

# NIA M. JOHNSON

5220 LANNON ST. DETRIOT, MI 48236

PHONE: 404-932-5264 • EMAIL: [N.M.JO@UMICH.EDU](mailto:N.M.JO@UMICH.EDU)

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## EDUCATION

**2020 –2023**

Ecology and Environmental Biology - Ph.D.

*Advisor: Regina Baucom Ph.D.*

**University of Michigan**, Ann Arbor, Michigan

**2017 –2020**

Ecology and Environmental Biology - M.S.

*Advisor: Regina Baucom Ph.D.*

**University of Michigan**, Ann Arbor, Michigan

**2011- 2015**

Biology Major, Chemistry Minor - B.S.

*Advisor: Mary McKenna Ph.D.*

**Howard University**, District of Columbia

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## RESEARCH EXPERIENCE

- Present**                      **Chicago Botanic Garden- Center for Conservation and Restoration**
- Collaborate within interdisciplinary teams to carry out projects focused on plant restoration
  - Generate and assess seedling trait data for plants designated for nationwide restoration efforts
  - Compile comprehensive dataset on tallgrass prairie restoration outcomes to discern patterns
  - Collaborate in the development of an inclusive restoration network
- 2017 – 2023**                      **University of Michigan- Department of Ecology and Evolutionary Biology**
- Designed and managed large scale experiments on invasive species with multiple stakeholders and research assistants
  - Collected data a series of laboratory and field experiments to include but not limited to: refractometer, confocal microscopy, digital chlorophyll meter, LECO (C:N) and Li-Cor 6400 (photosynthetic outputs)
  - Analyzed multiple datasets using software environments for statistical computing and graphic development
- 2014**                              **University of California- Davis (Evolution and Ecology Graduate Admissions Pathways Program)**
- Independently developed cross-species interaction experiments for honors thesis
  - Reared and collected colonization data from local species for multiple studies
  - Actively cared for research specimens of nickel-hyperaccumulating plants daily in greenhouse
- 2013**                              **University of California- San Diego (Pathways Program)**
- Collected samples of microorganisms at multiple depths below sea level
  - Cultivated and cared for bacteria cultures for identification at various selected temperatures
  - Evaluated bacteria growth after extended periods of darkness with use of fluorometer
- 2011 - 2014**                      **Howard University- NSF (Environmental Biology Scholars Program)**
- One of five undergraduate students selected to lead and conduct experiments under the direction of Howard faculty
  - Actively cared for and grew plant specimens in heavy-metal concentrated soil in greenhouse and lab conditions
  - Developed and conducted ecological research throughout summer at Blandy Experimental Farm
  - Formulated conclusions from a series of experiments to describe patterns of plant-insect interactions
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## PUBLICATIONS

**N Johnson** and RS Baucom. 2022. Dicamba drift alters plant-herbivore interactions at the agro-ecological interface. **Ecosphere**. 13(11): e4274. doi: <https://doi-org.proxy.lib.umich.edu/10.1002/ecs2.4274>

**N Johnson**, S Johnson, *G Zhang*, *A Soble*, and RS Baucom. 2022. The consequences of synthetic auxin herbicide on plant-herbivore interactions. **Trends in Plant Science**. doi: <https://doi.org/10.1016/j.tplants.2023.02.003>

**N Johnson** *G Zhang*, *A Soble*, and RS Baucom. 2023. Dicamba drift alters patterns of chewing herbivory in three common agricultural weeds. *In Review*. Manuscript available *via* bioRxiv. doi: <https://doi.org/10.1101/2022.08.21.504705>

**N Johnson** and RS Baucom. 2023. The double life of trichomes: understanding their dual role in herbivory and herbicide resistance. *In Review*. Manuscript available *via* bioRxiv. doi: <https://doi.org/10.1101/2023.04.28.538721>

**N Johnson** and RS Baucom. 2023. Building a barrier: investigating the defensive role of induced trichome production in herbicide exposed plants. *In Review*. Manuscript available *via* bioRxiv. doi: <https://doi.org/10.1101/2023.11.16.567395>

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## TEACHING EXPERIENCE

**2017 – 2019**                      **University of Michigan - BIO 171: Introduction to Biology**  
Graduate Student Instructor

- Developed and led class discussions on key concepts in ecology, genetics, and evolutionary biology
- Prepared weekly discussion materials and demonstrations
- Communicated concerns between students and course instructors
- Explained concepts to individual students during scheduled office hours
- Proctored course exams and evaluated student proficiency

**2015 – 2017**                      **Teach for America AmeriCorps - Democracy Prep Charter School**  
Fifth grade General Educator and Sixth grade Special Education Math Curriculum Developer

- Chosen as 2015 Corps Member out of over 48,000 applicants to teach fifth and sixth grade students in Camden, NJ
- Planned and executed objective-driven daily lessons for students in subject areas of science and math
- Employed student achievement data to support instructional decision-making and weekly tutoring plans
- Designed and implemented behavior plans with social workers for students with learning disabilities
- Organized professional development sessions to expand on culturally relevant pedagogy
- Ran after school program focused towards on educating youth on both local and national issues youth and discussing positive solutions

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## CERTIFICATION

**2021**    **Public Engagement in Ecology and Evolutionary Biology – University of Michigan Museum of Natural History**

- Trained in science communication practices for diverse/general audiences (K-12 and adults)
- Developed scientific demonstration based on ecological research
- Engaged museum visitors through Biodiversity Lab

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## SCHOLARSHIPS AND FELLOWSHIPS

2017 – 2023                      Rackham Merit Fellowship, Rackham Graduate School, University of Michigan (\$100,000)

2019 – 2022                      HHMI Gilliam Graduate Fellowship, Howard Hughes Medical Institute (\$150,000)

2011 – 2015                      Legacy Scholarship, Howard University (\$120,000)

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## GRANTS

### Research:

2021 - 2022                      Rackham Research Grant, Rackham Graduate School, University of Michigan

2020 - 2021                      Dr. Nancy Williams Walls Award for Field Research, University of Michigan

2020 - 2021                      Matthaei Botanical Gardens Research Award, University of Michigan

2019 - 2020                      Rackham Research Grant, Rackham Graduate School, University of Michigan

2019 - 2020                      Matthaei Botanical Gardens Research Award, University of Michigan

2018 - 2019                      Block Research Award, University of Michigan

### Travel:

2018 - 2022                      Rackham Conference Travel Grant, University of Michigan (3)

### Service and Outreach:

2022 – 2023                      Rackham Student Government Grant, University of Michigan (1)

2021 – 2023	Rackham Faculty Allies and Student Ally Diversity Grant, University of Michigan (2)
2021 – 2022	Frances and Sydney Lewis Visiting Leaders Grant, Center for the Education of Women (1)
2020 – 2022	Rackham Dean's Strategic Initiative Grant, University of Michigan (2)

## AWARDS

2023	Early Career Scientists Award	University of Michigan
2019	The Equalizer Award	Rackham Graduate School, University of Michigan
2012	Best Undergraduate Research	Botanical Society of America

## PRESENTATIONS

### Invited Talks:

2022	The Society for Integrative & Comparative Biology, Virtual
2021	University of Virginia - Blandy REU Program, Virtual

### Professional Meetings:

2022	Poster Presentation, Ecological Society of America, Montréal, QC, Canada
2022	Oral Presentation, Botany, Anchorage, AK
2021	Oral Presentation, Society for the Study of Evolution, Virtual
2021	Poster Presentation, HHMI Science Meeting: Genomes, Gene Expression, and Evolution, Virtual
2020	Poster Presentation, HHMI Annual Meeting, Virtual
2019	Poster Presentation, HHMI Annual Meeting, Virtual
2019	Poster Presentation, Society for the Study of Evolution, Providence, RI
2014	Poster Presentation, Ecological Society of America, Sacramento, CA
2013	Poster Presentation, Botanical Society of America, New Orleans, LA

### Symposiums:

2023	Poster Presentation Early Career Scientists Symposium, Ann Arbor MI
2019	Poster Presentation Green Life Symposium, Ann Arbor MI
2015	Oral Presentation Howard University Research Symposium, Washington DC
2014	Poster Presentation Howard University Research Symposium, Washington DC

## PROFESSIONAL SOCIETIES

2021 – Present	Ecological Society of America
2020 – Present	Botanical Society of America
2020 – Present	American Society of Naturalist
2019 – Present	Study for Science of Evolution

## SERVICE AND OUTREACH

### 2022 - 2023 **Minority Serving Institutions Connect Initiative (UM Rackham Graduate School)**

*Ambassador*

- Organized and arranged professional, social, and community service events for students from minority serving institutions at the University of Michigan
- Wrote grants and lead fund raising for organization
- Created themes, content, and social media graphics for event marketing

### 2020 – 2022 **Students of Color of Rackham (UM Rackham Graduate School)**

*Vice President*

- Organized and arranged event services for the purpose of education, community building, problem solving, and fellowship within the graduate students of color
- Facilitated communication between Rackham officials/ organizers and graduate students of color
- Served as liaison between vendors and stakeholders while managing professional development and social events
- Lead private and public fundraising initiatives for annual social justice symposium
- Developed statements for social justice issues and created monthly newsletters

- 2020 – 2022**                      **Diversity, Equity, Inclusion, and Justice Committee (Ecology and Evolutionary Biology Dept.)**  
*Graduate Student Representative*
- Organized programming, seminars, and awards to support and raise awareness to DEIJ concerns in academia
  - Aided in grant writing to fund programs and increase awareness of social injustice
- 2020**                                **Coloring Science Initiative (Ecology and Evolutionary Biology Dept.)**  
*Researcher and Content Creator*
- Researched and curated online content based on research from underrepresented minority scientists best align with introductory biology courses at the collegiate level
  - Tailored resources made publicly available for integration into undergraduate level biology courses
- 2019 - 2021**                      **Doris Duke Conservation Scholars Program (School for Environment and Sustainability)**  
*Mentor*
- Mentored underrepresented undergraduate scholar in field summer research project
  - Provided academic and personal support to scholar to successfully complete program
  - Aided in development of professional conference poster
- 2019**                                **Michigan DNA Day (College of Literature, Arts, and Science)**  
*Volunteer*
- Introduced scientific topics to freshman high school students at local schools
  - Developed and executed course materials for genetics lab
- 2018**                                **Bioblitz (School for Environment and Sustainability)**  
*Volunteer*
- Organized lessons to teach elementary school students about ecology and local minority owned community farm
  - Engaged students in learning about native plants and evolution
- 2017 - 2018**                      **Teach for America - Historically Black University and Colleges Alumni Board**
- Aided in recruitment and interview applicants with science backgrounds at HBCUs
  - Mentored students during and beyond the application period
- 2013 - 2015**                      **ESA- Strategies for Ecology Education, Diversity and Sustainability (Howard University Chapter)**  
*President*
- Introduced scientific topics to middle school students in Howard University MS2 Program
  - Aided in science fair development and judgment in MS2
  - Spread awareness of problems that affect the environment on campus by advertising events, programs, and seminars organized by the Howard University SEEDS chapter
  - Mentored and educated youth at local middle schools in the D.C. area on environmental issues
- 2013 - 2015**                      **Peer Health Exchange (Howard University Chapter)**  
*Leadership Council*
- Managed 5 Health Educators who specialize in teaching Healthy and Abusive Relationship workshops to 9th grade inner city students to make informed decisions about their mental emotional health.
  - Provided strategies for quality teaching through observations and individualized goal setting
  - Assisted Program Manager in developing activities/trainings that increase volunteer and student engagement
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