

Kristin Brunk

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Research Interests and Career Goals

I have a broad range of research interests and a passion for teaching others within and outside of the field of ecology. Short-term, I hope to earn a PhD in wildlife ecology, focusing on research that both answers basic biological questions and has real-world management implications. Ideally, my research will aid in the conservation of species and create opportunities for me to educate the public and mentor younger scientists. I am especially interested in behavioral ecology responses of birds and other taxa to anthropogenic stressors. Long term, I hope to earn a professorship at a small- to medium-sized institution where I will be able to conduct research, teach undergraduates, and get students involved in research. I am also open to working at an NGO that would provide me opportunities to conduct research and assist in conservation efforts.

Education

PhD – University of Wisconsin, Madison, WI 53706 – In progress

- Pursuing PhD in Wildlife Ecology since August 2016
- Research: Evaluating a management strategy for marbled murrelets in remaining old-growth forests of northern CA, behavioral and foraging ecology of Steller's jays in central CA
- GPA: 4.0

BS – Northland College, Ashland, WI 54806 – May 2013

- Majors: Natural Resources with an emphasis in Fisheries and Wildlife Ecology; Biology
- Minor: Environmental Studies
- *Summa Cum Laude*
- GPA: 3.95/4.0

Diploma – Westfield High School – June 2009

- Academic Honors Diploma
- GPA 4.28/4.3 Class Standing: 3/375

Teaching

- Graduate Teaching Assistant, **Birds of Southern Wisconsin and Ornithology** (ZOO520, ZOO521), Spring 2018
 - Taught lab section of Birds of Southern Wisconsin, coordinated and drove students to field trips each week and on weekends, taught

- students to identify >200 species of Wisconsin birds by call and/or sight, administered and graded quizzes and exams
- Graduate Teaching Assistant, **Extinction of Species** (FWE360), Fall 2017
 - Lead three sections of 20 students (60 total) each week in discussion of articles and course material, graded writing assignments and exams, organized course materials, worked with lecturer to coordinate course for students and ensure student learning
- Graduate Teaching Assistant, **Birds of Southern Wisconsin and Ornithology** (Z00520, Z00521), Spring 2017
- Graduate Teaching Assistant, **Extinction of Species** (FWE360), Fall 2016
- Teaching Assistant, **Aquatic Invertebrates** (Northland College) (May 2012)
 - Helped students prepare for tests and collect and identify aquatic invertebrates in the field and in a lab setting, prepared slide mounts of aquatic invertebrates, organized aquatic invertebrate collection

Publications

- **Brunk, Kristin M.**, Mark R. Vinson, Derek H. Ogle, and Lori M. Evrard. 2014. Burrowing mayfly populations in Chequamegon Bay, Wisconsin: 2002 and 2012. *Journal of Freshwater Ecology* 29(3): 337-344.
- Piper, WH, **KM Brunk**, JA Flory, MW Meyer. 2017. The Long Shadow of Senescence: Age impacts survival and territory defense in loons. *Journal of Avian Biology* 48(8): 1062-1070.
- Piper, W.H., **K.M. Brunk**, G.L. Jukkala, E.A. Andrews, S.R. Yund, N.G. Gould. 2018. Aging male loons make a terminal investment in territory defense. *Behavioral Ecology and Sociobiology* 72:95.

Grants and Awards

- National Science Foundation Graduate Research Fellowship, 2018
- Vera and Donald Wallach Scholarship, College of Agricultural and Life Sciences, University of Wisconsin, Madison, 2018
- Save the Redwoods League Foundation Research Grant, 2017 (\$25,000)

Outreach

- Brunk, K.M. Summer 2018. Steller's Jay Ecology, Capture, and Banding. Big Basin Redwoods State Park.
- Brunk, K.M. Summer 2018. Steller's Jays, Marbled Murrelets, and You. Big Basin Redwoods State Park, Campfire Presentation.

Specialized Skills

- Extensive experience observing and recording reproductive behavior of birds
- Extensive experience re-sighting colored and numbered field-readable bands on aquatic and terrestrial birds
- Experience working in bird colonies in marine and freshwater environments
- Extensive experience safely capturing and handling large species of birds and songbirds
- Experience extracting passerines from mist nets, banding, aging, sexing, taking morphometric measurements, attaching radio backpacks, and collecting feather and blood samples
- Experience conducting vigorous field work in tropical and cold climate conditions and in remote locations
- Strong writing, organizational, and quantitative analysis skills
- Proficient in laboratory techniques including DNA extraction, PCR, and stable isotope sample preparation
- Proficient in R for statistical analysis, Microsoft Office, Program Presence

Field and Research Experience

- **Behavioral Ecology of Steller's jays in central CA (Big Basin State Park, Boulder Creek, CA) (May-August 2017, May-August 2018)**
 - Captured Steller's jays using mist nets, color banded and re-sighted jays, radio tagged and used telemetry to track jays
 - Collected blood and feather samples from captured jays
 - Interacted with campers in the campground and educated visitors
 - Trained field tech in all skills necessary to complete field work
- **SC DNR Black Rail Technician (Yawkey WMA, Georgetown, SC) (February-August 2016)**
 - Planned survey routes and conducted surveys for focal marsh bird species including black rails
- **Avian Field Assistant (Isla Espanola, Galapagos, Ecuador; Wake Forest University) (November 2015-February 2016)**
 - Collected data related to the reproductive success of Nazca boobies and waved albatross in the Galapagos, Ecuador
- **Assistant Bird Bander (Rio Mesa Center, Moab, UT) (August-November 2015)**
 - Banded and extracted passerines from mist nets
 - Identified, aged, skulled, and sexed many species of western songbirds
- **SC DNR Wading Bird Technician (Donnelley WMA, SC) (March-July 2015)**
 - Monitored wood stork rookeries, aged chicks, and counted nests
 - Completed aerial surveys of wading bird rookeries from a fixed-wing aircraft

- Canoed through sensitive wading bird rookeries to count nests of several species of bird simultaneously, climbed trees to capture and band WOST chicks
- **Common Loon Project Crew Leader (Oneida County, WI) (May-October 2013 and June-October 2014)**
 - Meticulously collected and entered data related to territorial behavior of common loons in northern Wisconsin
 - Extensively handled adult loons and chicks during the banding season
 - Spotlighted and nocturnally captured wild loons for banding
 - Canoed 40+ hours per week in all weather conditions; portaged canoe
 - Helped train and assist new Loon Project field assistants
- **U.S Fish and Wildlife Service, Crazy Ant Strike Team VII Member (Johnston Atoll NWR) (November 2013-June 2014)**
 - Worked to exterminate populations of invasive Yellow Crazy Ants (*Anoplolepis gracilepes*) to increase success of ground-nesting bird reproduction
 - Captured and banded red-tailed tropicbirds, completed mean incubation counts for several seabirds in dense vegetation
 - Identified shorebirds by sight and/or call
 - Completed weekly fish surveys requiring the ID of over 100 species of fish
 - Assisted in analysis of bioassay data and writing of findings reports
 - Lived and worked in a tropical field setting on a remote island
- **Common Loon Project Field Assistant (Oneida County, WI) (May-August 2012)**
 - Meticulously collected and entered data related to loon populations in northern Wisconsin, re-sighted colored leg bands in and out of water
- **Northland College Capstone Project: *Burrowing Mayfly Populations in Chequamegon Bay, Wisconsin: 2002 and 2012 - 2012***
 - Designed project based on past studies and wrote a proposal for the Wisconsin DNR
 - Used a dichotomous key to identify burrowing mayflies to species level
 - Completed statistical analysis on a large dataset
- **Project Lead, Whittlesey Creek Aquatic Invertebrate Monitoring Project (2012-2013)**
 - Created protocols for baseline invertebrate monitoring at Whittlesey Creek National Wildlife Refuge in Ashland County, WI
- **Research Assistant - Research Experience for Undergraduates: University of Alaska Southeast (June-August 2011)**
 - Planned, conducted, and presented my own observational research
 - Completed nocturnal bat acoustic surveys in rough terrain
 - Insect identification, insect sampling

Leadership/Communication

- Communications Commission President (Northland College) (September 2012-May 2013)
 - Oversaw production of the student newspaper, literary magazine, and yearbook, and operations of the radio station
- Statistics/Biometry Tutor (Northland College) (September 2011-May 2013)
 - Helped students understand concepts, complete assignments, and prepare for tests
- Writing Tutor (Northland College) (September 2011-May 2013)
 - Helped students generate well-written and grammatically correct papers for both humanities and science topics
- *Drifts* Newspaper Editor-in-Chief (May 2010-September 2012)
 - Supervised staff writers and produced the college newspaper
 - Completed layouts, designed pages, edited and wrote news stories