined bioacoustic analyses in R</i> , 1st Ornithological Congress of the Americas, Puerto Iguazú, Argentina	
Co-delivered workshop on bioacoustics in R	13-17 Jul 2017
<i>Taller de bioacústica: análisis de sonidos animales en R</i>	
Universidad Centroamericana, Managua, Nicaragua with Dr. Marcelo Araya-Salas	
Attended La Kretz Conservation Genomics Workshop, UCLA	20-24 Mar 2016
Organized and delivered workshop session on R coding	08-09 Nov 2015
<i>Biology Graduate Student Organization R workshop</i> , NMSU Biology Department	
Co-delivered workshop on bioacoustics in R	14-19 Jul 2015
<i>Taller de bioacústica: análisis de sonidos animales en R y la aplicación en la biología de la conservación</i> , Organization for Tropical Studies Palo Verde Research Station, Costa Rica with Dr. Marcelo Araya-Salas	
Attended NIMBioS Graduate Workshop on Current Issues in Statistical Ecology	15-17 Apr 2015
National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville	

Selected Presentations

- Smith-Vidaurre, G.**, Molina, T., Hobson, E.A., and E.D. Jarvis. Talk. Jul 2023
Development of an automated system to comprehensively track avian parental care behavior
 Animal Behavior Society
- Smith-Vidaurre, G.**, Hobson, E.A., and E.D. Jarvis. Poster. Aug 2022
An integrated social and neural framework for the maintenance and evolution of socially learned identity signaling
 Gordon Research Conference: Neural Mechanisms of Acoustic Communication
- Smith-Vidaurre, G.**, Pérez-Marrufo, V., and T.F. Wright. Talk. Jul 2020
Invasion influences the complexity of individual signatures in learned contact calls of a parrot
 Animal Behavior Society
- Smith-Vidaurre, G.**, Araya-Salas, M., and T.F. Wright. Talk. Jul 2019
Social information differs among contact calls of three vocal learning species
 Animal Behavior Society
- Smith-Vidaurre, G.**, Araya-Salas, M., and T.F. Wright. Poster. Jul 2019
Distinct social information in contact calls of three vocal learning species
 Songbird and Animal Communication regional Conference
- Smith-Vidaurre, G.**, Araya-Salas, M., and T.F. Wright. Talk. Jan 2019
Monk parakeets exhibit low acoustic convergence across social scales in their native range
 Society for Integrative and Comparative Biology
- Smith-Vidaurre, G.**, and T.F. Wright. Poster. Feb 2018
Mapping patterns of vocal variation in the native range of an invasive parrot
 New Mexico State University Biosymposium, Department of Biology
- Smith-Vidaurre, G.**, and T.F. Wright. Poster. Apr 2018
Mapping patterns of vocal variation in the native range of an invasive parrot
 American Ornithologists' Society
- Hobson, E.A, **Smith-Vidaurre, G.**, and A. Salinas-Melgoza. Talk. Aug 2017
History of nonnative Monk Parakeets in Mexico
 Ornithological Congress of the Americas

Additional Research Positions

- Graduate research assistant**, The Ohio State University Jan – Aug 2020
 Assessing vocal variation over social scales and evidence of vocal learning in vampire bats with Dr. Gerry Carter
- Graduate research assistant**, Jornada Basin LTER Jun 2018 – Dec 2019
 Big Data approaches to assessing cyclical spatiotemporal disease occurrence with Dr. Heather Savoy and Dr. Debra Peters
- Graduate research assistant**, NMSU 21 May – Oct 2016
 Evaluating quasispecies diversity in dengue virus strains with Dr. Kathryn Hanley
- Sanger sequencing graduate assistant**, NMSU Molecular Biology Sequencing facility Spring 2016
 Sequenced samples for researchers across different NMSU departments (Dr. C. Brad Shuster)
- Avian field research technician**, RI Dept of Environmental Management Nov 2011 – Mar 2012
 Management research with 3 native duck species in Kingston, RI

Mentoring Activities

Graduate students:

César Estien: Bioacoustics analysis in R with parrot vocalizations 2021

Cesar was a post-bacc researcher with Dr. Elizabeth Hobson (University of Cincinnati), and is a PhD student with Dr. Christopher Schell (University of California, Berkeley)

Julia Vrtilek: Bioacoustics analysis in R with bat vocalizations 2021 - 2022

Julia is a PhD student with Dr. Gerald Carter (the Ohio State University)

Undergraduate students:

Científico Latino x Simons Foundation 2023 GSMI Mentorship Program Sep - Dec 2023

Mentoring an undergraduate student applying to graduate school programs

Jasmine Brace: Data collection and analysis, scientific writing and presentations 2021

Jasmine was a NSF REU and Dutchess Community College student, and is an undergraduate student at Hawai'i Pacific University

Valeria Pérez-Marrufo: Data collection and analysis, scientific writing and presentations 2019 - 21

Valeria was an NMSU Maximizing Access to Research (MARC) student, and is a PhD student with Dr. Susan Parks (Syracuse University)

High school students:

Jumpstart Advocate for a high school student doing spring and summer research Mar - Aug 2022

RockEDU Science Outreach, Rockefeller University

Peer mentoring:

Weaving the Future of Animal Behavior: Power of Peer mentoring, undergraduates Jul 2022 - present

Postdoc co-mentor for a peer mentoring circle with undergraduate students in the Animal Behavior Society (ABS) Turner program

Weaving the Future of Animal Behavior: Power of Peer mentoring, ECRs 2021 - present

Biweekly peer mentoring circle with 8 peers who are postdocs or early-career faculty, organized by ABS and funded by the NSF

Women of Color in Ecology and Evolutionary Biology: Monthly 1:1 mentoring program 2021 - present

Participating as a mentee and mentor (2 mentees since 2021)

Women of Color in Ecology and Evolutionary Biology: Monthly peer mentoring 2022 - present

Monthly peer mentoring with 4 peers at similar career stages (members of WOCinEEB)

Self-organized peer mentoring Apr 2022 - present

Weekly sessions with senior grad students at Rockefeller University

ABS Turner Program mentor Jul 2023

Three mentoring sessions with an undergraduate student

ABS conference mentor 03 - 06 Aug 2021

Mentoring sessions with students during 58th ABS annual meeting

Teaching Experience

Guest lecture for genetics course with Dr. Sara Lipshutz 04 Mar 2022

Epigenetic regulation of a specialized form of social learning, Department of Biology, Loyola University Chicago

Guest lecture for physiology course with Dr. Teri Orr 29 Sep 2021

Social functions and epigenetic regulation of a specialized form of social learning, Department of Biology, NMSU

Guest lecture for R course with Dr. Scott Ferrenberg 03 Apr 2019

PCA and Mantel tests, Department of Biology, NMSU

Guest seminar for ethology class with Dr. Bettina Tassino 20 Jun 2017

Más allá de los genes: La evolución y los cambios ambientales producidos por hombre, Facultad de Ciencias, la Universidad de la República, Uruguay

Teaching Assistant, NMSU Biology Department:

- BIOL 211: Cellular and Organismal Biology Lecture Spring 2018
- BIOL 309 and 350 (HHMI): Guided Biological Research Fall 2016, Spring and Fall 2015
- BIOL 211: Cellular and Organismal Biology Lab Fall 2013, Spring 2014

HHMI Graduate Assistant

Fall 2015, Spring 2017

Designed active learning exercises on protein folding and hypothesis-testing, NMSU Biology Department

Substitute Teacher

Fall 2012

Substitute teacher for middle and high school Spanish classes, Moses Brown School, Providence, RI

Teaching Assistant

Fall 2010

TA for introductory Spanish class, Haverford College, Spanish Department

Professional Development**Pedagogical training**

18 Jan - 03 Feb 2022

Launching Undergraduate Science Teaching Careers, virtual course

6 session course on undergraduate teaching and mentoring (Memorial Sloan Kettering Cancer Center, The Rockefeller University, Weill Cornell Medicine)

Technical host

03 - 06 Aug 2021

Technical host for Zoom meetings for workshops, plenaries, and conference sessions for the virtual Animal Behavior Society conference (58th annual meeting)

Instructor training

Jun 2021

Learned best practices for teaching coding in an inclusive way for groups of students with different levels of coding experience, The Carpentries

Mentor training

May 2021

Received weekly mentorship training as an NSF REU mentor through the Wisconsin Institute for Science Education and Community Engagement

Service**Active bystander training and conference duties**

20 - 23 Jul 2022

Animal Behavior Society Allies program

Book chapter reviewer

2022

Princeton University Press

Grant reviewer

2021

Army Research Office (Biomathematics program) and Animal Behavior Society Student Research Grants

Journal reviewer

2019 - present

Ecology and Evolution, *Animal Behavior*, *Methods in Ecology and Evolution*, *Ecology*, *Bioacoustics*, *Ornithology*, *Journal of Animal Ecology*, *Journal of Field Ornithology* (Editorial Assistance Program)**Graduate Student Organization Officer**, NMSU Biology Department

2014 - 2016

Outreach**Scientific American interview** on feral parrots around the world

10 Mar 2023

Parrots are taking over the world, Ryan Mandelbaum**Short research presentations** on 14 March, 17 and 27 April

Spring 2023

Rockefeller University Development Office tours organized by Stephanie Marcus

Podcast interview on the history of monk parakeets in New York

08 Feb 2023

The Last Archive, Ben Naddaff-Hafrey

Audio documentary interview on how the public can help shape neuroscience research 07 Dec 2022

Neuroscience and Society film, iDeas Lab, Berman Institute of Bioethics

Co-consultant for TED-Ed lesson published Jun 2022

Why can parrots talk and additional learning materials for students of different ages: *over 800,000 views*

Discussion panelist:

- Fulbright Uruguay Orientation Jul 2021
- Fulbright Workshops with NMSU Honors College Feb, Nov 2018
- Research Panel for New Mexico Alliance for Minority Participation Oct 2018

Twitter Takeover of Animal Behavior Society account Nov 2020

Disseminated animal communication research findings, learning how to code, upcoming postdoc research

Podcast interview Nov 2020

Discussion about monk parakeet ecology, Annenberg Media, University of Southern California

RLadies co-organizer Fall 2020

Monthly virtual meetings about R coding from September to December 2020, El Paso/Las Cruces chapter

Skype a Scientist:

- Discussion with elementary school class Feb 2020
- LGBTIA+ LIVE Q and A session Jun 2020

Science outreach volunteer Jan 2018, Mar 2019

Making DNA bracelets to link structure and function, Vista Middle School and Hillrise Elementary, Las Cruces, NM with Dr. Michèle Shuster

Science outreach volunteer Jan 2014, 2015, 2016

Evolution and bioacoustics hands-on exercise with Sierra Middle School students, organized by Dr. Tim Wright, NMSU Biology Department

Science fair judge:

- Desert Hills Elementary, Las Cruces, NM Nov 2015
- Asombro Institute for Science Education, Las Cruces, NM Apr 2015

Society Memberships

Animal Behavior Society (2015, 2019 - 23), American Ornithologists' Union (2014, 2018, 2020), Society for the Study of Evolution (2018), American Genetic Association (2016, 2018 - 19), Society for Integrative and Comparative Biology (2016, 2018 - 19), Graduate Women in Science (2018), Sigma Xi (2016), RLadies (2019 - 20), GeoLatinas (2020 - 22)