

Curriculum Vitae

Present address

Department of Biology
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Academic Positions

2024–Present: Associate Professor, Dept. Biology, Oklahoma State University

2019–2024: Assistant Professor, Dept. Integrative Biology, Oklahoma State University

2015–2018: Senior Postdoctoral Researcher. School of Biological, Earth and Environmental Science, University College Cork, Cork, Ireland. Supervising professor: Dr. John Quinn

2013–2015: NSF International Postdoctoral Research Fellow. Institute for Biology, Humboldt University, Berlin Germany. Supervising professor: Dr. Bernhard Ronacher

2012; 2015: Postdoctoral Research Fellow, University of Wisconsin-Milwaukee. Supervising professor: Dr. Gerlinde Höbel

Education

2018	Postgraduate Certificate in Teaching and Learning in Higher Education, University College Cork
2011	Ph.D. in Biological Sciences, University of Missouri. Advisor: Dr. H. Carl Gerhardt.
2005-2007	Graduate Studies in Ecology, Evolution and Behavior, University of Texas. Supervising professor: Dr. Mike Singer
2004	B.S. in Biology (with honors), University of North Carolina-Chapel Hill.

Research funding

2024-2029	CAREER: The metabolic basis of individual variation in behavior. <u>National Science Foundation</u> . \$1,526,558. M.S. Reichert (PI). IOS-2339824
2023-2026	Estimating crawfish frog abundance and habitat suitability using ecological and bioacoustic techniques. <u>Oklahoma Department of Wildlife Conservation</u> . \$327,831.48. M.S. Reichert (PI) and Bo Zhang (Co-PI). F22AF02584

2022-2026	RaMP: Oklahoma Network addressing human impacts across biological processes (ON-RaMP). <u>National Science Foundation</u> . \$2,719,700. M.S. Reichert (PI) and E.A. McCullagh (Co-PI). DBI-2216648
2021	Research Jumpstart/Accelerator Grant. <u>Oklahoma State University</u> . \$16,401
2020	Student Technology Fee grant. <u>Oklahoma State College of Arts & Sciences</u> . \$21,084
2013-2014	Signal detection in noise in the grasshopper <i>Chorthippus biguttulus</i> . International Research Fellowship Program award for postdoctoral research. <u>National Science Foundation</u> . \$138,700. OISE-1158968
2010-2012	Assessment of fighting ability and the use of the aggressive call in gray treefrog contests. Doctoral Dissertation Improvement Grant (DDIG). <u>National Science Foundation</u> . \$14,818. H.C. Gerhardt (PI), M.S. Reichert (Co-PI). IOS-1010791
2006	10 week predoctoral fellowship. <u>Smithsonian Institution</u> . \$4500.
2003-2017	Miscellaneous small student/postdoc grants for research and travel. \$12,200

Research Awards

2024	Distinguished Early Career Faculty Award, Oklahoma State University
2023	Early Career Faculty Award for Scholarly Excellence, Oklahoma State University College of Arts & Sciences
2006	National Science Foundation-Honorable Mention for Graduate Research Fellowship Program.

Publications in Peer-Reviewed Journals

*Undergraduate student mentee ^Graduate student mentee

64. O.M. Edwards, N.R. Balchan, K.M. Banks^, B. Zhang, F.A. Machado, **M.S. Reichert**, and D. Esquerre. 2025. Genomic and morphological evidence support contemporary three-way interspecific hybridization in ranid frogs. **Ecology and Evolution** 15: e72035

63. P. Will^, E. Lawson*, Z. Cochran*, and **M.S. Reichert**. 2025. Resting metabolic rate is repeatable, but does not affect call characteristics, in the gray treefrog *Hyla chrysoscelis*. **Journal of Experimental Biology** 228: jeb250570

62. J. Coomes^, J. Cuff, **M. Reichert**, G.L. Davidson, W.O.C. Symondson, and J. Quinn. 2025. Spatio-temporal variation in diet among age and sex cohorts of a model generalist bird species, the great tit *Parus major*: new insights revealed by DNA metabarcoding. **Ecology and Evolution** 15: e71565

61. O.M. Edwards, K.M. Banks^, B. Zhang, and **M.S. Reichert**. 2025. Population dynamics and environmental drivers of crawfish frog (*Rana areolata*) migration in southeastern Oklahoma, USA. **Herpetological Conservation and Biology** 20: 196-212

60. F. Rebrina, M. Anichini, K.H. Frommolt, A.W. Lehmann, **M.S. Reichert**, and G.U.C. Lehmann. 2025. Male bushcrickets show context-dependent plasticity in temporal signal features during acoustic contests. **Animal Behaviour** 223: 123153

59. C.A. Troisi, J.A. Firth, S.J. Crofts, G.L. Davidson, **M.S. Reichert**, and J.L. Quinn. 2025. Effects of fine-scale changes in resource access and social stability on the sociality of foraging flocks of wild birds. **Animal Behaviour** 221: 123071

58. O.M. Edwards, L. Zhai, **M.S. Reichert**, C.A. Shaughnessy, L. Ozment, and B. Zhang. 2025. Physiological and morphological traits affect contemporary range expansion and implications for species distribution modeling in an amphibian species. **Journal of Animal Ecology** 94: 195-209
*Highlighted article with accompanying commentary: <https://doi.org/10.1111/1365-2656.14239>

57. T.A. Kosch, M. Torres-Sánchez, H.C. Liedtke, K. Summers, M.H. Yun, A.J. Crawford, S.T. Maddock, M.S. Ahammed, V.L.N. Araújo, L.V. Bertola, G.M. Bucciarelli, A. Carné, C.M. Carneiro, K.O. Chan, Y. Chen, A. Crottini, J.M. da Silva, R.D. Denton, C. Dittrich, G.E. Themudo, K.A. Farquharson, N.J. Forsdick, E. Gilbert, J. Che, B.A. Katzenback, R. Kotharambath, N.A. Levis, R. Márquez, G. Mazepa, K.P. Mulder, H. Müller, M.J. O'Connell, P. Orozco-terWengel, G. Palomar, A. Petzold, D.W. Pfennig, K.S. Pfennig, **M.S. Reichert**, J. Robert, M.D. Scherz, K. Siu-Ting, A.A. Snead, M. Stöck, A.M.M. Stuckert, J.L. Stynoski, R.D. Tarvin, K.C. Wollenberg Valero, and The Amphibian Genomics Consortium (AGC). 2024. The Amphibian Genomics Consortium: advancing genomic and genetic resources for amphibian research and conservation. **BMC Genomics** 25: 1025

56. K.M. Banks^, O.M. Edwards, and **M.S. Reichert**. 2024. Prescribed fire and natural habitat characteristics affect crawfish frog (*Rana areolata*) advertisement call transmission. **Bioacoustics** 33: 479-497

55. **M.S. Reichert**, I. de la Hera, and M. Moiron. 2024. Partitioning variance in a signaling trade-off under sexual selection reveals among-individual covariance in trait allocation. **Evolution** 78: 1150-1160

54. **M.S. Reichert**, B. Luttbeg, and E.A. Hobson. 2024. Collective signalling is shaped by feedbacks between signaller variation, receiver perception, and acoustic environment in a simulated communication network. **Philosophical Transactions of the Royal Society B** 379: 20230186

53. J. Berokoff*, I. de la Hera, and **M.S. Reichert**. 2023. Image processing of thigh color pattern is an effective method for identifying individual Cope's gray treefrogs, *Hyla chrysoscelis*. **Ichthyology & Herpetology** 111: 612-620

52. **M.S. Reichert**, M.G. Bolek, and E.A. McCullagh. 2023. Parasite effects on receivers in animal communication: Hidden impacts on behavior, ecology and evolution. **Proceedings of the National Academy of Sciences** 120: e2300186120

51. S.E. Somers, G. Davidson, C. Johnson, **M. Reichert**, J. Crane, P. Ross, C. Stanton, and J. Quinn. 2023. Individual variation in the avian gut microbiota: the influence of host state and environmental heterogeneity. **Molecular Ecology** 32: 3322-3339

50. **M.S. Reichert** and I. de la Hera. 2022. Sensory biases in response to novel complex acoustic signals in male and female grey treefrogs, *Hyla chrysoscelis*. **Proceedings of the Royal Society B** 289: 20221306

49. I. de la Hera and **M.S. Reichert**. 2022. No indication of background color matching in a population of the brown-green polymorphic Admirable Grasshopper (*Syrbula admirabilis*). **Journal of Insect Behavior** 135: 114-126

48. **M.S. Reichert**, J.M.S. Crane, G. Davidson, E. Dillane, I.G. Kulahci, J. O'Neill, K. van Oers, C. Sexton, and J.L. Quinn. 2022. No reproductive fitness benefits of dear enemy behaviour in a territorial songbird. **Behavioral Ecology and Sociobiology** 76: 90

47. G. Höbel, O. Feagles, A. Moore, **M. Reichert**, K. Stratman. 2022. Random mating for body size despite fitness benefits of size-assortative mating in a treefrog. **Ethology** 128: 580-590

46. J. Albers[^] and **M.S. Reichert**. 2022. Personality affects individual variation in olfactory learning and reversal learning in *Acheta domesticus*. **Animal Behaviour** 191: 1-13

45. G.L. Davidson, **M.S. Reichert**, J.R. Coomes[^], I.G. Kulahci, I. de la Hera, J.L. Quinn. 2022. Inhibitory control performance is repeatable across years and contexts in a wild bird population. **Animal Behaviour** 187: 305-318

44. J. Morand-Ferron, **M.S. Reichert**, J.L. Quinn. 2022. Cognitive flexibility in the wild: individual differences in reversal learning are explained primarily by proactive interference, not by sampling strategies, in two passerine bird species. **Learning & Behavior** 50: 153-166
*Awarded 2022 best article in Learning & Behavior by the Psychonomic Society

43. I. de la Hera, **M.S. Reichert**, G.L. Davidson, J.L. Quinn. 2022. A longitudinal analysis of the growth rate and mass of tail feathers in a great tit population: ontogeny, genetic effects and relationship between both traits. **Journal of Avian Biology** 2022: e02894

42. J.R. Coomes[^], G.L. Davidson, **M.S. Reichert**, I.G. Kulahci, C.A. Troisi, J.L. Quinn. 2022. Inhibitory control, exploration behaviour and manipulated ecological context are associated with foraging flexibility in the great tit. **Journal of Animal Ecology** 91: 320-333

41. N. Clapp* and **M.S. Reichert**. 2022. Arginine vasotocin affects motivation to call, but not calling plasticity, in Cope's gray treefrog *Hyla chrysoscelis*. **Journal of Comparative Physiology B** 192: 115-125

40. I. de la Hera and **M.S. Reichert**. 2021. Water content in diet affects growth and timing of female first mating, but not coloration, in the admirable grasshopper (*Syrbula admirabilis*). **Invertebrate Biology** 140: e12356

39. K.L.N. Stauch, R.J. Wincheski, J. Albers[^], T.E. Black, **M.S. Reichert**, C.I. Abramson. 2021. Limited evidence for learning in a shuttle box paradigm in crickets (*Acheta domesticus*). **Journal of Orthoptera Research** 30: 155-161

38. **M.S. Reichert**, J. Morand-Ferron, I.G. Kulahci, J.A. Firth, G.L. Davidson, S.J. Crofts, J.L. Quinn. 2021. Cognition and covariance in the producer-scrounger game. **Journal of Animal Ecology** 90: 2497-2509

*Highlighted article with accompanying commentary: <https://doi.org/10.1111/1365-2656.13602>

37. J-M Mongeau, L.E. Schweikert, A.L. Davis, **M.S. Reichert**, and J.K. Kanwal. 2021. Multimodal integration across spatiotemporal scales to guide invertebrate locomotion. **Integrative and Comparative Biology** 61: 842-853

36. **M.S. Reichert**, M.S. Enriquez, and N.V. Carlson. 2021. New dimensions for animal communication networks: space and time. **Integrative and Comparative Biology** 61: 814-824

35. C.A. Troisi, A.C. Cooke[^], G.L. Davidson, I. de la Hera, **M.S. Reichert**, and J.L. Quinn. 2021. No evidence for cross-contextual consistency in spatial cognition or behavioral flexibility in a passerine. **Animal Behavior and Cognition** 8: 446-461

34. J. Clemens, B. Ronacher and **M.S. Reichert**. 2021. Sex specific speed-accuracy tradeoffs shape neural processing of acoustic signals. **Proceedings of the Royal Society B** 288: 20210005

33. G.L. Davidson, S.E. Somers, N. Wiley, C.N. Johnson, **M.S. Reichert**, R.P. Ross, C. Stanton, and J.L. Quinn. 2021. A time-lagged association between the gut microbiome, nestling growth and nestling survival in wild great tits. **Journal of Animal Ecology** 90: 989-1003

32. G.L. Davidson, N. Wiley, A.C. Cooke[^], C.N. Johnson, F. Fouhy, **M.S. Reichert**, I. de la Hera, J.M.S. Crane, I.G. Kulahci, R.P. Ross, C. Stanton, J.L. Quinn. 2020. Diet induces parallel changes to the gut microbiota and problem solving performance in a wild bird. **Scientific Reports** 10: 20783

31. K.E. Gentry, R.N. Lewis, H. Glanz, P.I. Simões, Á.S. Nyári and **M.S. Reichert**. 2020. Bioacoustics in cognitive research: applications, considerations, and recommendations. **WIREs Cognitive Science** 2020: e1538

30. **M.S. Reichert**, S.J. Crofts, G.L. Davidson, J.A. Firth, I.G. Kulahci and J.L. Quinn. 2020. Multiple factors affect discrimination learning performance, but not between-individual variation, in wild mixed-species flocks of birds. **Royal Society Open Science** 7: 192107

29. **M.S. Reichert** and B. Ronacher. 2019. Temporal integration of conflicting directional cues in sound localization. **Journal of Experimental Biology** 222: jeb208751

28. **M.S. Reichert**. 2019. Zooming in on assessment strategies: a comment on Chapin et al. **Behavioral Ecology** 30: 1186-1187

27. **M.S. Reichert** and G. Höbel. 2018. Phenotypic integration and the evolution of signal repertoires: a case study of treefrog acoustic communication. **Ecology and Evolution** 8: 3410-3429

26. G.L. Davidson, **M.S. Reichert**, J.M.S. Crane, W. O'Shea and J.L. Quinn. 2018. Repeatable aversion across threat types is linked with life history traits but is dependent on how aversion is measured. **Royal Society Open Science** 5: 172218

25. **M.S. Reichert** and J.L. Quinn. 2017. Cognition in contests: mechanisms, ecology and evolution. **Trends in Ecology and Evolution** 32: 773-785

24. J.T. Kilmer, K.D. Fowler-Finn, D.A. Gray, G. Höbel, D. Rebar, **M.S. Reichert** and R.L. Rodríguez. 2017. Describing mate preference functions and other function-valued traits. **Journal of Evolutionary Biology** 30: 1658-1673

23. **M.S. Reichert** and G. Höbel. 2017. Frequency-channel dependent selectivity for temporal call characteristics in gray treefrogs, *Hyla versicolor*. **Journal of Experimental Biology** 220: 1256-1266

22. **M.S. Reichert**, J. Finck, and B. Ronacher. 2017. Exploring the hidden landscape of female preferences for complex signals. **Evolution** 71: 1009-1024

21. **M.S. Reichert**, L.B. Symes, and G. Höbel. 2016. Lighting up sound preferences: cross-modal influences on the precedence effect in treefrogs. **Animal Behaviour** 119: 151-159

20. M.A. Bee, **M.S. Reichert**, and J. Tumulty. 2016. Assessment and recognition of competitive rivals in anurans. **Advances in the Study of Behavior** 48: 161-249

19. **M.S. Reichert** and G. Höbel. 2015. Modality interactions alter the shape of acoustic mate preference functions in gray treefrogs. **Evolution** 69: 2384-2398

18. **M.S. Reichert**. 2015. Effects of noise on sound localization in male grasshoppers, *Chorthippus biguttulus*. **Animal Behaviour** 103: 125-135

17. **M.S. Reichert** and B. Ronacher. 2015. Noise affects the shape of female preference functions for acoustic signals. **Evolution** 69: 381-394

16. R.L. Rodríguez, M. Araya-Salas, D.A. Gray, **M.S. Reichert**, L.B. Symes, M.R. Wilkins, R.J. Safran and G. Höbel. 2015. How acoustic signals scale with individual body size: common trends across diverse taxa. **Behavioral Ecology** 26: 168-177

15. **M.S. Reichert**, H. Galante* and G. Höbel. 2014. Female gray treefrogs, *Hyla versicolor*, are responsive to visual stimuli but unselective of stimulus characteristics. **Journal of Experimental Biology** 217: 3254-3262

14. **M.S. Reichert** and H.C. Gerhardt. 2014. Behavioral strategies and signaling in interspecific aggressive interactions in gray treefrogs. **Behavioral Ecology** 25: 520-530

13. **M.S. Reichert**. 2014. Playback tests and studies of animal contest dynamics: concepts and an example in the gray treefrog. **Behavioral Ecology** 25: 591-603

12. **M.S. Reichert**. 2013. Sources of variability on advertisement and aggressive calling in competitive interactions in the gray treefrog, *Hyla versicolor*. **Bioacoustics** 22: 195-214

11. **M.S. Reichert** and H.C. Gerhardt. 2013. Gray tree frogs, *Hyla versicolor*, give lower-frequency aggressive calls in more escalated contests. **Behavioral Ecology and Sociobiology** 67: 795-804

10. **M.S. Reichert**. 2013. Patterns of variability are consistent across signal types in the treefrog *Dendropsophus ebraccatus*. **Biological Journal of the Linnean Society** 109: 131-145

9. **M.S. Reichert**. 2013. Visual cues elicit courtship signals in a nocturnal anuran. **Behavioral Ecology and Sociobiology** 67: 265-271

8. **M.S. Reichert** and H.C. Gerhardt. 2013. Socially-mediated plasticity in call timing in the gray treefrog, *Hyla versicolor*. **Behavioral Ecology** 24: 393-401

7. **M.S. Reichert** and H.C. Gerhardt. 2012. Trade-offs and upper limits to signal performance during close-range vocal competition in gray treefrogs, *Hyla versicolor*. **The American Naturalist** 180: 425-437

6. **M.S. Reichert**. 2012. Call timing is determined by response call type, but not by stimulus properties, in the treefrog *Dendropsophus ebraccatus*. **Behavioral Ecology and Sociobiology** 66: 433-444

5. **M.S. Reichert** and H.C. Gerhardt. 2011. The role of body size on the outcome, escalation and duration of contests in the grey treefrog, *Hyla versicolor*. **Animal Behaviour** 82: 1357-1366

4. **M.S. Reichert**. 2011. Aggressive calls improve leading callers' attractiveness in the treefrog *Dendropsophus ebraccatus*. **Behavioral Ecology** 22: 951-959

3. **M.S. Reichert**. 2011. Effects of multiple-speaker playbacks on aggressive calling behavior in the treefrog *Dendropsophus ebraccatus*. **Behavioral Ecology and Sociobiology** 65: 1739-1751

2. **M.S. Reichert**. 2010. Aggressive thresholds in *Dendropsophus ebraccatus*: Habituation and sensitization to different call types. **Behavioral Ecology and Sociobiology** 64:529-539

1. D. Satre, **M. Reichert**, and C. Corbitt. 2009. Effects of vinclozolin, an anti-androgen, on affiliative behavior in the Dark-eyed Junco, *Junco hyemalis*. **Environmental Research** 109:400-404

Book Chapters

M.S. Reichert. 2018. Precedence effect. In: Encyclopedia of Animal Cognition and

Behavior. Ed., J. Vonk, T.K. Shackelford. Springer

M.L. Dyson, **M.S. Reichert**, and T.R. Halliday. 2013. Contests in amphibians. In: Animal Contests. ed., I.C.W. Hardy and M. Briffa, pp. 228-257. Cambridge University Press.

Teaching Experience

Awards

2022 Nominated for the OSU College of Arts & Sciences Distinguished Teaching Award

Classes Taught as Instructor of Record

Evolution (BIOL 4133), Oklahoma State University (Spring 2019, Spring 2020, Spring 2021, Fall 2021, Fall 2022, Fall 2023, Fall 2025)

Animal Communication (BIOL 4313), Oklahoma State University (Fall 2020, Spring 2022, Spring 2023, Spring 2024, Spring 2025)

Animal Behavior (BIOL 3153), Oklahoma State University (Fall 2024)

Graduate Seminar on “The Evolution of Beauty” (BIOL 5010) (Fall 2021)

Graduate Seminar on “Research Mentoring – Philosophy and Practice” (BIOL 5010) (Spring 2025)

Herpetology (Bio_Sc 3360), University of Missouri (Spring 2009, Spring 2011)

Teaching Assistant Positions

Neurophysiology intensive course (Spring 2013, Fall 2013), Humboldt University-Berlin

Introductory Biology lab, University of Missouri (Spring 2010, Spring 2011)

Herpetology lab, University of Missouri (Spring 2009)

Biostatistics, University of Texas (Spring 2006, Fall 2006, Spring 2007)

Introductory Biology I, University of Texas (Fall 2005)

Mentorship

Awards

2024 Margaret S. Ewing award for outstanding mentor in the Department of Integrative Biology

2024 Oklahoma State University Excellence in Research Mentoring Award

2023 Margaret S. Ewing award for outstanding mentor in the Department of Integrative Biology

2023 Nominated for the OSU College of Arts & Sciences Outstanding Faculty Mentor Award

2022 Nominated for the OSU College of Arts & Sciences Outstanding Faculty Mentor Award

Current graduate students, thesis advisor

2025-present Natalie Mitchell, M.S. student

2025-present Rachel Jacks, Ph.D. student

2022-present Kaleb Banks, Ph.D. student

2022-present Himidu Pitigala, Ph.D. student

2021-present Alejandro Marcillo-Lara, Ph.D. student

2021-present Jain Krishnan, Ph.D. student

Graduated students under my supervision

2022-2024 Phoebe Will, M.S.

2020-2022	Bailee Augustino, M.S.
2019-2021	Jonathan Albers, M.S.
2016-2021	Amy Cooke, Ph.D. (University College Cork; co-supervised with John Quinn)
2017-2021	Jenny Coomes, Ph.D. (University College Cork; co-supervised with John Quinn)

Post-baccalaureate mentees:

Brendan Dehner	2024 – 2025 (NSF RaMP mentee)
Matthew Thompson	2023 – 2024 (NSF RaMP mentee)

Undergraduate students mentored (61)

Students mentored since appointment at Oklahoma State University in 2019 (45):

Yicela Rivas (2025 – Present) – Work-study student
 Ana Frost (2025 – Present) – Volunteer Researcher
 Sawyer Henbest (2025 – Present) – Volunteer Researcher
 Robbie Stevens (2025 – Present) – Volunteer Researcher
 Ali Bruton (2025 – Present) – Paid Research Technician
 Natalie Mitchell (2025) – Paid Research Technician
 Alyssa Stockebrand (2025 – Present) – Paid Research Technician
 Lolalynn Simpson (2025) – BIOL 4700 student
 McKenna Shearer (2024 – Present) – Freshman Research Scholar
 Jonathan Medellin (2024) - OK-LSAMP scholar
 Sara Keyser (2024 – 2025) – Work-study student
 Ivan Robledo (2024 – 2025) – Volunteer Researcher; BIOL 4700 student
 Jasmine Plata (2024) – Volunteer Researcher
 Avery Koehler (2024) – BIOL 4700 student
 Levi Hanson (2024) – BIOL 4700 student
 Elena Lawson (2024) – Paid Research Technician
 Raygan Kyeremateng (2024 – 2025) – OK-LSAMP scholar
 Zashri Cocheran (2024 – Present) – BIOL 4700 student; Paid Research Technician
 Kate Martin (2024) – BIOL 4700 student
 Emily Liles (2024) – BIOL 4700 student
 Larry Kelsey (2024) – BIOL 4700 student
 Raegan Hula (2023 – 2024) – Work-study student
 Elena Liebl (2023 – 2024) – BIOL 4700 student; Paid Research Technician
 Gabrielle Rauker (2023 – 2023) – Volunteer Researcher
 Jesse Brewster (2023 – 2023) – BIOL 4700 student
 DuShawn Jones (2023 – 2023) – Volunteer Researcher
 Sarah Scott (2023 – 2023) – Volunteer Researcher
 Cory Volosevich (2022 – 2023) – Work-study student
 Lindsey Bandl (2022 – 2023) – BIOL 4700 student
 Samantha Guernsey (2022 – 2023) – Freshman Research Scholar
 Kayleen Sugianto (2022 – 2025) – Niblack Scholar
 Kennedy Funa (2022 – 2025) – BIOL 4700 student, Wentz Scholar, Paid Research Technician
 Cort Vanzant (2021 – 2024) – Volunteer researcher
 Mason Miller (2021-2024) – Wentz Scholar; BIOL 4700 student; HONR 3000 student, successful Honors Thesis defense

Clarissa Gottfried (2021-2023) – BIOL 4700 student
Erica Anglin (2021) – Interdisciplinary Studies Capstone Project
Sabyre Rojas (2021) – BIOL 4700 student
Roneisha Littles (2021) – BIOL 4700 student
Jo Brown (2021 – 2022) – Volunteer researcher
Rachel Atherton (2019-2023) – HHMI Life Sciences Freshman Research Scholar, BIOL 4700 Student
Jacinda Berokoff (2019-2022) – HHMI Life Sciences Freshman Research Scholar, BIOL 4700 Student, Wentz Scholar
Madisen Brown (2019-2022) – Freshman Research Scholar, BIOL 4700 student, BIOL 4750 student, successful Honors Thesis defense
A.J. Hager (2019-2021) – Wentz Scholar, successful Honors Thesis defense, BIOL 4750 Student
Nicole Clapp (2019-2020) – Wentz Scholar, successful Honors Thesis defense, BIOL 4750 Student
Cheyenne Smith (2019-2020) – OK-LSAMP scholar

Professional Development

Completed “Entering Mentoring” training by the Center for the Improvement of Mentored Experiences in Research (2023)
Trained facilitator to deliver CIMER Entering Mentoring curriculum (2023)

Invited Seminars and Talks

- 2024 University of Oklahoma, School of Biological Sciences
- 2024 University of Alberta, Department of Psychology
- 2023 Northeastern State University, Science and Technology Seminar Series
- 2023 Invited Symposium Speaker – Cognition in a Changing World Symposium, 2023 Animal Behavior Society Conference
- 2022 Wichita State University, Department of Biological Sciences
- 2021 Oklahoma State University, Department of Natural Resource Ecology and Management
- 2021 Invited Plenary Lecture. How do receivers integrate information in complex signals?
26th DZG (German Zoological Society) Graduate Meeting in Evolutionary Biology.
(Virtual Conference; 05/10/2021)
- 2021 Invited Symposium Speaker – Spatiotemporal Dynamics of Animal Communication Symposium, 2021 Society for Integrative and Comparative Biology Conference
- 2018 Humboldt University, Berlin (Germany)
- 2018 Oklahoma State University, Department of Integrative Biology (USA)
- 2018 Queen's University Belfast (UK)
- 2017 University of Oxford (UK), Edward Grey Institute Seminar Series
- 2015 University College Cork (Ireland); Biological, Earth and Environmental Sciences Seminar Series
- 2015 Southern Denmark University (Odense, Denmark), Frog communication workshop
- 2014 Bielefeld University (Germany), Brain and Behavior seminar
- 2014 Symposium on Contemporary Research on Anuran Communication (New York City)
- 2014 Karl-Franzens-University (Graz, Austria)
- 2013 Ludwig Maximilian University of Munich (Germany)

2013 Bielefeld University (Germany), Behavior and Evolution seminar series

Contributed Presentations at National and International Meetings

Oral Presentations (as the presenting author)

M. Reichert and E. McCullagh. ON-RaMP: Oklahoma Network for Research and Mentoring for Post-Baccalaureates. The Things We'll Never Know: A Science Fair of Cancelled Grants. U.S. House of Representatives Rayburn Office Building. Washington, D.C., July 2025

M.S. Reichert. Effects of habitat structure and individual variation in a simulated acoustic communication network. 2025 Animal Behavior Society conference. Baltimore, MD, July 2025

P. Will and M.S. Reichert. Relationship between metabolic rate and calling behavior in the gray treefrog, *Hyla chrysoscelis*. 2025 Society for Integrative and Comparative Biology conference. Atlanta, GA, January 2025.

M.S. Reichert, I. de la Hera, M. Moiron. Energetic trade-offs and individual consistency in calling performance in gray treefrogs. 2024 Mid-South SICB conference. Tulsa, OK, October 2024

M.S. Reichert, B. Luttbeg, E. Hobson. Individual-group feedbacks and the role of perception in a simulated communication network. 2024 Animal Behavior Society conference. London, ON, June 2024.

M.S. Reichert, B. Luttbeg, E. Hobson. Individual-group feedbacks and the role of perception in a simulated communication network. 2024 Society for Integrative and Comparative Biology conference. Seattle, WA, January 2024.

M.S. Reichert and J. Albers. Personality affects individual variation in learning and reversal learning in *Acheta domesticus*. 2022 Animal Behavior Society Conference. San José, Costa Rica, July 2022

M.S. Reichert & I. de la Hera. The importance of temporal order for response to complex signals in male gray treefrogs. 2021 Virtual Meeting of the Animal Behavior Society. August 2021.

M.S. Reichert. Partitioning variance in a signaling trade-off under sexual selection reveals among-individual covariance in trait allocation, but no repeatable plasticity. 2021 Virtual Meeting of the Association for the Study of Animal Behaviour.

M.S. Reichert. 2020. Temperature limits signaling plasticity in competitive interactions in gray treefrogs. 2020 Virtual Meeting of the Animal Behavior Society. July 2020.

M.S. Reichert, I.G. Kulahci, G.L. Davidson and J. Quinn. 2020. Scrounging Versus Learning Strategies in Foraging Songbirds. 2020 Society for Integrative and Comparative Biology conference. Austin, TX, January 2020.

M.S. Reichert, G. Davidson, I.G. Kulahci and J. Quinn. 2019. Individual and social determinants of spatial learning performance in a multi-species field-system. 2019 Animal Behavior Society Conference. Chicago, IL, July 2019

M.S. Reichert. How might cognition play a role in animal contests? 2018 Interdisciplinary Workshop: Broader Perspectives on Animal Contests, Belfast, UK, August 2018

M.S. Reichert, M. Foraita, J.M.S. Crane and J. Quinn. Individual variation in territorial neighbour recognition learning and its consequences for reproductive success. 2018 Joint Congress on Evolutionary Biology, Montpellier, France, August 2018

M.S. Reichert, J. Finck and B. Ronacher. Exploring the hidden landscape of female preferences for complex signals. 2017 European Society for Evolutionary Biology Conference. Groningen, Netherlands.

M.S. Reichert, J. Clemens and B. Ronacher. Common biases in sound localization in insects and anurans when directional cues conflict. 2016 Animal Behavior Society Conference. Columbia, MO, USA.

M.S. Reichert, J. Clemens and B. Ronacher. Sound localization in *Chorthippus biguttulus* with conflicting directional cues: effects of temporal order. 2015 Invertebrate Sound and Vibration Conference. Ottawa, Canada

M.S. Reichert. Effects of noise on female preference functions for acoustic signals in *Chorthippus biguttulus*. International Society for Behavioral Ecology conference, New York City, August 2014

M.S. Reichert. Effects of noise on female preference functions in the acoustically communicating grasshopper *Chorthippus biguttulus*. German Ethological Society, Tutzing, Germany, February 2014

M.S. Reichert. Assessment and communication in gray treefrog aggressive interactions. Annual meeting of the Society for Integrative and Comparative Biology, Austin, TX, January 2014

M.S. Reichert. Does experience affect signal detection and classification in anuran acoustic communication? Amphibian neuroethology satellite meeting of the International Congress of Neuroethology, College Park, MD, August 2012

M.S. Reichert and H.C. Gerhardt. Trade-offs and signal performance during close-range vocal competition in gray treefrogs. Joint congress on Evolutionary Biology, Ottawa, Canada, July 2012

M.S. Reichert and H.C. Gerhardt. Determinants of RHP and the level of escalation in aggressive interactions of gray treefrogs. Annual Meeting of the Animal Behavior Society, Bloomington, IN, July 2011

M.S. Reichert. Call timing in the treefrog *Dendropsophus ebraccatus*: The role of the aggressive call. Annual Meeting of the Society for Integrative and Comparative Biology, Salt Lake City, UT, January 2011

M.S. Reichert. Call timing interactions in the treefrog *Dendropsophus ebraccatus*. Annual Meeting of the Animal Behavior Society, Williamsburg, VA, July 2010

M.S. Reichert. Aggressive thresholds in *Dendropsophus ebraccatus*: Habituation and sensitization to different call types. Annual Meeting of the Animal Behavior Society, Pirenópolis, Brazil, June 2009

Poster Presentations (as the presenting author)

Reichert, M.S., I. de la Hera. Sensory biases for complex calls in male and female gray treefrogs. Poster presentation, 2022 Gordon Research Conference on Neural Mechanisms of Acoustic Communication

M.S. Reichert. Effects of noise on female preference functions in the acoustically communicating grasshopper *Chorthippus biguttulus*. Annual meeting of the Society for Integrative and Comparative Biology, Austin, TX, January 2014

M.S. Reichert. Directional hearing in masking noise in the grasshopper *Chorthippus biguttulus*. 2013 Invertebrate Sound and Vibration meeting. Glasgow, UK

M.S. Reichert and H.C. Gerhardt. Socially-mediated plasticity in call timing in the gray treefrog, *Hyla versicolor*. 2012 International Congress of Neuroethology, College Park, MD

M.S. Reichert, F. Barbosa, and M.J. Ryan. Effects of social context on female responses to male advertisement calls in túngara frogs (*Physalaemus pustulosus*). Annual Meeting of the Animal Behavior Society, Snowbird, UT, August 2006

M.S. Reichert and A.M. Welch. The effects of social context and body condition on calling behavior in male gray tree frogs. Annual meeting of the Ecological Society of America, Portland, OR. August 2004

Academic service at Oklahoma State University (2019-Present)

Awards:

2024 Community Engagement Grant, Oklahoma State University (\$2,500)

2024 Nominated for the OSU College of Arts and Sciences Community Engagement Award

University Service:

Faculty Advisor – OSU Birding Club (2025 – present)

Mentoring workshop for nine faculty participants on topics of “Aligning Expectations” and “Articulating and Implementing Your Mentoring Philosophy and Plan” on 5/30/2024

Mentoring workshop for four faculty participants in RaMP program on topics of “Maintaining Effective Communication” and “Addressing Diversity Equity and Inclusion” on 5/26/2023
Niblack Undergraduate Research Scholars Selection Committee (2021)

Departmental Service:

Search Committee, Edward Bartlett Endowed Professorship, Department of Biology (2025)
Transitional Graduate Committee for merger of PBEE and IB departments, chair (2024 – 2025)
Reappointment, Promotion and Tenure Committee, Department of Integrative Biology, member (2024 – present)
Search Committee, Department of Integrative Biology, Biology Education (2023)
Technology Committee, Department of Integrative Biology, member (2020-2025), chair (2023 – 2025)
Graduate Committee, Department of Integrative Biology, member (2019 - present)
Faculty Advisor: Zoology Graduate Students Society (2019-present)
Search Committee, Department of Integrative Biology, Systematics/Collection of Vertebrates Assistant Professor (2021)
Search Committee, Department of Integrative Biology, Teaching Assistant Professor (2019)
Reviewed student assignments for assessment of undergraduate program (48 assignments in 2021, 43 assignments in 2022)

Graduate Student Advisory Committees

Satyabhama Devi Weihermann de Oliveira (PhD, University of Minnesota Ecology, Evolution and Behavior 2025 -)
Jordyn Hardy (MS, Integrative Biology 2025 -)
Mason Lough (MS, Integrative Biology 2025 -)
Riley Wincheski (PhD, Psychology 2024 - 2025)
Nguvan Agaigbe (PhD, Integrative Biology 2024 -)
Isaac McEvoy (MS, Integrative Biology 2023 -)
Luberson Joseph (PhD, Integrative Biology 2022 -)
Owen Edwards (MS, Integrative Biology 2022 - 2024)
Amita Chawla (PhD, Integrative Biology 2021 -)
Kiley Cox (Penwell) (MS, Integrative Biology 2022 - 2023)
Jamie Najar (MS, Integrative Biology 2021 - 2022)

Second Reader for undergraduate honor's theses at Oklahoma State (7):

Claire Gallagher (2020), Bailey Hinshaw (2021), Taron Mills (2021), Emma Zompa (2022),
Carson Rainbolt (2023), Ishani Ray (2023), Eden Rutledge (2024)

Editorial boards:

Animal Behaviour, Editor (2023 -)
Learning & Behavior, Consulting Editor (2023 -)

Reviewer for:

Funding agencies:

National Science Foundation – ad hoc proposal reviewer (2025)

National Science Foundation – Panelist for Integrative Organismal Systems, Behavioral Systems Cluster (2024)

Icelandic Research Fund (IRF) – ad hoc proposal reviewer (October 2023)

Vienna Science and Technology Fund (WWTF) – ad hoc reviewer for “Understanding biology with AI/ML” grant proposal (September 2023)

National Science Foundation – Panelist for Division of Biological Infrastructure (2023)

Graduate Women in Science National Fellowship Program (April 2023)

Animal Behavior Society Student Research Grants (2019-2024)

Natural Sciences and Engineering Research Council of Canada (NSERC) – ad hoc reviewer for Discovery Grant Proposals (1 in December 2022, 2 in December 2023)

National Science Foundation – Panelist for Integrative Organismal Systems, Behavioral Systems Cluster (2021)

External tenure review letters:

Gettysburg College (August 2022)

Scientific journals (117 manuscripts reviewed):

Acta Herpetologica (1), American Naturalist (2), Amphibia-Reptilia (1), Animal Behavior and Cognition (1), Animal Behaviour (19), Annals of the New York Academy of Sciences (1), Behavioral Ecology (11), Behavioral Ecology & Sociobiology (13), Behavioral Processes (2), Behaviour (2), Bioacoustics (5), Biological Reviews (1), Biology Letters (3), Canadian Journal of Zoology (2), Ecology & Evolution (3), eLife (2), Ethology (6), Evolution (4), Frontiers Ecology & Evolution (1), Functional Ecology (1), HardwareX (1), Heredity (1), Integrative and Comparative Biology (2), Integrative Organismal Biology (1), JASA Express Letters (1), Journal of Animal Ecology (1), Journal of Comparative Physiology A (1), Journal of Evolutionary Biology (5), Journal of Experimental Biology (7), Philosophical Transactions of the Royal Society B (2), Proceedings of the Royal Society B (8), Royal Society Open Science (1), Scientific Reports (4), Trends in Cognitive Sciences (1)

Ad hoc reviewer for: Futuyma & Kirkpatrick Evolution 5th edition textbook revision

Public outreach and educational materials development:

Soundlab online sound analysis software. Collaboration with Galactic Polymath Education Studio, Victor Mince and Matthew Rice. <https://soundlab.scencemusic.org/>

Balancing act: Trade-offs in frogs, humans and other animals. Open-access multimedia lesson plans for high school biology students. Collaboration with Galactic Polymath Education Studio. <https://www.galacticpolymath.com/lessons/en-US/14>

Guest speaker, Oklahoma State University Herpetology Society (September 2024)

“Animals of Oklahoma: communication, habitat, and how to track”. 3 day outreach program at Stillwater Middle School, with Dr. Elizabeth McCullagh (May 2021)

Judge, 2019 Oklahoma State Science Fair

Press:

Interviewed for Science Magazine: <https://www.science.org/content/article/democrats-stage-science-fair-canceled-grants-show-what-s-been-lost>

Interviewed for Atmos article: <https://atmos.earth/a-quiet-place-is-the-lived-reality-for-these-hawaiian-insects/>

Research featured in Outdoor Oklahoma Magazine:

<https://www.wildlifedepartment.com/outdoorok/ooj/its-raining-its-pouring-crawfish-frog-snoring>

Interviewed for PNAS Front Matter article: <https://www.pnas.org/post/journal-club/female-toads-avoid-hybridizing-switching-mate-preference-fly>

Guest on WUWM “Curious Campus” Radio Show

<https://www.wuwm.com/show/CuriousCampus/2022-05-26/calls-in-the-wild-romance-and-the-eastern-gray-tree-frog>

Service to professional societies:

Mentor, SICB Division of Animal Behavior Mentoring Program (January 2025)

Board Member, Payne County Audubon Society (2025 – Present)

Mentor in Animal Behavior Society Latin American Affairs Committee Mentoring Program (2022 - 2024)

Mentor in “Virtual Mentoring Program”, 2021 Animal Behavior Society Conference (Aug 2021)

Mentor for one undergraduate student in Turner Program, Animal Behavior Society (2020, 2025)

Mentor in “Virtual Mentoring Program”, 2020 Animal Behavior Society Conference (July 2020)

Academic service prior to 2019 appointment at Oklahoma State University

Departmental Service:

Chair, career development subcommittee of University College Cork Athena SWAN School of BEES steering committee

Coordinator University College Cork EEB journal club

Reviewer for:

Funding agencies:

Animal Behaviour Society Student Research Grants (2017-2018), Austrian Science Fund (FWF), Chilean National Science and Technology Commission (CONICYT), French National Research Agency (ANR)

Scientific journals:

Acta Herpetologica (1), The American Naturalist (2), Amphibia-Reptilia (2), Animal Behaviour (14), Behaviour (3), Behavioral Ecology (6), Behavioral Ecology & Sociobiology (3), Bioacoustics (4), Biological Journal of the Linnean Society (3), Copeia (1), Current Zoology (2), Ecology Letters (3), Ecology & Evolution (1), Ethology (10), Ethology Ecology and Evolution (1), Evolution (3), Frontiers in Ecology and Evolution (2), Functional Ecology (1), Herpetologica (2), Journal of the Acoustical Society of America (3), Journal of Comparative

Physiology A (1), Journal of Evolutionary Biology (1), Journal of Experimental Biology (1), Journal of Herpetology (1), Journal of Insect Behavior (1), Journal of Natural History (2), Journal of Zoology (3), PeerJ (2), Proceedings of the Royal Society B (3), Scientific Reports (7), The Science of Nature (2)

Public outreach:

2017 & 2018 City of Cork “Culture Night” and “Meet the Scientist” events

Professional experience

Postdoctoral research associate, 2012. Department of Biological Sciences, University of Wisconsin-Milwaukee. Supervisor: Dr. Gerlinde Höbel

Laboratory technician. University of Louisville. Supervisor: Dr. Cynthia Corbitt. 2004-2005

Laboratory assistant. University of North Carolina. Supervisor: Dr. Allison Welch. 2002-2003

Intern, invertebrate biology laboratory. University of North Carolina. 2002

Languages

English – Native

Portuguese – excellent

German - intermediate

Spanish – intermediate

French – basics

Turkish - basics