

## Logan W. Cole

Batavia, NY

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Research interests: Genome evolution; molecular evolution; phylogenetics

### EDUCATION

**Indiana University** - Bloomington, Indiana 2019  
PhD in Evolution, Ecology, and Behavior with a minor in Bioinformatics  
Thesis: The radical structural evolution of genomes in flowering plant mitochondria  
Advisor: Jeffrey D. Palmer

**University at Buffalo** - Buffalo, New York 2012  
BS in Biological Sciences - Graduated *magna cum laude* and with high honors  
Honors Advisor: Charlotte Lindqvist

### AWARDS, SCHOLARSHIPS, & HONORS

SMBE Conference Registration Award 2017  
SSE Outreach Grant with W. Shoemaker and D. Schwab (\$1,000) 2017  
Charles B. Heiser Fellowship in Plant Evolution (\$2,000) 2016–2017  
SMBE Young Investigator’s Travel Award (\$2,000) 2016  
SSB Ernst Mayr Award Finalist 2015  
Ralph Cleland Travel Award (\$500) 2015  
SSE Student Travel Stipend (\$500) 2015  
Louise Constable Hoover Fellowship (\$1,000) 2015  
Bayard Floyd Plant & Fungal Biology Summer Fellowship (\$12,519) 2013–2017  
Departmental Honors - UB Department of Biological Sciences 2012  
UB Foundation Teaching Stipend (\$400) 2011  
UB CURCA Undergraduate Research Award (\$495) 2011  
PennAg Industries Association Scholarship (\$500) 2010  
New York State Academic Competitiveness Grant (\$1,300) 2009  
University at Buffalo Provost Scholarship (\$10,000) 2008  
New York State Attorney General Andrew Cuomo’s Triple “C” Award 2008

### RESEARCH APPOINTMENTS

Indiana University - Department of Biology 2012–2019  
**Graduate Research - Advisor: Jeffrey D. Palmer**

University at Buffalo - Department of Biological Sciences 2010–2012  
**Undergraduate Research - Faculty Supervisor: Charlotte Lindqvist**

### TEACHING APPOINTMENTS

SUNY Geneseo – Department of Biology  
Adjunct Lecturer for undergraduate courses  
BIOL 350 – Fundamentals of Biostatistics – upper division course  
BIOL 271 – Heredity – lower division course for non-majors/minors 2024–Present

Brockport College – Department of Biology  
Adjunct Lecturer for undergraduate courses  
BIO 411 - Evolution - upper division course 2022–Present

Indiana University - Department of Biology  
Associate Instructor for undergraduate courses  
BIOL-S 318 - Honors Evolution - upper division honors course 2017  
BIOL-L 318 - Evolution - upper division course 2016  
BIOL-L 111 - Evolution and Diversity - introductory course 2012, 2016

Indiana University - Foundations in Science and Mathematics (IU FSM)  
Instructor for summer high school courses  
Our Evolving World - supplementary course on evolution 2017  
Introductory Biology - preparatory course for high school biology 2015, 2016

University at Buffalo - Department of Biological Sciences  
Teaching assistant for undergraduate courses  
Basic Training in the Biological Sciences Workshop - prep course 2011  
BIO 200 - Evolutionary Biology - introductory course 2009–2011

### **PROFESSIONAL SERVICE**

Curriculum development - IU FSM 2015–2018  
Co-founder and co-chair - IU Evolution Discussion Group (EDG) 2015–2018  
Member - Activities committee for IU Biology GRW 2017  
Member - Talks committee at the Midwest Ecology and Evolution meeting 2015  
Chair - Session on plant organelle genome evolution at Evolution meeting 2014

Manuscript review: *Agronomy* (1), *BMC Plant Biology* (2), *Diversity* (1), *Frontiers in Ecology and Evolution* (1), *Genes* (6), *Genome Biology and Evolution* (4), *Insects* (2), *International Journal of Molecular Science* (4), *Journal of Applied Genetics* (1), *Journal of Molecular Evolution* (2), *Life* (2), *Molecular Biology and Evolution* (1), *Plants* (5), *PLoS ONE* (6), *Sustainability* (1), *Water* (1)

### **PUBLICATIONS**

#### ***Peer-reviewed publications***

Cole LW. 2020. The mitochondrion as a hammer. *Evo Edu Outreach*. 13:21

Schwab DB, Cole LW, Desai KM, Hemann J, Hummels KR, Maltese AV. 2018. A summer STEM outreach program run by graduate students: successes, challenges, and recommendations for implementation. *J Res STEM Educ*. 4(2): 117–129.

Cole LW, Guo W, Mower JP, Palmer JD. 2018. High and variable rates of repeat-mediated mitochondrial genome rearrangement in a genus of plants. *Mol Biol Evol*. 35(11): 2773–2785.

Cole LW. 2016. The evolution of per-cell organelle number. *Front Cell Dev Biol*. 4:85.

Roy T, Cole LW, Chang TH, Lindqvist C. 2015. Untangling reticulate evolutionary relationships among New World and Hawaiian mints (Stachydeae, Lamiaceae). *Mol Phylogenet Evol.* 89: 46–62.

### **Magazine articles**

Cole LW. 2021. The Gilded Age Bone Wars have their echoes in today's vaccine patent waiver fight. *Salon*.

Cole LW. 2021. Why biology can't tell us how to organize society. *Current Affairs*.

### **PRESENTATIONS**

#### **Symposium talks**

Cole LW. 2019. The radical structural evolution of genomes in flowering plant mitochondria. **Selected for Great Lakes Evolutionary Genetics Symposium at GLAM-EvoGen.** Amherst, NY.

Cole LW, Mower JP, Palmer JD. 2016. Unexpectedly high and variable tempo of plastid DNA integration in mitochondrial genomes of *Monsonia*. **Selected for “Mitochondria in the Age of Genomics” symposium at SBE 2016.** Gold Coast, Australia.

Cole LW, Mower JP, Palmer JD. 2015. A complex history of plastid-derived insertions and horizontal gene transfer in *Monsonia*. **Selected for Ernst Mayr Symposium at Evolution 2015.** Guarujá, Brazil.

Cole LW, Chang TH, Lindqvist C. 2012. Phylogenetic analyses of low-copy nuclear loci show reticulate evolutionary patterns among Hawaiian endemic mints and New World *Stachys* relatives. University at Buffalo Department of Biological Sciences Honors Symposium. Amherst, NY.

#### **Contributed conference talks**

Cole LW, Mower JP, Palmer JD. 2015. A complex history of plastid-derived insertions and horizontal gene transfer in *Monsonia*. SBE Satellite Meeting on Mutation, Repair, and Evolution. Bloomington, IN.

Cole LW, Mower JP, Palmer JD. 2015. Horizontal gene transfer in the mitochondrial genome of *Monsonia emarginata*. Midwest Ecology and Evolution Conference 2015. Bloomington, IN.

Cole LW, Mower JP, Palmer JD. 2014. Horizontal gene transfer in the mitochondrial genome of *Monsonia emarginata*. Evolution 2014. Raleigh, NC.

Cole LW, Chang TH, Lindqvist C. 2012. Phylogenetic analyses of low-copy nuclear loci show reticulate evolutionary patterns among Hawaiian endemic labiates and New World *Stachys* relatives. Botany 2012. Columbus, OH.

### ***Intradepartmental talks and workshops at Indiana University in Bloomington, IN***

Cole LW. 2017. Basic phylogenetics as a tool for applications in other fields. Ecolunch.

Cole LW. 2017. The evolution of mitochondrial genomes in flowering plants. EEB Brownbag.

Cole LW. 2015. A complicated history of rearrangement, plastid-derived insertions, and horizontal gene transfer in the mitochondrial genomes of *Monsonia*. EEB Brownbag.

Cole LW. 2015. Reticulate evolutionary patterns between angiosperm genomes. EDG.

Cole LW. 2014. Phylogenetics as a tool for applications in other fields. Ecolunch.

### ***Poster presentations***

Cole LW, Mower JP, Palmer JD. 2017. Extensive and variable repeat-mediated mitochondrial genome rearrangement in a genus of plants. SMBE 2017. Austin, TX.

Cole LW, Mower JP, Palmer JD. 2013. Horizontal gene transfer in the mitochondrial genome of *Monsonia emarginata*. SMBE 2013. Chicago, IL.

Cole LW, Chang TH, Lindqvist C. 2011. An American Origin for the Hawaiian Native Mints. UB CURCA Celebration of Academic Excellence. Amherst, NY.

### **PANELS**

Career Panel at the Conservation Leader Internship Program at the Land Conservancy at McHenry County, 2022

Grad School 101 Panel at Indiana University Evolution, Ecology, and Behavior Orientation, 2016

### **PROFESSIONAL AFFILIATIONS**

Society for Molecular Biology and Evolution (SMBE)

Society for the Study of Evolution (SSE)

Society of Systematic Biologists (SSB)

Indiana Academy of Science

National Center for Science Education