Grace Schuster

she/her/hers

8235 Northwoods Dr Apt 203 Lincoln NE 68505 / gschuster@huskers.unl.edu / (402) 806-3914

https://sites.google.com/view/graceeschuster

Summary

A Post Doctoral Research Associate at the University of Nebraska-Lincoln, seeking additional experience in ecology, ornithology, agroecology, quantitative analysis, and professional development. My involvement in field research, data analysis, scientific publishing, and community outreach has allowed me to develop keen scientific communication skills and an excellent understanding of natural resources management. Presently, I am working as a post-doctoral researcher at the University of Nebraska-Lincoln, where I focus on establishing effective conservation strategies for avian populations in agriculture landscapes.

Education

University of Nebraska – Lincoln, School of Natural Resources, Lincoln, NE **2017-2021**

Bachelor of Science, *Fisheries and Wildlife with a Minor in Urban Forestry*

University of Nebraska – Lincoln, School of Natural Resources, Lincoln, NE **2021-2025**

Doctorate of Philosophy, *Natural Resources Science with a specialization in Applied Ecology*

Dissertation: "Bioenergy Crop Production: Implications for Grassland Bird Communities in southwestern Nebraska"

Advisor: Dr. Andrew Little

Research Experience

University of Nebraska – Applied Wildlife Ecology and Spatial Movement Lab

Post-Doctoral Research Associate / August 2025 - Present / Lincoln, NE / https://awesmlab.unl.edu/

- As a researcher at the University of Nebraska, I apply foundational scientific principles and establish field methodologies to collect, interpret, and analyze ecological data related to avian populations and habitat dynamics. My research focuses on advancing conservation within agricultural landscapes to promote both productivity and long-term resource sustainability. More specifically, I specialize in avian ecology and employ both traditional monitoring methods (i.e., point count surveys) as well as Passive Acoustic Monitoring (PAM) technology to assess populations.

Felidae Conservation Fund

GIS Volunteer / August 2025 – Present / United States

- Collaborated with a conservation organization to develop and analyze GIS datasets supporting the ongoing protection efforts for mountain lions (*Puma concolor*) in California.

University of Nebraska - Human Dimensions Lab

Graduate Candidate / May 2020 - Present / Lincoln, NE

- Entered and analyzed social science data, conducted multiple independent research surveys, and provided project support to lab professionals. I have designed outreach materials, including cover letters and postcards, to support communication efforts. My responsibilities include conducting interviews with private landowners in southwestern Nebraska and developing personalized reports to explain the ecological research being conducted on their properties.

Prairie Corridor on Hanes Branch

Research Technician / May 2019 - August 2019, May 2020 - September 2020 / Nebraska

- Worked throughout the grasslands of Nebraska, assisting in various research methods, conservation practices, and habitat management techniques. During this two-year internship, my research focused on game bird and nongame bird populations and community outreach.

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Professional Experience

Wild Bird Habitat

Sales Associate / November 2018 - April 2020 / Lincoln, NE

- Sold wild bird feeders and bird seed at this family-owned business. Along with providing quality customer service, my responsibilities included educating the public on proper wild bird care and urban wildlife conservation.

Lower Platte South Natural Resource District

Seasonal Worker / September 2020 - November 2020 / Lincoln, NE

- Developed expertise on the various land management practices utilized in the grasslands and wetlands around urban areas in Lincoln, NE.

Teaching and Mentoring

Wildlife Techniques Class, University of Nebraska - Lincoln

Teaching Assistant / October 2020, October 2021, October 2023 / Lincoln, NE

- Taught undergraduate students about both traditional (i.e., point counts) and innovative (i.e., passive acoustic monitoring) bird-counting methods as well as the detectability issues related to both methods.

Undergraduate Creative Activities and Research Experiences (UCARE) Grant

Undergraduate Research Mentor / May 2022 - March 2023, April 2024 – April 2025, March 2025 - Present / Nebraska

- Research Projects: “Rangeland Vegetation Succession in Agriculture Landscapes”, “Understanding Wildlife Biodiversity & Pheasant Presence as a Benefit to Declining Grassland Birds”, “How do regenerative agriculture practices influence avian community structure?”

Cabela’s Apprenticeship

Undergraduate Research Mentor / April 2022 - March 2023, April 2024 – April 2025 / Nebraska

- Research Projects: “Rangeland Vegetation Succession in Agriculture Landscapes”, “Understanding Wildlife Biodiversity & Pheasant Presence as a Benefit to Declining Grassland Birds”

Community Engagement

Teammates

Mentor / July 2022 – November 2023 / Lincoln, NE

East Campus Discovery Days

Volunteer / August 2022 / Lincoln, NE

State Future Farmers of America Convention

Volunteer / April 2019, April 2021, April 2022, April 2024 / Lincoln, NE

Professional Memberships

The Wildlife Society

Member / May 2021 – Present / United States

Ecological Society of America (ESA)

Member / May 2025 – Present / United States

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Peer Reviewed Publications

Publication No	Status	Title	Primary Author	Journal Outlet
1	Published, 2024	Evaluation of an autonomous acoustic surveying technique for grassland bird communities in Nebraska (https://doi.org/10.1371/journal.pone.0306580)	**Grace Schuster**, Leroy Walston, and Andrew Little	PLoS One
2	Published, 2024	Disseminating human-wildlife damage management information in the 21st century: a case example from Nebraska (https://dx.doi.org/10.1353/gpr.2024.a959760)	**Grace Schuster**, Andrew Little, Matthew Gruntorad, Christopher Chizinski, and Dennis Ferraro	Great Plains Research
3	Accepted, 2025	How do we improve precision conservation adoption? An application of the Delphi method,	Morgan Register, Corrin Winter, Matthew Gruntorad, Christopher Chizinski, and **Grace Schuster**	Society & Natural Resources
4	Submitted, 2025	Comparing temporal trends of grassland bird occupancy using passive-acoustic monitoring data	**Grace Schuster**, Leroy Walston, and Andrew Little	Ecology Solutions and Evidence

Non-peer Reviewed Articles

Article No	Title	Primary Author	Outlet
1	Benefits of Grasslands for Bioenergy Production in an Agricultural Landscape: 2023	Grace Schuster	Applied Wildlife Ecology and Spatial Movement Lab
2	Benefits of Grasslands for Bioenergy Production in an Agricultural Landscape: 2024	Grace Schuster	Applied Wildlife Ecology and Spatial Movement Lab

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Professional Presentations

Application of Passive Acoustic Monitoring to Compare Avian Populations in Perennial Grasslands and Croplands in Nebraska, **2025 Ecological Society of America Conference**, Baltimore, MY

How do producers value natural resources in Great Plains Agroecosystems?, **2025 Great Plains Conference**, Lincoln, NE

Bioenergy Crop Production: Implications for Grassland Bird Communities**, 2024 Midwest Bioenergy Crop Coalition quarterly meeting**, Virtual Meeting

Considering Landowners Perspectives on Diversifying their Agriculture Systems, **2024 Pathways Conference**, Cordoba Spain

Using Supervised and Unsupervised Machine Learning to Identify Trends and Topics Among Human Dimensions of Wildlife Abstracts, **2024 Pathways Conference Poster Session**, Cordoba Spain

Evaluation of an Autonomous Acoustic Surveying Technique for Grassland Bird Communities in Nebraska, **2023 The Wildlife Society Conference**, Louisville KY

Bioenergy Crop Production: Implications for Grassland Bird Communities, **2023 Conservation Practitioner Symposium**, Grand Island NE

Strategic Bioenergy Planning: Implications for Grassland Birds, **2022 The Wildlife Society Conference Poster Session**, Spokane WA

Bioenergy Crop Production: Implications for Grassland Bird Communities, **2022 National Pheasant Fest**, Omaha NE

Skills and Certifications

Field

- Telemetry, Point Count Surveys, Passive-acoustic monitor sampling, Tree Climbing, All-terrain Vehicle (ATV) experience, Visual Obstruction Readings (VOR), Composition Readings with Daubenmire Frame, Trail Camera Sampling, Grassland Bird Identification, Grassland Plant Identification, Ground-truthing Habitat

Analytical

- R, ArcGIS, ArcGIS Online, BirdNET Automatic Classifier, Dropbox, OneDrive Applications, Google Drive Applications, Adobe, Zotero, Microsoft Applications, Canva Graphic Design, Zoom, Adobe Lightroom, Qualtrics, eBird

Statistical

- Integrated Population Models (IPM), Occupancy Modeling using R package “spOccupancy”, Generalized Additive Models (GAM), Generalized Additive Mixed Models (GAMM), Bayesian statistics, Generalized Linear Models (GLM), Generalized Linear Mixed Models (GLMM) using R package “glmmTMB”, Analysis of Variance (ANOVA), Student t-test, Extracting and Processing of acoustic files using R package “av”, Model Averaging using R package “MuMIn”, Text Analysis using R package “tidytext”, Random Forest Modeling, Graphical Visualizations using R package “ggplot2”, N-Mixture Modeling using R package “unmarked”, Spatial Analysis using R package “terra” and “sf”

Other

- Valid US driver's license, strong written and oral communication skills, operate full-size pickup truck, experience in big data analysis and preprocessing, conflict-resolution skills, experimental and survey design skills, nature photography, leadership, ability to lift 50lbs

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References

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Argonne National Laboratory
Email: lwalston@anl.gov

Dr. Christopher Chizinski
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University of Nebraska - Lincoln
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