

MICHAEL P. MOORE, Ph.D.

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APPOINTMENTS

2022 – Present	Assistant Professor	Department of Integrative Biology University of Colorado Denver
2019 – 2022	Biodiversity Post-Doctoral Fellow	Living Earth Collaborative Washington University in St. Louis

EDUCATION

2019	Ph.D. Biology	Case Western Reserve University
2014	M.S. Watershed Science	Murray State University
2011	B.S. Biology <i>Cum Laude</i>	Gonzaga University

PEER-REVIEWED PUBLICATIONS (32 total, 20 first author, 4 senior author)

Bold font – CU Denver Lab Member. § – equal contribution. 1 – high-school student. 2 – undergraduate or post-bac student. 3 – graduate student. 4 – post-doc. ‡ – corresponding, but not first, author.

View articles on Google Scholar: <https://scholar.google.com/citations?user=NRXkBIAAAAAAJ&hl=en&oi=sra>

- 2024 Leith NT and **Moore MP**. 2024. Heat-absorbing sexual coloration co-adapts with increased heat tolerance in dragonflies. *Frontiers in Ethology* 3: 1447647.
- 2024 **Nalley SE³** and **Moore MP**. 2024. Aggregate mating behavior of *Sympetrum* dragonflies in Colorado and Wyoming wildfire perimeters. *The Southwestern Naturalist* 69(1): 1-4.
- 2024 **Moore MP[§]**, Leith NT[§], Fowler-Finn KD, and Medley KA. 2024. Human-modified habitats imperil ornamented dragonflies less than their non-ornamented counterparts at local, regional, and continental scales. *Ecology Letters* 27(6): e14455.
- 2024 **Moore MP**, **Nalley SE³**, and **Hamadah D²**. 2024. An evolutionary innovation for mating facilitates ecological niche expansion and buffers species against climate change. *Proceedings of the National Academy of Sciences* 121(10): e2313371121

* Chosen as one of issue's featured articles – <https://www.pnas.org/doi/10.1073/iti1024121>

* Research highlighted by *Nature Climate Change* - <https://rdcu.be/dEOLQ>

* Research featured in ScienceNews, Outdoors.com, YahooNews, and Phys.org

- 2023 Stroud JT, **Moore MP**, Langerhans RB, and Losos JB. 2023. Fluctuating selection maintains distinct species phenotypes in an ecological community in the wild. *Proceedings of the National Academy of Sciences* 120(42): e2222071120.
* Research highlighted by Scientific American, Quanta Magazine, Science Daily, and Phys.org
* Selected as the Cover Story
- 2023 **Moore MP**, **Shaich J²**, and Stroud JT. 2023. Upslope migration is slower in insects that depend on metabolically demanding flight. *Nature Climate Change* 13: 1063-1066
* Research highlighted by Colorado Public Radio, Colorado Sun, KUSA Denver, the Daily Kos, the iNaturalist blog, Phys.org
- 2023 Martin RA, da Silva CRB, **Moore MP**, and Diamond SE. 2023. When will a changing climate outpace adaptive evolution? *WIREs Climate Change* 14(6): e852.
- 2023 **Moore MP** and **Khan F²**. 2023. Relatively large wings facilitate life at high elevations among Nearctic Dragonflies. *Journal of Animal Ecology* 92: 1613-1621.
- 2023 **Moore MP**. 2023. Ornamented species incur higher male mortality in the larval stage. *Biology Letters* 19: 20230108.
- 2023 Hersch K² and **Moore MP²**. 2023. Ornamentation diversified faster than eco-morphology across Nearctic dragonflies. *Biological Journal of the Linnean Society* 139(1): 70-78.
- 2022 Leith NT, Fowler-Finn KD, and **Moore MP**. 2022. Evolutionary interactions between thermal ecology and sexual selection. *Ecology Letters* 25(9): 1919-1936.
* Research highlighted by The Washington Post, Fast Company, and The Wildlife Society Newsletter
- 2021 **Moore MP**, Hersch K², Sricharoen C², Lee S², Reice C², Rice P², Kronick S², Medley KA, and Fowler-Finn KD. 2021. Sex-specific ornament evolution is a consistent feature of climatic adaptation across space and time in dragonflies. *Proceedings of the National Academy of Sciences* 118(28): e2101458118.
* Chosen as one of issue's featured articles - <https://www.pnas.org/content/118/28/eiti2821118>
* Research highlighted by *Nature Climate Change* – <https://rdcu.be/cvMaF>
* Press coverage by The Washington Post, CNN, The Guardian, The Hill, Environment & Energy News, Smithsonian Magazine, St. Louis Post-Dispatch, The Times of India, Natural History Magazine, New Scientist, Science News, and many other outlets
* Interviewed on public radio (KWMU – St. Louis) and the “Weather or Not” Podcast (WSVN – Miami)
* Adapted for K-12 classrooms by *Science Journal for Kids* - https://sciencejournalforkids.org/wp-content/uploads/2021/10/dragonfly_article.pdf
- 2021 **Moore MP**. 2021. Larval habitats impose trait-dependent limits on the direction and rate of adult evolution in dragonflies. *Biology Letters* 17(5): 20210023.
- 2021 **Moore MP** and Martin RA. 2021. Natural selection on adults has trait-dependent consequences for juvenile evolution in dragonflies. *The American Naturalist* 197(6): 677-689.

- 2021 Leith NT, Macchiano AT, **Moore MP**, and Fowler-Finn KD. 2021. Temperature impacts all behavioral interactions during insect and arachnid reproduction. *Current Opinions in Insect Science* 45: 106-114
- 2020 **Moore MP**, Pechmann JHK, and Whiteman HH. 2020. Relative size underlies alternative morph development in a salamander. *Oecologia* 193(4): 879-888.
- 2020 Lis C¹, **Moore MP**[‡], and Martin RA. 2020. Warm development temperatures induce non-adaptive plasticity in the intrasexually selected colouration of a dragonfly. *Ecological Entomology* 45: 663-670.
- 2019 **Moore MP** and Martin RA. 2019. On the evolution of carry-over effects. *Journal of Animal Ecology* 88(12): 1832-1844.
 - * Finalist for the Sidnie Manton Award – A biennial competition for the best review paper by an early career researcher in *Journal of Animal Ecology*
- 2019 **Moore MP**, Whiteman HH, and Martin RA. 2019. A mother's legacy: the strength of maternal effects in animal populations. *Ecology Letters* 22(10): 1620-1628.
- 2019 Lackey ACR, **Moore MP**, Doyle J, Gerlanc N, Hagan A, Geile M, Eden C, and Whiteman HH. 2019. Lifetime fitness, sex-specific life history, and the maintenance of a polyphenism. *The American Naturalist* 194(2): 230-245.
- 2019 Khazan ES, Verstraaten T, **Moore MP**, and Dugas MB[‡]. 2019. Nursery crowding does not influence offspring, but might influence parental, fitness in a phytotelm-breeding frog. *Behavioral Ecology and Sociobiology* 73: 33.
- 2019 **Moore MP**, Lis C¹, Gherghel I, and Martin RA. 2019. Temperature shapes the costs, benefits, and geographic diversification of sexual coloration in a dragonfly. *Ecology Letters* 22(3): 437-446.
 - * Press coverage by MSN, the Daily Kos, ScienceDaily, the iNaturalist blog, Amore a Quattro Zampe (Italian), and several other outlets
 - * CWRU Department of Biology Outstanding Paper Award – 2nd Place – 2019
 - * Highlighted as an exciting new use of iNaturalist data on the citizen-science SciStarter Podcast (~26 minute mark)
- 2018 **Moore MP**, Lis C¹, and Martin RA. 2018. Immune deployment increases larval vulnerability to predators and inhibits adult life-history traits in a dragonfly. *Journal of Evolutionary Biology* 31(9): 1365-1376.
- 2018 **Moore MP** and Martin RA. 2018. Trade-offs between larval survival and adult ornament development depend on predator regime in a dragonfly. *Oecologia* 188(1): 97-106.
- 2018 **Moore MP**, Lis C¹, and Martin RA. 2018. Larval body condition regulates predator-induced life-history variation in a dragonfly. *Ecology* 99(1): 224-230.
 - * CWRU Department of Biology Outstanding Paper Award – Honorable Mention – 2018
- 2016 **Moore MP** and Martin RA. 2016. Intrasexual selection favours an immune-correlated colour ornament in a dragonfly. *Journal of Evolutionary Biology* 29(11): 2256-2265.

- 2016 Dugas MB[§], **Moore MP**[§], Martin RA, Richards-Zawacki CL, and Sprehn CG. 2016. The pay-offs of maternal care increase as offspring develop, favouring extended provisioning in an egg-feeding frog. *Journal of Evolutionary Biology*. 29(10): 1977-1985.
- 2016 **Moore MP** and Whiteman HH. 2016. Natal philopatry varies with larval condition in salamanders. *Behavioral Ecology and Sociobiology*. 70(8): 1247-1255.
- 2016 **Moore MP**, Riesch R, and Martin RA. 2016. The predictability and magnitude of life-history divergence to ecological agents of selection: a meta-analysis in livebearing fishes. *Ecology Letters* 19(4): 435-442.
- * CWRU Department of Biology Outstanding Paper Award – 1st Place – 2016
- 2015 **Moore MP**, Landberg T, and Whiteman HH. 2015. Maternal investment mediates offspring life history variation with context-dependent fitness consequences. *Ecology* 96(9): 2499-2509.
- * Research highlighted at Phys.org
- 2015 Dugas MB, **Moore MP**, Wamelink CN, Richards-Zawacki CL, and Martin RA. 2015. An experimental test for age-related improvements in reproductive performance in a frog that cares for its young. *The Science of Nature* 102: 48.
- 2012 **Moore MP**, Burt CR, Whitney TD, Hastings SA, and Chang GC[‡]. 2012. Does social feeding improve larval survival of the two-spotted lady beetle, *Adalia bipunctata*? *Journal of Insect Science* 12: 101.

MANUSCRIPTS IN REVIEW

(available upon request)

Nalley SE³ and **Moore MP**. Mating characters underlie the risk of local extinction to global warming and wildfires in Nearctic dragonflies. *In Revision*.

Moore MP. Metamorphosis unyokes larval and adult evolution for some traits more than others. *In Review*.

Moore MP and Cushing PE. The effects of elevation on spider species diversity and distribution in the Rocky Mountains. *In Review*.

Moore MP, **Young MR**³, **Nguyen B**², **McCain SC**⁴, and **Pierce AK**⁴. Hypoxia extinguishes the competition for mates at high elevations. *In Review*.

OTHER PUBLICATIONS

- 2023 **Moore MP** and Stroud JT. 2023. Climate change is already forcing lizards, insects, and other species to evolve—and most can't keep up. *The Conversation*.
<https://theconversation.com/climate-change-is-already-forcing-lizards-insects-and-other-species-to-evolve-and-most-cant-keep-up-215222>

* re-published in YahooNews, Seattle Post-Intelligencer, and Idaho Press

- 2021 **Moore MP**, Hersch K, Sricharoen C, Lee S, Reice C, Rice P, Kronick S, Medley KA, and Fowler-Finn KD. 2021. How will dragonflies adapt to a warmer Earth? *Environmental Science Journal for Teens*. https://sciencejournalforkids.org/wp-content/uploads/2021/10/dragonfly_article.pdf
- 2021 **Moore MP**. 2021. Human activity imperils one of the Earth's great survivalists: dragonflies. *The Hill (Opinion)*. <https://thehill.com/opinion/energy-environment/562526-human-activity-imperils-one-of-the-earths-great-survivalists>
- 2020 **Moore MP**. 2020. There are no second acts in the lives of animals. *Animal Ecology in Focus*. <https://animalecologyinfocus.com/2020/04/17/there-are-no-second-acts-in-animal-life-cycles/>
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GRANTS

In Review

- 2024 USDA AFRI – Pest and Beneficial Species (total \$298,323)
Title: SEED GRANT: Climatic effects on the migration and reproduction of the army cutworm (*Euxoa auxiliaris*)
PI: Award \$298,323 to MPM
- 2025 NSF IOS – Behavioral Processes (total \$658,878)
Title: Extreme events and sexual selection: the impact of wildfires on territorial behavior and male-male competition in an ornamented insect
PI: Award \$658,878 to MPM

Awarded

Total = \$342,119

- 2023 CU Denver ORS All-Discipline Seed Grant (\$9,372)
- 2019-2022 Living Earth Collaborative – Biodiversity Post-Doctoral Fellowship (salary & research budget \$183,000)
- 2019-2021 University of Arizona – G.G. Simpson Post-Doctoral Fellowship (salary & research budget \$105,318; *Offer Declined*)
- 2018 Oglebay Grant Award (\$1,500)
- 2017-2018 GAANN Fellowship (\$22,000)
- 2017 Theodore Roosevelt Memorial Fund Award (\$2,000)
- 2017 Oglebay Grant Award (\$1,429)
- 2014 Watershed Research Grant (\$1,000)
- 2013 Watershed Research Grant (\$1,200)
- 2012-2014 Murray State University Innovation Research Assistantship (\$15,300)

AWARDS & HONORS

2020	Sidnie Manton Award Finalist from <i>Journal of Animal Ecology</i>
2019	CWRU Department of Biology Outstanding Paper Award – 2 nd Place
2018	CWRU Department of Biology Outstanding Paper Award – Honorable Mention
2017	Joanne Westin Distinguished Graduate Student Teaching Award
2016	CWRU Department of Biology Outstanding Paper Award – 1 st Place
2015	Murray State University Libraries #RacerScholars of the Week (Oct. 6)

ADVISING AND TEACHING

Graduate Students

2024-Present	Martha Young	University of Colorado Denver
	<i>MS Thesis Topic: Reproduction and life cycle variation on a changing planet</i>	
2023-Present	Sarah Nalley	University of Colorado Denver
	<i>PhD Thesis Topic: The physiological impact of wildfires on mating dynamics</i>	

Post-Doctoral Research Associates

2024-Present	Dr. Allison Pierce	University of Colorado Denver
	<i>Topic: Metabolic and life-history adaptations to high elevations among flying insects</i>	
2023-2024	Dr. Shel McCain	University of Colorado Denver
	<i>Topic: Aerobic responses to high-elevation life in dragonflies</i>	
	<i>Current Position: Post-doctoral research associate at National Jewish Health, Denver, CO</i>	

Graduate Thesis Committees

2024-Present	Karina Li	University of Colorado Denver
	<i>MS Thesis Topic: Seasonal patterns of seed dispersal of whitebark pine by nutcrackers</i>	
2023-Present	Shantanu Joshi	University of Arkansas
	<i>PhD Thesis Topic: The ecological drivers of sexual selection and conflict in damselflies</i>	
2023-Present	Casey Weissburg	University of Colorado Denver
	<i>PhD Thesis Topic: The migratory ecology of mountain plovers</i>	
2023-Present	My-Lan Le	University of Colorado Denver
	<i>MS Thesis Topic: Ecological drivers of population size of a rare alpine plant</i>	
2023-Present	Ali Alghamdi	University of Colorado Denver
	<i>PhD Thesis Topic: Forest restoration in arid environments</i>	
2022-Present	Audrey Spencer	University of Colorado Denver
	<i>PhD Thesis Topic: Evolution and biogeography of Rosaceae shrubs</i>	

2022-Present	Alex Moss	University of Colorado Denver
	<i>PhD Thesis Topic: Behavioral ecology of Pavement Ants</i>	
2022-Present	Comonla Acakpo	University of Colorado Denver
	<i>PhD Thesis Topic: Biomechanical constraints on sexual signals in stalk-eyed flies</i>	
2023-Present	Francis Anaya	University of Colorado Denver
	<i>MS Thesis Topic: Post-wildfire forest dynamics at high elevations</i>	
2023-2024	Goran Shikak	University of Colorado Denver
	<i>MS Thesis Topic: Diversification of Chihuahan Solfugidae</i>	
2022-2024	Michelle Levin-Deprenger	University of Colorado Denver
	<i>PhD Thesis Topic: Life-history and restoration of rare plants</i>	
2023-2024	Jasmine Vidrio	University of Colorado Denver
	<i>MS Thesis Topic: Plasticity & thermal stress in Drosophila</i>	
2022-2024	Erin Estes	Illinois State University
	<i>Masters Thesis Topic: Signaling & resource allocation within bird nests</i>	
2020-2024	Karissa Coffield	Murray State University
	<i>Masters Thesis Topic: Adaptive plasticity of coloration in response to environmental change</i>	

Undergraduate & High-School Student Advisees

(1 – high-school student; 2 – undergraduate student)

2024-Present	Serene Park ¹	Cherry Creek High School
	<i>Project: Physiological tolerances of Noctuidae across an elevation gradient</i>	
2024	Sayed Housini ²	University of Colorado Denver
	<i>Project: Morphological variation across elevation gradients in Colorado Dragonflies</i>	
2024	Madina Mangliyeva ²	University of Colorado Denver
	<i>Project: Morphological variation across elevation gradients in Colorado Dragonflies</i>	
2023	Rafael Rotenbakh ²	University of Colorado Denver
	<i>Project: Behavioral thermoregulation in the aftermath of a wildfire</i>	
2023	Alison Kraskovsky ²	University of Colorado Denver
	<i>Project: Sex differences in the physiological adaptations of dragonflies</i>	
2023	Berenice Nguyen ²	University of Colorado Denver
	<i>Project: Morphological variation across elevation gradients in Colorado Dragonflies</i>	
2023	Jami Helmig ²	University of Colorado Denver
	<i>Project: Behavioral thermoregulation in the aftermath of a wildfire</i>	
2023	Colette Bennet ¹	Chatfield High School
	<i>Project: Using citizen science to study phenotypic shifts following a wildfire</i>	
2022-2024	Dalal Hamadah ²	University of Colorado Denver
	<i>Project: Does desiccation drive the origins & maintenance of a sexual structure?</i>	
2022-2023	Faiza Khan ²	University of Colorado Denver
	<i>Project: Morphological constraints of high elevation life in dragonflies</i>	

2022-2023	Jesse Shaich ² <i>Project: Aerobic constraints on upslope migration in insects</i>	University of Colorado Denver
2019-2021	Kaitlyn Hersch ² <i>Honor's Thesis: Ornaments evolved faster than eco-morphological traits among dragonflies</i> <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2021	Paul Rice ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2020-2021	Saanya Sharma ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2021	Chanont Srirachoen ² <i>Project: Using citizen science to unravel the origins of a reproductive innovation</i> <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2021	Caitlin Reice ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2021	Sarah Lee ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2021	Sophie Kronick ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2020	Isabelle Ciaverelli ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019-2020	Francis Serrano ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2019	Jonah Bernstein ² <i>Project: Using citizen science to study climatic adaptation in dragonflies</i>	Washington University in St. Louis
2016-2019	Cassandra Lis ¹ <i>Senior Thesis: Rearing temperature and sexually selected color in dragonflies</i> <i>Project: Thermal effects of sexually selected color in dragonflies</i> <i>Project: Fitness costs of immune deployment in dragonflies</i> <i>Project: Predator-induced life-history variation in dragonflies</i> * watch Cassandra on the local news: www.wkyc.com/video/home/cassandra-lis-farah-sayed-hathaway-browns-science-research-engineering-program-srep-101118/95-8278838	Hathaway Brown School
2018	Christian Precht ² <i>Project: Predator-mediated selection on a male weapon in fairy shrimp</i>	Case Western Reserve University
2018	Kayla Harris ² <i>Honor's Thesis: Carotenoid-mediated maternal effects in fire-bellied toads</i>	Case Western Reserve University
2016	Andrew Wiecek ² <i>Project: Adaptive decoupling and evolutionary trade-offs in dragonflies</i>	Case Western Reserve University
2016	Lindsey Robinson ² <i>Project: Ontogenetic conflict over sexually selected coloration in dragonflies</i>	Case Western Reserve University
2015	Jared Larson ² <i>Project: Fitness costs of immune deployment in dragonflies</i>	Case Western Reserve University
2012	Katie Mount ²	Murray State University

Project: Maternal effects and adult life-history variation in salamanders

2012 Emily Clouse² Murray State University
Project: Maternal effects and adult life-history variation in salamanders

Instructor of Record

2025	Human Physiology	University of Colorado Denver
2024	Human Physiology	University of Colorado Denver
2024	Biological Research Workshop	University of Colorado Denver
2023	Human Physiology	University of Colorado Denver
2023	Synthetic Methods in Global Change Biology	University of Colorado Denver
2023	Integrative Biology Seminar	University of Colorado Denver
2022	Human Physiology	University of Colorado Denver
2022	Integrative Biology Seminar	University of Colorado Denver

Graduate Teaching

2018	Quantitative Biology	Case Western Reserve University
2017	Ecophysiology of Global Change	Case Western Reserve University
2017	Quantitative Biology	Case Western Reserve University
2016	Ecophysiology of Global Change	Case Western Reserve University
2016	Quantitative Biology	Case Western Reserve University
2015	Genes, Ecology, and Evolution	Case Western Reserve University
2014	Genes, Ecology, and Evolution	Case Western Reserve University
2012	Ecology	Murray State University

Guest Lectures

2024	“Mating & sexual selection in changing world”	Western Colorado University
2021	“Adaptation in a changing world”	Saint Louis University
2020	“Sexual Selection”	Saint Louis University
2020	“Mating Systems”	Saint Louis University
2020	“Evolution of reproductive modes”	Saint Louis University
2019	“Sexual vs Natural Selection”	Saint Louis University
2018	“Sexual Selection”	Case Western Reserve University
2018	“Multi-level models”	Case Western Reserve University

2017	“Writing an introduction and discussion”	Case Western Reserve University
2017	“Multi-level models”	Case Western Reserve University
2017	“Evolutionary responses to global change”	Case Western Reserve University
2013	“Reptiles and amphibians”	Murray State University
2012	“Amphibian life-history variation”	Murray State University

Other Teaching Experience

2007-2011	Substitute Teacher	Weare Middle School, Weare, NH 03281
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REPRESENTATIVE MEDIA COVERAGE

(Affiliation at time of piece: 1 – Murray State; 2 – Case Western Reserve; 3 – WashU; 4 – CU Denver)

2024	Outdoors ⁴ – Article https://outdoors.com/mating-in-extreme-weather-could-be-key-to-species-survival/
2024	ScienceNews ⁴ – Article https://www.sciencenews.org/article/male-dragonflies-wax-coats-warming-climate
2023	KUSA Denver ⁴ – TV interview https://www.9news.com/video/news/state/colorado-climate/warming-climate-threatens-flying-insects/73-47f1a62c-b8b6-4fb0-ac22-dbd7495a596a
2023	Colorado Sun ⁴ – Article https://coloradosun.com/2023/09/28/cu-denver-bug-extinction-study/
2023	Colorado Public Radio ⁴ – Article https://www.cpr.org/2023/09/26/flying-insects-migration-challenges-cooler-environments/
2023	NPR– Radio Interview ⁴ – <i>Living on Earth</i> https://www.loe.org/shows/segments.html?programID=23-P13-00009&segmentID=7
2022	KCBS San Francisco – Radio Interview ⁴ – <i>Holly Quan Show</i> https://www.audacy.com/kcbsradio/podcasts/kcbs-on-demand-20757/the-climate-is-changing-mating-patterns-in-animals-1540001425
2022	Washington Post – Article ⁴ https://www.washingtonpost.com/climate-environment/2022/11/28/animal-people-sex-climate-change/
2022	Long Now Foundation – Article ⁴ https://longnow.org/ideas/peering-into-the-invisible-present/
2022	Columbia Missourian – Article ⁴ https://www.columbiamissourian.com/news/local/dragonflies-return-to-columbia-as-a-part-of-annual-migration/article_10ea53ba-385c-11ed-9fa7-ff5448fa6c4e.html
2021	CNN – Article ³ https://us.cnn.com/2021/07/06/us/dragonfly-wings-climate-change/index.html

- 2021 The Guardian – Article³
<https://www.theguardian.com/environment/2021/jul/06/climate-crisis-causing-male-dragonflies-to-lose-wing-bling-study-finds>
- 2021 St. Louis Public Radio - Live Interview³ – *St. Louis on the Air*
<https://news.stlpublicradio.org/show/st-louis-on-the-air/2021-07-08/thursday-as-male-dragonflies-adapt-to-climate-change-females-might-be-less-attracted>
- 2021 The Times of India – Article³
<https://www.indiatimes.com/technology/science-and-future/climate-change-dragonfly-shine-loss-544430.html>
- 2021 St. Louis Post-Dispatch – Article³
https://www.stltoday.com/news/local/metro/dragonflies-lose-wing-markings-in-warmer-climates-washu-and-slu-study-shows/article_487b4436-96da-5577-b502-e940018c77b3.html
- 2021 Smithsonian Magazine – Article³
<https://www.smithsonianmag.com/smart-news/warmer-climate-may-cause-male-dragonflies-lose-their-patchy-wings-180978141/>
- 2021 Science News – Article³
<https://www.sciencenews.org/article/climate-change-dragonfly-wing-spots-biology>
- 2021 New Scientist – Article³
<https://www.newscientist.com/article/2283184-male-dragonflies-may-become-less-colourful-as-the-climate-warms/>
- 2021 The Wildlife Society – Article³
<https://wildlife.org/warmer-weather-means-duller-dragonflies/>
- 2019 Discover Magazine – Podcast² (highlighted at 26 min mark)
<https://blog.scistarter.com/2019/10/explore-biodiversity-with-inaturalist-and-the-appalachian-mountain-club/>
- 2019 iNaturalist blog – Article²
<https://www.inaturalist.org/blog/22029-inat-photos-used-to-study-correlation-between-dragonfly-wing-coloration-and-temperature>
- 2019 Daily Kos – Article²
<https://www.dailykos.com/stories/2019/3/2/1838754/-Daily-Bucket-For-blue-dasher-dragonflies-every-picture-tells-a-story-and-stories-become-science>
- 2019 Amore a quattro zampe – Article² (Italian)
<https://www.amoreaquattrozampe.it/news/animali-cambiano-colore-cambiamenti-climatici/37025/>
- 2015 Phys.org – Article¹
<https://phys.org/news/2015-10-smaller-offspring-competitive-environments.html>
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KEYNOTE ADDRESSES, INVITED SEMINARS, & PRESENTATIONS

(‡ -denotes upcoming seminar or presentation)

Keynote Addresses & Invited Panel Discussions

- 2021 American Philosophical Society Invited Panelist
“*The promise of citizen science*”
* Watch: <https://youtu.be/NEf3nAqXMxw>
- 2020 Hefner Museum of Natural History 46th Annual Lecture
“*How your iNaturalist observations are supercharging evolutionary biology*”
* Flyer: <https://www.miamioh.edu/cas/about/news/2020/10/hefner-lecture.html>
* Watch: https://youtu.be/9_jjU4HITik
- 2019 Ohio Odonate Conference Keynote Address
“*Too hot to trot? Climate & color adaptation in dragonflies*”
* Flyer: <https://u.osu.edu/ohiodonatasurvey/2019/02/>

Invited Seminars

- 2024 University of Colorado – Mountain Research Station
- 2024 University of California – Davis
- 2023 University of Denver
- 2023 University of Colorado – Colorado Springs
- 2023 University of Mississippi
- 2022 Southern Illinois University – Edwardsville
- 2022 University of Colorado – Denver
- 2022 George Washington University
- 2022 University of California – Santa Cruz
- 2022 Texas A&M University
- 2022 University of Illinois – Urbana-Champaign
- 2022 University of Dayton
- 2021 Towson University
- 2021 Oakland University
- 2021 Eawag
- 2021 University of North Carolina – Chapel Hill
- 2021 Eastern Michigan University
- 2020 Miami (OH) University
- 2020 Murray State University
- 2020 Tyson Research Center
* watch replay here: <https://youtu.be/nH5MfjPgIr4>

2019	Saint Louis University
2019	Washington University in St. Louis
2019	John Carroll University
2018	Case Western Reserve University
2018	University of California – Davis

Research Conferences

2025	Society for Integrative and Comparative Biology	Oral Presentation
2024	Society for Integrative and Comparative Biology	Oral Presentation
2022	Guild of Rocky Mountain Ecologists & Evolutionary Biologists	Poster Presentation
2022	Society for the Study of Evolution	Oral Presentation
2022	Society for Integrative and Comparative Biology	Oral Presentation
2022	Society for Integrative and Comparative Biology	Poster Presentation
2019	Society for the Study of Evolution	Oral Presentation
2019	Society for the Study of Evolution	Poster Presentation
2018	American Society of Naturalists	Oral Presentation
2017	Society of Integrative & Comparative Biology	Oral Presentation
2015	Ecological Society of America	Oral Presentation
2014	Ecological Society of America	Oral Presentation
2014	Southeastern Ecology & Evolution Conference	Oral Presentation
2013	Ecological Society of America	Poster Presentation
2013	Society for Study of Evolution	Poster Presentation
2013	Midwestern Ecology & Evolution Conference	Oral Presentation
2012	Southeastern Population Ecology & Evolutionary Genetics	Oral Presentation
2010	Murdock College Science Research Conference	Poster Presentation

Institutional Symposia

2015	CWRU Biology Graduate Research Symposium	Oral Presentation
2014	Watershed Science Research Symposium	Oral Presentation
2013	Watershed Science Research Symposium	Oral Presentation

SERVICE & OUTREACH

Editorial Boards

2025-Present	Associate Editor	Journal of Evolutionary Biology
2023-Present	Associate Editor	Functional Ecology
2023-2025	Associate Guest Editor for Special Issue	Frontiers in Ethology

Institutional Service

2024-Present	Committee – College Academic Standards	University of Colorado Denver
2024-Present	Committee – Departmental Merit Review Committee	University of Colorado Denver
2022-Present	Committee – Departmental Graduate Advisory	University of Colorado Denver
2020-2022	Organizer – Graduate Student Research Grant	Washington University in St. Louis
2021	Search Committee – LEC Post-doctoral Fellowship	Washington University in St. Louis
2021	Organizer – Panel on Demystifying Grad School	Tyson Research Center
2020-2021	Organizer – EEPB Seminar Series * Watch Fall 2020 here: https://www.youtube.com/playlist?list=PL1qK1_d1g_fvPuUjUo_UzP-Ffh_OWSTF * Watch Spring 2021 here: https://www.youtube.com/playlist?list=PL1qK1_d1g_fsPTgVbdz7PnJ30OZGjh888	Washington University in St. Louis
2021	Co-organizer – Panel on Environmental Justice * Watch here: https://youtu.be/820MDO8iHoM	Washington University in St. Louis
2020-2021	Organizer – LEC Summer Activities	Washington University in St. Louis
2020	Organizer – Biodiversity Summer Seminar Series * Watch here: https://www.youtube.com/playlist?list=PL1qK1_d1g_fuWvNVI4D9zjiuEgX7WTCm0	Washington University in St. Louis
2019	Search Committee – LEC Post-doctoral Fellowship	Washington University in St. Louis
2017	Organizer – Graduate Research Symposium	Case Western Reserve University
2017	Organizer – Graduate Student-Invited Speaker	Case Western Reserve University
2012-2014	Organizer – Graduate Student Journal Club	Murray State University

Outreach

2023	Presenter – Migratory Bird Event	Waneka Lake
2021	Author – Adapted article for K-12 classrooms * View here: https://sciencejournalforkids.org/wp-content/uploads/2021/10/dragonfly_article.pdf	<i>Science Journal for Kids</i>
2021	Visiting Professional Presentation	Tyson Research Center
2020	Panelist – Career Panel	Tyson Research Center
2020	Presenter – Lunch & Learn Discussion	Tyson Research Center
2020	Panelist – Career Panel	Tyson Research Center
2019	Presenter – STEAM Night	Bristol Elementary School
2017	Exhibitor – Think and Drink with the Extinct	Cleveland Museum of Natural History
2014	Presenter – Herpetological Society	Murray State University
2013	Presenter – AP Biology Trip	Hancock Biological Station
2013	Presenter – 5 th Grade Science	Weare, NH Middle School
2012	Presenter – 5 th Grade Science	Weare, NH Middle School

OTHER PROFESSIONAL ACTIVITIES

Working Groups

2015 “Costs of phenotypic plasticity and adaptation to novel environments”. National Evolutionary Synthesis Center. Feb. 22-24.

Workshops

2023-2024 “Faculty Grants Academy”. University of Colorado Denver Office of Research Services. 2022-2023 Academic Year.

2020 “Understanding and Analyzing Systematic Racism”. Crossroads Antiracism Organizing & Training. St. Louis, MO USA. Feb. 26-28.

2019 “Get ahead of the game: writing effective proposals”. Dr. Saran Twombly, NSF DEB program director. Saint Louis University. Dec. 13.

Ad Hoc Manuscript Referee

Science, Proceedings of the National Academy of Sciences, Nature Climate Change, Nature Ecology & Evolution, Science Advances, Ecology Letters, Proceedings of the Royal Society of London B: Biological Sciences, The American Naturalist, Functional Ecology, Evolution Letters, Biology Letters, Evolution, Heredity, Evolutionary Applications, Journal of Animal Ecology, Philosophical

Transactions of the Royal Society B: Biological Sciences, Journal of Experimental Zoology-Part A, Ecography, Oikos, Oecologia, Evolutionary Ecology, Ecological Entomology, Evolutionary Journal of the Linnean Society, Current Research in Insect Science, Ethology, Journal of Herpetology, Écoscience, International Journal of Odonatology, Amphibia-Reptilia, Insect Science, Ecosphere, Ecology & Evolution, BMC Ecology and Evolution, Royal Society Open Science, PeerJ, PLoS One

Ad Hoc Grant Referee

NSF DEB