

ANASTASIA A. RAHLIN

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Education

2014-2016	M.S. Ecology and Evolutionary Biology, University of Chicago, Chicago, Illinois
2008-2012	Sc.B. Geology-Biology with Honors, Brown University, Providence, Rhode Island

Professional Appointments

September 2016 – present

Ornithologist, resident and migratory bird research. Illinois Natural History Survey, University of Illinois, Urbana, IL. Designed and supervised migratory bird research in northern Illinois, including grant writing and acquisition, planning and conducting fieldwork, data collection and analysis, and writing manuscripts and technical reports. Performed point count and playback surveys, focusing on threatened, endangered, and sensitive wetland and woodland species, along urbanization and land-use gradients. Coordinated fieldwork with Cook, Lake, Will, and McHenry County Forest Preserve District biologists. Modeled bird density using distance sampling methods and wrote technical reports to contracting agencies and district biologists. Initiated environmental DNA (eDNA) research to search for rare and cryptic wetland birds of Illinois and Michigan, particularly rails and bitterns; developed bioinformatic pipelines and currently testing and developing primers. Collaborated with Audubon Great Lakes scientists on wetland bird occupancy modeling research. Initiated red-headed woodpecker decline and oak mast research in northern Illinois and obtained master banding permit for RHWOs. Managed multiple staff biologists and hourly technicians as the terrestrial ecology team lead, including hiring, training, and evaluating staff.

April 2016 – July 2016

Biologist, Black-Backed Woodpecker Research. The Institute for Bird Populations, Point Reyes Station, CA. Established and conducted multi-species point counts and habitat assessments in the northern Sierra Nevada and southern Cascade ranges as part of USFS Management Indicator Species population monitoring. Additionally, used playback to survey recently burned mixed conifer forests for Black-Backed Woodpeckers, a species of conservation concern, in order to better manage fire and logging impacts on birds.

September 2014 – March 2016

Graduate research assistant, University of Chicago, Chicago, IL. Studied interactions between Hume's Leaf Warbler, sawfly larvae, and Himalayan Birch in Manali Sanctuary, Himachal Pradesh, India, to tease apart the effects of biotic and abiotic factors which limit the altitudinal distributions of these three alpine species, and to understand how responses to extreme weather events and predation impact fitness of migratory birds. Supervised and trained multiple field technicians to conduct bird, insect, and phenology surveys, safely

mist-net and measure birds. Processed over 200 birds, conducted playback with competing *Phylloscopus* warbler species, and piloted reciprocal transfer experiments with birch saplings. Used program MARK to model nest survival rates for 11 years of field data.

March 2014 – August 2014

Bird Banding Intern, Point Blue Conservation Science (formerly PRBO), Palomarin Field Station, Point Reyes, CA. Worked with a team of interns as part of a long-term mistnetting and banding songbird research program. Extracted, banded, and processed over 600 birds, comprising over 40 species; trained as a bander by Renée Cormier and Mark Dettling. Conducted area searches, mended nets, and recorded phenological observations in collaboration with Nature's Notebook, a citizen science program. Conducted outreach presentations and tours to school groups and members of the public, and conducted independent project using mark-recapture data to measure Wrentit body size shifts due to climate change. Gained certification at the Bander level from the North American Banding Council (NABC, nabanding.net) demonstrating ethical bird-banding practices and my ability to use molt patterns, plumage characteristics, and morphological measurements to accurately age and sex a variety of passerines and near-passerines.

August 2013 – March 2014

Acorn Woodpecker Lead Field Technician, Hastings Natural History Reservation, Carmel Valley, CA. Assisted with long-term Acorn Woodpecker cooperative breeding research under Drs. Walt Koenig and Eric Walters. Tracked birds using radio telemetry, re-sighted color bands using spotting scopes in blinds, captured unbanded juveniles and adults, conducted roost watches, nest searches, acorn counts, and recorded behaviors of breeding and helper birds. As the Lead Technician, I supervised two additional field technicians and scheduled fieldwork. Conducted outreach presentations and equipment demonstrations to Boy scout groups, undergraduates, and visitors.

March 2013 – August 2013

Black-backed Woodpecker Biologist Intern, The Institute for Bird Populations, Susanville, CA. Tracked Black-Backed Woodpecker adults to assess their habitat use, foraging behavior, and home range size in Plumas National Forest. Mist-netted birds, assisted with banding and placing transmitters on adults, photographed plumage for molt analysis, and released captured birds. Conducted vegetation surveys at foraging locations, searched for nests, and conducted playback and point count surveys off-trail in recently burned forests.

September 2012 – March 2013

Acorn Woodpecker Field Technician, Hastings Natural History Reservation, Carmel Valley, CA. Assisted with long-term Acorn Woodpecker cooperative breeding research. Tracked birds using radio telemetry, re-sighted color bands using spotting scopes in blinds, captured unbanded juveniles and adults, conducted roost watches, nest searches, acorn counts, and recorded behaviors of breeding and helper birds. Conducted outreach presentations and equipment demonstrations to Boy Scout groups, undergraduates, and visitors.

June 2012 – September 2012

Clark's Nutcracker Field Technician. Bridger-Teton National Forest, Jackson, WY. Assisted with Clark's Nutcracker research under Dr. Taza Schaming. Tracked Clark's Nutcrackers with radio-telemetry off-trail using GPS and topographical maps, conducted

habitat surveys, point counts, cone counts, and re-sighted color bands using binoculars to quantify Nutcracker feeding behavior, seasonal ranges, and use of Whitebark Pines in response to climate-induced mountain pine beetle invasions and fungal outbreaks causing tree mortality and widespread habitat decline.

May 2011 – May 2012

Independent Research, Brown University, Providence, RI. Conducted plant ecology research under Dr. Erika Edwards. Created ecological niche models of global CAM and C4 plant distributions in R. Used open-source Maxent and DIVA-GIS to describe CAM and C4 climate envelopes and model potential responses of plant species to climate change. Models used freely-available WorldClim and GBIF occurrence data.

Publications

In prep. Bielke, S., Rahlin, A., and S. Saunders. Understanding seasonal and spatial drivers of wetland bird occupancy. Target journal: Journal of Field Ornithology.

In prep. Rahlin, A., M. Davis, and M. Niemiller. Using environmental DNA methods to detect cryptic wetland birds. Target journal: Conservation Genetics Resources.

In press. Rahlin, A., A.R. Világ, and D. Hurd. Improved, flexible canopy netting rig and audio lure placement for woodpecker capture. North American Bird Bander.

Poisot, T., R. Labrie, E. Larson, and A. Rahlin. 2018. Data-based, synthesis-driven: setting the agenda for computational ecology”. Ideas in Ecology and Evolution 12: 9-21. [dx.doi.org/10.24908/iee.2019.12.2.e](https://doi.org/10.24908/iee.2019.12.2.e).

Technical Reports

Rahlin, A., T.C. Hohoff, V.A. Sivicek, J.L. Jarvis, and M.J. Dreslik. 2019. Biological surveys of terrestrial communities along the northern I-355 corridor. INHS Technical Report 5:1-48.

Rahlin, A., T.C. Hohoff, V.A. Sivicek, J.L. Robinson, M.J. Dreslik, and J.L. Jarvis. 2019. Biotic assessment of terrestrial communities along the Edens Spur toll road. INHS Technical Report 3: 1-48.

Rahlin, A., A.R. Világ, and M.J. Dreslik. 2018. Assessment of impacts from construction activities near the Tri-State Corridor tollway bridge over the Des Plaines River on Osprey (*Pandion haliaetus*). INHS Urban Biotic Assessment Program report to Bryan Wagner, Environmental Planning Coordinator, ISHTA.

Rahlin, A., E.E. Bilger, S.A. Douglass, T.C. Hohoff, M.L. Niemiller, J.P. Ross, A.J. Stites, J.L. Sherwood, A.R. Világ, and M.J. Dreslik. 2018. Biotic assessment of the Pine Dunes wetland mitigation site. INHS Technical Report 8: 1-25.

Baker, S.J., E.E. Bilger, S.A. Douglass, T.C. Hohoff, A.A. Rahlin, J.P. Ross, J.L. Sherwood, A.J. Stites, M.L. Niemiller, and M.J. Dreslik. 2018. Organismal monitoring at Orland Grassland South Addition wetland mitigation site. INHS Technical Report 7: 1-20.

Ross, J.P., A.A. Rahlin, S.A. Douglass, J.L. Sherwood, A.J. Stites, E.E. Bilger, T.C. Hohoff, M.L. Niemiller, A.R. Világ, and M.J. Dreslik. 2017. Biological monitoring at streams and natural areas within the interstate 355 corridor. INHS Technical Report 6:1-40.

Douglass, S., A.A. Rahlin, S.J. Beilke, E.E. Bilger, S.J. Baker, J.K. Warner, and M.J. Dreslik. 2017. Biological monitoring at Trout Park, Fox River Forested Fen Forest Preserve, and Voyageur Landing Forest Preserve in Elgin, Illinois. INHS Technical Report 6:1-18.

Rahlin, A., Beilke, S., and M.J. Dreslik. 2017. Fall avifaunal surveys of woodland forest preserves along the southern I-294 corridor. INHS Technical Report 2: 1-11.

Rahlin, A.A., Beilke, S.J., and M.J. Dreslik. 2017. Fall 2016 avifaunal monitoring at Lib and Ipsen conservation areas along the I-90 corridor. INHS Technical Report 10: 1-11.

Rahlin, A., Baker, S., Warner, J.K., Bilger, E., Niemiller, M., Beikle, S.J., and M.J. Dreslik. 2017. Biological monitoring at the North Chicago wetland mitigation site near the I-94 corridor. INHS Technical Report 1: 1-21.

Rahlin, A. 2016. Progress report on field research conducted using funds from the HINDS grant. Report to the University of Chicago, Committee on Evolutionary Biology, Chicago, IL.

Price, T. D., Singh, P., and Rahlin, A. 2016. Report on field research in Himachal Pradesh, 2015. Report to the Wildlife Institute of India, Dehradun, India.

Presentations

2019 Secretive marsh bird occupancy in Illinois and Indiana. Poster presentation for American Ornithological Society conference, Anchorage, AK.

2019 Secretive marsh birds in the big city. Co-talk with Audubon collaborator Stephanie Beilke for the Wild Things conference, Chicago, IL.

2019 Using environmental DNA to detect rails. Lightning talk for Midwest Fish and Wildlife conference, Cleveland, OH.

2018 Using environmental DNA to determine cryptic wetland bird occupancy. Poster presentation for American Ornithological Society conference, Tucson, AZ.

2017 Using environmental DNA sampling methods to determine cryptic wetland bird occupancy in Illinois. Poster presentation for Ecological Society of America conference, Portland, OR.

2016 Selection on breeding date in a migratory warbler. Lightning talk for American Society of Naturalists conference, Asilomar, CA.

2015 Selection on breeding date. Departmental talk for University of Chicago annual symposium, Chicago, IL.

2014 Examining the effects of extreme weather and climate on the morphology of Wrentits *Chamaea fasciata*. Final project talk for Point Blue Conservation Science staff, Point Reyes, CA.

2012 Characterizing current and future climate niches of CAM and C4 plant species. Department-wide senior thesis talks for Brown University Geology and Biology departments, Providence, RI.

Grants, Honors, and Fellowships

- 2019 Kushlan Research Award recipient from The Waterbird Society, for proposal *Using environmental DNA sampling to determine heron and bittern occupancy in western Michigan: a metagenomics approach*. \$5,300 over one year.
- 2019 One of twenty-five attendees chosen to attend the SESYNC Bayesian Modeling for Socio-Environmental Data Short Course led by Drs. Tom Hobbs, Mary Collins, and Christian Che-Castaldo. ~\$500 for food and lodging.
- 2018 One of twenty-two attendees chosen to attend an annual conservation genomics workshop at the UCLA La Kretz Center led by the Shaffer laboratory.
- 2017 One of fifteen attendees chosen from an international applicant pool to attend computational summer school with the Poisot laboratory at the Université de Montréal. \$250 in travel funds.
- 2015 Research Internship in Science and Engineering (RISE). Indo-US Science and Technology Forum, for work in conjunction with the Wildlife Institute of India, Dehradun, to examine interactions between local adaptation of migratory birds, insects, and birch trees in the western Himalayas. \$2,000 over a three-month period.
- 2015 Hinds Fund Committee, Committee on Evolutionary Biology, University of Chicago, for testing local adaptation to climate and environmental stochasticity in montane species. \$1,650 over one year.
- 2014 NSF Graduate Research Fellowship award, for proposal *Testing strengths of mechanistic constraints across a range of a boreal species*. \$102,000 over three years.
- 2013 NSF Graduate Research Fellowship honorable mention, for proposal *Impacts of ice plant on island vertebrate community composition and habitat use*.
- 2012 Sigma Xi membership nomination.
- 2011 Undergraduate Teaching and Research Award (UTRA) funding senior thesis research. Brown University, \$3,000 over a three-month period.
- 2010 NSF REU grant recipient for Plant-Herbivore Interactions LTER, Florida State University. \$4,000 over ten weeks.
- 2010 Brown Outdoor Leadership Training (BOLT) member, received \$175 for backpacking expenses during leadership training in the backcountry.

Teaching

- 2019 (anticipated) Will be leading a weekly seminar working through Hooten and Hobbs's *Bayesian Models: A statistical primer for ecologists*, following the 2019 SESYNC Bayesian Modeling course developed by Tom Hobbs, Mary Collins, and Chris Che-Castaldo.

- 2016 Evolution and Ecology Teaching Assistant, University of Chicago, Chicago, IL. Led weekly laboratories for 15 undergraduates, facilitated lab work and group discussions. Held office hours, graded exams, and planned labs in weekly TA meetings.
- 2010-2012 Principles of Ecology Teaching Assistant, Brown University, Providence, RI. Led weekly primary literature discussions for groups of 15-20 undergraduates. Supervised annual tree demography fieldwork in Haffenreffer Forest, a nearby RI field site, for 60-80 students. Graded assignments, provided feedback on problem sets, held weekly office hours, taught review sections, proofread exam drafts, and discussed teaching strategies in weekly TA meetings.
- 2011 Experimental Design in Ecology Teaching Assistant, Brown University, Providence, RI. Met and worked individually with graduate and undergraduate students on improving their weekly primary literature presentations regarding experimental design. Provided continuous feedback on term projects. Held weekly office hours, graded and provided comments on weekly problem sets.
- 2009 Ethology Seminar Teacher, Illinois Mathematics and Science Academy, Aurora, IL. Designed and led a week-long seminar on animal behavior and evolution for 25 high school students as part of IMSA's intersession program, which allows former graduates to lead seminars between semesters.

Service and Outreach

- 2019 Conducted outreach at the Illinois State Fair, Springfield, IL. Discussed bird migration and ongoing eDNA research with the public.
- 2017-present Volunteered at the Lincoln Land Community College banding station, Springfield, IL. Extracted birds from mist nets, banded birds, and talked to students and visiting locals about migratory bird mark-recapture efforts. Assisted with training field technician in bird extraction and banding. Assisted with 2018 Christmas Bird Count at Horseshoe Lake in Alexander County, IL.
- 2017-2018 Led 20 middle-school children on bird walk to highlight Illinois birds during spring and fall migration. Chicago Free School, Chicago, IL.
- 2015 Brains! Teaching Assistant, University of Chicago, Chicago, IL. In a group of TAs, facilitated hands-on neuroscience experiments to 100 Chicago middle-school children, as part of a program called Brains! led by Dr. Stephanie Palmer.
- 2014-present Member of the following societies: The Ecological Society of America, American Ornithological Society, Association of Field Ornithologists, American Society of Naturalists, North American Students of Cooperation (NASCO), The Institute for Bird Populations, Point Blue Conservation Science.
- 2013 Black Rail volunteer, Tomales Bay, CA. Assisted UC Berkeley graduate student Laurie Hall in the capture, banding, and release of threatened Black Rails.

- 2013 Reviewer for Gonclaves, E. and A. Souza. Provided English revisions for manuscript titled Floristic variation in ecotonal areas: Patterns, determinants, and biogeographic origins of subtropical forests in South America. *Austral Ecology*, doi: 10.1111/aec.12051.
- 2009-2012 Urban Environmental Laboratory volunteer, Brown University, Providence, RI. Planted, watered, and harvested vegetables from Brown University's student garden.
- 2007 North Branch Restoration Project volunteer, Morton Grove, IL. Conducted outreach presentations on sources of Cook County watershed pollution to the public.
- 2006-2009 Friends of the Morton Grove Forest Preserve volunteer. Cleared invasive garlic mustard *Alliaria petiolata* from Cook County forests.

Software and Languages

R, SQLite, Microsoft Access, FoxPro, and ArcGIS. Beginner knowledge of Python and command line for genomic data analysis; working knowledge of Geneious and Blast2Go. Fluent in English and Russian. Intermediate Spanish speaking, reading, and writing ability. Beginner Mandarin reading ability.

References

Dr. Michael Dreslik, current supervisor
Illinois Natural History Survey
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Stephanie Beilke, Wetland bird research colleague and collaborator
Audubon Great Lakes
Conservation Science Associate
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Bob Wilkerson, multi-species point count and
Black-backed Woodpecker research supervisor
The Institute for Bird Populations
Staff Biologist
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Renée Cormier, bird banding supervisor
Point Blue Conservation Science Avian Ecologist
Pacific Coast and Central Valley Group
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