

**Sean M. Keogh**  
National Museum of Natural History  
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**Education**

- 2023     **Ph.D.**, University of Minnesota  
Ecology, Evolution, and Behavior  
Dissertation: Natural selection & phenotypic plasticity shape freshwater mussel ecomorphological evolution
- 2018     **M.S.**, University of Minnesota  
Conservation Sciences  
Thesis: Integrative species delimitation of *Lampsilis teres* species complex (Bivalvia: Unionidae)
- 2014     **B.S.**, University of Minnesota  
Fisheries, Wildlife, and Conservation Biology  
Undergrad research: Population dynamics of imperiled freshwater mussels & their host fishes

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**Professional Experience**

- 2025-Present     Peter Buck Postdoctoral Fellow  
Smithsonian Institution – National Museum of Natural History
- 2023-Present     Museum Associate  
Bell Museum of Natural History – University of Minnesota
- 2025-Present     Collection Associate  
Field Museum of Natural History
- 2023-2025        Collections Manager of Invertebrate Zoology  
Field Museum of Natural History

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**Fellowships & Grants****Research Fellowships**

- 2025     National Museum of Natural History – Peter Buck Fellowship. \$144,000
- 2022     Bell Museum of Natural History – Simons Fellowship in Systematic Biology. \$21,637
- 2021     National Museum of Natural History – Smithsonian Institution Predoctoral Fellowship. \$40,000
- 2020     UMN – Interdisciplinary Doctoral Fellowship. \$25,000
- 2020     UMN – Ecology, Evolution, and Behavior Summer Fellowship. \$6,461
- 2019     UMN – Ecology, Evolution, and Behavior Summer Fellowship. \$6,461
- 2019     Bell Museum of Natural History – Dayton Fellowship. \$25,000
- 2017     UMN – Moos Graduate Research Fellowship in Aquatic Biology. \$7,340
- 2016     Bell Museum of Natural History – Joyce Davenport Fellowship. \$5,917
- 2015     UMN – John Dobie Fellowship. \$16,218

**Research Grants**

- 2025     FMNH – Grainger Bioinformatics Center Research Award. \$8,500
- 2023     Linnean Society of London – LinnéSys: Systematics Research Fund. \$1,255
- 2021     National Museum of Natural History – Smithsonian Institution Predoc Research Grant. \$4,000
- 2021     Bell Museum of Natural History – Dayton Grant. \$2,000
- 2021     Society of Integrative & Comparative Biology – Grants-In-Aid of Research. \$1,000
- 2021     UMN – Ecology, Evolution, and Behavior Summer Award. \$1,500

2020 UMN – Ecology, Evolution, and Behavior Summer Award. \$1,500  
 2020 UMN – Florence Rothman Research Grant. \$2,000  
 2020 The Society for Systematic Biologists Graduate Research Award. \$2,000  
 2020 Bell Museum of Natural History – Davenport Grant. \$2,500  
 2019 Bell Museum of Natural History – Davenport Grant. \$2,500  
 2019 UMN – Ecology, Evolution, and Behavior Summer Award. \$1,500  
 2018 Minnesota Department of Natural Resources Research Contract 146124/3000139381. \$2,505  
 2018 American Malacological Society – Melbourne R. Carriker Student Award. \$1,000  
 2018 Conchologists of America Academic Grant. \$2,300  
 2017 UMN – Wally Dayton Wildlife Fund. \$2,500  
 2017 UMN – Moos Graduate Research Grant. \$2,000  
 2016 Bell Museum of Natural History Dayton Grant. \$1,500  
 2013 UMN – Undergraduate Research Opportunities Program Grant. \$1,700

### Travel Grants

2024 FMNH – Negaunee Field Work Fund. \$5,000  
 2022 UMN – Ecology, Evolution, and Behavior Travel Award. \$900  
 2019 UMN – Ecology, Evolution, and Behavior Travel Award. \$900  
 2018 UMN – Conservation Sciences Travel Grant. \$350  
 2017 UMN – Conservation Sciences Travel Grant. \$350

### Manuscripts in review or revision

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**Keogh, S.,** \*Celli, S., & ^Ramos, A. Ecological interactions between imperiled molluscs: Spawning of *Somatogyrus* pebblesnails on freshwater mussels. *Submitted*.

\*Mentored undergraduate student, ^Mentored high school student

Lopez, J., Hopper, G., Sánchez González, I., **Keogh, S.**, Bucholz, J., Lozier, J., & Atkinson, C. Leveraging the elementome and biogeochemical niche to test stoichiometric hypotheses in freshwater bivalve assemblages. *In review*.

Franzen, A., Sansom, B., Pfeiffer, J., Goetz, F., **Keogh, S.**, & Vaughn, C. Testing Ortmann's Law of Stream Position: Exploring shell morphology in mussels across hydrologic scales with micro-CT scanning and a fluvial experiment. *In review*.

Hopper, G., **Keogh, S.**, Atkinson, C., DuBose, T., Lozier, J., Pfeiffer, J., & Sánchez González, I. Linking body size, dispersal, range size, and fragmentation to assess extinction risk of freshwater mussels. *In review*.

### Publications

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7. **Keogh, S.**, Johnson, N., Smith, C., Sietman, B., Garner, J., Randklev, C., & Simons, A. 2025. Secondary contact erodes Pleistocene diversification in a wide-ranging freshwater mussel (*Quadrula*). *Molecular Ecology*, 34, e17572. <http://doi.org/10.1111/mec.17572>
6. **Keogh, S.**, Minerich, B., Ohlman, L., Pletta, M., Scheunemann, A., Schroeder, Z., Secrist, Z., Franzen, A., Sietman, B., & Simons, A. 2025. Phenotypic plasticity, multiple paternity, and shell shape divergence across lake-stream habitats in a freshwater mussel brood (*Pyganodon grandis*). *Freshwater Biology*, 70, e14358. <http://doi.org/10.1111/fwb.14358>
5. Pfeiffer, J., DuBose, T., & **Keogh, S.** 2024. Synthesis of natural history collections data reveals patterns of US freshwater mussel diversity and decline. *Biological Conservation*, 291, 110462. <https://doi.org/10.1016/j.biocon.2024.110462> [Press](#) [MusselMapR](#)

4. **Keogh, S.**, Pfeiffer, J., Simons, A. & Edie, S. 2024. Riverine flow rate drives widespread convergence in the shell morphology of imperiled freshwater mussels. *Evolution*, 78, 39-52. <https://doi.org/10.1093/evolut/qpad190>
3. Hopper, G., Bucholz, J., DuBose, T., Fogelman, K., **Keogh, S.**, Kubala, M., Lodato, M., Nichols, D., Sánchez González, I., Pfeiffer, J., Stoeckel, J., Lozier, J., & Atkinson, C. 2023. A trait dataset for freshwater mussels of the United States of America. *Scientific Data*, 10, 745. <https://doi.org/10.1038/s41597-023-02635-9>
2. **Keogh, S.**, Johnson, N., Williams, J., Randklev, C., & Simons, A. 2021. Gulf Coast vicariance shapes phylogeographic history of a North American freshwater mussel species complex (Bivalvia: Unionidae). *Journal of Biogeography*, 48, 1138-1152. <https://doi.org/10.1111/jbi.14066>
1. **Keogh, S.** & Simons, A. 2019. Molecules and morphology reveal ‘new’ widespread North American freshwater mussel species (Bivalvia: Unionidae). *Molecular Phylogenetics and Evolution*, 138, 182-192. <https://doi.org/10.1016/j.ympev.2019.05.029>

### Non Peer-Reviewed Articles

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4. White, D., Badgett, N., **Keogh, S.**, Stegmann, E., & Dunn, H. 2021. DNA confirmation of a reproducing population of federally endangered Winged Mapleleaf (*Quadrula fragosa*) in the Little River, Oklahoma. *Ellipsaria*, 23(2), 27-30.
3. Scheunemann, A., Sietman, B., Hove, M., **Keogh, S.**, Pletta, M., Ohlman, L., Carrow, K., Rounds, C., & Taylor, S. 2020. Suitable Host Fishes for the Canary Kingshell, *Lampsilis sietmani* Keogh and Simons 2019. *Ellipsaria*, 22(1), 26-28.
2. **Keogh, S.** & Simons, A. 2019. Species and distributional boundaries of *Tritogonia nobilis* (Conrad, 1854) (Bivalvia: Unionidae). *Minnesota Department of Natural Resources Report*. Executed contract 146124/3000139381.
1. Hove, M., Sietman, B., Berg, M., Bump, S., Davis, M., Hansen, H., **Keogh, S.**, Luebke, C., Marr, S., Maynard, A., Murphy, K., Secrist Z., and Hornbach, D. 2013. *Pleurobema sintoxia* Early Life History. *Ellipsaria*, 15(3), 14-16.

### Presentations

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#### Invited Seminars

- 2026 Howard University – Department of Biology
- 2024 Minnesota Zoo – Department of Conservation and Research
- 2023 University of Illinois – Department of Natural Resources and Environmental Sciences
- 2023 Chicago Shell Club
- 2023 Smithsonian National Museum of Natural History – Department of Invertebrate Zoology (*Virtual*)
- 2022 Field Museum of Natural History (*Virtual*)
- 2021 Harvard University – Museum of Comparative Zoology (*Virtual*)
- 2021 Regis University – Department of Biology
- 2019 Smithsonian National Museum of Natural History – Department of Invertebrate Zoology
- 2019 Auburn University Museum of Natural History
- 2018 University of Minnesota – Conservation Sciences

#### Conference Presentations

- 2025 Freshwater Mollusk Conservation Society. Ann Arbor, MI.
- 2023 Freshwater Mollusk Conservation Society. Portland, OR.

- 2022 Society for Integrative & Comparative Biology. Phoenix, AZ. (*Virtual*)
- 2020 Society for Integrative & Comparative Biology. Austin, TX. (*Poster*)
- 2019 Freshwater Mollusk Conservation Society. San Antonio, TX. (*Oral & Poster*)
- 2018 American Malacological Society. Oahu, HI. **Runner-up: Best Student Presentation Award**
- 2017 Freshwater Mollusk Conservation Society. Cleveland, OH. (*Poster*)

## Teaching

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### Guest Instructor

American University – Research Methods in Biological Sciences – Spring 2026

- Two class sessions on how natural history museums & phylogenetic comparative methods are used to study environmental change

Shedd Aquarium – Freshwater Ecology – Fall 2023

- Full day session lecturing on freshwater mussel natural history, leading students in a mini collections-based project, and touring Field Museum collections

### Laboratory Instructor (Teaching Assistant)

UMN – Ornithology – Spring 2020 (2 sections)

- Taught undergraduate and graduate students avian systematics, anatomy, natural history, and species identification
- Transitioned lab sessions online during COVID-19 pandemic

UMN – Ichthyology – Fall 2018 (2 sections)

UMN – Ichthyology – Fall 2017 (2 sections)

UMN – Ichthyology – Fall 2016 (2 sections)

- Taught undergraduate and graduate students fish evolution, anatomy, and identification
- Restructured and rewrote lab manual

## Diversity & Inclusion

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Women in Science (WIS) Internship – Summer 2025

- Lead and designed a six week internship for Santina Celli and Ariana Ramos on DNA extraction, amplification, and sequencing in the Pritzker Lab at the Field Museum.

Illinois Louis Stokes Alliances for Minority Participation (ILSAMP) Internship – Summer 2024

- Lead and designed a twelve week internship for Kaylynn Wilson (Chicago State University) on collections-based research in the Invertebrate Zoology Collection at the Field Museum.

Bell Museum High School Career Exploration Program – Summer 2021

- Co-lead and co-designed inaugural six week paid internship program for six high school students from underrepresented racial and ethnic backgrounds in STEM. I worked with three other mentors to facilitate Bell Museum collections-based biodiversity research with lab and field focused projects.

## Mentorship

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### Graduate Student Mentorship

2025- Kussum Ghimire – Loyola University Chicago (MS committee)

2025 Camilo Mejia-Rivera – FMNH Visiting Scholar (\$3900 awarded to CMR)

### Undergraduate Student Mentorship

2025 Santina Celli – Miami University (WIS intern)

2024 Kaylynn Wilson – Chicago State University (ILSAMP intern)

2019 Saskia Sackner-Bernstein – Macalester College

2019 Max Nord – Macalester College

- 2018 Alex Franzen – University of Minnesota
- 2018 Adam Rogowski – Macalester College
- 2017 Michelle Buse – Macalester College
- 2017 Matthew Glasenapp – Macalester College
- 2017 Jose Fernandez – Macalester College

### **High School Interns**

- 2025 Ariana Ramos – FMNH Women in Science Intern
- 2025 Liam Gallaga – FMNH Behind-the-Scenes Intern
- 2025 Mariana De Alba – FMNH Behind-the-Scenes Intern
- 2024 Sam Morales – FMNH Behind-the-Scenes Intern
- 2024 Maura Hanley – FMNH Behind-the-Scenes Intern
- 2024 Miles Jung – FMNH Behind-the-Scenes Intern

### **Volunteers**

- 2025 Caryn Stein – FMNH Invertebrate Zoology Volunteer (Digitization)
- 2025 Laura Lewis – FMNH Invertebrate Zoology Volunteer (Digitization)
- 2024-25 Ariadna Sánchez – FMNH Invertebrate Zoology Volunteer (Digitization)
- 2023-25 Gerard Gagne – FMNH Invertebrate Zoology Volunteer (Imaging)
- 2023-25 Tom Durica – FMNH Invertebrate Zoology Volunteer (Curation)
- 2023-25 Connie Bonbrest – FMNH Invertebrate Zoology Volunteer (Curation)

## **Community Engagement**

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### **Citizen science**

- 2025- [Snail Scribe Archive](#) – Zooniverse: Digitizing FMNH Invert Zoology Collection records

### **Outreach events**

- 2026 Georgetown University Department of Biology – Career spotlight lunch & learn
- 2025 Educator Open House at Field Museum – Freshwater mussels: theivers of our rivers
- 2025 Meet a Scientist at Field Museum Science Hub – Freshwater mussels: theivers of our rivers
- 2025 Field Museum Members’ Night – Discover the vast diversity of invertebrate zoology
- 2024 Field Museum Learning Center – Incorporating snail shells into K-12 education
- 2023 Field Museum Learning Center – Incorporating snail shells into K-12 education
- 2019 Conservation Corps Youth Outdoors Career Day – Bell collection tours & career discussion
- 2018 Conservation Corps Youth Outdoors Career Day – Bell collection tours & career discussion
- 2018 Science Sunday – Public engagement at Bell Museum mollusk exhibit
- 2017 Conservation Corps Youth Outdoors Career Day – Bell collection tours & career discussion
- 2017 Bell Museum Lake Pepin Freshwater Mussel Exhibit – Assisted design of display
- 2016 Conservation Corps Youth Outdoors Career Day – Bell collection tours & career discussion
- 2016 Saturday with a Scientist – Public engagement of aquaponics at Bell Museum
- 2015-25 50+ Collection tours – Field Museum & Bell Museum

### **Online resources**

- 2023 [MusselMapR](#) – R shiny web app for plotting US freshwater mussel distributions

### **School visits**

- 2025 Natural history of freshwater mussels – School of Northern Lights
- 2018 Cedar Creek Eco-Extravaganza – Jackson Middle School
- 2016 Cedar Creek Eco-Extravaganza – Jackson Middle School

## **Professional Development**

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2024	Leadership Training – Field Museum of Natural History
2023	Strategic Planning for Biodiversity Collections – iDigBio
2020	ECR2: Command-Line Bioinformatics – American Society of Naturalists Graduate Council
2019	RADCamp (library prep, sequencing, & bioinformatics of 3RAD data) – Columbia University
2012	PADI Search and Rescue SCUBA certification

## **Service**

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### **Service committees**

2026	Central American Freshwater Mollusc Panel – IUCN Red List Review
2025-	Co-Chair of Genetics Committee – Freshwater Mollusk Conservation Society
2025	Collections Manager of Insects Search Committee – Field Museum
2024-25	Science & Scholarship Funding Committee – Field Museum
2023	Invertebrate Zoology Collections Assistant Job Search – Field Museum
2023-25	Invertebrate Zoology Collections Administrative Committee – Field Museum
2023	Assistant Professor & Curator of Ichthyology Search Committee – University of Minnesota
2023-	Diversity, Equity, and Inclusion Committee – Freshwater Mollusk Conservation Society
2018	Conservation Sciences Seminar Committee – University of Minnesota
2017	Conservation Sciences Seminar Committee – University of Minnesota

### **Reviewer**

Aquatic Conservation: Marine and Freshwater Ecosystems, Conservation Genetics, Ecology and Evolution, Freshwater Mollusk Biology and Conservation, Hydrobiologia, Journal of Fish Biology, Journal of Molluscan Studies, Malacologia, Scientific Reports, Zoological Journal of the Linnean Society, Zoomorphology

## **Fieldwork**

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### **Domestic**

2012-25	Minnesota, Wisconsin
2023-25	Illinois
2022	Maryland
2018	Alabama, Missouri
2017	Illinois, Iowa
2016	Alabama, Arkansas, Illinois, Iowa, Mississippi, Tennessee
2014	Oregon

### **International**

2026	Honduras
2024	Costa Rica
2023	Panama
2015	Canada
2013	Peru

## **Society Memberships**

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American Genetic Association  
 American Malacological Society  
 Freshwater Mollusk Conservation Society  
 Society for Integrative & Comparative Biology  
 Society for the Study of Evolution