

# Joshua A. Jones

Indiana University Bloomington,  
Department of Biology  
Program in Evolution,  
Ecology, and Behavior

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## RESEARCH INTERESTS

Host-Microbe Interactions, Environmental Microbiology,  
Symbioses and Evolutionary Innovation, Microbiomes Across Complex Life Cycles,  
& Role of Microbiomes in Development and Immunity

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## EDUCATION

2019-present:	Graduate student (PhD), Indiana University, Department of Biology, Program in <i>Evolution, Ecology, and Behavior</i> (EEB), Minor in Microbiology Advisor: Dr. Armin Moczek
2015-19	<b>BS</b> , Biological Sciences, University of Missouri

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## FELLOWSHIPS AND AWARDS

College of Arts and Sciences Travel Award (2023)  
Carl Storm Underrepresented Minority Fellowship (2023)  
Outstanding Student Presentation Award, ASM – Microbe (2022)  
National Science Foundation Graduate Research Fellowship (2021-2025)  
Templeton Fellowship (2020-2021)  
Indiana University Graduate Scholar's Fellowship (2019-25)  
Research Experience for Undergraduates (REU) Fellowship (2018)  
Stipend through Exposure to Research for Science Students Fellows Program (2017-19)  
Life Sciences Undergraduate Research Opportunity Program (LS UROP, 2017)

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## PUBLICATIONS

- *In press* -

Rohner PT, **Jones JA**, Moczek AP. Roles of - and interactions among - plasticity, symbionts, and niche construction in dung beetle development and evolution. *Journal of Experimental Biology*.

- *In review* -

**Jones JA**, Irene IG, Moczek AP. The dynamic dung beetle microbiome: insights into life stage bottlenecks, microbiome assembly, and host-constructed microbial refugia.

- *In preparation* -

**Jones JA**, Irene IG, Moczek AP. Insights into microbial genomic potential and functional adaptations for herbivore dung utilization within the *Onthophagus taurus* gut metagenome.

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## PRESENTATIONS

- *Oral presentations* -

Jones, J., Newton, I., & Moczek, A. 2023. Metamorphosis Matters: Investigating the Dynamic Microbiome of Onthophagus Dung Beetles. EEB Retreat, Bloomington, MO  
Jones, J., Newton, I., & Moczek, A. 2022. Intra- and transgenerational maintenance and function of dung beetle microbiota. Beneficial Microbes, Madison, WI

- *Poster presentations* -

Jones, J., Newton, I., & Moczek, A. 2023. Transgenerational microbiota maintenance and function in a dung beetle. Gordon Research Conference, Lucca (Barga), LU, Italy  
Jones, J., Newton, I., & Moczek, A. 2023. Transgenerational microbiota maintenance and function in a dung beetle. Gordon Research Seminar, Lucca (Barga), LU, Italy  
Jones, J., Newton, I., & Moczek, A. 2022. Intra- and transgenerational maintenance and function of dung beetle microbiota. Beneficial Microbes, Madison, WI  
Jones, J., Newton, I., & Moczek, A. 2022. Intra- and transgenerational maintenance of dung beetle microbiota. American Society for Microbiology – Microbe, Washington, DC  
Jones, J., & Leal, M. 2019. An experimental approach to evaluate problem solving in the lizard *Anolis sagrei*. Spring Undergraduate Research, Columbia, MO.  
Jones, J., Lyons, C., & Shiaris M. 2018. Effect of temperature and salinity on gill microbiome in the Eastern oyster, *Crassostrea virginica*. Annual Biomedical Conference for Minority Students, Indianapolis, IN.  
Jones, J., Lyons, C., & Shiaris M. 2018. Effect of temperature and salinity on gill microbiome in the Eastern oyster, *Crassostrea virginica*. UMass Boston Summer Research Symposium, Boston, MA.

- Poster presentations continued -

- Jones, J., & Leal, M. 2018. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Spring Undergraduate Research Forum, Columbia, MO.
- Jones, J., & Leal, M. 2018. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Missouri Life Science Week, Columbia, MO.
- Jones, J., & Leal, M. 2017. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Annual Biomedical Conference for Minority Students, Phoenix, AR.
- Jones, J., & Leal, M. 2017. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Summer Undergraduate Research Forum, Columbia, MO.
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## TEACHING, OUTREACH, AND SERVICE

2024	Associate Instructor for Honors Evolution course
2023	Associate Instructor for Biology of the Senses course
2023	James Holland RISE program presenter
2022	Guest lecture for Entomology course
2021 - 22	Reviewer for Molecular Ecology
2021	GROUPs Summer Mentor
2017 - 19	Peer mentor for Exposure to Research for Science Students
2018 - 19	Lang Middle School STEM outreach

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## Techniques

### Molecular Techniques

- DNA extraction using QIAGEN kits and Phenol:Chloroform
- PCR; qPCR
- Library preparation for amplicon-based and whole genome sequencing with Illumina
- Insect immunity assays: phenol-oxidase activity, lysozyme-like activity, protein concentration, hemocyte morphology and abundance

### Bioinformatics

- 16S analysis with QIIME2 & Mothur
- Metagenome analysis with SPAdes, MEGAHIT, QUAST, SAMtools, MetaBAT, CONCOCT, CheckM, Kraken2, and Prokka via KBASE or a supercomputer

### Programming Languages

- Basic programming in R and Perl
- Microsoft Office (Excel, Word, PowerPoint, OneNote)
- Terminal/Bash for supercomputer utilization