Erik Parker

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EDUCATION

2015 - present: Ph.D. Evolution, Ecology and Behavior, Indiana University, Bloomington
Minor: Statistics
Advisor: Dr. Armin Moczek
Committee: Dr. Irene Newton, Dr. Jay Lennon, Dr. Whitney Schlegel, Dr. Jen Lau
Thesis title: *With a little help from my friends: The role of the microbiota in dung beetle diversification*.

2009 – 2014: Bachelor of Science, Biology, University of Oregon, Eugene; *Magna Cum Laude*

PUBLICATIONS [*Co-First Authors]

in press / in print

2020 **Parker ES**, Moczek AP. Don't stand so close to me: microbiota-facilitated enemy release dynamics in introduced *Onthophagus taurus* dung beetles. **Ecology and Evolution** *in press*.

Parker ES, Newton ILG, Moczek AP. (My microbiome) would walk 10,000 miles: Maintenance and turnover of microbial communities in introduced dung beetles. **Microbial Ecology**.

*Hu Y, *Linz DM, ***Parker ES**, *Schwab DB, Casasa S, Macagno AL, Moczek AP. Developmental bias in horned dung beetles and its contributions to innovation, adaptation, and resilience. **Evolution & Development** 22(1-2):165-80.

2019 **Parker ES**, Dury GJ, Moczek AP. Transgenerational developmental effects of species-specific, maternally transmitted microbiota in Onthophagus dung beetles. **Ecological Entomology** 44(2):274-82.

PRESENTATIONS

2019 **Parker ES**, Schwab DB & Moczek AP. With a little help from my friends: The role of the microbiota in dung beetle diversification. [poster] *Evolution Evolving*, Cambridge, UK.

Parker ES. Where does diversity come from? Symbiosis, development, and evolution of dung beetles. *Brown Bag Seminar*. Indiana University, Bloomington, IN.

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2014 **Parker ES**, Currey M & Cresko W. Morphological Divergence Between Coastal and Inland Freshwater Oregon Stickleback. *EVO-WIBO*, Port Townsend, WA.

GRANTS, AWARDS, AND HONORS

2019 Louise Constable Hoover Fellowship ($2000 for research expenses). Indiana University, Bloomington.

Indiana University McCormick Science Grant ($2500 for research expenses). Indiana University, Bloomington.

2017 EEB Summer Fellowship ($3200 stipend). Indiana University, Bloomington.

2016 NSF Graduate Research Fellowship Program (Honorable Mention). *A test of the hologenome theory of evolution in natural populations.*

TEACHING EXPERIENCE

2018 Assistant Instructor. Animal Behavior 460. Indiana University, Bloomington.

2017 Instructor, Foundations in Science and Mathematics program. Zoology. Bloomington, IN.

Assistant Instructor. Biology of the Senses 104. Indiana University, Bloomington.

Assistant Instructor. Diversity, Evolution, and Ecology 111. Indiana University, Bloomington.

2016 Guest Lecture. Diversity, Evolution, and Ecology 111. *IU's Finest: Natural Selection in the Classroom*. Indiana University, Bloomington.

Guest Lecture. Evolution 318. *Evolution and Development: The Past, Present, and Future of EvoDevo*. Indiana University, Bloomington.

2016 Assistant Instructor. Evolution 318. Indiana University, Bloomington.

Assistant Instructor. Entomology 373. Indiana University, Bloomington.

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2015 Guest Lecture. Evolution 318. *Evolution and Development: The Past, Present, and Future of EvoDevo*. Indiana University, Bloomington.

Assistant Instructor. Evolution 318. Indiana University, Bloomington.

Assistant Instructor. Human Biology 104. Indiana University, Bloomington.

WORKSHOPS

LEAD

2020 *Making beautiful (or at least decent looking) scientific graphics using Illustrator*. Indiana University, Bloomington.

Using R for data visualization, statistical analyses, and linear modeling of biological data. Indiana University, Bloomington.

PARTICIPANT

2018 STEM Tech2Teach. Organizers: Dr. Madeleine Gonin and Dr. John Paul Kanwit. Center for Innovative Teaching and Learning, Indiana University, Bloomington.

2017 *GitHub and R for Ecologists*. Organizer: Dr. Jay Lennon. Indiana University, Bloomington.

The Basics of *Genomics and Bioinformatics*. Organizer: Dr. Irene Newton. Indiana University, Bloomington.

PROFESSIONAL SERVICE

Invited Reviewer for: *Entomologia Experimentalis et Applicata*,
Evolution & Development.

STUDENTS MENTORED

2018- 2019 Madison Gits (Undergraduate)

OUTREACH

2019 *The Evolutionary Morphology of Skulls and Teeth*. 6 classes of 9th-12th graders. Mooresville High School, Mooreseville, IN. Participants: ~ 180 students.

2018 *Studying Animal Behavior in Crayfish*. 4 classes of AP Biology students. Bloomington High School South, Bloomington, IN. Participants: ~80 students.

The Wonderful World of Dung Beetles. Community outreach event. Marble Hill Farms, Bloomington, IN. Participants: ~20 children and adults.

The Evolutionary Morphology of Skulls and Teeth. 7 classes of 9th-12th graders. Mooresville High School, Mooreseville, IN. Participants: ~ 220 students.

Reconstructing 4 Million Years Human Evolution. 1 class of 9th-12th graders. Harmony School, Bloomington, IN. Participants: ~15 students.

2017 *Insect Lifecycles*. 2 classes of 1st and 2nd graders. Parkview Primary School, Bedford, IN. Participants: ~70 students.

The Evolutionary Morphology of Skulls and Teeth. 2 classes of 9th-12th graders. Bloomington High School South, Bloomington, IN. Participants: ~ 50 students.

2016 *The Evolutionary Morphology of Skulls and Teeth*. 5 classes of 9th-12th graders. Bloomington High School North, Bloomington, IN. Participants: ~ 160 students.

Reconstructing 4 Million Years Human Evolution. 4 classes of 6th-8th graders. Central Middle School, Columbus, IN. Participants: ~100 students.

The Evolutionary Morphology of Skulls and Teeth. 3 classes of 3rd-5th graders. Unionville Elementary School, Unionville, IN. Participants: ~ 70 students.

Formulating and Testing Hypotheses Using Termite Behavior. 3 classes of 1st-3rd graders. Unionville Elementary School, Unionville, IN. Participants: ~ 80 students.

The Evolutionary Morphology of Skulls and Teeth. 1 class of 6th graders. Summit Elementary School, Bloomington, IN. Participants: ~ 30 students.

2015 *The Wonderful World of Dung Beetles*. WonderLab camp, grades K-3rd. Bloomington, IN. Participants: ~40 students.

The Evolutionary Morphology of Skulls and Teeth. 7 classes of 9th-12th graders. Bloomington High School South, Bloomington, IN. Participants: ~ 210 students.

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The Evolutionary Morphology of Skulls and Teeth. 4 classes of 2nd-5th graders. Dollens Elementary School, Oolitic, IN. Participants: ~ 120 students.

Judge for 2015 *Indiana Science Olympiad Tournament*. Indiana University, Bloomington, IN.

2014 *The Evolutionary Morphology of Skulls and Teeth*. 4 classes of 4th-8th graders. St. Vincent de Paul School, Bedford, IN. Participants: ~ 80 students.

The Evolutionary Morphology of Skulls and Teeth. Community outreach event. Bedford Public Library, Bedford, IN. Participants: ~ 10 children and adults.

Insect Development and Biodiversity. 1 class of students age 5-18. Bloomington Christian Schoolhouse, Bloomington, IN. Participants: 35 students.

The Evolutionary Morphology of Skulls and Teeth. 2 classes of 5th graders. Spencer-Owen Elementary School, Spencer, IN. Participants: ~ 50 students.

2013 *Boology! A Night of Spooky Science.* Community outreach event. University of Oregon, Eugene, OR. Participants: ~ 500 visitors.