

# Kyle E. McElroy, Ph.D.

## CURRICULUM VITAE

Postdoctoral Research Associate, Serb Lab  
Dept Ecology, Evolution & Organismal Biology  
Iowa State University

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### EDUCATION & TRAINING

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Postdoctoral Research Associate Iowa State University	2019-Present Advisor: Dr. Jeanne Serb
Ph.D. Integrated Biology University of Iowa	2013-2019 Advisor: Dr. Maurine Neiman
BSc. Evolution & Ecology; Anthropological Sciences The Ohio State University	2009-2013

### PUBLICATIONS († equal contribution)

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#### Peer reviewed

**McElroy KE**, Bankers L, Soper D, Hehman H, Boore JL, Logsdon JM Jr, Neiman M. (2022). Patterns of gene expression in ovaries of sexual vs. asexual lineages of a freshwater snail. *Frontiers in Ecology and Evolution* 10: 845640, In press. [doi.org/10.3389/fevo.2022.845640](https://doi.org/10.3389/fevo.2022.845640)

Smedley GD, **McElroy KE**, Feller K, Serb JM. (2022). Additive and epistatic effects influence spectral tuning in molluscan retinochrome opsin. *Journal of Experimental Biology*, In Press. [doi.org/10.1242/jeb.242929](https://doi.org/10.1242/jeb.242929)

**McElroy KE**, Müller S, Lamatsch KD, Bankers L, Fields PD, Jalinsky JR, Sharbrough J, Boore JL, Logsdon JM Jr, Neiman M. (2021). Asexuality associated with marked genomic expansion of tandemly repeated rRNA and histone genes. *Molecular Biology and Evolution* 38: 3581–3592. [doi.org/10.1093/molbev/msab121](https://doi.org/10.1093/molbev/msab121)

Tvedte ES, Walden KKO, **McElroy KE**, Forbes AA, Hood GR, Logsdon JM Jr, Feder JL, Robertson HM. (2019). Genome of the parasitoid wasp *Diachasma alloeum*, an emerging model for ecological speciation and transitions to asexual reproduction. *Genome Biology and Evolution* 11: 2767-2773. [doi.org/10.1093/gbe/evz205](https://doi.org/10.1093/gbe/evz205)

Verhaegen G, **McElroy KE**, Bankers L, Neiman M, Haase M. (2018) Adaptive phenotypic plasticity in a clonal invader. *Ecology and Evolution* 8: 4465-4483. [doi.org/10.1002/ece3.4009](https://doi.org/10.1002/ece3.4009)

**McElroy KE**†, Denton† R, Sharbrough J, Bankers L, Neiman M, Gibbs L. (2017) Genome balance in a triploid trihybrid vertebrate. *Genome Biology and Evolution* 9: 968-980. [doi.org/10.1093/gbe/evx059](https://doi.org/10.1093/gbe/evx059)

Bankers L, Fields P, **McElroy KE**, Boore JL, Logsdon JM Jr, Neiman M (2017) Genomic evidence for population-specific responses to coevolving parasites in a New Zealand freshwater snail. *Molecular Ecology* 26: 3663-3675. [doi.org/10.1111/mec.14146](https://doi.org/10.1111/mec.14146)

#### In review

Sharbrough J, Bankers L, Cook E, Fields PD, Jalinsky JR, **McElroy KE**, Neiman M, Logsdon JM Jr Boore JL. Single-molecule sequencing of animal mitochondrial genomes reveals chloroplast-like architecture and repeat-mediated recombination. *bioRxiv* <https://doi.org/10.1101/2022.08.11.503648>

## PRESENTATIONS & POSTERS

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Evolution: **2014** (Raleigh, NC); **2016** (Austin, TX); **2017** (Portland, OR); **2021** (virtual)

International Conference on Polyploidy, Hybridization and Biodiversity: **2016** (Roving, Croatia)

Population, Evolutionary, and Quantitative Genetics Conference: **2018** (Madison, WI)

Midwest Popgen: **2018** (Minneapolis, MN)

Theo Murphy international scientific meeting: "Pearls of wisdom: synergising leadership and expertise in molluscan genomics". **2019** (Buckinghamshire, England)

Annual Meeting of the Society for Integrative & Comparative Biology: **2020** (Austin, TX); **2021** (virtual)

World Congress of Malacology: **2022** (Munich, Germany; presented by Dr. Jeanne Serb)

## RECENT AWARDS

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2016: NSF Doctoral Dissertation Improvement Grant, \$19,825

2016: U of Iowa Graduate College T. Anne Cleary International Dissertation Research Fellowship

2016: U of Iowa Graduate College Post-Comprehensive Research Award

2017: NSF MCB Improving Graduate Student Preparedness for Entering the Workforce Supplemental Support

2018: U of Iowa Graduate College Ballard and Seashore Dissertation Fellowship

2020: Dovetail Genomics Tree of Life Grant Award, \$15,000

## TEACHING EXPERIENCE

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### Graduate Teaching Assistant, University of Iowa, Biology Department

Diversity of Form & Function (Spring 2014, Autumn 2014)

Animal Behavior (Autumn 2015, Autumn 2017)

Evolution (Spring 2016, Spring 2017)

## COMMUNITY OUTREACH

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2013-2017 Assistant in Project Lead the Way bioinformatic activity at Solon High School, IA

2014-2019 Organizer for Iowa City Darwin Day

2015, 2018 Intern for National Center for Science Education's (NCSE) Iowa City Science Booster Club

2015-2019 Community Engagement Manager for NCSE Iowa City Science Booster Club

2016-2018 Assistant in Personal Genome Learning Center, Iowa City, IA

## ACADEMIC SERVICE

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Journal Reviewer (\* Reviewed with academic mentor)

2016 International Journal of Molecular Sciences\*

2017 Genes

2018 Nature Ecology & Evolution\*

2019 BMC Evolutionary Biology

2020 Molecular Biology & Evolution\*

2021 Genes; Biology; Integrative & Comparative Biology

2022 Evolution\*; Nature Communications; G3: Genes|Genomes|Genetics