Chloe E. Moore V., PhD

Pleasanton, CA • chloe9mo@gmail.com • chloe9moo.github.io • (404) 245 5902

EDUCATION

Virginia Polytechnic Institute and State University 2018 – 2023
PhD, Biological Sciences
Interfaces of Global Change Fellow

University of Georgia 2012 – 2015
Bachelor of Science in Forest Resources (*Cum Laude*), Wildlife Science Area of Emphasis
Spanish Minor

PROFESSIONAL APPOINTMENTS

Postdoctoral Fellow, Arkansas Cooperative Fish & Wildlife Research Unit, University of Arkansas, *Fayetteville*, AR (*remote*) 2023 – *present*

Laboratory Manager, Virginia Tech**,** *Blacksburg*, VA 2017 – 2018

PUBLICATIONS

[U] denotes undergraduate mentee; ^ denotes forthcoming publication

Moore, C.E. & M. C. Mims. (2024). Sampling through space and time: multi-year analysis reveals dynamic population genetic patterns for an amphibian metapopulation. *Conservation Genetics.* doi:10.1007/s10592-024-01602-0

DuBose, T.P., C. Catalan, **C.E. Moore**, V.R. Farallo, A.L. Benson, J. Dade, W.A. Hopkins, & M.C. Mims. (2024). Thermal traits of Anurans Database for the Southeastern United States (TRAD): A database of thermal trait values for 40 anuran species. *Ichthyology & Herpetology*, 112(1):21-30. doi:10.1643/h2022102

DuBose, T.P., **C.E. Moore**, S. Silknetter, A.L. Benson, T. Alexander[U], G. O'Malley, & M.C. Mims. (2023). Mismatch between conservation status and climate change sensitivity leaves some anurans in the United States unprotected. *Biological Conservation*, 277:109866. doi:10.1016/j.biocon.2022.109866

Gendreau, K.L., V.L. Buxton, **C.E. Moore**, & M.C. Mims. (2021). Temperature loggers capture intraregional variation of inundation timing for intermittent ponds. *Water Resources Research,* 57:e2021WR029958. doi:10.1029/2021WR029958

Moore, C.E., J.S. Helmann[U], Y. Chen[U], S.M. St. Amour[U], M. Hallmark, L.E. Hughes[U], N. Wax[U], & M.C. Mims. (2021). Anuran Traits of the United States (ATraiU): A database for anuran traits-based conservation, management, and research. *Ecology*, 102(3):e03261. doi:10.1002/ecy.3261

Lakoba, V.T., L.L. Wind, S.E. DeVilbiss, M.E. Lofton, K.A. Bretz, A.R. Weinheimer, **C.E. Moore**, C. Baciocco, E.R. Hotchkiss, & W.C. Hession. (2021). Salt dilution and flushing dynamics of an impaired agricultural-urban stream. *ACS ES&T Water*, 1(2):407-416. doi:10.1021/acsestwater.0c00160

Mims, M.C., **C.E. Moore**, & E.J. Shadle. (2020). Threats to aquatic taxa in an arid landscape: knowledge gaps and areas of understanding for amphibians of the American Southwest. *WIREs Water*, 7:e1449. doi:10.1002/wat2.1449

Peterman, W.E., K.J. Winiarski, **C.E. Moore**, C. da Silva Carvalho, A.L. Gilbert, & S.F. Spear. (2019). A comparison of

popular approaches used to optimize landscape resistance surfaces. *Landscape Ecology,* 34:2197-2208. doi:10.1007/s10980-019-00870-3

Unger, S., L. Williams, J. Groves, S. Spear, **C.E. Moore**, & C. Lawson. (2016). Cryptobranchus alleganiensis alleganiensis (eastern hellbender) unusual mortality. Herpetological Review, 47(4).

GRANTS, SCHOLARSHIPS, & AWARDS

Virginia Tech Biological Sciences Nominee for College of Science Outstanding Doctoral Student	2023
Virginia Tech Biological Sciences Graduate School Doctoral Assistantship Fellowship (~$11,000)	Spring 2023
Virginia Tech Biological Sciences John Palmer Memorial Scholarship ($1,275)	2022 – 2023
Society for Freshwater Science General Endowment Award ($1,000)	2022
Virginia Tech Graduate Student Association Travel Fund ($180; $500)	2019; 2022
Virginia Tech Interfaces of Global Change, Global Change Fellowship ($40,000)	2021 – 2022
Virginia Tech Biological Sciences Robert & Marion Patterson Scholarship ($800)	2021 – 2022
Appleton-Whittell Research Ranch's Apacheria Fellowship ($500)	2021
2nd Place Flash Talk; Virginia Tech Graduate Student Association Research Symposium ($600)	2021
Honorable Mention for National Science Foundation Graduate Research Fellowship	2018; 2020
3rd Place Flash Talk; Virginia Tech Graduate Student Association Research Symposium ($400)	2020
Virginia Herpetological Society Grant in Aid of Research ($500)	2020
Zell Miller Scholarship (~$40,000 over 4 years)	2012 – 2015

SELECTED SCIENTIFIC PRESENTATIONS

** denotes primary presenter; [U] denotes undergraduate mentee*

Moore, C.E.*, & D.D. Magoulick. (2024). *Poster.* Taxonomic and functional assemblage turnover thresholds in response to hydrologic alteration and temperature across flow regimes. Society for Freshwater Science, Phil., PN.

Moore, C.E.*, & M.C. Mims. (2022). *Oral.* Redundant or complementary? Identifying patterns of multifaceted anuran biodiversity in Virginia, USA. North American Congress for Conservation Biology, Reno, NV.

Moore, C.E.*, & M.C. Mims. (2022). *Oral.* Investigating the effects of temporal scale on landscape genetic inference in a dryland amphibian metapopulation. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

- *Co-chair for Symposium Session: Assessing and comparing climate change vulnerability of freshwater organisms*

Mims, M.C.*, **C.E. Moore***, T.P. DuBose*, S. Silknetter*, & A. L. Benson. (2022). *Oral*. The power, potential, and pitfalls of opportunistic data for vulnerability assessments. United States Geological Survey Science Analytics and Synthesis Group, Virtual.

Moore, C.E.*, Alexander, T.M.[U], & M.C. Mims. (2021). *Poster.* Redundant or complementary? Identifying patterns of multifaceted anuran biodiversity in the US. Society for Freshwater Science, Virtual.

Alexander, T.M.*[U], **C.E. Moore**, & M.C. Mims. (2021). *Oral.* Does big data bring opportunity, bias, or both for conservation? Exploring open access species occurrence data. Dennis Dean Undergraduate Research and Creative Scholarship Conference, Virtual.

Moore, C.E.*, & M.C. Mims. (2020). *Oral 5-min Flash Talk.* Does commonness confer connectivity? A genomics case study of a backyard frog. Virginia Tech Graduate Student Association Research Symposium, Virtual.

Moore, C.E.*, E.J. Shadle, & M.C. Mms. (2020). *Poster*. Threats to aquatic taxa in an arid landscape: Knowledge gaps and areas of understanding for amphibians of the American Southwest. Society for Freshwater Science, Madison, WI. *Accepted abstract, conference canceled due to 2020 coronavirus pandemic*

Moore, C.E.*, J. Helmann[U], Y. Chen[U], S. St. Amour[U], L. Hughes[U], N. Wax[U], & M.C. Mims. (2019). *Oral.* Anuran Traits of the United States (ATraiU) Database – A multi-use tool for traits-based conservation, management, and research. Society for Freshwater Science, Salt Lake City, UT.

Moore, C.E.*, J. Helmann[U], Y. Chen[U], S. St. Amour[U], L. Hughes[U], N. Wax[U], & M.C. Mims. (2019). *Oral.* Anuran Traits of the United States (ATraiU): A comprehensive traits database for basic and applied research. Southeastern Partners in Amphibian and Reptile Conservation, Black Mountain, NC.

Moore, C. E.*, Y. Chen[U], & M.C. Mims. (2018). *Poster*. Anuran traits across the United States: Building a comprehensive trait database for basic and applied research. Southeastern Partners in Amphibian and Reptile Conservation, Helen, GA.

Moore, C. E. (2016). *Oral*. The effects of land cover and water quality on hellbender (*Cryptobranchus alleganiensis*) presence as detected using environmental DNA. Coweeta LTER Symposium, Otto, NC.

Moore, C. E. (2016). *Poster & Oral*. The effect of meteorological variation on eastern box turtle (*Terrepene carolina*) movements. Science Undergraduate Laboratory Internship Research Symposium, Brookhaven National Lab, NY.

Moore, C. E. (2015). *Oral*. The effects of land cover and water quality on hellbender (*Cryptobranchus alleganiensis*) presence as detected using environmental DNA. University of Georgia Senior Thesis Presentation, Athens, GA.

RESEARCH EXPERIENCE

Postdoctoral Research, Arkansas Cooperative Fish & Wildlife Research Unit 2023 – *present*
Advisor: Dr. Dan Magoulick

Use machine learning algorithms to understand and predict responses of macroinvertebrate and fish assemblages to hydrologic alteration in the Interior Highlands region of the central US within an environmental flows framework.

Graduate Research, Virginia Tech, Department of Biological Sciences 2018 – 2023
Advisor: Dr. Meryl C. Mims

From genes to species: Characterizing spatial and temporal variation in multidimensional frog and toad biodiversity

Evaluation of climate vulnerability for sensitive fish species across the Pacific Northwest 2021 – *present*
Co-PI: Dr. Kristin Jaeger & Dr. Meryl C. Mims

Collaborative project within the USGS Northwest Climate Adaptation Science Center coupling community science occurrence data, state agency fish survey data, climate data, and streamflow predictions to assess PNW fish species' vulnerability using the RCS index and species distribution models.

Anthropogenic freshwater salinization and flushing dynamics 2019 – 2020

Multidisciplinary collaborative project of Interfaces of Global Change fellows investigating how transport dynamics reflect anthropogenic sources of salt in a mixed land-use stream in Blacksburg, VA.

Evaluating Resistance Surface Optimization Methods for Landscape Genetics 2018 – 2019
PI: Dr. William Peterman

Collaborative effort to compare three approaches assigning resistance values to landscapes in resistance analyses.

Valles Caldera National Preserve, Biological and Entomology Intern Jun 2017 – Aug 2017

Monitored invasive invertebrate abundance, fish population health, and elk reproductive health.

St. Mark's National Wildlife Refuge, Carney Biological Sciences Intern Jan 2017 – Apr 2017

Performed fieldwork and monitoring for endangered, threatened, and conservation concern species including frosted flatwood salamander (*Ambystoma cingulatum*), red-cockaded woodpeckers (*Leuconotopicus borealis*), and red wolf (*Canis rufus*) in addition to general St. Mark's and St. Vincent NWR population assessments.

The Orianne Society, Hellbender Conservation Research Technician Jun – Sep 2016

Conducted hellbender (*Cryptobranchus alleganiensis*) population genetic analyses using environmental DNA and worked with state wildlife resource managers and universities to conduct larval stream snorkel surveys to assess population trends across the species' range in NC and GA.

Brookhaven National Laboratory, Science Undergraduate Laboratory Internship Jan – Apr 2016
Advisor: Jennifer Higbie

Final project: Examined the role of meteorological variation on eastern box turtles (*Terrepene carolina*) movement using 10 years of radio telemetry and climate data. Also worked with a team to monitor lab operational effects on local environmental systems, e.g., salamander surveys, turtle telemetry, frog call surveys, small mammal and mesocarnivore trapping, bird banding, and deer surveys.

Undergraduate Research, Univ. of Georgia, Warnell School of Forestry and Natural Resources 2015
Advisors: Dr. Stephen Spear & Dr. John Maerz

Undergraduate senior thesis: Investigated the effects of land cover and water quality on hellbender (*Cryptobranchus alleganiensis*) presence as detected by environmental DNA.

OUTREACH, SERVICE, & LEADERSHIP

Peer Reviewer 2019 – *present*

Peer reviewed for the journals *Ichthyology & Herpetology (1), Hydrobiologia (1), Freshwater Biology (1), Freshwater Science (1), Canadian Journal of Fisheries and Aquatic Sciences (1),* and *Austral Ecology (1).*

Founder & Trip Leader, Girls on Adventures in Leadership & Science Southwest VA 2021 – 2022

Organized, fundraised, and led a free summer learning and adventure experience for high-school students to provide hands-on lessons in science and outdoor skills while backpacking. News Link.

IGC GSO President, *Virginia Tech* 2021 – 2022

Serve as the president in the Interfaces of Global Change Graduate Student Organization to organize and run meetings and delegate organizational tasks to appropriate committees.

Research Day Committee, *Department of Biological Sciences, Virginia Tech* Oct 2021 – Feb 2022

Assist with planning and organizing the annual research symposium for 2022.

Student Interview Panel Participant for CoS Dean Candidates, *College of Science, Virginia Tech* Nov – Dec 2021

Interviewed four finalist candidates for the College of Science Dean position, presented the College of Science student perspective for candidates, and provided thoughts and feedback on candidate interviews to the college.

Children's Backcountry Guide, *Poway Backpackers* July 2017 – July 2021

Guided 12 to 13 middle school aged kids for two weeks through the Mammoth Mountain area of CA while teaching nature appreciation, stewardship, and basic life skills.

Virginia State Science and Engineering Fair Judge, *Virginia* April 2021

Judged and provided feedback on 21 high school research projects in the Earth and Environmental Sciences category.

Virginia Tech Science Festival Booth*,* Blacksburg, VA 2017, 2018, 2021

Operated a booth for Virginia Tech Stream Team, featuring a hands-on activity about the effects of land cover on stream flow and erosion, and Interfaces of Global Change, featuring several guided activities to explain the effects of different aspects of global change, at the VT Science Festival.

Biological Sciences GSA Department Representative, *Virginia Tech* 2020 – 2021

Served as a representative and advocate for the graduate students of the Department of Biological Sciences to the Virginia Tech Graduate Student Association.

IGC GSO Secretary, *Virginia Tech* 2020 – 2021

Served as the secretary in the Interfaces of Global Change Graduate Student Organization to record meeting minutes and share with all members.

Co-Organizer, *Hidden Rivers* film, Blacksburg, VA November 2019

Assisted with organizing a public viewing of the Freshwater Illustrated film "Hidden Rivers" at the Lyric Theater in Blacksburg, VA. Approx. 300 people attended the event that also included a panel discussion of freshwater scientists, non-profit directors, and the film makers about local freshwater conservation.

Blacksburg City Nature Challenge Leader, *Town of Blacksburg*, Blacksburg, VA Apr 2019

Led the effort to document local herpetofauna on iNaturalist as a part of Blacksburg, VA's entry into the bioblitz competition known as the City Nature Challenge.

Undergraduate Awards Committee, *Society for Freshwater Science* 2019

Reviewed and provided feedback on undergraduate award applications.

SEEDs Spring Nature Festival Booth, Blacksburg, VA Apr 2018

Created, organized, and operated a booth for the Mims Lab at the local nature center, featuring activities to explain different life history strategies in frogs and toads.

NPS Volunteer, *Valles Caldera National Preserve*, Sandoval County, NM Jun 2017 – Aug 2017

Assisted in pine bark beetle removal efforts, pit-fall trap specimen creation, fish electroshock surveys, large mammal surveys, and radiotelemetry surveys.

TEACHING & MENTORING

Undergraduate Research Mentoring, *Virginia Tech,* Blacksburg, VA 2017 – 2023

Mentored 15 undergraduates assisting with my own research (field technicians, data mining, spatial analysis), leading to co-authorship for 5 students, or completing their own tangential research project.

NSF GRFP Prep TA (BIOL 5174), *Virginia Tech,* Blacksburg, VA Fall 2022

Provided logistical assistance and peer-review for graduate students as they worked to prepare personal and research statements for the NSF GRFP Fellowship.

Principles of Biology TA (BIOL 1105), *Virginia Tech,* Blacksburg, VA Fall 2020

Organized, provided feedback, and graded two group sections (~60 students total) virtually over Zoom as they answered daily free response questions based on the full class lecture.

Intro to Biological Science Lab TA (BIOL 1115), *Virginia Tech,* Blacksburg, VA Fall 2018 & 2019

Taught 3 lab sections (~72 students) basic biological laboratory skills and concepts. Duties included lecturing on basic biological concepts, guiding lab experiments, and grading lab reports and worksheets.

REFERENCES

References available upon request.