Grace Smith-Vidaurre

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Appointments and Educational History

2021 - 24	**NSF Postdoc Research Fellow**	The Rockefeller University, University of Cincinnati
2013 - 20	**PhD in Ecology and Evolutionary Biology**	New Mexico State University
2007 - 11	**BS in Biology and Spanish**	Haverford College

Publications and Accepted Manuscripts

*undergraduate mentee

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.

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.

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.

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.

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.

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

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.

Preprints and Submitted Manuscripts

Estien, C.O., O'Connell, C.L., Francis, X., **Smith-Vidaurre, G.**, Kluever, B.M., Hobson, E.A., and A. van der Marel. (2022). Playback experiments elicit temporary group repulsion, not attraction, in a globally distributed pest parrot. In review. EcoEvoRxiv preprint: https://ecoevorxiv.org/u8nkm/

Fellowships, Grants, and Research Funding (*$252,000 total*)

NSF Broadening Participation Postdoctoral Research Fellowship (*$207,000*)	2021 - 24
NMSU Whaley Fieldwork Award, Biology Department (*$2,000*)	2017
Fulbright Study/Research Grant (*$14,000*)	2016
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

Book Chapters

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

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

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 at Haverford 2011
Manuel J. and Elisa P. Asensio Prize for best senior thesis in Spanish 2011

Presentation Awards: NMSU Biosymposium Best Graduate Talk (2020), NMSU Biosymposium Best Graduate Poster (2015, 2018), NMSU Graduate Research and Arts Symposium (GRAS) Honorable Poster Mention (2015)

Travel and Diversity Awards: 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

Allee Competition symposium. *Resilience and sensitivity of learned vocalizations to the social environment*. 58th Animal Behavior Society (ABS) meeting Aug 2021

Integrated Behavioral Research Group seminar. *Monk parakeet calls exhibit resilience and sensitivity to invasion*. Princeton Ecology and Evolutionary Biology Mar 2021

Coffee with Scientists talk with Fedorova, N. and Logan, C.J. *Understanding urban history from an ecological perspective*. Dept. of History and Philosophy of Science, Univ. of Cambridge Nov 2020

Departmental seminar. *Learned calls of monk parakeets exhibit sensitivity and resilience to invasion*. Dept. of Biological Sciences, University of Cincinnati Oct 2020

Symposium talk with Russello, M.A. and Wright, T.F. *Genetics of invasive parrots: insights into origins, invasion patterns and adaptation*. Symposium titled *The global rise of naturalized parrots: status, lessons learned, and emerging issues*, North American Ornithological Conference Aug 2020

Workshops and Working Groups

Attended Joint lab retreat organized by Dr. Elizabeth Hobson (University of Cincinnati) and Dr. Gerald Carter (the Ohio State University) to discuss collaborative projects on social behavior Aug 2021

Attended Weaving the Future of Animal Behavior (WFAB) workshop at the 58th annual meeting of Animal Behavior Society Aug 2021

Attended NextProf Science virtual workshops, University of Michigan May 2020 - 21

Attended Complex Networks Winter Workshop Jan 2021

Co-delivered workshop *Packages for streamlined bioacoustics analyses in R*, AOS annual meeting, Tucson, AZ with Dr. Marcelo Araya-Salas 10 Apr 2018

Delivered workshop *warbleR: a package for streamlined bioacoustic analyses in R*, 1st Ornithological Congress of the Americas, Puerto Iguazú, Argentina 7 Aug 2017

Co-delivered workshop *Taller de bioacústica: análisis de sonidos animales en R*, UCA, Managua, Nicaragua, with Dr. Marcelo Araya-Salas 13-17 Jul 2017

Attended *UCLA La Kretz Center for California Conservation Science Workshop in Conservation Genomics*, La Kretz Field Station 20-24 Mar 2016

Organized and delivered one session of *Biology Graduate Student Organization R workshop*, NMSU Biology Department 08 - 09 Nov 2015

Co-delivered workshop *Taller de bioacústica: análisis de sonidos animales en R y la aplicación en la biología de la conservación*, Organization for Tropical Studies Palo Verde Research Station, with Dr. Marcelo Araya-Salas 14-19 Jul 2015

Attended NIMBioS *Graduate Workshop on Current Issues in Statistical Ecology*, National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville 15 – 17 Apr 2015

Presentations

Smith-Vidaurre, G., Pérez-Marrufo, V., and T.F. Wright. Invasion influences the complexity of individual signatures in learned contact calls of a parrot. Talk, ABS meeting Jul 2020

Smith-Vidaurre, G., Pérez-Marrufo, V., and T.F. Wright. Patterns of vocal variation are conserved between a parrot's native and invasive range. Talk, NMSU Biosymposium Mar 2020

Smith-Vidaurre, G., Araya-Salas, M., and T.F. Wright. Social information differs among contact calls of three vocal learning species. Talk, ABS meeting Jul 2019

Smith-Vidaurre, G., Araya-Salas, M., and T.F. Wright. Distinct social information in contact calls of three vocal learning species. Poster, Songbird and Animal Communication Jul 2019

Smith-Vidaurre, G., Araya-Salas, M., and T.F. Wright. Monk parakeets exhibit low acoustic convergence across social scales in their native range. Talk, SICB meeting Jan 2019

Smith-Vidaurre, G., and T.F. Wright. Mapping patterns of vocal variation in the native range of an invasive parrot. Poster, NMSU Biosymposium Feb 2018, American Ornithologists' Society Apr 2018

Hobson, E.A, **Smith-Vidaurre, G.**, and A. Salinas-Melgoza. History of nonnative Monk Parakeets in Mexico. Talk, Ornithological Congress of the Americas Aug 2017

Araya-Salas, M., **Smith-Vidaurre, G.**, Mennill, D. and T.F. Wright. 2015. Social group signatures provide evidence of learning in visual displays. Talk, ABS meeting Jun 2015

Smith-Vidaurre, G., A. Veale, M.A. Russello and T.F. Wright. Identifying genomic evidence of adaptation to novel environments in an invasive parakeet (*Myiopsitta monachus*). Poster presented at:

- Society for Integrative and Comparative Biology Jan 2016
- NMSU Biosymposium Apr, Oct 2015
- New Mexico IDeA Networks of Biomedical Research Excellence Symposium Mar 2015
- NMSU Graduate Research and Arts Symposium Mar 2015

Research Experience

Graduate research assistant, The Ohio State University, Assessing vocal variation over social scales and evidence of vocal learning in vampire bats, with Dr. Gerry Carter Jan – Aug 2020

Graduate research assistant, Jornada Basin LTER, Big Data approaches to assessing cyclical spatiotemporal disease occurrence, with Dr. Heather Savoy and Dr. Debra Peters Jun 2018 – Dec 2019

Visiting researcher, Santa Fe Institute, Monk parakeet research collaborative visit, with Drs. Elizabeth Hobson and Alejandro Salinas-Melgoza 01 – 07 Nov 2016

Graduate research assistant, NMSU, Evaluating quasispecies diversity in dengue virus strains, Dr. Kathryn Hanley 21 May – Oct 2016

Field research technician, Pacific coast of Nicaragua, Assessing spatiotemporal variability in parrot vocal dialects, Drs. Tim Wright, Christine Dahlin 22 Jun – 12 Jul 2016

Sanger DNA Sequencing Graduate Assistant, NMSU Biology Department Spring 2016

Bioinformatics intern, National Center for Genome Resources, Santa Fe, NM. Research internship in cutting-edge genomics and bioinformatics 16 Jun – 10 Jul 2015

Visiting researcher, University of British Columbia-Okanagan, Kelowna, BC, Canada. Restriction enzyme associated DNA sequencing (RAD-seq) bioinformatics, library prep, Drs. Andrew Veale, Michael Russello 7 Jul – 5 Aug 2014, 15 Jan – 26 Jan 2015

Avian field research technician:

- La Selva Biological Station, Sarapiquí, Costa Rica. Social learning in hummingbirds with Drs. Marcelo Araya-Salas and Tim Wright Jan – Apr 2013
- RI Department of Environmental Management, Kingston, RI. Management research with 3 native duck species Nov 2011 – Mar 2012

Undergraduate thesis, Haverford College Biology Department.

Using acrylodan to probe oligomeric structures formed by the huntingtin N-terminus during aggregation, Dr. Robert Fairman Sep 2010 – Apr 2011

Undergraduate thesis, Haverford College Spanish Department.
Esta criatura no es de aquí: constelaciones de transformaciones y la invasión de la barbarie en 2666, Dr. Roberto Castillo-Sandoval Sep 2010 – Apr 2011

Mentoring Activities

Graduate students:

César Estien: Bioacoustics analysis in R with parrot vocalizations 2021

Julia Vrtilek: Bioacoustics analysis in R with bat vocalizations 2021

Undergraduate students:

Jasmine Brace: Data collection and analysis, scientific writing and presentations, NSF REU and Dutchess Community College student 2021

Valeria Pérez-Marrufo: Data collection and analysis, manuscript preparation and publication, presenting at national conferences, NMSU Maximizing Access to Research (MARC) student 2019 - 21

High school students:

Jumpstart Advocate for a high school student conducting a research project with a team, RockEDU Science Outreach, Rockefeller University Mar - Jun 2021

Peer mentoring:

Weaving the Future of Animal Behavior: Biweekly Power of Peer mentoring with 8 peers, organized by Animal Behavior Society (ABS) and funded by the National Science Foundation 2021 - present

Women of Color in Ecology and Evolutionary Biology: Monthly 1:1 mentoring program, participating as a mentee and mentor (2 mentees since 2022) 2021 - present

Women of Color in Ecology and Evolutionary Biology: Monthly group peer mentoring program with 4 peers 2022 - present

Weekly peer mentoring sessions with 2 students at Rockefeller University Apr 2022 - present

ABS mentoring meeting sessions with students during annual conference Aug 2021

Teaching

Guest lecture for genetics course with Dr. Sara Lipshutz: *Epigenetic regulation of a specialized form of social learning*, Department of Biology, Loyola University Chicago 04 Mar 2022

Guest lecture for physiology course with Dr. Teri Orr: *Social functions and epigenetic regulation of a specialized form of social learning*, Department of Biology, NMSU 29 Sep 2021

Guest lecture on PCA and Mantel tests for R course with Dr. Scott Ferrenberg, Department of Biology, NMSU 03 Apr 2019

Guest seminar for ethology class with Dr. Bettina Tassino: *Más allá de los genes: La evolución y los cambios ambientales producidos por hombre*, Facultad de Ciencias, la Universidad de la República, Uruguay 20 Jun 2017

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 (designed active learning exercises), NMSU — Fall 2015, Spring 2017

Substitute Teacher, Moses Brown School, Providence, RI — Fall 2012

Teaching Assistant, Haverford College, Spanish Department — Fall 2010

Professional Development

Pedagogical training: 6 session course on undergraduate teaching and mentoring (Memorial Sloan Kettering Cancer Center, The Rockefeller University, Weill Cornell Medicine) 18 Jan - 03 Feb 2022

Technical host for virtual Animal Behavior Society conference (58th annual meeting) 03-06 Aug 2021

Instructor training to learn best practices for teaching coding to researchers at different experience levels, provided by the Carpentries community initiative Jun 2021

Mentor training with Wisconsin Institute for Science Education and Community Engagement through NSF Research Experience for Undergraduates mentoring program May 2021

Service

Grant reviewer: Army Research Office (Biomathematics program), Animal Behavior Society Student Research Grants

Journal reviewer: *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

Co-educator for TED-Ed lesson Why can parrots talk and additional learning materials Jun 2022

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, Research findings in animal communication with monk parakeets, learning how to code in R, and upcoming postdoc research Nov 2020

Podcast interview, Annenberg Media, Univ. of Southern California Nov 2020

RLadies co-organizer, Monthly virtual meetings about R coding from September to December 2020, El Paso chapter and Las Cruces community Fall 2020

Skype a Scientist:

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

Outreach volunteer, Making DNA bracelets to link structure and function, Vista Middle School and Hillrise Elementary, Las Cruces, NM with Dr. Michèle Shuster Jan 2018, Mar 2019

Outreach volunteer, Evolution and bioacoustics hands-on exercise with Sierra Middle School students, organized by Dr. Tim Wright, NMSU Biology Dept. Jan 2014, 2015, 2016

Science fair judge:

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

Reference Writers

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