**Sean M. Ehlman**

***Postdoctoral Researcher***, Leibniz Institute for Freshwater Ecology and Inland Fisheries, Berlin, Germany

***Guest Scientist****,*Humboldt University and SCIoI Excellence Cluster, Berlin, Germany

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**EDUCATION**

Univ. of California, Davis Animal Behavior Ph.D. 2018

Univ. of Kentucky, *summa cum laude* Biology B.S. 2011

**CURRENT APPOINTMENT**

2020-current Postdoctoral Researcher, Leibniz Institute for Freshwater Ecology and Inland Fisheries

2020-current Guest Research Scientist, Humboldt-Universität zu Berlin and SCIoI Excellence Cluster

**PREVIOUS APPOINTMENTS (RESEARCH, TRAINING, and TEACHING)**

2020 Insight Data Science Fellow, Insight Los Angeles

2018-2020 NSF Postdoctoral Research Fellow in Biology, Univ. of Minnesota

2012-2017 NSF Graduate Research Fellow, UC Davis

2015 Teaching Assistant, Introduction to Biology—Phylogenetics. Dept. of Evolution and Ecology, UC Davis

2013 Teaching Assistant, Introduction to Biology—Ecology and Evolution. Dept. of Evolution and Ecology, UC Davis

2012 Teaching Assistant, Introduction to Ecology. Dept. of Environmental Science and Policy, UC Davis

**AWARDS and HONORS**

***TOTAL: $861,250***

2023-2026 German Research Foundation Independent Research Grant ($363,000)

2022 Wallenberg Postdoctoral Fellowship selectee from SLU Umeå, *declined*

2018-2020 NSF Postdoctoral Research Fellowship in Biology ($135,000)

2018-2021 UMN Grand Challenges in Biol. Postdoc Fellowship, *declined* ($186,000)

2018 Featured Student Research Paper, *Behavioral Ecology & Sociobiology*

2017-2018 UC Davis Dissertation Year Fellowship ($42,000)

2017-2018 ARCS Research Scholarship ($11,000)

2012-2017 NSF Graduate Research Fellowship ($102,000)

2017 UC Davis ABGG Richard Coss Award for International Research ($1,000)

2017 NSF Grad Research Opportunities Worldwide (GROW) Grant ($5,000)

2016 NSF Conference Travel Award to ISBE, Exeter, UK ($1,000)

2016 Center for Population Biology, UC Davis Research Grant ($1,750)

2015 Center for Population Biology, UC Davis Research Grant ($1,500)

2015 UC Davis Jastro Shields Research Grant ($2,000)

2014 Center for Population Biology, UC Davis Research Grant ($2,000)

2014 UC Davis Jastro Shields Research Grant ($3,000)

2013 Animal Behavior Society Grant in Aid of Research ($3,000)

2012 Dept. of Environ. Sci. and Policy Conf. Travel Grant, UC Davis ($500)

2010 Gertrude R. Ribble Undergraduate Research Grant ($1,500)

**PEER-REVIEWED PUBLICATIONS** (*in press and published*)

**Ehlman SM**, Scherer U, Bierbach D, Stärk L, and Wolf M. Developmental arcs of plasticity in whole movement repertoires of a clonal fish. ***iScience***. *In press*. Preprint available on *bioarxiv*.

Scherer U, Laskowski KL, Kressler M, **Ehlman SM**, Wolf M, and Bierbach D. Predator exposure early in life shapes behavioral development and individual variation in a clonal fish. ***Scientific Reports***. *In press.* Preprint available on *bioarxiv*.

Scherer U, **Ehlman SM**, Bierbach D, Krause J, and Wolf M. 2023. Reproductive individuality of clonal fish raised in near-identical environments and its link to early-life behavioral individuality. ***Nature Communications*** 14:7652.

**Ehlman SM**, Scherer U, Bierbach D, Francisco FA, Laskowski KL, Krause J, and Wolf M. 2023. Leveraging big data to uncover the eco-evolutionary factors shaping behavioral development. ***Proceedings of the Royal Society B*** 290:20222115.

Snell-Rood EC and **Ehlman SM**. 2023*.* Developing the genotype-to-phenotype relationship in evolutionary theory: a primer of developmental features. ***Evolution & Development*** 25:393-409.

**Ehlman SM**, Scherer U, and Wolf M. 2022. Developmental feedbacks and the emergence of individuality. ***Royal Society Open Science*** 9:221189.

Pollack L, Munson A, Savoca MS, Trimmer PC, **Ehlman SM**, Gil MA, and Sih A. 2022. Enhancing the ecological realism of evolutionary mismatch theory. ***Trends in Ecology and Evolution*** 37:233-245.

Snell-Rood EC and **SM Ehlman**. 2021. The Ecological and Evolutionary Consequences of Phenotypic Plasticity. In *Phenotypic Plasticity: Consequences and Controversies*. Ed. D. Pfennig. *CRC Press*. 139-160.

**Ehlman SM**, Torresdal JD, and Fraser DF. 2020. Altered visual environment affects a tropical freshwater fish assemblage through impacts on predator-prey interactions. ***Freshwater Biology*** 65:316-324.

Miller SE, Barrow LN, **Ehlman SM**, Goodheart JA, Greiman SE, Lutz HL, Misiewicz TM, Smith SM, Tan M, Thawley CJ, Cook JA, and Light JE. 2020. Building biological collections for the 21st century and beyond. ***BioScience*** 70: 674-687.

**Ehlman SM**, Halpin R, Jones C, Munson A, Pollack L, and Sih A. 2019. Intermediate turbidity elicits the greatest anti-predator response and generates repeatable behaviour in mosquitofish. ***Animal Behaviour*** 158:101-108.

Crowley PH, Trimmer PC, Cuello WS, **Ehlman SM**, Spiegel O, and Sih A. 2019. Predicting habitat choice after rapid environmental change. ***The American Naturalist***193:619-632.

**Ehlman SM**, Trimmer PC, and Sih A. 2019. Prey responses to exotic predators: effects of old risks and new cues. ***The American Naturalist*** 193:586-587.

Chmura H, Kharouba H, Ashander J, **Ehlman SM**, Rivest E, and Yang LH. 2019. The mechanisms of phenology: the patterns and processes of phenological shifts. ***Ecological Monographs***89:e01337.

Saaristo M, Brodin T, Balshine S, Bertram MG, Brooks BW, **Ehlman SM**, McCallum ES, Sih A, Sundin J, Wong BBM, and Arnold K. 2018. Direct and indirect effects of chemical contaminants on the behaviour, ecology and evolution of wildlife. ***Proceedings of the Royal Society B*** 285:20181297.

Davis BE, Komoroske LM, Hansen MJ, Poletto JB, Miller NA, Perry E, **Ehlman SM**, Wheeler S, Sih A, Todgham AE, and Fangue NA. 2018. Juvenile rockfish show resilience to CO2-acidification and hypoxia across multiple biological scales. ***Conservation Physiology*** 6:coy038.

**Ehlman SM**, Martinez D, and Sih A. 2018. Male guppies compensate for lost time when mating in turbid water. ***Behavioral Ecology and Sociobiology*** 72:46.

Trimmer PC, **Ehlman SM**, McNamara JM, and Sih A. 2017. The erroneous signals of detection theory. ***Proceedings of the Royal Society B*** 284:20171852.

Trimmer PC, **Ehlman SM**, and Sih A. 2017. Predicting behavioural responses to rapidly-altered environments: state-dependent detection theory. ***Proceedings of the Royal Society B*** 284:20162108.

Sih A, Trimmer PC, **Ehlman SM**. 2016. A conceptual framework for understanding behavioral responses to HIREC. ***Current Opinion in Behavioral Sciences*** 12:109-114.

Crowley PH, **Ehlman SM**, Korn E, and Sih A. 2016. Dealing with stochastic environmental variation in space and time: bet-hedging by generalist, specialist, and diversified strategies. ***Theoretical Ecology*** 9:149-161*.*

**Ehlman SM**, Sandkam BA, Breden F, and Sih A. 2015. Developmental plasticity in vision and behavior may help guppies overcome increased turbidity. ***Journal of Comparative Physiology A*** 201:1125-1135.

Sih A, **Ehlman SM**, and Halpin, R. 2015. On connecting behavioral responses to HIREC to ecological outcomes: a comment on Wong and Candolin. ***Behavioral Ecology*** 26:676-677.

**Ehlman SM**, Cox JJ, and Crowley PH. 2013. Evaporative water loss, spatial distributions, and survival in white-nose-syndrome-affected little brown myotis: a model. ***Journal of Mammalogy*** 94:572-583.

**ADDITIONAL FORTHCOMING PUBLICATIONS** (*in review*)

Scherer U, **Ehlman SM**, Bierbach D, Krause J, and Wolf M. Among-individual difference in activity predict lifespan in a clonal fish. *In review*.

Scherer U, **Ehlman SM**, Bierbach D, Krause J, and Wolf M. Non-genetic inheritance of stochastic individuality in a naturally clonal fish. *In review*.

**PRESENTATIONS**

Ehlman SM, Scherer R, Bierbach D, and Wolf M. *International Society for Behavioral Ecology*

*Conf.* Melbourne, Australia, Summer 2024. Talk.

Ehlman SM. *GEOMAR Helmholtz Inst. Seminar Series*. Kiel, Germany, Fall 2023. Invited Talk.

Ehlman SM, Scherer U, and Wolf M. *International Society for Developmental Psychobiology Conf.* Utrecht, Netherlands, Summer 2023. Invited Symposium Talk.

Ehlman SM, Scherer U, and Wolf M. *International Society for Behavioral Ecology* *Conf*. Stockholm, Sweden, Summer 2022. Talk.

Ehlman SM. *IGB Leibniz Institute Seminar Series*. Berlin, Germany, Winter 2021. Invited Talk.

Ehlman SM, Munson A, and Sih A. *Animal Behavior Society Conf*. Chicago, IL, Summer 2019. Talk.

Ehlman SM. *University of California Davis Animal Behaivor Seminar Series*. Spring 2018. Talk.

Ehlman SM, Trimmer PC, and Sih A. *Gordon Research Conf: Pred/Prey Interactions*.

Ventura, CA, Winter 2018. Poster.

Ehlman SM, Martinez D, and Sih A. *Behaviour*. Estoril, Portugal, Summer 2017. Poster.

Ehlman SM, Torresdal J. *Gordon Research Conf: Pred/Prey Interactions*. Ventura, CA, Winter 2016. Poster.

Ehlman SM, Sandkam BA, Breden F, and Sih A. *Animal Behavior Society Conf*. Anchorage, AK, Summer 2015. Talk.

Ehlman SM, Sandkam BA, Breden F, and Sih A. *Society for Integrative and Comparative Biology Conf*. West Palm Beach, FL, Winter 2015. Poster.

Ehlman SM. *Workshop on Evolution in Stochastic Environments*. Trondheim, Norway, Winter 2014. Seminar Talk*.*

Ehlman SM, Trimmer PC, and Sih A*. Gordon Research Conf: Pred/Prey Interactions*. Ventura, CA, Winter 2014. Poster.

Ehlman SM, Trimmer PC, and Sih A. *Animal Behavior Society Conf*. Boulder, CO, Summer 2013. Talk.

Ehlman SM, Cox JJ, and Crowley PH. *Comparative Decision-Making Conf*. Lexington, KY, Summer 2011. Poster.

**SOCIETY AFFILIATIONS**

International Society for Behavioral Ecology, Animal Behavior Society, Society of Integrative and Comparative Biology

**ACADEMIC SERVICE**

2022-present *Committee Member,*ScIoI Excellence Cluster, Equal Opportunities

Committee, Berlin, Germany

2019 *Session leader* (Phenotypic Plasticity Symposium) and *Undergraduate*

*Poster Award Judge*, Animal Behaviour Society Conference, Chicago, IL USA

2014-2018 *Graduate Student Peer Advisor*, Animal Behavior Grad Group, UC Davis

2017 *Student Representative,* Animal Behavior Grad Group Admissions

Committee, UC Davis

2014-present *Peer Reviewer*, multiple academic journals: Proceedings of the Royal Society B, Science Advances, Oikos, Philosophical Transactions of the Royal Society, Animal Behaviour, Behavioral Ecology, eLife, Scientific Reports, Current Zoology, Ethology, Behavioral Processes, Behavioral Ecology and Sociobiology, Royal Society Open Science, Conservation Physiology, Hydrobiologia, Theoretical Ecology, *et al.*

**OUTREACH**

*Volunteer,* Biology Outreach Booth, Minnesota State Fair. 2018 and 2019.

Annually, two million people attended the Minnesota State Fair. I volunteered at the Biology Outreach Booth, which focused on showcasing the natural history of Minnesota prairie ecosystems to thousands of Fair goers.

*Editor*, The Ethogram Blog, Animal Behavior Grad Group, UC Davis. 2014-2016.

The Ethogram (www.theethogram.com) is a behavioral ecology blog aimed at lay readers. I managed posts, invited guest authors, and wrote popular science articles.

*Volunteer Mentor and Educator*, Student and Landowner Education and Watershed Stewardship (SLEWS), Center for Land-Based Learning. 2012-2018.

SLEWS is an organization that pairs landowners with high-school environmental science classes in the Sacramento area to perform restoration of the Sacramento Delta watershed. I served as a mentor and instructor during my entire graduate school career.

*Volunteer,* United States Peace Corps, Mali, West Africa. 2012.

I served as a Peace Corps Volunteer in the Education sector, teaching science pedagogy to middle school and high school teachers and helping translate science lessons from French to the local language. My service ended abruptly after a military coup and subsequent evacuation of volunteers from the country.

**MENTORSHIP**

*Mentor to Undergraduate Research Scholars and Masters Students*. 2013-present.

Throughout graduate school and my postdoc, I have mentored 12 undergraduate research scholars and two Masters students, many of which have developed independent projects on guppies, *Daphnia*, or theory under my direction. A number of these have also secured additional funding and presented at conferences. I am particularly committed to maintaining a diverse team from a variety of socioeconomic, ethnic, gender, and sexual orientation backgrounds.

**PROFESSIONAL REFERENCES**

***Prof. Andrew Sih*** (PhD advisor)

Distinguished Professor

Department of Environmental Science and Policy, University of California, Davis

Davis, CA, USA

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***Prof. Max Wolf*** (Postdoc Advisor)

Professor

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***Prof. Emilie Snell-Rood*** (Postdoc Advisor)

Associate Professor

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