

Elsa C. Anderson

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Curriculum Vitae

Current Affiliation

2021-Present

Chicago Botanic Garden

Post-doctoral Researcher: Urban Ecology

Education

2019

PhD

University of Illinois at Chicago, Chicago, IL

Department of Biological Sciences

Ecology and Evolution Group

Dissertation: *Vacant and Verdant: examining Chicago's vacant lots as a socio-ecological system*

2019

Fulbright Student Grantee--Germany

Technische Universität Berlin

Project: *Redrawing the Iron Curtain: ecological legacies of the Berlin Wall*

2017

Certificate in College Teaching

University of Illinois at Chicago, Chicago, IL

Graduate College

2015

Masters of Science

DePaul University, Chicago, IL

Department of Biological Sciences

Graduated with Distinction

Thesis: *Nest site selection, use, and re-use by Red-headed Woodpeckers (Melanerpes erythrocephalus) in Cook County, Illinois, USA*

2011

Bachelors of Science

University of Illinois at Urbana-Champaign, Urbana, IL

Department of Animal Sciences

James Scholar, Graduated with High Honors

Minor: Spanish

Refereed Publications

Suchy A, **Anderson EC**, Fork ML, Locke DH, Lin L, LaDeau S, Groffman P, Rosi E. *In Press*.

Environmental Problems are in the Eye of the Beholder. *Frontiers in Ecology and the Environment*. *Frontiers in Ecology and the Environment*

Zettle MS, **Anderson EC**, LaDeau SL. *In Press*. Changes In Container-Breeding Mosquito Diversity and Abundance Along An Urbanization Gradient Are Associated With Dominance of Arboviral Vectors. *Journal of Medical Entomology*.

- Fork ML, **Anderson EC**, Castellanos A, Fischhoff I, Matsler AM, Nieman C, Olesky I, Wong, M. 2021. Creating Community: How we collectively built an adaptable postdoctoral program to develop skills and overcome isolation. *Ecosphere* 12(10).
<https://doi.org/10.1002/ecs2.3767>
- Anderson EC**, Avolio M, Sonti N, LaDeau SL. 2021. More than green: tree structure and biodiversity patterns differ across canopy change regimes in Baltimore’s urban forest. *Urban Forestry & Urban Greening* 65
<https://doi.org/10.1016/j.ufug.2021.127365>
- Midgley M, **Anderson EC**, Minor ES. 2021. Vacant lot plant establishment techniques alters soil ecosystem services. *Urban Forestry & Urban Greening* 61
<https://doi.org/10.1016/j.ufug.2021.127096>
- Anderson EC**, Minor ES. 2021. Assessing four methods for establishing native plants on urban vacant land. *Ambio* 50:695-705.
<https://doi.org/10.1007/s13280-020-01383-z>
- Egerer MH, **Anderson EC**. 2020. Social-Ecological Connectivity to Understand Ecosystem Service Provision across Networks in Urban Landscapes. *LAND* 9(12):530
<https://doi.org/10.3390/land9120530>
- Anderson EC**, Minor ES. 2020. Management effects on plant community and functional assemblages in Chicago’s vacant lots. *Applied Vegetation Science* 23(2):266-276.
<https://doi.org/10.1111/avsc.12480>
- Egerer MH, Fouch N, **Anderson EC**, Clark M. 2020. Connectivity of community gardens in socio-biological space in three US cities. *Scientific Reports* 10:452.
<https://www.nature.com/articles/s41598-020-61230-9>
- Anderson EC**, MH Egerer, N Fouch, MJ Davidson, and M Clarke. 2019. Comparing community garden typologies of Baltimore, Chicago, and New York City (USA) to understand potential implications for socio-ecological services. *Urban Ecosystems*. 22(4):671-681.
<https://doi.org/10.1007/s11252-019-00855-9>.
- M Clark, Davidson M, N Fouch, MH Egerer, and **EC Anderson**. The role of community gardens in improving cities’ resilience to climate change. *People, Place, and Policy*. Special issue: “The Politics of Urban Green Space”.12(3): 241-251.
<https://doi.org/10.3351/ppp.2019.3396732665>
- Anderson EC** and ES Minor. 2019. Assessing social and biophysical drivers of spontaneous urban plant diversity and structure in vacant lots. *Science of the Total Environment* 653:1272-1281.
<https://www.sciencedirect.com/science/article/pii/S0048969718343511>
- Minor ES, **EC Anderson**, JA Belair, M Garfinkel, and AD Smith. 2018. Urban green infrastructure and ecological networks for urban biodiversity conservation. in *Urban Biodiversity: from research to practice*. Eds. A. Ossola and J. Niemala. Routledge—Taylor & Francis.

<https://www.taylorfrancis.com/books/e/9781315402574/chapters/10.4324%2F9781315402581-12>

Shaughnessey CA, **EC Anderson**, M Kasparian, JM LaMontagne, and JS Bystriansky. 2017. Survival and osmoregulation of the purple marsh crab (*Sesarma reticulatum*) at varying salinity and pH. *Journal of the Canadian Society of Zoologists* 95(12):985-989.

<http://www.nrcresearchpress.com/doi/abs/10.1139/cjz-2016-0199#.XD3Ws1xKjIU>

Anderson EC, ES Minor. 2017. Vacant lots: an underexplored resource for ecological and social benefits in cities. *Urban Forestry and Urban Greening* 21:146—152.

<https://www.sciencedirect.com/science/article/pii/S161886671530114X>

Anderson EC, JM LaMontagne. 2015. Nest site selection by Red-headed Woodpeckers (*Melanerpes erythrocephalus*) across three spatial scales in an urban environment. *Urban Ecosystems*. DOI 10.1007/s11252-015-0491-3

<https://www.springerprofessional.de/en/nest-selection-by-red-headed-woodpeckers-across-three-spatial-sc/5805156>

LaMontagne JM, RJ Kilgour, **EC Anderson**, and S Magle. 2015. Tree cavity availability across forest, park, and residential habitats in a highly urban area. *Urban Ecosystems* 18: 151-167.

<https://link.springer.com/article/10.1007/s11252-014-0383-y>

Papers in Review

Anderson EC, Locke DH, Pickett STA, LaDeau SL. Just Street Trees? Street trees increase local biodiversity and biomass in wealthier, denser neighborhoods. *Ecological Applications*

Papers in Prep

Anderson EC, Happel A, Fidino M, Kay CAM, Ziter CD, Floress K, Magle SB, Menke SB, LaMontagne JM. Establishing “Rules of Urban Life”: reexamining biological theory through a social lens in cities

Hill N, **Anderson EC**, Taddeo S, Mulligan M, Legge J, Havens-Young K. Biodiversity monitored via iNaturalist differs across distinct landscape clusters in Chicago.

Anderson EC, Kowarik I. Examining ecological legacies of the Berlin Wall

Research Experience

2021-Present

Postdoctoral Researcher in Urban Ecology

Chicago Botanic Garden

Evaluating biodiversity and community science usage patterns across the Chicago region as a part of a partnership between the Chicago Botanic Garden and The Nature Conservancy.

(Supervisor Dr. Sophie Taddeo)

2019-Present

BES Synthesis Postdoctoral Fellow

Cary Institute for Ecosystem Studies

Working as a team in the Baltimore Ecosystem Study (BES) Long Term Ecological Research ramp-down. Focusing on socio-ecological synthesis

research of a 20 year dataset, particularly from a community ecology perspective.
(Supervisor Dr. Shannon LaDeau)

- 2018-2019 **Fulbright Research Student Grantee**
US Fulbright/Germany Fulbright Commission, Berlin, Germany
Investigation of the legacy effects of the Berlin Wall in the Spandauer Forest, outside of Berlin, by cataloguing an assessing structure of trees and herbaceous vegetation on either side of the wall at two spatial scales. This project will entail a 10 month research fellowship in Berlin from December 2018-October 2019.
(Advisor Dr. Ingo Kowarik)
- 2016-2019 **Graduate Research Fellow—Team Leader**
National Socio-Environmental Synthesis Center, Annapolis, MD
Collaborative synthesis research project investigating the social and ecological wealth and/or dearth generated when urban vacant lands are transitioned to community gardens. One of three funded graduate pursuits in the current cycle.
- 2014-2019 **Graduate Research**, University of Illinois at Chicago, Chicago, IL
Investigation of ecosystem processes of community drivers and establishment of spontaneous plant communities in urban vacant lots. Additional projects include assessing low-input restoration of vacant spaces. (Advisor Dr. Emily Minor)
- 2012-2014 **Graduate Research**, DePaul University, Chicago, IL
Evaluated characteristics, current status, and historic use patterns of 34 Red-headed Woodpecker nests in forest preserves, city parks, and cemeteries.
(Advisor Dr. Jalene LaMontagne)
- 2012-2013 **Field Research in Coastal Ecosystems**, ACE Basin, SC
Developed and executed a research project evaluating the physiological responses of purple marsh crabs (*Sesarma reticulatum*) kept at varying levels of salinity and pH. (Advisor Dr. Jason Bystriansky)

Diversity, Equity, Inclusion, and Justice

- 2021 **Racial Equity and Environmentalism Workshops:** Attendee
Chicago Wilderness
- 2021 **Ecology & Justice Seminar Series and Workshops:** Organizer
Cary Institute for Ecosystem Studies
- 2021 **JEDI Committee:** Member
Cary Institute for Ecosystem Studies

Honors and Awards

- 2021 **EU/US Young Leaders Conference**, Virtual
Cities and the Environment Working Group Leader.
- 2018 **United States Fulbright Research Grantee**, Berlin, Germany

- 2017 **Excellence in Undergraduate Mentoring**, University of Illinois at Chicago
- 2017 **Excellence in Graduate Research**, UIC Department of Biological Sciences
- 2016 **Provost's Award**, University of Illinois at Chicago
- 2016 **Excellence in Undergraduate Mentoring**, University of Illinois at Chicago
- 2016 **Honorable Mention Student Oral Presentation**, International Association of Landscape Ecologists US Chapter, Asheville, NC
- 2016 **Outstanding Student Oral Presentation**, Society for Ecological Restoration, Bloomington, IN
- 2015 **Chancellor's Graduate Research Award**, University of Illinois at Chicago
- 2015 **WISE Graduate Student Research Award**, Honorable Mention, University of Illinois at Chicago
- 2014 **University Fellowship**, University of Illinois at Chicago
- 2014 **Honorable Mention Student Presentation**, Genomes to Biomes, Canadian Society for Ecology and Evolution Joint Conference, Montreal, QC, Canada
- 2011 **Richard and Charlotte Lundgren Scholarship**, University of Illinois at Urbana-Champaign

Grants

- 2017 Provost's Award \$2500
- 2016 Chancellor's Award \$8000
- 2016 Hadley Research Award \$2000
- 2015 University of Illinois at Chicago Sustainability Fee Grant: \$4500
- 2013 Illinois Ornithological Society Research Grant: \$1000

Oral Presentations

- 2021 Just Street Trees? Evaluating the biodiversity and physical structure contributions of street trees across Baltimore from an environmental justice perspective. **EC Anderson**, DH Locke, STA Pickett, SL LaDeau. BES Annual Meeting
- 2020 Just trees? examining socio-ecological patterns of Baltimore's street trees using new and historic data sets. **EC Anderson** IALE-NA, Virtual Conference. iPoster: <https://2020toronto-ialena.ipostersessions.com/default.aspx?s=17-86-F0-87-00-F1-13-75-2D-B2-04-81-5C-EA-4A-DD>

- 2019 Examining socio-ecological connectivity through urban garden networks across varying cityscapes. MH Egerer, **EC Anderson**, N Fouch, M Clarke. IALE World Congress Milano, Italy
- 2018 Assessing social and biophysical drivers of spontaneous urban plant diversity and structure in Chicago's vacant lots. **EC Anderson** and ES Minor. Ecological Society of America Annual Meeting New Orleans, Louisiana
- 2018 Biodiversity in Chicago's Vacant Lots. **EC Anderson** and ES Minor. US-International Association of Landscape Ecologists Annual Meeting Chicago, Illinois
- 2017 Bee Diversity in Chicago's Vacant Lots. **EC Anderson** and ES Minor. US-International Association of Landscape Ecologists Annual Meeting, Baltimore, Maryland
- 2016 Evaluating historic, local, social, and landscape drivers of species diversity in vacant lots in Chicago, IL USA. **EC Anderson** and ES Minor. US-International Association of Landscape Ecologists Annual Meeting, Asheville, North Carolina
- 2016 Evaluating low-input techniques for increasing plant diversity in highly degraded sites. **EC Anderson** and ES Minor. Midwest-Great Lakes SER Chapter Meeting. Bloomington, Indiana
- 2016 Evaluating historic, local, social, and landscape drivers of species diversity in vacant lots in Chicago, IL, USA. **EC Anderson** and ES Minor. Midwest Ecology and Evolution Conference. Oxford, Ohio
- 2015 Tree Cavity Availability in a Highly Urban Area. JM LaMontagne, RJ Kilgour, **EC Anderson**, SB Magle. Transactions of the Illinois Academy of Sciences Annual Meeting, Macomb, Illinois
- 2015 Arthropods in Urban Green Spaces near Chicago, IL: Evaluating Assemblage Response to Habitat Factors. MC Lordon, **EC Anderson**, and JM LaMontagne. Transactions of the Illinois Academy of Sciences Annual Meeting, Macomb, Illinois
- 2014 Nest-site selection of Red-headed Woodpeckers across three spatial scales in an urban environment. **EC Anderson** and JM LaMontagne. Canadian Society for Ecology and Evolution Joint Conference, Montreal, QC, Canada
- 2014 Nesting patterns of Red-headed Woodpeckers in Cook County, IL. **EC Anderson** and JM LaMontagne. Midwest Ecology and Evolution Conference, Dayton, Ohio
- 2013 Identification and physiology of crabs in ACE Basin, SC. CA Shaughnessey, **EC Anderson**, ME Kasparian, JS Bystriansky, and JM LaMontagne. Midwest Ecology and Evolution Conference, South Bend, Indiana

Invited Seminars

- 2021 Drawing Ecological Lines: ecological effects of human activities in cities. University of Illinois at Chicago, Chicago, IL

Science for the Urban Forests of Tomorrow. New York State Association of Conservation Councils, Virtual

- 2021 Of Plants and People: ecological effects of human activities in cities
Cary Institute for Ecosystem Studies, Millbrook, NY
- 2019 Plants, Place, and People: ecological effects of human activities in cities
University of California Davis Department of Plant Sciences, Davis, CA
- 2014 Nesting Patterns of Red-headed Woodpeckers in Cook County
Lincoln Park Zoo Urban Wildlife Institute Seminar Series, Chicago, IL
- 2011 Elephants in Thailand
Keynote Speaker, James Scholar Media Team 5th Anniversary Event, Urbana, IL

Organized Symposia

- 2021 Ecology & Justice Discussion Workshops and Seminar Series
Cary Institute for Ecosystem Studies, Seminar Series and Events
- 2020 20 years of BES and the future of urban LTERs
International Association for Landscape Ecologists-North America Annual Meeting,
Virtual Conference
- 2018 Social and Ecological Perspectives on Urban Vacant Lots
US-International Association for Landscape Ecologists Annual Meeting, Chicago, IL

Poster Presentations

- 2019 We need to talk about walls: examining the legacy of the Berlin Wall in a peri-urban forest. **EC Anderson** and I Kowarik. IALE World Congress, Milano, Italy
- 2016 Drivers of plant diversity in Chicago's vacant lots. **EC Anderson** and ES Minor. Association for Women in Science. South Bend, Indiana
- 2016 Native seed species preferences among native bird foragers in Chicago, IL. S Colin **E Anderson** and E Minor. Society for Ecological Restoration Great Lakes Chapter Meeting, Bloomington, Indiana
- 2016 A survey of tree species composition: Chicago's vacant lots. D Herrera, **EC Anderson**, and ES Minor. Midwest Ecology and Evolution Conference. Oxford, Ohio
- 2014 Arthropod communities and Red-headed Woodpecker (*Melanerpes erythrocephalus*) habitat selection. MC Lordon, **EC Anderson**, and JM LaMontagne. Midwest Ecology and Evolution Conference, Dayton, Ohio
- 2013 A comparison of tree cavity availability across three habitat types in a highly urban area. JM LaMontagne, RJ Kilgour, **EC Anderson**, and SB Magle. Ecological Society of America, San Francisco, California

Teaching Experience

Marist College Department of Biology, Poughkeepsie, NY

2020 **Principal Instructor:** General Biology II/Ecology and Evolution

Coursework and Supplemental Training at University of Illinois at Chicago, Chicago, IL

2017 Seminar in College Teaching—Anthony Corte Professor
Practicum in College Teaching—Dr. J. Coumbe-Lilley Professor
Teaching Symposium Presenter: Technology in the Classroom—UIC Library
Seminar: Bringing the Community into the Classroom—UIC Library
Seminar: How to Teach All Learners—UIC Library
Seminar: Active Learning in the College Classroom—UIC Library

2016 Foundations of College Teaching—Dr. J. Coumbe-Lilley Professor

University of Illinois at Chicago, Chicago, IL

2017 **Graduate Teaching Assistant:** Ecology and Evolution

2016 **Graduate Teaching Assistant:** Ecology Laboratory
Graduate Teaching Assistant: Ecology and Evolution

2015 **Graduate Teaching Assistant:** Ecology and Evolution

DePaul University, Chicago, IL

2014 **Graduate Teaching Assistant:** General Biology II—Team Based Learning
Graduate Teaching Assistant: General Biology I

2013 **Graduate Teaching Assistant:** Ecology
Graduate Teaching Assistant: General Biology II—Team Based Learning
Graduate Teaching Assistant: General Biology II

2012 **Graduate Teaching Assistant:** General Biology I

Guest Lectures

2019 **Urban Ecology: an American in Germany**
Principle Instructor: Dr. Leonie Fischer

Mentoring Experience

2020 Cary Institute REU Program
 Workshops
 Data Exploration in R
 Spatial Analysis and Mapping in QGIS
 Data Visualization in R

2017 Angelica Calderon—Independent Study

- 2016 Miguel Garcia—Biological Sciences Independent Research, UIC Honors Capstone
Katherine Koo—Biological Sciences Independent Research
- 2015 Bianca Garcia—Independent Study
Denisse Herrera—Biological Sciences Independent Research
Recipient of UIC Undergraduate Travel Award
Hammed Sorunke—Independent Study
Miquel Garcia—Honors Activity
Ify Ndwuku—Biological Sciences Independent Research
Dina Sadaah—Biological Sciences Independent Research
Katherine Koo—Independent Study
Sara Colin—Biological Sciences Independent Research, UIC Honors Capstone
Recipient of UIC Undergraduate Travel Award
- 2013-2014 **Undergraduate Summer Research Fellow**, Michael Lordon. DePaul University Department of Biological Sciences. Currently pursuing M.S. in Conservation Ecology, University of Michigan.
Insect communities surrounding Red-headed woodpecker nest trees. Lordon, Michael C. (2014) Arthropod Communities and Red-headed Woodpecker (*Melanerpes erythrocephalus*) Habitat selection. DePaul Discoveries 3(1):12

Journals Reviewed For

Urban Ecosystems
Global Change Biology
Plant Biosystems
Journal of Tropical Biology
Journal of Urban Ecology
Landscape and Urban Planning
Current Zoology
Urban Science
AMBIO
Leisure Science
BioScience
Urban Forestry & Urban Greening
Frontiers in Ecology and the Environment

Service and Outreach

- 2020 Podcast interview with Future Cities Podcast: No Such Thing as a Vacant Lot
- 2018 Consulting with the Field Museum of Natural History and collaborating on a Vacant to Vibrant program at six vacant lots in Gary, IN
- 2018 Interviewed and quoted in Nature Sustainability article by SESYNC fellow Lisa Palmer
<https://www.nature.com/articles/s41893-017-0014-8.pdf>

- 2017-2018 Guest writer for Science Cafe, UIC's Department of Biological Sciences monthly newsletter
- 2017 Interview with WTTW for Urban Nature, an online documentary series.
<http://interactive.wttw.com/urbannature/intricate-ecology-vacant-lots#!/>
- 2017 Girl Scouts of America consultation for Lego Robotics tournament focused on bee conservation
- 2017 Chicago Area Undergraduate Research Symposium Judge
- 2016 Chicago Area Undergraduate Research Symposium Judge
- 2015 Chicago Area Undergraduate Research Symposium Judge
- 2013 Lincoln Park High School Science Fair Judge

Informal Teaching Experience

Forest Preserves of Cook County, Riverside, IL

2017-2018 **Stewardship Program Aide:** Conservation & Education Programming

Richard J. Daley College, Chicago, IL

2015-2016 **Biology Tutor:** Academic Support/Tutoring Center

Chicago Zoological Society, Brookfield, IL

2012 **Roving Naturalist:** Department of Conservation, Education, and Training

2011 **Intern:** Department of School, Group, and Teacher Programs

Student Conservation Association, Chicago, IL

2016 **Program Coordinator:** Chicago Conservation Leadership Corps

2014 **Assistant Program Director:** Summer Chicago Conservation Leadership Corps

2015, 2013, 2012 **Crew Leader:** Year-Round Chicago Conservation Leadership Corps

2011 **Environmental Educator:** Summer Chicago Conservation Leadership Corps

Skills

Attended The Bee Course in 2017, expert in bee identification and ecology

International Society of Arboriculture Certified Arborist

Curriculum design and implementation for K-12 and collegiate students

Organization and program management of academic and professional endeavors

Experimental design and field sampling to address habitat and community composition in urban areas

Statistical analysis using R Statistical Package

ArcGIS & ERDAS Imagine

Forest Preserves of Cook County: Brush Pile Burn Boss, IL Pesticide Applicator's License, Certified

Group Leader, Certified in Managing Invasive Species

Chicago Wilderness Prescription Burn Crew certified

Spanish language proficiency (read, written, spoken)

German language familiarity