

CURRICULUM VITAE

STEVEN M. PHELPS

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FALL 2023

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POSITIONS AND AFFILIATIONS:

Professor, Department of Integrative Biology, Univ. Texas, Austin	2019-present
Associate Professor, Department of Integrative Biology, Univ. Texas, Austin	2010-2019
Center for Computational Biology and Bioinformatics	2012-present
Director, Center for Brain, Behavior and Evolution	2011-present
Institute for Cell and Molecular Biology	2011-present
Institute for Neuroscience	2011-present
Department of Psychology (affiliate)	2010-present
Associate Professor, Department of Biology, University of Florida, Gainesville	2009-2010
UF Center for Autism and Related Disabilities	2008-2010
UF Genetics Institute	2008-2010
Assistant Professor, Department of Biology, University of Florida, Gainesville	2002-2009
President, Society for Social Neuroscience	2021-2022
President-elect, Society for Social Neuroscience	2019-2020
Board of Governors, Society for Social Neuroscience	2016-present
Advisory Board, Broadening Representation of Academic Investigators in Neurosciences (BRAINS)	2016-2018
NSF Sociogenomics Research Coordination Network (member)	2013-2018
Mechanisms and Evolution of Individual Differences Working Group	2016-2017
Mechanisms of Social Behavior and Evolution, NESCent working group (co-PI)	2011-2013

EDUCATION AND PROFESSIONAL PREPARATION:

Introduction to NextGen Sequencing Bioinformatics, Summer Statistics Inst. UT	2012
NextGen Sequencing Course, National Center for Evolutionary Synthesis	2011
Summer Institute in Statistical Genetics, University of Washington	2011
Postdoctoral fellow, NSF Center for Behavioral Neuroscience, Emory University	2000-2002
Topic: Neurobiological and genetic mechanisms of monogamy	
Sponsors: Drs. Larry J. Young and Thomas R. Insel	
Postdoctoral fellow, Smithsonian Tropical Research Institute	1999-2000
Topic: Cognitive models of mate choice in túngara frogs	
Sponsor: Dr. A. Stanley Rand	
Ph.D. in zoology/integrative biology, University of Texas, Austin	1994-1999
Dissertation: Historical influences on receiver biases -- neural network simulations and behavioral studies of call recognition in the túngara frog	
Supervisors: Drs. Michael J. Ryan and Walter Wilczynski	
M.S. in biology, University of Illinois, Urbana-Champaign	1993-1994
Thesis: <i>In vivo</i> and <i>in vitro</i> studies of a putative neurotrophic factor, Dopamine-Releasing Protein	
Supervisor: Dr. Victor D. Ramirez	
B.S. in physiology, University of Illinois, Urbana-Champaign	1988-1992

GRANTS:

Subaward, National Institutes of Health (\$425k UT)	2019-2024
“Neural computations underlying vocal sensorimotor transformations”	
Co-P.I. National Science Foundation (\$1.6M)	2018-2023
“EDGE: Transforming the social brain in the genus <i>Microtus</i> ”	
P.I. National Institutes of Health (\$3.9M)	2017-2024
“The bonding brain: Substrates of social attachment in monogamous voles”	
P.I. Oak Ridge Associated Universities (\$4k)	2020
“Society for Social Neuroscience: A Meeting of Minds”	
P.I. National Science Foundation (\$680k)	2015-2019
“Inventing monogamy: innovation and adaptation in the epigenome”	
P.I. National Science Foundation (\$368k)	2014-2016
“Integrative biology of social cognition: avpr1a, memory and alternative male tactics”	
P.I. National Science Foundation (\$750k)	2009-2014
“CAREER: Integrative neurobiology of species recognition”	
P.I. National Science Foundation (\$19k)	2011-2012
“International Meeting of the Society for Social Neuroscience”	
Co-P.I. National Center for Evolutionary Synthesis (\$60k)	2010-2012
“Integrative models of vertebrate sociality: evolution, mechanism and emergent properties.”	
P.I. National Institutes of Health (\$275k)	2009-2011
“An animal model of parental care: Manipulating social environment with V1aR-RNAi”	
P.I., National Science Foundation	2006-2008
“Integrative biology of vocal communication”	
P.I., National Geographic	2007
“Historical biogeography of the singing mice”	
P.I., National Science Foundation	2003-2006
“Behavioral and neuroendocrine variation in mammalian mating systems.”	
P.I., National Science Foundation	2005
“Workshop on rodents as models for integrative study of social behavior”	

HONORS AND AWARDS:

The Op-Ed Project Fellow	2023-2024
Radcliffe Fellow , Radcliffe Institute of Advanced Study, Harvard University	2021-2022
Guggenheim Fellow , John Simon Guggenheim Foundation	2021-2022
Humanities Institute Fellow , University of Texas at Austin	2020
Diversity & Inclusivity Teaching Excellence , UT College of Natural Sciences	2018
Notable Literary Essay, <i>2018 Best American Essays</i>	2018
Best Research Paper Award , University of Texas at Austin	2016
Reeder Fellow, University of Texas at Austin	2010-2011
National Science Foundation CAREER Award	2009-2014
UF College of Liberal Arts and Sciences Teacher of the Year Award	2006-2007
University of Florida Academy of Distinguished Teacher-Scholars, nominee	2006-2007
NSF Center for Behavioral Neuroscience Postdoc. Fellow	2000-2002
Smithsonian Postdoctoral Fellow	1999
University of Texas Continuing Fellow nominee, declined	1999
University of Texas Tuition Fellowship	1998, 1999
Dorothea Bennet Travel Fellowship, U.T. Dept. Zoology	1996, 1998

Smithsonian Predoctoral Fellow	1998
Dorothea Bennet Research Fellowship, U.T. Dept. Zoology	1995, 1998
National Research Service Award , National Institutes of Health	1995-1998
Endowment for Excellence Fellowship, U.T. Dept. Zoology	1997
Bruton Award, U.T. Graduate School	1996
Sigma Xi Grants-in-Aid	1996
Gaige Award, American Society of Ichthyologists and Herpetologists	1996
National Science Foundation Undergrad. Research Fellowship	1992

PUBLICATIONS:

Manuscripts submitted (including pre-prints):

A. Berrio and **S.M. Phelps**. *In revision*. Ancient and ongoing selection on a novel *Avpr1a* enhancer associated with the onset of prairie vole monogamy. *Hormones and Behavior*.

E. Giglio, P. Campbell, A.L. Warren, B. Pasch, **S.M. Phelps**. *In revision*. For whom the mouse sings: Audience influences the songs of Alston's singing mice. *Animal Behaviour*.

Published or in press:

M.L. Gustison, R. Muñoz Castañeda, P. Osten, **S.M. Phelps**. 2023. Sexual coordination in a whole-brain map of prairie-vole pair-bonding. *eLife*.

S. Smith, P. Frazel, A. Khodadadi, P. Zappile, C. Marier, M. Okhovat, S. Brown, M. Long, A. Heguy, **S.M. Phelps**. 2023. *De novo* assembly and annotation of the singing mouse genome. *BMC Genomics* 24:1-12.

T.T. Burkhard, M. Matz and **S.M. Phelps**. 2023. Patterns of repeatability and heritability in the songs of wild Alston's singing mice, *Scotinomys teguina*. *Animal Behaviour* 200:91-103.

T. Burkhard, E.R. Sachs and **S.M. Phelps**. 2023. Female preferences for high vocal effort in singing mice. *Behaviour* 160:275-297.

D. Zheng, D.E. Okobi, R. Shu, R. Agrawal, M.A. Long, **S.M. Phelps**. 2022. Mapping the vocal circuitry of Alston's singing mouse with pseudorabies virus. *Journal of Comparative Neurology* 530:2075-2099.

M.L. Gustison and **S.M. Phelps**. 2022. Individual differences in attachment: A multi-disciplinary perspective. *Genes, Brains & Behavior* 21:e12792.

G.N. Wallace, M. Elden, R. Boucher, **S.M. Phelps**. 2022. An automated radio-telemetry system (ARTS) for monitoring small mammals. *Methods in Ecology and Evolution* 13:976-986.

J.A. Tripp, A. Berrio, L.A. McGraw, M. Matz, J.K. Davis, J.W. Thomas, L.J. Young, **S.M. Phelps**. 2021. Comparative neurotranscriptomics reveal widespread species differences associated with bonding. *BMC Genomics* 22:1-22.

D.J. Zheng, A. Singh and **S.M. Phelps**. 2021. Conservation and dimorphism in neural androgen receptor distribution in Alston's singing mice (*Scotinomys teguina*). *Journal of Comparative Neurology* 529:2539-2557.

- S.L. Smith, T.T. Burkhard and **S.M. Phelps**. 2020. A comparative characterization of laryngeal anatomy in the singing mouse. *Journal of Anatomy* 238:308-320.
- E. Giglio and **S.M. Phelps**. 2020. Leptin regulates song effort in neotropical singing mice (*Scotinomys teguina*). *Animal Behaviour* 167:209-219.
- S.M. Phelps** and M.L. Gustison. 2020. The transient joys of others: Neural ensembles encode social approach in bonded voles. *Proceedings of the National Academy of Sciences* 117(23):12510-12512.
- H.J. Kilvitis, A.W. Schrey, A.K. Ragsdale, A. Berrio, **S.M. Phelps**, L.B. Martin. 2019. DNA methylation predicts immune gene expression in introduced house sparrows (*Passer domesticus*). *Journal of Avian Biology* 50(6).
- A. Banerjee, **S.M. Phelps** and M.A. Long. 2019 Quick guide: Singing mice. *Current Biology* 29:R190-191.
- D.E. Okobi, A. Banerjee, A.M.M. Matheson, **S.M. Phelps**, M.A. Long. 2019. Cortical control of vocal interaction in Neotropical singing mice. *Science* 363:983-988.
- R.L. Young, M.H. Ferkin, N.F. Ockendon, V.N. Orr, **S.M. Phelps**, A. Pogany, C.L. Richards-Zawacki, K. Summers, T. Szekely, B.C. Trainor, A.O. Urrutia, G. Zachar, L. O'Connell, H.A. Hofmann. 2019. Conserved transcriptomic profiles underpin monogamy across vertebrates. *PNAS* 116:1331-1336.
- J. Ratcliffe and **S.M. Phelps**. 2019. Twenty-five years of cognitive ecology. *Animal Behaviour*.
- J. Ratcliffe and **S.M. Phelps** (eds). 2019. *Cognitive Ecology*, special theme issue in *Animal Behaviour*.
- T.T. Burkhard, R.R. Westwick and **S.M. Phelps**. 2018. Adiposity signals predict vocal effort in Alston's singing mice. *Proceedings of the Royal Society series B* 285. doi:10.1098/rspb.2018.0090
- S.E. Bengston, R.A. Dahan, Z. Donaldson, **S.M. Phelps**, A. Sih, K. van Oers, A.M. Bell. 2018. Genomic tools for behavioural ecologists to understand repeatable individual differences in behaviour. *Nature Ecology and Evolution* 2:944-955. doi:10.1038/s41559-017-0411-4
- A. Berrio, R. Guerrero, M. Okhovat, M. Matz, **S.M. Phelps**. 2018. Complex selection on a regulator of social cognition: Evidence of balancing selection, regulatory interactions and population differentiation in the prairie vole. *Molecular Ecology* 27:419-431.
- M. Okhovat, I. Chen, D.J. Zheng, H. Momoh, J. Ikpat, **S.M. Phelps**. 2017. Genetic variation in the developmental regulation of cortical *avpr1a* among prairie voles. *Genes, Brain and Behavior*, 17:36-48. doi: 10.1111/gbb.12396
- S.M. Phelps**, M. Okhovat and A. Berrio. 2017. Individual differences in social behavior and cortical vasopressin receptor: Genetics, epigenetics and evolution. *Frontiers in Neuroscience* 11, 537. doi:10.3389/fnins.2017.00537

- S.M. Phelps.** 2017. News and Views: How to build a better dad. *Nature* 544:418-419.
- M. Okhovat, S. Maguire and **S.M. Phelps.** 2017. Methylation of *avpr1a* in the cortex of wild prairie voles: Effects of CpG position and polymorphism. *Royal Society Open Science* 4:160646.
- B. Pasch, R. Sanford and **S.M. Phelps.** 2017. Agonistic character displacement in social cognition in singing mouse (*Scotinomys teguina*). *Animal Cognition* 20: 267-273
doi:10.1007/s10071-016-1046-6.
- D.V. Blondel and **S.M. Phelps.** 2016. Effects of acute corticosterone treatment on male prairie voles (*Microtus ochrogaster*): Territorial aggression does not accompany induced social preference. *Journal of Comparative Psychology B* 130: 400-406.
- D.V. Blondel, G.N. Wallace, S. Calderone, M. Gorinshteyn, C.M. St Mary, **S.M. Phelps.** 2016. Effects of population density on corticosterone levels of prairie voles in the field. *General and Comparative Endocrinology* 225, 213-221.
- D.R. Rubenstein, H. Skolnik, A. Berrio, F.A. Champagne, **S.M. Phelps**, J. Solomon. 2016. Sex-specific fitness effects of unpredictable early life conditions are associated with DNA methylation in the avian glucocorticoid receptor. *Molecular Ecology* 25:1714-1728.
- M. Okhovat, A. Berrio, G. Wallace, A.G. Ophir and **S.M. Phelps.** 2015. Sexual fidelity trade-offs promote regulatory variation in the prairie vole brain. *Science* 350:1371-1374.
- M. Taborsky, H.A. Hofmann, A.K. Beery, D.T. Blumstein, I.D. Couzin, R.L. Earley, L.D. Hayes, P.L. Hurd, E.A. Lacey, **S.M. Phelps**, N.G. Solomon, L.J. Young, D.R. Rubenstein. 2015. Taxon matters: promoting integrative studies of social behavior. *Trends in Neuroscience* 38:188-191.
doi:10.1016/j.tins.2015.01.004
- P. Campbell, B. Pasch, A.L. Warren and **S.M. Phelps.** 2014. Vocal ontogeny in Neotropical singing mice (*Scotinomys*). *PLOS One* 9(12):e113628.
- H.A. Hofmann, A.K. Beery, D.T. Blumstein, I.D. Couzin, R.L. Earley, L.D. Hayes, P.L. Hurd, E.A. Lacey, **S.M. Phelps**, N.G. Solomon, M. Taborsky, L.J. Young, D.R. Rubenstein. 2014. An evolutionary framework for studying mechanisms of social behavior: NESCent Working Group on Integrative Models of Vertebrate Sociality: Evolution, Mechanisms, and Emergent Properties. *Trends in Ecology and Evolution* 29:581–589.
- B. Pasch, B. Bolker and **S.M. Phelps.** 2013. Interspecific dominance via vocal interactions mediates altitudinal zonation in Neotropical singing mice. *American Naturalist* 182: E161-173.
- D. Zheng, B. Larsson, **S.M. Phelps** and A.G. Ophir. 2013. Female alternative mating tactics, reproductive success and nonapeptide receptor expression in the social decision-making network. *Behavioral Brain Research* 246:139-147.

M.A. Kingsbury, E.D. Gleeson, A.G. Ophir, **S.M. Phelps**, L.J. Young and C.A. Marler. 2012. Monogamous and promiscuous rodent species exhibit discrete variation in the size of the medial prefrontal cortex. *Brain, Behavior and Evolution* 80:4-14. DOI: 10.1159/000339247

A.G. Ophir, A. Gessel, D. Zheng and **S.M. Phelps**. 2012. Oxytocin receptor density is associated with male mating tactics and social monogamy. *Hormones and Behavior* 61: 445-453.

M. Fernandez-Vargas, Z. Tang-Martinez and **S.M. Phelps**. 2011. Singing, allogrooming, and allomarking behaviour during inter- and intra-sexual encounters in the Neotropical short-tailed singing mouse (*Scotinomys teguina*). *Behavior* 148:945-965.

B. Pasch, A.S. George, P. Campbell and **S.M. Phelps**. 2011. Androgen-dependent vocal performances influences female preference in Neotropical singing mice. *Animal Behavior* 82:177-183.

B. Pasch, A. George, H. Hamlin, L.G. Guillette and **S.M. Phelps**. 2011. Androgens mediate song effort and aggressive behavior in singing mice. *Hormones and Behavior* 59: 90-97.

S.M. Phelps. 2010. From endophenotypes to evolution: social attachment, sexual fidelity and the *avpr1a* locus. *Current Opinion in Neurobiology* 20:795–802.

O. Crino, I. Larkin and **S.M. Phelps**. 2010. Divergent stress coping styles and singing behavior in the short-tailed singing mouse (*Scotinomys teguina*). *Hormones and Behavior* 58:334-340.

P. Campbell, B. Pasch, J.L. Pino, M. Phillips and **S.M. Phelps**. 2010. Geographic variation in the songs of Neotropical singing mice: testing the relative importance of drift and local adaptation. *Evolution* 64:1955-1972.

L.M. Turner, A.R. Young, H. Rompler, T. Schoneberg, **S.M. Phelps** and H.E. Hoekstra. 2010. Monogamy evolves through multiple mechanisms: Evidence from V1aR in deer mice. *Molecular Biology and Evolution* 27:1269-1278.

A.G. Ophir, D.J. Zheng, S. Eans and **S.M. Phelps**. 2009. Social investigation in a memory task relates to natural variation in septal expression of oxytocin receptor and vasopressin receptor 1a. *Behavioral Neuroscience* 123:979-991.

S.M. Phelps, P. Campbell, D.-J. Zheng and A.G. Ophir. 2009. Beating the boojum: Comparative approaches to the neurobiology of social behavior. *Neuropharmacology* 58:17-28.

S.M. Phelps and A.G. Ophir. 2009. Monogamous brains and alternative tactics: Neuronal V1aR, space use and sexual infidelity among male prairie voles. In *Cognitive Ecology II*, (Reuven Dukas and John Ratcliffe Eds.) University of Chicago Press, pp156-176.

- P. Campbell, A.G. Ophir and **S.M. Phelps**. 2009. Central vasopressin and oxytocin receptor distributions in two species of singing mice. *Journal of Comparative Neurology* 516:321-333.
- D. Blondel, J. Pino and **S.M. Phelps**. 2009. Space use and social structure of the long-tailed singing mouse (*Scotinomys xerampelinus*). *Journal of Mammalogy* 90:715-723.
- P. Campbell, R. Reep, M. Stoll, A. Ophir and **S.M. Phelps**. 2009. Conservation and diversity of *Foxp2* expression in muroid rodents: Functional implications. *Journal of Comparative Neurology* 512:84-100.
- A.G. Ophir, P. Campbell, K. Hannen and **S.M. Phelps**. 2008. Field tests of *cis*-regulatory variation at the prairie vole *avpr1a* locus: association with V1aR abundance but not social or sexual fidelity. *Hormones and Behavior* 54:694-702.
- A.G. Ophir, J.O. Wolff and **S.M. Phelps**. 2008. Variation in neural V1aR predicts space use and sexual fidelity among male prairie voles in semi-natural settings. *Proceedings of the National Academy of Sciences* 105:1249-1254.
- A.G. Ophir, A.B. Sorin, **S.M. Phelps** and J.O. Wolff. 2008. Social but not genetic monogamy is associated with higher breeding success in prairie voles. *Animal Behavior* 75:1143-1154.
- A.G. Ophir, O. Crino, Q. Wilkerson, J.O. Wolff and **S.M. Phelps**. 2008. Female-directed aggression predicts paternal behavior, but female prairie voles prefer affiliative males to paternal males. *Brain, Behavior and Evolution* 71:32-40.
- J.O. Wolff, A.G. Ophir and **S.M. Phelps**. 2008. Social monogamy in prairie voles is not related to synchronous breeding. *Canadian Journal of Zoology* 86:339-343.
- M. Fernandez, Z. Tang-Martinez and **S.M. Phelps**. 2008. Olfactory responses of male and female Neotropical singing mice (*Scotinomys teguina*) to odors of the mid-ventral sebaceous gland: Discrimination of conspecifics, gender and female reproductive condition. *Journal of Chemical Ecology* 34:429-437.
- A.G. Ophir, A.B. Sorin, **S.M. Phelps** and J.O. Wolff. 2007. Comparative morphology, genetics and social behavior of prairie voles from Tennessee and Illinois in the laboratory and field. *Journal of Mammalogy* 88:989-999.
- S.M. Phelps**, A.S. Rand and M.J. Ryan. 2007. The mixed-species chorus as public information: male túngara frogs eavesdrop on a heterospecific. *Behavioral Ecology* 18:108-114.
- S.M. Phelps**. 2007. Sensory ecology and the evolution of perceptual allocation. *Philosophical Transactions of the Royal Society* 362:355-367.
- S.M. Phelps**. 2006. The integrative biology of social behavior: Rodents as extended model systems. *National Science Foundation Workshop Report*.
- S.M. Phelps**, A.S. Rand and M.J. Ryan. 2006. The cognitive architecture of mate choice and species recognition. *American Naturalist* 167:28-42.
- S.M. Phelps**. 2004. Appraising the brain's utility. *Trends in Ecology and Evolution* 19:303-304.

S.M. Phelps and L.J. Young. 2003. Extraordinary diversity in vasopressin (V1a) receptor expression in wild prairie voles: Patterns of variation and covariation. *Journal of Comparative Neurology* 466:564-576.

M.J. Ryan, W. Rand, P.C. Hurd, **S.M. Phelps** and A.S. Rand. 2003. Generalization in response to mate recognition signals. *American Naturalist* 161:380-294.

S.M. Phelps. 2002. Like minds: Evolutionary convergence in nervous systems. *Trends in Ecology and Evolution* 17:157-158.

S.M. Phelps, M.J. Ryan and A.S. Rand. 2001. Vestigial preferences in neural networks and túngara frogs. *Proceedings of the National Academy of Sciences* 98:13161-13166.

E.J. Yang, **S.M. Phelps**, D. Crews and W. Wilczynski. 2001. The effects of social experience on aggressive behavior in the green anole lizard (*Anolis carolinensis*). *Ethology* 107:777-793.

S.M. Phelps. 2001. History's lessons: a neural network approach to receiver biases and the evolution of communication. In *Anuran Communication*, (M.J. Ryan) Smithsonian, pp.167-180.

M.J. Ryan, **S.M. Phelps** and A. S. Rand. 2001. How evolutionary history shapes recognition mechanisms. *Trends in Cognitive Science* 5:143-148.

S.M. Phelps and M.J. Ryan. 2000. History influences signal recognition: Neural network models of túngara frogs. *Proceedings of the Royal Society B* 267:1633-1639.

S.M. Phelps, J. Lydon, B.W. O'Malley and D. Crews. 1998. Regulation of male sexual behavior by progesterone receptor, sexual experience, and androgens. *Hormones and Behavior* 34:294-302.

S.M. Phelps and M.J. Ryan. 1998. Neural networks predict response biases of female túngara frogs. *Proceedings of the Royal Society B* 265:279-285.

S.M. Phelps and V.D. Ramirez. 1994. Unilateral deficits induced in rats by MPP+ are markedly reduced by an N-terminal peptide fragment of dopamine-releasing protein. *Brain Research* 666:117-119.

L.M. Page and **S.M. Phelps**. 1994. Speciation and phylogenetic resolution. *Trends in Ecology and Evolution* 9:298.

Published abstracts

J.A. Tripp, **S.M. Phelps**. 2022. Counter-singing is present but dimorphic across sexes in Alston's singing mouse. *Animal Behavior Society*, San Jose, Costa Rica.

M.L. Gustison, R. Munoz-Castaneda, P. Osten, **S.M. Phelps**. 2022. Mapping the vocal behavior network in a socially monogamous rodent. *Gordon Research Conference, Neural Mechanisms of Acoustic Communication*, South Hadley, MA.

J.A. Tripp, D. Zheng, **S.M. Phelps**. 2022. Song production is sexually dimorphic and song circuits are androgen-sensitive in a highly vocal rodent. *Gordon Research Conference, Neural*

Mechanisms of Acoustic Communication, South Hadley, MA.

C.W. Cushing, S.K. Smith, J.T. Clyde, P.S. Wilson, **S.M. Phelps**. 2022. Autonomous system for in-field observation of responses to vocalizations of Alston's singing mouse. *The Journal of the Acoustical Society of America* 151:A249-A249.

J.A. Tripp, A. Berrio, L.A. McGraw, M. Matz, J. Davis, J. Thomas, L.J. Young, **S.M. Phelps**. Neurogenomics of the bonding brain. *Integrative and Comparative Biology* 61:E909-E910.

E.M. Giglio, P. Campbell, **S.M. Phelps**. Acoustic variation across social contexts in neotropical singing mice (*S. teguina*). *Integrative and Comparative Biology* 61:E316-E316.

S.M. Phelps. 2020. Genetic and epigenetic influences on alternative tactics in the mostly monogamous prairie vole. *Society for Integrative and Comparative Biology*, Austin, TX.

M.L. Gustison, **S.M. Phelps**. 2020. Vocal activity is coupled to partner proximity and mating during pair-bonding in a monogamous rodent. *Society for Integrative and Comparative Biology*, Austin, TX.

T.T. Burkhard, **S.M. Phelps**. 2020. Evidence for heritable variation in the songs of Alston's singing mouse. *Society for Integrative and Comparative Biology*, Austin, TX.

E.M. Giglio, J.A. Tripp, **S.M. Phelps**. 2020. The role of leptin in social signal decisionmaking in neotropical singing mice (*Scotinomys teguina*). *Society for Integrative and Comparative Biology*, Austin, TX.

S.K. Smith, J. Hakansson, P. Frazel, M. Long, C. Elemans, **S.M. Phelps**. 2020. An intralaryngeal whistle using an elaborated structure enables song in Alston's singing mouse. *Society for Integrative and Comparative Biology*, Austin, TX

M.L. Gustison and **S.M. Phelps**. 2019. Automated social tracking as a tool to capture the emergence of prairie-vole bonds. *Society for Social Neuroscience*, Chicago, IL.

D.J. Zheng, R. Shu, S.K. Smith, D.E. Okobi Jr, M.A. Long, **S.M. Phelps**. The coordination of song: Characterizing the singing-mouse vocal circuit using dual pseudorabies-virus tract tracing. *Society for Social Neuroscience*, Chicago, IL.

E.M. Giglio and **S.M. Phelps**. 2019. Context in courtship: the role of leptin in social investment decisions in singing mice. *Society for Integrative and Comparative Biology*, Orlando, FL.

S.K. Smith and **S.M. Phelps**. 2019. Vocal morphology and elaborate display behavior in singing mice. *Society for Integrative and Comparative Biology*, Orlando, FL.

J. Ikpatt and **S.M. Phelps**. 2019. Expression of avpr1a in the retrosplenial cortex of the prairie vole. *Society for Social Neuroscience*, Chicago, IL.

R. Munoz, **S.M. Phelps**, P. Osten. 2018. Development of a 3D atlas of the prairie vole brain. *Society for Neuroscience*, San Diego, CA.

D.J. Zheng, D. Okobi, M. Long, **S.M. Phelps**. 2018. Androgen receptor distribution in the vocal

motor pathway of Alston's singing mice. *Society Behav. Neuroendocrinology*, Toronto, Canada.

E. Giglio, T. Burkhard, R. Westwick, **S.M. Phelps**. 2018. Leptin regulates vocal effort in singing mice in the lab and field. *Society for Behavioral Neuroendocrinology*, Toronto, Canada.

A. Berrio, J. Ikpatt, **S.M. Phelps**. 2018. Regulating monogamy: Rapid evolution of a pallidal *avpr1a* enhancer in prairie voles. *Society for Behavioral Neuroendocrinology*, Toronto, Canada.

E. Giglio, **S.M. Phelps**. 2018. Leptin regulates song effort in singing mice. *Society for the Study of Evolution*, Montpellier, France.

T. Burkhard, R. Westwick, **S.M. Phelps**. 2018. Adiposity signals predict song effort in singing mice. *Society for the Study of Evolution*, Montpellier, France.

T. Burkhard, R. Westwick, **S.M. Phelps**. 2018. Adiposity signals predict song effort in Central American singing mice. *Society for Integrative and Comparative Biology*, San Francisco, CA.

S.M. Phelps. The cognitive ecology of alternative mating tactics. 2017. *Animal Behavior Society*, Toronto, CA.

A. Berrio, R.F. Guerrero, G.V. Aglyamova, M. Okhovat, M. Matz, **S.M. Phelps**. 2017. Complex selection on a regulator of sexual fidelity. *Society for Molecular Biology and Evolution*, Austin TX.

T. Burkhard, R. Westwick, **S.M. Phelps**. 2017. Adiposity signals and body size predict song effort in Central American singing mice. *American Society for Mammalogy*, Moscow, ID.

J.E. Ikpatt, M. Okhovat, **S.M. Phelps**. 2017. CpG methylation patterns predict cortical expression of a gene locus modulating monogamy. *Gordon Research Conference – Epigenetics*, Holderness, NH.

G. Wallace and **S.M. Phelps**. 2016. Comparing traditional, Bayesian and non-parametric approaches to automated telemetry for tracking prairie voles. *Animal Behavior Society*, Columbia, MO.

M. Viacheslavov, L. O'Connell, Z. Dehghani, R. Gillette, D. Crews, **S.M. Phelps**. 2016. Cognitive ecology of alternative tactics: Neural metabolism predicts bonding and space use in the wild. *Animal Behavior Society*, Columbia, MO.

E. Giglio and **S.M. Phelps**. 2016. Supper for your singing mouse: The effect of energetic resources on investment in a sexually selected trait. *Animal Behavior Society*, Columbia, MO.

A. Berrio, M. Okhovat, **S.M. Phelps**. 2016. How to become monogamous, very rapidly! *Evolution*, Austin, TX.

E. Giglio and **S.M. Phelps**. 2016. Supper for your singing mouse: The effect of energetic resources on investment in a sexually selected trait. *Evolution*, Austin, TX.

S.M. Phelps. 2015. Sexual fidelity shapes selection on epigenetic variation in the social brain. *Winter Animal Behavior Conference*, Steamboat Springs, CO.

A. Berrio, M. Okhovat, **S.M. Phelps.** 2015. Natural selection shapes the regulatory elements of pair-bonding and sexual fidelity. *Society for Social Neuroscience*, Chicago.

M. Okhovat, G. Wallace, A. Berrio, A.G. Ophir, **S.M. Phelps.** 2015. Cads and Dads: mapping genotype to phenotype among prairie voles. *Society for Social Neuroscience*, Chicago, IL.

G. Wallace, M. Gorinshteyn, R. Sheely, M. Viacheslavov, **S.M. Phelps.** 2015. Automated tracking of prairie voles in seminatural enclosures. *Society for Social Neuroscience*, Chicago, IL.

D.E. Okobi, **S.M. Phelps**, M.A. Long. 2014. Motor cortex mediates vocal sequences in Neotropical singing mice. *Society for Neuroscience*, San Diego, CA.

B. Pasch, P. Campbell, M.Z. Abbasi, P.S. Wilson, **S.M. Phelps**, M.J. Ryan. 2014. Sources of acoustic variation in the advertisement vocalizations of Neotropical singing mice. *Journal of the Acoustical Society of America* 135 (4), 2239-2239.

B. Pasch, M. Abbasi, **S.M. Phelps**, P.S. Wilson, M.J. Ryan. 2014. Steering sound beams: The influence of social context on acoustic radiation patterns in Neotropical singing mice *INTEGRATIVE AND COMPARATIVE BIOLOGY* 54, E161-E161.

A.S. George, **S.M. Phelps.** 2014. Winning influences aggression and singing behavior in Neotropical mice. *INTEGRATIVE AND COMPARATIVE BIOLOGY* 54, E277-E277.

A. Berrio, M. Okhovat, L.O'Connell, **S.M. Phelps.** 2014. Regulating monogamy: evidence for adaptive evolution of an avpr1a enhancer. *INTEGRATIVE AND COMPARATIVE BIOLOGY* 54, E17-E17.

G. Wallace, Z. Dehghani, M. Okhovat, A Berrio, **S.M. Phelps.** 2014. Does cis-regulatory variation in avpr1a shape sexual fidelity through spatial memory? *INTEGRATIVE AND COMPARATIVE BIOLOGY* 54, E364-E364.

M. Okhovat, A. Berrio, A.G. Ophir, N. Lysak, **S.M. Phelps.** 2014. Balancing selection promotes epigenetic variation in prairie vole spatial memory circuit. *INTEGRATIVE AND COMPARATIVE BIOLOGY* 54, E326-E326.

D.E. Okobi, **S.M. Phelps**, M.A. Long. 2013. Cortical and subcortical modules control stereotyped vocalizations in a tropical rodent. *Society for Neuroscience*, New Orleans, Louisiana.

A.S. George, B. Pasch and **S.M. Phelps.** 2013. Social experience modulates acoustic signaling in Alston's singing mouse. *Society for Behavioral Neuroendocrinology*, Atlanta, Georgia.

S.M. Phelps, A. Berrio, M. Okhovat and G.N. Wallace. 2013. Does sexual fidelity drive balancing selection on neuronal avpr1a expression and social memory? *Society for Molecular Biology and Evolution*, Chicago, Illinois.

- A. Berrio, D.V. Blondel and **S.M. Phelps**. 2013. Evolution of cis-regulatory elements of the *avpr1a* locus in New World voles. *Society for Molecular Biology and Evolution*, Chicago, Illinois.
- D.V. Blondel, G.N. Wallace, S. Calderone, M. Gorinshteyn, C.M. St Mary and **S.M. Phelps**. 2013. Corticosterone, stress-reactivity, and male prairie vole social behavior in semi-natural enclosures. *Animal Behavior Society*, Boulder, Colorado.
- L.A. O'Connell, B.M. Goetz, T.C. McDonald, A.J. Moore, **S.M. Phelps**, T. Székely, B.C. Trainor and H.A. Hofmann. 2012. Evolutionary convergence of neuroendocrine mechanisms regulating social systems. *Society for Behavioral Neuroendocrinology*. Madison, Wisconsin.
- S.J. Alger, B. Pasch and **S.M. Phelps**. 2012. Social Context Influences FoxP2 Neuronal Activation in Response to Auditory Stimuli. *Society for Behavioral Neuroendocrinology*. Madison, Wisconsin.
- A.S. George, B. Pasch and **S.M. Phelps**. 2012. Conditioning species recognition in the singing mouse. *Society for Behavioral Neuroendocrinology*, Madison, Wisconsin.
- M. Okhovat, N. Lysak, A.G. Ophir and **S.M. Phelps**. 2012. Non-microsatellite Cis-regulatory sequence polymorphisms predict Neuronal V1aR abundance in prairie voles. *Society for Behavioral Neuroendocrinology* (SBN), Madison, Wisconsin.
- D. Zheng, **S.M. Phelps**, A.G. Ophir. 2012. Female monogamy, reproductive success and the social decision-making network. *Animal Behavior Society (ABS) & Human Behavior and Evolution Society (HBES)*, Albuquerque, New Mexico.
- G. Wallace, O. Crino, **S.M. Phelps**. 2011. Type 1- and 2-like corticotropin releasing factor receptor distributions in *Scotinomys teguina*. *Society for Neuroscience (SfN)*, Washington, D.C.
- A. Berrio, J.L. Pino, **S.M. Phelps**. 2011. Cis-regulatory evolution of the *avpr1a* locus and its pseudogene among New World voles. *Society for Neuroscience (SfN)*, Washington, D.C.
- M. Okhovat, N. Lysak, P. Campbell, A.G. Ophir and **S.M. Phelps**. 2011. Complex associations of cis-regulatory sequence polymorphisms with neuronal V1aR abundance: Implications for social behavior and genome-wide association studies. *Society for Neuroscience (SfN)*, Washington, D.C.
- B. Pasch, P. Campbell and **S.M. Phelps**, 2011. Integrative biology of acoustic communication in neotropical singing mice (*Scotinomys*). *Third Symposium of Acoustic Communication in Animals*, Ithaca, NY.
- J.L. Pino, D.L. Reed and **S.M. Phelps**. 2011. Lineage divergence of singing mice (genus *Scotinomys*) in southern Central American highlands. *American Society for Mammalogy*, Portland, OR.
- B. Pasch and **S.M. Phelps**. 2011. Neural mechanisms of species recognition in

Neotropical singing mice. *Society for Social Neuroscience*, Utrecht, Netherlands.

W. Weymouth, E. Richmond and **S.M. Phelps**. 2010. Evolutionary remains: variation in the heritability of *avpr1a* expression among prairie voles. *Society for Neuroscience*, San Diego, California.

S.M. Phelps and N.S. Lysak. 2010. Single nucleotide polymorphisms and microsatellites in the *avpr1a* promoter: novel associations with neuronal V1aR among wild prairie voles. *Society for Neuroscience*, San Diego, California.

A. Berrio, N.S. Lysak, D.V. Blondel, J.L. Pino and **S.M. Phelps**. 2010. Evolution of the *cis*-regulatory region of *avpr1a* and its pseudogene. *Society for Neuroscience*, San Diego, California.

A.G. Ophir, A. Gessel A, D. Zheng and **S.M. Phelps**. 2010. A socio-spatial memory neural circuit predicts male monogamy in the field. *Society for Neuroscience*, San Diego, California.

B. Pasch, A. George, H.J. Hamlin, L.G. Guillette and **S.M. Phelps**. 2010. Androgens activate the advertisement songs of singing mice (*Scotinomys*). *Society for Integrative and Comparative Biology*. Seattle, WA.

P. Campbell, A.G. Ophir and **S.M. Phelps**. 2009. Central vasopressin and oxytocin receptor distributions in two species of singing mice *Society for Behavioral Neuroendocrinology*, East Lansing, MI.

B. Pasch, A. George and **S.M. Phelps**. 2009. Does testosterone activate singing in male mice? *Society for Behavioral Neuroendocrinology*, East Lansing, Michigan.

D. Blondel and **S.M. Phelps**. 2009. Does cortisol influence the social monogamy behavior syndrome in prairie voles? *Society for Behavioral Neuroendocrinology*, East Lansing, Michigan.

A.G. Ophir, J.O. Wolff, and **S.M. Phelps**. 2009. Variation in neuronal V1aR predicts sexual fidelity and space use. *National Meeting of Vole Researchers*, Atlanta, Georgia.

P. Campbell, B. Pasch and **S.M. Phelps**. 2008. Geographic variation in songs of singing mice (genus, *Scotinomys*): local adaptation or neutral divergence? *Society for the Study of Evolution*.

A.G. Ophir, D.J. Zheng, S. Eans and **S.M. Phelps**. 2008. Social investigation in a memory task relates to natural variation in septal expression of oxytocin receptor and vasopressin receptor 1a. *JB Johnston Club (JBJC)*.

A.G. Ophir, J.O. Wolff and **S.M. Phelps**. 2007. Monogamous brains? Context-dependent selection on behavioral and brain phenotypes. *International Ethological Conference (IEC)*.

O.L. Crino, I. Larkin and **S.M. Phelps**. 2007. Behavioral and hormonal differences in wariness between two populations of short-tailed singing mice. *Animal Behavior Society*.

P. Campbell, B.S. Pasch and **S. M. Phelps**. 2007. Ontogeny of vocal behavior and call structure in singing mice, *Scotinomys teguina* and *S. xerampelinus*. *American Society of Mammalogists*.

A.G. Ophir, D. Zheng, J. O. Wolff and **S.M. Phelps**. 2006. Neuropeptide receptor expression related to patterns of space use, but not mating status, in field populations of prairie voles. *Society for Neuroscience*.

P. Campbell, G.J. Zhang and **S.M. Phelps**. 2006. RNAi strategies for exotic species. *Society for Neuroscience*.

A.G. Ophir, J. O. Wolff and **S.M. Phelps**. 2006. V1aR expression and alternative mating tactics in male prairie voles: a field study. *Society for Behavioral Neuroendocrinology*.

O.I. Crino, A.G. Ophir, J.O. Wolff and **S.M. Phelps**. 2006. Female prairie voles prefer affiliative males but not good fathers. *Animal Behavior Society*.

A.G. Ophir, **S.M. Phelps** and J.O. Wolff. 2006. Selection for social but not genetic monogamy in the prairie vole. *Society for Integrative and Comparative Biology*.

A.G. Ophir, **S.M. Phelps** and J.O. Wolff. 2005. Defining mating system using information theory: space use and parentage in the prairie vole. *Animal Behavior Society*.

D. Blondel and **S.M. Phelps**. 2004. Assessing the social systems of the singing mice (genus *Scotinomys*). *Animal Behavior Society*.

S.M. Phelps. 2004. A psychophysics of mate choice: insights from signal detection theory. *Animal Behavior Society*.

S.M. Phelps. 2004. Computational models of mate choice: insights into the evolution of brain and behavior. *Fourth International Congress on Ecological Informatics*.

S.M. Phelps, K.M. Sharer, and L.J. Young. 2002. Individual differences in vasopressin V1a receptor expression, promoter structure and social behavior. *Society for Neuroscience Abstracts*.

S.M. Phelps, T.R. Insel and L.J. Young. 2001. Individual differences and the origins of behavioral diversity. *J.B. Johnston Club* (comparative neuroscience).

S.M. Phelps, M.J. Ryan and A.S. Rand. 2001. A psychophysical approach to mate choice in female túngara frogs, *Physalaemus pustulosus*. *Animal Behavior Society*.

S.M. Phelps, K.M. Sharer, T.R. Insel and L.J. Young. 2001. Individual differences in neuropeptide receptor expression and promoter structure in wild prairie voles. *Sixth International Congress of Neuroethology*.

S.M. Phelps, S. Wooley, J. Lydon, B.W. O'Malley and D. Crews. 1998. Sexual behavior deficits in male PRKO mice: effects of sexual experience and testicular androgens. *Society for Neuroscience Abstracts*.

S.M. Phelps and M.J. Ryan. 1998. Evolutionary history shapes receiver biases: Artificial neural network models of call recognition in the túngara frog, *Physalaemus pustulosus*. *Fifth International Congress of Neuroethology*.

S.M. Phelps, J. Lydon, B.W. O'Malley and D. Crews. 1997. Progesterone receptor enhances reinstatement of male sexual behavior by testosterone: evidence from mice heterozygous for a progesterone receptor knockout. *Society for Neuroscience Abstracts*.

S.M. Phelps, M.J. Ryan and W. Wilczynski. 1996. The evolution of biases in mate choice: modeling call recognition in the túngara frog with neural networks. *Society for Neuroscience Abstracts*.

S.M. Phelps 1996. The evolution of biases in mate choice. *American Society of Ichthyologists and Herpetologists*.

V.D. Ramirez, **S.M. Phelps**, and S. Kim. 1994. Treatment with a synthetic peptide from the N-terminus of DARP partially restores DA levels in MPP+-lesioned rats and drastically reduces amphetamine-induced rotation, *Society for Neuroscience Abstracts*.

INVITED PRESENTATIONS:

Symposia and national/international meetings

Genetic and epigenetic influences on alternative tactics in the mostly monogamous prairie vole. Symposium on environmental and evolutionary epigenetics, *Society for Integrative and Comparative Biology*, Austin, TX, January 2020.

Regulating monogamy: Adaptive evolution of reward, memory and modulation. *Summer course in Neural Circuits of Social Cognition and Behavior*, Neuroscience School of Advanced Studies (NSAS), **Venice, Italy**, June 2019.

Social cognition in the wild. *ISC 2018 Summer School in Animal Cognition*, McGill University, **Montreal, Canada**, July 2018.

The cognitive ecology of alternative male tactics: Memory & fidelity among mostly monogamous voles. *Animal Cognition: Mechanisms, Ecology and Evolution*, *Animal Behavior Society*, **Toronto, Canada** July 2017.

Sing out loud: a signaler's perspective on condition-dependent traits. *Mechanisms of Mate Choice Symposium*, *Society for Integrative and Comparative Biology*, New Orleans, January 2017.

The sociogenomics of monogamy: Epigenetics, genetics and evolution. Annual meeting of the *Sociogenomics NSF Research Coordination Network*, Atlanta, GA, May 2017.

Caught in peculiar positions: Variation in the mechanisms of monogamy. *Behavioral Genomics Symposium*, *Animal Behavior Society*, Columbia, MO, August 2016.

Sexual fidelity shapes selection on epigenetic variation in the social brain. *Center for the Integrative Study of Animal Behavior Spring Symposium*, Indiana University at Bloomington, March 2015.

Sexual fidelity shapes selection on epigenetic variation in the social brain. *Winter Animal*

Behavior Conference, Steamboat Springs, CO, January 2015.

Genes, genomics and the mechanisms of monogamy. *Gordon Conference on Genes and Behavior*, Galveston, TX, February 2014.

Communicating your research. *Broadening Representation of Academic Investigators in Neurosciences (BRAINS) workshop*, Seattle, Washington, January 2013.

Thriving as an only. *Broadening Representation of Academic Investigators in Neurosciences (BRAINS) workshop*, Seattle, Washington, January 2013.

Career/life balance. *Broadening Representation of Academic Investigators in Neurosciences (BRAINS) workshop*, Seattle, Washington, January 2013.

The evo-devo of neuroendocrine systems: a historical perspective. *Society for Behavioral Neuroendocrinology*. **Queretaro Mexico**, June 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy. *Society for Social Neuroscience*, **Utrecht, Netherlands**, March 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy. *Society for Social Neuroscience*, **Shanghai, China**, January 2011.

Getting caught in peculiar positions: Variation in the mechanisms of monogamy. *19th Congress on Neuropharmacology*, Chicago, Illinois, October 2009.

Evolutionary perspective on individual differences: Forebrain V1aR and sexual fidelity in male prairie voles. *Society for Behavioral Endocrinology*, East Lansing, Michigan, June 2009.

Variation in neuronal V1aR predicts sexual fidelity and space use. *National Meeting of Vole Researchers*, Atlanta, Georgia, February 2009.

Variation in the mechanisms of monogamy: evolutionary perspectives on individual differences. Symposium on "Evolution and development: How brains change through evolutionary time," 24th Annual Winter Conference on Issues in Developmental Psychobiology, January 2009.

Neurobiology of social behavior. National Institutes of Health Symposium on Animal Models of Social Behavior, November 2008.

Mechanisms of mate choice and the evolution of brain size. Evolutionary Ecology of Learning, Memory and Information Use, Animal Behavior Society, July 2007.

Perceptual allocation and the power of choice. Winter Animal Behavior Conference, Jan. 2007.

Mechanisms of mate choice and the evolution of brain size. Distinguished Speakers in Behavioral and Brain Sciences Colloquium, Cornell University, March 2007.

Neuronal gene expression and behavioral decision-making. Distinguished Speakers in

Behavioral and Brain Sciences Colloquium, Cornell University.

Context-dependent selection on brain and behavior. Symposium on Behavioral Evolution, Society for the Study of Evolution, July 2006.

Intraspecific and interspecific variation in brain and behavior. Winter Animal Behavior Conference, January 2006.

Computational models of mate choice: insights into the evolution of brain and behavior. **Keynote address.** Fourth International Congress on Ecological Informatics. **Busan, Korea**, October 2004.

A psychophysics of mate choice: insights from signal detection theory. Animal Behavior Society, **Oaxaca, Mexico**, July 2004.

Neuropeptide receptors and monogamy in voles. Gordon Conference on Genes and Behavior, February 2004.

Historical influences on species recognition: Neural network models of túngara frogs. Symposium on advances in anuran communication, in honor of Dr. A. Stanley Rand. *American Society of Ichthyologists and Herpetologists*, July 1998.

Invited seminars

A biology of bonding: Neurobiology, behavior and evolution. University of California at Davis, Department of Biology, February 2022.

Making sound decisions: Singing mice as integrative models for adaptive display. University of California at Davis, Department of Biology, February 2022.

A biology of bonding: Neurobiology, behavior and evolution. Harvard Medical School, Institute for Neuroscience, March 2022.

Keynote speaker: A biology of bonding: Neurobiology, behavior and evolution. University of Mississippi, Neuroscience Institute, March 2022.

Making sound decisions: Singing mice as integrative models for adaptive display. . University of Mississippi, Department of Biology, March 2022.

The biology of intimacy: A synthesis. Harvard University, Radcliffe Institute, November 2021.

Making sound decisions: Singing mice as integrative models for adaptive display. Queens University Department of Biology, October 2020.

Cancelled due to pandemic: The bonding brain: Memory, modulation and evolution. Yale University, March 2020.

Cancelled due to pandemic: The bonding brain: Memory, modulation and evolution. Northern Arizona University, April 2020.

Keynote speaker: The bonding brain: Memory, modulation and evolution. *Spring Neuroscience Symposium*, University of Mississippi Medical School, April 2019.

Regulating monogamy: Adaptation in reward, memory and modulation.
Department of Psychology, Notre Dame, February 2019.

Graduate student invited speaker: The varied mind: Selection maintains diversity in the monogamous brain. Indiana University, Bloomington, August 2018.

Outside voices: Singing mice as models for adaptive decision making. Indiana University, Bloomington, August 2018.

The varied mind: Selection maintains diversity in the monogamous brain. University of Michigan, April 2017.

Peculiar positions: Variation in the mechanisms of monogamy. Keck Center Distinguished Speakers Series, North Carolina State University, Raleigh, December 2016.

Caught and jammed: Variation in the mechanisms of monogamy. Cold Spring Harbor Labs, April 2016.

Caught and jammed: Variation in the mechanisms of monogamy. Emory University Center for Translational Social Neuroscience. January 2016.

Graduate student invited speaker. Caught and jammed: Variation in the mechanisms of monogamy. Kent State University, November 2015.

Caught in peculiar positions: Selection promotes diversity in the social brain. Oklahoma University, February 2015

Caught in peculiar positions: Selection promotes diversity in the social brain. University of Texas at San Antonio, February 2015

Caught in peculiar positions: Selection promotes diversity in the social brain. University of South Florida, November 2014

Caught in peculiar positions: Selection promotes diversity in the social brain. University of Illinois at Urbana-Champaign, September 2014

Social cognition in the wild: from philandering voles to singing mice. Center for Social Neuroscience, University of Chicago, April 2013.

Getting caught in peculiar positions: variation in the mechanisms of monogamy. Department of Zoology, Oklahoma State University, November 2012.

Getting caught in peculiar positions: variation in the mechanisms of monogamy. Department of Biology, Trinity University, October 2012.

Getting caught in peculiar positions: variation in the mechanisms of monogamy. Department of Biology, McGill University, December 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy.
Department of Biology, Reed University, November 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy.
Department of Biology, Texas A&M University, October 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy.
Department of Biology, New York University Medical School, October 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy.
Department of Biology, Michigan State University, September 2011.

Evolutionary perspectives on individual differences. Institute for Cell and Molecular
Biology, University of Texas at Austin, February 2011.

Getting caught in peculiar positions: variation in the mechanisms of monogamy.
Behavioral Neuroscience Seminar, Department of Psychology, University of Texas,
January 2011.

Do long alleles make better lovers? The *avpr1a* locus and monogamy. *Physiology and
Behavior Seminar*, Section of Integrative Biology, University of Texas at Austin.
December 2010.

Getting caught in peculiar positions: Variation in the mechanisms of monogamy.
University of California at Los Angeles, Department of Biology, April 2010.

Getting caught in peculiar positions: Variation in the mechanisms of monogamy.
University of Montana, December 2009.

Getting caught in peculiar positions: Variation in the mechanisms of monogamy.
University of Miami Ohio, Department of Biology, April 2009.

Getting caught in peculiar positions: Variation in the mechanisms of monogamy. Agnes
Scott College, Department of Biology, February 2009.

Getting caught in peculiar positions: Variation in the mechanisms of monogamy.
University of Texas, Section of Integrative Biology, December 2008.

Perceptual allocation and the evolution of brain size. University of Texas, Section of
Integrative Biology, November 2008.

On not getting caught in peculiar positions: Conservation and diversity in the
mechanisms of monogamy. University of Florida, Department of Psychology, November
2007. University of Washington, Department of Biology, February 2008.

Prospects for an evolutionary neurobiology: from computational models to monogamy
molecules. North Carolina State University, Department of Biology, November 2004;
University of Florida Medical School, November 2004; University of Texas at Austin,
April 2005.

A cognitive framework for mate choice and species recognition. Indiana University, Department of Biology, April 2004; Boston University, March 2004; Univ. North Carolina, November 2004.

Individual differences and the origins of behavioral diversity: Vasopressin and monogamy. Indiana University, Department of Biology, April 2004; Boston University, March 2004.

Convergence in the evolution of nervous systems. International Conference on Molecular Mechanisms in Higher Brain Function. February 2004 (declined due to conflict).

Individual differences and the evolution of social behavior: vasopressin and monogamy in voles. University of Florida, Department of Psychology, December 2003.

Making aesthetic judgments: cognitive approaches to mate choice in túngara frogs. University of Memphis, Department of Biology, September 2001.

Making reproductive decisions: from computational models to monogamy molecules. University of Florida-Gainesville, Department of Biology, February 2001.

Decision mechanisms in mate choice. Emory University, Dept. Psychology, January 2001.

Decision mechanisms in mate choice. Smithsonian Tropical Research Institute, Dec 1999.

Evolutionary history and receiver biases. Stanford University, February 1999.

The persistence of evolutionary memory: Receiver history in neural networks and the túngara frog. Smithsonian Tropical Research Institute, June 1998.

The evolution of a communication system: Neural networks and call recognition in the túngara frog. University of California, Berkeley, November 1997.

TEACHING, MENTORING AND SERVICE ACTIVITIES:

Teaching

Teaching appointments

University of Texas at Austin

Director, Study Abroad Program: Human Biology on the Spanish Coast	summer 2019
Primary instructor: Human biology ^U	fall 2012-2020
Biology of bonding ^G	fall 2020
Brain, behavior & evolution seminar ^G	fall 2018-spring 2021
Epigenetics and society ^U	spring 2017, 2018
Behavioral epigenetics ^G	spring 2016, 2018
Evolution of gene regulation ^G	spring 2013, 2015
Evolutionary neurobiology ^G	spring 2014
Physiology and behavior seminar ^G	spring 2012
Introductory biology ^U	spring 2011-2012
Guest lecturer: Cognitive ecology ^G	fall 2017
Future of humanity (AST 321) ^U	fall 2015

Animal behavior ^U	fall 2015, 2016
Biology scholars program ^U	spring 2014, 2016
Ecology, evolution and behavior core course ^G	spring 2012-2015
Evolutionary neurobiology ^G	fall 2011, 2013
Neuroscience ^G	fall 2011, 2012

University of Florida at Gainesville

Primary instructor:	Introductory biology: Integrative principles ^U	fall 2002-2009
	Comparative and evolutionary neurobiology ^{U/G}	spring 2008, 2010
	Mechanisms of behavior ^{U/G}	spring 2005 - 2009
	Evolution of brain size ^G	spring 2006
	Comparative and evolutionary neurobiology ^G	spring 2007
	Communication and signaling: from cells to systems ^G	fall 2003 – fall 2005
	Evolution of gene regulation ^G	spring 2005
	Historical readings in animal behavior ^G	spring 2004
	Guest lecturer: Comparative neurobiology (Neuroscience) ^G	fall 2002 – spring 08
	Reproductive biology (Veterinary Medicine) ^G	
Guest lecturer:	Animal physiology (Veterinary Medicine) ^G	
	Graduate seminar in behavioral neuroscience (Psychology) ^G	
	Ethology (Zoology) ^G	

University of Texas at Austin

Teaching assistant:	Neurobiology and Behavior ^U	fall 1998
	Cellular and Molecular Biology ^U	fall 1994, spring 1995
Guest lecturer:	Biopsychology ^U	fall 1997- spring 1999
Grader:	Comparative Physiology ^U	fall 1995, spring 1996
	Animal Physiology ^U	fall 1996, spring 1997
	Nerve and Muscle Physiology ^U	fall 1997

University of Illinois at Urbana-Champaign

Teaching assistant:	Organismal Biology ^U	fall 1993, sum. 1994
	Plant Biology ^U	spring 1993, 1994

Summary of recent anonymous student evaluations

<i>Course title</i>	<i>Overall rating (5=excellent, 1=poor)</i>	
Human biology	4.8, 4.8	fall 2019, sum 2020
Epigenetics and society	4.2, 4.5	spring 2018, 2017
Behavioral epigenetics	4.5	spring 2016
Mechanisms of behavior	4.6	spring 2009
Introductory biology: Integrative principles	4.5, 4.5	fall 2008, 2010
Evolution of brain size	5.0	spring 2006
Evolution of gene regulation	4.9, 4.5	spring 2005, 2013

Mentoring

Mentorship activities

External Advisor, Broadening the Representation of Academic Investigators in NeuroSciences (BRAINS)	fall 2015-2018
Faculty Mentor, BRAINS, University of Washington, Seattle. J University of Texas at Austin	spring 2013
McNair Scholars	2010-2011
University of Florida at Gainesville:	

Graduate committees

Committees chaired

S. Smith	Ph.D. student	UT Ecology, Evol & Behav	2017-present
J. Ikpat	Ph.D. student	UT Cell & Mol Biology	2016-present
T. Burkhard	Ph.D. student	UT Ecology, Evol & Behav	2013-2021
D. Zheng	Ph.D. student	UT Ecology, Evol & Behav	2014-2020
E. Giglio	Ph.D. student	UT Ecology, Evol & Behav	2012-2020
G. Wallace	Ph.D. student	UT Ecology, Evol & Behav	2011-2021
S. Strutz	Ph.D.	UT Ecology, Evol & Behav	2014-2017
M. Okhovat	Ph.D.	UT Ecology, Evol & Behav	2010-2016
A. Berrio	Ph.D.	UF Biology/UT EEB	2009-2016
Z. Daghbani	M.S.	UT Cell and Mol. Biol.	2013-2014
A. George	M.S.	UT Psychology	2010-2014
J. Pino	Ph.D. candidate	UF Biology (co-chaired)	2007-2014
D. Blondel	M.S., Ph.D.	UF Biology	2002-2013
B. Pasch	Ph. D.	UF Biology	2006-2011
O. Crino	M.S.	UF Zoology	2005-2008

Committees served

P. Demetrovich	Ph.D.	UT Neuroscience	2021-present
M. Dwight	Ph.D.	UT Neuroscience	2020-present
A. Davis	PhD	UT Ecology, Evol & Behav	2020-present
H. Bilger	Ph.D.	UT Ecology, Evol & Behav	2020-present
K. Wilhite	Ph.D.	UT Ecology, Evol & Behav	2019-present
J. York	Ph.D.	UT Ecology, Evol & Behav	2019-present
M. Dixon	Ph.D.	UT Ecology, Evol & Behav	2017-2021
C. Friesen	Ph.D.	UT Ecology, Evol & Behav	2017-2021
K. Wallace	Ph.D.	UT Ecology, Evol & Behav	2016-2021
C. Leslie	Ph.D.	UT Ecology, Evol & Behav	2017-2020
S. Stockmaier	Ph.D.	UT Ecology, Evol & Behav	2016-2020
M. Still	Ph.D.	UT Ecology, Evol & Behav	2016-2020
L. Reding	Ph.D.	UT Ecology, Evol & Behav	2016-2018
S. Maguire	Ph.D.	UT Ecology, Evol & Behav	2013-2017
A. Leah	Ph.D.	UT Ecology, Evol & Behav	2011-2016
A. Thompson	Ph.D.	UT Ecology, Evol & Behav	2011-2015
V. Topper	Ph.D.	UT Pharmacy	2013-2015
M. Guerro	Ph.D.	UT Ecology, Evol & Behav	2011-2014
M. Smith	Ph. D.	UF Biology	2006-2012
L. Munchrath	Ph.D.	UT Cell and Mol Bio	2009-2011
J. Jankowski	Ph.D.	UF Biology	2006-2011
E. Emke	Ph.D.	UF Anthropology	2005-2010
J. Anderson	M.S.	UF Anthropology	2007-2009
A. Seifert	Ph.D.	UF Zoology/Genetics	2005-2007
K. McCoy	Ph.D.	UF Zoology	2004-2007
G. Zhang	Ph.D.	UF Zoology/Genetics	2004-2007
H. Klug	Ph.D.	UF Zoology	2003-2007
S. Hedrick	M.S.	UF Wildlife, Ecology & Cons.	2004-2006

K. Jones	M.S.	UF Zoology	2003-2006
T. Okuyama	Ph.D.	UF Zoology	2002-2006
M. Milnes	Ph.D.	UF Zoology	2002-2006

Postdocs	<i>Current position</i>	<i>Years in lab</i>
Tang Watanasriyakul	Postdoc at UT	2022-present
Morgan Gustison	Postdoc at UT	2018-present
Joel Tripp	Postdoc at UT	2019-present
Lauren O'Connell	Asst Prof, Stanford University	2011-2012
Sarah Jane Alger	Asst. Prof, University of Wisconsin, Stevens Point	2011
Polly Campbell	Asst. Prof., University of California, Riverside	2005-2009
Alex Ophir	Asst. Prof., Cornell University	2004-2009

Select honors by lab trainees

Postdoctoral trainees

Pathway to Independence Award (K99), NIH – Dr. M. Gustison	2021-2023
Individual National Research Service Award, NIH – Dr. J. Tripp	2021-2024
Bauer Fellowship, Harvard University – Dr. L. O'Connell	2012-2017
Young Investigator Award, Int. Soc. Neuroethology. – Dr.O'Connell	2011
Young Investigator Award, Soc. Behavioral Neuroendo. – Dr.O'Connell	2011
Early Career Award, Society for Social Neuroscience – Dr.O'Connell	2011
Individual National Research Service Award, NIH – Dr. P. Campbell	2007-2009
Pathway to Independence Award (K99), NIH – Dr. A. Ophir	<i>declined</i>

Graduate students

Postdoctoral Research Fellowships in Biology (PRFB) – T. Burkhard	2021
University of Texas Award for Best Doctoral Dissertation – M. Okhovat	2016
NSF Graduate Research Fellowship – G. Wallace, D. Zheng	2011-2014
Doctoral Dissertation Improvement Grant, NSF – B. Pasch	2010
Shadle Award, American Society of Mammalogists – B. Pasch	2010
Organization for Tropical Studies Grants-in-Aid – B. Pasch	2008
Society for Integrative and Comparative Biology Grants-in-Aid – B. Pasch	2008
University of Florida Alumni Fellowship – D. Blondel, O. Crino, B. Pasch	2002-2010
American Mammal Society Grants-in-Aid – B. Pasch	2007
Sigma Xi Grants-in-Aid – B. Pasch, J. Pino	2007, 2010
NSF Graduate Research Fellowship, honorable mention – O. Crino	2007

Undergraduate students

Fulbright Fellowship – W. Weymouth	2011
McNair Scholarship – S. Eans, A. George	2006, 2009

Service and outreach

Service to journals and professional societies

Editor-in-chief and co-founder, VoleBase	2020-present
President, Society for Social Neuroscience	2020- present
Co-chair, Society for Social Neuroscience annual meeting	2020-present
Website designer, Society for Social Neuroscience	2020-2021
Chair and host, Vole Meeting 2019	2019
President-elect, Society for Social Neuroscience	2018-2019
Board of Governors, Society for Social Neuroscience	2016-present

Award committee, Society for Social Neuroscience	2016-present
Editorial Board, Social Neuroscience	2016-present
Advisory Board, Broadening Representation of Academic Investigators In the NeuroSciences (BRAINS)	2015-2018
Co-chair, Society for Social Neuroscience annual meeting	2011, 2012
Editorial board, <i>Behavioral Ecology</i>	2009-2012
Education Committee, Society for Behavioral Neuroendocrinology	2009-2012
Workshop chair, Society for Behavioral Neuroendocrinology	2010
Symposium chair, Society for Behavioral Neuroendocrinology	2009
Guest editor, <i>PNAS</i>	2017
Guest editor, <i>Animal Behaviour</i> issue on Cognitive Ecology	2017-2019

Reviewer for the following institutions, books and journals

National Science Foundation (last 5 years)
 Animal Behavior panel, January 2016, October 2017, October 2020
 Understanding the Rules of Life: Epigenetics panel, April 2019
 National Institutes of Health (last 5 years)
 NRSA Behavioral Neuroscience study section November 2016
 Neural Systems for Motivated Behavior study section, February 2018
 Social Determinants of Health study section, July 2020
 Role of Social Connectedness and Isolation on Health Outcomes, July 2021
 Israeli Research Foundation
 BBSRC
 National Geographic
 Graduate Women in Science
 Princeton University Press
 Animal Behavior (Alcock, 7th ed)

Animal Behaviour
American J Medical Genetics B
American Naturalist
Behavioral and Brain Sciences
Behavioral Ecology
Ethology
Evolution
Frontiers in Neuroscience
Genes, Brains and Behavior
Journal of Comparative Neurology
Journal of Neurobiology
Journal of Theoretical Biology
Nature
Nature Genetics
PLOS Genetics
PNAS
Proc. Royal Society B
Science
Trends in Ecology and Evolution
Trends in Neuroscience

University, college, and departmental service

University

Vice Provost Committee for LGBTQIA+ Equity, Chair Best Practices Cte	2022-present
Vice Provost Committee for LGBTQIA+ Equity	2019-present
Vice President for Research, National Research Training Awards review	2020
UT Institutional Animal Care and Use Committee	2017-2020
International Office Study Abroad Scholarship Committee	2019, 2020
Vice President for Research, Best Research Paper Award Committee	2017
Vice President for Research, Research Grant Committee	2017
Vice President for Research, Best Dissertation Award Committee	2016

College of Natural Sciences

Faculty advisory committee, Texas Science Festival	2022
Featured speaker, Texas Science Festival	2021
Non-tenure track faculty promotion committee	2020
Promotion review, Jennifer Fritz	2020
Stengl-Wyer Predoctoral Fellowship Committee	2020
Human Biology undergraduate advisor	2020-present
Neuroscience Graduate Program admissions committee	2016-2019
EEB graduate program awards committee	2014-2018
Promotion review, Blinda McClelland	2017
Patterson Labs Renovation Committee	2016-2017
Search Committee for Director of CNS's Strategic Research Initiatives	2016

Department

Faculty sponsor, Integrative Biology DEI discussion group	2019-present
Integrative Biology Diversity and Inclusion Committee	2017-present
Director, Center for Brain, Behavior and Evolution	2013-present
Development and submission of NSF National Research Training grants	2016, 2017
Coordinator, EEB Graduate Recruitment Weekend	2015
Coordinator of Spring Symposium in Brain, Behavior and Evolution	2011-2019
BB&E Graduate recruitment weekend coordinator	2011-2014
Co-director, Center for Brain, Behavior and Evolution	2011-2013

Outreach and related activities

Public presentations

The brain in love. Science Café, Oxford, Mississippi, March 2022.

The biology of intimacy: A synthesis. Harvard University, Radcliffe Institute, November 2021.

The brain in love. *Stand-up Science with Shane Mauss*, December 2019.

The bonding brain: Molecules, memory and evolution. *UT Tower Fellows Program*, April 2019.

The bonding brain: Molecules, memory and evolution. *Nerd Nite*, February 2019

Love in the minds of wanderers: What can prairie voles teach us about attachment? *UT Forum*, April 2018.

Science under the Stars. A longstanding weekly seminar series for the public that has been coordinated and organized by lab members (E. Giglio, S. Strutz, D. Zheng), and which has featured multiple members of our lab as speakers (E. Giglio, S. Strutz, T. Burkhard, B. Pasch). Ongoing (2010-present)

Evolution of nervous systems. *Center for Inquiry, Food for Thought* lecture series. April 2014

Variation in the mechanisms of monogamy. Seminar at *Synapse*, the UT undergraduate neuroscience club, October 2014.

Contributed to Science Partners in Inquiry-based Collaborative Education, a middle school outreach program. Developed learning module on cloud forests and singing mice. (2008-2010)

Spoke at local retirement community on neurobiology of pair-bonding (10/06) and maternal care (1/10).

Presentations on singing mice to elementary schools in rural Costa Rica (7/07).

Writing for lay audiences

S.M. Phelps, Z. Donaldson and D. Manoli. 2023. [The neurobiology of love](#). *Scientific American*. A full-length feature on the history of research on prairie voles, printed in the February 2023 issue.

S.M. Phelps and R. Wedow, 2019. [What genetics is teaching us about sexuality](#). *New York Times*. This is a review of a genome-wide association study on the genetics of same-sex behavior and its ethical consequences.

S.M. Phelps. 2019 How to build a better dad, *Nature*, 2019. A summary of work on the genetics of parental care in oldfield mice.

S.M. Phelps. 2017. [Touched](#). *Aeon*.
This is a survey of the neurobiology of positive affective touch and its role in human intimacy. It received over 3000 shares on Facebook, and 50,000 page views. Listed as a “notable literary essay” in *2018 Best American Essays*.

SM Phelps. 2015. [Before autism had a name](#). *The Atlantic*.
This is an overview of the history of autism and its diagnosis while reviewing the now best-selling book *NeuroTribes*, by Steve Silberman. It received over 2600 shares on Facebook and 35,000 page views.

Popular and scientific press

Vole work reviewed in

- Austin-American Statesman (2/16)
- Science (12/15)
- New York Times (12/15)
- Washington Post (12/15)
- LA Times (12/15)
- I F*cking Love Science (12/15)
- ABC 20/20 (7/08)
- [Nature](#) (2/08)
- BBC Wildlife (UK, 2/08)
- [The Observer](#) (2/08)
- [Science News](#) (8/05)
- Science* (3/04, 1/05)
- The Economist* (UK, 2/04)
- Nature via Nurture* (Ridley, 2003)

Singing mouse project discussed in

- [New York Times](#) (2/19)
- [Science](#) (2/19)
- The Guardian (4/18)
- ABC News (11/13)

ScienceNews (11/13)
I F*cking Love Science (11/13)
[Ciencia al cubo](#) (Spain, 8/11)
[NPR](#) (6/11)
[EarthSky](#) (6/11)
[ScienceNow](#) (6/11)
[Wired](#) (UK, 6/11)
[Ciencia en la radio](#) (Argentina, 8/10)
[Scientific American](#) (7/09)
La Prensa (Panama, 3/04).

Túngara frog work highlighted in
Natural History (2/07).
Trends in Ecology and Evolution (1/01).