

BETH A. REINKE

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ACADEMIC POSITIONS

Faculty Fellow	2021-current
Northeastern Illinois University, Department of Education <i>ARCOS</i> Grant	
Assistant Professor	2019-current
Northeastern Illinois University, Department of Biology.	
Postdoctoral Researcher, Instructor	2018-2019
Penn State University, Miller Lab. Project: Demographic analyses of long-term datasets.	
Postdoctoral Researcher	2017-2018
Texas A&M University, Lawing Lab. Project: Evolution of colorfulness in butterflies.	

EDUCATION

Dartmouth College	2012-2017
Ph.D in Ecology and Evolutionary Biology, NSF Graduate Research Fellow, NSF EAPSI Fellow. Advisor: Ryan Calsbeek	
Indiana University	2008-2012
Zoology B.A. with Distinction, Honors Notation, Departmental Honors, Certificate in Animal Behavior, Biology, Anthropology, and Zulu Minors.	

PUBLICATIONS (*Undergraduate co-authors)

- Reinke, Beth A.**... Bronikowski, A., and David Miller (+112 authors). Diverse aging rates in ectothermic tetrapods provide insights for the evolution of aging and longevity. In revision at *Science*.
- Maki, Erik T.*, Georgina Jaimes*, and **Beth A. Reinke**. Water turbidity and plant density influence painted turtle shell shape. In review at *Herpetologica*. Submitted October 2021.
- Jaimes, Georgina*, Erik T. Maki*, Megan Konrath*, and **Beth A. Reinke**. Assessing the impact of environment on the color of painted turtles (*Chrysemys picta*). In review at *Ecology and Evolution*. Submitted December 2021.
- Shidemantle, Grascen Irene, Jurnee Blackwood, Kelsey Horn, Isabela Velasquez, Emily Ronan, **Beth A. Reinke**, and Jessica Hua. The morphological effects of artificial light at night (ALAN) on amphibian predators and prey are masked at the community level. In review at *Environmental Pollution*. Submitted January 2022.
- Cayuela, Hugo...**Beth A. Reinke**... David Miller (+46 authors). Sex-related differences in aging rate are associated with sex chromosome system in amphibians. In press at *Evolution*. DOI: 10.1111/evo.14410.
- Bronikowski, Anne, **Beth A. Reinke**, Luke Hoekstra, Fredric Janzen, and David Miller. Reply to Comment on Joint estimation of growth and survival from mark-recapture data to improve estimates of senescence in wild populations. *Ecology* e03571. DOI: 10.1002/ecy.3571.

- Shelton, Delia S., Mikel Delgado, EV Ginny Greenway, Elizabeth A. Hobson, Alycia C.R. Lackey, Angela Medina, **Beth A. Reinke**, Paula A. Trillo, Caitlin P. Wells, M. Claire Horner-Devine. Expanding the landscape of opportunity: Professional societies support early career researchers through community programming and peer coaching. *Journal of Comparative Psychology* 135(4):439-449. Invited Special Issue. DOI: 10.1038/com0000300.
- Lawing, A. Michelle, Michael McCoy, **Beth A. Reinke**, Susanta K. Sarkar, Felisa A. Smith, and Derek Wright (authors alphabetical). 2021. A framework for investigating rules of life by establishing zones of influence. *Integrative and Comparative Biology*. DOI: 10.1093/icb/icab169.
- Reinke, Beth A.**, Luke Hoekstra, Anne Bronikowski, Fredric Janzen, and David Miller. 2020. Joint estimation of growth and survival from mark-recapture data to improve estimates of senescence in the wild. *Ecology* 101(1):1-7. DOI: 10.1002/ecy.2877.
- Reinke, Beth A.**, David Miller, and Fredric Janzen. 2019. What have long-term studies taught us about population dynamics? *Annual Review of Ecology, Evolution, and Systematics* 50:11.1-11.18. Invited. DOI: 10.1146/annurev-ecolsys-110218-024717.
- Erritouni*, Yasmeen, **Beth A. Reinke**, and Ryan Calsbeek. 2018. Novel coloration in *Anolis sagrei*: implications for physiology, fitness, and predation. *PloS One* 13(12): e0209261.
- Urbanowicz, Christine and **Beth A. Reinke**. 2018. Commentary. Publication overlap: building an academic house with salami shingles. *The Bulletin of the Ecological Society of America* 99(4). DOI: 10.1002/bes2.1425.
- Reinke, Beth A.**, Steven Pearson, and Will Selman. 2018. Plastron pigmentation variation in a coastal turtle species of conservation concern (*Malaclemys terrapin*). *Herpetologica* 74(2): 141-145. DOI:10.1655/herpetologica-d-17-00046.1
- Reinke, Beth A.**, Yasmeen Erritouni*, and Ryan Calsbeek. 2018. Maternal allocation of carotenoids to eggs in an *Anolis* lizard. *Comparative Biochemistry and Physiology, Part A* 218:56-62. DOI: 10.1016/j.cbpa.2018.01.014.
- Reinke, Beth A.**, Ryan Calsbeek, Devi M. Stuart-Fox. 2017. A test of an antipredatory function for conspicuous coloration in freshwater turtles. *Evolutionary Ecology* 31(4):463-473. DOI: 10.1007/s10682-017-9892-5.
- Reinke, Beth A.** and David Klings III*. 2017. Snapping Turtle Natural History Note. *Herpetological Review* 48(2): 423.
- Ruiz, Mayte, Danfeng Wang, **Beth A. Reinke**, Gregory E. Demas, and Emilia P. Martins. 2011. Supplemental feedings eliminate trade-offs between reproductive investment and innate immunity in a natural population of female sagebrush lizards. *The Herpetological Journal* 21:131-134.

MANUSCRIPTS IN LATE-STAGE PREPARATION

- Macleod, Kirsty, Hayden O’Connell*, and **Beth A. Reinke**. The evolution of viviparity is associated with a decrease in precopulatory sexual traits in squamate reptiles. In prep for *Nature Communications*.
- Fredna, Kelsey* and Beth A. Reinke. Light environment does not predict sexual dichromatism in butterflies.
- Reinke, Beth A.** and Julian D. Avery. Considering all functions of integumentary pigments is important for understanding species’ responses to climate change. In prep for *Journal of Animal Ecology*.

Reinke, Beth A., Jesse Mast, Ryan Calsbeek, Huagang Hou, and Periannan Kuppusamy. Ecological applications of electron paramagnetic resonance. In prep for *Free Radical Research*.

Reinke, Beth A., Jesse Mast, and Ryan Calsbeek. The role of integumentary pigments in mitigating oxidative stress during freezing.

OTHER PUBLICATIONS

Reinke, Beth A. 2012. The effects of eutrophication on the painted turtle. Indiana University Undergraduate Senior Honors Thesis.

AWARDS AND GRANTS

2021 Animal Behavior Society Support for Peer-mentoring Circles in Animal Behavior Workshop for Graduate Students - \$7,000
2021 Student Center for Science Engagement Research Program, Faculty Project
2021 Biology Departmental Travel Award - \$200
2021 Animal Behavior Society Support for Peer-mentoring Circles in Animal Behavior Workshop for Graduate Students - \$4,000
2020 Summer Research Stipend, Northeastern Illinois University- \$5,000
2020 Student Center for Science Engagement Research Program, Faculty Project
2017 Finalist for iBiology's Young Scientist Seminar Series
2016 Recognition for Outstanding Graduate Student Teaching
2015 Hitchcock Foundation Pilot Grant- \$29,105
2014 Dartmouth College Graduate Alumni Research Award- \$1,000
2014 National Science Foundation East Asia and Pacific Summer Institute Fellowship
2013 Sigma Xi Grant-in-Aid of Research- \$500
2013 Lac Courte Oreilles Foundation Inc. Research Grant- \$1,000
2012 National Science Foundation Graduate Research Fellowship
2012 Graduate Assistance in Areas of National Need Fellowship
2012 Conservation and Biology of Tortoises and Freshwater Turtles Travel Grant
2012 Susan Butler Scholarship- \$3,000
2012 Outstanding Senior Project Award, Individualized Major Program
2012 Lac Courte Oreilles Foundation Inc. Research Grant- \$1,500
2012 Tri Kappa Beryl Holland Showers Fellowship- \$1,000
2012 Sigma Xi Grant-in-Aid of Research- \$800
2012 Hutton Honors College Thesis Grant- \$750
2011 Individualized Major Program Grant- \$484
2011 Sigma Xi, the Scientific Research Society, Undergraduate Research Award
2011 Conservation and Biology of Tortoises and Freshwater Turtles Travel Grant
2011 Lac Courte Oreilles Foundation Inc. Research Grant- \$3,600
2011 Hutton Honors College Pre-Professional Experience Internship Grant- \$3,000
2011 Fernandus and Elizabeth J. Payne Scholarship- \$2,400
2011 Carl H. Eigenmann Scholarship- \$500
2011 Hutton Honors College/ Individualized Major Program Capstone Award- \$500
2010 Lac Courte Oreilles Foundation Inc. Research Grant- \$4,000
2010 Hutton Honors College Research Grant- \$2,500
2010 Burnett/Masters Jr. Scholars Award- \$1,500

- 2010 Hutton Honors College Research Partnership Grant-\$750
- 2010 Indiana University Incentive Grant- \$300
- 2009 Indiana University Founders Scholar
- 2009 Hutton Honors College International Experiences Grant- \$1,200
- 2009 Hutton Honors College Travel Grant- \$750
- 2008 Indiana University Academic Excellence Scholarship- \$32,000

SEMINAR PRESENTATIONS

- 2021 Invited Seminar. Why are painted turtles painted? Triton College. Chicago, IL.
- 2021 Invited Seminar. Why are painted turtles painted? A multifaceted framework for investigating the function of coloration. Purdue University. Lafayette, IN.
- 2019 Invited Seminar. Research in the Reinke Lab: The Evolution of Animal Coloration. Biology Seminar Series. Northeastern Illinois University. Chicago, IL.
- 2018 Invited Seminar. A multifaceted approach to studying the evolution of animal coloration. Indiana University. Bloomington, IN.
- 2017 Invited Seminar. The antioxidant role of integumentary pigments in vertebrates. Texas A&M University Ecology and Evolutionary Biology Seminar. College Station, TX.
- 2015 Ecological applications of electron paramagnetic resonance spectrometry: an exploratory study of insect development. Dartmouth College Ecology and Evolutionary Biology Seminar. Hanover, NH. Co-presented with Jessica Mast.
- 2014 Invited Seminar. The adaptive significance of plastron coloration in freshwater turtles. University of Melbourne Departmental Seminar. Melbourne, Australia.

PARTICIPATION IN SCIENTIFIC CONGRESS

- 2021 Attendee of Animal Behavior Society Virtual Conference.
- 2021 Session Chair and Moderator for Animal Behavior Twitter Conference.
- 2021 Attendee of Society of Integrative and Comparative Biology virtual conference.
- 2020 Attendee of Animal Behavior Society Virtual Conference
- 2019 Participant in National Science Foundation Reintegrating Biology Jumpstart in Austin, TX.
- 2019 Reinke, Beth A., Hugo Cayuela, Fred Janzen, Anne Bronikowski, and David Miller. Comparing ectotherm senescence using a hierarchical model. Society of Integrative and Comparative Biology Conference. Tampa, FL.
- 2018 Reinke, Beth A. (Invited Presentation). Drivers of color diversity: Interspecific and intraspecific color variation in butterflies and turtles. Early Career Scientists Symposium: Ecology and Evolution of Color. University of Michigan. Ann Arbor, MI.
- 2018 Reinke, Beth A., and A. Michelle Lawing. The evolution of wing colorfulness in a butterfly group. Society of Integrative and Comparative Biology Conference. San Francisco, CA.
- 2017 Reinke, Beth A., Jessica Mast, and Ryan Calsbeek. The role of integumentary pigments in mitigating oxidative stress during freezing. Ecological Integration Symposium, Oral Presentation. College Station, TX.

- 2013 Reinke, Beth A. and Ryan Calsbeek. Conspicuous or cryptic: Investigating coloration in an aquatic organism. Dartmouth College Ecology and Evolutionary Biology Presentation. Hanover, NH.
- 2012 Reinke, Beth A., Andrew Burnside, Kara Fitzpatrick, A. Michelle Lawing, and P. David Polly. Comparative analysis of body size, diet, and growth of the painted turtle, *Chrysemys picta*, between eutrophic and oligotrophic waters. Joint Annual Meeting of the Turtle Survival Alliance and IUCN Tortoise and Freshwater Turtle Specialist Group, Oral Presentation. Tucson, AZ.
- 2011 Reinke, Beth A., Andrew Burnside, Kara Fitzpatrick, A. Michelle Lawing, and P. David Polly. The effects of eutrophication on the painted turtle (*Chrysemys picta*). Joint Annual Meeting of the Turtle Survival Alliance and IUCN Tortoise and Freshwater Turtle Specialist Group, Oral Presentation. Orlando, FL.
- 2011 Reinke, Beth A., A. Michelle Lawing, Mayte Ruiz, and P. David Polly. 2011. The potential effects of eutrophication on the painted turtle (*Chrysemys picta*). Indiana University Crossroads Conference: Change with Time, Oral Presentation. Bloomington, IN.
- 2011 Reinke, Beth A., A. Michelle Lawing, Mayte Ruiz, and P. David Polly. The effects of eutrophication on painted turtle diet, morphology, and immune function. Indiana University 13th Annual Women in Science Research Conference, Poster Presentation. Bloomington, IN.
- 2009 Reinke, Beth A., Anna-Marie Casserly, Matthew J. Rowe, and A. Michelle Lawing. Intraspecific variation in the Rosy Boa (*Lichanura trivirgata*). Indiana University Undergraduate Research Conference, Poster Presentation. Bloomington, IN.
- 2009 Reinke, Beth A., Anna-Marie Casserly, Matthew J. Rowe, and A. Michelle Lawing. Intraspecific variation in the Rosy Boa (*Lichanura trivirgata*). The Society of Vertebrate Paleontology 69th Annual Meeting, Poster Presentation. Bristol, United Kingdom.

TEACHING AND CURATION EXPERIENCE

NORTHEASTERN ILLINOIS UNIVERSITY

- 2021 Bio 202 General Biology II
 Bio 315 Communicating Biology
 Bio 325 Local Fauna
 Bio 415 Animal Behavior
 NDP 321 Correspondence on Current Biology Topics (co-proposed, co-designed, co-taught) for inmates at Stateville Correctional Center
- 2020 Stam 203 Design in Nature (co-proposed, co-designed, co-taught)
 Bio 325 Local Fauna (designed and taught)
 Bio 202 General Biology II
 Bio 315 Communicating Biology (proposed, designed, and taught)
 Env 101 Intro to Environmental Science (co-taught)
- 2019 Bio 202 General Biology II
 Bio 310 Evolution

PENNSYLVANIA STATE UNIVERSITY

- 2018 WFS 461 Animal Welfare: Science and Ethics. Course Instructor.

DARTMOUTH COLLEGE

- 2015-2016 Ethics Peer Facilitator for incoming graduate students

- 2016 Teaching Assistant for Tropical Biology in Foreign Studies Program, Costa Rica
 2016 Teaching Assistant for Marine Biology in Foreign Studies Program, Little Cayman
 2015 Guest Lecturer: “Genomic Conflict”, Evolutionary Ecology
 2014 Guest Lecturer: “Sensory Systems,” Animal Behavior
 2014 Graduate Teaching Assistant for Animal Behavior, Lecture and Lab
 2013 Guest Lecturer: “Aquatic Ectotherms,” Aquatic Ecology
 2013 Guest Lecturer: “Reptilian Locomotion,” Vertebrate Zoology
 2013 Graduate Teaching Assistant for Genetic Variation and Evolution
- INDIANA UNIVERSITY
- 2011-2012 Safety Officer for William R. Adams Zooarchaeology Laboratory
 2011 Undergraduate Teaching Assistant for Vertebrate Geobiology Course
 2008-2012 Curation Assistant for William R. Adams Zooarchaeology Laboratory

DIVERSITY AND INCLUSION

I am committed to furthering diversity and inclusion efforts in my classroom and lab, as well as in STEM in general. My syllabi (available upon request) and teaching pedagogy follow best-practices, and I am dedicated to serving the diverse student body at Northeastern Illinois University (a federally designated Hispanic-serving Institution).

- 2021 Co-organizer (with Weaving the Future of Animal Behavior group) of Peer-mentoring Circles in Animal Behavior Workshop for Graduate Students at the 2021 Animal Behavior Society Conference.
- 2020-2021 Participant in the Title III STEM Faculty and Staff Professional Development Series. Workshops on Identity, anti-racism, implicit bias, culturally relevant pedagogy, and creating cultures of inclusion.
- 2020 Attendee of “Moving toward syllabi that serve our students” workshop and others in the Conversations in Classroom, Culture, and Curriculum Series, Northeastern Illinois University.
- 2020 Co-organizer (with Weaving the Future of Animal Behavior group) of #BlackInAnimalBehavior Week
- 2020 Attendee of “Exploring culturally relevant pedagogies for our diverse students” workshop at Learn and Lead Symposium, Northeastern Illinois University.
- 2019 Social Justice Ally Training. 6 week program. Northeastern Illinois University.
- 2019 Participant in ‘Strategies for a More Inclusive Biology Classroom’ Workshop, National Association of Biology Teachers.
- 2019 Undocumented Student Ally Training. Northeastern Illinois University.
- 2018 Organizer of Diversity Discussion Group for grad students and post-docs, Pennsylvania State University.

PROFESSIONAL SERVICE

- 2021-ongoing Student Center for Science Engagement Executive Board Member, NEIU
 2021 *ARCOS* Grant Director Search Committee Member
 2020-ongoing Undergraduate Committee Chair, Department of Biology, NEIU

2020-ongoing Animal Behavior Society Social Media Team Member
2020-ongoing NEIU Biology Department Secretary
2020 Science Librarian Search Committee Member
2019-ongoing Weaving the Future of Animal Behavior Peer Mentoring Member
2019-ongoing Secretary and Member of the NEIU Institutional Animal Care and Use Committee
2019-ongoing Undergraduate Committee member, Department of Biology, NEIU
2017-2018 Contract Editor for American Journal Editors
2016 Postdoctoral Fellow Search Committee Member
2016 Co-organizer for Review Writing Workgroup
2014 Faculty Search Committee Member
2013-2014 Graduate Student Council (EEB Representative)

PEER REVIEWER FOR: Functional Ecology, Naturwissenschaften, Hydrobiologia, PeerJ, Science of Nature, Biological Journal of the Linnaean Society, American Naturalist, Ecology, Behavioral Ecology and Sociobiology, Open Educational Resources

UNDERGRADUATES MENTORED:

Paige Boban, Northeastern Illinois University, ongoing.
Hayden O'Connell, Northeastern Illinois University, ongoing.
Haider Mehdi, McNair Scholar, Northeastern Illinois University, ongoing
Megan Konrath, Northeastern Illinois University.
Georgina Jaimes, Northeastern Illinois University, now Science STEM Ambassador at CPS.
Erik Maki, Northeastern Illinois University, now Masters student at George Mason University.
Kelsey Littrell, Northeastern Illinois University, now Masters student at University College London.
Yasmeen Erritouni, Dartmouth College, now PhD student at University of Washington.
Dr. Benjamin Kessler, Dartmouth College, now director of Joy Tutoring.
Kara Fitzpatrick, Indiana University.

ACADEMIC MEMBERSHIPS

2019-present Animal Behavior Society
2017-present American Association of University Women
2017-present Society of Integrative and Comparative Biology
2011-present Sigma Xi Associate Member
2011-2017 Society of Vertebrate Paleontology
2013-2015 North American Freshwater Turtle Research Group

OUTREACH

2021 Chicago Museum of Ecological Progress. Collaboration with artist Katelyn Patton. Gallery exhibit at Northeastern Illinois University Art Gallery. Associated website: www.speciesreplacement.com
2020-2021 Artificial Outlook. Collaboration with artist Katelyn Patton. Exhibit hosted by EXTRA Projects Space.
2019 "Colors of an ecosystem" talk at Hayward Elementary Summer Camp
2019 Ten Year Turtle Party: a cookout with the local community to celebrate ten years

of turtle research. Over 100 attendees interacted with turtle-themed games, educational materials, and past participants of the project. Organized with the Lac Courte Oreilles Lake Association.

- 2018 Letters to a Pre-Scientist pen pal participant
- 2018 Art collaboration with Chicago-based artist Katelyn Patton: Butterfly Brigade
- 2015-2017 Guest Scientist, Hartford High School
- 2016 BioBlitz Herp Leader, Marsh-Billings Rockefeller Wildlife Refuge
- 2016 Science Panel, middle school
- 2015 Science Day Table, open to K-12, Dartmouth College
- 2014 Science Panel, high school
- 2014 Science Fair Judge, Lyme School, 6th and 7th grade
- 2013 Science Career Panel, middle-school
- 2011-2012 WildCare Inc. Volunteer and Co-Team Leader, wildlife rehabilitation
- 2011-2012 WildCamp Co-Director (2011) and Counselor (2011 and 2012)
- 2011 Science Night Presentation at the Bloomington Project School
- 2010-2011 Local Outreach: Effects of eutrophication on painted turtles
- 2010 Participant in Biodiversity Survey at Goose Pond Fish and Wildlife Area
- 2009 South Africa and Botswana Conservation Volunteer

PRESS AND MEDIA

- 2021 Guest on The Women in Ecology & Evolution Podcast. “Science is an Art.” 23 May 2021.
- 2021 Podcast guest on Science Night “Episode 12: The Curious Case of the Painted Turtle with Beth Reinke.” 28 March 2021.
- 2021 Yale Climate Connections. “Artist and scientist install fake storefronts in Chicago to draw attention to climate change.” 23 March 2021.
- 2020 Guest on The Women in Ecology & Evolution Podcast. “The WEE Pandemic Support Group.” 31 December 2020.
- 2020 Block Club Chicago article about Artificial Outlook. “Cicada Cupcake, Anyone? Avondale Bug Bakery is Actually an Art Project to Highlight What Could Happen Due to Climate Change.” Mina Bloom. 28 December 2020.
- 2019 Podcast guest on NEUIdeas. “Episode 4: On animal coloration, pigment, and climate change with Beth A. Reinke”. Ronald Williams Library.
- 2019 Profiled in the June 19, 2019 edition of the Sawyer County Record
- 2018 Featured on Integrative and Comparative Biology’s blog
- 2014 Featured Researcher in Counting Turtles: Field Notes from Wekiwa
- 2011 Undergraduate Researcher for Documentary on “Titanoboa, Monster Snake.” Smithsonian Channel.

SKILLS

Technical: Microsoft Office Suite, R programming language, Adobe Creative Suite, Image J, GIMP and Inkscape, Mesquite, Nikon camera operation, Ocean Optics JAZ and Flame spectrometer operation, visual contrast modeling, electron paramagnetic resonance spectroscopy operation.

Field: tadpole elastomer tagging, lizard noosing, drawing blood from subcarapacial sinus and

caudal vein of turtles, PIT tagging turtles, turtle trapping, snorkeling, Diver Alert Network SCUBA certified, kayaking, wildlife rehabilitation of reptiles.

Lab: conducting hemolytic complement assays, conducting bacterial killing assays, conducting total antioxidant capacity (TAC) assays, hot water maceration, animal dissection and defleshing, preparing museum specimens, making blood smears, osteological identification.