

W. ALICE BOYLE

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ACADEMIC APPOINTMENTS

Associate Professor , Division of Biology, Kansas State University	2019–present
Visiting Research Associate , Department of Ecology and Evolutionary Biology, University of Arizona	2019–2020
Assistant Professor , Division of Biology, Kansas State University	2012–2019
Research Associate , Centre for Applied Conservation Research, Department of Forest Sciences, University of British Columbia <i>Supervisor: Dr. K.M. Martin</i>	2011–2012
Natural Sciences and Engineering Research Council (NSERC, Canada) Postdoctoral Fellow , Department of Biology, University of Western Ontario <i>Supervisor: Dr. C.G. Guglielmo (UWO). Collaborator: Dr. D.W. Winkler (Cornell)</i>	2009–2011
Helen Battle Postdoctoral Fellow , Department of Biology, University of Western Ontario <i>Supervisors: Dr. C.G. Guglielmo (UWO), Dr. D.R. Norris (U. Guelph)</i>	2007–2009

TRAINING

Ph.D., Department of Ecology and Evolutionary Biology, University of Arizona <i>Minor: School of Natural Resources. Advisers: Dr. J.L. Bronstein and Dr. C.J. Conway</i>	Dec 2006
B. Mus., University of British Columbia <i>Viola performance, 1st Class</i>	May 1990

AWARDS, HONORS, AND APPOINTMENTS

KATMA AWARD, American Ornithological Society	2021
ELECTED COUNCIL MEMBER, American Ornithological Society	2020-2023
MARION JENKINS SERVICE AWARD, American Ornithological Society	2019
University-wide faculty SCIENCE COMMUNICATION AWARD, Kansas State University	2019
ELECTED FELLOW of the American Ornithological Society	2017
EDITORIAL BOARD, Ecological Society of America journal, <i>Ecosphere</i>	2013–2020
ELECTED BOARD MEMBER, Cooper Ornithological Society	2013–2016
ELECTED MEMBER of the American Ornithologists' Union	2013
NED K. JOHNSON YOUNG INVESTIGATOR Award, American Ornithologists' Union	2011
BEST STUDENT PAPER Award in 2010, Organization for Tropical Studies	2011
OUTSTANDING INSTRUCTOR, University of Arizona Alumni Association	2001

PUBLICATIONS

(*denotes Boyle lab graduate students/postdoc, §denotes undergraduate student, †denotes other students that I mentored)

IN REVIEW/REVISION:

58. *Freeman, N.E., *K.M. Silber, T.J. Hefley³, A.M. Louthan¹, and **W.A. Boyle**. Changing precipitation regime threatens population growth and persistence of a declining grassland songbird. *Global Change Biology* (in review; first submitted Sep 2023; 70% of contribution Boyle lab)
57. *Mohankumar, N.M., T.J. Hefley, and **W.A. Boyle**. Robustness of point process species distribution models to misspecified temporal support. *Journal of Agricultural, Biological, and Environmental Statistics* (in review; first submitted Aug 2023; 15% of contribution Boyle lab)
56. *Winnicki, S. K. and **W.A. Boyle**. Grassland songbird growth and development under intense predation and brood parasitism risk. *Functional Ecology* (in revision; first submitted Aug 2023; 100% of contribution Boyle lab; 100% KSU)
55. *Freeman, N.E., §E.N. Sroor, §H.N. Castro-Miller, §M.D. Reynaldo, *K.M. Silber, N.M. Mohankumar, §N.A. Wright, and **W.A. Boyle**. Environmental drivers of shifts in female reproductive investment from quantity to quality in a grassland songbird. *Ibis* (in review; first submitted Aug 2022; 100% of contribution Boyle lab)
54. †Kraus, H.M., G.R. Houseman, M.E. Jameson, M.M. Reichenborn, **W.A. Boyle**, W.E. Jensen. Nestling condition of a grassland bird is not associated with food availability in restored grasslands. *Ornithology* (in revision; first submitted May 2022; 15% of contribution Boyle lab)
53. **Boyle, W.A.** and D. Sullins. Long-distance breeding dispersal in a grassland bird; patterns and climatic drivers. *Ornithology* (in revision; first submitted Oct 2020; 70% of contribution Boyle lab).
52. Hefley, T.J., **W.A. Boyle**, and †N.M. Mohankumar. Accounting for location uncertainty in distance sampling data. *Methods in Ecology and Evolution* (in revision, first submitted Apr 2019; 10% of effort Boyle lab)

PUBLISHED PEER-REVIEWED:

51. §Gresham, J., *Smith, E.B., and **W.A. Boyle**. Experimental evidence of the function of nest orientation: a behavioral strategy to control microclimate? *J. Field Ornithology* (accepted; first submitted Sep 2022; 100% of contribution Boyle lab)
50. *Silber, K.M., T.J. Hefley, §H.N. Castro-Miller, Z.J. Ratajczak, and **W.A. Boyle**, 2023. The long shadow of woody encroachment: an integrated approach to modeling grassland songbird habitat *Ecological Applications* (accepted; 75% of contribution Boyle lab)
49. *Smith, E.B., §A.J. Roe, *K.M. Silber, *E.J. Williams, *S.K. Winnicki, and **W.A. Boyle**, 2023. Consequences of drought for grassland songbird reproduction. *Ecosphere* (in press; 100% of contribution Boyle lab)
48. Bernath-Plaisted, J.S., M.D. Correll, S.G. Somershoe, A.M. Dwyer, N. Koper, **W.A. Boyle**, T.L. George, T. VerCautern, A. Bankert, A. Beh, H. Berlanga, J.L. Cruz-Romo, J. Herkert, A. Macias-Duarte, W.E. van Pelt, O.M. Ramirez-Flores, D. Svingen, E.H. Strasser, I. Revulcaba-Ortega, A.O. Panjabi, B. Robinson, J. Sibbing, and M. Titulaer,

2023. A review of conservation challenges and possible solutions for grassland birds of the North American Great Plains. *Rangeland Ecology and Management*, 90:165-185, doi:10.1016/j.rama.2023.07.002; INVITED REVIEW (5% of contribution Boyle lab)
47. †Mohankumar, N.M., T.J. Hefley, *K.M. Silber, and **W.A. Boyle**, 2023. Data fusion of distance sampling and capture-recapture data. *Journal of Spatial Statistics*, 55:100756, doi: 10.1016/j.spasta.2023.100756 (20% of contribution Boyle lab)
46. *Freeman, N.E, §M. Gustafson, T.J. Hefley, and **W.A. Boyle**, 2023. Riding out the storm: depleted fat stores and elevated hematocrit in a small-bodied endotherm exposed to severe weather. *Conservation Physiology*, 11(1): coad011, doi:10.1093/conphys/coad011 (95% of contribution Boyle lab)
45. Fuxjager, M.J., T.B. Ryder, N.M. Moody, C. Alfonso, C.N. Balakrishnan, J. Barske, M. Bosholn, **W.A. Boyle**, E.L. Braun, I. Chiver, R. Dakin, L. Day, R. Driver, L. Fusani, B.M. Horton, R.T. Kimball, S. Lipshutz, C.V. Mello, E.T. Miller, M.S. Webster, M. Wirthlin, R. Wollman, I.T. Moore, and B. A. Schlinger, 2023. Systems biology as a framework to understand the physiology of behavior—from concepts to a case study in birds. *Hormones and Behavior*, 151:105340, doi: 10.1016/j.yhbeh.2023.105340 (5% of contribution Boyle lab)
44. *Silber, K.M., †N.M. Mohankumar, T.J. Hefley, and **W.A. Boyle**, 2023. Emigration and survival correlate with different precipitation metrics throughout a grassland songbird's annual cycle. *Journal of Wildlife Management*. 87:e22371. doi:10.1002/jwmg.22371 (80% of contribution Boyle lab)
43. *Shogren, E.H., M. Anciães, J. Barske, C. Cestari, E.H. DuVal, M. G. Gaiotti, E. I. Johnson, R. T. Kimball, M.A. Marini, T. B. Ryder, M. N. Scholer, J. Ungvári, S. A. White, **W.A. Boyle**, 2022. Dancing drives evolution of sexual size dimorphism in manakins. *Proceedings of the Royal Society B*, 289:20212540. doi:10.1098/rspb.2021.2540 (data contributed by multiple authors, 100% of analysis and writing Boyle lab)
42. †Verheijen, B.H.F, A.N. Erickson, **W.A. Boyle**, §K.S. Leveritte, §L.A. Spahr, *E.J. Williams, *S.K. Winnicki, B.K. Sandercock, 2022. Effects of patch-burn grazing on reproductive success of grassland songbirds. (*The Condor*) *Ornithological Applications*, doi:10.1093/ornithapp/duac002 (15% of contribution Boyle lab)
41. *Shogren, E.H., M.A. Jones, and **W.A. Boyle**, 2021. Dancing in the rain: environmental drivers of behavioral variability in White-ruffed Manakin courtship. *Integrative and Comparative Biology*, icab085, doi:10.1093/icb/icab085 (100% of contribution Boyle lab)
40. *Shogren, E.H. and **W.A. Boyle**, 2021. Spread the word: male manakins advertise the presence of display sites with neighboring competitors. *Animal Behavior*, 177:147-158, doi: 10.1016/j.anbehav.2021.04.026 (100% of contribution Boyle lab)
39. *Herse, M.R., K.A. With, and **W.A. Boyle**, 2020. Grassland fragmentation affects declining tallgrass prairie birds most where large amounts of grassland remain. *Landscape Ecology*, 2020, 35(12):2791-2804, doi: 10.1007/s10980-020-01064-y (90% of effort Boyle lab; 100% KSU)
38. **Boyle, W.A.**, *E.H. Shogren, and J. D. Brawn, 2020. Hygric niches for tropical endotherms. *Trends in Ecology and Evolution*, 35:938-952. doi:10.1016/j.tree.2020.06.011 (95% of effort Boyle lab; 100% KSU).

WINNER OF THE 2021 [KATMA AWARD](#) FOR “PROPOSING IDEAS OR TESTING THEORIES THAT

REPLACE CURRENT DOGMA OR SETTLED OPINION AND THAT COULD CHANGE THE COURSE OF THINKING ABOUT THE BIOLOGY OF BIRDS.”

37. Bruckerhoff, L., K. Connell, J. Guinnip, E. Adhikari, A. Godar, K. Gido, **W.A. Boyle**, A. Hope, A. Joern, E. Welti, 2020. Harmony on the prairie? Grassland plant and animal community responses to variation in climate and land management. *Ecology*, e02986. doi:10.1002/ecy.2986 (5% of contribution Boyle lab; 100% KSU)
36. *Winnicki, S.K., §S.M. Munguía, *E.J. Williams, and **W.A. Boyle**, 2020. Social interactions do not drive territory aggregation in a grassland songbird. *Ecology* doi:10.1002/ecy.2927 (100% of contribution Boyle lab; 100% KSU)
35. †Burnett, K., †M. N. Zippel, †L. T. Phillips, †P. Pawar, L.P. McGuire, and **W.A. Boyle**, 2019. Nocturnal reductions in body temperature in high elevation Neotropical birds. *Tropical Ecology*; doi:10.1007/s42965-019-00051-y (40% of effort Boyle lab; 100% of effort KSU)
34. *Williams, E. J., and **W.A. Boyle**, 2019. Causes and consequences of avian dispersal decisions in a dynamic grassland environment. *Animal Behaviour*, 155:77-87. doi:10.1016/j.anbehav.2019.06.009 (100% of contribution Boyle lab; 100% KSU)
33. **Boyle, W.A.** and *E.H. Shogren, 2019. Sex and deception: a rare example of cheating in a lek-breeding tropical bird. *J. Ethology*, 37:151-155; doi:10.1007/s10164-019-00592-8 (100% of effort Boyle lab; 100% of effort KSU)
32. *Shogren, E.H., †M.A. Jones, B.K. Sandercock, and **W.A. Boyle**, 2019. Apparent survival of tropical birds in a wet, premontane forest in Costa Rica. *J. Field Ornithology*, 90:117-127. doi:10.1111/jof.12290 (80% Boyle lab; data collected pre-KSU but all analyses and writing KSU effort). AFO 2019 BEST STUDENT PAPER AWARD
31. **Boyle, W.A.**, 2018. Birds on the move: ecology of migration and dispersal. INVITED TEXTBOOK CHAPTER Pages 613-654 in *Ornithology: Foundation, Critique, and Application*, M. L. Morrison, A. D. Rodewald, G. Voelker, M.R. Colón, and J. F. Prather, Johns Hopkins University Press, Baltimore, MD. (100% effort KSU)
30. McGuire, L.P., L.A. Kelly, D.E. Baloun, **W.A. Boyle**, T.L. Cheng, J. Clerc, N.W. Fuller, A.R. Gerson, K.A. Jonasson, E.J. Rogers, and C.G. Guglielmo, 2018. Common condition indices are no more effective than body mass for estimating fat stores in insectivorous bats. *Journal of Mammalogy*, 99:1065-1071 doi:10.1093/jmammal/gyy103 (10% of effort Boyle lab; 100% of effort KSU)
29. *Herse, M.R, K.A. With, and **W.A. Boyle**, 2018. The importance of core habitat for a threatened species in changing landscapes. *Journal of Applied Ecology*, 55:2241-2252; doi: 10.1111/1365-2664.13234 (90% Boyle lab, 100% of effort KSU)
28. Hsiung, A., **W.A. Boyle**, R.J. Cooper, and R.B. Chandler, 2018. Altitudinal migration: ecological drivers, knowledge gaps, and conservation implications. *Biological Reviews*, 93:2049-2070. doi:10.1111/brv.12435 (25% of effort Boyle lab; 100% of effort KSU)
27. *Williams, E.J., and **W.A. Boyle**, 2018. Patterns and correlates of within-season breeding dispersal: a common strategy in a declining grassland songbird. *The Auk: Ornithological Advances*, 135:1-14; doi:10.1642/AUK-17-69.1 (100% of contribution Boyle lab; 100% KSU)
26. §Sommers, A.S., **Boyle, W.A.**, and L.P. McGuire, 2017. Validation of a field-ready handheld meter for plasma β -hydroxybutyrate analysis, *J. Field Ornithology* 88:399-404;

- doi:10.1111/jof.12233. (70% contribution Boyle lab, 100% effort KSU)
25. *Herse, M.R., M.E. Estey, P.J. Moore, B.K. Sandercock, and **W.A. Boyle**, 2017. Landscape context determines settlement patterns of an enigmatic grassland songbird. *Landscape Ecology*. doi:10.1007/s10980-017-0574-z (85% contribution Boyle lab, 100% of effort KSU)
 24. **Boyle, W.A.** Altitudinal bird migration in North America, 2017. *The Auk: Ornithological Advances* 134:443-465. doi:10.1642/AUK-16-228.1 (100% of contribution and effort KSU)
 23. **Boyle, W.A.**, B.K. Sandercock, and K. Martin, 2016. Patterns and drivers of intraspecific variation in avian life history along elevational gradients: a meta-analysis. *Biological Reviews* 91:469-482; doi:10.1111/brv.12180 (75% contribution Boyle lab; 50% effort KSU)
 22. Visco, D.M., N.L. Michel, **W.A. Boyle**, B.J. Sigel, S. Woltmann, and T.W. Sherry, 2015. Patterns and causes of understory bird declines in human-disturbed tropical forest landscapes: a case study from Central America. *Biological Conservation* 191:117-129. doi:10.1016/j.biocon.2015.05.018 (25% contribution Boyle lab, 100% effort KSU)
 21. **Boyle, W.A.** and K. Martin, 2015. The conservation value of high elevation habitats to migrant birds in southern British Columbia. *Biological Conservation* 192:461-476. doi:10.1016/j.biocon.2015.10.008 (60% contribution Boyle lab; 70% of effort KSU)
 20. Ross, J.D, J.F. Kelly, E.S. Bridge, M.H. Engle, D.L. Reinking, and **W.A. Boyle**, 2015. Pallid bands in feathers and associated stable isotope signatures reveal effects of severe weather stressors on fledgling sparrows. *PeerJ* 3:e814. doi:10.7717/peerj.814 (20% contribution Boyle lab, 100% of effort KSU)
 19. **Boyle, W.A.** and B. Sigel, 2015. Ongoing changes in the avifauna of La Selva Biological Station: twenty-three years of Christmas Bird Counts. INVITED SPECIAL ISSUE: TROPICAL UNDERSTORY INSECTIVORES, *Biological Conservation* 188:11-21; doi:10.1016/j.biocon.2015.01.004 (90% contribution Boyle lab, 100% of effort KSU)
 18. **Boyle, W.A.** and E. Waterman, 2015. The ecology of musical performance: toward a robust methodology. INVITED EDITED BOOK CHAPTER, *Current Directions in Ecomusicology*, A. S. Allen, editor, Routledge Publishers. (Cross-disciplinary study evaluating the applicability of standard methodological tools from behavioral ecology to the study of human musical communication; 50% contribution Boyle lab, 100% effort KSU).
 BOOK AWARDED THE [ELLEN KOSKOFF EDITED VOLUME PRIZE](#) FROM THE SOCIETY FOR ETHNOMUSICOLOGY
 17. *Jones, M.A., E.H. DuVal and **W.A. Boyle**, 2014. Individual and temporal variability in the courtship behavior of White-ruffed Manakins (*Corapipo altera*), a species with facultative cooperative displays. *The Auk: Ornithological Advances* **131**:727-742. doi: 10.1642/auk-14-96.1 (50% contribution Boyle lab, data collected prior to KSU, 80% of writing KSU)
 16. McGuire, L., and **Boyle, W.A.**, 2013. Altitudinal migration of bats: evidence, patterns, and processes. *Biological Reviews* 88:767-786. doi:10.1111/brv.12024 (50% contribution Boyle lab, data collected prior to KSU, 10% of writing KSU)
 15. **Boyle, W.A.**, D.W. Winkler, and C.G. Guglielmo, 2012. Rapid loss of fat but not lean mass prior to chick provisioning supports the flight efficiency hypothesis in Tree

- Swallows. *Functional Ecology* 26:895-903.
14. **Boyle, W.A.** and J.L. Bronstein, 2012. Phenology of tropical understory trees: patterns and correlates. *Revista de Biología Tropical* **60**:1415-1430
 13. **Boyle, W.A.**, 2011. Short-distance partial migration of Neotropical birds: a community-level test of the foraging limitation hypothesis. *Oikos*, 120:1803-1816. (INVITED SUBMISSION, SPECIAL ISSUE ON ECOLOGY AND EVOLUTION OF PARTIAL MIGRATION)
 12. **Boyle, W.A.**, C.G. Guglielmo, K.A. Hobson, and D.R. Norris, 2011. Lekking birds in a tropical forest forego sex for migration. *Biology Letters* **7**:661-663
 11. **Boyle, W.A.**, C.J. Conway, J.L. Bronstein, 2011. Why do some, but not all, birds migrate? A comparative study of diet breadth and fruit preference. *Evolutionary Ecology* **25**:219-236. WINNER OF THE ORGANIZATION FOR TROPICAL STUDIES ANNUAL BEST STUDENT PAPER AWARD
 10. **Boyle, W.A.**, D.R. Norris, and C.G. Guglielmo, 2010. Storms drive altitudinal migration in a tropical bird. *Proceedings of the Royal Society-B* **277**:2511-2519
 9. Sol, D., N. Garcia, A. Iwaniuk, K. Davis, A. Meade, **W.A. Boyle**, and T. Székely, 2010. Evolutionary divergence in brain size between migratory and resident birds. *PLoS One* **5**:e9617
 8. **Boyle, W.A.**, 2010. Does food abundance explain altitudinal migration in a tropical frugivorous bird? *Canadian Journal of Zoology* **88**:204-213
 7. §Lumpkin, H. and **W.A. Boyle**, 2009. Effects of forest age on fruit composition and removal in tropical bird-dispersed understory trees. *Journal of Tropical Ecology* **25**:515-522
 6. **Boyle, W.A.**, 2009. How to keep tropical montane frugivorous birds in captivity. *Ornitología Neotropical*, **20**:265-273
 5. **Boyle, W.A.**, 2008. Partial migration in birds: an evaluation of three hypotheses in a tropical lekking frugivore. *Journal of Animal Ecology*, **77**:1122-1128
 4. **Boyle, W.A.**, 2008. Can variation in risk of nest predation explain altitudinal migration in tropical birds? *Oecologia* **154**:397-403
 3. **Boyle, W.A.**, §C.N. Ganong, D.B. Clark, and §M.A. Hast, 2008. Density, distribution, and attributes of tree cavities in an old-growth tropical rain forest. *Biotropica* **40**(2):241-245
 2. **Boyle, W.A.** and C.J. Conway, 2007. Why migrate? A test of the evolutionary precursor hypothesis. *American Naturalist* **169**, 344-359
 1. Holland, J.N., J.H. Ness, **W.A. Boyle**, and J.L. Bronstein, 2005. Mutualisms as consumer-resource interactions. Pages 17-33 in P. Barbosa and I. Castellanos, editors. *Ecology of Predator-Prey Interactions*, Oxford University Press, Oxford, England

DATA PRODUCTS AND OTHER PUBLICATIONS:

16. **Boyle, W.A.** 2022-2023. Kansas motus (Project500), data accessed from Motus Wildlife Tracking System, Birds Canada. <https://motus.org/>
15. *Silber, K.M, †N.M. Mohankumar, T.J. Hefley, and **W.A. Boyle**, 2023. Data and code supplementing article: Apparent survival is associated with lagged precipitation in a grassland songbird. doi:10.5061/dryad.dv41ns22w. (100% of contribution Boyle lab; 100% KSU)
14. *Smith, E.B., §A.J. Roe, *K.M. Silber, *E.J. Williams, *S.K. Winnicki, and **W.A. Boyle**,

- Data and code supplementing article: Consequences of drought for grassland songbird reproduction. doi:10.5281/zenodo.5224970 (100% of contribution Boyle lab; 100% KSU)
13. *Winnicki, S.K.; **W.A. Boyle**, *E.J. Williams, §S.M. Munguía, 2020. Data and code deposited to Dryad supplementing the article: Social interactions do not drive territory aggregation in a grassland songbird. doi.org/10.5061/dryad.3xsj3tx9w (100% of contribution Boyle lab; 100% KSU)
 12. *Williams, E.J., and **W.A. Boyle**, 2019. Data and code supporting the article: Causes and consequences of avian dispersal decisions in a dynamic grassland environment. doi:10.5061/dryad.c0n5hm8 (100% of contribution Boyle lab; 100% KSU)
 11. *Herse, M.R., K.A. With, and **W.A. Boyle**, 2018. Data and code deposited to Dryad supplementing the article: The importance of core habitat for a threatened species in changing landscapes. doi: 10.5061/dryad.9pr1476 (100% of contribution Boyle lab; 100% KSU)
 10. *Herse, M.R., M.E. Estey, P.J. Moore, B.K. Sandercock, and **W.A. Boyle**, 2017. Data supplementing the article: Landscape context drives breeding habitat selection by an enigmatic grassland songbird. doi:10.5281/zenodo.823708 (100% contribution Boyle lab, 100% KSU)
 9. **Boyle, W.A.**, B.K. Sandercock, and K. Martin. 2015. Data from: Patterns and drivers of intraspecific variation in avian life history along elevational gradients: a meta-analysis. Dryad Digital Repository. doi:10.5061/dryad.h13vg (100% contribution Boyle lab, 100% KSU)
 8. **Boyle, W.A.** and K. Martin 2015. Data from: The conservation value of high elevation habitats to North American migrant birds. Dryad Digital Repository. doi: 10.5061/dryad.bf486 (100% contribution, 100% KSU)
 7. **Boyle, W.A.** and B. Sigel. 2015. Data deposited to Dryad from: Ongoing changes in the avifauna of La Selva Biological Station: twenty-three years of Christmas Bird Counts. doi:10.1016/j.biocon.2015.01.004 (100% contribution, 100% KSU)
 6. **Boyle, W.A.** 2014. Multi-media data: video behavioral vouchers of *Corapipo altera* displays, Cornell Lab of Ornithology's Macaulay Library, catalog #s 473506-473519. Audio behavioral vouchers of *Corapipo altera* vocalizations (with M.A. Jones). Macaulay Library, catalog #s 190863-190867 (recordings made prior to KSU, metadata, editing, and archiving 100% KSU)
 5. Altshuler, D.L., K.L. Cockle, and **W.A. Boyle**, 2013. North American ornithology in transition. Meeting Report of the 5th North American Ornithological Conference (NAOC-V). *Biology Letters*, **9**(1):20120876 (contributed 30% of article, 15% effort KSU)
 4. **Boyle, W.A.** 2013. Book review; *Cotingas and Manakins* 2012, G. Kirwan and G. Green. *Ibis*, **155**:440-441 (100% KSU)
 3. **Boyle, W.A.** 2006. Why do birds migrate? The role of food, habitat, predation, and competition. Ph.D. University of Arizona, Tucson, AZ
 2. **Boyle, W.A.**, 2003. Seed images from the Atlantic Slope of Costa Rica <http://aliceboyle.net/Seeds/SeedPhotos.html>. Public-access resource used by wide range of scientists (e.g., forensic veterinary scientists, researchers studying dispersal in fragmented tropical landscapes)
 1. **Boyle, W.A.**, and C.J. Conway, 2003. Avian diversity at the Madrona Pools. Pages 61-72

in Madrona Pools Pulse Study: A rapid environmental assessment at the Madrona Pools, Saguaro National Park”. U.S. Dept. of Interior, National Park Service, Tucson, AZ

FUNDING

EXTERNAL RESEARCH GRANTS:

Johnson, L. (PI), 3 other co-PIs and W.A. Boyle (co-PI), “GAANN: Graduate training for the 21st Century: Integrating ecology and evolution through genomics and data science”, US Department of Education (\$456,570)	2022–2025
Boyle, W.A. and W. Dodds, “Effectiveness of virtual electronic cattle fencing to address management challenges within the Flint Hills of Kansas,” The Nature Conservancy (\$434,906 plus \$15,000 supplement)	2022–2025
Boyle, W.A. ; NSF-DEB supplement to award 1754490 (\$45,038)	2022
Boyle, W.A. ; NSF-DEB “ROA Supplement proposal for award 1754491: What are the environmental causes of population variability of highly mobile animals?” (\$67,258)	2020–2022
Boyle, W.A. and T. Hefley; “What are the environmental causes of population variability of highly mobile animals?” NSF-DEB (\$542,060)	2018–2023
Boyle, W.A. ; “EAGER: Climatic drivers of demography and reproductive behavior of tropical birds” NSF-DEB (\$200,000)	2016–2018
Johnson, L. (PI), 2 other co-PIs and W.A. Boyle (co-PI), “GAANN: Integrative Graduate Training for New Frontiers in Ecology, Evolution, and Genomics”, Department of Education (\$256,327)	2016–2019
Boyle, W.A. ; “Consequences of climate variability for prairie birds.” NSF EPSCoR First Award (\$77,712)	2016
Loiselle, B.A., Balakrishnan, C.N., W.A. Boyle , M. Braun, and E.H. DuVal; Research Coordination Network (RCN) grant “Enabling comparative studies of the process and products of sexual selection in a genomic context” NSF-DEB (\$499,901 total; \$31,136 to KSU)	2015–2022
Boyle, W.A. ; “Development of spatially-explicit models and decision support tools for Henslow’s Sparrows and other priority birds in the Flint Hills” US Fish and Wildlife Service, (\$129K)	2015–2017
Academic Keys Future Faculty Grant (\$1000)	2012
National Geographic Society’s Committee for Research and Exploration Grant (PI; \$18,500)	2008–2009
NSF–Doctoral Dissertation Improvement Grant (\$12,000)	2004–2005
The Explorers Club Research Grant (\$1,200)	2001
Tinker Foundation/Latin American Studies Research Grant (\$650)	2001

OTHER EXTERNAL FUNDING:

Private fundraising to support regional automated telemetry network and animal movement research (www.kansasmotus.org) (\$130,000 Total;	2022-2023
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\$92,000 to K-State)
 Anonymous grant made through the American Ornithological Society 2021
 (\$5000)

PENDING:

Boyle, W.A. and A.R. Gerson; NSF “Collaborative Research: Testing the
 hygric niche: physiological and behavioral mechanisms mediating
 rainfall responses in a tropical endotherm,” Proposal 2310235, re-
 submitted July 2023 (\$1,492,965 Total; \$811,047 to K-State)

INTERNAL GRANTS:

Boyle, W.A.; K-State BRIEF program conference travel support (\$1714) 2022
Boyle, W.A.; K-State BRIEF program conference travel support (\$1400) 2019
Boyle, W.A.; K-State BRIEF program conference travel support (\$2000) 2017
Boyle, W.A.; K-State ADVANCE distinguished lecture series (\$1400) 2017
Boyle, W.A.; Dispersal and Migratory Connectivity of a Declining 2015–2016
 Grassland Songbird", Kansas State University USRG fund (\$5331)
Boyle, W.A.; Kansas State ADVANCE distinguished lecture series award 2014
 (\$1200)
Boyle, W.A.; Kansas State ADVANCE distinguished lecture series awardee 2014
 (\$1200)
Boyle, W.A.; Kansas State Mentoring Fellowship Award (\$6,000) 2013
Boyle, W.A.; K-State BRIEF program conference travel support (\$1800) 2013
Boyle, W.A.; K-State International Incentives Grant (\$1530) 2013
 Silliman Memorial Research Award (five separate awards totaling \$5,850) 2001–2005
 Department of Ecology and Evolutionary Biology Research Award (six 2001–2006
 separate awards totaling \$4,650)
 Center for Insect Science Research Award (\$2,000) 2004
 American Ornithologists’ Union Alexander Wetmore Memorial Research 2002
 Award (\$1,800)
 University of Arizona Research Training Grant Research Grant (\$1000) 2001

FELLOWSHIPS AND OTHER AWARDS:

NEScent Catalysis Meeting "Genome-enabled Research on Manakins", 2013
 (co-PI; ~\$30,000 for 25 participants)
 NSERC Post-doctoral Fellowship (two years; \$80,000) 2009–2011
 Helen Battle Postdoctoral Fellowship, University of Western Ontario 2007–2009
 (two years; \$70,000)
 Organization for Tropical Studies–REU Program Mentor Fellowship 2005 & 2007
 (two summers; \$1600)
 American Ornithologists’ Union Tucker Award (conference travel; \$250) 2005
 Women in Science and Engineering (conference travel; \$600) 2006

Department of Ecology and Evolutionary Biology (scholarships and waivers over six years; \$79,575)	2000–2006
NSERC Post Graduate Fellowship (two years; \$38,200)	2002–2003
University of Arizona Research Training Grant Graduate Fellowship (one year; \$12,105)	2001–2002
University of Arizona Graduate College Fellowship (one year; \$23,100)	2000–2001
Maurice Taylor Scholarship in Music, Hawk Eilertson Scholarship in Music, John S. Chappell Memorial Scholarship in Music, British Columbia Government Challenge Grant	1987–1989

SEMINARS AND PRESENTATIONS

(underlining denotes presenter, bold font denotes Boyle lab member, *denotes graduate student, §denotes undergraduate student, †denotes other students that I mentored)

EXTERNAL RESEARCH SEMINARS:

<i>Upcoming</i> : <u>Boyle, W.A.</u> , TBD, GRADUATE-STUDENT INVITED SPEAKER, DR. DAVE OTIS SPEAKER SERIES, Department of Fish, Wildlife, and Conservation Biology, Colorado State University, Ft. Collins, CO	9 Feb 2024
<u>Boyle, W.A.</u> , “Direct and indirect effects of rain on grassland songbirds”, School of Biological Sciences, University of Oklahoma, Norman, OK	27 Oct 2023
<u>Boyle, W.A.</u> , “Avian conservation challenges and solutions in the Tallgrass Prairie,” Department of Wildlife, California State Polytechnic University, Humboldt, Humboldt, CA	27 Oct 2022 (virtual)
<u>Boyle, W.A.</u> , “Rain and the art of disappearing: population biology of tallgrass prairie bird birds,” Pittsburg State University, Pittsburg, KS	30 Sep 2022
<u>Boyle, W.A.</u> , “Rain, movement, and changing perspectives on tropical and grassland birds,” Department of Forest and Wildlife Biology, University of Wisconsin, Madison, WI	29 Oct 2021 (virtual)
<u>Boyle, W.A.</u> , “Dancing in the rain: how precipitation can shape the evolutionary ecology of tropical birds”, Department of Biology, University of Missouri St. Louis, St. Louis, MO	23 Sep 2020 (virtual)
<u>Boyle, W.A.</u> , “More than meets the eye: high-speed video reveals aerobatic display and the mechanisms of sound production in <i>Corapipo altera</i> ”, Department of Ecology and Evolutionary Biology, Texas A & M University, College Station, TX	21 Sep 2020 (virtual)
<u>Boyle, W.A.</u> , “Dancing in the rain: how precipitation can shape the evolutionary ecology of tropical birds”, GRADUATE-STUDENT INVITED COLLOQUIUM SPEAKER, Department of Biological Science, Florida State University, Tallahassee, FL	16 Jan 2020
<u>Boyle, W.A.</u> , “Grassland birds and rural landowners: lessons learned from engaging through music”, Ecology and Evolution series, Department of Biological Science, Florida State University, Tallahassee, FL	17 Jan 2020
<u>Boyle, W.A.</u> , “From dance moves to dispersal: rainfall and the ecology of tropical and grassland birds.” Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ	12 Nov 2019

- ***Shogren, E.H. and W.A. Boyle** “Population genetics and genomics of *Corapipo altera*, the White-ruffed Manakin” Manakin Genomics Research Coordination Network meeting, Paraná, Brazil 4 Oct 2019
- Boyle, W.A.** “From dance moves to dispersal: rainfall and the ecology of tropical & grassland birds.” GRADUATE-STUDENT INVITED SEMINAR SPEAKER, Odum School of Ecology, University of Georgia 26 Feb 2019
- Boyle, W.A.** “Population biology of tallgrass prairie bird birds: from dispersal to drought.” GRADUATE-STUDENT INVITED SEMINAR SPEAKER, Department of Natural Resources and Environmental Sciences, University of Illinois Urbana-Champaign, Urbana, IL 18 Jan 2019
- ***Shogren, E.H. and W.A. Boyle.** “Investigación de *Corapipo altera* en Parque Nacional Volcán Tenorio.” Sistema Nacional de Áreas de Conservación, El Pilon, Costa Rica 20 Jun 2018
- ***Shogren, E.H. and W.A. Boyle.** “Dancing in the rain: selective drivers of variability in a Neotropical manakin.” Benedictine College Biology Colloquium, Atchison, KS 9 Nov 2017
- ***Shogren, E.H. and W.A. Boyle.** “Investigación de *Corapipo altera* en Parque Nacional Volcán Tenorio.” Sistema Nacional de Áreas de Conservación, El Pilon, Costa Rica 16 Jun 2017
- ***Herse, M.R., M.E. Estey, P.J. Moore, B.K. Sandercock, and W.A. Boyle.** “Patterns and drivers of habitat selection by Henslow’s Sparrows: a landscape perspective.” Landscape Conservation Cooperative Network Webinar Series, recorded live, available: https://www.youtube.com/watch?v=_QJTbdrO6IM&t=53s 29 Mar 2017
- Boyle, W.A.** “Consequences of rain for rainforest birds” Department of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL 27 Feb 2017
- Boyle, W.A.** “Causes and consequences of animal movement: case studies of tropical forest and temperate grassland birds” Wichita State University, Wichita, KS 6 Feb 2017
- Boyle, W.A.** “Consequences of rain for rainforest birds” Texas Tech University, Lubbock, TX 26 Oct 2016
- Boyle, W.A.** “Consequences of rain for rainforest birds” Department of Biology, University of Nebraska Omaha, Omaha, NE 24 Feb 2016
- Boyle, W.A.** “Consequences of rain for rainforest birds” Department of Biological Sciences, Auburn University, Auburn, AL 19 Nov 2015
- Boyle, W.A.** “Evolución de la migración: sistemas migratorios latitudinales y altitudinales en regiones tropicales y templadas” WORKSHOP: *Técnicas de Investigación en Ecología de Aves*, Universidad Austral de Chile, Valdivia, Chile 6 Oct 2015
- Boyle, W.A.** “Patterns and causes of grassland bird dispersal movements over multiple spatial and temporal scales” Washington College, Chestertown, CT 16 Jun 2015
- Boyle, W.A.** “Causes and consequences of animal movement: case studies of 25 Mar 2015

- tropical forest birds and temperate grassland birds” Department of Biology, Emporia State University, Emporia, KS
- Boyle, W.A.** “Causes and consequences of animal movement: case studies of tropical forest birds and temperate grassland birds” Organismal Biology and Ecology, University of Montana, Missoula, MT 18 Mar 2014
- Boyle, W.A.** “Consequences of rain for rainforest birds” Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT 11 Apr 2014
- Boyle, W.A.** “Consequences of rain for rainforest birds” Program in Ecology, Evolution, and Conservation Biology, University of Illinois, Champaign, IL 26 Feb 2014
- Boyle, W.A.** “Consequences of rain for rainforest birds: migration, life history, and conservation” Biology Department, University of New Mexico. Albuquerque, NM 6 Dec 2013
- Boyle, W.A.** “Altitudinal migration mediates life history trade-offs in tropical birds” Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS 3 Sep 2013
- Boyle, W.A.** “Altitudinal migration mediates life history trade-offs in tropical birds” Department of Ecology and Evolutionary Biology, Tulane University, New Orleans, LA 1 Feb 2013
- Boyle, W.A.** “Altitudinal migration mediates life history trade-offs in tropical birds” Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS 30 Nov 2012
- Canadian Wildlife Service, Delta, BC 21 Feb 2012
- Department of Biology, Kansas State University, Manhattan, KS 13 Feb 2012
- Department of Biological Sciences, Simon Fraser University, Vancouver, BC 2 Feb 2012
- Department of Forest Sci., University of British Columbia, Vancouver, BC 18 Jan 2012
- Department of Biology, East Carolina University, Greenville, NC 30 Nov 2011
- Biodiversity Research Centre, University of British Columbia, Vancouver, BC 21 Nov 2011
- Department of Zoology and Physiology, University of Wyoming, Laramie, WY 13 Oct 2011
- Department of Biological Sciences, Old Dominion University, Norfolk, VA 21 Mar 2011
- Department of Biology, Texas State University, San Marcos, TX 17 Feb 2011
- Department of Biology, University of St. Thomas, St. Paul, MN 2 Dec 2010
- School of Natural Resources and the Environment, University of Arizona, Tucson, AZ 19 Nov 2010
- Department of Biological Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA (GRADUATE STUDENT NOMINATED SPEAKER) 21 Oct 2010
- Cornell University, Lab of Ornithology, Ithaca, NY 5 Oct 2010
- Cornell University, Department of EEB, Ithaca, NY 6 Oct 2010
- Department of Biology, Carleton University, Ottawa, ON 29 Jan 2010
- Department of Biology, University of Western Ontario, London, ON 2010 &

- 2008
- La Selva Biological Station, Costa Rica 2008, 2007
- Spanish-language presentation to Costa Rican National Parks personnel,
conservationists, and land managers. San José, Costa Rica 15 Nov 2004
- Center for Latin American Studies, University of Arizona, Tucson, AZ 10 Nov 2001
- INTERNAL RESEARCH SEMINARS:**
- Boyle, W.A.**, J. Taylor, E. Welti, A. Hope “Konza consumers: An overview
of Konza VIII animal research” Konza Prairie LTER NSF Site Review,
Manhattan KS (oral) 31 May 2023
- Boyle, W.A.**, N.E. Freeman, K.M. Silber and T.J. Hefley “Direct and
indirect effects of rain on grassland songbirds” Konza Prairie LTER NSF
Site Review, Manhattan KS (oral) 1 Jun 2023
- Silber, K.**, and W.A. Boyle “Under the weather: mechanisms underlying
avian response to precipitation” Division of Biology Graduate Research
Forum, Manhattan, KS (oral) 17 Apr 2023
- Silber, K.M.**, T.J. Hefley, H. Castro-Miller, Z. Ratajczak and W.A. Boyle.
“The long shadow of woody encroachment: an integrated approach to
modeling grassland songbird habitat” Konza Prairie Long-Term
Ecological Research Site Annual Meeting, Manhattan KS (oral) 20 Jan 2023
- Hobbs, K.S.** and W.A. Boyle “Factors affecting intraspecific variation in
altitudinal bird migration”. Animal Behavior Society Twitter Conference
(online; twitter) 18 Jan 2023
- Hobbs, K.S.** and W.A. Boyle “Age Drives Altitudinal Migration in White-
Ruffed Manakins”. Division of Biology, Kansas State University,
Manhattan KS (oral) 20 Oct 2022
- Boyle, W.A.** “Time for a paradigm shift at Konza?” Konza Prairie LTER
meeting, Manhattan, KS (oral) 30 May 2022
- Silber, K.M.** and W.A. Boyle. “A bird’s eye view: does Konza provide
suitable breeding habitat for declining grassland songbirds?” Konza
Prairie Long-term Ecological Research Site Annual Meeting, Manhattan
KS (oral) 4 Sep 2021
- Hobbs, K.S.** and W.A. Boyle “Drivers of altitudinal migration in White-
ruffed manakins”. Division of Biology, Kansas State University,
Manhattan KS (oral) 11 Nov 2021
- §Nguyen, L., W.A. Boyle, *E.H. Shogren, §N. Bergevine, and L.B. Day 13 Apr 2020
“Novel Understanding of avian biomechanics and sonations using high-
speed video of the White-ruffed Manakin (*Corapipo altera altera*).”
Neuroscience Research Showcase, University of Mississippi, Oxford MS
(oral; virtual)
- ***Smith, D.J.**, §A.J. Roe, *S.K. Winnicki, *E.J. Williams, A.G. Hope, and 31 May 2019
W.A. Boyle. “Consequences of severe drought on grassland songbird
reproduction.” Konza Prairie LTER meeting, Manhattan, KS (poster)
- Boyle, W.A.** “From dispersal to dance moves: rainfall and the ecology of 31 Aug 2018

- grassland & tropical birds.” Division of Biology, Kansas State University. Manhattan KS (oral)
- ***Winnicki, S.K.** and **W.A. Boyle**. “Effects of brood parasitism on nestling growth and development.” ONE OF FOUR GRADUATE STUDENTS FROM THE DIVISION OF BIOLOGY INVITED TO PRESENT during the 50th Anniversary of the founding of the Division of Biology at Kansas State University, Manhattan KS (oral) Apr 2018
- ***Winnicki, S.K.** “Effects of brood parasitism on nestling growth and development.” Kansas State University Three-Minute Thesis Competition, Manhattan KS (oral) 13 Feb 2018
- Boyle, W.A.** “Avian research at Konza: long-term data and recent initiatives.” Presentation to the LTER site review committee and LTER participants, Konza Prairie Biological Station, Manhattan KS (oral) 7 Sep 2017
- ***Herse, M.R.** and **W.A. Boyle**. “Core versus total habitat area for a declining grassland songbird: bigger is not always better” Division of Biology Graduate Student BioForum, Kansas State University, Manhattan KS (oral) 4 Mar 2017
- ***Herse, M.R.** and **W.A. Boyle**. “Relative effects of habitat amount and fragmentation on occupancy dynamics of a rare and highly mobile grassland bird.” Division of Biology Graduate Student BioForum, Kansas State University, Manhattan KS (oral) 5 Mar 2016
- ***Williams E.J.** and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season breeding dispersal in a declining grassland songbird?” Division of Biology Graduate Student BioForum, Kansas State University, Manhattan KS (BEST STUDENT PRESENTATION AWARD) 7 Mar 2015
- ***Williams E.J.** and **W.A. Boyle**. “Does food abundance affect within-season breeding dispersal of male Grasshopper Sparrows?” Division of Biology Graduate Student BioForum, Kansas State University, Manhattan KS (oral) 1 Mar 2014
- Boyle, W.A.** “Ongoing change in the avifauna of La Selva Biological Station” Division of Biology EEB seminars, Kansas State University, Manhattan KS 12 Sep 2013
- INVITED ORAL CONFERENCE PRESENTATIONS**
- ***Silber, K.M.** and **W. A. Boyle**. “Precipitation timing, elevation, and life history traits mediate relationships between precipitation and avian reproductive success: A global meta-analysis.” European Ornithological Conference, Lund, Sweden. 23 Aug 2023
- ***Silber, K.M.**, **W.K. Dodds**, **C.R. Mushrush**, **A.P. Capizzo**, and **W.A. Boyle**. “Virtual fences: a win-win for ranchers and conservation in the Flint Hills?” Oral presentation for symposium entitled “Virtual Fence Technology: Challenges and opportunities for implementing virtual fence across public, private, and research sectors” Society for Range Management Annual Meeting, Boise ID 14 Feb 2023

- ***Silber, K.M.**, A.M. Louthan, **N.E. Freeman**, T.J. Hefley, and **W.A. Boyle**, 30 Jun 2022
 “Rainfall mediates population dynamics in a mobile grassland songbird.”
 Invited symposium presentation at the joint meeting of the American
 Ornithological Society and Birds Caribbean, San Juan, PR. HONORABLE
 MENTION IN BEST STUDENT PRESENTATION AWARD COMPETITION
- ***Freeman, N.E.**, T.J. Hefley, and **W.A. Boyle**. “Severe storms are a source of 30 Jun 2022
 nest failure in a ground-nesting grassland songbird.” Invited symposium
 presentation at the joint meeting of the American Ornithological Society
 and Birds Caribbean, San Juan PR
- ***Shogren, E.H.** and **W.A. Boyle**. “Surviving to dance in the rain: 30 Jun 2022
 environmental drivers of demography and display in Neotropical birds.”
 Invited symposium presentation at the joint meeting of the American
 Ornithological Society and Birds Caribbean, San Juan PR
- Boyle, W.A.**, **K.M. Silber**, and **N.E. Freeman**. “How and why rain matters to 30 Jun 2022
 birds.” Invited symposium presentation at the joint meeting of the
 American Ornithological Society and Birds Caribbean, San Juan PR
- Boyle, W.A.** PLENARY ADDRESS: “Why didn’t I think of this before? Rain, 11 Aug 2021
 movement, and changing perspectives on tropical and grassland birds”.,
 Joint meeting of the American Ornithological Society and the Society of
 Canadian Ornithologists/Société des Ornithologistes du Canada (SCO-
 SOC; virtual)
- ***Shogren, E.H.** and **W.A. Boyle**. “Dancing in the rain: environmental drivers 7 Jan 2021
 of behavioral and social variability in White-ruffed Manakin courtship
 displays.” Society for Integrative and Comparative Biology (virtual)
- Boyle, W.A.**, D. Bodony, ***E.H. Shogren**, §L. Nguyen, and E. Day. “More 13 Aug 2020
 than meets the eye: high-speed video reveals aerobatic display and the
 mechanisms of sound production in *Corapipo altera*”. North American
 Ornithological Congress (virtual)
- ***Shogren, E.H.** and **W.A. Boyle**. “Detecting genomic signatures of natural 13 Aug 2020
 selection in a sexually selected species.” North American Ornithological
 Congress (virtual) HONORABLE MENTION, OUTSTANDING STUDENT
 PRESENTATION AWARDS
- DuVal, E.**, **W.A. Boyle**, ***E.H. Shogren**, and 35 other authors. “Does 13 Aug 2020
 variation in “sexually selected” traits reflect current opportunity for sexual
 selection across species?” North American Ornithological Congress
 (virtual)
- Balakrishnan, C.**, **W.A. Boyle**, ***E.H. Shogren**, and 35 other authors. 13 Aug 2020
 “Comparative genomics of a sexually selected avian family.” North
 American Ornithological Congress (virtual)
- Boyle, W.A.**, PLENARY “Grasslands Roadmap 2020: a perspective on 4 Aug 2020
 research”. 2020 Central Grasslands Roadmap Summit (virtual;
www.grasslandsroadmap.org/). View presentation:
<https://www.youtube.com/watch?v=pqyVJ1ZnDR4>
- Martin, K.**, T. Altamirano, *D. de Zwaan, *T. Ibarra, and **W.A. Boyle**. “The 25 Aug 2018
 conservation value of mountain habitats for birds in the Americas and

- predicted impacts of climate change”. International Ornithological Congress, Vancouver, Canada
- Boyle, W.A.**, “Movement ecology of grassland sparrows and why it matters for conservation”. American Ornithological Society, Tucson, AZ 12 Apr 2018
- Boyle, W.A.**, “Why rain matters: how weather affects the ecology and conservation of tropical birds”. PLENARY SPEAKER, 21st Congress of the Mesoamerican Society of Biology and Conservation (SMBC) and 6th International Meeting of Partners in Flight (PIF), San José, Costa Rica 1 Nov 2017
- Boyle, W.A.** “Dancing in the rain: how eating fruit and the weather affect life, death, and sex for tropical manakins”. KEYNOTE SPEAKER, Kansas Ornithological Society, Junction City, KS 7 Oct 2017
- Boyle, W.A.** “Evaluating hypotheses for animal movement strategies”. Gordon Research Conference on Movement Ecology of Animals. Ventura, CA 22 Mar 2017
- Boyle, W.A.** “The current and future of tropical frugivores in a changing climate: insights and challenges”. North American Ornithological Conference, Washington, DC 20 Aug 2016
- Boyle, W.A.** and B.K. Sandercock. “Climatic drivers of tropical avian demography in very wet environments: a case history from Central American White-ruffed Manakins (*Corapipo altera*)”. North American Ornithological Conference, Washington, DC 18 Aug 2016
- Boyle, W.A.** “*Corapipo* manakins”. Second meeting of the Manakin Genomics RCN, Annapolis, MD 14 Aug 2016
- ***Aulicky, C.** and **W.A. Boyle** “*Lepidothrix* manakins”. Second meeting of the Manakin Genomics RCN, Annapolis, MD 14 Aug 2016
- Boyle, W.A.**, M. Estey, and ***M.R. Herse.** “Development of spatially explicit models and decision support tools for Henslow’s Sparrows and other priority birds in the Flint Hills”. Eastern Tallgrass and Big Rivers Landscape Conservation Cooperative meeting, Manhattan, KS 15 July 2015
- Boyle, W.A.** “Altitudinal migration in the Americas”. American Ornithologists’ Union / Cooper Ornithological Society, Estes Park, CO 24 Sep 2014
- Boyle, W.A.**, B.K. Sandercock, and K. Martin. “Vertebrate life history variation along elevational gradients: a global meta-analysis”. The Wildlife Society meeting, Portland, OR 16 Oct 2012
- CANMove Ecology and Evolution of Partial Migration in Animals symposium, Lund University, Sweden 31 Aug 2010
- American Ornithologists’ Union, Philadelphia, PA 15 Aug 2009
- NCCR International Conference on Plant Species Concepts and Evolution, University of Neuchâtel, Switzerland 1 Feb 2008

CONTRIBUTED CONFERENCE PRESENTATIONS

- Silber, K.**, A., H.M. Castro-Miller, Z. Ratajczak, T.J. Hefley, and **W.A. Boyle**. “The long shadow of woody encroachment: a multi-tiered approach to modeling grassland songbird habitat.” Kansas Natural Resources Conference, Manhattan, KS (oral) BEST STUDENT PRESENTATION AWARD 10 Feb 2023
- Silber, K.**, W.K. Dodds, C.R. Mushrush, A.P. Capizzo, and **W.A. Boyle**. “Virtual fences: a win-win for ranchers and conservation in the Flint Hills?” Kansas Natural Resources Conference, Manhattan, KS (poster) 9 Feb 2023
- Boyle, W.A.**, W.E. Jensen, A.D. George, “Kansas Motus: a new tool to study animal movements in Kansas.” Kansas Natural Resources Conference, Manhattan, KS (poster) 9 Feb 2023
- Silber, K.**, A.M. Louthan, A., N.E. Freeman, T.J. Hefley, and **W.A. Boyle**. “Rainfall mediates population dynamics in a mobile grassland songbird.” Kansas Ornithological Society Conference, Atchison, KS 1 Oct 2022
- Boyle, W.A.**, **W.E. Jensen**, A.D. George, “Developing a local Motus network to study grassland bird movements.” Kansas Ornithological Society Conference, Atchison, KS (oral) 1 Oct 2022
- §Reynaldo, M.R.**, W. Schelsky, N. Antonson, M. Hauber, and **W.A. Boyle**. “Evidence of high rates of conspecific brood parasitism in Eastern Meadowlarks.” Joint meeting of the American Ornithological Society-Birds Caribbean, San Juan, Puerto Rico (oral) 29 Jun 2022
- Boyle, W.A.** and T. VerCauterern, “The Central Grasslands Roadmap: what it is and why we need your involvement.” Kansas Natural Resources Conference, Manhattan KS (oral) 4 Feb 2022
- §Sroor, E.N.**, **W.A. Boyle**, ***K. Hobbs**, **§M.R. Reynaldo**, **§H. Castro-Miller**, ***N.M. Mohankumar**, ***K.M. Silber**, and **N. Freeman**, “What drives female investment in egg and clutch size in Grasshopper Sparrows.” Kansas Natural Resources Conference, Manhattan KS (oral) 4 Feb 2022
- *Silber, K.M.**, A. Louthan, **N.E. Freeman**, T.J. Hefley, and **W.A. Boyle**, “Population growth is sensitive to adult apparent survival in a mobile grassland songbird.” Kansas Natural Resources Conference, Manhattan KS (oral) 4 Feb 2022
- Freeman, N.E.**, T.J. Hefley, and **W.A. Boyle**, “Riding out the storm: anticipatory and reactive shifts in body composition to extreme weather.” Society for Integrative and Comparative Biology Meeting, virtual (oral) 8 Jan 2022
- *Smith, D.J.**, ***K.M. Silber**, ***E.J. Williams**, ***S.K. Winnicki**, P.E. Klug, K.L. Kosciuch, W.E. Jensen, J.W. Rivers, B.F. Sousa, B.K. Sandercock, and **W.A. Boyle**, “Local grassland bird declines were not explained by long-term changes in reproductive output.” Joint meeting of the American Ornithological Society and the Society of Canadian Ornithologists (virtual; oral) 13 Aug 2021

- ***Silber, K.M.**, T.J. Hefley, **W.A. Boyle**, “An integrated resource selection model to predict avian habitat use from grassland vegetation structure.” 10 Aug 2021
Joint meeting of the American Ornithological Society and the Society of Canadian Ornithologists (virtual; oral)
- ***Silber, K.M.**, T.J. Hefley, **W.A. Boyle**, “An integrated resource selection model to predict avian habitat use from grassland vegetation structure.” Aug 2021
Ecological Society of America (virtual; poster)
- ***Shogren, E.H.** and **W.A. Boyle**. “Spread the word: male manakins advertise the presence of display sites with neighboring competitors” 4 Aug 2021
Animal Behavior Society (virtual; oral)
- ***Mohankumar, M.M.**, **W.A. Boyle**, and T. Hefley, “Data fusion of distance sampling and spatial capture-recapture data”. Aug 2021
Joint Statistical Meetings
- ***Shogren, E.H.** and **W.A. Boyle**. “Detecting genomic signatures of constraints on sexual selection mediated by natural selection.” 23 Jun 2021
Evolution 2021 (virtual; oral)
- Panjabi, A.**, T. VertCauteren, **W.A. Boyle** ...[and 24 other coauthors]. 17 May 2021
“Central Grasslands Roadmap”. Trilateral Committee for Wildlife and Ecosystem Conservation and Management 2021 meeting (virtual)
- Boyle, W.A.**, D. Bodony, **E.H. Shogren**, §L. Nguyen, and E. Day. “More than meets the eye: high-speed video reveals aerobatic display and the mechanisms of sound production in *Corapipo altera*”. 2 Jan 2021
Society for Integrative and Comparative Biology (virtual)
- Silber, K.M.**, N.M. Mohankumar, T.J. Hefley, and **W.A. Boyle**. “Apparent survival is correlated with lagged precipitation in a mobile grassland songbird.” 28 Sep 2020
Kansas Ornithological Society Conference (virtual; oral)
- ***Smith, D.J.**, T.J. Hefley, and **W.A. Boyle**. “Climatic variability explains interannual variation in breeding distributions of Grasshopper Sparrows.” 12 Aug 2020
North American Ornithological Congress (virtual; poster)
- ***Mohankumar, N.M.**, T.J. Hefley, **K.M. Silber**, and **W.A. Boyle**. “An integrated population model for spatial capture-recapture and distance sampling data” 11 Aug 2020
North American Ornithological Congress (virtual; oral)
- ***Driver, R.** **W.A. Boyle**, M. Fuxjager, B. Schlinger W. Warren, T. B. Ryder, B. Jones, B. Loiselle, M. Braun, R. Dikow, P. Frandsen, A. Zimin, C. Balakrishnan. “Olfactory gene evolution during the evolution of frugivory in manakins.” July 2020
Society for Molecular Biology and Evolution, Quebec City, Canada (oral)
- §**Nguyen, L.** **W.A. Boyle**, E.B. Day. “Novel understanding of avian biomechanics and sonations using high-speed video of White-ruffed Manakins (*Corapipo altera*).” Apr 2020
Mississippi Academy of Sciences, Biloxi, MS (poster)
- ***Silber, K.**, *N.M. Mohankumar, T.J. Hefley, **W.A. Boyle**. “How does precipitation influence apparent survival in Grasshopper Sparrows?” 30 Jan 2020
Kansas Natural Resources conference, Manhattan, KS (poster)

- *Kraus, H. M., W.E. Jensen, M.L. Jameson, **W.A. Boyle**, G.R. Houseman, and M.M. Reichenborn. “Nestling condition of a grassland bird not associated with food availability in restored grasslands of the Great Plains.” Ecological Society of America, Louisville, KY (oral) Aug 2019
- Hefley, T.J., **W.A. Boyle**, *M. Narmadha. “Accounting for location uncertainty in model-based distance sampling methods.” Joint Statistical Meetings, Denver, CO (oral) Jul 2019
- *Shogren, E.H. and **W.A. Boyle**. “Dancing drives evolution of sexual size dimorphism in manakins”. Behavior, Chicago, IL (oral) Jul 2019
- *Winnicki, S.K. and **W.A. Boyle**. “Direct effects of Brown-headed Cowbird (*Molothrus ater*) brood parasitism on the growth and development of grassland songbirds.” American Ornithological Society, Anchorage, AK (oral) Jun 2019
- *Smith, D. J., §**A.J. Roe**, ***S.K. Winnicki**, ***E.J. Williams**, A. G. Hope, and **W.A. Boyle**. “Consequences of severe drought on grassland songbird reproduction” American Ornithological Society, Anchorage, AK (poster) Jun 2019
- *Shogren, E.H. and **W.A. Boyle**. “Dancing drives evolution of sexual size dimorphism in manakins”. Evolution, Providence, RI (oral) Jun 2019
- *Winnicki, S.K. and **W.A. Boyle**. “Indirect effects of Brown-headed Cowbird (*Molothrus ater*) brood parasitism on the growth and development of grassland songbirds.” Southwestern Association of Naturalists, Chihuahua, Mexico (oral) Apr 2019
- *Winnicki, S.K. and W.A. Boyle. “Direct effects of Brown-headed Cowbird (*Molothrus ater*) brood parasitism on the growth and development of grassland songbirds” Kansas Natural Resources Conference, Manhattan, KS (oral) 31 Jan 2019
- §Smith, D.J. and **W.A. Boyle**. “Effects of drought on grassland songbirds: reproductive responses and trophic drivers.” Kansas Natural Resources Conference, Manhattan, KS (oral) 31 Jan 2019
- *Winnicki, S.K. and **W.A. Boyle**. “Direct effects of Brown-headed Cowbird (*Molothrus ater*) brood parasitism on the growth and development of grassland songbirds.” Kansas Ornithological Society, Lawrence, KS (oral) BEST MASTERS STUDENT PRESENTATION AWARD 6 Oct 2018
- §Smith, D.J. and **W.A. Boyle**. “Patterns and trophic drivers of reproductive responses to drought in grassland songbirds.” Kansas Ornithological Society, Lawrence, KS. (oral) 6 Oct 2018
- *Winnicki, S.K. and **W.A. Boyle**. “Direct and indirect effects of Brown-headed Cowbird (*Molothrus ater*) brood parasitism on growth and development of grassland songbirds.” International Ornithological Congress, Vancouver, Canada. (poster) 22 Aug 2018
- *Shogren, E.H. and **W.A. Boyle**. “Natural or sexual selection? Sexual size dimorphism in manakins.” International Ornithological Congress, Vancouver, Canada (oral) 21 Aug 2018

- ***Winnicki, S.K.** and **W.A. Boyle**. “The effects of Brown-headed Cowbird brood parasitism on the growth and development of grassland songbirds.” American Ornithological Society, Tucson, AZ (oral) 12 Apr 2018
- ***Winnicki, S.K.** and **W.A. Boyle**. “The effects of Brown-headed Cowbird brood parasitism on the growth and development of grassland songbirds.” Kansas Natural Resources Conference, Manhattan, KS (oral) 9 Feb 2018
- ***Winnicki, S.K.**, §**E.T. Harris**, §**B. Rosado-Ramos**, §**D.C. Savage**, and **W.A. Boyle**. “The role of brood parasitism in shaping nestling growth and development strategies: preliminary results.” Annual Meeting of the Kansas Ornithological Society, Junction City, KS (oral) 7 Oct 2017
- Boyle, W.A.** “Isotopic evidence of long-distance breeding dispersal in a migratory grassland bird” Ecological Society of America, Portland, OR (oral) 10 Aug 2017
- ***Shogren, E.H.** and **W.A. Boyle**. “How does precipitation affect survival across Neotropical bird communities?” American Ornithological Society, East Lansing, MI (poster) 3 Aug 2017
- ***Winnicki, S.K.** and **W.A. Boyle**. “Complex drivers of Grasshopper Sparrow (*Ammodramus savannarum*) nest success” American Ornithological Society, East Lansing, MI (poster) 3 Aug 2017
- ***Herse, M.R.**, K.A. With and **W.A. Boyle**. “Core versus total habitat area for a declining grassland songbird: bigger is not always better (oral). Meeting of the U.S.-International Association of Landscape Ecology, Baltimore, MD. (oral; BEST GRADUATE STUDENT PRESENTATION AWARD) 10 Apr 2017
- §**Gustafson, M.L.** and **W.A. Boyle**. “Weathering the storm: how grassland birds in Kansas anticipate and respond to weather extremes” Kansas Natural Resources Conference, Wichita, KS (poster) 27 Jan 2017
- ***Winnicki, S.K.** and **W.A. Boyle**. “Complex drivers of Grasshopper Sparrow (*Ammodramus savannarum*) nest success.” Kansas Natural Resources Conference, Wichita, KS (poster) 26 Jan 2017
- ***Herse, M.R.**, M.E. Estey, P.J. Moore, and **W.A. Boyle**. “Landscape context and local disturbance drive within-season site occupancy dynamics of Henslow’s Sparrows in Kansas.” Annual Meeting of the Kansas Ornithological Society, Garden City, KS (oral) 1 Oct 2016
- §**Winnicki, S.K.** and **W.A. Boyle**. “Causes of Grasshopper Sparrow (*Ammodramus savannarum*) density variation: parasitism, cooperative care, and extra-pair paternity.” Kansas Ornithological Society, Garden City, KS. 1 Oct 2016 (oral; BEST UNDERGRADUATE STUDENT PRESENTATION AWARD) 1 Oct 2016
- ***Herse, M.R.**, M. Estey, and **W.A. Boyle**. “What drives breeding habitat selection behavior in a rare and highly mobile grassland bird? A multi-scale landscape perspective”. North American Ornithological Conference, Washington, DC (oral) 18 Aug 2016

- ***Williams E.J.** and **W.A. Boyle**. “Grasshopper Sparrows on the move: patterns and causes of within-season breeding dispersal in a declining grassland songbird”. North American Ornithological Conference, Washington, DC (oral) 20 Aug 2016
- §**Winnicki, S.K.** and **W.A. Boyle**. “Causes of Grasshopper Sparrow (*Ammodramus savannarum*) density variation: parasitism, cooperative care, and extra-pair paternity”, North American Ornithological Conference, Washington, DC (oral) 20 Aug 2016
- ***Herse, M.R.**, M. Estey, and **W.A. Boyle**. “Patterns and predictors of breeding habitat occupancy in declining grassland birds: a multi-scale approach” Kansas Natural Resources Conferences, Wichita, KS (oral; WINNER OF THE KANSAS CHAPTER OF *THE WILDLIFE SOCIETY* FOR BEST STUDENT PRESENTATION) 5 Feb 2016
- Boyle, W.A.** “Patterns of breeding dispersal in a declining grassland bird”, The Wildlife Society national meeting, Winnipeg, Manitoba, Canada (oral) 19 Oct 2015
- ***Williams E.J.** and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season dispersal in a declining songbird?”, The Wildlife Society national meeting, Winnipeg, Manitoba, Canada (oral) 19 Oct 2015
- ***Herse, M.R.**, M. Estey, and **W.A. Boyle**. “Patterns and predictors of breeding habitat occupancy in a highly mobile grassland bird: a multi-scale approach” Kansas Ornithological Society meeting, Emporia, KS (oral; WINNER OF THE *CELIA WHITE MARKUM AWARD* FOR BEST STUDENT PRESENTATION) 3 Oct 2015
- Boyle, W.A.** and ***E.J. Williams**. “Local and regional patterns of breeding dispersal and habitat selection in a declining grassland bird”, LTER All Scientists Meeting, Estes Park, CO (poster) 1 Sep 2015
- ***Williams E.J.** and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season dispersal in a declining songbird?” Central Mountains and Plains Section of The Wildlife Society, Manhattan, KS (oral) 11 Aug 2015
- ***Williams E.J.** and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season dispersal in a declining songbird?” American Ornithologists’ Union / Cooper Society, Norman, OK (oral; WINNER OF AOU’S *ROBERT B. BERRY CONSERVATION AWARD* FOR OUTSTANDING STUDENT PRESENTATION) 31 Jul 2015
- §**Winnicki, S.K.** and **W.A. Boyle**. “Aggregation of Grasshopper Sparrow (*Ammodramus savannarum*) territories: a test of the extra pair mating and cooperative care hypotheses” American Ornithologists’ Union / Cooper Society, Norman OK (oral) 31 Jul 2015
- Boyle, W.A.** and **E.J. Williams**. “Local and regional patterns of breeding dispersal and habitat selection in a declining grassland bird”, American Ornithologists’ Union / Cooper Society, Norman, OK (poster) 29 Jul 2015

- Martin, K., M. Martin and **W.A. Boyle**. “The conservation value of high elevation habitats to migrant birds?” Wilson Ornithological Society, Wolfville, Nova Scotia, Canada (oral) 18 Jul 2015
- *Williams E.J. and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season dispersal in a declining songbird?” Wilson Ornithological Society, Wolfville, Nova Scotia, Canada (oral) 18 Jul 2015
- §Winnicki, S.K. and **W.A. Boyle**. “Aggregation of Grasshopper Sparrow (*Ammodramus savannarum*) territories: a test of the extra pair mating and cooperative care hypotheses” Wilson Ornithological Society, Wolfville, Nova Scotia, Canada (oral) 18 Jul 2015
- §Winnicki, S.K. and **W.A. Boyle**. “Aggregation of Grasshopper Sparrow (*Ammodramus savannarum*) territories: a test of the extra pair mating and cooperative care hypotheses”. Ohio Avian Research Conference, Granville, OH (oral; WINNER OF THE *DR. DAVID R. OSBORNE ORNITHOLOGY PRIZE* FOR THIS PRESENTATION) 18 Oct 2014
- *Williams E.J. and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season dispersal in a declining songbird?” Kansas Ornithological Society, Salina, KS (oral; BEST UNDERGRAD/MSC STUDENT PRESENTATION AWARD) 4 Oct 2014
- Ross, J. D., J. F. Kelly, E. S. Bridge, and **W.A. Boyle**. “Severe weather, fault bars, and stable isotope signatures of stress”. American Ornithologists’ Union / Cooper Society, Estes Park, CO (oral) 24 Sep 2014
- *Williams E.J. and **W.A. Boyle**. “Grasshopper Sparrows on the move: what explains variation in within-season dispersal in a declining songbird?” American Ornithologists’ Union / Cooper Society, Estes Park, CO (oral) 27 Sep 2014
- Boyle, W.A.** “Temporally-dynamic patterns of Grasshopper Sparrow breeding densities: implications for inferring habitat quality”. Kansas Natural Resources Conference, Wichita, KS (oral) 31 Jan 2014
- §Pei, C. K. and **W.A. Boyle**. “A test of interspecific competition between two common grassland birds”. Kansas Natural Resources Conference, Wichita, KS (poster) 31 Jan 2014
- *Williams E.J. and **W.A. Boyle**. “Does food abundance affect within-season dispersal behavior of male Grasshopper Sparrows?” Kansas Natural Resources Conference, Wichita, KS (poster) 31 Jan 2014
- *Williams E.J. and **W.A. Boyle**. “Does food abundance affect within-season dispersal behavior of male Grasshopper Sparrows?” Midwest Fish and Wildlife Society, Kansas City, MO (poster) 27 Jan 2014
- Boyle, W.A.** and B. J. Sigel. “Ongoing change in the avifauna of La Selva Biological Station.” American Ornithologists’ Union / Cooper Society, Chicago, IL (oral) 14 Aug 2013
- Boyle, W.A.**, B.K. Sandercock and K. Martin. “Avian life history variation along elevational gradients: a global meta-analysis”. Ecological Society of America, Minneapolis, MN (oral) 8 Aug 2013

- Boyle, W.A.** and B. J. Sigel. “Ongoing change in the avifauna of La Selva Biological Station: Insights from 23 years of Christmas Bird Counts” Association of Tropical Biology and Conservation, San José, Costa Rica (oral) 24 Jun 2013
- Boyle, W.A.**, D. W. Winkler, and C.G. Guglielmo. “When and how do Tree Swallow chicks die during cold weather?” Society for Integrative and Comparative Biology, San Francisco, CA (oral) 4 Jan 2013
- North American Ornithological Conference, Vancouver, BC 17 Aug 2012
- Society for Integrative and Comparative Biology, Charleston, SC 7 Jan 2012
- American Ornithologists’ Union, Jacksonville, FL 28 July 2011
- Ecological Society of America, Milwaukee, WI 8 Aug 2008
- American Ornithologists’ Union, Laramie, WY 10 Aug 2007
- North American Ornithological Congress, Veracruz, Mexico 6 Oct 2006
- Ecological Society of America, Memphis, TN 7 Aug 2006
- American Ornithologists’ Union, Santa Barbara, CA 26 Aug 2005
- Ecological Society of America, Montreal, Canada 9 Aug 2005
- Southwestern Association of Biologists, Portal, AZ 27 Oct 2003
- North American Ornithological Congress, New Orleans, LA 26 Sep 2002
- “Birds of Two Worlds” Symposium, Smithsonian Institution, Shepherdstown, WV 8 Mar 2002
- PUBLIC ENGAGEMENT PRESENTATIONS AND PRODUCTS:**
- Boyle, W.A.**, “An update on Kansas Motus,” Northern Flint Hills Audubon, Manhattan KS 18 Oct 2023
- Boyle, W.A.**, “Sex, fruit, and rock-n-roll: how manakins became the tropics’ dance idols,” SUTTON PUBLIC LECTURE, University of Oklahoma, Norman, OK 28 Oct 2023
- Kaw Creek** (Alice Boyle & Robert Rosenberg); music-based public engagement concerts focusing on themes of grasslands, weather, and the creatures and people that make their home in the central Great Plains. Developed with assistance through the STEM Ambassador Program (U. Utah, 2018), funded as broader impacts component of NSF-DEB-1754491 >15 events, 2019-2023
- Boyle lab Fall 2022** (M. Ball W.A. Boyle, E. Blackwood, H. Castro-Miller, N.E. Freeman, K. Hobbs, K.M. Silber, N. Wright), major edits to the “Grasshopper Sparrow” entry on Wikipedia. Collaborative effort; converted previous stub to entry containing rich, referenced detail and multi-media content. Dec 2022
(https://en.wikipedia.org/wiki/Grasshopper_sparrow)
- Boyle, W.A.**, “Flying through the intersection: bird movements through Kansas,” Audubon of Kansas, Celebration of Cranes, Sterling, KS 5 Nov 2022
- Boyle, W.A.**, “Kansas flyways: the current and future of understanding birds’ movements”. Jayhawk Audubon, Lawrence KS 24 Oct 2022
- Boyle, W.A.**, “Kansas flyways: the current and future of understanding birds’ 18 Oct 2022

- movements". Wichita Audubon, Wichita, KS
- Boyle, W.A.**, "Kansas flyways: the current and future of understanding birds' movements". Sperry-Galligar Audubon Society, Pittsburg, KS 29 Sep 2022
- Boyle, W.A.**, "Inside the K-State Ornithology Collection." Presentation and tour to the Northern Flint Hills Audubon chapter, Manhattan, KS 21 Sep 2022
- Boyle, W.A.**, "Virtual fences: the win-win we've all been waiting for?" Mushrush Ranch Field Day, Cottonwood Fall, KS 23 Jun 2022
- Silber, K.M.** and **W.A. Boyle**. "A bird's eye view: how do we study grassland bird declines?" Tabling for ~30 people of the Manhattan community at a Science on Tap event at Manhattan Brewing Company, Manhattan, KS 30 Mar 2022
- Boyle, W.A.**, "Kansas as a migration hotspot; a crossroads of movements and the future of how we study them," Northern Flint Hills Audubon, Manhattan KS 16 Feb 2022
- Boyle, W.A.**, "A prairie bird's love-hate relationship with humans". Ulrich Museum, Wichita KS 26 Oct 2021
- Boyle, W.A.**, ***K.M. Silber**, §**M.J. Reynaldo**, and §**E.N. Sroor**. "Grassland Bird Behavior and Ecology". Presentation and hands-on interactive session with ~40 members of the public regarding the core topics of grassland bird conservation, demography, and climate. Designed by whole lab group and delivered by PI, PhD student, and undergraduates. 10 Sep 2021
- Boyle, W.A.** and ***E.H. Shogren**. "An introduction to the concept of the "Hygric Niche"" Video created to explain key figures in article published in Trends in Ecology and Evolution. 21 Jul 2020
<https://www.youtube.com/watch?v=4XkEvFZaZsY&t> also disseminated on the "Figure360" playlist on the Cell Press YouTube channel.
- ***Shogren, E.H.**, §**J. Gresham**, §**A.J. Roe**, ***K. Silber**, ***D.J. Smith**, §**M.K. Wilcox**, ***S.K. Winnicki**, and **W.A. Boyle**. "Dance Dance Evolution" Video created by entire lab group about parts of our tropical research. https://www.youtube.com/watch?v=fSXXTfy_sE Apr 2020
- Boyle, W.A.** Presentations on woodland-associated birds during a day-long program of outdoor, interactive education organized by the Kansas Forest Service 16 Oct 2018 & 18 Jun 2019
- Boyle, W.A.** and ***E.H. Shogren**. "Aves del Parque Nacional Volcán Tenorio / Birds of Volcán Tenorio National Park" and "Saltarín Gorgiblanco / White-ruffed Manakins." Two interpretive signs created for our current research site in Costa Rica, placed at entrance receiving over 80K visitors annually. Jun 2018-present
- Boyle, W.A.** "Sex, fruit, and rock-n-roll: how manakins became the tropics' dance idols." KEYNOTE ADDRESS; Kansas Birding Festival, Milford, KS. 28 Apr 2018

- Boyle, W.A.** “Sex, fruit, and rock-n-roll: how manakins became the tropics’ dance idols.” Evening public outreach talk representing the manakin genomics RCN to members of the local scientific and non-scientific community. Gamboa, Panama. 22 Apr 2018
- Boyle, W.A.** “The surprising mobility of grassland birds: what we know, what we don’t know, and why it matters.” Presentation to the Kansas Master Naturalists training program. Olathe, KS. 19 Apr 2018
- *Winnicki, S.K., §M. K. Wilcox, §D.J. Smith.** “Wonderful World of Bird Migration” Two workshops teaching scientific methods and core concepts in migration ecology. Enhancing your Future with Mathematics and Science conference for middle school girls, Emporia State University, Emporia, KS 3 Mar 2018
- Boyle, W.A.** “Dancing in the rain; sex and survival of rainforest birds.” Public presentation and discussion at Science on Tap, Tallgrass Tap House, Manhattan, KS. This event also covered in a *Science Snapshots* blog post by ***S.K. Winnicki** (<https://sciencesnapshots.com/2018/02/28/science-on-tap-rain-migration-and-dancing-birds/>) 21 Feb 2018
- *Winnicki, S.K.** “Prairie babies: developmental variation and survival in changing environments.” hands-on game for children and their families at multiple Science Saturday events, Sunset Zoo, Manhattan, KS Nov & Dec 2018
- *Shogren, E.H. and W.A. Boyle** “Research on *Corapipo altera* in Volcán Tenorio National Park.” Estes Park Environmental Center Field Trip, El Pilón, Costa Rica 15 Jun 2017
- *Aulicky, C., S. Replogle Curnutt, *M.R. Herse, *E.H. Shogren, *B. Verheijen, *E.J. Williams, *S.K. Winnicki, and W.A. Boyle.** “More than meets the eye: Boyle lab research into the private lives of Kansas grassland birds” Video conceived and produced by entire lab group about our grassland research. Apr 2017
<https://www.youtube.com/watch?v=ITbUEQHJz&t=12s>
- Boyle, W.A.** “A Year in the Life of a Tallgrass Prairie” Video visualizing changeability and beauty of tallgrass prairie. Apr 2017
<https://www.youtube.com/watch?v=G5vJnGhUCxM&t=2s>
- Boyle, W.A. and *S.K. Winnicki.** “Wonderful World of Birds” and two career discussion sessions. Enhancing your Future with Mathematics and Science conference for middle school girls, Emporia State University, Emporia, KS 4 Mar 2017
- *Herse, M.R.** “How do birds choose habitats? A landscape perspective.” Public presentation and discussion at Science on Tap, Tallgrass Tap House, Manhattan, KS 18 Jan 2017
- Boyle, W.A.** “The Wonderful World of Birds”. Hands-on workshops with middle school girls as part of the Expanding Your Futures in Mathematics and Science conference, Emporia, KS 5 Mar 2016

- Boyle, W.A.** “Why the cool girls play in the mud”. Career workshops with middle school girls as part of the Expanding Your Futures in Mathematics and Science conference, Emporia, KS 7 Mar 2015
- Boyle, W.A., *E.J. Williams,*M.R. Herse,** “Take flight!” Hands on workshop for grade-schoolers and their families at the STEM Fun Night, Lee Elementary School, Manhattan, KS 26 Feb 2015
- Boyle, W.A.** “Inside the KSU ornithology collection”. Presentation to Flint Hills chapter of the National Audubon Society, Manhattan, KS 9 Mar 2014
- Boyle, W.A.** and *E.J. Williams. “Birds of a feather moonwalk together”. Presentation to middle school girls as part of the Expanding Your Futures in Mathematics and Science conference, Emporia, KS 8 Mar 2014
- Boyle, W.A.** “The Clue in the Stormy Jungle... or why science is like a murder mystery”. Presentation to Jayhawk chapter of the National Audubon Society, Lawrence, KS 27 Oct 2013
- Boyle, W.A.** “Cambios en el avifauna de la estación biológica La Selva: 23 años de Conteos Navideños”. Spanish language talk on long-term changes to La Selva's avifauna to staff and researchers at La Selva Biological Station, Costa Rica 2 Jul 2013
- Boyle, W.A.** Presentations (2) to KSU's undergraduate student chapter of The Wildlife Society, Manhattan,, KS 2013 & 2014
- Boyle, W.A.** Four, 1-hour presentations to groups of 7th grade students, Desert Sky Middle School, Tucson, AZ 2006
- Boyle, W.A.** Presentations to school children through the University of Arizona/NASA Space Grant Science Speakers Program, Tucson, AZ 2005

TEACHING AND MENTORING

INSTRUCTOR:

- Graduate Seminar in Behavioral Ecology**, Division of Biology, Kansas State University Fall 2021
- Organismic Biology**, Division of Biology, Kansas State University Fall 2023
- Ornithology**, Division of Biology, Kansas State University Every spring, 2014–present
- Applied Methods in Population and Statistical Ecology (Wild Bird Research)**, Division of Biology, Kansas State University cross-listed & co-taught with Trevor Hefley (STATS) until 2021 Every spring, 2019–present
- Topics: Advanced Methods in Field Ornithology**, Division of Biology, Kansas State University Every spring 2016–2018
- Senior Capstone Seminar in Biology**, Department of Biology, University of Western Ontario Spring 2009
- Techniques in Physiology and Biochemistry**, Department of Biology, University of Western Ontario Fall 2007
- Ornithology**, Department of Ecology and Evolutionary Biology, University of Arizona Spring 2007

TEACHING ASSISTANT AND LAB INSTRUCTOR:

Department of Ecology and Evolutionary Biology, University of Arizona:	
Environmental Biology (3 rd year non-majors)	Spring 2006
Animal Behavior (senior/grad level)	Fall 2005
Ornithology (senior/grad level)	Spring 2005
Ecology (core 3 rd year level--TEACHING AWARD FOR THIS COURSE)	Fall 2001

MENTORING, FIELD COURSES, OTHER TEACHING:**Post-doctoral mentor**

Katy Silber; 2023–present
 Nikole Freeman; 2021–present

Graduate advisor

Logan Anderson; MS, 2023–present
 Kristen Hobbs; PhD, 2021–present
 Katy M. Silber; PhD, 2019–2023
 Emma (Dylan) Smith; MS, 2019–2021
 Elsie H. Shogren; PhD, 2015–2020
 Sarah K. Winnicki; MS, 2016–2019
 Carly Aulicky; PhD, 2015–2017
 Mark R. Herse; MS, 2015–2017
 Emily J. Williams; MS, 2013–2016

External graduate student mentor

Megan Jones (Florida State U)
 Andy Boyce (U Arizona; AOS young professional mentoring program)
 Heather Kraus (Emporia State U)

Undergraduate mentor*Kansas State undergrads*

Emma Blackwood, Nathalie Wright, Shelby Noel, Alli Stanton, Paige Wimberly, Gloria Gilber	2023
Miriam Reynaldo, Elizabeth Sroor, Henry Castro-Miller, Nathalie Wright, Emma Blackwood, Maddie Ball, Jacob Riggs	2022
Miriam Reynaldo, Sara Blunk, Elizabeth Sroor, Henry Castro-Miller	2021
Miriam Reynaldo, Elizabeth Sroor, Daniel Wells, Kailyn Underwood, Sara Blunk, Louis Kokenge	2020
Joanna Gresham, Miriam Reynaldo, Austin Roe, Ryan Donnelly, Muriel Winnerman	2019
Mary Kate Wilcox, Dylan Smith, Natasha Bergevine, Logan Thomas, Joanna Gresham, Blair Pfeifer, Hannah Choo	2018
Michaela Gustafson, Natasha Bergevine, Cole Allen, Logan Thomas, Katelyn Thompson, Mary Kate Wilcox	2017
Michaela Gustafson, Suzy Replogle, Destiny Hett, Jessica Nguyen, Caitlin Weichman, Lauren Angermayer	2016

Caroline Doty, Jacqueline Gehrt, Justin Leon, Amanda Moraes Charpinel, Suzy Replogle, Breyana Ramsey, Dylan Smith, Amie Sommers, Chelsea Sink	2015
Alex Henry, Chyna Pei, Willow Malone, Alexandra McChesney, Hunter Nedland, Dylan Smith, Amie Sommers, Blake Walters	2014
Allison Bays, Sarah Demadura, Keil Gary, Chyna Pei, Ian Waters	2013
<i>K-State Developing Scholars program</i>	
Breyana Ramsey (2014–15)	
<i>K-State REU program</i>	
Dylan Smith (KSU, 2018), Braiam Rosado (Universidad de Turabo, 2017), Edwin Harris (Beloit College, 2017), Darrien Savage (KSU, 2017), Yisel Márquez (Weber State University; 2015), Sarah Winnicki (Dennison U., 2014 & 2015), Steffanie Munguia (U. South Florida; 2013)	
<i>K-State SCTE program</i>	
Justin Leon (2014), Emily Samuel (2016)	
Mentorship training	
Completed interactive online course focusing on best practices for mentoring at multiple career stages (sponsored by the National Research Mentoring Network (NRMN) and University of Minnesota Clinical and Translational Science Institute (CTSI)	2020
Post-doctoral mentoring program	
Co-organized bi-weekly meetings, KSU Division of Biology	2012–2013
Committee member	
<i>K-State</i> —Kat Nelson (Animal Science & Industry; 2023–present), Sarah Herzog (2020–present), Narmadha Meenabhashini Mohankumar (Statistics; 2019–2022), Nick Barts (2015–2020), Bram Verheijen (2012–2017), Courtney Passow (2014–2016), Kayla Gerber (2012–2015), Brian Kearns (2012–2015), Zachary Peterson (2012–2015), Joseph Lautenbach (2012–2014), Andrew Stetter (2013–2014), Lyla Hunt (2013)	
<i>U Arizona</i> —Carl Lundblad (2011-2014)	
Guest lecturer	
Ecology of Animal Migration, Centre for Animal Movement Research (CANMove), Department of Biology, Lund University, Sweden	Nov 2019
Isotope Ecology, Kansas State University	2016
Population Biology, Kansas State University	2016
Nature of Biological Things (non-majors), Physiology of Migration (upper-level majors); University of Western Ontario, London ON	2009, 2010, & 2011
Animal Behavior, University of Guelph, Guelph ON	2007 & 2010
Environmental Biology, University of Arizona, Tucson AZ	2006
Animal Behavior, University of Arizona, Tucson AZ	2005

- Organization for Tropical Studies Tropical Biology** 2002, 2003,
Week-long guest faculty member, OTS Tropical Biology graduate field 2016
courses, directed short graduate student field projects
- Research Experience for Undergraduates (REU) program, La Selva Biological Station, Costa Rica** Summers
2007 & 2005
Two (of 3) mentored students published their research projects and are now pursuing academic careers in biology (1 is tenure-track faculty member)
- Department of Ecology and Evolutionary Biology, University of Arizona and Department of Biology, University of Western Ontario** 2001–2009
Mentor to > 35 assistants from Costa Rica, Colombia, Spain, Australia, Canada and USA in the field

LEADERSHIP, SERVICE, AND INTERNATIONAL EXPERIENCE

Professional Societies:

- Service to the American Ornithological Society:* Elected Council member (2020-2023); co-chair (2014–2016) and chair (2016-2019) of the Publications Advisory Committee; Professional ethics committee (2018); Social media committee (2020); Council nominations committee (2022); Service awards committee (2023)
- Steering committee member 2019-2022,* Central grasslands roadmap: a conservation roadmap for the future, helped plan and presented at online summit Aug 2020 and in-person summit May 2022
- Organizer and moderator,* Symposium “*Avian responses to rainfall variability in temperate and tropical systems*” Joint meeting of American Ornithological Society and Birds Caribbean, July 2022
- Advisory Committee member;* “Grassland Management Priorities for the North Central Region,” report prepared by C. D. Miller Hesed and H. Yocum with contributions from dozens of other scientists; North Central Climate Adaptation Science Center (a partnership between US Geological Survey, the University of Colorado Boulder, and five consortium partners - Conservation Science Partners, Great Plains Tribal Water Alliance, South Dakota State University, University of Montana, and Wildlife Conservation Society).
- Co-leader and organizer of Research Coordination Network (2015-2022) and meetings resulting from successful NSF RCN grant: “Enabling comparative studies of the process and products of sexual selection in a genomic context”;* (1) Front Royal VA, 14–17 August 2015; (2) Annapolis MD, 13–16 August 2016; (3) Gamboa, Panama, 21–26 April 2018; (4) Curitiba, Brazil, 31 Sep–5 Oct 2019
- Organizer and moderator,* Symposium “*Avian responses to rainfall variability in temperate and tropical systems*” Joint meeting of American Ornithological Society and Birds Caribbean, July 2022
- Editorial Board Member* for Ecological Society of America’s journal, *Ecosphere* (2013–2019)
- Co-organizer and moderator,* Plenary panel discussion “*Promoting Diversity in Conservation*”; Kansas Natural Resources Conference, Manhattan KS (February 2018)
- Board member,* Cooper Ornithological Society 2013–2016. Chair, student presentations

awards (2014-2015).

Co-organizer, symposium “Alpine Ornithology in 2014: ecological adaptations and challenges for birds breeding in mountain ecosystems”; AOU/COS/SCO-SOC Joint Annual Meeting, Estes Park, CO (September 2014)

Travel grant reviewer, International Ornithological Congress, (2014)

Student fellowship reviewer, Neotropical Ornithological Society (2013, 2014)

Chair, Media Committee, 5th North American Ornithological Conference, Vancouver, Canada (2012)

Judge, student presentation awards, multiple societies/conferences (SICB 2012; TWS 2012 & 2015; ESA 2013; AOU/COS 2013, 2014, 2015; KNRC 2018; NAOC 2016 & 2020)

Reviewer:

Granting agencies and publishers: National Science Foundation of the USA (panelist Jan 2014, panelist Oct 2016, ad-hoc reviewer [48 proposals total]), Environmental Protection Agency (panelist Jan 2013), National Geographic Society (3 ad hoc reviews), Swiss National Science Foundation (1 ad hoc review) Princeton University Press.

Journals (110 reviews/91 at KSU): American Midland Naturalist (1), American Naturalist (2), Avian Conservation and Ecology (4), Animal Behavior (2), Ardeola (1), Behavioural Ecology (1), Behavioural Ecology & Sociobiology (1), Biological Conservation (2), Biological Journal of the Linnean Society (1), Biological Reviews (1), Biology Letters (2), Biotropica (3), Bird Conservation International (2), Bull. Kansas Ornithological Soc. (1), Canadian Journal of Forest Research (1), Canadian Journal of Zoology (1), Ecography (2), Ecological Applications (1), Ecology (5), Ecology Letters (3), Ecosphere (2), Ecosystems (1), Frontiers in Ecology and the Environment (2), Functional Ecology (3), Global Ecology and Biogeography (1), Ibis (1), Journal of Animal Ecology (10), Journal of Arid Environments (1), Journal of Avian Biology (2), Journal of Experimental Zoology (1), Journal of Field Ornithology (5), Journal of Ornithology (3), Journal of Theoretical Biology (2), Journal of Tropical Ecology (3), Journal of Zoology (1), Landscape Ecology (1), Oecologia (2), Oikos (2), Ornithology (formerly The Auk: Ornithological Advances) (8), Ornithological Applications (formerly The Condor: Ornithological Applications) (1), PeerJ (1), PLoS One (2), Proceedings of the National Academy of Sciences (1), Proceedings of the Royal Society-B (2), Royal Society Open Science (2), Science (1), Tropical Conservation Science (1), Western Birds (1), Western N. American Naturalist (1), Wilson Journal of Ornithology (3), Zoological Studies (2)

Other external evaluations: U. Nebraska MS thesis award, South Africa MS thesis external examiner, external Tenure & Promotion evaluations (2), federal employee pre-submission ms reviews (5)

University/departmental service: KAWSE's Postdoctoral Researcher Travel Award Screening Committee, Fall 2023; Panelist for the KAWSE Advance Distinguished Lecturer Series, 27 Feb 2017; University-wide joint REU-SUROP poster session judge, Jul 2013

Departmental service: Convened bird specimen preparation workshop (2023); Biology Graduate Student Association faculty representative (2022-present); Founded and organized division-wide writing club (2020-present); Tenure & Promotion committee member (2022-2023); Diversity & Inclusion committee member (2020–2021); EEB section chair (2017); Graduate student recruiting committee member (2014–2019); Faculty search committees member (2018, 2 positions; 2017–2018; 1 position); EEB seminar committee (2014–2016); EEB grads on parade judge (2012, 2013) and organizer (2014-2017); Organized Biology graduate students research forum (2013); REU program leadership (student selection, field trips, ethics and social media workshops; 2013–2017); UBC Dept. of Forest Sciences student research awards (2011)

RESEARCH FEATURED IN PRESS AND OTHER MEDIA

[Kansas Public Radio](#) spot on Kansas Motus, Sep 2023

“[How satellite-guided cows might save the Kansas prairie and make ranchers more money](#)”;

Kansas Public Radio story about Virtual Fence project; aired in Kansas and on national NPR (All Things Considered), Jul 2022

“*Importance of rainfall highlighted for tropical animals*”; press release for research article prepared by U. Illinois and reprinted by news outlets globally

Boyle Lab YouTube channel showcases several videos created and produced by lab members about the aims, methods, and outcomes of our research:

<https://www.youtube.com/channel/UCiQiNb9syQ5F455XielMjDA>

Cumulative views (Aug 2023): >6.3K

“*A grassland bird’s changing world*”; research featured in K-State student Callie Ogborn’s project, highlighted on Science360 and winner of the Kansas Broadcasting Association’s student award. <https://www.youtube.com/watch?v=rbrIyc4sbQ0>

Comparative migration research highlighted in textbook; S. E. Nordell and Valone. T. J., 2013, *Animal Behavior: Concepts, Process, Application*. Oxford University Press

Interview on *Quirks and Quarks*, (**Canadian Broadcasting Corporation’s** national radio science program), Apr 2011. <http://www.cbc.ca/quirks/episode/2011/04/09/april-9-2011/>

U Guelph Press, *Birds Must Choose Between Mating, Migrating*, 6 April 2011 reprinted broadly online including at Science Daily News, PhysOrg, e!ScienceNews.

Interview on the **Canadian Broadcasting Corporation’s** national radio science program, *Quirks and Quarks*, Apr 2010. <http://www.cbc.ca/quirks/archives/09-10/qq-2010-04-24.html>

Science Magazine’s ScienceNOW, <http://news.sciencemag.org/sciencenow/2010/04/rainy-days-stress-out-birds.html>, Apr 2010

Interviewed and featured on KXCI’s *Arizona Illustrated*, **National Public Television**, Tucson, Mar 2007

Spanish-language interview and story, **El Imparcial** newspaper, Mexico, Apr 2007

University of Arizona’s **Visitor Guide Magazine**, Fall 2007