

Jessica Gorzo

ECOLOGIST

NJDEP Fish & Wildlife, Port Republic, NJ

she/her | avianecologist.com | dendroica | gorzo

Recent Experience

New Jersey Dept. of Environmental Protection

RESEARCH SCIENTIST

- Fisheries stock assessment
- Marine Bureau

Port Republic, NJ

Jan. 2025 - Present

Conservation Science Global, Inc.

RESEARCH ASSOCIATE

- Data wrangling and ecological analysis
- Working on a variety of projects to complete grant goals and produce required deliverables

Remote

Mar. 2024 - Dec. 2024

Cellular Tracking Technologies LLC

DATA SCIENTIST

- Develop methodology to estimate locations from radio and Bluetooth signals from wildlife telemetry devices
- Manage data pipelines and processes that deliver and display data via web interfaces

Rio Grande, NJ

Jul. 2020 - Dec. 2024

Natural Resources Research Institute - University of Minnesota

RESEARCHER

- Landscape Ecologist
- NSF Macrosystems Grant postdoc

Duluth, MN

Aug. 2016 - Jun. 2020

CONTRACTOR

New Jersey Dept. of Environmental Protection

MARSH BIRD SURVEY TECHNICIAN

- Worked as a contractor to survey sensitive and endangered nocturnal avian species via boat transects
- Solely by-ear bird identification required for night surveys

Tuckahoe, NJ

Summer 2021, 2024

On the Wing Scientific Consulting LLC

CO-FOUNDER

- Data science consulting projects including spatio-temporal modeling
- Create tools for improving workflows

Remote

Jul. 2018 - Present

Education

Virginia Tech

B.S. BIOLOGICAL SCIENCES

Blacksburg, VA

2004-08

Clemson University

M.S. WILDLIFE & FISHERIES BIOLOGY

Clemson, SC

2009-11

University of Wisconsin

PH.D. WILDLIFE ECOLOGY

Madison, WI

2012-16

Thesis & Dissertation

Gorzo, J. M. (2016). *Avian response to weather in the central US grasslands* [PhD thesis]. The University of Wisconsin-Madison.

Gorzo, J. M. (2012). *Avian communities and landscape characteristics of golf courses within the Beaufort County sea island complex* [Master's thesis]. Clemson University.

Peer-Reviewed Publications

Gorzo, J. M., Pidgeon, A. M., Thogmartin, W. E., Allstadt, A. J., Radeloff, V. C., Heglund, P. J., & Vavrus, S. J. (2016). Using the North American Breeding Bird Survey to assess broad-scale response of the continent's most imperiled

- avian community, grassland birds, to weather variability. *The Condor: Ornithological Applications*, 118(3), 502–512.
- Schilke, P. R., Bartrons, M., Gorzo, J. M., Vander Zanden, M. J., Gratton, C., Howe, R. W., & Pidgeon, A. M. (2020). Modeling a cross-ecosystem subsidy: Forest songbird response to emergent aquatic insects. *Landscape Ecology*, 35, 1587–1604.
- McIntyre, N., Liu, G., Gorzo, J. M., Wright, C. K., Guntenspergen, G. R., & Schwartz, F. (2019). Simulating the effects of climate variability on waterbodies and wetland-dependent birds in the Prairie Pothole Region. *Ecosphere*, 10(4), e02711.
- Hamilton, C. M., Bateman, B. L., Gorzo, J. M., Reid, B., Thogmartin, W. E., Peery, M. Z., Heglund, P. J., Radeloff, V. C., & Pidgeon, A. M. (2018). Slow and steady wins the race? Future climate and land use change leaves the imperiled Blanding's turtle (*Emydoidea blandingii*) behind. *Biological Conservation*, 222, 75–85.
- Latimer, C. E., Graves, R., Pidgeon, A. M., Gorzo, J. M., Henschell, M. M., Schilke, P. R., Hobi, M. L., Olah, A., Kennedy, C. M., Zuckerberg, B., et al. (2022). Rising novelty and homogenization of breeding bird communities in the US. *bioRxiv*, 2022–2009.
- Simonetti, J., Chou, A., Dowd, J., Gorzo, J., Grimm, C., Harold, M., Hubbard, R., Kuether, T., Loyd, R., Nipper, B., et al. (2008). Minor Planet Observations [841 Martin Observatory, Blacksburg]. *Minor Planet Circulars*, 62871, 9.

Conference Presentations

- Gorzo, J. M., & Burcher, S. (2024). Automated radio telemetry: Study design and data analysis. *Meeting of the American Ornithological Society*.
- Burcher, S., Blackshire, S., Gorzo, J., Lanzone, M., La Puma, D., & Mizrahi, D. (2024a). Tracking wildlife movements with networks of fixed radio receivers. *8th International Bio-Logging Science Symposium*.
- Burcher, S., Blackshire, S., Gorzo, J., Lanzone, M., La Puma, D., & Mizrahi, D. (2024b). Tracking wildlife movements with networks of fixed radio receivers. *Meeting of the American Ornithological Society*.
- Gorzo, J. M., & Wright, C. K. (2018). Mallard Distribution and Wetland Network Modularity in the Prairie Pothole Region (PPR). *IALE-NA, T02, Terrestrial-aquatic ecosystem interactions*.
- Gorzo, J. M. (2017). Waterfowl response to weather and land cover in the prairie potholes. *Proceedings of the Ninety-Eighth Annual Meeting*, 922. <https://doi.org/10.1676/1559-4491-129.4.911>
- Gorzo, J. M., Pidgeon, A., Allstadt, A., Thogmartin, W., Vavrus, S., & Heglund, P. (2016). Land cover and weather drivers of avian site fidelity. *Proceedings of the Society for Conservation Biology*.
- Wright, C. K., & Gorzo, J. M. (2018). For mallard ducks, the network is the habitat. *AGU Fall Meeting Abstracts, 2018*, H21L-1826.
- Gorzo, J. M., Pidgeon, A. M., Thogmartin, W., Allstadt, A., & Radeloff, V. (2015). Grassland bird response to weather in the badlands and prairies. *Meeting of the American Ornithologists' Union/Cooper Society*.
- Gorzo, J. M. (2014). Avian population response to extreme weather events. *Nelson Earth Day Conference*.
- Gorzo, J. M., & Jodice, P. G. R. (2011). The breeding bird community of coastal golf courses in Beaufort County, South Carolina. *Meeting of the American Ornithologists' Union*.
- Bateman, B., Gorzo, J. M., Pidgeon, A., Radeloff, V., Akcakaya, R., Flather, C., Albright, T., Vavrus, S., Thogmartin, W., & Heglund, P. (2013). Use of multiple data sources in identifying drivers of abundance in an irruptive species, the dickcissel. *Meeting of the American Ornithologists' Union/Cooper Ornithological Society*.
- Allstadt, A. J., Gorzo, J. M., Bateman, B. L., Heglund, P. J., Pidgeon, A. M., Thogmartin, W., Vavrus, S. J., & Radeloff, V. (2016). Effects of weather on the abundance and distribution on populations of 103 breeding bird species across the United States. *AGU Fall Meeting Abstracts, 2016*, GC11D-1181.

Technical Reports

- Noe, R., Locke, C., Host, G., Gorzo, J., Johnson, L., Lonsdorf, E., Grinde, A., Joyce, M., Bednar, J., Dumke, J., et al. (2021). *Measuring what matters: Assessing the full suite of benefits of OHF investments*.
- Johnson-Bice, S., Gorzo, J. M., Kovalenko, K., Brown, T., & Host, G. (2020). *Predicting Potential Beaver Dam Sites on Lake Superior's North Shore*. Natural Resources Research Institute.

Contributions

StellaR: <http://www.r-gis.net/stellar/>

Updated code for Supplement 1. R Script in 2016 for the publication: Jackson, M. M., Turner, M. G., Pearson, S. M., & Ives, A. R. (2012). Seeing the forest and the trees: multilevel models reveal both species and community

patterns. Ecosphere, 3(9), 1-16. https://figshare.com/articles/dataset/Supplement_1_R_script_and_input_data_file_for_creating_multilevel_models_using_the_forest_herb_data_set_described_in_the_main_text_/3563784?file=5637069

Contributed "Raptors and songbirds" (8.4.5.1) pp.565-566 in Jodice, P. G. R., Tavano, J., Mackin, W., & Michel, J. (2013). South Atlantic information resources: data search and literature synthesis. US Department of the Interior, Bureau of Ocean Energy Management, regulation, and enforcement, Gulf of Mexico OCS region, 475, 587

Teaching

SELECTED INVITED SEMINARS

Gorzo, J.M. "Career Perspective: From Wildlife to Data Science" Stockton University (remote) 4/18/24

Gorzo, J.M. "Networks and Connectivity in Landscape Ecology" University of Minnesota-Duluth, 2020

Gorzo, J.M. "Introduction to Birding & Community Science" University of Wisconsin-Stevens Point, 2016

TEACHING ASSISTANT

Forestry Practicum ("Summer Camp"), Kemp Natural Resource Station (2012, 2014)

Introduction to Astronomy Lab (2 Sections) Virginia Tech (2008)

SHORT COURSE & WORKSHOP INSTRUCTOR

BIOSC 730: Wolves and Society, Clemson University (2013)

Elderhostel: Astronomy, Mountain Lake VA (Fall 2007)

Outreach, Service & Fundraising

- Birding field guide (paid or volunteer) for various festivals
 - Cape May Fall Festival, Cape May Bird Observatory/NJ Audubon (2023-2024)
 - Cape May Spring Festival, Cape May Bird Observatory/NJ Audubon (2024)
 - Sax-Zim Bog Birding Festival (2014 - 2019)
- World Series of Birding: Participant in Carbon Footprint Challenge
 - 2015: tied for 1st
 - 2021: 2nd place in social/physical distance COVID-19 modified rules
- Great Wisconsin Birdathon Participant (2013, 2016)
- BRRRRDathon (Team Overall Winner, Record Setter Jan. 2013)

TELEVISION

Expeditions – air date Oct 17 2010

Guest appearance, season 4, Episode 7: "The ACE Basin – A Conservation Miracle"

Discussed painted bunting habitat requirements, threats and conservation needs

(Listing and TV show description:

http://www.clemson.edu/public/expeditions/episode_guide/season_4.html)

RADIO

Your Day – air date Aug 30 2010

(Segment begins 45:50 <http://cufan.clemson.edu/psaradiopod/YDPodcast/YD100830.mp3>)

ACADEMIC

Ad hoc reviewer: Journal of Arid Environments, Landscape & Urban Planning, Landscape Ecology, PLOS ONE, Wilson Ornithological Society, Biological Conservation, Avian Conservation & Ecology

Professional Memberships: Phi Kappa Phi Honors Society (inducted 2010), American Ornithological Society, US-International Association for Landscape Ecology

Awards & Honors

2015 Travel Award, American Ornithologist's Union/Cooper Ornithological Society Conference

2011 Outstanding Service to the Clemson Experimental Forest

Dean's List (undergraduate)