Wilson J. Wright

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EDUCATION

Ph.D., Statistics 2024
Colorado State University, Fort Collins, CO
Advisors: Mevin Hooten and Daniel Cooley

M.S., Statistics 2016
Montana State University, Bozeman, MT

B.S., Biological Science 2011
Montana State University, Bozeman, MT

EXPERIENCE

Assistant Professor Aug 2024–Present
Department of Statistics and Data Science
University of Missouri, Columbia, MO

PUBLICATIONS

Wright, W. J., Neitlich, P. N., & Hooten, M. B. (2025). Clipped multiscale spatial processes for multivariate vegetation data. *The Annals of Applied Statistics*.

Wright, W. J., & Hooten, M. B. (2025a). Rejoinder to the discussion on "Continuous-space occupancy models". *Biometrics*, *81*(2), ujaf058.

Wright, W. J., & Hooten, M. B. (2025b). Continuous-space occupancy models [Biometrics Methodology Discussion paper]. *Biometrics*, *81*(2), ujaf055.

Neitlich, P. N., **Wright, W. J.**, Di Meglio, E., Shiel, A. E., Hampton-Miller, C. J., & Hooten, M. B. (2024). Mixed trends in heavy metal-enriched fugitive dust on National Park Service lands along the Red Dog Mine haul road, Alaska, 2006–2017. *PLoS ONE*, *19*, e0297777.

Wright, W. J., Neitlich, P. N., Shiel, A. E., & Hooten, M. B. (2022). Mechanistic spatial models for heavy metal pollution. *Environmetrics*, *33*, e2760.

Stratton, C. K., Irvine, K. M., Banner, K. M., **Wright, W. J.**, Lausen, C., & Rae, J. (2022). Coupling validation effort with *in situ* bioacoustic data improves estimating relative activity and occupancy for multiple species with cross-species misclassifications. *Methods in Ecology and Evolution*, *13*, 1288–1303.

Wright, W. J., Irvine, K. M., Rodhouse, T. J., & Litt, A. R. (2021). Spatial Gaussian processes improve multi-species occupancy models when range boundaries are uncertain and non-overlapping. *Ecology and Evolution*, *11*, 8516–8527.

Shanahan, E., **Wright**, **W. J.**, & Irvine, K. M. (2021). Adaptive monitoring in action: Reconsidering design-based estimators reveals underestimation of whitebark pine disease prevalence in the Greater Yellowstone Ecosystem. *Journal of Applied Ecology*, *58*, 1079–1089.

Wright, **W. J.**, Irvine, K. M., Alberg, E. S., & Litt, A. R. (2020). Modelling misclassification in multi-species acoustic data when estimating occupancy and relative activity. *Methods in Ecology and Evolution*, *11*, 71–81.

Irvine, K. M., **Wright**, **W. J.**, Shanahan, E. K., & Rodhouse, T. J. (2019). Cohesive framework for modeling plant cover class data. *Methods in Ecology and Evolution*, *10*, 1749–1760.

Wright, **W. J.**, Irvine, K. M., & Higgs, M. D. (2019). Identifying occupancy model inadequacies: Can residuals separately assess detection and presence? *Ecology*, *100*, e02703.

Irvine, K. M., Rodhouse, T. J., **Wright**, **W. J.**, & Olsen, A. R. (2018). Occupancy modeling species-environment relationships and non-ignorable designs. *Ecological Applications*, *28*, 1616–1625.

Banner, K. M., Irvine, K. M., Rodhouse, T. J., **Wright**, **W. J.**, Rodriquez, R. M., & Litt, A. R. (2018). Improving geographically extensive acoustic survey designs for modeling species occurrence with imperfect detection and misidentification. *Ecology and Evolution*, *8*(12), 6144–6156.

Wright, **W. J.**, Irvine, K. M., Warren, J. M., & Barnett, J. K. (2017). Statistical design and analysis for plant cover studies with multiple sources of observation error. *Methods in Ecology and Evolution*, *8*, 1832–1841.

Wright, **W. J.**, Irvine, K. M., & Rodhouse, T. J. (2016). A goodness-of-fit test for occupancy models with correlated within-season revisits. *Ecology and Evolution*, *6*, 5404–5415.

Technical Reports

Wright, **W. J.**, Irvine, K. M., Reichert, B., Talbert, C., & Litt, A. R. (2019). *Analysis of Colorado NABat data from 2016 and 2017* (tech. rep.). Colorado Natural Heritage Program.

Wright, **W. J.**, & Irvine, K. M. (2017). *Assessment of imperfect detection of blister rust in whitebark pine within the Greater Yellowstone Ecosystem* (tech. rep. NPS/GRYN/NRR-2017/1457). National Park Service. Fort Collins, Colorado.

Honors and Awards

Graybill Award for Excellence in Linear Models - CSU Statistics Department	May 2022
Honorable Mention ASA-Statistics and the Environment Student Paper	Jan 2016
Mildred Livingston Scholarship, Montana State University	Aug 2013
Honors Degree (*magna cum laude*) recipient, Montana State University	May 2011
Presidential Scholar, Montana State University	2007 – 2011

Teaching

Instructor
University of Missouri

STAT 8310 - Data Analysis I	Fall 2024, Fall 2025
STAT 4760/7760 - Statistical Inference	Spring 2025

Guest Lecturer
STAT 192 - First-year seminar in statistics   Nov. 2023

Teaching Assistant
Bayesian Statistics for Ecologists short course (10 days)   June 2022, June 2023

Graduate Teaching Assistant
Colorado State University

    STAR 511 - Design and Analysis for Researchers I   Fall 2021

    STAT 307 - Introduction to Biostatistics   Fall 2021

    STAT 201 - General Statistics   Spring 2021

    STAT 204 - Statistics with Business Applications   Fall 2020

Statistics Success Center Tutor
Colorado State University

    All introductory statistics courses   Fall 2020, Spring 2021, Fall 2021

Graduate Teaching Assistant
Montana State University

    STAT 201 - Introduction to Statistics   Fall 2013, Spring 2014, Summer 2014

INVITED PRESENTATIONS

Wright, **W. J.** (2025). *Continuous-space occupancy models* [Presentation at the WNAR/IMS Annual Meeting in Whistler, British Columbia, Canada].

CONTRIBUTED PRESENTATIONS AND POSTERS

Wright, **W. J.**, Neitlich, P. N., Shiel, A. E., & Hooten, M. B. (2023). *Mechanistic spatial models for heavy metal pollution* [Poster at the EnviBayes Workshop in Fort Collins, Colorado].

Wright, **W. J.**, Neitlich, P. N., & Hooten, M. B. (2023). *Multiscale clipped Gaussian processes for spatial vegetation data* [Presentation at Spatial Statistics Conference in Boulder, Colorado].

Wright, **W. J.**, Neitlich, P. N., Shiel, A. E., & Hooten, M. B. (2022a). *Mechanistic spatial models for heavy metal pollution* [Poster at the ENVR Workshop in Provo, Utah].

Wright, **W. J.**, Neitlich, P. N., Shiel, A. E., & Hooten, M. B. (2022b). *Mechanistic spatial models for heavy metal pollution* [Presentation at Joint Statistical Meetings of the American Statistical Association in Washington, D.C.].

Wright, **W. J.**, Irvine, K. M., Almberg, E. S., & Litt, A. R. (2019). *Estimating occupancy and activity of Montana bat species prior to the arrival of White-nose Syndrome* [Presentation at the Montana Chapter of the Wildlife Society Annual Conference in Helena, Montana].

Wright, **W. J.**, Irvine, K. M., & Higgs, M. D. (2018a). *Untangling spatial patterns in occupancy models: Residuals to separately assess detection and presence* [Presentation at the Wildlife Society Annual Conference in Cleveland, Ohio].

Wright, **W. J.**, Irvine, K. M., & Higgs, M. D. (2018b). *Untangling spatial patterns in occupancy models — an example of residual diagnostics for hierarchical models* [Presentation at the Montana Chapter of the American Statistical Association meeting in Bozeman, Montana].

Wright, **W. J.**, Irvine, K. M., Warren, J. M., & Barnett, J. K. (2017). *Statistical design and analysis of plant cover data with multiple sources of observation error* [Presentation at the Joint Statistical Meetings of the American Statistical Association in Baltimore, Maryland].

Wright, **W. J.**, Irvine, K. M., & Rodhouse, T. J. (2016a). *A new assessment tool for occupancy models when revisits are serially correlated* [Presentation at the International Statistical Ecology Conference in Seattle, Washington].

Wright, **W. J.**, Irvine, K. M., & Rodhouse, T. J. (2016b). *Assessing occupancy model fit when revisits are serially correlated* [Presentation at the Montana State University Student Research Celebration in Bozeman, Montana].

Wright, **W. J.** (2016). *Estimating mallard duckling survival — accounting for catastrophic events* [Presentation at the Statistics Graduate Student Writing Projects seminar].