

NADEJDA MIROCHNITCHENKO

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EDUCATION

M.Sc. Natural Resource Sciences *specializing in Applied Ecology* Expected December 2018
Nebraska Fish and Wildlife Research Unit, University of Nebraska-Lincoln, Lincoln, Nebraska, USA

- Chancellor's Fellow

B.Sc. in Biology *specializing in Conservation and Ecology,* May 2016
Minor in General Science

Bowling Green State University, Bowling Green, Ohio, USA

- *Summa cum laude*, University and Departmental Honors
- Honors Program/College

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, Nebraska Cooperative Fish and Wildlife Research Unit, 2016 - Present
School of Natural Resources, University of Nebraska, Lincoln NE

- Assessed bird phylogenetic and function biodiversity patterns across landscape gradients
- Analyzed Bayesian hierarchical occupancy and abundance models in JAGS via R (e.g. rjags, coda packages)
- Analyzed phylogenetic diversity through programs BEAST and R (e.g., ape package)
- Analyzed functional diversity through dendrograms built in R (e.g., cluster package)
- Analyzed Bayesian multivariate statistics through program R (e.g., rjags, coda packages)
- Mapped occurrence, abundance, and diversity in R and ArcGIS (e.g., raster, sp packages)
- Conducted breeding bird point counts throughout Nebraska and neighboring states
- Assisted night light trapping and telemetry tracking of pheasants (*Phasianus colchicus*)
- Collaborated with Nebraska Game and Parks Commission
- Drove four-wheel drive vehicles

Quail Field Technician, Nebraska Cooperative Fish and Wildlife Research Unit, 2016
School of Natural Resources, University of Nebraska, Lincoln NE

- Used peak telemetry to track collared Bobwhite quail (*Colinus virginianus*)
- Trapped quail using box traps, mist nets, bow nets, and hoop nets
- Quantified quail behavior, physical characteristics, and nest predation rates
- Set up and monitored an artificial nest study in grasslands
- Assisted with grassland vegetation surveys

Stream and Urban Ecology Research Assistant, Environmental Animal Ecology Lab, 2014 - 2016
Bowling Green State University, Bowling Green, OH

- Managed urban ecology and stream ecology research
- Taught undergraduates sample collecting and site surveying skills
- Collaborated with graduate students on various scientific projects
- Collected and identified terrestrial insects and benthic invertebrates
- Conducted enzyme linked immunosorbent analyses for common water contaminants
- Prepared and analyzed stable isotope ecology samples

Research Assistant, Center for Undergraduate Research and Scholarship, 2015
Bowling Green State University, Bowling Green, OH

- Designed research project on the effects of toxic algae in Lake Erie on terrestrial insects

- Managed field operations: gained access to lake front sites, trained and scheduled technicians
- Analyzed insect community and toxicological data using R (e.g., vegan package)

Rain Forest Field Technician, Genetic Research in Applied Spatial Ecology Lab, 2014
Bowling Green State University, Bowling Green, OH, and Kakamega, Kenya

- Quantified human land use and biodiversity of trees and insects in the forest
- Assisted timber cruising, camera trapping, pitfall trapping, and sound measuring in the forest
- Learned identification of local flora and fauna
- Contributed to the evaluation of carbon trading projects for Eco2librium

Landscape Acoustics Research Assistant, Genetic Research in Applied Spatial Ecology Lab, 2014
Bowling Green State University, Bowling Green, OH, and Toledo, OH

- Conducted soundscape research on the effect of anthropogenic noise on songbird frequencies
- Recorded and analyzed ambient noise and songbird songs for acoustic adjustment
- Visually and audibly identified birds living in the Oak Openings region

Water Chemistry Research Assistant, 2013
Science, Engineering & Technology Gateway Ohio Research Program,
Bowling Green State University, Bowling Green, OH

- Collected sample water from the Portage River watershed to identify sources of contamination
- Analyzed physicochemical, nutrient, bacteriological and macroinvertebrate properties of each site
- Used equipment such as Hach HQ40d Analyzer, AQ2 Seal Discrete Chemical Analyzer and Quanti-Tray Bacteria Assays in accordance with Environmental Protection Agency Regulations
- Collaborated with the Bowling Green Wastewater Treatment Plant on phosphate chemical tests

PRESENTATIONS

Mirochnitchenko, N. A., Stuber, E. F., and Fontaine, J. J. 2018. “Can we predict biodiversity?” Nebraska Chapter of The Wildlife Society and Central Mountains and Plains Section Annual Meeting and Fire Exchange Symposium. Kearney, NE.

Mirochnitchenko, N. A., Stuber, E. F., and Fontaine, J. J. 2018. “Spatial mismatches between phylogenetic and functional diversity in Nebraska grassland bird communities.” The Society for Integrative and Comparative Biology. San Francisco, California.

Mirochnitchenko, N. A., Stuber, E. F., and Fontaine, J. J. 2017. “Influence of environmental gradients on the relationship between taxonomic and functional diversity in grassland birds.” American Ornithological Society Meeting 2017. East Lansing, Michigan.

Burnett, J., Wszola L.S., **Mirochnitchenko N.A.**, Stuber E., Allen C.R., Brown M.B., Twidwell D., and Carroll J.P. 2017. “Gray partridge distribution in North America: Changing landscapes and environment for an introduced species.” International Union of Game Biologists. Montpellier, France.

Mirochnitchenko, N. A., Stuber, E. F., and Fontaine, J. J. 2017. “How would different definitions of biodiversity change where we prioritize conservation?” 2017 Midwest Fish and Wildlife Conference Lincoln, Nebraska. 2017 University of Nebraska-Lincoln Graduate Poster Session. Lincoln, Nebraska.

Mirochnitchenko, N. A., and McCluney, K. E. 2016. “The Influence of beached harmful algal blooms on terrestrial arthropods on the shore of Lake Erie.” 2016 North America Congress for

Conservation Biology. Madison, WI. BGSU Undergraduate Symposium for Research and 2016 Scholarship. Bowling Green, OH. Northwest Ohio Undergraduate Symposium for Research and Scholarship/ Minds at Work Student Research Conference. Tiffin, OH.

Mirochnitchenko, N. A., and Gregory, A. J. 2015. "Integrating New Technology into Kenyan Rain Forest Conservation: Insights and Challenges." Embracing Global Engagement Conference. Bowling Green, OH.

Marshall, M. M., **Mirochnitchenko, N. A.**, and McCluney, K. E. 2015. "The Effects of Caffeine-laden Wastewater Effluent on Linked Stream and Riparian Food Webs." 2015 Midwest Ecology & Evolution Conference. Bloomington, IN. 2015 Ecological Society of America Annual Meeting. Baltimore, Maryland.

Mirochnitchenko, N. A., Marshall, M. M., and McCluney, K. E. 2015. "Effects of Widespread Trace Chemicals on Aquatic and Riparian Communities in the Portage River Watershed." Ecological Society Annual Meeting. Baltimore, MD.

Mirochnitchenko, N. A., and McCluney, K. E. 2015. "Chemical contamination suggests rising ecosystem threat in the Portage River watershed." 2015 Northwest Ohio Undergraduate Symposium for Research and Scholarship. Bowling Green, OH. 2015 National Conference of Undergraduate Research. Cheney, Washington.

Becker, J. E., Ingram H., **Mirochnitchenko, N. A.**, and K. E. McCluney. 2015. "Urbanization in mesic environments increases the frequency of terrestrial invertebrate water stress." Entomological Society of America, Minneapolis, MN.

Becker, J. E., Ingram, H., **Mirochnitchenko, N. A.**, and McCluney, K. E. 2015. "Frequency of arthropod water stress across urban, suburban, and undeveloped habitats in a cool, mesic climate." Ecological Society of America Annual Meeting, Baltimore, MD.

Becker, J. E., **Mirochnitchenko, N. A.**, Ingram H., and McCluney, K. E. 2015. "Water limitation alters terrestrial arthropod communities in mesic, urban environments." Belle Isle Aquarium Conservation Day Symposium, Detroit, MI. Midwest Ecology and Evolution Conference. Bloomington, IN.

Mirochnitchenko, N. A., Ruckert, K., Hutchins, S., and Midden, R. W. 2013. "Survey of the Sources of Contamination within the Tributaries of the Portage Watershed to Reduce the Economic and Ecological Impact of Harmful Algal Blooms in Lake Erie." 2014 Western Pennsylvania Conservation Conference. Clarion, PA. 2014 Undergraduate Research/Graduate School Retreat. Knoxville, TN. 2014 National Conference of Undergraduate Research. Louisville, KY. 2014 Posters at the Capitol. Columbus, OH. 2013 Science, Engineering & Technology Gateway Ohio Research Symposium. Bowling Green, OH.

FELLOWSHIPS, SCHOLARSHIPS, GRANTS, and AWARDS

- 2018 *Honorable Mention*, National Science Foundation Graduate Research Fellowship Program (<https://www.fastlane.nsf.gov/grfp/AwardeeList.do?method=loadAwardeeList>)
- 2018 *School of Natural Resources Conference Registration Scholarship (to attend AMCS/ CAMNet Adaptive Management Joint Meeting)*, University of Nebraska-Lincoln

- 2017 *School of Natural Resources Graduate Student Association Travel Grant*, University of Nebraska-Lincoln
- 2016 - 2018 *Chancellor's Fellowship*, University of Nebraska-Lincoln
- 2016 - 2018 *Graduate Assistantship for Research and Teaching Assistantship*, University of Nebraska-Lincoln
- 2015 *Center for Undergraduate Research and Scholarship Research Grant*, Bowling Green State University
- 2015 *Glass Award for Science Poster Presentation*, Northwest Ohio Undergraduate Symposium for Research and Scholarship, Bowling Green State University
- 2015 - 2016 *Science, Engineering & Technology Gateway Ohio Scholarship*, Bowling Green State University
- 2015 - 2016 *T. Richard Fisher Biology Scholarship*, Department of Biological Sciences, Bowling Green State University
- 2015 - 2016 *McKinney-Whitwer Biological Sciences Scholarship*, Department of Biological Sciences, Bowling Green State University
- 2014 - 2015 *J. Robert Bashore Liberal Education Scholarship*, Honors College, Bowling Green State University
- 2014 - 2015 *Harold Tinnappel Science Success Scholarship*, Department of Biological Sciences, Bowling Green State University
- 2014 *1st Place in Science Poster Presentation*, Undergraduate Research/Graduate School Retreat, Knoxville, TN
- 2013 - 2014 *Myra L. Patchen Biology Research Scholarship*, Department of Biological Sciences, Bowling Green State University
- 2013 *G. O. Herbert Moorehead Jr. Leadership Scholarship*, Bowling Green State University
- 2013 *Science, Engineering & Technology Gateway Ohio Scholarship*, Bowling Green State University
- 2012 *Achievement in Math and Science Scholarship 2012*, Bowling Green State University
- 2012 - 2016 *Centennial Scholarship*, Bowling Green State University
- 2012 - 2016 *Honors Experience Scholarship*, Honors College, Bowling Green State University
- 2012 - 2016 *Ohio College Opportunity Grant*, Ohio Department of Higher Education

PUBLICATIONS

Becker, J. E., **Mirochnitchenko, N. A.**, Ingram, H., Everett, A., and McCluney, K. "Invertebrate water demand varies with climate, weather, and land cover in a cool mesic region" *Accepted to PLOS One*.

Mirochnitchenko, N. A., and McCluney, K. E. "The influence of beached harmful algal blooms on terrestrial arthropods on the shore of Lake Erie." *in prep*.

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Burnett, J. L., Wszola, L. S., **Mirochnitchenko, N. A.**, Stuber, E. F., Allen, C. R., Bomberger Brown, M., Twidwell, D., and Carroll, J. P. "Gray Partridge distribution in North America: changing landscapes for an introduced species." *in prep.*

Marshall, M. M., **Mirochnitchenko, N. A.**, and McCluney, K. E. "Linking aquatic trace chemicals on terrestrial arthropod communities in an agricultural watershed." *in prep.*

TEACHING EXPERIENCE

Teaching Assistant, NRES 474/874, Herpetology, 2017
School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE

- Assisted teaching basic anatomy, physiology, behavior, and ecology of amphibians and reptiles
- Helped guide field trips looking for Nebraska native herptofauna
- Facilitated laboratory and field activities including reptile and amphibian trapping
- Prepared specimens for examination and dissection
- Cared for snakes, frogs, toads, turtles, and salamanders

Teaching Assistant, NRES 233, Wildlife Field Techniques, 2016 - 2017
School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE

- Taught wildlife techniques: mammal trapping, deer and prairie chicken aging, and navigating

Teaching Assistant, NRES 208, Applied Climate Sciences, 2016
School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE

- Facilitated group activities, directed review sessions, and graded assignments and tests
- Integrated an interactive teaching platform, Mentimeter©, into lectures

Learning Assistant, BIOL 2050, Concepts of Biology II, 2014 - 2016
Bowling Green State University, Bowling Green, OH

- Facilitated group activities in lecture and lab, directed review sessions, and graded assignments
- Showcased reptiles to demonstrate biological course related concepts

Undergraduate Stewardship Liaison, CHEM 1280, General Chemistry Laboratory, 2013 - 2014
Great Lakes Innovative Stewardship Through Education Network,
Bowling Green State University, Bowling Green, OH

- Managed relationships between BGSU faculty and community partners to organize service learning projects for undergraduate students, to improve the quality of the Great Lakes
- Trained new Undergraduate Stewardship Liaisons at Stone Laboratory
- Managed systematic water quality chemical analysis projects
- Partnered with community representatives from Ohio Environmental Protection Agency, Lake Erie Water Keeper, Ohio Department of Health
- Assessed learning outcomes for the National Center for Science and Civic Engagement

Undergraduate Stewardship Liaison, ARTS 4000, Special Topics 2-D (Mural Painting), 2013 - 2014
Great Lakes Innovative Stewardship Through Education Network,
Bowling Green State University, Bowling Green, OH

- Managed relationships between BGSU faculty and community partners to organize service learning projects for undergraduate students, to improve the quality of the Great Lakes
- Helped design a mural that displayed the benefits of clean water
- Partnered with community representatives from Friends of Toledo

PROFESSIONAL WORKSHOPS

- 2018 *Communicating Research via Outreach*, Professional and Career Development, University of Nebraska-Lincoln
- 2018 *SciComm: A conference on effective science communication*, University of Nebraska-Lincoln
- 2017 *Stochastic Modeling in Ecology*, Enhancing Linkages between Mathematics and Ecology, Kellogg Biological Station, Michigan State University
- 2017 *Structural Equation Modeling in Ecology*, Enhancing Linkages between Mathematics and Ecology, Kellogg Biological Station, Michigan State University
- 2017 *Maximum Likelihood in Ecology*, Enhancing Linkages between Mathematics and Ecology, Kellogg Biological Station, Michigan State University
- 2017 *Conservation Biology and Modeling*, National Conservation Training Center, U.S. Fish and Wildlife Service
- 2017 *Introduction to Data Basin and the Midwest Grassland Conservation Atlas*, 77th Annual Midwest Fish and Wildlife Conference
- 2017 *Essentials of Survey Research on Hunters, Anglers, Trappers and Non-Consumptive Wildlife Enthusiasts*, 77th Annual Midwest Fish and Wildlife Conference

SERVICE AND OUTREACH

- Judge**, Metropolitan Science and Engineering Fair, Henry Doorly Zoo, Omaha, NE 2017, 2018
- Evaluated creative and scientific merit of middle school science projects
- Volunteer**, Weatherfest, University of Nebraska-Lincoln 2018
- Educated visitors and families about Nebraska herpetofauna
- Guest Lecturer**, Middle School Science Club, Lincoln Public Schools 2018
- Taught middle school students about the natural history of lizards, snakes, turtles, and amphibians
 - Guided handling of salamanders, turtles, geckos, and snakes
- Volunteer**, Sunday with a Scientist, University of Nebraska State Museum, Morrill Hall 2017 - 2018
- Educated visitors about the ecology, natural history, and management of Nebraskan snakes
 - Led educational activities about the ecology and management of bobwhite quail for kids(age5-12)
- Volunteer**, North American Arctic Goose Conference, Lincoln, NE 2018
- Guided attendees and helped assemble poster boards
- Volunteer**, BioBlitz, Indian Cave State Recreation Area, NE 2017
- Assisted and documented bat netting set-up, data collection, and bat public outreach session
- Volunteer**, Missouri River Outdoor Expo, Ponca State Park, NE 2017
- Educated visitors about native snakes of Nebraska
 - Mist netted backyard birds for public education

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- Reviewer**, Herpetology Lab, University of Nebraska-Lincoln 2017
- Reviewed an undergraduate thesis for defense and publication
- Judge**, Science Literacy Poster Session, University of Nebraska-Lincoln 2017, 2018
- Evaluated of undergraduate environmental decision-making posters for science literacy class
- Graduate Student Representative**, Safety Committee, School of Natural Resources, University of Nebraska, Lincoln, NE 2017- Present
- Addressed safety issues in the department by voicing the concerns of graduate students
 - Helped coordinate tornado drill

LEADERSHIP EXPERIENCE

- Volunteer Coordinator**, Herpetology Lab, Bowling Green State University 2015 - 2016
- Managed the cared for reptiles and amphibians of all species in the laboratory
 - Trained new volunteers to care for and handle animals
 - Performed necropsies, monitored for IACUC compliance, addressed animal health issues
- Demonstration Leader**, Herpetology Lab, Bowling Green State University 2016
- Demonstrated animals to visitors and events like STEM at the Park, Art X, and Preview Days
- Student Ambassador**, Center for Undergraduate Research and Scholarship, Bowling Green State University 2014 - 2016
- Guided prospective students to potential funding sources for creative and scientific work
- Co-founder, Vice President, and Trip Coordinator**, Society of Conservation Biology Northwest Ohio Chapter (i.e. Ecology and Conservation Association), Bowling Green State University 2013 - 2015
- Organized professional training opportunities, stewardship events, guest speakers, and fundraisers
 - Served as Vice President, Public Relations Officer, and Executive Planning Committee Chair
 - Designed logo, advertise events, and helped write the ECA constitution
- Organizer and Member**, Honors Scholar, Bowling Green State University 2012 - 2016
- Participated in a student community which explores ethics, rationality, and critical thinking
 - Orchestrated documentary discussions nights and online conversations
 - Learn through reading, listening and discussing about books, film, theatre and music
 - Travel to participate in theatre showings and academic meetings

LANGUAGES

Russian (Native); English (Native); Spanish (working proficiency); Portuguese (working proficiency)

PROFESSIONAL MEMBERSHIP

- 2016 - Present **Researcher Member**, Galliformes Specialist Group
- 2017 - Present **Student Member**, American Ornithological Society
- 2017 - Present **Student Member**, The Society for Integrative and Comparative Biology
- 2017 - Present **Student Member**, The Wildlife Society (Nebraska Chapter)

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- 2014 - Present **Student Member**, Ecological Society of America
- 2014 - Present **Student Member**, Society for Conservation Biology
- 2015 - 2016 **Student Member**, Phi Beta Kappa National Honor Society (Xi of Ohio Chapter)
- 2014 - 2016 **Student Member**, Mortar Board National Honor Society
- 2013 - 2016 **Student Member**, National Society of Collegiate Scholars

OTHER WORK EXPERIENCE

- Reptile and Amphibian Keeper**, Herpetology Lab, Bowling Green State University 2013 - 2016
- Worked with geckos, lizards, frogs, snakes, chameleons, salamanders, axolotls, turtles, and skinks
- Technician**, Biological Sciences Greenhouse, Bowling Green State University 2015 - 2016
- Assisted with botany experiments and greenhouse maintenance
- Whip Spider Keeper**, Behavioral Ecology Lab, Bowling Green State University 2015
- Attended to three species of whip spiders
- Art Apprentice**, Young Artists at Work, Toledo, OH 2011
- Collaborated with a team of artists to construct, paint and install a mural for Toledo Grows
 - Painted benches for the city of Toledo
 - Worked on individual art pieces that were sold to fund the following year's program

ADDITIONAL TRAINING

- 2018 First Aid/CPR/AED Certification (certified since 2016)
- 2016 Institutional Animal Care and Use Committee (IACUC)-Investigators, Staff, & Students
- 2016-18 UNL Large Passenger Van Driving
- 2016 UNL Core: Injury and Illness Prevention Plan
- 2016 UNL Core: Emergency Preparedness Training
- 2016 NSC Defensive Driving 9
- 2016 Safety: DOI Safety and Occupational Health Overview (course code: 1342)
- 2016 Safety: Authorities, Roles, and Responsibilities (course code: 1338)
- 2016 Safety: USGS Safety and Occupational Health Program Overview (course code: 1315)
- 2016 Safety: USGS Safety Program Requirements (course code: 1300)
- 2016 Safety: USGS Industrial Hygiene Program (course code: 1304)