
Nicholas J. Lyon

Research Interests: Community Ecology, Agroecology, Plant-Insect Interactions, Entomology, Integrated Pest Management

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EDUCATION

Ph.D. Entomology – May 2024 (expected) – Clemson University, Clemson SC

Thesis: *TBD*

M.Sc. Ecology and Evolutionary Biology – May 2019 – Iowa State University, Ames IA

Thesis: *An Integrated Approach to Restoring Grassland Function to Working Lands*

B.Sc. Biology – May 2016 – University of Puget Sound, Tacoma WA

Interdisciplinary Emphasis in **Bioethics**, Minor in **Humanities**

Thesis: *Mytilus Mussels as Bio-indicators of Regional Microplastic Trends*

RESEARCH

Agroecological Predator-Prey Interactions Researcher (Aug. 2019 – Present)

Clemson University, Clemson SC – **Advisor: Dr. Carmen Blubaugh**

- Performed field research in experimental farm and organic farm contexts
- Mentored undergraduates in scientific writing and statistical analysis
- Assisted other students in the lab with data tidying and analysis code in the R statistical environment

Grassland Plant and Pollinator Researcher (May 2016 – May 2019)

Iowa State University, Ames IA – **Advisors: Dr. Diane Debinski and Dr. Haldre Rogers**

- Performed field surveys for butterflies, wild bees, and flowering plants in a combination of remnant prairies, grazed landscapes, and un-grazed grassland restorations
- Wrote univariate and multivariate analysis code for ecological community data in the R statistical environment
- Built species distribution models (SDMs) in R for grassland plant species to inform climate-resilient seed-mix design
- Interviewed, hired, trained, and managed field technicians for summer 2017 and 2018
- Wrote protocols for field data collection and database management

Vegetation Sampling Field Crew Coordinator (June – July 2017 & June – July 2018)

Iowa State University, Ames IA – **Co-Coordinator: Jaime J Coon**

- Conducted vegetation percent cover estimations for several plant functional groups (e.g. forbs, cool-season grasses, etc.)
- Trained technicians with variable previous field experience in identification of relevant plant species and functional groups
- Planned and executed an intensive sampling schedule with field technicians from three different universities
- Wrote customized functions in R for response calculation as well as tidy and analysis scripts for raw collected data

Marine Microplastics Researcher (Apr. 2014 – May 2016)

University of Puget Sound, Tacoma WA – **Advisor: Dr. Peter Hodum**

- Developed a novel methodology using fluorescence microscopy to quantify plastic load in mussels (*Mytilus spp.*)
 - Designed a follow-up study in the second funded summer to my work the previous year
 - Wrote competitively funded grant proposals for University funding for the summer of 2014 and 2015
 - Selected as the university's sole 'Biological Sciences' representative at the Murdock College Science Research Conference
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Plant Genetics Lab Member (Dec. 2015 – May 2016)

University of Puget Sound, Tacoma WA – **Advisor: Dr. Bryan Thines**

- Used PCR to identify *Arabidopsis thaliana* homozygous knockout mutants for a trait related to F-BOX stress response
 - Expanded existing R code for meta-analysis of Affymetrix microarray data on several abiotic stresses
 - Participated in weekly literature days where lab members introduced a peer-reviewed paper and explained it to the group
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TEACHING

Ecology Teaching Assistant (Aug. 2018 – Dec. 2018)

Iowa State University, Ames IA – **Biology 312 (Intro to Ecology)**

- Taught core ecological concepts to sophomore through senior undergraduate students
- Worked with students individually and in groups to facilitate formal scientific writing skills and strategies
- Led both lab and field exercises to promote hands-on interaction with course concepts
- Collaborated with another TA to modify the course structure to emphasize development of scientific writing skills

Instructor of Record (Aug. 2017 – Dec. 2017)

Iowa State University, Ames IA – **Environmental Sciences 490 (Independent Research)**

- Mentored an Iowa State University undergraduate in their first independent research experience
- Facilitated the student in hypothesis formation, methods development, statistical analysis, and results reporting
- Taught the student data management and cleaning in the R statistical environment
- Wrote guidelines and gave feedback on abstract writing and poster presentation skills

Instructor's Assistant (Jan. 2016 – May 2016)

University of Puget Sound, Tacoma WA – **Biology 111 (Unity of life)**

- Addressed questions from students as they learned and employed lab techniques
 - Supervised and led trainings in the use of lab equipment
 - Taught statistical and database management methods in Microsoft Excel
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LEADERSHIP

Vice President (Sep. 2019 – Present)

Clemson University, Clemson SC – **Clemson University Entomological Society**

- Performed the functions of the president where she was unavailable
- Organized ride and room sharing to the 2019 Entomological Society of America meeting to increase accessibility
- Created programming to provide for unmet needs of students (graduate and undergraduate) in the program

Social Media Coordinator (May 2018 – May 2019)

Iowa State University, Ames IA – **Society for Advancement of Hispanics/Chicanos and Native Americans in Science**

- Led workshops on professional networking and the process of applying to graduate school
- Created consistent branding for web presence across social media platforms
- Wrote and posted tweets in-line with the support for diverse identities in science consistent with the society's mission
- Member since January 2018

Recruitment Committee Graduate Student Representative (May 2017 – May 2019)

Iowa State University, Ames IA – **Ecology and Evolutionary Biology Graduate Program**

- Established timeline for organizing the research symposium during recruitment weekend
 - Worked with faculty, staff, and students to ensure a successful recruitment season
 - Designed a promotional flier and the program for the event
 - Elected for two consecutive terms by the graduate student members of the program
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Graduate Student Senator (Dec. 2017 – May 2019)

Iowa State University, Ames IA – Graduate and Professional Student Senate

- Voted on policy and administrative matters that affect graduate students
- Advocated for issues relevant to graduate students in the Ecology and Evolutionary Biology Graduate Program
- Appointed as the first EEB Program Senator and subsequently elected for the following term

Applied Ecology Section Liaison (Aug. 2017 – Oct. 2018)

Ecological Society of America – ESA Student Section

- Provided social media (e.g. Twitter, newsletter, etc.) content on Applied Ecology Section news relevant to students
- Recorded a podcast with the ESA Student Section on my experience of being an applied ecology graduate student
- Member of the Ecological Society of America since August 2017

Phi Sigma Research Symposium Co-Chair (Apr. 2015 – May 2016)

University of Puget Sound, Tacoma WA – Phi Sigma Biological Sciences Honors Society

- Organized a symposium for student researchers across the natural sciences to present to the campus community
- Secured a keynote speaker for the symposium and coordinated logistics around their visit
- Sourced and managed a designer to produce posters to publicize the event around campus

PUBLICATIONS

Lyon, N. J., Debinski, D.M., Rangwala, I. 2019. Evaluating the Utility of Species Distribution Models in Informing Climate Change-Resilient Grassland Restoration Strategy. *Frontiers in Ecology and Evolutionary Biology* 7.

Lyon, N. J., Debinski, D.M., Rogers, H.S. Butterfly Long-Term Response to Management with Fire and Grazing Differs from Short-Term Responses. *[In prep]*

Stein, D.S., Debinski, D.M., Pleasants, J.M., **Lyon, N. J.** Enhancing Butterfly and Flowering Plant Communities via Collaborative Adaptive Management of *Schedonorus arundinaceus*. *[In prep]*

SELECTED PRESENTATIONS

Lyon, N.J., Debinski, D.M. Evaluating the Effects of 11 Years of Consistent Restoration Management. **Ecological Society of America**, Louisville KY, August 2019. Oral Presentation.

Lyon, N.J. Multivariate Statistics in R. **Data Management and Analysis in R for Ecologists and Evolutionary Biologists (EEB 698)**, Ames IA, November 2018. Guest Lecture.

Lyon, N.J., Debinski, D.M., Miller, J., Schact, W. Native Plant and Pollinator Response to Adaptive Management. **Ecological Society of America**, New Orleans LA, August 2018. Oral Presentation.

Lyon, N.J., Debinski, D.M., Miller, J., Schact, W. Plant and Pollinator Response to Adaptive Management. **Graduate and Professional Student Research Conference**, Ames IA, April 2018. *Awarded Best Oral Presentation*.

Lyon, N.J., Debinski, D.M. Butterfly and Nectar-Producing Plant Response to Invasive Grass Management. **Graduate Research in Ecology and Evolutionary Biology Symposium**, Ames IA, February 2018. Oral Presentation.

Lyon, N.J. An Integrated Approach to Tallgrass Prairie Restoration. **Three-Minute Thesis**, Ames IA, January 2018. Oral Presentation.

Lyon, N. J., Debinski, D.M., and Rangwala, I. Species Distribution Modeling to Predict Prairie Restoration Success under Climate Change. **Ecological Society of America**, Portland OR, August 2017. Oral Presentation.

Lyon, N.J., Debinski, D.M., Miller, J., Schact, W. and Stein, D. Adaptive Management for Prairie Plants and Pollinators in Midwestern Working Landscapes. **Iowa Invasive Species Conference**, Moravia IA, March 2017. Oral Presentation.

Lyon, N.J. Incorporating Correlative Modeling into Modifying Restoration Strategies for the Future. **Graduate Research in Ecology and Evolutionary Biology Symposium**, Ames IA, February 2017. Oral Presentation.

HONORS & AWARDS

Fellowships & Honors

- 2019 – **Joel A Berly Research Fellow** – Clemson University, Clemson SC
2018 – **Early Career Publication Award** – Ecological Society of America, Ecological Restoration Section, Louisville KY
2018 – **Preparing Future Faculty Fellow** – Iowa State University, Ames IA
2017 – **Science Communication Fellow** – Reiman Gardens, Ames IA
2016 – **Biology Department Honors** – University of Puget Sound, Tacoma WA

Grants & Awards

- 2019 – **Real/Brown Graduate Student Travel Award** – \$150
2018 – **Graduate Student Travel Award** – \$500
Ecological Society of America, Applied Ecology Section
2017 – **Graduate Student Travel Grant** – \$600
Center for Global and Regional Environmental Research (CGRER)
2017 – **Graduate Student Field Research Grant** – \$1,377
Center for Global and Regional Environmental Research (CGRER)
2014 & 2015 – **Student Research Award** – \$3,250
University of Puget Sound, Biology Department
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