

KRISTIN BRUNK

PhD Candidate, NSF Graduate Research Fellow
University of Wisconsin – Madison
Department of Forest and Wildlife Ecology
kbrunk@wisc.edu

Education

University of Wisconsin – Madison, WI (2016 – present)

Pursuing PhD in Wildlife Ecology, Department of Forest and Wildlife Ecology

Dissertation: “Exploring the Ecology and Management of Two Species of Conservation Concern.”

Advisors: Dr. M Zachariah Peery and Dr. Anna Pidgeon

PhD Committee: Dr. Karen Strier, Dr. Anthony Ives, and Dr. Volker Radeloff

Northland College, Ashland, WI (2013)

B.S. in Fisheries and Wildlife Ecology and Biology, *Summa Cum Laude*

Undergraduate Capstone: “Burrowing mayfly populations in Chequamegon Bay, Wisconsin: 2002 and 2012.” Advisor: Derek Ogle

Field and Research Experience

Doctoral field research: Ecology and management of Steller’s jays (May-Aug 2017, 2018, 2019)

Big Basin State Park, Boulder Creek, CA

Black Rail Technician, South Carolina Department of Natural Resources (Feb-Aug 2016)

Yawkey Wildlife Management Area, Georgetown, SC

Avian Field Assistant, Wake Forest University, PI: Dave Anderson (Nov 2015-Feb 2016)

Isla Espanola, Galapagos, Ecuador

Assistant Bird Bander, University of Utah MAPS Station, PI: Cagan Sekercioglu (Aug-Nov 2015)

Rio Mesa Center, Moab, UT

Wading Bird Technician, South Carolina Department of Natural Resources (Mar-July 2015)

Donnelley and Bear Island Wildlife Management Areas, Green Pond, SC

Field Crew Leader, Common Loon Project, PI: Walter Piper (May-Oct 2013, 2014)

Oneida and Lincoln Counties, WI

Crazy Ant Strike Team Member, U.S. Fish and Wildlife Service (Nov 2013-June 2014)

Johnston Atoll National Wildlife Refuge, Pacific Remote Island

Field Assistant, Common Loon Project, PI: Walter Piper (May-Aug 2012)

Oneida and Lincoln Counties, WI

Research Assistant, NSF Research Experience for Undergraduates (June-Aug 2011)
University of Alaska Southeast, Advisor: Karen Blejwas, AK Dept. of Fish and Game

Publications

Brunk, KM, S Chinnici, A Pidgeon, and MZ Peery. *In Press*. Evaluating the effectiveness of a forest Habitat Conservation Plan for a threatened seabird, the marbled murrelet. *Ornithological Applications*.

Brunk, KM, E West, MZ Peery, and A Pidgeon. 2021. Reducing anthropogenic subsidies can curb density of overabundant predators in protected areas. *Biological Conservation* 256:109081, <https://doi.org/10.1016/j.biocon.2021.109081>

Hoover, BA, **KM Brunk**, G Jukkala, N Banfield, AL Rypel, WH Piper. 2020. Early evidence of natal-habitat preference: Juvenile loons feed on natal-like lakes after fledging. *Ecology and Evolution* 11(3):1310-1319.

West, EH, **K Brunk**, and MZ Peery. 2019. When protected areas produce source populations of overabundant species. *Biological Conservation* 238.

Piper, WH, **KM Brunk**, GL Jukkala, EA Andrews, SR Yund, N.G. Gould. 2018. Aging male loons make a terminal investment in territory defense. *Behavioral Ecology and Sociobiology* 72:95.

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.

Brunk, Kristin M., MR Vinson, DH Ogle, and LM Evrard. 2014. Burrowing mayfly populations in Chequamegon Bay, Wisconsin: 2002 and 2012. *Journal of Freshwater Ecology* 29(3): 337-344.

Awards and Funded Research

(2018) Marbled Murrelet and Steller's Jay management in coastal redwood forests: an emerging conservation success story? – continuation grant. **Save the Redwoods League**. \$25,000. PI: M Peery, Co-Is: K Brunk, AM Pidgeon, EH West.

(2018) Graduate Research Fellowship. **National Science Foundation**.

(2018) Vera and Donald Wallach Scholarship. **College of Agricultural and Life Sciences**, University of Wisconsin-Madison. \$2,000.

(2017) Marbled Murrelet and Steller's Jay management in coastal redwood forests: an emerging

conservation success story? **California State Parks**. \$29,000. PI: M Peery, Co-Is: AM Pidgeon, EH West, KM Brunk.

(2017) Marbled Murrelet and Steller's Jay management in coastal redwood forests: an emerging conservation success story? **Save the Redwoods League**. \$25,000. PI: M Peery, Co-Is: AM Pidgeon, EH West, KM Brunk.

Teaching

Guest Lecture, Ornithology, "Ecology and Conservation of the Marbled Murrelet," April 2021

Guest Lecture, Extinction of Species, "Diagnosing the Causes of Extinction," October 2019

Graduate Teaching Assistant, **Birds of Southern Wisconsin** and **Ornithology** (Z00520, Z00521), Spring 2018, Spring 2017

Organized and taught lab section of Birds of Southern Wisconsin, coordinated and led student 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, Fall 2016

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

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

Academic Presentations

Brunk, KM, Elena West, MZ Peery, Anna Pidgeon. 2021. Management curbs density of an important Marbled Murrelet nest predator in a protected area. Oral presentation. Pacific Seabird Group Conference, February 2021, virtual. *Honorable mention*, student presentation awards.

Brunk, KM, Elena West, MZ Peery, Anna Pidgeon. 2021. Management curbs density of a highly-subsidized generalist predator in a protected area. Oral presentation. The Wildlife Society – Western Section Conference, February 2021, virtual. *Best Talk*, student presentation awards.

Brunk, KM, Sal Chinnici, Anna Pidgeon, MZ Peery. 2020. Evaluating the effectiveness of Marbled Murrelet habitat conservation planning. Oral presentation. North American Ornithological Conference, August 2020, virtual. *Honorable Mention*, student presentation awards.

Brunk, KM, Elena West, MZ Peery, Anna Pidgeon. 2020. Management reduces density of a highly-subsidized generalist predator. Poster presentation. North American Ornithological Conference, August 2020, virtual.

Brunk, K.M. Exploring the ecology and management of two old-growth forest species. May 2018. Entrance seminar, Forest and Wildlife Ecology Department, University of Wisconsin-Madison.

Outreach Presentations

K Brunk. Scheduled - July 2021. A Tale of Two Species: Improving species conservation by managing human behavior. Cocktails and Fishtales, Harbor WildWatch, Washington.

Wray, A, A Kramer, A Reiss, C Zulla, N Kryshak, **K Brunk**, and M Rodriguez Curras. October 2020. Wildlife of Halloween Community Webinar. Forest and Wildlife Ecology Webinar Series, UW Madison.

Brunk, K.M. August 2019. Steller's Jay Ecology, Capture, and Banding. Banding demonstration and talk for the Santa Cruz Bird Club.

Brunk, K.M. June 2019. Panel Member for the Pickwick Society in a discussion of animals in literature.

Brunk, K.M. Summer 2019. Steller's Jay Ecology, Capture, and Banding. Big Basin Redwoods State Park. (4 programs)

Brunk, K.M. Summer 2018. Steller's Jay Ecology, Capture, and Banding. Big Basin Redwoods State Park. (2 programs)

Brunk, K.M. Summer 2018. Steller's Jays, Marbled Murrelets, and You. Big Basin Redwoods State Park, Campfire Presentation. (2 programs)

Leadership/Service/Communication

Student Representative (Pacific Seabird Group, Executive Committee) (February 2020-February 2022)

Graduate Student Representative (Dept. of Forest and Wildlife Ecology, UW-Madison) (September 2018-September 2020)

Communications Commission President (Northland College) (September 2012-May 2013)

Statistics/Biometry Tutor (Northland College) (September 2011-May 2013)

Writing Tutor (Northland College) (September 2011-May 2013)

Drifts Student Newspaper Editor-in-Chief (May 2010-September 2012)

Specialized Skills

- Extensive experience observing and recording reproductive and territorial behavior of birds, re-sighting colored and numbered field-readable bands on aquatic and terrestrial

- birds, working in bird colonies/rookeries in marine and freshwater environments, 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
 - Strong writing, organizational, and quantitative analysis skills
 - R for statistical analysis, ArcGIS
 - Distance sampling, stable isotope analysis, demography, occupancy modeling, hierarchical modeling (GLMM, LMM)
 - Proficient in laboratory techniques including DNA extraction, PCR, and stable isotope sample preparation
-

Detailed 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, May-August 2019)

- 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 technicians 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, 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 research
- Completed nocturnal bat acoustic surveys in rough terrain
- Insect identification, insect sampling