John Peter SWADDLE

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**Education**

1991-1994 Ph.D. University of Bristol UK, School of Biological Sciences. Thesis title: *The Role of Fluctuating Asymmetry in Sexual Selection*. Advisor: Prof. Innes Cuthill.

1988-1991 First Class B.Sc. (Hons) University of Bristol UK, School of Biological Sciences. Joint Honors in Psychology and Zoology. UK equivalent to *summa cum laude*.

Professional Positions

2020-now Faculty Director, Institute for Integrative Conservation, William & Mary (W&M)

2019-2020 Chair, Biology Department, W&M

2017-2019 Associate Chair, Biology Department, W&M

2015-2016 Visiting Research Associate, Centre for Ecology and Conservation, University of Exeter, UK

2012-2013 Dean of Graduate Studies and Research, Arts and Sciences, W&M

2010-2014 Courtesy Professor, Department of Applied Science, W&M

2010-now Professor, Biology Department, W&M

2007-2008 Sabbatical Research Fellow, National Center for Ecological Analysis and Synthesis (NCEAS), University of California Santa Barbara

2006-2011 Director (Chair) of Environmental Science and Policy Program, W&M

2004-2010 Associate Professor of Biology, Biology Department, W&M

2004-2010 Courtesy Associate Professor, Department of Applied Science, W&M

2001-2004 Assistant Professor, Biology Department, W&M

2000-2001 Project Lead, User Research, Sapient Corporation, Chicago, IL

1998-2001 Permanent University Lecturer (equivalent to Assistant Professor) and Royal Society of London University Research Fellow, School of Biological Sciences, University of Bristol, UK

1997-1999 Visiting Research Associate and Royal Society of London University Research Fellow, University of Chicago, Department of Ecology and Evolution

1995-1997 Natural Environment Research Council (NERC) Postdoctoral Research Fellow, Division of Environmental and Evolutionary Biology, University of Glasgow, UK

1994-1995 NERC Postdoctoral Research Fellow, School of Biological Sciences, University of Bristol

Awards and Fellowships

2019-2022 Plumeri Award for Faculty Excellence. W&M. Nine awards per year across whole university.

2018-2019 Arts and Sciences Faculty Award for Teaching Excellence, W&M. Three awards per year across all subject areas.

2017-2022 Class of 1938 endowed eminent professorship in Biology, W&M. One awarded across all sciences and social sciences.

2016-2017 Reves’ Center International Faculty Fellowship, W&M. Approximately four awarded across all subjects annually.

2015 State Council for Higher Education in Virginia (SCHEV) Outstanding Faculty Award. The highest award for faculty in Virginia, awarded to a dozen individuals annually across the thousands of faculty members at all public and private universities and colleges in Virginia.

2015-2017 English-Stonehouse Fellowship. W&M. Fellowship to reward and promote research with undergraduate students. Two awarded biennially in sciences.

2012-2013 Reves’ Center International Faculty Fellowship, W&M.

2012 Selected to give inaugural William & Mary Faculty Lecture Series presentation. Largest public lecture series offered by the university.

2011 Association for the Advancement of Sustainability in Higher Education (AASHE) Campus Sustainability Case Study Award nomination for designing and developing the William & Mary carbon offset program.

2010 Plumeri Award for Faculty Excellence. W&M. Nine awards per year across whole university.

2009 Phi Beta Kappa (alpha chapter, W&M) Faculty Award for the Advancement of Scholarship. One award per year across whole university.

2007-2008 Sabbatical Research Fellow, National Center for Ecological Analysis and Synthesis (NCEAS), University of California Santa Barbara. Eight awarded internationally each year.

2007-2010 Arts and Science Distinguished term endowed professorship in Biology, W&M.

2004-2007 Robert and Sara Boyd term endowed professorship in Biology, W&M.

2004 Alumni Fellowship Award from W&M Alumni Association for outstanding teaching.

1998 Awarded Most Outstanding New Investigator Prize by the Association for the Study of Animal Behaviour. This prize is awarded to one scientist internationally per year for recognition of outstanding research achievement in animal behavior.

1997 Awarded University Research Fellowship by the Royal Society of London. This is arguably the most prestigious research fellowship in the UK for any area of science.

1996 Awarded Leverhulme Trust Special Research Fellowship. I declined this award because I was also awarded the 1851 fellowship (see below).

1996 Awarded Royal Commission of 1851 Science and Engineering Research Fellowship. Two awards made in UK per year in life sciences.

1996 Awarded Young Investigator Prize by the American Society of Naturalists. Four of these prizes are awarded internationally per year to recognize significant contributions to ecology and evolutionary biology by young scientists.

1994 Awarded Natural Environment Research Council Postdoctoral Research Fellowship.

1991 Awarded a Scientific and Engineering Research Council Research fellowship to fund all three years of my Ph.D. research.

**Peer-reviewed Publications** (\*graduate or undergraduate student)

As of 4/2/2021, **number times cited = 7,731** ***h*-index = 42** (42 papers each cited at least 42 times), data from *GoogleScholar*.

1. Greggor, A.L., Berger-Tal, O., Swaisgood, R. R., Cooke, S. J., DeVault, T. L., Fernández-Juricic, E., Gienapp, A., Hall, S., Hostetter, C., Owen, M. A., Rankin, S., Ruppert, K. A., **Swaddle, J. P.**, Blumstein, D. T. 2021. Using change models to envision better applications of animal behavior research in conservation management and beyond. *Frontiers in Conservation Science* DOI: 10.3389/fcosc.2021.653056
2. Boycott, T. J.\*, Mullis, S. M., Jackson, B. E. and **Swaddle, J. P.** 2021 Field testing an “acoustic lighthouse”: Combined acoustic and visual cues provide a multimodal solution that reduces avian collision risk with tall human-made structures. *PLOS ONE*, in press.
3. Werrell, A. K.\*, Klug, P. E., Lipcius, R. N. and **Swaddle, J. P.** 2021 A Sonic Net reduces damage to sunflower by blackbirds (Icteridae): implications for broad-scale agriculture and crop establishment. *Crop Protection*. DOI: 10.1016/j.cropro.2021.105579.
4. Samuels-Fair, M., Martins, M. J. F., Lockwood, R., **Swaddle, J. P.** and Hunt, G. 2021 Temporal shifts in ostracode sexual dimorphism from the Late Cretaceous to the late Eocene of the U. S. Coastal Plain. *Marine Micropaleontology*. DOI: 10.1016/j.marmicro.2020.101959.
5. Hawkins, C. E.\*, Ritrovato, I. T. and **Swaddle, J. P.** 2020. Traffic noise alters individual social connectivity, but not space-use, of red-backed fairywrens. *Austral Ecology*, Oct 24, 1-9. DOI: 10.1080/01584197.2020.1830706.
6. **Swaddle, J. P.**, Emerson, L. C.\*, Thady, R. G.\* and Boycott, T. J.\* 2020. Ultraviolet-reflective film applied to windows reduces the likelihood of collisions for two species of songbird. *PeerJ*, **8**, 9. DOI: 10.7717/peerj.9926.
7. Martins, M. J. F, Hunt, G., Thompson, C. M., Lockwood, R., **Swaddle, J. P.** and Puckett, T. M. 2020. Shifts in sexual dimorphism across a mass extinction: implications for sexual selection as a factor in extinction risk. *Proceedings of the Royal Society of London B: Biological Sciences*, **287**, 1933. [DOI:10.1098/rspb.2020.0730](https://doi.org/10.1098/rspb.2020.0730)
8. Scoville, S. A., Varian-Ramos, C. W., Saha, M. S., **Swaddle, J. P.**, Adkins, G. A. and Cristol, D. A. 2020. Mercury delays cerebellar development in a model songbird species, the zebra finch. *Ecotoxicology*, **8**. DOI:10.1007/s10646-020-02270-9
9. Spickler, J. L.\*, **Swaddle, J. P.**, Gilson, R. L., Varian-Ramos, C. W. and Cristol, D. A. 2020. Sexually-selected traits as bioindicators: Exposure to mercury affects carotenoid-based male bill color in zebra finches. *Ecotoxicology*, 8. DOI:10.1007/s10646-020-02271-8.
10. **Swaddle, J. P.** 2019. “Zebra Finches”. In *Encyclopedia of Animal Behavior, 2nd Edition*. Amsterdam, The Netherlands: Elsevier.
11. Buchanan, G. M., Parks, B. C., Donald, P. F., O’Donnell, B. F., Runfola, D., **Swaddle, J. P.**, Tracewski, L.and Butchart, S. H. M. 2018. The local impacts of World Bank development projects near sites of conservation significance. *Journal of Environment and Development*. DOI: 10.1177/[10.1177/1070496518785943](https://doi.org/10.1177%2F1070496518785943)
12. Sommer, N., Moody, N., Lantz, S.\* Leu, M., Karubian, J. O. and **Swaddle, J. P.** 2018 Red-backed fairywrens adjust habitat use in response to dry season fires. *Austral Ecology*. DOI: 10.1111/aec.12629
13. Martins, M. J. F., Puckett, T. M., Lockwood, R., **Swaddle, J. P.** and Hunt, G. 2018. High male sexual investment as a driver of extinction in fossil ostracodes. *Nature*, **556**, 366–369. DOI:10.1038/s41586-018-0020-7
14. Paris, O. J.\*, **Swaddle, J. P.** and Cristol, D. A. 2018. Exposure to dietary methyl-mercury solely during embryonic and juvenile development halves subsequent reproductive success in adult zebra finches. *Environmental Science and Technology*. DOI:10.1021/acs.est.7b04752.
15. Greene, V. A.\*, **Swaddle, J. P.**, Moseley, D. M. and Cristol, D. A. 2018. Attractiveness of male zebra finches is not affected by exposure to an environmental stressor, dietary mercury. *The Condor: Ornithological Applications*. DOI: 10.1650/condor-17-19.1
16. Ebers Smith, J. H.\*, Cristol, D. A. and **Swaddle, J. P.** 2017. Experimental infection and clearance of coccidian parasites in mercury-exposed zebra finches. *Bulletin of Environmental Contamination and Toxicology*. DOI:10.1007/s00128-017-2246-8
17. Hunt, G., Martins, M. J. F., Puckett, T. M., Lockwood, R., **Swaddle, J. P.**, Hall, C. S. and Stedman, J. 2017. Sexual dimorphism and sexual selection in cytheroidean ostracodes from the Late Cretaceous of the US Coastal Plain. *Paleobiology*. DOI: 10.1017/pab.2017.19
18. **Swaddle, J. P.** and Ingrassia, N. M.\* 2017. Using a sound field to reduce the risks of bird-strike: an experimental approach. *Integrative and Comparative Biology*, 2017. DOI:10.1093/icb/icx026
19. Martins, M. J. F., **Swaddle, J. P.**, Lockwood, R., Horne, D. J. and Hunt, E. 2017. Correlation between investment in sexual traits and valve sexual dimorphism in Cyprideis species (Ostracoda). *PLoS ONE*, **12**, e0177791. DOI:10.1371/journal.pone.0177791
20. **Swaddle, J. P.**, Diehl, T., Taylor, C., Fanaee, A., Benson, J., Huckstep, N. and Cristol, D. A. 2017. Exposure to dietary mercury alters cognition and behavior of zebra finches. *Current Zoology*, 2017. DOI:10.1093/cz/zox007
21. Peterson, E.\*, Buchwalter, D., Kerby, J., LeFauve, M.\*, Varian-Ramos, C, W. and **Swaddle, J. P.** 2017. Integrative Behavioral Eco-Toxicology: Bringing together fields to establish new insight to behavioral ecology, toxicology, and conservation. *Current Zoology*, 2017. DOI:10.1093/cz/zox010
22. Wolf, S. E.\*, **Swaddle, J. P.**, Cristol, D. A. and Buchser, W. J. 2017. Methylmercury exposure reduces the auditory brainstem response of zebra finches (*Taeniopygia guttata*). *Journal of the Association for Research in Otolaryngology*, 2017. DOI:10.1007/s10162-017-0619-7
23. Griffith, S. C. et al [52 co-authors listed alphabetically] 2017. Variation in reproductive success across captive populations: methodological differences, potential biases and opportunities. *Ethology*, **123**: 1-29. DOI:10.1111/eth.12576
24. Buck, K. A.\*, Varian-Ramos, C. W., Cristol, D. A. and **Swaddle, J. P.** 2016. Blood mercury levels of zebra finches are heritable: implications for the evolution of mercury resistance. *PLoS ONE* 11: e0162440; DOI:10.1371/journal.pone.0162440
25. Potvin, D.A., Curcio, M. T.,**Swaddle, J. P.** and MacDougall-Shackleton, S. A. 2016. Experimental exposure to urban and pink noise affects brain development and song learning in zebra finches (Taeniopygia guttata). PeerJ, **4**: e2287; DOI:10.7717/peerj.2287
26. **Swaddle, J. P.**, Moseley, D. L., Hinders, M. H. and Smith, E. P. 2016. A sonic net excludes birds from an airfield: implications for reducing bird strike and crop losses. *Ecological Applications*, **26**: 339-345. DOI: 10.1890/15-0829.1
27. **Swaddle, J. P.** 2016. “Evolution and Conservation Behaviour.” In *Conservation Behaviour: Applying Behavioural Ecology to Wildlife Conservation and Management* (O. Berger-Tal and D. Saltz, Eds.), pp: 36-65. Cambridge: Cambridge University Press.
28. **Swaddle, J. P.** 2016. “Zebra Finches”. In *Reference Module in Life Sciences*. Amsterdam, The Netherlands: Elsevier.
29. **Swaddle, J. P.**, Francis, C. D., Barber, J. R., Cooper, C. B., Kyba, C. C. M., Dominoni, D., Shannon, G., Aschehoug, E., Goodwin, S. E., Kawahara, A. Y., Luther, D., Spoelstra, K., Voss, M. and Longcore, T. 2015. A framework to assess evolutionary responses to anthropogenic light and sound. *Trends in Ecology and Evolution*, **30**:550-560. DOI 10.1016/j.tree.2015.06.009
30. Kight, C. R.\* and **Swaddle, J. P.** 2015. Male bluebirds alter their song in response to anthropogenic changes in the acoustic environment. *Integrative and Comparative Biology*, **55**: 418-431. DOI 10.1093/icb/icv070
31. Mahjoub, G.\*, Hinders, M. H. and **Swaddle, J. P.** 2015. Using a “sonic net” to deter pest bird species: excluding European starlings from food sources by disrupting their acoustic communication. *Wildlife Society Bulletin*, 39: 326-333. DOI [doi.org/10.1002/wsb.529](https://doi.org/10.1002/wsb.529)
32. Kobiela, M.\*, Cristol, D. A. and **Swaddle, J. P.** 2015. Risk-taking behaviours in zebra finches affected by mercury exposure. *Animal Behaviour*, **103**: 153-160. DOI [10.1016/j.anbehav.2015.02.024](https://doi.org/10.1016/j.anbehav.2015.02.024)
33. Carlson, J. R.\*, Cristol, D. A. and **Swaddle, J. P.** 2014. Dietary mercury exposure causes decreased escape takeoff flight performance and increased molt rate in European starlings (*Sturnus vulgaris*). *Ecotoxicology*, DOI 10.1007/s10646-014-1288-5
34. Varian-Ramos, C. W., **Swaddle, J. P.** and Cristol, D. A. 2014. Mercury reduces avian reproductive success and imposes selection: an experimental study with adult- or lifetime-exposure in zebra finch. *PLoS ONE*, **2014**, e95674. DOI [10.1371/journal.pone.0095674](https://doi.org/10.1371/journal.pone.0095674)
35. **Swaddle, J. P.** 2014. “Behavioral Ecology.” In *Oxford Bibliographies in Evolutionary Biology* (J. Losos, Ed.). New York: Oxford University Press.
36. Varian-Ramos, C. W., **Swaddle, J. P.** and Cristol, D. A. 2013. Familial differences in the effects of mercury on reproduction in zebra finches. *Environmental Pollution*, **182**, 616-323. DOI [10.1016/j.envpol.2013.07.044](https://doi.org/10.1016/j.envpol.2013.07.044)
37. Reding, L. P., **Swaddle, J. P.** and Murphy, H. A. 2013 Sexual selection hinders adaptation in experimental populations of yeast. *Biology Letters* **9**, 20121202. DOI [10.1098/rsbl.2012.1202](https://doi.org/10.1098/rsbl.2012.1202)
38. Wilson, L. C.\* and **Swaddle, J. P.** 2013 Manipulating the perceived opportunity to cheat: An experimental test of the active roles of male and female zebra finches in mate guarding behavior. *Behavioral Ecology and Sociobiology* **67**, 1077-1087. DOI [10.1007/s00265-013-1532-7](https://doi.org/10.1007/s00265-013-1532-7)
39. Lewis, C. A.\*, Cristol, D. C., **Swaddle, J. P.**, Varian-Ramos, C. W. and Zwollo, P. 2013 Decreased immune response in zebra finches exposed to sublethal doses of mercury. *Archives of Environmental Contamination and Toxicology* **64**, 327-336. DOI 10.1007/s00244-012-9830-z
40. Kight, C. R.\*, Saha, M. S. and **Swaddle, J. P.** 2012 Anthropogenic noise is associated with reductions in the productivity of breeding eastern bluebirds (*Sialia sialis*). *Ecological Applications* **22**, 1989-1996. DOI [10.1890/12-0133.1](https://doi.org/10.1890/12-0133.1)
41. Edmonds, L. C. and **Swaddle, J. P.** 2012 “Effective structures for sustainability programs in higher education.” In *Sustainable Development at Universities: New Horizons* (W. Leal, Ed.). Environmental Education, Communication and Sustainability. Vol. 34. Frankfurt: Peter Lang Scientific Publishers.
42. Kortz, K. M., **Swaddle, J. P.** and Fastovsky, D. E. 2012 “How undergraduate students misread cladograms.” In *Teaching Paleontology in the 21st Century* (M. M. Yacobucci and R. Lockwood, Eds.), pp. 123-134. Boulder, CO: The Paleontological Society Special Publication Volume 12.
43. Kight, C. R.\*, Hinders, M. H. and **Swaddle, J. P.** 2012 Avian acoustic space is affected by anthropogenic habitat features: implications for bird vocal communication. *Ornithological Monographs* **74**, 47-62. DOI 10.1525/om.2012.74.1.47
44. **Swaddle, J. P.**, Kight, C. R.\*, Perera, S., Davila-Reyes, E. and Sikora, S. 2012 Constraints on acoustic signaling among birds breeding in secondary cavities: the effects of weather, cavity material, and noise on sound propagation. *Ornithological Monographs* **74**, 63-77. DOI 10.1525/om.2012.74.1.63
45. Kight, C. R.\* and **Swaddle, J. P.** 2011 How and why environmental noise impacts animals: an integrative, mechanistic review. *Ecology Letters* 14, 1052-1061. DOI [10.1111/j.1461-0248.2011.01664.x](https://doi.org/10.1111/j.1461-0248.2011.01664.x)
46. Cornell, K. L., Kight, C. R.\*, Burdge, R. B.\*, Gunderson, A. R.\*, Hubbard, J. K.\*, Jackson, A. K.\*, Leclerc, J. E.\*, Pitts, M. L.\*, **Swaddle, J. P.**, and Cristol, D. C. 2011. Reproductive success of eastern bluebirds (Siala sialis) on suburban golf courses. *Auk* **128**, 1-10. DOI 10.1525/auk.2011.10182
47. **Swaddle, J. P.** 2011 Assessing the developmental stress hypothesis in the context of a reaction norm. *Behavioral Ecology* **22**, 13-14. DOI [doi.org/10.1093/beheco/arq089](https://doi.org/10.1093/beheco/arq089)
48. Rowe. M.\*, **Swaddle, J. P.**, Pruett-Jones, S. and Webster, M. S. 2010 Ejaculate investment in relation to plumage coloration and reproductive phenotype in the red-backed fairy-wren (*Malurus melanocephalus*). *Animal Behaviour* **79**, 1239-1246. DOI [10.1016/j.anbehav.2010.02.020](https://doi.org/10.1016/j.anbehav.2010.02.020)
49. **Swaddle, J. P.** 2010. “The Zebra Finch”. In: *Encyclopedia of Animal Behavior*. (M. Breed and J. Moore, Eds). Amsterdam, The Netherlands: Elsevier.
50. Duffy, J. E., Canuel, E. A., Adey, W. and **Swaddle, J. P.** 2009 Biofuels: algae. *Science*. **326**, 1345a. DOI 10.1126/science.326.5958.1345-a
51. Gunderson, A. R.\*, Forsyth, M. H. and **Swaddle, J. P.** 2009 Correlational evidence that plumage bacteria influence feather coloration and body condition of eastern bluebirds (*Sialia sialis*). *Journal of Avian Biology* 40, 349-351. DOI [10.1111/j.1600-048X.2008.04650.x](https://doi.org/10.1111/j.1600-048X.2008.04650.x)
52. Karubian, J. O., **Swaddle, J. P.**, Varian, C. W.\* and Webster, M. S. 2009. The relative importance of male tail length and nuptial plumage on social dominance and mate choice in the red-backed fairy-wren: evidence for the multiple receiver hypothesis. *Journal of Avian Biology* **40**, 559-568. DOI 10.1111/j.1600-048X.2009.04572.x
53. Gunderson, A. R.\*, Frame, A. M., Forsyth, M. H. and **Swaddle, J. P.** 2008 Resistance of melanized feathers to bacterial degradation: Is it really so black and white? *Journal of Avian Biology* **39**, 539-545. DOI [10.1111/j.0908-8857.2008.04413.x](https://doi.org/10.1111/j.0908-8857.2008.04413.x)
54. **Swaddle, J. P.** (Lead Author); J. Emmett Duffy (Topic Editor). 2008. "Evolution." In *Encyclopedia of Earth*. (Ed. C. J. Cleveland). Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment.
55. **Swaddle, J. P.** and Calos, S. E. 2008 Increased avian diversity is associated with lower incidence of human West Nile infection: observation of the dilution effect model. *PLoS One* **2008**, e2488.
56. **Swaddle, J. P.**, Ruff, D. A., Page, L. C., Frame, A. M. and Long, V. A. 2008 A test of receiver perceptual performance: European starlings’ abilities to detect asymmetry in a naturalistic trait. *Animal Behaviour* **76**, 487-495. DOI [10.1016/j.anbehav.2008.05.005](https://doi.org/10.1016/j.anbehav.2008.05.005)
57. **Swaddle, J. P.** and Page, L. C. 2007 Increased amplitude of environmental white noise erodes pair preferences in zebra finches: implications for noise pollution. *Animal Behaviour*, **74**, 363-368. DOI [10.1016/j.anbehav.2007.01.004](https://doi.org/10.1016/j.anbehav.2007.01.004)
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62. **Swaddle, J. P.**, Cathey, M. G., Correll, M. and Hodkinson, B. P. 2005 Socially transmitted mate preferences in a monogamous bird: a non-genetic mechanism of sexual selection. *Proceedings of the Royal Society of London B: Biological Sciences*, **272**, 1053-1058. DOI [10.1098/rspb.2005.3054](https://doi.org/10.1098/rspb.2005.3054)
63. **Swaddle, J. P.**, Che, J. P. K. and Clelland, R. E. 2004 Symmetry preference as a cognitive by-product in starlings. *Behaviour*, **141**, 469-478. DOI [10.1163/156853904323066748](https://psycnet.apa.org/doi/10.1163/156853904323066748)
64. **Swaddle, J. P.** and Ruff, D. A. 2004 Starlings have difficulty in detecting dot symmetry: implications for studying fluctuating asymmetry. *Behaviour*, **141**, 29-40.
65. **Swaddle, J. P.** and Lockwood, R. 2003 Wingtip shape and flight performance in the European Starling (*Sturnus vulgaris*) *Ibis*, **145**, 457-464. DOI [10.1046/j.1474-919X.2003.00189.x](https://doi.org/10.1046/j.1474-919X.2003.00189.x)
66. **Swaddle, J. P.** 2003 Fluctuating asymmetry, animal behavior, and evolution. *Advances in the Study of Animal Behavior*, **32**, 169-205.
67. Williams, E. V. W.\* and **Swaddle, J. P.** 2003 Moult, flight performance, and wingbeat kinematics in the European Starling (*Sturnus vulgaris*). *Journal of Avian Biology*, **34**, 371-378. DOI [10.1111/j.0908-8857.2003.02964.x](https://doi.org/10.1111/j.0908-8857.2003.02964.x)
68. **Swaddle, J. P.** and Reierson, G. W. 2002 Testosterone increases perceived dominance but not attractiveness in human males. *Proceedings of the Royal Society of London B: Biological Sciences*, **269**, 2285-2289.
69. Karubian, J.\* and **Swaddle, J. P.** 2001 Selection on females can create 'larger males'. *Proceedings of the Royal Society of London B: Biological Sciences*, **268**, 725-728. DOI [10.1098/rspb.2000.1407](https://doi.org/10.1098/rspb.2000.1407)
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78. **Swaddle, J. P.**, Williams, E. V.\* and Rayner, J. M. V. 1999 The effect of simulated flight feather moult on escape take-off performance in starlings. *Journal of Avian Biology* **30**, 351-358.
79. Lockwood, R.\*, **Swaddle, J. P.** and Rayner, J. M. V. 1998 Avian wingtip shape reconsidered: wingtip shape indices and morphological adaptations to migration. *Journal of Avian Biology*, **29**, 273-292. DOI 10.2307/3677110
80. **Swaddle, J. P.** and Lockwood, R.\* 1998 Morphological adaptations to predation risk in passerines. *Journal of Avian Biology*, **29**, 172-176. DOI 10.2307/3677195
81. **Swaddle, J. P.** and Witter, M. S. 1998 Cluttered habitats reduce wing asymmetry and increase flight performance in European starlings. *Behavioural Ecology and Sociobiology* **42**, 281-287. DOI 10.1007/s002650050440
82. Hunt, S.\*, Cuthill, I. C., **Swaddle, J. P.** and Bennett, A. T. D. 1997 Ultraviolet vision and band colour preferences in females zebra finches, *Taeniopygia guttata*. *Animal Behaviour*, **54**, 1383-1392.
83. **Swaddle, J. P.** 1997a On the heritability of developmental stability. *Journal of Evolutionary Biology*, **10**, 57-61. DOI [10.1046/j.1420-9101.1997.10010057.x](https://doi.org/10.1046/j.1420-9101.1997.10010057.x)
84. **Swaddle, J. P.** 1997b Developmental stability and predation success in an insect predator-prey system. *Behavioral Ecology*, **8**, 433-436. DOI [10.1093/beheco/8.4.433](https://doi.org/10.1093/beheco/8.4.433)
85. **Swaddle, J. P.** 1997c Experimental design and the signalling properties of fluctuating asymmetry. *Animal Behaviour* **54**, 1034-1037. DOI [10.1006/anbe.1997.0535](https://doi.org/10.1006/anbe.1997.0535)
86. **Swaddle, J. P.** 1997d Within-individual changes in developmental stability affect flight performance. *Behavioral Ecology*, **8**, 601-604. DOI [10.1093/beheco/8.6.601](https://doi.org/10.1093/beheco/8.6.601)
87. **Swaddle, J. P.** and Cuthill, I. C. 1997 The biological relevance of testing for perfect symmetry. *Animal Behaviour*. **54**, 475-476. DOI [10.1006/anbe.1997.0495](https://doi.org/10.1006/anbe.1997.0495)
88. **Swaddle, J. P.** and Witter, M. S. 1997a On the ontogeny of developmental stability in a stabilized trait. *Proceedings of the Royal Society of London B: Biological Sciences*, **264**, 329-334. DOI [10.1098/rspb.1997.0047](https://doi.org/10.1098/rspb.1997.0047)
89. **Swaddle, J. P.** and Witter, M. S. 1997b The effects of moult on the flight performance, body mass and behaviour of European starlings (*Sturnus vulgaris*): an experimental approach. *Canadian Journal of Zoology* **75**, 1135-1146. DOI [10.1139/z97-136](https://doi.org/10.1139/z97-136)
90. **Swaddle, J. P.** and Witter, M. S. 1997c Food availability and moult in European starlings *Sturnus vulgaris*. *Canadian Journal of Zoology* **75**, 948-953. DOI [10.1139/z97-114](https://doi.org/10.1139/z97-114)
91. Witter, M. S. and **Swaddle, J. P.** 1997Body mass regulation in juvenile starlings: response to periodic food availability. *Functional Ecology* **11**, 11-15. DOI [10.1046/j.1365-2435.1997.00041.x](https://doi.org/10.1046/j.1365-2435.1997.00041.x)
92. **Swaddle, J. P.** 1996 Reproductive success and symmetry in zebra finches. *Animal Behaviour*, **51**, 203-210. DOI [10.1006/anbe.1996.0017](https://doi.org/10.1006/anbe.1996.0017)
93. **Swaddle, J. P.**, Witter, M. S., Cuthill, I. C., Budden, A. and McCowen, P. 1996 Plumage condition affects flight performance in starlings: implications for developmental homeostasis, abrasion and moult. *Journal of Avian Biology,* **27**, 103-111. DOI 10.2307/3677139
94. **Swaddle, J. P.** and Cuthill, I. C. 1995 Asymmetry and human facial attractiveness: symmetry may not always be beautiful. *Proceedings of the Royal Society of London B: Biological Sciences*, **261**, 111-116.
95. **Swaddle, J. P.** and Witter, M. S.\* 1995 Chest plumage, dominance and fluctuating asymmetry in female starlings. *Proceedings of the Royal Society of London B: Biological Sciences*, **260**, 219-223.
96. **Swaddle, J. P.**, Witter, M. S\*. and Cuthill, I. C. 1995 Museum studies measure FA. *Animal Behaviour,* **49**, 1700-1701.
97. Witter, M. S\*. and **Swaddle, J. P.** 1995 Dominance, competition and energetic reserves in the European starling *Sturnus vulgaris*. *Behavioral Ecology*, **6**, 343-348. DOI [10.1093/beheco/6.3.343](https://doi.org/10.1093/beheco/6.3.343)
98. Witter, M. S.\*, **Swaddle, J. P.** and Cuthill, I. C. 1995 Periodic food availability and strategic regulation of body mass in the European starling, *Sturnus vulgaris*. *Functional Ecol*ogy, **9**, 568-574. DOI 10.2307/2390146
99. **Swaddle, J. P.** and Cuthill, I. C. 1994a Preference for symmetric males by female zebra finches. *Nature,* **367**, 165-166.
100. **Swaddle, J. P.** and Cuthill, I. C. 1994bFemale zebra finches prefer males with symmetrically manipulated chest plumage. *Proceedings of the Royal Society of London B: Biological Sciences*, **258**, 267-271.
101. **Swaddle, J. P.** and Witter, M. S.\* 1994 Food, feathers and fluctuating asymmetry. *Proceedings of the Royal Society of London B: Biological Sciences*, **255**, 147-152.
102. **Swaddle, J. P.**, Witter, M. S.\* and Cuthill, I. C. 1994 The analysis of fluctuating asymmetry. *Animal Behaviour,* **48**, 986-989.
103. Witter, M. S.\* and **Swaddle, J. P.** 1994 Fluctuating asymmetry, competition and dominance. *Proceedings of the Royal Society of London B: Biological Sciences*, **256**, 299-303.
104. Cuthill, I. C., **Swaddle, J. P.** and Witter, M. S.\* 1993 Fluctuating asymmetry. *Nature*, **363**, 217-218.

**Authored Books**

1. Møller, A. P. and **Swaddle, J. P.** 1997 *Asymmetry, Developmental Stability and Evolution*. Oxford: Oxford University Press.

**Patents**

1. **Swaddle, J. P.** and Boycott, T, J, 2020. Systems and methods for reducing the risks of bird strike. US Provisional Application No. 63/082,025
2. **Swaddle, J. P.** 2018. Systems and methods for reducing the risks of bird strike. US Provisional Patent No. 62536040.
3. **Swaddle, J. P.** and Hinders, M. K. 2017. System and method for disrupting auditory communications among animals in a defined locale. US Patent: 9,693,548 B2.

**Invited Publications (Editorial Review)**

1. **Swaddle, J. P.** 2011 A review of: *A primer of Conservation Behavior* by Daniel T Blumstein and Esteban Fernández-Juricic. *Quarterly Review of Biology*. **86** 224-225.
2. **Swaddle, J. P.** and Clelland, R. E. 2009 Deciding who to mate with: do female finches follow fashion? In *Encyclopedia of Psychology of Decision Making* (D. Murphy and D. Longo, Eds.), p. 663-676. NOVA Science Publishers, Hauppauge, New York.
3. **Swaddle, J. P.** and Clelland, R. E. 2007 Deciding who to mate with: do female finches follow fashion? In *Psychology of Decision Making in Education, Behavior and High Risk Situations* (J. A. Elsworth, Ed.), pp 257-270. NOVA Science Publishers, Hauppauge, New York.
4. **Swaddle, J. P.** 2002 Book review of “Digit Ratio: A Pointer to Fertility, Behavior, and Health”. *Heredity*, **89**, 403.

**External Funding**. Continuous external funding since the beginning of PhD, in 1991.

2021-2024 *Australian Research Council*. *Avian embryonic perception: what role for good vibrations?* (co-PI with Kate Buchanan and Susanne Hoffmann)

$334,938

2020-2021 BirdShades Innovations GmbH. *Testing the effectiveness of UV-reflective window treatments to reduce avian collisions*. (PI)

$5,000

2020-2030 Private donor. *Establishing the Institute for Integrative Conservation at William & Mary*. (co-PI with Robert Rose)

$19,300,000

2020-2023 Australian Research Council. *The sparrows in mining towns: a century of adaptation to contamination*. (co-PI with Simon Griffith, Macquarie University, Australia)

$355,160

2020-2021 Electric Power Research Institute. *Deterring pest birds from a power substation using the Sonic Net*. (Subcontractor with EDM Consulting)

$10,000

2019-2020 BirdShades Innovations GmbH. *Testing the effectiveness of new generation window treatments to reduce avian collisions*. (PI)

$5,000

2019-2020 American Welfare Institute. *Using acoustic signals to reduce bird collisions with human-made structures in open airspace*. (PI with Tim Boycott)

$11,000

2018-2020 Virginia’s Center for Innovative Technology. *Developing acoustic technology to reduce birds’ risks of collision with wind turbines: Expanding wind energy opportunities in Virginia*. (PI)

$99,730

2018-2019 United States Department of Agriculture, cooperative agreement. *Using a sonic net to reduce damage to sunflower crops by blackbirds*. (PI)

$48,484.

2017-2021 Cornwall (UK) Agritech Consortium. *Reducing starling impacts in cattle housing*. (co-PI with Robbie McDonald and Stuart Bearhop, University of Exeter, UK)

$381,550

2016-2017 REU Supplement to *Influence of mercury exposure on a songbird: An experimental test of the developmental stress hypothesis*. (PI with Dan Cristol)

$6,000

2016-2019 National Science Foundation. *U.S.-Australia IRES Collaboration:* *Behavioral ecology research training in Australia's tropical savannah*. (co-PI with Jordan Karubian and Mike Webster)

$250,000

2014-2017 National Science Foundation. Collaborative research: *Does sexual selection promote speciation and extinction?* *A test with late Cretaceous Ostracoda from the US Coastal Plain*. (co-PI with Rowan Lockwood and Gene Hunt)

$199,700

2014-2016 Virginia’s Center for Innovative Technology. *Developing sonic net technology to reduce the risks of bird-aircraft collision*. (PI with Mark Hinders)

$99,781

2013-2018 National Science Foundation. *Influence of mercury exposure on a songbird: An experimental test of the developmental stress hypothesis*. (PI with Dan Cristol)

$466,000

2012-2014 Bill and Melinda Gates Foundation Grand Challenges Explorations. *Employing sonic nets to protect crops from pest bird species*. (PI with Mark Hinders)

$100,000

2012-2016 National Science Foundation. *U.S.-Australia IRES Collaboration:* *Behavioral ecology research training in Australia's tropical savannah*. (co-PI with Jordan Karubian and Mike Webster)

$150,000

2011-2012 Army Research Office. *The spread of zoonotic diseases through ectoparasites of birds in south east Virginia*. (PI)

$12,500

2011 Benjamin R. Altshuler Memorial Fund. *Support a Bicycle-Pedestrian Master Plan based on a digital map showing all transit routes, bike facilities, and major community attractions*. (PI)

$7000

2010-2011 American Association of Colleges and Universities *Shared Futures: General Education for a Global Century* curriculum and faculty development project. (co-PI with Teresa Longo, Tuska Benes, Cary Bagdassarian, Christine Nemacheck, Elizabeth Meade, Sue Peterson)

$4,000.

2008-2009 Army Research Office. *Prevalence of zoonotic diseases in birds, ticks, and mosquitoes at Fort Eustis army base*. (PI)

$24,508.

2008-2011 Andrew W. Mellon Foundation. *Establishing a Center for Geospatial Analysis and a Teacher-Scholar Postdoctoral Program at the College of William and Mary*. (PI with Carl Strikwerda, Linda Luvaas, Greg Hancock, Randy Chambers).

$1,500,000

2007-2008 National Center for Ecological Analysis and Synthesis Sabbatical Research Fellowship. *How avian community ecology affects the risk of West Nile virus infection to humans*. (PI)

$28,750

2006-2008 National Science Foundation Research Experience for Undergraduates site program. *Interdisciplinary watershed studies at the College of William and Mary*. (co-PI with Randy Chambers, Greg Hancock).

$282,190

2005-2008 Andrew W. Mellon Foundation. *Enhancing undergraduate environmental science and policy at the College of William and Mary*. (co-PI with Timmons Roberts, Randy Chambers, Greg Hancock, Dennis Taylor, Linda Luvaas, Rob Hicks).

$300,000

2004-2010 National Science Foundation. *Undergraduate research in metapopulation ecology*. (co-PIs with Dan Cristol, Sebastian Schreiber).

$647,000

2002-2008 National Science Foundation Early CAREER Award. *Perception of asymmetry and its role in evolutionary behavioral ecology.* (PI).

$527,478

2002-2003 Jeffress Memorial Trust Research Grant. *Asymmetry perception and behavioral ecology.* (PI).

$29,312

2000-2001 Wolfson Foundation (UK) Laboratory Refurbishment grant. *Bioinformatics in the ecology of vision.* (co-PI with Innes Cuthill, Andy Bennett, Julian Partridge).

$120,000

1998-2001 Royal Society of London (UK) University Research Fellowship. *Perceptual mechanisms and signal design.* (PI).

$170,347

1998-1999 Natural Environment Research Council (UK) Small Project Grant. *The receiver-psychology of fluctuating asymmetry signaling theory.* (PI)

$34,758

1997-1999 Leverhulme Trust (UK) Special Research Fellowship. *The receiver-psychology of signaling by asymmetry.* (PI).

Awarded but declined

1997-1998 Royal Commission for the Exhibition of 1851 (UK) Research Fellowship. *Asymmetry and biological signals.* (PI).

$82,382

1997-1999 Natural Environment Research Council (UK) Small Project Grant. *Mate attraction and body mass dynamics in birds.* (PI).

$38,604

1996-1997 Royal Society of London (UK) Standard Research Grant. *Analysis of the flight costs of molt.* (PI).

$13,022

1994-1997 Natural Environment Research Council (UK) Postdoctoral Research Fellowship. *The ecological costs of avian molt.* (PI).

$241,176

1991-1994 Scientific and Engineering Research Council (UK) Graduate Fellowship. *The Role of Fluctuating Asymmetry in Sexual Selection*. Advisor, Innes Cuthill.

$20,263

**TOTAL $26,205,633 in external funding**

**Teaching Experience**

2021-now **Conservation Behavior**. Undergraduate and graduate sections of upper-level seminar course applying behavioral ecology to applied conservation. W&M.

2021-now **Introduction to Integrative Conservation**. Gateway course to the Integrative Conservation major/minor programs. W&M.

2018-2020 **Evolution of Organisms field course in UK**. Study away enhancement of Evolution of Organisms, studying the cross-cultural roots of evolutionary theory in the UK. W&M.

2014-2019 **Introduction to Organisms, Ecology, Evolution**. Undergraduate required first-year large lecture course. W&M.

2011-2019 **Evolution of Organisms**. Undergraduate required sophomore large lecture course. W&M.

2003-now **Introduction to Graduate Studies**. Graduate Seminar Course. W&M.

2001-2020 **Sexual Selection**. Undergraduate and graduate sections of upper-level seminar course. W&M.

2019-2021 **Advanced Readings in Ecology**. Undergraduate readings course in the intersections of ecology and wildlife conservation. W&M.

2018 **Ecology in the Anthropocene**. Undergraduate upper-level seminar course, W&M.

2017 **Landscapes of Disease**. Undergraduate seminar course associated with Environmental Science and Policy lecture series in Landscapes of Disease. W&M.

2011 **Communication of Climate Change Issues**. Undergraduate seminar course associated with Environmental Science and Policy lecture series in Communication of Climate Change Issues. W&M

2009 **International Pollution**. Undergraduate seminar course associated with Reves Center and Environmental Science and Policy lecture series in Global Mercury Contamination. W&M.

2009 **Population Modeling in Ecology and Evolution**. Undergraduate lecture/seminar course. W&M.

2009 **Heavy Metals as Global Contaminants**. Undergraduate seminar course associated with Environmental Science and Policy lecture series in Heavy Metals as Global Contaminants. W&M.

2007 **Sustainable Business Practices**. Undergraduate seminar course associated with Environmental Science and Policy lecture series in Sustainable Business Practices. W&M.

2006 **Global Climate Change**. Undergraduate seminar course associated with Environmental Science and Policy lecture series in Global Climate Change. W&M.

2004-2006 **Metapopulation Ecology and Evolution**. Undergraduate lecture/seminar course. W&M.

2001-2009 **Evolutionary Biology**. Undergraduate and graduate sections of upper-level lecture course, with lab. W&M.

2004 **Evolution: Philosophical, Biological, and Religious Perspectives**. Undergraduate seminar course associated with Cohen lecture series in Evolution. W&M.

2003 **Advanced** **Readings in Evolutionary Physiology**. Undergraduate readings course in roles of sex hormones in evolutionary processes. W&M.

1998-2000 **Avian Behavior and Ecology**. Undergraduate upper-level lecture course. University of Bristol UK.

1997-1998 **Experimental Evolutionary Biology**. Graduate seminar course. University of Chicago.

1997-1998 **Environmental Stress and Evolution**. Graduate seminar course. University of Chicago.

1997-2000 **Ethology**. Undergraduate residential field course to Lundy Island UK. University of Bristol UK.

1994-1995 **Experimental Design and Statistical Analysis**. Graduate Lecture Course. University of Bristol UK.

1991-1995 **Behavioral Ecology**. Undergraduate Laboratory Class (Teaching Assistant). University of Bristol UK.

1993-1995 **Ethology**. Undergraduate Field Course to Lundy Island UK (Teaching Assistant). University of Bristol UK.

1991-1993 **Evolutionary Biology**. Undergraduate Laboratory Class (Teaching Assistant). University of Bristol UK.

Students’ evaluation of my teaching. I routinely receive very high teaching evaluation scores. On a scale of 1 to 5 (with 5 being the highest score), my teaching performance in courses has received a median score of 5 for all courses in the past 10 years, with means usually around 4.6 to 4.8, even for very large classes.

Guest lectures: I have contributed lectures and instructional modules to many other courses, including **Age of Dinosaurs**; **Animal Behavior**; **Introduction to Environmental Science and Policy**; **Evolutionary Genetics**; **Introduction to Applied Science Research**; **Ornithology**; **Music in the Liberal Arts**; **Musicology: Music and Nature**; **Paleontology**; and **Sensory Ecology**.

**Student Supervision and Advising**

Undergraduate student mentoring

2001-now Each semester at W&M I mentor 10-15 undergraduate researchers to collaborate with me in the lab and/or field, on the following topics:

* Avian conservation and ecology
* Human-wildlife conflict
* Noise pollution
* Ecotoxicology
* Interactions of biodiversity and human health
* Animal communication
* Sexual selection and mate preferences
* Avian learning and cognition
* Environmental sustainability and policy

2001-now I have been the academic advisor to over 500 undergraduates from biology, environmental science and policy, and College pre-majors

1994-1997 I supervised undergraduate research projects at the University of Glasgow on topics such as body mass regulation, predatory behavior, biomechanics, evolution of anti-predatory tactics, foraging behavior and social dominance. I published with two of these students.

Postdoctoral scholars and graduate student mentoring (The Biology department at W&M has a small MS program but no PhD program. It is unusual to have postdocs in my department)

2014-2018 Dr. M. João Martins, postdoctoral scholar. Smithsonian Institute, DC, and W&M.

2014-2016 Dr. Dana Moseley, postdoctoral scholar. W&M. Now tenure-track assistant professor at James Madison University.

2010-2012 Jes Therkelsen (MFA), “postdoctoral” scholar. W&M. Now tenured associate professor at Fresno State University.

2009-2013 Dr. Claire Varian Ramos, postdoctoral scholar. W&M. Now tenured associate professor at University of Colorado at Pueblo.

2008-2010 Dr. Kerri Cornell-Duerr, postdoctoral scholar. W&M. Now tenured associate professor at Westminster College.

2007-2008 Dr. Meagan Herald, postdoctoral scholar. W&M. Now tenured associate professor at Virginia Military Institute.

2005-2010 Caitlin Kight, Ph.D. Thesis title: Evolutionary ecology of noise pollution in song birds. Department of Applied Science, W&M.

1996-2000 Andrew Ferguson, Ph.D. Thesis title: Trade-offs between investment in body mass and sexual advertising in zebra finches. University of Glasgow UK.

* 1. Emma Williams, Ph.D. Thesis title: Flight kinematics and functional morphology of take-off in passerines. University of Bristol UK.

2020-now Moira Meehan, MS program. Thesis topic: The use of multi-modal strategies to reduce window collisions for birds. W&M.

2019-now Lauren Emerson, MS program. Thesis topic: The effects of lighting conditions on the probability of birds’ collisions with windows. W&M.

2019-now Robin Thady, MS program. Thesis topic: Designing an acoustic cue that reduces in-flight collision risks for birds. W&M.

2018-2020 Timothy Boycott, MS program .Thesis topic: Can we use an Acoustic Lighthouse to reduce collision risks for birds? W&M.

2017-2020 Rachel Davis, MS program. Thesis topic: Telomere degradation and cellular damage in associate with mercury exposure. W&M.

2017-2019 Amanda Werrell, MS program. Thesis topic: Using a “sonic net” to protect sunflower from damage by blackbirds. W&M.

2016-2019 Ananda Menon, MS program. Thesis topic: Influence of dietary mercury exposure on male fertility. W&M.

2016-2018 Carly Hawkins, MS program. Thesis topic: How anthropogenic noise affects social structure and social connectivity of group-living birds. W&M.

2014-2016 Virginia Greene, MS program. Thesis topic: The effect of mercury on mate choice in zebra finches. W&M.

2014-2016 Nicole Ingrassia, MS program. Thesis topic: Using an acoustic lighthouse to reduce bird collisions. W&M.

2013-2015 Autumn Swan, MS. Thesis title: The effects of environmental noise on the establishment and maintenance of social hierarchies in European starlings. W&M.

2012-2014 Ghazi Mahjoub, MS. Thesis title: The effects of communication disruption on feeding and antipredatory behaviors of European starlings. W&M.

2012-2013 Erica Norton, MS program. Thesis topic: The effects of noise pollution on songbirds. W&M.

2011-2013 Jessica Spickler, MS. Thesis title: The effects of mercury exposure on the production and expression of coloration in song birds. W&M.

2011-2013 Jessie Ebers Smith, MS. Thesis title: Investigation of how environmental mercury affects host-parasite interactions in terrestrial song birds. W&M.

2010-2013 Kenton Buck, MS. Thesis title: The evolutionary genetic responses of zebra finches to methyl mercury exposure. W&M.

2010-2013 Megan Kobiela, MS. Thesis title: How mercury contamination changes starvation-predation trade-offs in a small passerine. W&M.

2010-2013 Jenna Carlson, MS. Thesis title: The effects of mercury exposure on flight performance and molt of European starlings. W&M.

2009-2011 Catherine Lewis, MS. Thesis title: Immune responses of zebra finches to low-dose mercury exposure.

2008-2010 Leah Wilson, MS. Thesis title: Testing male and female fitness trade-offs associated with mate guarding by zebra finches. W&M.

2008-2010 Marie Pitts, MS. Thesis title: The influence of habitat spatial scale on the breeding success of eastern bluebirds. W&M.

2008-2009 Diana Soteropoulos, MS program. Thesis topic: The effect of sublethal mercury contamination on the behavioral ecology of passerines. W&M.

2007-2008 Nicole Combs, MS. Thesis topic: Explaining fitness variation in eastern bluebirds by spatial distribution of landscape and pesticide variables. W&M.

2006-2008 Kelly Minton, MS. Thesis title: The influence of past experience on future mate choice in zebra finches. W&M.

2006-2008 Joanna Hubbard, MS. Thesis title: Mutual mate choice in eastern bluebirds. W&M.

2006-2010 Rebecca McKeel, MS program. Thesis topic: Comparisons of grey wolf cub introductions in wild and captive situations—designing rehabilitation and management practices. W&M.

2005-2007 Amanda Houck, MS. Thesis title: Social and genetic mate preferences in female zebra finches. W&M.

2005-2007 Alex Gunderson, MS. Thesis title: Avian adaptations to feather-degrading bacteria. W&M.

2004-2005 Holly Lang, MS program. Thesis topic: The costs of molt-breeding overlap in eastern bluebirds. W&M.

2003-2005 Caitlin Kight, MS. Thesis title: Effects of anthropogenic disturbance on the behavior and fitness of eastern bluebirds. W&M.

2002-2004 Ryan Crabtree, MS. Thesis title: Costs of mate choice and the evolution of mate preferences in zebra finches. W&M.

2001-2003 Melissa Kennedy, MS program. Thesis topic: Developmental stability in a shrew hybrid zone. W&M.

**Professional Presentations**

**Invited talks, seminars, and plenaries presented by me**

1. 2019. *Promoting animal behaviour to tackle global challenges*. Invited Presidential plenary talk, Animal Behavior Society and International Ethological Society Joint Meeting, Chicago, Illinois.
2. 2019. *Applications of sensory ecology to reduce conflict between birds and humans*. Invited seminar, Biology Department, Colorado State University at Pueblo, Colorado.
3. 2019. *William & Mary and renewable energy*. Virginia Higher Education Powering the Renewable Energy Workforce. Virginia Renewable Energy Reliance LEAD-Series Conference and discussion panel. Norfolk, Virginia.
4. 2018. *The integration of technology into conservation research and teaching*. ConservationXLabs workshop on the next generation of conservation curricula. Washington, DC.
5. 2018. *Using sound to design long-term solutions to bird-human conflicts: applications in aviation, agriculture, and wind energy*. National Wildlife Control Operators Association Meeting, Richmond, Virginia.
6. 2018. *How understanding bird behaviour helps minimize crop loss and bird-aircraft collisions*. Invited symposium talk, American Association for the Advancement of Science Annual Meeting, Austin, Texas.
7. 2017. *Using targeted noise deterrents to reduce human-avian conflicts*. Invited talk, Zoological Society of London Sensory Ecology Workshop, London, UK.
8. 2017. *Applications of sensory ecology to reduce conflict between birds and humans*. Invited seminar, Biology Department, North Dakota State University, North Dakota.
9. 2017. *The potential for using a Sonic Net to reduce damage by birds to sweet corn*. Invited talk, New England Vegetable and Fruit Conference, Manchester, New Hampshire.
10. 2017. *Using a Sonic Net to deter wildlife: a potential long-term solution to reducing crop losses*. Invited talk, New England Vegetable and Fruit Conference, Manchester, New Hampshire.
11. 2017. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Biology Department, Arizona State University, Arizona.
12. 2017. *Animal communication and species interactions in a changing world: consequences of noise pollution*. Invited symposium speaker, Society of Integrative and Comparative Biology Annual Meeting, New Orleans, Louisiana.
13. 2016. *Behavioral ecotoxicology: how studying environmental toxins can enrich our understanding of behaviour*. Invited symposium speaker, Animal Behavior Society Annual Meeting, Columbia, Missouri.
14. 2016. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Centre for Biological Diversity, University of St Andrews, UK
15. 2016. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, School of Biological Sciences, University of Bristol, UK
16. 2016. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Department of Zoology, University of Cambridge, UK.
17. 2016. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Department of Genetic, Ecology, and Evolution, University College London, UK.
18. 2015. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, College of Life and Environmental Sciences, University of Exeter, UK.
19. 2015. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Edward Grey Institute of Ornithology, University of Oxford, UK.
20. 2015. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Department of Integrative Biology, University of Texas, Austin, Texas.
21. 2015. *A noise annoys. Perhaps enough to save lives*. Invited talk at TEDx Williamsburg, Williamsburg, Virginia.
22. 2015. *Noise pollution and understanding song in anthropogenic environments*. Invited symposium talk, Society for Integrative Biology annual meeting, West Palm Beach, Florida.
23. 2015. *Taking ideas from the bench to patented technology*. Invited seminar, Monroe Scholars program, W&M.
24. 2014. *Do World Bank development projects benefit biodiversity conservation?* Invited plenary conference talk, AidData Research Consortium Convening, Williamsburg, Virginia.
25. 2013. *Far from the deafening crowd: The effects of noise pollution on songbirds*. Invited seminar, Department of Biology, Virginia Tech, Blacksburg, Virginia.
26. 2013. *A sound net can persistently exclude European starlings from a food source*. Poster presentation, Bill and Melinda Gates Foundation Grand Challenges Explorations joint meeting between Global Health and Sustainable Agriculture, Seattle, Washington.
27. 2013. *Increased bird diversity is associated with lower incidence of West Nile Virus infections in humans*. Invited conference talk, Wilson Ornithological Society Conference, Williamsburg, Virginia.
28. 2012. *Does conserving bird diversity give us public health benefits? A case study with West Nile virus*. Invited seminar, Department of Biology, Old Dominion University, Norfolk, Virginia.
29. 2012. *Not Just for the Birds: How Ecological Land Management Could Keep Us from Getting Sick*. Invited seminar for William and Mary Alumni Association’s Homecoming Sundial Series, Williamsburg, Virginia.
30. 2012. *Not Just for the Birds: How Ecological Land Management Could Keep Us from Getting Sick*. Invited inaugural Provost’s Faculty Lecture Series Talk. W&M.
31. 2012. *Putting the environment at the center of academic living and learning*. Invited seminar, Bucknell University, Lewisburg, PA.
32. 2009. *How noise and neighbors influence mating: Environmental mechanisms in sexual selection*. Invited seminar, Department of Ecology and Evolution, University of Colorado at Boulder. CO.
33. 2008. *The consequences of ambient noise and mating and reproductive success of songbirds*. Invited symposium presentation, American Ornithological Union Annual Meeting, Portland OR.
34. 2008. *Can avian biodiversity help protect people from West Nile virus*? Invited seminar, Ecology and Evolution group, University of California Riverside.
35. 2008. *How noise and neighbors change mate preferences: environmental mechanisms in sexual selection*. Invited seminar, Department of Biology, University of California Riverside.
36. 2008. *Urbanization, mate preference, and public health: the effects of development on avian and human societies*. Invited seminar, University of California Santa Barbara, National Center for Ecological Analysis and Synthesis seminar.
37. 2008. *How noise and neighbors influence mate preferences in song birds*. Invited seminar, Animal Behavior Graduate Group, University of California Davis.
38. 2007. *How noise and neighbors influence mate preferences in song birds*. Invited seminar, Ecology and Evolution Department, University of California Los Angeles.
39. 2007. *Noisy neighbors and avian mating systems*. Invited seminar, Biology Department, Oberlin College, Ohio.
40. 2006. *An evolutionary approach to conservation: fitness consequences along an anthropogenic gradient*. Invited seminar, Queens University, Kingston, Ontario, Canada.
41. 2006. *Avian diversity and West Nile virus risks to humans in the US*. Invited seminar. Environmental Science and Policy program, W&M.
42. 2006. *Perceptual processes in evolutionary ecology*. Invited seminar, Imperial College London, Silwood Park, UK.
43. 2005. *Symmetry, psychology, and sexual selection*. Invited seminar, Eastern Carolina University.
44. 2004. *Symmetry and sexual selection*. Invited seminar, Virginia Institute of Marine Science Field Station, Wachapreague, Virginia.
45. 2002. *Testosterone and male facial attractiveness*. Invited Seminar, Monroe Seminar Series, W&M.
46. 2001. *Breeding in Australian Fairy-wrens*. Invited Seminar, Williamsburg Bird Club, Virginia.
47. 2001. *Asymmetry, mate choice, and signaling*. Invited Seminar, Biology Department, W&M.
48. 2000. *Evolution of sexual dimorphism in passerines*. Invited seminar, University of Bristol Research Centre in Behavioural Biology, Bristol UK.
49. 1999. *Evolution of reversed sexual dimorphism in red-backed fairy-wrens*. Invited Seminar, Biology Department, University of Nottingham UK.
50. 1999. *Is it an advantage to be small down-under?* Invited seminar, School of Biological Sciences, University of Bristol UK.
51. 1999. *Symmetry and perception*. Invited seminar, University of Bristol Research Centre in Behavioural Biology, Bristol UK.
52. 1999. *Aerodynamics and behavior of take-off and molt in birds*. Invited seminar, Society of Experimental Biology, Invited Presentation for Special Seminar on Biomechanics and Behaviour, Edinburgh, UK.
53. 1998. *Is fluctuating asymmetry a visual signal*? Invited seminar, Royal Norwegian Society of Science and Letters Foundation 5th Conference, Trondheim, Norway.
54. 1998. *Biological asymmetry: origins and applications to human scoliosis*. Invited Plenary Speaker and co-Chair, Philip Zorab Symposium, Oxford University UK.
55. 1998. *Developmental stability: is asymmetry relevant to evolutionary biology or is it just FA*? Invited seminar, Department of Ecology and Evolution, University of Chicago.
56. 1998. *Is asymmetry a biological signal*? Invited Seminar, School of Biological Sciences, University of Bristol UK.
57. 1997. *The biomechanical consequences of molt*. Invited seminar, Department of Organismal Biology and Anatomy, University of Chicago.
58. 1996. *Fluctuating asymmetry as an indicator of condition*. Invited seminar, Joint Ecology Research Initiative Inaugural Conference, Stirling UK.
59. 1995. *Developmental stability and human attractiveness: can we take asymmetry studies at face value*? Invited seminar, European Science Foundation Workshop on Developmental Stability, Gilleleje, Denmark.
60. 1995. *Developmental stability, performance and predation*. Invited seminar, European Science Foundation Workshop on Developmental Stability, Gilleleje, Denmark.
61. 1995. *Fluctuating asymmetry and mate choice in zebra finches*. Invited seminar, Ecological Society of America Annual Meeting, Providence, Rhode Island.
62. 1995. *Plumage condition affects flight performance in starlings: implications for developmental homeostasis, abrasion and moult*. Invited seminar, European Evolutionary Biology Congress, Edinburgh UK.
63. 1995. *Fluctuating asymmetry and mate choice processes*. Invited seminar, Edward Grey Institute of Ornithology, University of Oxford.
64. 1995. *The role of fluctuating asymmetry in sexual selection*. Invited seminar, Department of Evolutionary Genetics, University College London UK.
65. 1995. *Fluctuating asymmetry and sexual selection in the zebra finch*. Invited seminar, Division of Environmental and Evolutionary Biology, University of Glasgow UK.
66. 1994. *Fluctuating asymmetry in evolutionary biology*. Invited seminar, Workshop in Behavioural Ecology, University of Bristol UK.
67. 1994. *Sexual selection and fluctuating asymmetry*. Invited seminar, Department of Animal and Plant Sciences, University of Sheffield UK.
68. 1994. *Experimental investigations of asymmetry and mate choice*. Invited seminar, School of Biological Sciences, University of Bristol UK.
69. 1993. *Zebra finches choose symmetric mates*. Invited seminar, School of Biological Sciences, University of Bristol UK.
70. 1992. *Facial attractiveness and asymmetry in humans*. Invited seminar, School of Biological Sciences, University of Bristol UK.
71. 1991. *Asymmetry and evolutionary biology*. Invited seminar, School of Biological Sciences, University of Bristol UK.

Additional conference presentations by me

1. 2018. Inaudible noise pollution: environmental ultrasound pollution is prevalent and has biological effects. Conference talk, Animal Behavior Society Annual Meeting, Milwaukee, Wisconsin.
2. 2017. Can we use sensory ecology to reduce birds’ collisions with buildings, towers, and turbines? Conference talk, Animal Behavior Society Annual Meeting, Scarborough, Ontario, Canada.
3. 2015. *Manipulating the acoustic environment displaces problem birds from an airfield*. Conference talk, Animal Behavior Society Annual Meeting, Anchorage, Alaska.
4. 2014. Mercury exposure changes the "personality" of zebra finches: the bold and not so beautiful. Conference talk, Animal Behavior Society Annual Meeting, Princeton, New Jersey.
5. 2013. *Using animal behavior to improve human health and safety: deterring birds from crops and airports*. Conference talk, Animal Behavior Society Annual Meeting, Boulder, Colorado.
6. 2012. *Noise pollution is associated with changes in breeding behavior and fitness of eastern bluebirds*. Conference talk, Animal Behavior Society Annual Meeting, Albuquerque, NM.
7. 2011. *Developmental stress as a nestling erodes cognitive performance as an adult*. Conference talk, Animal Behavior Society and International Ethological Society Joint Meeting, Bloomington, IN.
8. 2009. *Bird diversity dilutes the incidence of West Nile virus in humans: The benefits of birds to public health*. Conference talk, American Ornithology Union Annual Meeting, Philadelphia, PA.
9. 2007. *Environmental noise erodes pair bonds in zebra finches*. Conference talk, Animal Behavior Society Annual Meeting, Burlington, Vermont.
10. 2007. *Increased avian diversity is associated with lower incidence of West Nile virus in both human and bird populations*. Poster presentation, Ecological Society of America Annual Meeting, San Jose, California.
11. 2007. *GIS impervious land cover metrics predict fitness variation in a neotropical migrant, the house wren* (*Troglodytes aedon).* Poster presentation, Ecological Society of America Annual Meeting, San Jose, California.
12. 2006. *A ‘culture’ of mate choice: social inheritance of mate preferences in a monogamous species, the zebra finch*. Conference talk, International Society for Behavioral Ecology, biennial meeting, Tours, France.
13. 2005. *Mate choice copying in a monogamous species: the zebra finch*. Conference talk, Animal Behavior Society Annual Meeting, Snowbird, Utah.
14. 2004. *Mate choice copying in zebra finches*. Poster presentation, Animal Behavior Society Annual Meeting, Oaxaca, Mexico.
15. 2003. *Symmetry preference as a cognitive by-product in starlings*. Conference talk, Animal Behavior Society Annual Meeting, Boise, Idaho.
16. 2002. *Symmetry perception, cues, and signals*. Conference talk, Animal Behavior Society Annual Meeting, Bloomington, Indiana.
17. 1999. *Perceptual mechanisms and selection against asymmetry*. Conference talk, Society for the Study of Evolution Annual Meeting, Madison, Wisconsin.
18. 1998. *Receiver psychology and signaling by fluctuating asymmetry*. Conference talk, Behavioral Ecology Congress, Monterey, California.
19. 1997. *The kinematics of take-off during moult*. Society of Experimental Biology Annual Meeting, Canterbury UK.
20. 1996. The functional costs of moult in the European starling, *Sturnus vulgaris*. Conference talk, Society of Experimental Biology Annual Meeting, Lancaster UK.
21. 1994. *Fluctuating asymmetry: female finches choose symmetrical males*. Poster presentation, International Ornithological Congress, Vienna, Austria.
22. 1993. *Food, feathers and fluctuating asymmetry in the starling*. Conference talk, International Ethological Conference, Torremolinos, Spain.

Co-authored presentations by undergraduate, graduate students, and postdocs I mentored

1. 2021. *New approach to mitigate bird-window collisions*. Poster presentation, IENE infra Eco Network Europe virtual international conference.
2. 2020. *Using acoustic signals to reduce the incidence of avian collisions with human-made structures in open air-space*. Conference talk, Ecological Society of America Virtual Conference.
3. 2020***. Using acoustic signals to reduce avian collisions with human-made structures in open air-space.*** Conference talk, Animal Behavior Society Virtual Conference.
4. 2020. ***Ultraviolet-reflective film reduces the risk of bird-window collisions.*** Conference talk, Animal Behavior Society Virtual Conference.
5. 2020. *Personality traits mediate the effect of anthropogenic noise pollution in eastern bluebirds*. Conference talk, Animal Behavior Society Virtual Conference.
6. 2019. *Using acoustic signals to reduce bird collisions with human-made structures in open airspace*. Conference talk, Animal Behavior Society and International Ethological Society Joint Meeting, Chicago, Illinois.
7. 2019. Does a “Sonic Net” protect sunflower from damage by blackbirds? Conference talk, American Ornithological Society Annual Meeting, Anchorage, Alaska.
8. 2018. *Conspicuous plumage acquisition and its behavioral correlates during the non-breeding season in the red-backed fairywren*. Poster presentation, American Ornithological Society Annual Meeting, Tucson, Arizona.
9. 2018. *Bright coloration does not incur predation cost in red-backed fairywrens*. Poster presentation, American Ornithological Society Annual Meeting, Tucson, Arizona.
10. 2018. *The link between social/familial relationships and ecto-parasite infection*. Poster presentation, American Ornithological Society Annual Meeting, Tucson, Arizona.
11. 2018. *Investigating the effects of anthropogenic noise disturbance on songbird social networks*. Poster presentation, Society of Integrative and Comparative Biology, San Francisco, California.
12. 2018. *Investigating the effects of anthropogenic noise disturbance on songbird social networks*. Poster presentation, Society of Integrative and Comparative Biology, San Francisco, California.
13. 2017. *Did sexual selection hinder survival of ostracode species through the K/PG mass extinction?* Conference talk, Geological Society of America Annual Meeting, Seattle, Washington.
14. 2017. *Sexual dimorphism is generally stable over the lifetime of fossil ostracode species*. Conference talk, Geological Society of America Annual Meeting, Seattle, Washington.
15. 2017. *Integrative behavioral eco-toxicology (IBET): bringing together fields to establish new insight to behavioral ecology, toxicology, and conservation*. Poster presentation, SETAC North America 38th Annual Meeting, Minneapolis, Minnesota.
16. 2017. *Dietary methylmercury affects cognition and behavior in a model songbird*. Poster presentation, International Conference on Mercury as a Global Pollutant, Providence, Rhode Island.
17. 2017. *Sexual dimorphism is generally stable over the lifetime of fossil ostracode species*. Conference talk, Society for the Study of Evolution Annual Meeting, Portland, Oregon.
18. 2017. *Ornamental plumage in the non-breeding season is associated with behavioural change in a tropical passerine*. Poster presentation, Society for the Study of Evolution Annual Meeting, Portland, Oregon.
19. 2017. *Testing sexual selection as a determinant of species extinction and origination in Late Cretaceous cytheroid ostracodes*. Conference talk, Society for the Study of Evolution Annual Meeting, Portland, Oregon.
20. 2017. *No relationships between ambient noise and acoustically-related behaviors in Australian fairywrens*. Poster presentation, Wilson Ornithological Society, Fort Myers, FL.
21. 2017. *Ornamental plumage in the non-breeding season is associated with behavioral change in a tropical passerine*. Poster presentation, Wilson Ornithological Society, Fort Myers, FL.
22. 2016. *Casting a sonic net: deterring birds from food sources using acoustic ecology*. Conference talk, North American Ornithological Conference, Washington, DC.
23. 2016. *A test of the early stress hypothesis using mercury exposure and spatial memory in Zebra Finches*. Poster presentation, North American Ornithological Conference, Washington, DC.
24. 2016. *The effect of mercury exposure on mate choice in birds*. Poster presentation, North American Ornithological Conference, Washington, DC.
25. 2016. *Keeping birds away from food using sonic technology: a potential for protecting crops*. Poster presentation, North American Ornithological Conference, Washington, DC.
26. 2016. *Color association in mercury-dosed Zebra Finches*. Conference talk, North American Ornithological Conference, Washington, DC.
27. 2015. *Correlation between soft and hard parts in Cyprideis (Ostracoda): Implications for the analysis of sexual selection in the fossil record*. Conference talk, Geological Society of America Annual Meeting, Baltimore, Maryland.
28. 2015. *Sexual dimorphism as a proxy for sexual selection in Cretaceous ostracodes from the US Gulf Coastal Plain*. Conference talk, Geological Society of America Annual Meeting, Baltimore, Maryland.
29. 2015. *How do fire regimes and an invasive grass affect habitat occupancy of an Australian songbird?* Poster presentation, Ecological Society of America annual meeting, Baltimore, Maryland.
30. 2015. *Using sound to prevent birds from flying in to objects*. Poster presentation, Wilson Ornithological Society Conference, Acadia University, Wolfville, Nova Scotia, Canada.
31. 2015. *Environmental contaminants and sexual selection: does mercury have an effect on mate choice behavior?* Poster presentation, Wilson Ornithological Society Conference, Acadia University, Wolfville, Nova Scotia, Canada.
32. 2015. *Using auditory brainstem response testing to investigate the potential effects of mercury exposure on hearing in the zebra finch*. Poster presentation, Wilson Ornithological Society Conference, Acadia University, Wolfville, Nova Scotia, Canada.
33. 2015. *Does methylmercury exposure impact song learning or song production in the zebra finch?* Conference talk, Animal Behavior Society Annual Meeting, Anchorage, Alaska.
34. 2015. *Risk-taking behaviors in zebra finches affected by mercury exposure*. Conference talk, Animal Behavior Society Annual Meeting, Anchorage, Alaska.
35. 2014. *Fluctuating asymmetry as a measure of developmental stress in mercury-dosed zebra finches*. Conference talk, Wilson Ornithological Society Conference, Salve Regina University, Newport, Rhode Island.
36. 2014. *Do social and environmental factors influence vigilance in two Australian songbirds*? Poster presentation, Wilson Ornithological Society Conference, Salve Regina University, Newport, Rhode Island.
37. 2014. *The influence of environmental heterogeneity on winter ranging in the red-backed fairy-wren,* *Malurus melanocephalus*. Poster presentation, Wilson Ornithological Society Conference, Salve Regina University, Newport, Rhode Island.
38. 2014. *Evidence for rapid adaptation to an environmental contaminant in a model songbird*. Conference talk, Evolution annual meeting, University of North Carolina, Raleigh, North Carolina.
39. 2013. *Effectiveness of a “sonic net” at displacing European starlings from food patches in an outdoor aviary: implications for reduced aircraft bird strikes*. Poster presentation, Bird Strike North America Conference, Milwaukee, Wisconsin.
40. 2013. *Benign exclusion of birds using acoustic parametric arrays*. Conference talk, Acoustical Society of America, Montreal, Quebec, Canada.
41. 2013. *Genetic variation in the effects of mercury on reproduction in zebra finches*. Conference talk, Wilson Ornithological Society Conference, Williamsburg, Virginia.
42. 2013. *Habitat preference of a tropical passerine in a fire-prone environment*. Poster presentation, Wilson Ornithological Society Conference, Williamsburg, Virginia.
43. 2013. *Can we use a sound net to block vocal communication and persistently exclude European Starlings from food sources?* Poster presentation, Wilson Ornithological Society Conference, Williamsburg, Virginia.
44. 2013. *Fire history and invasive grasses change the acoustic environment of Red-backed Fairy-wren's (Malurus melanocephalus) implications for vocal signaling*. Poster presentation, Wilson Ornithological Society Conference, Williamsburg, Virginia.
45. 2013. *Mercury exposure results in hyperactivity and decreased neophobia in zebra finches*. Poster presentation, Wilson Ornithological Society Conference, Williamsburg, Virginia.
46. 2012. *Methylmercury affects the trade-off between starvation and predation risk in zebra finches*. Conference talk, North American Ornithological Conference, Vancouver, Canada.
47. 2012. *Heritability for blood mercury levels in zebra finches*. Conference talk, North American Ornithological Conference, Vancouver, Canada.
48. 2012. *Genetic variation in the plasticity of responses to methylmercury*. Poster presentation, Animal Behavior Society Annual Meeting, Albuquerque, NM.
49. 2012. *Developmental mercury exposure alters song in the zebra finch*. Poster presentation, Animal Behavior Society Annual Meeting, Albuquerque, NM.
50. 2011. *Repeatable among individual variation in bioaccumulation of mercury-dosed zebra finches*. Poster presentation, Society of Environmental Toxicology and Chemistry North America 32nd Annual Meeting, Boston, MA.
51. 2011. *Effects of environmentally relevant levels of methylmercury on flight performance in European starlings (Sturnus vulgaris)*. Poster presentation, Society of Environmental Toxicology and Chemistry North America 32nd Annual Meeting, Boston, MA.
52. 2011. *Form of methylmercury present in diet does not affect bioaccumulation in various tissues in the zebra finch (Taeniopygia guttata)*. Conference talk, Society of Environmental Toxicology and Chemistry North America 32nd Annual Meeting, Boston, MA.
53. 2011. *A new approach to offsetting: the W&M Carbon Offset Program.* Conference talk, Association for the Advancement of Sustainability in Higher Education Annual Meeting, Pittsburgh, PA.
54. 2011. *An evaluation of effective structures for campus sustainability programs at institutions of higher**education*. Conference talk, Association for the Advancement of Sustainability in Higher Education Annual Meeting, Pittsburgh, PA.
55. 2011. *Sublethal effects of mercury on the songbird immune response: an experimental study*. Conference talk, American Ornithology Union Annual Meeting, Jacksonville, FL.
56. 2011. *Reproductive success of eastern bluebirds on suburban golf courses*. Conference talk, American Ornithology Union Annual Meeting, Jacksonville, FL.
57. 2011. *Repeatable among-individual variation in bioaccumulation of mercury-dosed zebra finches*. Poster presentation, American Ornithology Union Annual Meeting, Jacksonville, FL.
58. 2011. *Methylmercury exposure alters pitch and complexity of learned songs in the zebra finch*. The 10th International conference on Mercury as a Global Pollutant, Hamilton, Nova Scotia, Canada.
59. 2011. *Does sexual selection predict extinction threat in African birds?* Conference talk, Animal Behavior Society and International Ethological Society Joint Meeting, Bloomington, IN.
60. 2011. *Mercury’s effect on spatial memory in zebra finch, Taeniopygia guttata*. Poster presentation, Animal Behavior Society and International Ethological Society Joint Meeting, Bloomington, IN.
61. 2011. *The effect of mercury on parental care in captive zebra finches*. Poster presentation, Animal Behavior Society and International Ethological Society Joint Meeting, Bloomington, IN.
62. 2010. *Why mate guard? Missing opportunities to cheat may be more important than risk of cuckoldry in the zebra finch*. Conference talk, Animal Behavior Society Annual Meeting, Williamsburg, VA.
63. 2010. *A captive dosing study on zebra finch to determine the effects of methylmercury on reproduction and stress*. Poster presentation, Animal Behavior Society Annual Meeting, Williamsburg, VA.
64. 2010. *Manipulating the paternity threat: is mate guarding flexible in the Australian zebra finch?* Poster presentation, American Ornithology Union Annual Meeting, San Diego, CA.
65. 2009. *Ejaculate quality, plumage coloration and reproductive phenotype in the red-backed fairy-wren*. Conference talk, American Ornithology Union Annual Meeting, Philadelphia, PA.
66. 2009. *He’s just not that into you: variation in female coloration is not driven by male mate choice in eastern bluebirds*. Conference talk, American Ornithology Union Annual Meeting, Philadelphia, PA.
67. 2009. *Fledging success and nestling sex ratio of eastern bluebirds breeding in golf course landscapes*. Conference talk, American Ornithology Union Annual Meeting, Philadelphia, PA.
68. 2009. *Does anthropogenic noise decrease fitness of breeding male birds? Molecular & behavioral analyses*. Conference talk, Animal Behavior Society Annual Meeting, Pirenopolis, Brazil.
69. 2008. *Social interaction and mate preference plasticity in female zebra finches* (Taeniopygia guttata). Conference talk, International Society for Behavioral Ecology, biennial meeting, Cornell University.
70. 2008. *Eastern bluebirds (Sialia sialis) adjust multiple song characteristics in response to anthropogenic noise*. Poster presentation, International Society for Behavioral Ecology, biennial meeting, Cornell University.
71. 2008. *Fancy females: the function of female coloration in eastern bluebirds, Sialia sialis*. Poster presentation, International Society for Behavioral Ecology, biennial meeting, Cornell University.
72. 2008. *Bluebirds on the fairway: golf courses as replacement habitats*. Poster presentation, American Ornithological Union Annual Meeting, Portland OR.
73. 2008. *Evidence that feather-degrading bacteria differentially affect male and female birds*. Poster presentation, Society for the Study of Evolution Annual Meeting, University of Minnesota.
74. 2007. *Does historical exposure to humans affect current responses to anthropogenic disturbance*? Conference talk, Animal Behavior Society Annual Meeting, Burlington, Vermont.
75. 2007. *Phenotypic costs associated with mating in Eastern bluebirds*. Conference talk, Animal Behavior Society Annual Meeting, Burlington, Vermont.
76. 2007. *Female coloration, sexual selection, and male mate choice in eastern bluebirds,* *Sialia sialis*. Poster presentation, Animal Behavior Society Annual Meeting, Burlington, Vermont.
77. 2007. *Male mate choice based on sexually selected traits in female Eastern Bluebirds*. Poster presentation, American Ornithological Union Annual Meeting, Laramie, Wyoming.
78. 2007. *Autoclave sterilization may confound the observed effect of feather degrading bacteria*. Conference talk, American Ornithological Union Annual Meeting, Laramie, Wyoming.
79. 2007. *Impervious land cover predicts anthropogenic disturbance and variation in fitness of nesting house wrens* (*Troglodytes aedon*). Poster presentation, Evolutionary Change in Human Altered Environments: An International Summit. Los Angeles, California.
80. 2006. *Melanin resistance to bacterial degradation of feathers*. Poster presentation, American Ornithological Union meeting, Mexico.
81. 2006. *Effects of human disturbance on the breeding success of eastern bluebirds (Sialia sialis)*. Conference talk, International Society for Behavioral Ecology, biennial meeting, Tours, France.
82. 2006. *Repeatability of primary mate choice and the strength of mate choice copying in female zebra finches*. Poster presentation, International Society for Behavioral Ecology, biennial meeting, Tours, France.
83. 2006. *Gender differences in neural processing of facial cues of gonadal steroid status in humans*. Poster presentation, Society for Neuroscience Annual Meeting, Atlanta, Georgia
84. 2005. *Interdisciplinary watershed studies provides science-society link*. Poster presentation, American Geophysical Union meeting, San Francisco, California.
85. 2005. *The effects of human disturbance on the breeding success of Eastern bluebirds*. Conference talk, Animal Behavior Society Annual Meeting, Snowbird, Utah.
86. 2004. *Homes for bluebirds: correlating nestbox and environmental variables with fitness*. Poster presentation, Animal Behavior Society Annual Meeting, Oaxaca, Mexico.
87. 2004. *Zebra finches and video-taped stimuli in mate choice trials*. Poster presentation, Animal Behavior Society Annual Meeting, Oaxaca, Mexico.
88. 2003. *A lack of ‘culture’ in zebra finch mate preference*. Poster presentation, Animal Behavior Society Annual Meeting, Boise, Idaho.
89. 1993. *Social dominance and avian mass regulation*. Conference talk, International Ethological Conference, Torremolinos, Spain.

**Professional Societies**

# American Association for the Advancement of Science; Animal Behavior Society; Ecological Society of America; International Society for Behavioral Ecology; Society for Integrative and Comparative Biology

**Academic Leadership and Professional Service**

## Academic Leadership and Service

*Current positions and activities*

2021-now Member, Design Review Board, all-university committee that oversees planning and construction on all W&M properties

2021-2023 Appointed member, FWO (Fonds Wetenschappelijk Onderzoek, Research Foundation—Flanders) Review College. Belgian public research council.

2020-now Faculty Director, Institute for Integrative Conservation, W&M

2020-now Convener and leader, Chairs and Directors Leadership Workshop, W&M

2020-now Member, Prestigious Scholarships review and interview committee, W&M

2020-2021 Chair, search committee for Environmental Justice faculty member, Institute for Integrative Conservation, W&M

2019-now co-Chair, Climate Action Plan Committee, W&M

2019-now Member, Green to Gold Steering Committee, W&M

2019-now Biology Department Faculty Liaison to the Honor Council, W&M

2017-now Co-Chair, Committee on Sustainability, W&M. All university committee that addresses campus and community sustainability initiatives.

2017-now Member, Sustainability Planning Committee, W&M. All university committee setting strategic priorities related to sustainability.

2017-now Member, Executive Committee of Sustainability Planning Committee, W&M

2016-now Appointed member, Royal Society of London International Exchanges Panel

2016-now Member, State Council for Higher Education in Virginia (SCHEV) Outstanding Faculty Award mentoring and review committee, W&M

2008-now Pre-majors academic advisor, W&M

2005-now Member, Animal Facility Committee, Biology Department, W&M

2003-now Environmental Science & Policy major advisor, W&M

2001-now Biology major advisor, W&M

*Prior positions and activities*

2020 co-Chair, search committee for Program Manager, Institute for Integrative Conservation, W&M

2020 co-Chair, search committee for Administrative Coordinator, Institute for Integrative Conservation, W&M

2020 Member, search committee for Visiting Assistant Professor of Biostatistics, Biology Department, W&M

2019-2020 Chair, Biology Department, W&M

2019-2020 Member, Teaching and Learning working group, Strategic Planning Steering Committee, W&M

2019-2020 Member, search committee for Senior Associate Provost for Planning and New Ventures, W&M

2019 Member, interview committee for Director of Operations and Maintenance, Facilities Management, W&M

2018-2019 Chair, Lecturer search committee, Biology Department, W&M

2018 Member and invited speaker, ConservationXLabs workshop to form the next generation of conservation curricula

2018 Member, NSF panel review of Career Grants, Integrative Organismal Systems

2017-2019 Associate Chair, Biology Department, W&M

2017 Member, NTE search committee, Biology Department, W&M

2016-2020 Elected as President of Animal Behavior Society (my primary academic society)

2016-2019 Member, Faculty Research Committee, university-level committee, W&M

2016-2017 Chair, Undergraduate Studies Committee, Biology Department, W&M

2016-2019 Member, Undergraduate Studies Committee, Biology Department, W&M

2016-2017 Member, Animal Care Supervisor search committee, W&M

2016-2017 Member, Biostatistics faculty search committee, W&M

2015-2018 Member, Animal Behavior Society Strategic Planning Committee

2013-2015 Member, Graduate Studies Committee, Biology Department, W&M

2013-2017 Judge, Animal Behavior Society Film Festival

2013-2018 Internal interviewer for Fulbright and other international academic fellowships and awards, W&M

2012-2015 Chair, “Leading Liberal Arts University” Strategic Planning Subcommittee, W&M. Addressing the largest over-arching goal of university’s strategic plan.

2012-2015 Elected Member-at-Large, Animal Behavior Society Executive Committee. In charge of student research grant program, and travel awards for minority scientists.

2012-2013 Member, ad hoc committee to expand English as a Second/Other Language programs, W&M

2012-2013 Member, Swem library academic study assignment committee, W&M

2012-2013 Dean of Graduate Studies and Research, Arts and Sciences, W&M

2012-2013 Chair, Committee on Graduate Studies, W&M

2012-2013 W&M representative on Virginia Microelectronics Consortium Executive Committee

2012-2013 W&M representative on Virginia Council of Graduate Schools

2012-2013 W&M representative on Virginia Space Grant Consortium

2012-2013 W&M representative to Academic Common Market

2012-2013 Member, International Advisory Committee, Reves Center, W&M. Steering committee for university’s international initiatives

2012-2013 Completed inaugural W&M Leadership forum

2012-2013 Member, Provost’s Digital Educational Technology Committee, W&M.

2012 Panelist, Maximizing Research Publications. Provost’s workshop on professional development, W&M

2012 Member, ad hoc committee that defined W&M vision statement

2011-2012 co-Chair, Chairs and Program Directors’ Training Workshop, W&M. Year-long training program for new department Chairs

2011-2015 Member, Planning Steering Committee, W&M. All university strategic planning steering committee

2011-2012 Member, Grand Challenge 1 Strategic Planning Committee, W&M. Addressing the largest over-arching goal of College’s strategic plan

2011-2012 Member, Evolutionary Biology Search Committee. Biology Department, W&M

2011 NSF panel member for review of Doctoral Dissertation Improvement Grants, Animal Behavior panel

2010-2011 Chair, Dean of Libraries Search Committee. W&M

2010-2011 Member, Ecology Search Committee. Biology Department, W&M

2010-2020 Member, Noyce Scholars and Teaching for a Competitive Tomorrow STEM Education Steering Committee, W&M

2010-2013 Mentor to minority doctoral scientists on MentorNet

2010-2011 Member, Dean of Arts & Science ad hoc committee to review College spending of F&A (indirect) funds.

2010-2011 Member, ad hoc committee on *General Education for a Global Century Project*, W&M

2010-2012 Member, Scientific and Technical Advisory Subcommittee of the Committee on Sustainability, W&M

2010 Pew Scholars Program in the Biomedical Sciences, Member of Nominations Committee, W&M

2009-2010 Host and Conference Organizer of Animal Behavior Society Annual Meeting at W&M

2009 Judge of student presentation awards, American Ornithological Union annual meeting, Philadelphia, PA

2009 co-Chair, Behavior and Ecology Search Committee, Biology Department, W&M

2009-2011 Member, curricular advisory board to Center for Ecological Living and Learning CELL, consortium of Ivy League and R1 institutions

2008-2010 Chair, Scientific and Technical Advisory Subcommittee of the Committee on Sustainability, W&M. Led working groups on greenhouse gas emissions, storm water managements, and College procurement.

2008-2010 Founding Member, Committee on Sustainability Steering Committee, W&M. University-wide committee reporting directly to College President on sustainability issues.

2008-2011 Member, Academic Programs Working Group, Committee on Sustainability Steering Committee, W&M

2008-2011 Member, Center for Geospatial Analysis Steering Committee, W&M

2008-2010 Co-organizer and mentor for Virginia Institute of Marine Science graduate teaching fellow program

2008-2009 Chair, Conservation Biology Search Committee, Biology Department, W&M

2008 Judge of student presentation awards, American Ornithological Union annual meeting, Portland OR

2008 Member, Director of Center for Geospatial Analysis Search Committee, W&M

2007-2011 Coordinator of Mellon Environmental Postdoctoral Scholar program, W&M

2006-2011 Member, Dean of Arts and Science Advisory Committee. College-wide steering and strategy committee, W&M.

2006-2011 Director, Environmental Science and Policy Program, W&M

2006-2011 Webmaster for Environmental Science and Policy Program, W&M

2006-2007 Member, Administrative Evaluation Committee for Dean John Wells, Director of Virginia Institute of Marine Science, W&M

2005-2006 Member, Animal Care Supervisor Search Committee, W&M

2005-2006 National Science Foundation review board member for biomathematics (UBM) panel

2005-2007 Member, Committee on Honors and Interdisciplinary Studies. University level board, W&M.

2005-2006 Department Chair’s Advisory Committee, Biology Department, W&M

2004-2006 Chair, Environmental Science and Policy Program Executive Committee, W&M

2004-2006 Webmaster for Biology Department, W&M

2004-2005 Member, Developmental Biology Search Committee, Biology Department, W&M

2005 Member, Animal Care Technician Search Committee, Biology Department, W&M

2004 Chair, Animal Care Supervisor Search Committee, Biology Department, W&M

2004 Chair, Conservation Biology Search Committee, Biology department, W&M

2003-2006 Director of Graduate Studies, Biology Department, W&M

2003-2006 Member, Committee on Graduate Studies. University level board, W&M.

2002 Co-Founder of Institute of Integrative Bird Behavior Studies, W&M. Multidisciplinary research group studying the evolution of behaviors in birds.

2001-now Major’s academic advisor, Department of Biology, W&M

2001-2006 Chair, Graduate Studies Committee, Biology Department, W&M

2001-2006 Member, Curriculum Committee, Biology Department, W&M

2001-2002 Member, Evolutionary Genetics Search Committee, Biology Department, W&M

1999-2000 Member, Biological Sciences Research Committee and representative to University Senate, University of Bristol

1999-2000 Seminar Facilitator, University Research Centre in Behavioral Biology, University of Bristol

1999-2000 Undergraduate and Graduate Admissions, University of Bristol

1998 Keynote (plenary) speaker, Conference Facilitator and Session Chair, Philip Zorab Symposium, Oxford University

1996-1998 Founding member of the Joint Ecology Research Initiative between Scottish Universities: Glasgow, Edinburgh and Stirling

1996 Judge of Best Student Award, Scottish Universities Student Conference, University of Glasgow

1993-1996 Seminar Facilitator, University Research Centre in Behavioral Biology, University of Bristol

1993-1994 Biological Sciences graduate student representative to University Senate, University of Bristol

1992-1993 Departmental Seminar Meeting Organizer and Facilitator, University of Bristol

1992 Founding member of the Bristol University Research Centre in Behavioral Biology

**Editorial Experience (manuscript reviews)**

I have reviewed and/or edited manuscripts for the following 72 journals:

* American Naturalist
* Animal Behaviour
* Animal Cognition
* Animal Conservation
* Annals of the Entomological Society of America
* Attention, Perception, and Psychophysics
* Auk
* Behavioral Ecology
* Behavioral Ecology and Sociobiology
* Behaviour
* Biological Journal of the Linnean Society
* Biological Letters of the Royal Society of London
* Biological Reviews
* Biotropica
* Bird Study
* BMC Evolutionary Biology
* Canadian Journal of Zoology
* Comparative Biochemistry and Physiology
* Condor
* Conservation Biology
* Conservation Physiology
* Crop Protection
* Current Zoology
* Ecological Applications
* Ecology Letters
* Environmental Entomology
* Environmental Science and Pollution Research
* Evolution
* Evolutionary Ecology
* Evolutionary Ecology Research
* Evolution and Human Behavior
* Evolution Letters
* Frontiers in Ecology and Evolution
* General and Comparative Endocrinology
* Global Ecology and Biogeography
* Global Change Biology
* Heredity
* Emu
* Ibis
* International Journal of Sports Science
* Journal of Animal Ecology
* Journal of Applied Ecology
* Journal of Avian Biology
* Journal of Ecoacoustics
* Journal of Environmental Planning and Management
* Journal of Environmental Quality
* Journal of Experimental Biology
* Journal of Experimental Marine Biology and Ecology
* Journal of Field Ornithology
* Journal of Sports Science
* Journal of Zoology
* Methods in Ecology and Evolution
* Microbial Research
* Landscape Ecology
* Nature
* Oecologia
* Oikos
* PeerJ
* Perception
* Philosophical Transactions of the Royal Society of London Series B
* Physiological Zoology
* PLoS ONE
* Proceedings of the Royal Society of London B
* Psychological Reports: Perceptual and Motor Skills
* Science of the Total Environment
* Scientific Reports
* Southeastern Naturalist
* Trends in Ecology and Evolution
* Urban Ecosystems
* Water
* Wilson Journal of Ornithology
* Zoo Biology

**Grant Application, Technical Report, and Personnel reviews**

I have reviewed numerous grant applications for the following grant-awarding bodies: Animal Behavior Society (US), Association for the Study of Animal Behaviour (UK), Austrian Programme for Advanced Research and Technology(Austria); Biotechnology and Biological Sciences Research Council (UK); Czech Science Foundation (Czech Republic); Flanders Research Foundation (Belgium); Graduate Women in Science; Hong Kong Research Grant Council (Hong Kong); Israel Science Foundation (Israel); Natural Environment Research Council (UK); Natural Sciences and Engineering Research Council (Canada); National Science Foundation (behavior processes, doctoral dissertation improvement, population biology, and biomathematics panels); Royal Society of London (UK); Wilson Ornithological Society (US).

I have reviewed drafts of technical reports and documents for organizations and agencies, such as the US Department of Energy. I have also reviewed chapters for some of the major Evolution textbooks and reviewed book prospectuses for several academic publishers.

I have served as an external reviewer/examiner for graduate theses/dissertations produced by students at other universities, and also reviewed candidates for tenure/promotion at other US universities.

**Media interactions and public outreach**

I have been interviewed frequently by journalists from radio stations (e.g., BBC, National Public Radio, Science Update), magazines (e.g., Science Now, Science Daily, New Scientist, The Economist, BBC Wildlife, Audubon), Internet news sites (e.g., Science Daily, TED, How Stuff Works), regional, national and international newspapers (e.g., New York Times, Washington Post, Chronicle for Higher Education, London Times, London Daily Telegraph, Times Higher Supplement for Higher Education) and television networks (e.g., History Channel, Discovery Channel, ABC, CBS, PBS, BBC) in relation to my work. I worked with a film-maker to produce short films about local and international environmental projects. I regularly give talks about the life sciences to students at local schools and engage with local wildlife, naturalist, and bird groups. I also volunteered with a local Girl Scout troop, focusing on engaging young girls in STEM activities.