

## Sonja H. Kolstoe

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CONTACT INFORMATION	Department of Economics and Finance Salisbury University Perdue Hall, 1101 Camden Avenue Salisbury, MD 21801-3524 USA	Cell Phone: (206) 940-2541 Work E-mail: <a href="mailto:shkolstoe@salisbury.edu">shkolstoe@salisbury.edu</a> Website: <a href="http://www.sonjakolstoe.com">www.sonjakolstoe.com</a>
ACADEMIC POSITIONS	Assistant Professor of Economics, Dept. of Economics & Finance, Dept. of Env. Studies, Salisbury University (August 2016 - present)	
	Research Associate (by courtesy), Dept. of Economics, University of Oregon (August 2016 - present)	
	Udall Faculty Representative, Salisbury University (August 2018 - present)	
	Interim Faculty Director for the Business Honors Program, Salisbury University (January 2019 - January 2020)	
EDUCATION	<b>University of Oregon</b> , Eugene, Oregon	
	Ph.D., Environmental Sciences, Studies and Policy, June 2016	
	Focal Department: Economics (full complement of Economics Ph.D. courses <sup>1</sup> )	
	Economic Fields: Environmental, Public & Applied Econometrics	
	Interdisciplinary Concentration Areas: Ecology and Public Policy <sup>2</sup>	
	Dissertation Committee: Trudy Ann Cameron (chair), Ralph Mastromonaco, Wesley Wilson, Scott Bridgham and Dan Gleason	
	M.S., Economics, September 2013	
	<b>University of Nevada, Las Vegas</b> , Las Vegas, Nevada	
	M.A., Economics, December 2011	
	<b>Washington State University</b> , Pullman, Washington	
	B.S., Biology, May 2010, <i>cum laude</i>	
	Minor: French and Economics	
FIELDS	Environmental Economics, Public Economics and Applied Econometrics	
RESEARCH	<i>Publications</i>	
	Kolstoe, S., Cameron, T.A. and Wilsey, C.B. (2018) "Climate policy, land cover, and bird populations: Differential Impacts on the Future Welfare of Birders in the Pacific Northwest," <i>Agricultural and Resource Economic Review</i> , 47(2), 272-310. (ARER Featured Article February 2019)	
	Kolstoe, S., and Cameron, T.A. (2017) "The Non-market Value of Birding Sites and the Marginal Value of Additional Species: Biodiversity in a Random Utility Model of Site Choice by eBird Members," <i>Ecological Economics</i> , 137, 1-12. (Lead Article)	
	Riddel, M., and Kolstoe, S. (2013) "Heterogeneity in Life-duration Preferences: Are Risky Recreationists really more Risk Loving?," <i>Journal of Risk and Uncertainty</i> , 46(2), 191-213.	
	<sup>1</sup> Completed first year core sequences of Microeconomics Theory, Macroeconomics Theory, and Econometrics as well as field courses in Time Series Econometrics, Microeconometrics, Bayesian Econometrics, Public Economics, Game Theory, Taxation, Environmental Economics and Natural Resource Economics	
	<sup>2</sup> Concentration Area Coursework: Terrestrial Ecosystem Ecology; Population Ecology; GIS I; Python Programming GIS; Natural Resource Policy; Public Policy Analysis; Geography, Law & Environment	

### *Working Papers*

Cameron, T.A. and Kolstoe, S. (2020) “Using Auxiliary Population Samples for Sample-Selection Correction in Models Based on Crowd-sourced Volunteered Geographic Information” *Under review at Land Economics, early version published as part of the workshop proceedings for the Applications and Potential of Ecosystem Services Valuation within USDA – Advancing the Science workshop*

Kling, D., Nguyen, T. and Kolstoe, S. (2019) “Spatial Economics of Citizen Science” *Earlier version published as part of the workshop proceedings for the Applications and Potential of Ecosystem Services Valuation within USDA – Advancing the Science workshop*

Kolstoe, S., and Cameron, T.A. (2020) “Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example” *Invited Paper for Ecosystem Services’ “Assessing cultural ecosystem services through crowdsourced data from social media”*

### *Draft Manuscripts*

Behanan, P., Guilfoos, T. and Kolstoe, S. “Estimating Habitual and Variety-seeking Behavior: Non-market Valuation of Recreational Birdwatching”

Kolstoe, S. “Low-Snowpack and Wildfires: A Welfare Double-Edged Sword for Hikers”

Kolstoe, S., Chaudhry, A. and Tsournos, P. “Salmon are King: A Recreational Site-Choice Model of Fishing during an Extreme and Prolonged Drought”

Kolstoe, S., Vander Naald, B. and Cohan, A. “Comparing WTP for Biodiversity Protection Across Samples from Social Media Platforms: Evidence from Waikamoi Preserve” *Invited Paper for Ecosystem Services’ “Assessing cultural ecosystem services through crowdsourced data from social media”*

### *Works in Progress*

Kolstoe, S. and Cameron, T.A. “Exploring Preferences of eBirders over Backyard and Local Birds, A Stated Preference Approach.”

Kolstoe, S. and Cameron, T.A. “Wildfires, Air Quality and Birding: How Participation Changes”

Kolstoe, S., and Cameron, T.A. “Birding and Wildfires in the Pacific Northwest: Valuing Ecological Succession, An eBird Example ”

Kolstoe, S., Vander Naald, B. and Cohan, A. “WTP for Biodiversity Protection: Evidence from Waikamoi Preserve”

### FIELD RESEARCH EXPERIENCE *Survey Administration and Focus Groups*

Focus groups/talk alouds, Maui, HI, June 2019

Focus groups/talk alouds, Salisbury, MD, 2018

Survey administration, Las Vegas, NV, 2011

### *Biology Field Research*

Prepared, deployed and recovered deep-sea experiments, Ray Lee Laboratory, Washington State University, *R/V Atlantis*, 2009 & 2010

SERVICE ACTIVITIES	<p><i>Department and School Service</i>  Department of Economics and Finance Brown Bag Seminar Coordinator  Interim Faculty Director for the Business Honors Program in 2019  Member of the 2018-2019 Faculty Search Committee for a Health Economist  Perdue School of Business Brown Bag Seminar Coordinator</p> <p><i>University Service</i>  High Performance Computing Lab Steering Committee  Udall Faculty Representative  2019 Applicants: Aubrey Anderson, Courtney (Nicole) Hammond* and Devin Neil  2020 Applicants: Heather Delaphine, Allison Dreiss  * denotes Udall Scholar</p>
PROFESSIONAL ACTIVITIES	<p><i>Professional Association Committee Member</i>  Northeastern Agricultural and Resource Economics Association  Career Advancement and Mentoring Program Committee  Selected Papers Committee  Association of Environmental and Resource Economists  Southern Economic Association Program Committee</p> <p><i>Referee</i>  <i>Agricultural and Resource Economics Review, American Journal of Agricultural Economics, Ecological Applications, Energy Policy Human Dimensions of Wildlife, Journal of Environmental Economics and Management, Journal of Environmental Economics and Policy, Landscape and Urban Planning, Marine Resource Economics, Resource and Energy Economics</i></p> <p><i>Reviewer</i>  Agricultural and Applied Economics Association 2017, 2019 &amp; 2020 Conference  Environmental and Non-Market Valuation Section  Northeastern Agricultural and Resource Economics Association 2018 and 2019 Conference  Southern Economic Association Conference 2019, 2020  Association of Environmental and Resource Economists  Western Economic Association International Conference 2020  Association of Environmental and Resource Economists</p>
AWARD	The Mikesell Research Paper Award, University of Oregon, June 2015
RESEARCH GRANT	<p>Salisbury University Faculty Mini Grant, “Understanding the Preferences of Marylanders for Birds in their Backyard and Neighborhood,” 2019-2020, Project PI</p> <p>Delaware Sea Grant, “The importance of Delaware Bay near-shore habitats to migratory song-birds and the projected ecological and economic consequences of future sea-level rise and urban development,” February 2020 - January 2022, Project co-PI (Project PI: Christopher Heckscher at Delaware State University); Undergraduate Research Intern: Kelsey Poisal</p>
CONTRACT	The Nature Conservancy - Hawaii, “TNC Maui Waikamoi Bird Valuation and Willingness to Pay Study,” June 2019 - 2020, Project PI (co-PI Brian Vander Naald, Drake University)
PRESENTATIONS	<p><i>Conference Presentations</i></p> <p>“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example,” presented at the Southern Economic Association Conference, Fort Lauderdale, FL, November 23-25, 2019.</p> <p>“Birding and Wildfires: Valuing Lost-Use Value and Ecological Succession, An eBird Example,” presented at the Western Economic Association International Conference. San</p>

Francisco, CA, June 28-July 2, 2019.

“Wildfires and Birding: Valuing Ecological Succession,” presented at the Southern Economic Association Conference. Washington, DC, November 17-20, 2018.

“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example,” presented at the 6th World Congress of Environmental and Resource Economists. Gothenburg, Sweden, June 25-29, 2018.

“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example,” presented at the Society for the Benefit-Cost Analysis Conference. Washington, DC, March 14-16, 2018.

“Low Snowpack and Wildfires: A Double-Edged Sword for the Welfare of Hikers”, presented at the Southern Economic Association Conference. Tampa, FL, November 17-19, 2017.

“Supplementing eBird Citizen Science Data with Auxiliary Surveys of Participants: New Insights Concerning the Determinants of Birding Destination Choice by Birders,” presented a poster at the NAREA Conference. Washington, D.C., June 11-14, 2017.

“Supplementing eBird Citizen Science Data with Auxiliary Surveys of Participants: New Insights Concerning the Determinants of Birding Destination choice by Birders,” presented at the Society for Benefit-Cost Analysis Conference. Washington, D.C., March 16-17, 2017.

“The Value of Birds to eBirders: Exploring Citizen Science Data using a Recreational Site Choice Model,” presented at the Southern Economic Association Conference. Washington, D.C., November 19-21, 2016.

“Welfare Effects and Consequences for Birders from Changes in Site Attributes,” presented at the Western Economic Association International, Portland, OR, June 29- July 2, 2016.

“Modeling Recreation Behavior of Bird Watchers with Data from a Citizen Science Project,” presented at the Agricultural & Applied Economics Association, San Francisco, CA, July 26-28, 2015.

“Exploring Systematic Differences in the Value to Birders of Species Biodiversity: A RUM Study of Site Choice by eBird Participants,” presented a poster at the Association of Environmental and Resource Economists, San Diego, June 3-5, 2015.

“The Value of Avian Biodiversity to Recreational Birders: A Random Utility Model of Site Choice by eBird Participants,” presented at the Society for Benefit-Cost Analysis, Washington D.C., March 18-20, 2015.

“The Value of Biodiversity: Birders’ WTP for Species Abundance,” presented at the Western Economic Association International, Denver, CO, June 27-July 1, 2014.

#### *Workshop Presentations*

“WTP for biodiversity protection: Evidence from Waikamoi Preserve” presented at the W4133 Workshop, Athens, GA, February 12-14, 2020.

“Hurry Up and Weight: Auxiliary Data to Improve Representativeness of Inference from Citizen Science Data” presented at the Applications and Potential of Ecosystem Services Valuation within USDA - Advancing the Science Workshop, Washington, DC, April 23-24, 2019.

“Low-Snowpack and Wildfires: A Welfare Double-Edged Sword for Hikers,” presented at the W4133 Workshop, Santa Fe, NM, February 20-22, 2019.

“Low-Snowpack and Wildfires: A Welfare Double-Edged Sword for Hikers,” presented at the Heartland Workshop, Urbana-Champaign, IL, September 29-30, 2018.

“Exploring the Heterogeneity of Preferences of Recreationalists for Recreational Sites along the Sacramento River,” presented at the W4133 Workshop, Austin, TX, February 21-23, 2018.

“Basics about Dealing with Spatial Data,” presented at the Mikesell Environmental and Resource Economics Workshop at the University of Oregon. Eugene, OR, January 19, 2018

“Climate Policy, Land Cover, and Bird Populations: Forecasting Impacts on the Future Welfare of Birders in the Pacific Northwest,” presented at the NAREA Workshop. Washington, D.C., June 14-15, 2017.

“The Value of Bird Biodiversity to eBirders: Exploring Citizen Science Data using a Recreational Site Choice Model,” presented at the W3133 Workshop, Portland, OR, February 25-26, 2016.

“Using Citizen Science Data to Measure the Value of Birds to Birdwatchers,” presented at the Oregon Resource and Environmental Economics Workshop. Salem, OR, October 2, 2015.

“Exploring Systematic Differences in the Value to Birders of Species Biodiversity: a RUM Study of Site Choice by eBird Participants,” presented at the Camp Resources, Asheville, NC, August 2-4, 2015.

#### *Invited Presentations*

“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example” presented at Cornell University, March 5, 2020.

“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example,” presented at the University of Rhode Island, December 6, 2019.

“The Value of Bird Biodiversity in Urban Areas,” Biodiversity of Cities Symposium, Featured Speaker, University of North Carolina at Chapel Hill, April 25-26, 2019.

“How Citizen Science Can Be Used By Social Scientists to Understand the Non-Market (Use) Value of Environmental Goods: An eBird and Wildfire Example,” Resources for the Future, Washington D.C., November 1, 2018.

“Citizen Science and an Application to Environmental Economics: An eBird Example,” presented to teachers and outdoor educators participating in a multi-day training by the Ward Museum and Safe Skies Maryland and the Maryland Association for Environmental and Outdoor Education, Salisbury, MD, August 22, 2018.

“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example,” University of Delaware, April 18, 2018.

“Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example,” DePauw University, April 6, 2018.

“Valuing Non-Market Goods and Services, Work of a Biologist Turned Environmental Economist,” Environmental Fellows Program, at DePauw University, April 5, 2018.

“Supplementing eBird Citizen Science data with auxiliary surveys of participants: New insights concerning the determinants of birding destination choice by birders,” Clarkson University, November 10, 2017.

“Supplementing eBird Citizen Science data with auxiliary surveys of participants: New insights concerning the determinants of birding destination choice by birders,” California State University, Chico, Chico, CA, March 24, 2017.

“Using Citizen Science Data to Measure the Value of Avian Biodiversity to Birdwatchers,” Pennsylvania State University, University Park, PA, February 4, 2016.

“Using Citizen Science Data to Measure the Value of Avian Biodiversity to Birdwatchers,” Salisbury University, Salisbury, MD, January 29, 2016.

### *Panels*

“How to Take Your Research From the Drawing Board to Print,” moderated and led the organization of the panel on behalf of the 2017 CAM Fellows, Northeastern Agricultural and Resource Economics Association Conference, Philadelphia, PA, June 10-12, 2018.

“The Value of Birds: Diverse Perspectives on Biodiversity,” moderator and panelist. Salisbury, MD, March 9, 2018.

“Teaching Environmental Economics and Policy in a Politically Fractured World,” panelist, Southern Economic Association Conference. Tampa, FL, November 17-19, 2017.

### *Public Talks*

“Backyard Birds of the Chesapeake: A Talk on the Value of Your Neighborhood Birds with Sonja Kolstoe,” Ward Museum, Salisbury, MD, scheduled for May 14th, 2020.

“Losing Land, Losing Birds: Climate Change and Our Wildlife,” Co-Keynote Speaker, Ward Museum, Salisbury, MD, November 30th, 2018.

“Valuing Bird Biodiversity Using Citizen Science Data from eBird,” Salisbury University’s Environmental Studies Faculty Lecture Series, Ocean Pines, MD, October 6, 2017.

“Using (eBird) Citizen Science Data to Measure the Value of Avian Biodiversity to Birdwatchers”, Co-Keynote Speaker for the Valuing Bird Biodiversity Using Citizen Science Event, Ward Museum, Salisbury, MD, March 10, 2017.

## TEACHING

### *Salisbury University*

Principles of Microeconomics, ECON 211 (students: 26-33)

Intermediate Microeconomics, ECON 311 (students: 10-26)

Econometrics, ECON 430 (students: 8)

Principles of Environmental Economics, ENVR 210 (students: 25-30)

Hidden Values: Understanding the Role of Economics in Public Policy, ENVR 305, *scheduled for Spring 2021*

### *University of Oregon*

Using Market Instruments to Improve Environmental Outcomes, ENVS 411 (students: 10)

Labor Market Issues, EC 350 (students: 50-56)

Environmental and Resource Economic Issues, EC 333 (students: 60-85)

Principles of Microeconomics, EC 201 (students: 49)

## SOFTWARE

ArcGIS, QGIS, Python, Google Earth Engine, L<sup>A</sup>T<sub>E</sub>X, STATA, Matlab, Qualtrics and R

## MEMBERSHIPS

American Economic Association

Agricultural and Applied Economics Association

Association of Environmental and Resource Economists

Northeastern Agricultural and Resource Economics Association

Professional Ski Instructors of America, Pacific Northwest Division

Southern Economic Association

CITIZENSHIP	USA and France
LANGUAGES	English and French Diplôme Approfondi de la Langue Française C1, May of 2008 (College-Level)