

<https://smith-vidaurre.com/> | [gsvidaurre@gmail.com](mailto:gsvidaurre@gmail.com) | Pronouns: she/her

Google Scholar | GitHub: @gsvidaurre | Twitter: @gsvidaurre

## Education

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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

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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

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\*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. *Submitted*. EcoEvoRxiv preprint: <https://doi.org/10.32942/X2Z60C>.

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.A., **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](https://github.com/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

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|--|------------|
| 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       |

*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:* 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

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| 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 |

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|---|----------|
| <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

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| <b>Attended</b> 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)   |                |
| <b>Attended</b> NextProf Science, University of Michigan   | May 2020, 21   |
| <b>Attended</b> Complex Networks Winter Workshop   | Jan 2021       |
| <b>Co-delivered workshop</b> 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  |                |
| <b>Delivered</b> 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  |                |
| <b>Co-delivered</b> 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   |                |
| <b>Attended</b> La Kretz Conservation Genomics Workshop, UCLA  | 20-24 Mar 2016 |
| <b>Organized and delivered</b> workshop session on R coding  | 08-09 Nov 2015 |
| <i>Biology Graduate Student Organization R workshop</i> , NMSU Biology Department  |                |
| <b>Co-delivered</b> 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 |                |
| <b>Attended</b> NIMBioS Graduate Workshop on Current Issues in Statistical Ecology   | 15-17 Apr 2015 |
| National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville  |                |

## Selected Presentations

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- 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

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- 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

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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)