

Jackson Barratt Heitmann
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Professional Positions

Postdoctoral Associate, Weecology Lab, University of Florida, Gainesville, FL 2026-present

Education

University of Florida, Gainesville, FL 2026
Ph.D. Wildlife Ecology and Conservation
• Dissertation: Analysis of bird biodiversity within and among isolated wetlands across space and time

College of Charleston, Charleston, SC 2023
M.S. Environmental and Sustainability Studies with Distinction
• Thesis: Are ephemeral wetlands hotspots for avian biodiversity in pine savannah ecosystems?

Bard College, Annandale-on-Hudson, NY 2018
B.A. Global and International Studies
• Senior Thesis: National Parks in Sub-Saharan Africa, an Examination of Social and Economic Program Effectiveness in the Development Paradigm

Publications

* denotes student mentored

Peer-Reviewed

1. Fraleigh DJ, **Barratt Heitmann J**, Robertson BA. Ultraviolet polarized light pollution and evolutionary traps for aquatic insects. *Animal Behavior*. 2021.
2. **Barratt Heitmann J**, Folk TH, Lord LJ, and McGlinn DJ. Geographically isolated wetlands have higher alpha diversity than surrounding uplands in pine savanna ecosystems. *Wetlands Ecology and Management*. 2025
3. **Barratt Heitmann J**, Mason BM, Callaghan CT. Land cover and area influence bird biodiversity in geographically isolated wetlands. *Diversity and Distributions*. 2025
4. Mason BM, Mesaglio T, **Barratt Heitmann J**, Chandler M, Chowdhury S, Gorta S, Grattarola F, Groom Q, Hitchcock C, Hoskins L, Lowe S, Marquis M, Pernat N, Shirev V, Shukherdori B, and Callaghan CT. iNaturalist is shaping the future of biodiversity research. *BioScience*. 2025
5. Buenano Marino CD, **Barratt Heitmann J**, García-Esparza J, Mason BM, and Callaghan CT. Does building height influence bird biodiversity? *Landscape Ecology*. 2025

6. Callaghan CT, Hoskins L, **Barratt Heitmann J**, Alvarez-Abreu O, Bearhs K, Carnevale S, Fussell CA, Lilkendey T, Marquis M, Sellers B, Song J, Swigris A, Zuliani M, and Mason BM. A bioblitz provides valuable biodiversity data. *Natural Areas Journal*. 2026
7. **Barratt Heitmann J**, Ernest MK, McGlinn DJ, and Callaghan CT. Different beta-diversity frameworks reveal contrasting roles of species abundance distributions and spatial aggregation. *Journal of Biogeography*. 2026

In Review

8. **Barratt Heitmann J**, Qiu J, Callaghan CT. Geographically isolated wetlands are understudied bird biodiversity repositories. For *Biodiversity and Conservation*. 2026
9. **Barratt Heitmann J**, Sieving K, Callaghan CT. Intra-daily temporal turnover of bird biodiversity and functional ethogram in geographically isolated wetlands. For *Avian Ecology & Conservation*.

In Preparation

10. **Barratt Heitmann J**, Keates C, Lyons MB, and Callaghan CT. Half of the world's terrestrial biodiversity use wetlands. For *Science*.
11. Fussell Persaud CA*, Callaghan CT, and **Barratt Heitmann J**. Professionally collected wading bird data population trends can be estimated accurately from eBird. For *Ibis*.
12. Williamson A, **Barratt Heitmann J**, and McGlinn DJ. Differences between passive acoustic monitoring and point counts depend on confidence threshold and spatial scale: a case study of ephemeral wetlands. For *Ibis*.
13. Robertson BA, **Barratt Heitmann J**. Polarization properties of solar panels trigger maladaptive water-seeking behavior in wildlife. For *Journal of the Royal Society Interface*.

Theses

Barratt Heitmann J, "National Parks and Development in Sub-Saharan Africa: An Examination of Social and Economic Program Effectiveness in the Development Paradigm" (2018). *Senior Projects Spring 2018*. 216. https://digitalcommons.bard.edu/senproj_s2018/216

Barratt Heitmann J, "Are ephemeral wetlands hotspots for avian biodiversity in pine savannah ecosystems?" (2023). *College of Charleston ProQuest Dissertations & Theses*. 30423416.

<https://www.proquest.com/docview/2816729772?pq-origsite=gscholar&fromopenview=true&sourcetype=Dissertations%20%20Theses>

Reports

Barratt Heitmann J for *Florida Ornithological Society*, "Geographically Isolated Wetlands Position Statement". Fall 2025. <https://fosbirds.org/wp-content/uploads/2025/06/FOS-position-statement-isolated-wetlands.pdf>

Grants, Awards & Fellowships

Grants

South Carolina Sea Grant Consortium Biannual Research Award (\$112,000)

2022-2023

- Project title: How does disturbance shape avian community composition and diversity in ephemeral wetlands?
- Role: Lead-PI Daniel J. McGlinn, Stacey Lance (Co), Lisa Lord (Co), and Lucy Davis (Co)
- As a MS student I was unable to be listed as a PI on the grant, but I wrote the grant, carried out the field work, and produced the grant deliverables (publications and internal reports).

Fellowships

CALS Dean's Award Graduate Assistantship (\$128,000)

2023-2027

EVSS Merit Research Assistantship Award (\$13,200)

2021-2022

Research Assistantship – McGlinn Biodiversity Lab (\$30,000)

2022-2023

Graduate Assistantship – Stono Preserve Student Garden (\$7,500)

2021

Awards

Outstanding Graduate Service to Wildlife Ecology & Conservation—UF

2026

Florida Wildlife Federation Scholarship (\$1,000)

2025

Wildlife Ecology & Conservation Travel Grant (\$500)

2025

William & Else Jennings Scholarship (\$1,500)

2024

2022 College of Charleston 1st Place Graduate Poster Session (\$500)

2024

Presentations

Invited Presentations

1. Florida Ornithological Society Meeting, November 16, 2024. Jackson Barratt Heitmann, Brittany M. Mason, and Corey T Callaghan. Land cover and area influence bird biodiversity in geographically isolated wetlands.

Conference presentations

1. The Wildlife Society – Florida Chapter Meeting, April 8-10, 2026. Analise C Fussell Persaud, Corey T. Callaghan and Jackson Barratt Heitmann. Professional wading bird data can be approximated accurately using eBird.
2. Ecological Society of America Meeting, August 14, 2025. Jackson Barratt Heitmann, Brittany M. Mason, and Corey T. Callaghan. Contributions of geographically isolated wetlands to bird biodiversity across the conterminous United States.
3. The Wildlife Society – Florida Chapter Meeting, April 17, 2025. Jackson Barratt Heitmann, Brittany M. Mason, and Corey T. Callaghan. Land cover and area influence bird biodiversity in geographically isolated wetlands.
4. Florida Coop Unit Cooperators Meeting, April 23, 2024. Jackson Barratt Heitmann, Brittany M. Mason, and Corey T Callaghan. Land cover and area influence bird biodiversity in geographically isolated wetlands.

5. Suds & Science Outreach Event. April 14, 2024. Jackson Barratt Heitmann, Brittany M. Mason, and Corey T Callaghan. Land cover and area influence bird biodiversity in geographically isolated wetlands.
6. Forested Wetlands of the Upper Estuary Conference, January 18, 2024. Jackson Barratt Heitmann, Brittany M. Mason, and Corey T Callaghan. Land cover and area influence bird biodiversity in geographically isolated wetlands.
7. South Carolina Sea Grant Research Symposium, May 11, 2022. Jackson Barratt Heitmann, Stacey Lance, Matt Rutter, Lisa Lord, and Daniel J. McGlinn. Are ephemeral wetlands hotspots for avian biodiversity in Pine Savanna ecosystems?
8. College of Charleston Student EXPO, April 7, 2022. Jackson Barratt Heitmann, Stacey Lance, Matt Rutter, Lisa Lord, and Daniel J. McGlinn. Are ephemeral wetlands hotspots for avian biodiversity in Pine Savanna ecosystems?
9. College of Charleston Student Graduate Poster Session, March 16, 2022. Jackson Barratt Heitmann, Stacey Lance, Matt Rutter, Lisa Lord, and Daniel J. McGlinn. Are ephemeral wetlands hotspots for avian biodiversity in Pine Savanna ecosystems?
10. North American Ornithological Conference, August 10, 2020. Robertson BA, Barratt Heitmann J. Polarization properties of solar panels that trigger maladaptive water-seeking behavior in wildlife.
11. Animal Behavior Society, July 18, 2020. Robertson BA, Rothberg O, Barratt Heitmann J, Fraleigh D. Birds use polarized light to locate water bodies.

Teaching Experience

Graduate Teaching Assistant and Lecturer

Spring 2024, 2025, 2026

WIS 3401 – Wildlife Ecology & Management

- Responsible for taking attendance, grading discussion posts, and leading discussion/lecture for multiple classes.
- Developed and delivered community science data collection and introduction to wetland management lessons.
- Managed 3 online sections of each course, promoting discussion on Canvas and delivering 1-on-1 student-based learning via Zoom and in-person as needed.

Urban Ecology Educator

2019

For the Birds! Program

- Taught a total of 610 students (K-12th grade) in-school and afterschool programs on Bird Adaptations, Biomes of New York, and Plants for Birds in 4 boroughs of New York City.
- Developed Plants for Birds lesson plan using NY next generation learning standards and adjusted lesson for distance and in-person learning, and across K-8th grade learning standards.

Guest Lectures

Manhattanville College, Conservation Biology, March 31, 2026. Research synergy between community science and professionally collected data.

Columbia University Pre-College Program, July 14 & 25, 2025. The Biodiversity Crisis: a case for community science.

University of Florida, Forest Ecology, November 13, 2025. Wildlife in embedded wetlands of savanna ecosystems.

Professional Service

Reviewing

I have reviewed articles for multiple journals, including:

Biodiversity & Conservation (2)

Diversity & Distributions (1)

Ecology (1)

PeerJ (2)

Lake and Reservoir Management (1)

Waterbirds (1)

Wetlands (1)

Frontiers in Ecology and the Environment (2)

I have also reviewed 5 grant applications for the NOAA Climate Resilience Regional Challenge.

Mentoring

Carlos Martínez – HS Bronx School of Science - REGENERON Science Talent Competition

iNaturalist data reveals Spotted Lanternfly phenology change over time

- Assisted with research design, data analysis, and scientific writing.

Perry McDonald – BS University of Florida

Ditches and Dikes: Wildlife use of constructed riverine habitats in Gainesville, Florida

- Assisted with research design, remote sensing data collection, and data analysis.

Analise C. Fussell Persaud – MSc University of Florida

Comparison of eBird waterbird data to professionally collected data in Lake Okeechobee, Florida

- Assisted with research design, data analysis, and interpreting scientific results.

Relevant Professional Experience

Global Ecology Research Group, University of Florida , Gainesville, FL <i>PhD Graduate Research Assistant</i>	2023-2027
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McGlenn Biodiversity Lab, College of Charleston , Charleston, SC <i>MS Research Assistant</i>	2021-2022
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South Carolina Department of Health and Environmental Control , <i>Historical Media Preservation Manager</i> , North Charleston, SC	2022-2023
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Bard College, Department of Biology , Annandale-on-Hudson, NY <i>Research Assistant</i>	2019-2020
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Student Conservation Association, an AmeriCorps Program, New York, NY

serving at Audubon New York - *For the Birds!* Program 2019
Urban Ecology Educator

Maine Conservation Corps, an AmeriCorps Program, *Augusta, ME* 2018
serving at Maine Natural Areas Program
Environmental Steward

Volunteer/Outreach Experience

DeLuca Preserve BioBlitz	Spring 2025, 2026
Museum in the Parks – Community Science Program	Fall 2024
City Nature Challenge South Florida Education Program	Spring 2024
Ordway Swisher Christmas Bird Count	Fall 2023
Bird Adaptations Lesson at Phillip P. Simmons School	Summer 2022
Vice-president EVSS MS Student Organization	2021-2022
Bird Walk at Stono Preserve	Summer 2022
Bird Biodiversity Seminar at Overture 55+ Community	Summer 2022
Audubon South Carolina – Bird Banding	Summer 2021
Audubon NY - Long Island Waterbird Survey	Summer 2019
Be a Good Egg Shorebird Outreach	Summer 2019
Sam's Point Breeding Bird Survey	Summer 2019
American Eels monitoring in Hudson River	January 2018
Program for African Thought Intern	Spring 2017
PACE Environmental Education Workshop	January 2016

References

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University of Florida

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