Dr. Kelly M. Russo-Petrick

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EDUCATION:

2018-2022	Ph.D. in Biology, Bowling Green State University, Bowling Green, OH
2015-2017	M.S. in Applied Ecology & Conservation Biology, Frostburg State University, Frostburg, MD
2010-2014	B.S. in Wildlife Conservation, minor in Psychology, Juniata College, Huntingdon, PA
2013	Semester abroad, University of Gloucestershire: Cheltenham, United Kingdom

PUBLICATIONS:

Russo-Petrick, K., & Root, K.V. (2023). Impacts of climate change on bat habitat suitability. Manuscript submitted for publication.

Nissley, C., Williams, C., Abraham, K. F., & **Russo-Petrick, K.** (2023). Anthropogenically inducted wildlife population release in native arctic geese incurs apparent competition consequences. Manuscript accepted for publication in *Wildfowl.*

Russo-Petrick, K., & Root, K.V. (2023). Long-term monitoring of bat activity and species richness reveals changes in local bat communities. Manuscript accepted for publication in *The Ohio Journal of Science*.

Walter, W. D., Fameli, A., **Russo-Petrick, K.,** Edson, J. E., Rosenberry, C., Schuler, K., & Tonkovich, M. J. (2023). Large-scale assessment of genetic structure to assess risk of populations of a large herbivore to disease. *Ecology and Evolution*. 14(5): 1-17.

Russo-Petrick, K., & Root, K.V. (2023). Factors impacting bat activity and species richness in protected parks in the Oak Openings Region of Northwest Ohio. *Environmental Management.* https://doi.org/10.1007/s00267-023-01849-2

Russo-Petrick, K., & Root, K.V. (2023). Identifying factors across multiple scales that impact bat activity and species richness along roads in a fragmented landscape. *Biodiversity and Conservation.* 32(3): 1065-1088.

Russo-Petrick, K., Seddon, W., Lambert, T., & Ammer, F (2019). Fecal pellet surveys and DNA analysis reveal that Appalachian cottontails (*Sylvilagus obscurus*) are more widespread than previously recorded in Western Maryland. *Journal of the Pennsylvania Academy of Science.* 93(31): 13-25.

RESEARCH AND ACADEMIC WORK:

2023-now	**Project Specialist in Urban Ecology.** The College of Agriculture, Urban Sustainability, and Environmental Sciences; Center for Urban Resilience, Innovation, and Infrastructure, The University of the District of Columbia, Supervisor: Tsakani Ngomane. Coordinated DC Master Naturalist Program. Current research includes an oak health survey across DC in cooperation with the US Forest Service and DDOT to determine reasons for increased oak decline and mortality.
2023-2023	Postdoctoral Scholar. Postdoc. **Pennsylvania Wetland Management Review.** University of Delaware, Supervisor: Dr. Chris Williams. Conducted extensive literature review to summarize and compile recommendations for wetland management across Pennsylvania. Worked with Pennsylvania state agencies to make recommendations for management based on these findings.
2022-2023	Postdoctoral Scholar. Postdoc. **Large-scale assessment of genetic structure to assess risk of**

white-tailed deer populations to Chronic Wasting Disease. Pennsylvania Cooperative Fish and Wildlife Research Unit, The Pennsylvania State University, Supervisor: Dr. W. David Walter. Analyzed genetic data using the programs R, STRUCTURE, Geneclass2, and GenAlEx to determine population structure in white-tailed deer populations across the northeast United States vulnerable to chronic wasting disease. This research will be used by agencies to determine appropriate disease management areas for the species.

2018-2022 Graduate Research Assistant. Dissertation research. **Effects of Human Development on Bat Diversity and Activity in the Oak Openings**. Biological Sciences, Bowling Green State University. Advisor: Dr. Karen V. Root. Acoustically monitored bats throughout Oak Openings region, led volunteer bat surveys, organized and analyzed bat data volunteers collected 2011-2021, and conducted habitat analysis using ArcGIS and field surveys. Created habitat suitability models for bat species both for current habitat and weather conditions and future projection maps based on potential climate change scenarios.

2015-2017 Graduate Research Assistant. **Distribution and Habitat Use of the Appalachian Cottontail (*Sylvilagus obscurus)* in Western Maryland**. Biology, Frostburg State University. Advisors: Dr. Frank Ammer and Dr. William Seddon. Redetermined Appalachian cottontail range in Western Maryland and provided information to Maryland Department of Natural Resources that will be used for future management. Conducted field surveys for rabbit fecal pellets at over 40 sites of known and potential habitat, performed mitochondrial DNA analysis on over 100 pellet samples to identify species, and conducted habitat analysis with ArcGIS and field surveys.

2014 Undergraduate Research Assistant. **Mapping Owl Invasions**. Department of Environmental Sciences, Juniata College. Advisor: Dr. Chuck Yohn. Determined reasons for abnormally far south snowy owl irruptions in winter 2014 by gathering eBird data to compare winter owl irruptions from the winters of 2013 and 2014.

2014 Undergraduate Research Assistant. **Assessment of the Juniata River System as Suitable Alternative Habitat for Migrating and Wintering Waterfowl**. Department of Environmental Sciences, Juniata College. Advisor: Dr. Chuck Yohn. Compared waterfowl populations at Raystown Lake and Juniata River between 2013 and 2014 to determine how waterfowl dispersal patterns were affected by increased ice cover on Raystown Lake in 2014 using field population counts and data collected from eBird.

2013 Undergraduate Research Assistant. **Assessment of Raystown Lake for Migratory Waterfowl.** Department of Environmental Sciences, Juniata College. Advisor: Dr. Chuck Yohn. Counted and identified waterfowl species and used eBird to compare waterfowl abundance and species richness between two PA lakes.

2012-2014 Undergraduate Research Assistant. **Assessing Networks in Zoological Nomenclature.** Department of Environmental Sciences, Juniata College. Advisor: Dr. Neil Pelkey. Developed visual models of spatial distribution and co-authorship networks that illustrated the social and spatial relationships between researchers commenting on the Aldabra tortoise nomenclatural debate.

TEACHING:

Course	**Semesters taught**	**Type of Course**	**Location**
Intro to Biology for majors	Fall 2015	lab	Frostburg State University (FSU)
Intro to Biology for non-majors	Spring 2016, Spring 2017	lab	FSU
Botany	Fall 2016	lab	FSU
Botany	Spring 2019	lab	Bowling Green State University (BGSU)

SEA-PHAGES lab	Fall 2018, Fall 2019	lab	BGSU
Anatomy and Physiology I	Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022	lab	BGSU
General Ecology	Fall 2024	lecture and lab	University of the District of Columbia (UDC)

Graduate Seminars- Co-led Biological Conservation Fall 2019 (seminar, BGSU)

Certificate Programs- DC Master Naturalist Coordinator Spring 2024

GRANTS AWARDED:
NACCB 2022 Financial Support Award- $200
Graduate Student Senate Funding for Professional Development Spring 2019, Fall 2019 - $140

OTHER EMPLOYMENT:

2019 **Photographer, Lifetouch**. Did event photography for graduations.

2018 **Field Technician, Versar Inc and Bureau of Land Management**. Did restoration work on unauthorized trails in desert habitat- including vertical mulching and placing signs. Entered data in ArcGIS Collector and mapped data in ArcGIS and Google Earth.

2017-2018 **Freelance Photographer, Upwork**. Took and edited product photos for clients.

2015 **Park Aide, Lopez Lake Recreation Area**. Developed and presented environmental education hikes and programs.

2014 **Lab Technician, Enartis Vinquiry**. Developed laboratory skills, including titration, pipetting, taking pH, centrifugation, and preparing buffers in process of preparing wine samples to analyze.

2013 **Natural Resources Intern, Morro Bay State Park**. Designed and executed invasive plant control plan, conducted vegetation transect research, and assisted with bird banding and snowy plover and seabird population monitoring projects.

2010-2014 **Photographer and Writer, Campus Opinions Newsletter**. Took photos to accompany articles for online newsletter, edited photos using Adobe Photoshop CS5, and wrote articles and interviewed faculty and students

LAB AND FIELD SKILLS: Acoustic bat monitoring, Bird banding (owls and songbirds), DNA isolation, Data entry, Dichotomous key, Electrofishing, Experimental design, Field data collection, Gel electrophoresis, Gill netting, Measuring canopy cover using a spherical densitometer, Measuring slope with a clinometer, Mist netting, Multiplex fragment analysis, Off-road driving, PCR, Pipetting, pH meter, Population monitoring, Preparing buffers and other solutions, Small mammal trapping (live and snap traps), Tagging wildlife, Titrations, Transmission electron microscopy, Vegetation transects and plots, Vertical mulching, Water chemistry measurements, Tree Inventory

COMPUTER SKILLS: Adobe Lightroom, Adobe Photoshop, Analook, ArcGIS Collector, CLUMMP, CLUMPAK, ENVI 5.3, ERDAs Imagine, FRAGSTATS, GIS ArcMap, GenePop, Structure Harvester, Geneclass2, Geoda, Google Earth, JPS Statistics, Java, Maxent, Microsoft Office, Python, QGIS, R Statistical Software, SPSS Statisics, STRUCTURE, Sci2, ArcGIS Pro, ArcGIS Online

UNIVERSITY SERVICE:
On Search Committee for Assistant Teaching Professor in Anatomy Position Spring 2021
On Graduate Student Committee Bowling Green State University Fall 2019-Spring 2022
Graduate student senate senator Fall 2020-Spring 2022

HONORS AND AWARDS:

Conservation Leaders for Tomorrow September 2015- professional development program that focuses on hunting awareness and conservation education.
SCA National Park Academy Grand Tetons March 2014- week long leadership program designed to introduce students to career opportunities with the National Park Service
Member of Omnicron Delta Kappa Honor's Society
Certified State Park Docent
CPR and first aid certified

PRESENTATIONS:

2024 **Russo-Petrick K**, Frederick Rischmiller, and Tsakani Ngomane. Oak Health in the District of Columbia. The Wildlife Society Annual Conference (Poster).
2024 **Russo-Petrick K.** Native Plants and Green Infrastructure. MLK Jr. Memorial Library (Invited Speaker).
2023 **Russo-Petrick K**, Alberto Fameli, Krysten L. Schuler, Michael J. Tonkovich, Jessie E. Edson, and W. David Walter. Large-Scale Assessment of Genetic Structure to Assess Risk of White-Tailed Deer Populations to Chronic Wasting Disease. Chronic Wasting Disease Symposium (Poster).
2022 **Russo Petrick, K.** Identifying Factors that Influence Bat Habitat Suitability**.** Society for Conservation Biology North America Conference.
2021 **Russo Petrick, K.** Evaluating Essential Habitat Features for Bat Conservation in a Mixed-Use Region. The Wildlife Society Annual Conference (Remote).
2021 **Russo Petrick, K**. Acoustic Bat Monitoring. Oak Openings Blue Week (Invited Speaker).
2021 **Russo Petrick, K** and Karen V. Root**.** Assessing the Impact of Habitat Fragmentation and Impervious Surfaces on Bat Activity and Diversity. Midwest Bat Working Group Meeting (Poster, Remote).
2021 **Russo Petrick, K.** Assessing the Impact of Habitat Fragmentation and Impervious Surfaces on Bat Activity and Diversity. Shanklin Awards poster presentation (Poster, Remote).
2021 **Russo Petrick, K** and Karen V. Root**.** Assessing Human Impacts on Bat Activity and Species Richness at Multiple Scales. Ohio Natural History Conference (Poster, Remote)
2020 **Russo Petrick, K.** Bats of Northwest Ohio. Oak Openings Blue Week (Invited Speaker, Remote).
2020 **Russo Petrick, K** and Karen V. Root. Assessing Human Impacts on Bat Activity and Species Richness at Multiple Scales. Society for Conservation Biology Conference (Speed Talk, Remote).
2020 **Russo Petrick, K**. Evaluating the Effects of Anthropogenic Land Use and Habitat Fragmentation on Bat Diversity and Activity in the Oak Openings Region. Oak Openings Science Summit (Remote).
2020 **Russo Petrick, K** and Karen V. Root**.** Assessing the Effects of Human Development on Bat Activity and Diversity. Ohio Bat Working Group Meeting.
2019 Poster. **Russo Petrick, K** and Karen V. Root**.** Using Long-term Citizen Science Data to Assess Trends in Bat Populations In Northwest Ohio. Oak Openings Science Summit.
2019 **Russo Petrick, K** and Karen V. Root**.** Using Long-term Citizen Science Data to Assess Trends in Bat Populations in Northwest Ohio. North American Society for Bat Research Conference.
2019 **Russo Petrick, K.** Using Fecal Pellet Surveys and mtDNA Analysis to Survey Appalachian Cottontail Distribution in Western Maryland. Shanklin Awards paper presentation, Bowling Green State University.
2017 Thesis presentation. **Russo, K.** Appalachian Cottontail (*Sylvilagus obscurus*) Occurrence in Western Maryland Identified through Fecal mtDNA. Frostburg State University.
2016-2017 Poster. **Russo, K.,** Matthews, A., and Ammer, F. Status, Distribution, and Habitat Associations for Appalachian Cottontail in Western Maryland. Frostburg Graduate Research Symposium.
2015-2017 Poster. **Russo, K.,** Matthews, A., and Ammer, F. Status, Distribution, and Habitat Associations for Appalachian Cottontail in Western Maryland. Frostburg Graduate Research Symposium.

SOCIETY MEMBERSHIPS:

2015-2017, 2021-2022, 2024 Wildlife Society
2019-2022 Society of Conservation Biology
2019-2022 National Society for Bat Research
2019-2022 Midwest Bat Working Group