Dr. Megan M. Skrip

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EDUCATION

Ph.D. 2016, Ecology and Ecosystem Sciences. Department of Natural Resources Science, University of Rhode Island (URI), Kingston, RI. Dissertation: *Oxidative state of songbirds during migration and best practices to communicate the science.* Advisor: Dr. Scott R. McWilliams

M.Sc. 2010, Ecology. Department of Environmental and Forest Biology, State University of New York College of Environmental Science and Forestry (SUNY-ESF), Syracuse, NY. Thesis: *Fall-winter survival, habitat, and long-term population change of ruffed grouse in New York State.* Advisor: Dr. William F. Porter

B.Sc. 2007, Double major in Biology and Environmental Studies, minor in Chemistry, *summa cum laude*. The College of New Rochelle (CNR), New Rochelle, NY. Advisor: Dr. Faith Kostel-Hughes

RESEARCH AND PROFESSIONAL EXPERIENCE

Science Communicator. Center for Geospatial Analytics, North Carolina State University, Raleigh, NC (2016 – present). Supervisor: Dr. Ross K. Meentemeyer.
Advancing and assessing activities that support and highlight interdisciplinary research and education programs, including news writing, grant writing and editing, newsletter production, social media engagement, website management, and graphic design.

Freelance Copyeditor. Second Rhode Island Breeding Bird Atlas, Dept. of Natural Resources Science, URI, Kingston, RI (2020). Clients: Drs. Peter Paton and Charles Clarkson.
Fact-checked and edited species accounts and introductory chapters for *The Second Atlas of Breeding Birds in Rhode Island*.

Graduate Intern. Metcalf Institute for Marine and Environmental Reporting, Graduate School of Oceanography, URI, Narragansett, RI (2014 – 2015). Supervisor: Dr. Sunshine Menezes.
Wrote and illustrated a climate change backgrounder about migratory birds for journalists; prepared resource lists in support of national programs to deliver scientific content to journalists.

Graduate Research Assistant. Dept. of Natural Resources Science (incl. Society, Ecology & Communication Laboratory), URI, Kingston, RI (2011 – 2016). Supervisors: Drs. Scott R. McWilliams and Caroline Gottschalk Druschke.
Examined contribution of dietary antioxidants and flight exercise to oxidative balance of captive songbirds and allocation of antioxidants to eggs; analyzed antioxidant capacity of wild migratory birds as a function of body condition; assessed efficacy of NSF Broader Impacts in scientific research and synthesized a framework to guide design of Broader Impacts activities; prepared resource briefs for US National Park Service administrators, interpretive staff, and park visitors, documenting the results of ongoing research and data management projects in response to Hurricane Sandy.

Lead Telemetry Assistant. Texas Tech University, Lubbock, TX; fieldwork performed in Millbrook, NY (2011). Supervisors: Drs. Kenneth Schmidt and Kara Belinsky.
Performed, and trained others to perform, radio-telemetry to determine space use and spatial singing behavior of radio-marked Veeries at the Cary Institute of Ecosystem Studies, Millbrook, NY; managed field assistants, equipment, and the telemetry dataset; performed home range analyses in ArcGIS.

Graduate Research Assistant. Research Foundation of SUNY, SUNY-ESF, Syracuse, NY (2007 – 2010). Advisor: Dr. William F. Porter.
Conducted survival study of radio-marked ruffed grouse in NY to assess impact of habitat and harvest on fall-winter mortality; evaluated statewide datasets to assess drivers of statewide grouse population change and provide recommendations for management.

EPA Greater Research Opportunities Undergraduate Intern, US Environmental Protection Agency, Edison, NJ (2006). Supervisor: James Kurtenbach.
Served as an aquatic biologist's primary field assistant for stream and lake monitoring, assessing benthic macroinvertebrate and fish assemblages to gauge water quality impairment in NJ and NY.

Research Experiences for Undergraduates Intern, Cary Institute of Ecosystem Studies, Millbrook, NY (2005). Advisor: Dr. Stuart Findlay.
Designed and conducted a research project to compare zebra mussel survival and settlement in the beds of nonnative water chestnut versus native water celery in the Hudson River, NY.

VOLUNTEER EXPERIENCE

Board Member and Communications Committee Member, Champaign County Audubon Society (CCAS), Champaign-Urbana, IL (2020 – present).
Guiding strategic planning and decision-making to support the educational and conservation mission of CCAS; produced monthly print newsletter (Sept. 2020 – Dec. 2021); led a website redesign (Sept. 2021 – April 2022); serve as webmaster, maintaining and updating the CCAS website.

Research Assistant, Champaign-Urbana, IL (2018 – 2019). Client: Dr. Bradley Scott.
Assisted a paleontologist with data collection in seven fossil and ichthyology collections at six natural history museums in the United States and Europe; recorded measurements of the morphology of fossil agnathans and gnathostomes and preserved extant sharks, maintained data sheets and associated notes, organized equipment, and assisted with logistics.

SELECTED HONORS AND AWARDS

Second place, Institutional Communications Division, SCONCies **Science Communication Contest**, Science Communicators of North Carolina (2021)

Gladys West ("Hidden Figure") Award, Center for Geospatial Analytics (2021)

Accepted into **National Association of Science Writers** (2020)

STEM Award for **Excellence in Doctoral Research**, Graduate School, URI (2017)

Best Student Publication in the Journal of Field Ornithology in 2016, Association of Field Ornithologists (2017)

Wilson Prize for **Outstanding Oral Presentation**, Wilson Ornithological Society (2015)

Betty Moore Chamberlaine Award for **excellence by a female graduate student in avian management**, SUNY-ESF (2008)

President's Award, presented to the graduate whose outstanding personal achievements and contributions to the College exemplify its highest ideals, CNR School of Arts and Sciences (2007)

SPECIAL SKILLS

Synthesis and translation of complex scientific research for both specialist and non-specialist audiences to achieve communication goals

Technical and non-technical writing and editing, problem solving, communications strategy, illustration, and graphic design

Excellent organizational skills and high attention to detail, ability to master and adhere to institutional brand and style guidelines

Software proficiency: Microsoft Word, PowerPoint, and Excel; Google Docs, Slides, and Sheets; Adobe Photoshop, Illustrator, and InDesign; WordPress, Squarespace; Hootsuite; Emma

SELECTED ARTICLES ON NC STATE UNIVERSITY'S NEWS BLOG

Skrip, M.M. 2023. First-year students learn the value of GIS for environmental justice https://cnr.ncsu.edu/geospatial/news/2023/02/01/first-year-students-learn-the-value-of-gis-for-environmental-justice/

Skrip, M.M. 2022. Study: People are most physically active when their environments are both highly walkable and very green https://news.ncsu.edu/2022/06/study-people-are-most-physically-active-when-their-environments-are-both-highly-walkable-and-very-green/

Skrip, M.M. 2021. Keeping track of rare mountaintop plants with drones https://cnr.ncsu.edu/geospatial/news/2021/11/05/rare-mountain-plants-drones/

Skrip, M.M. 2021. Where there's smoke: reducing downwind impacts of prescribed burns https://news.ncsu.edu/2021/04/smoke-fire-prescribed-burns-management/

Skrip, M.M. 2020. Taking research with drones to new heights https://news.ncsu.edu/2020/08/taking-research-with-drones-to-new-heights/
Award-winning: SCONC Science Communication Contest

Skrip, M.M. 2020. Remote sensing and the science of sound https://news.ncsu.edu/2020/02/remote-sensing-and-the-science-of-sound/

Skrip, M.M. 2019. UAVs and Christmas trees: new research to help NC growers benefit from drone technology. https://news.ncsu.edu/2019/12/uavs-and-christmas-trees/

Skrip, M.M. 2019. A new way to help stop insect pests in their tracks https://news.ncsu.edu/2019/07/pops-help-stop-insect-pests/

Skrip, M.M. 2019. Where fire is a treatment, GIS helps prescribe it https://cnr.ncsu.edu/geospatial/news/2019/07/22/where-fire-is-a-treatment-gis-helps-prescribe-it/

Skrip, M.M. 2018. How big can snowflakes be? https://news.ncsu.edu/2018/12/how-big-can-snowflakes-be/

Skrip, M.M. 2018. Connecting power and place https://cnr.ncsu.edu/geospatial/news/2018/05/14/connecting-power-and-place/

Skrip, M.M. 2018. New research shows water use impacted by the shape of our cities https://cnr.ncsu.edu/geospatial/news/2018/03/27/water-use-impacted-by-the-shape-of-our-cities/

SELECTED OTHER POPULAR WRITING

M. Skrip. 2022. Forecasting the arrival of an insect pest. Nature Ecology & Evolution Community https://ecoevocommunity.nature.com/posts/forecasting-the-arrival-of-an-insect-pest

Shedd, J., **M. Skrip**, and J. Vukomanovic. 2021. Equipping firefighters with the maps they need to preserve history. In *Mapping America's National Parks: Preserving Our Natural and Cultural Treasures* (pp. 72–74). Redlands: Esri Press.

Shedd, J., M. Shukunobe, N. Inglis, **M. Skrip**, and J. Vukomanovic. 2021. Improving communication with web maps in the Mid-Atlantic. In *Mapping America's National Parks: Preserving Our Natural and Cultural Treasures* (pp. 170–172). Redlands: Esri Press.

Skrip, M.M. 2015. A matter of timing: climate change impacts on bird migration. Metcalf Institute for Marine and Environmental Reporting. http://archives2.metcalfinstitute.org/wp-content/uploads/2015/05/Skrip_backgrounder.pdf

Skrip, M.M. 2015. Migrating songbirds on Block Island: key findings from ongoing research into stopover ecology. University of Rhode Island. https://web.uri.edu/forestry/files/2015/02/URI-Block_Island_Bird_Research_2015.pdf

Skrip, M.M. 2010. Fading drums: does hunting play a role in the decline of ruffed grouse in New York? *New York State Conservationist* 65(2):12-16. http://www.dec.ny.gov/docs/administration_pdf/1010fadedrumsgrouse.pdf

Skrip, M.M. 2009. A bird in the hand. *The Spruce Moose*. Summer 2009, issue:1-2. https://issuu.com/sunyesf/docs/20091

PEER-REVIEWED PUBLICATIONS

G.M. Sanchez, A. Petrasova, **M.M. Skrip**, E.L. Collins, M.A. Lawrimore, J.B. Vogler, A. Terando, J. Vukomanovic, H. Mitasova, and R.K. Meentemeyer. 2023. Spatially interactive modeling of land change identifies location-specific adaptations most likely to lower future flood risk. *Scientific Reports* 13, 18869. https://doi.org/10.1038/s41598-023-46195-9

Jones, C., **M.M. Skrip**, B.J. Seliger, S. Jones, T. Wakie, Y. Takeuchi, V. Petras, A. Petrasova, and R.K. Meentemeyer. 2022. Spotted lanternfly predicted to establish in California by 2033 without preventative management. *Communications Biology* 5, 558. https://doi.org/10.1038/s42003-022-03447-0

McWilliams, S., W. Carter, C. Cooper-Mullin, K. DeMoranville, A. Frawley, B.J. Pierce, and **M. Skrip**. 2021. How birds during migration maintain (oxidative) balance. *Frontiers in Ecology and Evolution* 756. https://doi.org/10.3389/fevo.2021.742642

Jones, C., S. Jones, A. Petrasova, V. Petras, D. Gaydos, **M.M. Skrip**, Y. Takeuchi, K. Bigsby, and R.K. Meentemeyer. 2021. Iteratively forecasting biological invasions with PoPS and a little help from our friends. *Frontiers in Ecology and the Environment*. https://doi.org/10.1002/fee.2357

Vukomanovic, J., **M.M. Skrip**, and R.K. Meentemeyer. 2019. Making it spatial makes it personal: engaging stakeholders with geospatial participatory modeling. *Land* 8(2): 38. https://doi.org/10.3390/land8020038

Skrip, M.M., N. P. Seeram, T. Yuan, H. Ma, and S.R. McWilliams. 2016. Dietary antioxidants and flight exercise in female birds affect allocation of nutrients to eggs: how carry-over effects work. *Journal of Experimental Biology* 219:2716-2725. https://dx.doi.org/10.1242/jeb.137802

Skrip, M.M., and S.R. McWilliams. 2016. Oxidative balance in birds: an atoms-to-organisms-to-ecology primer for ornithologists. *Journal of Field Ornithology* 87(1):1-20. https://dx.doi.org/10.1111/jofo.12135 **Award-winning:** JFO Best Student Publication

Skrip, M.M., U. Bauchinger, W. Goymann, L. Fusani, M. Cardinale, R.R. Alan, and S.R. McWilliams. 2015. Migrating songbirds on stopover prepare for, and recover from, oxidative challenges posed by long-distance flight. *Ecology and Evolution* 5(15):3198-3209. https://dx.doi.org/10.1002/ece3.1601

Skrip, M.M. 2015. Crafting and evaluating Broader Impact activities: a theory-based guide for scientists. *Frontiers in Ecology and the Environment* 13(5):273-279. https://dx.doi.org/10.1890/140209

Skrip, M.M., U. Bauchinger, W. Goymann, L. Fusani, and S.R. McWilliams. 2015. Access to water affects the condition dependency of nocturnal restlessness in Garden Warblers on a Mediterranean island stopover. *Journal of Ornithology* 156(suppl. 1):425-432. http://dx.doi.org/10.1007/s10336-015-1198-1

Skrip, M.M., W.F. Porter, B.L. Swift, and M.V. Schiavone. 2011. Fall-winter survival of ruffed grouse in New York State. *Northeastern Naturalist* 18(4):395-410. http://dx.doi.org/10.1656/045.018.0401 **Cover photo**

SELECTED PRESENTATIONS

Jones, C., S. Jones, A. Petrasova, V. Petras, D. Gaydos, **M. Skrip**, B. Seliger, Y. Takeuchi, and R. Meentemeyer. 2021. Iterative near-term ecological forecasting for biological invasions using the PoPS (Pest or Pathogen Spread) Platform. International Association for Landscape Ecology-North America Annual Meeting, virtual.

McWilliams, S.R. and **M.M.Skrip**. 2018. How birds during migration contend with oxidative stress. 27th International Ornithological Congress, Vancouver, British Columbia.

Skrip, M.M, S.R. McWilliams, et al. 2015. Migrating songbirds on stopover prepare for, and recover from, oxidative challenges posed by long-distance flight. Joint Annual Meeting of Association of Field Ornithologists, Society of Canadian Ornithologists–Société des Ornithologistes du Canada, and Wilson Ornithological Society, Wolfville, Nova Scotia. **Award-winning:** Wilson Prize for Outstanding Oral Presentation

Skrip, M.M. 2015. A theory-based framework for designing and assessing Broader Impacts activities (poster). National Alliance for Broader Impacts annual summit, Madison, WI.

Skrip, M.M. 2015. Science, communication, and the Broader Impacts criterion: a theory-based how-to for scientists striving to craft and evaluate impactful outreach activities (poster). Society for Integrative and Comparative Biology annual meeting, West Palm Beach, FL.

Skrip, M.M. 2014. Assessing the Broader Impacts of ecological research: towards a "Broader Impacts Impact Factor" (invited speaker). Fourth Iowa State University Summer Symposium on Science Communication, Ames, IA.
Viewable online: https://www.youtube.com/watch?v=FNkwwjUnlsI

Skrip, M.M., and S.R. McWilliams. 2014. Dietary antioxidants and exercise affect how females allocate nutrients to their eggs. Joint Meeting of Association of Field Ornithologists and Wilson Ornithological Society, Newport, RI.

Skrip, M.M., and W.F. Porter. 2009. Habitat and fall-winter survival of ruffed grouse in New York State (poster), The Wildlife Society 16th Annual Conference, Monterey, CA.

Skrip, M.M., and W.F. Porter. 2008. Habitat and fall-winter survival of ruffed grouse in New York State. The Northeast Natural History Conference X, Albany, NY.

Skrip, M.M., and S. Findlay. 2007. Exotic interactions: zebra mussel survival and settlement in the beds of nonnative water chestnut vs. native water celery in the Hudson River. Student Conference on Conservation Science, Nicholas School of the Environment and Earth Sciences, Duke University, Durham, NC.

PROFESSIONAL MEMBERSHIPS

American Ornithological Society (AOS)

Ecological Society of America (ESA)

National Association of Science Writers

Science Communicators of North Carolina (SCONC)

Sigma Xi: The Scientific Research Society

The Wildlife Society (TWS)

Wilson Ornithological Society (WOS)