

Anna M. Tucker

Postdoctoral Research Associate
USGS Patuxent Wildlife Research Center

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Education

Ph.D. Wildlife Sciences - Auburn University - 2019

Stopover ecology and population dynamics of migratory shorebirds

Advisor: Dr. Conor McGowan

M.S. Ecology - Virginia Commonwealth University - 2014

Occurrence and consequences of conspecific brood parasitism in a cavity-nesting warbler

Advisors: Dr. Lesley Bulluck and Dr. Rodney Dyer

B.S. Biology - Loyola University Maryland - 2010

Professional Appointments

Postdoctoral Researcher, U.S. Geological Survey, Patuxent Wildlife Research Center

Jan 2020-present

Dynamic management strategies for migratory birds under uncertain but inevitable global change

Supervised by Dr. Jim Lyons and Dr. Michael Runge

Postdoctoral Researcher, School of Forestry and Wildlife Sciences, Auburn University

Apr 2019-Jan 2020

Population analysis and projection modeling for USFWS Species Status Assessments

Supervised by Dr. Conor McGowan

Publications

Tucker, A.M., C.P. McGowan, E. Mulero, N.F. Angeli, J.P. Zegarra. 2020. Developing a demographic projection model to support conservation decision making for an endangered snake with limited monitoring data. *Animal Conservation*.

Tucker, A.M., C.P. McGowan, M. Catalano, A.L. DeRose-Wilson, R.A. Robinson, and J. Zimmerman. 2019. Foraging ecology mediates response to ecological mismatch during migratory stopover. *Ecosphere*, 10.

Tucker, A.M., C.P. McGowan, R.A. Robinson, J.A. Clark, J.E. Lyons, A.L. DeRose-Wilson, R. du Feu, G.E. Austin, P.W. Atkinson, and N.A. Clark. 2019. Effects of individual misidentification on estimates of survival in long-term mark-resight studies. *The Condor: Ornithological Applications*, 121: 1-13.

Weaver, R.J., E.A. Santos, **A.M. Tucker**, A.E. Wilson, and G.E. Hill. 2018. Carotenoid metabolism strengthens the link between feather coloration and individual quality. *Nature Communications*: 9.

Tucker, A.M. and L.P. Bulluck. 2017. No evidence for a negative effect of conspecific brood parasitism on annual survival of female Prothonotary Warblers. *Ibis*, 160: 447-452.

Tucker, A.M., R.J. Dyer, S.K. Huber, and L.P. Bulluck. 2016. Opportunistic conspecific brood parasitism in a box-nesting population of Prothonotary Warblers (*Protonotaria citrea*). *The Auk*: 133, 2, 298-307.

In progress

Tucker, A.M. and M.C. Runge. Optimal strategies for managing wildlife harvest under climate change. *In review - Journal of Wildlife Management.*

Dunham, K., **A.M. Tucker**, D. Koons, A. Abebe, F.S. Dobson, and J.B. Grand. Demographic responses to climate change in a threatened Arctic species. *In review - Ecology and Evolution.*

Lawson, A.J., B. Folt, **A.M. Tucker**, F.T. Erickson, and C.P. McGowan. Decision context as a necessary component of population viability analysis appraisal. *In revision - Conservation Biology.*

Folt, B., J.M. Goessling, **A.M. Tucker**, C. Guyer, S. Hermann, E. Shelton-Nix, and C.P. McGowan. Contrasting Patterns of Demography and Population Viability among Six Populations of Gopher Tortoises (*Gopherus polyphemus*) at the Species' Range Edge. *In revision - Journal of Wildlife Management.*

Valente, J.J., C.L. LeGrande-Rolls, J.W. Rivers, **A.M. Tucker**, R.A. Fisher, and M.G. Betts. The role of conspecific attraction in breeding habitat selection by terrestrial birds: current knowledge and future research directions. *In review - Ornithological Applications.*

Research Grants and Fellowships

2020 Working Group Grant, USGS Powell Center for Earth System Science Analysis and Synthesis* \$170,785

2020 Research Grant, Northeast/Southeast Climate Adaptation Science Center* \$345,904

2019 Co-PI, Research Contract for Species Status Assessments, USFWS Region 2 (pending) \$50,000

2017 Francis M. Peacock Scholarship for Native Bird Habitat, Garden Club of America \$4000

2015 Graduate Thesis/Dissertation Fellowship, Auburn University Graduate School \$500

2015 Research Grant, Eastern Bird Banding Association Memorial Fund \$1000

2013 Student Research Award, VCU Rice Center \$1000

2013 J.J. Murray Research Award, Virginia Society of Ornithology \$1000

2008 Hauber Summer Research Fellowship, Loyola University \$3000

* not listed as PI but led the writing of these proposals

Awards and Honors

2019 Distinguished Dissertation Award, Auburn University Graduate School

2019 Outstanding Doctoral Student, Auburn University Graduate Student Council

2019 Drummond PhD Student Award, AU School of Forestry and Wildlife Sciences

2018 Biometrics Working Group Travel Award, The Wildlife Society

2018 AOS Council Student Presentation Award, American Ornithological Society

2017 Best Student Poster, Euring Analytical Meeting and Workshop

2017 Graduate Student Award, Ducks Unlimited

2014 Outstanding Graduate Student in Ecology, Virginia Commonwealth University

Conference Presentations

Invited

2019 Encounter type and frequency determine the effects of individual misidentification on survival estimation. *Oral presentation, American Fisheries Society & The Wildlife Society Joint Conference, Reno NV*

Contributed

2020 A demographic PVA to support conservation decision making for an endangered snake with limited monitoring data. *Oral presentation, The Wildlife Society Annual Meeting, virtual*

2020 A full annual cycle perspective for analyzing stopover monitoring data: integrated population models for Arctic-breeding shorebirds. *Oral presentation, North American Ornithology Conference* (presented by C.P. McGowan)

2019 Estimating population growth rate and latent recruitment at a migratory stopover site using integrated population models. *Oral presentation, American Fisheries Society & The Wildlife Society Joint Conference, Reno NV*

2019 Annual variation in use of a spring stopover site by three migratory shorebirds. *Oral presentation, American Ornithological Society Annual Meeting, Anchorage AK*

2018 Bias in survival estimates due to individual misidentification in long-term mark-resight studies. *Oral presentation, The Wildlife Society Annual Meeting, Cleveland OH*

2018 Effects of resource mismatch on stopover mass gain dynamics for two Arctic-breeding shorebirds. *Oral presentation, American Ornithological Society Annual Meeting, Tucson AZ Winner–Student Presentation Award*

2017 Comparing annual variation in stopover mass gain between two long-distance migrants. *Oral presentation, Western Hemisphere Shorebird Group, Paracas, Peru* (presented by R.A. Robinson)

2017. Combining multistate models and network theory to evaluate movement patterns during migratory stopover. *Poster presentation, Euring Analytical Meeting, Barcelona, Spain Winner–Best Student Poster Award*

2016 Assessing the influence of migratory connectivity and spring stopover site disturbance on population dynamics using a full annual cycle simulation model. *Oral presentation, North American Ornithological Conference VI, Washington DC*

2014 Conspecific brood parasitism as an alternative breeding strategy in box-nesting Prothonotary Warblers. *Oral presentation, American Ornithologists' Union Annual Meeting, Estes Park CO*

2014 The occurrence and consequences of conspecific brood parasitism in the Prothonotary Warbler (*Protonotaria citrea*). *Oral presentation, Virginia Society of Ornithology Annual Meeting, Norfolk VA*

Professional Development

Decision Analysis for Natural Resources Certificate Program - NCTC (2020-present)

Observer, Adaptive Management Review Workshop, Upper Midwest Environmental Science Center 2020

Introduction to Bayesian Statistics with Nimble, Reno NV 2019

Apprentice, National Conservation Training Center Structured Decision Making Workshop 2018

Integrated Population Modeling Workshop, Patuxent Wildlife Research Center 2017

Data Integration Workshop, Euring Analytical Meeting, Barcelona 2017

Conservation Leaders for Tomorrow, Mansfield GA 2017

Teaching

Lesson Development

Quantitative Techniques for Species Status Assessments, USFWS Training Course (2017-2018)
Wildlife Population Science Lab, Auburn University (Spring 2018)
Ornithology Program, National Audubon Society Hog Island Family Camp (2017-present)
Ornithology Lab, Virginia Commonwealth University (Summer 2013)

Guest Lectures

Avian Conservation in North America, Ornithology, Auburn University (Apr 2018)
Migratory Shorebirds in Delaware Bay, Osher Lifelong Learning Institute, Auburn AL (Apr 2017)
Avian Life History, Ornithology, Virginia Commonwealth University (Mar 2014)

Teaching Assistantships

Ornithology Lab, Auburn University (Spring 2016)
Anatomy and Physiology II Lab, Auburn University (Spring 2015-Fall 2016)
Ornithology Lab, Virginia Commonwealth University (Spring 2014)
Tropical Avian Ecology in Panama, Virginia Commonwealth University (Spring 2014)
Intro. to Biological Sciences Lab, Virginia Commonwealth University (Fall 2012-Fall 2013)

Service and Outreach

Peer Reviewer: *Ibis*, *Conservation Science and Practice*, *Landscape and Urban Planning*, *Urban Ecosystems*, *Evolutionary Ecology*
Founder and Coordinator, Wildlife Graduate Student & Postdoc Quant Club (2017-2018)
Graduate Student Representative, IT Specialist Hiring Committee (Jan 2018)
Ornithology Instructor, National Audubon Society, Hog Island Family Camp (2017-present)
Instructor, Graduate Women in Science and Girl Scout Pi Day (Mar 2017)
Ornithology Instructor, Alabama Extension Master Naturalist Program (Dec 2016)
Bird Survey Leader, Alabama Extension Program BioBlitz (2016-2017)
Poster Session Judge, Auburn University This is Research Symposium (Mar 2016)
Shorebird Monitoring Volunteer, Delaware Shorebird Project (2015-2018)
Vice President, VCU Graduate Organization of Biology Students (2013-2014)
Interpretive Aide, National Aquarium in Baltimore (2010-2011)
Environmental Education Volunteer, Patterson Park Audubon Society (2009-2010)