# ANASTASIA A. RAHLIN

Associate Ornithologist
Illinois Natural History Survey
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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

Associate Ornithologist, resident and migratory bird research. Illinois Natural History Survey, University of Illinois, Urbana, IL. Performed resident and migratory bird surveys, focusing on threatened, endangered, and sensitive species, along urbanization and land-use gradients as part of biological monitoring associated with Illinois Tollway construction activities. Wrote technical reports on bird survey activities. Wrote grants and initiated environmental DNA research to search for rare and cryptic wetland birds of Illinois, focusing on rails. Collaborated with Audubon Great Lakes scientists on rail species distribution modelling research. Initiated research on red-headed woodpecker declines in Illinois as a Master Bander. Managed hourly technicians, contract employees, and staff biologists. Supervisor: Dr. Michael Dreslik.

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. Supervisors: Dr. Rodney Siegel, Bob Wilkerson.

September 2014 – March 2016

Graduate student, 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.

Committee members: Dr. Trevor Price (chair), Dr. Stephen Pruett-Jones, and Dr. J. Timothy Wootton.

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. 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. Supervisors: Renée Cormier, Mark Dettling, Diana Humple, and Xeronimo Castañeda.

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. 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 Boyscout groups, undergraduates, and visitors. Supervisors: Dr. Eric Walters and Dr. Walter Koenig.

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. Supervisors: Dr. Rodney Siegel, Bob Wilkerson, and Kristen Strohm.

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 Boyscout groups, undergraduates, and visitors. Supervisors: Dr. Eric Walters and Dr. Walter Koenig.

June 2012 – September 2012

Clark's Nutcracker Field Technician. Bridger-Teton National Forest, Jackson, WY. 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. Supervisor: Taza Schaming.

May 2011 – May 2012

Independent Research, Brown University, Providence, RI. 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. Advisers: Dr. Erika Edwards and Dr. Matthew Ogburn.

## 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., A.R. Világ, and D. Hurd. Improved, flexible canopy netting rig and audio lure placement for woodpecker capture. Target journal: North American Bird Bander.

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

Poisot, T., R. Labrie, E. Larson, and A. Rahlin. 2018. Data-based, synthesis-driven: setting the agenda for computational ecology". bioRxiv 150128 doi.org/10.1101/150128, in review at Ecography.

## 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 birds in the big city. Co-talk with Audubon collaborator Stephanie Beilke for 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.

## Honors and Fellowships

2018 One of twenty-two attendees chosen from an international applicant pool 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. $2000 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, $3000 over a three-month period.

2010 NSF REU grant recipient for Plant-Herbivore Interactions LTER, Florida State University. $4000 over ten weeks.

2010 Brown Outdoor Leadership Training (BOLT) member, received $175 for backpacking expenses during leadership training in the backcountry.

## Teaching

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. Supervisor: Dr. Chris Andrews.

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. Advisor: Dr. Jon Witman.

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. Advisor: Dr. Jon Witman.

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. Advisor: Dr. Don Dosch.

**Service and Outreach**

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 2018 Christmas Bird Count at Horseshoe Lake in Alexander County, IL.

2017-present Led 20 middle-school children on bird walk to teach them about 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**, direct supervisor
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