JESSICA L. BURNETT

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(a) Professional Preparation

Ph.D., Natural Resource Sciences, Specialization Applied Ecology   2015 - 19
School of Natural Resources, University of Nebraska-Lincoln, Nebrasaka USA

M.Sc., Wildlife Ecology & Conservation   2013 - 15
Department of Wildlife Ecology & Conservation, University of Florida, Florida USA

B.Sc. Wildlife Ecology & Conservation   2010 - 13
Department of Wildlife Ecology & Conservation, University of Florida, Florida USA

(b) Positions Held

Research Ecologist & Mendenhall Postdoctoral Fellow   September 2019 - present
Science Analytics and Synthesis, Core Science Systems
U.S. Geological Survey, Lakewood, Colorado, USA

Graduate Research Assistant   August 2015 - August 2019
Nebraska Cooperative Fish & Wildlife Research Unit
School of Natural Resources University of Nebraska-Lincoln, Nebraska, USA

Young Scholar   May 2018 - September 2018
Applied Systems Analysis Research Group
International Institute for Applied Systems Analysis Laxenburg, Austria

Graduate Teaching Assistant   August 2013 - August 2015
Department of Wildlife Ecology & Conservation
University of Florida, Florida, USA

(c) Select Publications (10 published, 3 in review, 1 published book chapter)

(i) Publications relating to proposed research

1. **Burnett, J.L.**, N.B. Price, A.J. Tyre, D.G. Angeler, T. Eason, D. Twidwell., and C.R. Allen. Deconstructing the steps for calculating Fisher Information as a measure of abrupt change in ecological systems. *under review at Ecological Modelling*

2. **Burnett, J.L.**. 2019. Regime Detection Measures for the Practical Ecologist.

3. **Burnett, J.L.**, N.B. Price, A.J. Tyre, D.G. Angeler, T. Eason, D. Twidwell., and C.R. Allen. Deconstructing the steps for calculating Fisher Information as a measure of abrupt change in ecological systems. *in review at Ecological Modelling*

4. **Burnett, J.L.**, G. Munoz-Palomo, and L. Wszola.*under review at Journal of Open Source Software* `bbsAssistant`. 2019. An R package for downloading and manipulating the North American Breeding Bird Survey data. https://github.com/TrashBirdEcology/bbsAssistant/blob/master/man/bbsAssistant_0.0.1.pdf Github:trashbirdecology/bbsAssistant

5. Price, N.B. and **J.L. Burnett**. `tvdiff`. 2019. An R package for numerical differentiation of noisy, non-smooth data. Github:natbprice/tvdiff

6. **Burnett, J.L.**, N.B. Price. 2019. `regimeDetectionMeasures`. An R package for calculating univariate and multivariate regime detection methods using community time series. Github:trashbirdecology/regimedetectionmeasures

7. Roberts, C.P., D. Twidwell, **J.L. Burnett**, V.M. Donovan, C. Wonkka, C.H. Bielski, A.S. Garmestani, D.G. Angeler, T. Eason, B.W. Allred, M.O. Jones, D.E. Naugle, S. Sundstrom, C.R. Allen, (2018) Early warnings for state transitions. *Rangeland Ecology and Management* DOI:10.1016/j.rama.2018.04.012

8. **Burnett, J.L.**, N.B. Price, and A.J. Tyre. 2018. `distanceTravelled`. An R package for calculating the distance traveled by a multispecies community along a time series. Github:trashbirdecology/distancetravelled

9. Chuang, W.C., A.S. Garmestani, T. Eason, T.L. Spanbauer, H.B. Fried-Peterson, C. Roberts, S. Sundstrom, **J.L. Burnett**, D. G. Angeler, B. Chaffin, L. Gunderson, D. Twidwell, C.R. Allen. 2018. Enhancing quantitative approaches for assessing ecological and community resilience. *Journal of Environmental Management* 213: 353-362 DOI:10.1016/j.jenvman.2018.01.083

(ii) Additional significant products

1. La Sorte, F.A., C.A. Lepczyk, **J.L. Burnett**, A. Hurlbert, M. Tingley, and B. Zuckerberg. 2018. Opportunities and challenges for big data ornithology. *The Condor* 120(2): 414-426 DOI:0.1650/CONDOR-17-206.1

2. **Burnett, J.L.**, C.R. Allen, C.P. Roberts, M.Bomberger Brown, and M.P. Moulton. 2017. Eurasian Tree Sparrow (*Passer montanus*) range expansion in North America. *Biological Invasions* 19(1): 5-9 DOI:10.1007/s10530-016-1273-4

3. **Burnett, J.L.**, G. Munoz-Palomo, and L. Wszola.*under review at Journal of Open Source Software* `bbsAssistant`. 2019. An R package for downloading and manipulating the North American Breeding Bird Survey data. https://github.com/TrashBirdEcology/bbsAssistant/blob/master/man/bbsAssistant_0.0.1.pdf Github:trashbirdecology/bbsAssistant

(c) Synergistic activities

1. **Instructor** Introduction to Applied Ecological Statistics and Introduction to Program R, Kearney & Lincoln, NE   2017-2018

2. **Co-organizer** Symposium: Opportunities and Challenges in Big Data Ornithology. North American Ornithological Conference V, Washington, D.C., 2016