

Andrew S. Mehring

Assistant Professor

Department of Biology

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Education

2005-2012	Ph.D. Ecology	University of Georgia, Athens, GA
2000-2003	M.S. Biology/Ecology	Shippensburg University, Shippensburg, PA
1994-1998	B.S. Biology / Environmental Science	Millersville University, Millersville, PA

Professional appointments

2020-present	Assistant Professor, Department of Biology, University of Louisville
2018-2021	Marie Curie Fellow, Doñana Biological Station, Spanish National Research Council (CSIC)
2018	Project Scientist, Scripps Institution of Oceanography, UCSD (supervisor: Lisa Levin)
2013-2017	Postdoctoral Scholar, Scripps Institution of Oceanography, UCSD (supervisor: Lisa Levin)

Publications

In Review

Hudson, T.B., A.J. Nisip, S.P. Yanoviak, A.S. Mehring. **(202x)** Variation of methane flux in the nests of leaf-cutting ants (*Atta cephalotes*) across a dry-wet seasonal transition. In review in *Biotropica*.

Frommeyer, J.P., M.A. McGregor, J.T. Cooper, A.S. Mehring, J.E. Alexander, M.A. Kolmann. **(202x)** Host specificity and overlap in two common freshwater mussel species from Kentucky. In review in *Freshwater Mollusk Biology and Conservation*.

Keith, R., S. Willis, N. Christian, F. Khayat, J. Gallagher, W. Gunter, J. Kachanova, A. Mehring, R. Pigg, D. Proctor, A. Smith, C. Stopforth, P. Piuma, T. Smith, A. Bhatnagar. **(202x)** Protocol for dense urban microforest to mitigate heat and support cardiovascular health: The Green Oasis (GRO) Project. In review in *International Journal of Environmental Research and Public Health*.

Published

2025

Naslund L.C., A.S. Mehring, N.J. Tomczyk, A.D. Rosemond, S.K. McKay, E.S. Bernhardt, S.J. Wenger. **(2025)** Consequences of dam removal for reservoir carbon storage and emissions. *Journal of Environmental Management* 395: 127792.

Earl, N.O., J.J.M. de Klein, A.S. Mehring. **(2025)** Black and white fire ash alter greenhouse gas emissions and temporarily reverse carbon source-sink status in aquatic mesocosms. *Environmental Science and Technology* 59: 10990-11001.

Robbins, C.J., W.J. Matthaues, R.A. Eckert, E. Bastias, A.K. Dodd, J. Jabiol, A.S. Mehring, D.W.P. Manning, A. Pastor. **(2025)** Revisiting k: Time-varying stream litter breakdown rates. *Limnology and Oceanography Letters* 10: 576-586.

2024

Fausey, K., M.A. Rippy, G. Pierce, D. Feldman, B. Winfrey, A.S. Mehring, L.A. Levin, P.A. Holden, P.A. Bowler, R. Ambrose. **(2024)** Ecosystem service values support conservation and sustainable land development: Perspectives from four University of California campuses. *Ecological Engineering* 208: 107379.

Naslund, L.C., A.S. Mehring, A.D. Rosemond, S.J. Wenger. **(2024)** Toward more accurate estimates of greenhouse gas emissions from small reservoirs. *Limnology and Oceanography* 69(6): 1350-1364.

Kurylo, J.S., J. Le, A.S. Mehring, R.F. Ambrose. **(2024)** Management dampens seasonal variability in soil microclimates and alters its chemical and physical properties in a semi-arid region. *Journal of Urban Ecology* 10(1): juae001.

2023

- Robbins, C.J., D.W.P. Manning, H.M. Halvorson, B.C. Norman, R.A. Eckert, A. Pastor, A.K. Dodd, J. Jabiol, E. Bastias, A. Gossiaux, A.S. Mehring. (2023) Nutrient and stoichiometry dynamics of decomposing litter in stream ecosystems: A global synthesis. *Ecology* 104(7): e4060.
- Feraud, M., S.P. Ahern, E.A. Parker, S. Avasarala, M.B. Rugh, W. Hung, D. Li, L.C. Van De Werfhorst, T. Kefela, A. Hemati, A.S. Mehring, Y. Cao, J.A. Jay, H. Liu, S.B. Grant, P.A. Holden. (2023) Stormwater biofilter response to high nitrogen loading under transient flow conditions: ammonium and nitrate fates, and N₂O emissions. *Water Research* 230: 119501
- Robbins, C.J., B.C. Norman, H.M. Halvorson, D.W.P. Manning, E. Bastias, C. Biasi, A.K. Dodd, R.A. Eckert, A. Gossiaux, J. Jabiol, A.S. Mehring, A. Pastor. (2023) Nutrient and stoichiometric time series measurements of decomposing coarse detritus in freshwaters. *Ecology* 104(8): e4114.

2022

- Rippy, M.A., G. Pierce, D. Feldman, B.K. Winfrey, A.S. Mehring, P.A. Holden, R.F. Ambrose & L.A. Levin. (2022) Perceived services and disservices of natural treatment systems for urban stormwater: insight from the next generation of designers. *People and Nature* 4: 481-504.

2021

- Mehring, A.S., R.M. Martin, C.S. Delavaux, E.B. James, J.J. Quispe, & D. Yaffar. (2021) Leaf-cutting ant (*Atta cephalotes*) nests may be hotspots of methane and carbon dioxide emissions in tropical forests. *Pedobiologia* 87-88: 150754.
- Herzog, T.L., A.S. Mehring, B.E. Hatt, R.F. Ambrose, L.A. Levin & B.K. Winfrey. (2021) Pruning stormwater biofilter vegetation influences water quality improvement differently in *Carex appressa* and *Ficinia nodosa*. *Urban Forestry & Urban Greening* 59: 127004.
- Pierce, G., K.S. Gmoser-Daskalakis, K. Jessup, S.B. Grant, A.S. Mehring, B.K. Winfrey, M.A. Rippy, D. Feldman, P. Holden, R.F. Ambrose, & L.A. Levin. (2021) University stormwater management within urban environmental regulatory regimes: Barriers to progressivity or opportunities to innovate? *Environmental Management* 67:12-25.

2019

- Ge, B., A.S. Mehring & L.A. Levin. (2019) Urbanization alters belowground invertebrate community structure in semi-arid regions: a comparison of lawns, biofilters and coastal sage scrub. *Landscape and Urban Planning* 192: 103664

2018

- Huang, X., M.A. Rippy, A.S. Mehring, B.K. Winfrey, S.C. Jiang, and S.B. Grant. (2018) Shifts in dissolved organic matter and microbial community composition are associated with enhanced removal of fecal pollutants in urban stormwater wetlands. *Water Research* 137:310-323

2017

- Welti, N., M. Striebel, A.J. Ulseth, W.F. Cross, S. DeVilbiss, P.M. Glibert, L. Guo, A.G. Hirst, J. Hood, J.S. Kominoski, K.L. MacNeill, A.S. Mehring, J.R. Welter, H. Hillebrand (2017) Bridging food webs, ecosystem metabolism, and biogeochemistry using ecological stoichiometry theory. *Frontiers in Microbiology* 8, DOI: 10.3389/fmicb.2017.01298
- Mehring A.S., P.L.M. Cook, V. Evrard, S.B. Grant & L.A. Levin (2017) Pollution-tolerant invertebrates enhance greenhouse gas flux in urban wetlands. *Ecological Applications* 27:1852-1861.
- Parker, E., Rippy, M.A., A.S. Mehring, B. Winfrey, R.F. Ambrose, L.A. Levin, and S.B. Grant (2017) The predictive power of clean bed filtration theory for fecal indicator bacteria removal in stormwater biofilters. *Environmental Science & Technology* 51:5703-5712.

2016

- Mehring A.S., B.E. Hatt, D. Kraikittikun*, B.D. Orelo, M.A. Rippy, S.B. Grant, J.P. Gonzalez, S.C. Jiang, R.F. Ambrose, & L.A. Levin (2016) Soil invertebrates in Australian rain gardens and their potential roles in storage and processing of nitrogen. *Ecological Engineering* 97: 138–143.

2015

- Askarizadeh, A., M.A. Rippy, T.D. Fletcher, D. Feldman, J. Peng, P. Bowler, A.S. Mehring, B.K. Winfrey, J.A. Vrugt, A. AghaKouchak, S.C. Jiang, B.F. Sanders, L.A. Levin, S. Taylor and S.B. Grant (2015) From rain tanks to catchments: use of low impact development to address hydrologic symptoms of the urban stream syndrome. *Environmental Science & Technology* 49: 11264–11280.

Publications (continued)

2015

- Mehring, A.S. and L.A. Levin (2015) Potential roles of soil fauna in improving the efficiency of rain gardens used as natural stormwater treatment systems. *Journal of Applied Ecology* 52: 1445–1454.
- Tant, C.J., A.D. Rosemond, A.S. Mehring, K.A. Kuehn and J.M. Davis (2015) The role of aquatic fungi in transformations of organic matter mediated by nutrients. *Freshwater Biology* 60: 1354–1363.
- Mehring, A.S., K.A. Kuehn, A. Thompson, C.M. Pringle, A.D. Rosemond, M.R. First, and R.R. Lowrance and G. Vellidis (2015) Leaf litter nutrient uptake in an intermittent blackwater river: Influence of tree species and associated biotic and abiotic drivers. *Functional Ecology* 29(6): 849–860.
- Levin, L.A. and A.S. Mehring (2015) Optimization of bioretention systems through application of ecological theory. *WIREs Water* 2: 259–270.

2014

- Mehring, A.S., K.A. Kuehn, C.M. Pringle, C.J. Tant, R.R. Lowrance and G. Vellidis (2014) Contribution of surface leaf-litter breakdown and forest composition to benthic oxygen demand and ecosystem respiration in a South Georgia blackwater river. *Freshwater Science* 33(2): 377–389.

2013

- Mehring, A.S., R.R. Lowrance, A.M. Helton, C.M. Pringle, D.D. Bosch and G. Vellidis (2013) Inter-annual drought length governs dissolved organic carbon dynamics in blackwater rivers. *Journal of Geophysical Research: Biogeosciences* 118(4): 1636–1645.
- Hopkinson, C.S., A. Covich, C.B. Craft, T.W. Doyle, N. Flanagan, M. Freeman, E. R. Herbert, A. Mehring, J. Mohan, C. Pringle, C. J. Richardson (2013) The effects of climate change on natural ecosystems of the Southeast. Pp. 237–270 In K.T. Ingram, K. Dow, L. Carter, and J. Anderson [eds.], *Climate of the Southeast United States: Variability, Change, Impacts, and Vulnerability*. Island Press, Washington, D.C. ISBN 978-1-61091-509-0.

2011

- Mehring, A.S. and T.J. Maret (2011) Red maple dominance enhances fungal and shredder growth and litter processing in temporary ponds. *Limnology and Oceanography* 56(3): 1106–1114.
- Mehring, A.S. (2011) Experimental Design and Statistical Analysis, Pp. 7–35. In G.W. Barrett, T.L. Barrett, S.J. Connelly, A.S. Mehring and J.O. Moree [eds.], *Ecology Exercise Book: An Ecosystem Approach*. Kendall Hunt Publishing Company, Dubuque, IA. ISBN: 978-0-7575-8718-4.

2010

- Allgeier, J.E., A.D. Rosemond, A.S. Mehring and C.A. Layman (2010) Synergistic nutrient colimitation across a gradient of ecosystem fragmentation in subtropical mangrove-dominated wetlands. *Limnology and Oceanography* 55(6): 2660–2668.

Grants and Awards

US Department of Agriculture, NIFA grant, award Number: 2026-67014-45942	\$299,887
FY2023 USGS 104b Grant Program, award Number: 3200004323-24-059	\$37,500
- active 9/1/2023-8/31/2024 (co-PI with Dr. Andrea Gaughan)	
Wageningen Institute for Environ. & Climate Research (WIMEK) fellowship	€7,900
- Awarded March 15, 2023, project active June–August 2023	
FY2022 USGS 104b Grant Program, award Number: 3200004323-23-095	\$39,812
- active 9/1/2022-8/31/2023 (co-PI with Dr. Andrea Gaughan)	
FY2021 USGS 104b Grant Program, award Number: 3200004323-22-066	\$29,436
- active 9/1/2021-8/31/2022 (sole PI)	
Marie Skłodowska-Curie Actions Individual Fellowship 799434-FLAMMINGGOS	€158,121
- H2020-MSCA-IF-2017. Awarded April 18, 2018, project active 2018–2021	

Courses taught

University of Louisville - six courses

Ecosystem Ecology (BIOL 562/662*); Global Change Ecology (BIOL 440/644*); Biostatistics (BIOL 350); Diversity of Life (BIOL242, large enrollment); Graduate Biol Seminar (BIOL 689); Undergraduate Honors Biol Seminar (BIOL 388) * = courses developed by me

Courses taught (continued)

Organization for Tropical Studies, Costa Rica

Tropical Field Ecology[†] (Dec.-Jan. 2017, co-coordinator for full graduate field research course)

University of Georgia, Costa Rica

Tropical Field Ecology, Tropical Ecology Laboratory (ECOL 3100[†], 3510[†], May-June 2013, 2017)

Undergraduate NSF PIRE Program Down Under[†]

USA (UCSD, UCI, UCLA) and Australia (U of Melbourne, Monash U), June-July 2013-2016

[†] = foreign travel / field course

Students mentored

University of Louisville, Louisville, KY, USA – PhD students

Amelia Wise – January 2026 – present
Zachary Moats – August 2025 – present
Erin Brennan (co-advised) – January 2024 – present
Nathan Earl – August 2022 – present
Mark Tierney – October 2020 – December 2025

University of Louisville, Louisville, KY, USA – MS students

Blake Hudson (thesis) – January 2023 – July 2024
Josh Snipes (non-thesis) – January 2024 – December 2024
Vincent Cafazo (non-thesis) – August 2023 – May 2024
Brennan Molique (non-thesis) – August 2020 – Dec. 2022

University of Louisville, Louisville, KY, USA – undergraduate students

Andrew Olson – August 2025 – present
McKenzie Goodwyn – August 2023 – present
Taylor Cowles – August 2023 – December 2023
Jacob Webb – January 2023 – May 2023
John Swartz – June – August 2022
Danielle Roney – January 2021 – May 2022

Doñana Biological Station, Seville, Spain (in collaboration with Third Sector International)

Seven Erasmus+ interns mentored for three months each (2018-2019) – Robert Andrew, Lucy Stockton, Noa Ratia, Katey Fisher, Matthew Holroyd, Amy Ferguson, Jaime Carvalho

Scripps Institution of Oceanography, UCSD

Spring 2016, undergraduate student: Jimmy Luong
Fall 2015, undergraduate student: Barbara D. Orelo
Spring 2014, undergraduate student: Diana Kraikittikun

Monash University, Melbourne, Australia

Topic/final paper: “Influence of plant biomass harvest and soil fauna on stormwater biofilter performance”, Fall 2015, undergraduate student: Daniel I. Guttman

Conference presentations

2025

Earl, N.O., M.E. Goodwyn, and A.S. Mehring. **2025**. Enhanced methane emissions in small, peri-urban wetlands dominated by emergent and floating vegetation. Kentucky Academy of Science Meeting. Louisville, KY, USA, November 21-22, 2025.

Conference presentations (continued)

2025

- Goodwyn, M.E, J. Snipes, N.O. Earl, and A.S. Mehring. **2025**. Does duckweed (*Lemna* and *Wolffia* spp.) alter organic matter decomposition rates in small ponds? Kentucky Academy of Science Meeting. Louisville, KY, USA, November 21-22, 2025.
- Earl, N.O., M.E. Goodwyn, and A.S. Mehring. **2025**. Emergent vegetation (*Typha* spp.) synergistically enhances methane emissions in small, peri-urban wetlands dominated by floating vegetation (*Lemna*, *Wolffia* spp.). Kentucky Water Resources Institute (KWRI) Annual Symposium. Lexington, KY, USA, September 12, 2025.
- Goodwyn, M.E, N.O. Earl, and A.S. Mehring. **2025**. Effects of duckweed (*Lemna* and *Wolffia* spp.) on decomposition rates in small, peri-urban wetlands. KWRI Annual Symposium. Lexington, KY, USA, September 12, 2025.
- Tierney, M.C., A.E. Gaughan, J. Marion, and A.S. Mehring. **2025**. Impact of adjacency effects and CDOM on the accurate estimation of chl-*a* in small ponds. Ecological Society of America Annual Meeting. Baltimore, MD. USA, August 10-15th.
- Mehring, A.S. **2025**. Ecosystem service tradeoffs in urban waters. 7th Symposium on Urbanization and Stream Ecology (SUSE 7). San Juan, Puerto Rico, U.S.A. May 13-16th.
- Earl, N.O., L. Cai, J. Xu, A.S. Mehring. **2025**. Can biofilters serve as records of heavy metal pollution in an urban ecosystem? SUSE 7. San Juan, Puerto Rico, U.S.A. May 13-16th.

2024

- Mehring, A.S., M.C. Tierney, N.O. Earl, M. Goodwyn, J. Snipes and A.E. Gaughan. **2024**. The roles of aquatic plant communities in determining the carbon source-sink status of Kentucky wetlands and ponds. Kentucky Academy of Science Meeting, Frankfort, KY, USA, November 1-2, 2024.
- Snipes, J.A. and A.S. Mehring. **2024**. Impacts of duckweed (*Lemna* and *Wolffia* spp.) on carbon storage and decomposition in small ponds. KWRI Annual Symposium. Lexington, KY, USA, September 27, 2024.
- Mehring, A.S., M.C. Tierney, N.O. Earl, M. Goodwyn and A.E. Gaughan. **2024**. Can urban and peri-urban constructed ponds serve as carbon sinks? KWRI Annual Symposium. September 27, 2024.
- Gaughan, A.E., S. Hutchins, D. Brown, M.C. Tierney and A.S. Mehring. **2024**. A remote sensing application for characterizing small wetland ponds and their surrounding landscapes in Louisville, KY. Kentucky Water Resources Annual Symposium, Lexington, KY, USA, September 27, 2024.
- Venkatasubramanian, K., A.E. Gaughan and A.S. Mehring. **2024**. Community perceptions on urban wetland health and use in Louisville, KY. KWRI Annual Symposium. Lexington, KY, USA, September 27, 2024.
- Naslund, L.C., A.S. Mehring, A.D. Rosemond, S.K. McKay, E.S. Bernhardt and S.J. Wenger. **2024**. The gas they passed: Carbon costs of dam removal from large reservoirs. Annual Meeting of the Society for Freshwater Science. Philadelphia, PA, USA, June 2-6, 2024.
- Tierney, M.C., J.H. Loughrin, S.W. Antle, C. Jalink, J.J.M. de Klein and A.S. Mehring. **2024**. Duckweed enhances carbon emissions but slows the aerobic decomposition of organic matter in small ponds. Annual Meeting of the Society for Freshwater Science. Philadelphia, PA, USA, June 2-6, 2024.
- Earl, N.O., J.J.M. de Klein, A.S. Mehring. **2024**. Fire ash temporarily reverses the carbon source-sink status of wetland mesocosms. Annual Meeting of the Society for Freshwater Science. Philadelphia, PA, USA, June 2-6, 2024.
- Tierney, M.C., J.H. Loughrin, S.W. Antle, C. Jalink, J.J.M. de Klein and A.S. Mehring. **2024**. Duckweed cover enhances pond carbon emissions but may slow aerobic decomposition rates by inducing hypoxia. Salt River Watershed Watch Annual Conference, Louisville, KY, February 29, 2024.

2023

- Tierney, M.C., C. Jalink, J.H. Loughrin, S.W. Antle, A.S. Mehring. **2023**. Floating vegetation as a driver of greenhouse gas emissions in small ponds. KWRI Annual Symposium. Lexington, KY, USA, September 15, 2023.
- Gaughan, A.E., A.S. Mehring, M. Tierney, M. Cicha, K. Haynes and D. Brown. **2023**. Characterizing Louisville wetlands from above and below to better predict wetland carbon sink-source status. Kentucky Water Resources Annual Symposium. Lexington, KY, USA, September 15, 2023.

Conference presentations (continued)

2023

- Mehring, A.S., and J.J.M. de Klein. **2023**. Synergistic enhancement of sediment methane flux by *Tubifex tubifex* (Annelida: Oligochaeta) and green algae (*Chlorella* sp.). 9th International Symposium on Non-CO₂ Greenhouse Gases (NCGG9). June 21-23, 2023, Amsterdam, The Netherlands.
- Tierney, M.C., J.A. Swartz, J.H. Loughrin, S.W. Antle and A.S. Mehring. **2023**. How does sediment organic matter content mediate the effects of chironomid larvae on benthic greenhouse gas fluxes? 9th International Symposium on Non-CO₂ Greenhouse Gases (NCGG9). June 21-23, 2023, Amsterdam, The Netherlands.
- Naslund, L.C., A.S. Mehring, A.D. Rosemond and S.J. Wenger. **2023**. Characterizing fine-scale spatial and temporal variability in greenhouse gas emissions from small reservoirs. Annual Meeting of the Society for Freshwater Science. Brisbane, Australia, June 3-7, 2023.

2022

- Tierney, M.C., J.A. Swartz, J.H. Loughrin, S.W. Antle and A.S. Mehring. **2022**. How does sediment organic matter content mediate the effects of chironomid larvae on benthic oxygen uptake and nitrous oxide flux? Ohio River Basin Consortium for Research and Education Virtual Symposium, October 6-7, 2022
- Tierney, M.C., J.A. Swartz, J.H. Loughrin, S.W. Antle and A.S. Mehring†. **2022**. Does sediment organic matter content mediate the effects of chironomid larvae on benthic nitrous oxide flux? Kentucky Water Resources Annual Symposium. Lexington, KY, USA, September 19, 2022. †=presenter
- Tierney, M.C., J.A. Swartz, J.H. Loughrin, S.W. Antle and A.S. Mehring†. **2022**. An assessment of three pathways of greenhouse gas flux in small Kentucky wetlands. Kentucky Water Resources Annual Symposium. Lexington, KY, USA, September 19, 2022.

2021

- Mehring, A.S., J.J.M. de Klein, E. Huertas, I. Reche, A.J. Green. **2021**. FLAMMINGGOS: The roles of waterbirds and invertebrates in modulating wetland greenhouse gas emissions. *ASLO 2021 Aquatic Sciences Virtual Meeting*. Palma de Mallorca, Spain, 22–27 June 2021 (virtually).

2011-2020

- Mehring, A.S., I. Reche, J.J.M. de Klein, N.A. Ratia, L.E. Stockton, A.J. Green. **2019**. The role of predation by waterbirds in moderating wetland greenhouse gas emissions. *Ecological Society of America 104th Annual Meeting*. Louisville, KY, U.S.A.
- Mehring, A.S., B.E. Hatt, M.J. Burns, J. Luong, L.A. Levin. **2017**. Factors influencing heavy metal accumulation in urban Australian biofilters. *4th Symposium on Urbanization and Stream Ecology*. Browns Summit, NC, U.S.A.
- Mehring, A.S., P.L.M. Cook, V. Evrard, S.B. Grant, L.A. Levin. **2016**. Enhancement of carbon dioxide, methane, and nitrous oxide flux by oligochaetes and chironomids in urban wetlands. *Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting*. Santa Fe, NM, U.S.A.
- Mehring, A.S., L.A. Levin, V. Evrard, S.B. Grant, P.L.M. Cook. **2015**. The contribution of aquatic invertebrates to benthic greenhouse gas flux in urban wetlands. *ASLO Aquatic Sciences Meeting*. Granada, Spain.
- Mehring, A.S., R.R. Lowrance, A.M. Helton, G. Vellidis, C.M. Pringle, A. Thompson and D.D. Bosch. **2012**. Effects of drought on dissolved organic carbon (DOC) cycling: Implications of climate change for coastal plain blackwater rivers, USA. *ASLO Summer Meeting*. Otsu, Japan.
- Mehring, A.S., D.W. Kemp, D.D. Bosch, R.R. Lowrance, G. Vellidis and C.M. Pringle. **2011**. Another function for cypress knees? Extension of oxic periods in blackwater swamps by bryophytes growing on bald cypress (*Taxodium distichum*). *96th Annual Meeting of the Ecological Society of America*, Austin, TX, U.S.A.
- Mehring, A.S., S.R. Davie, G. Vellidis, D.D. Bosch, C.M. Pringle and R.R. Lowrance. **2011**. Modeling dissolved oxygen dynamics in blackwater rivers: The importance of site-specific data and carbon flux parameter complexity. *59th Annual North American Benthological Society Meeting*, Providence, RI, U.S.A.

Invited presentations*

- Mehring, A.S. **2025**. “Ecosystem Ecology”, “Zoogeochemistry and the effects of animals on soil and wetland greenhouse gas emissions” (two seminars). La Selva Research Station, Puerto Viejo de Sarapiquí, Costa Rica. July 8,9, 2025.
- Mehring, A.S. **2025**. Carbon budget considerations of wetland and reservoir management and dam decommissioning. U.S. Army Corps of Engineers Louisville District, Louisville, KY. March 26, 2025.
- Mehring, A.S., A.E. Gaughan, M.C. Tierney, M. Cicha, K. Haynes, D. Brown. **2023**. The carbon balance of ponds and wetlands. Wageningen University and Research Centre - AEW Seminar Series, July 6, 2023, Wageningen, Netherlands.
- Mehring, A., A. Gaughan, M. Tierney+, M. Cicha*, K. Haynes*, and D. Brown. **2023**. The carbon balance of ponds and wetlands. Presented at the Salt River Watershed Watch Conference, February 23, 2023, Louisville, KY.
- Mehring, A.S., **2023**. Zoogeochemistry and the effects of animals on wetland greenhouse gas emissions. Murray State University - Department of Biological Sciences Seminar Series. Murray, Kentucky, USA, April 14th, 2023.
- Mehring, A.S., **2022**. Zoogeochemistry and the effects of animals on wetland greenhouse gas emissions. Eastern Kentucky University - Department of Biological Sciences Seminar Series. Richmond, Kentucky, USA, March 25th, 2022.
- Mehring, A.S., J.J.M. de Klein, I. Reche, P. Hortas, E. Huertas, J.A. Carbonell, H.C. Liedtke, A.J. Green. **2021**. FLAMMINGGOS: The roles of waterbirds, invertebrates, and carbon and nutrient subsidies in modulating wetland greenhouse gas emissions. [LIFE Wetlands4Climate Networking Event](#) (online - hosted by Fundación Global Nature and Universitat de València, December 20, 2021).
- Mehring, A.S. **2021**. FLAMMINGGOS: The roles of waterbirds and invertebrates in modulating wetland greenhouse gas emissions. *Winthrop University – Biology Departmental Seminar Series*, Rock Hill, SC, U.S.A. February 3, 2021.
- Mehring, A.S. **2020**. FLAMMINGGOS: The roles of waterbirds, invertebrates, plants, and microbes in modulating wetland greenhouse gas emissions. *Missouri Western State University – Aquatic Ecology guest lecture*, St. Joseph, MO, U.S.A. September 23, 2020.
- Mehring, A.S., J.J.M. de Klein, I. Reche, N.A. Ratia, L.E. Stockton, A.J. Green. **2019**. FLAMMINGGOS: The roles of waterbirds and invertebrates in modulating wetland greenhouse gas emissions. *Wageningen University and Research Centre Seminar Series*, Wageningen, Netherlands. September 5, 2019.
- Mehring, A.S. **2017**. Sources and loads of heavy metals, nitrogen, and phosphorus in urban environments, and the optimization of biofilters to treat them. *Reaching for Resilience: Imagining Regional Stormwater Neutrality*. San Diego Coastkeeper, San Diego, CA, U.S.A. December 11, 2017.
- Mehring, A.S. **2016**. Greenhouse gas flux in constructed wetlands. *California Stormwater Quality Association (CASQA) 12th Annual Conference “Stormwater Evolution: Source to Resource”*. Panel member at the Stormwater Management Training Workshop entitled “Stormwater Management Through Natural Treatment Systems”. San Diego, CA, USA. Sept. 12, 2016.
- Mehring, A.S. **2015**. The ecology of natural stormwater treatment systems. *Southern California Coastal Water Research Project (SCCWRP) – Fall 2015 Seminar Series*. Costa Mesa, CA, USA. November 13, 2015.
- Mehring, A.S. **2013**. Carbon, nutrient and oxygen dynamics in blackwater rivers of the western upper Suwannee River basin. *Scripps Institution of Oceanography – Ecology Seminar Series*. La Jolla, CA, USA. December 4, 2013.
- Mehring, A.S. **2012**. The World Water Crisis. *ASLO, Aquatic Sciences Meeting – Opening Symposium on climate change*. Otsu, Japan. July 8, 2012.
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Service and Outreach (since 2020)

Public

Ohio River Basin Restoration Plan - contributor	2020-present
<i>Ohio River Basin Confluence Summit</i> – co-led a tour of local green infrastructure	Oct 16, 2025
<i>Louisville Metropolitan Sewer District</i> – “Fall” in Love with Your Creek – Stream Macroinvertebrate Identification Station	Sept 28, 2025
<i>WLKY TV</i> – Outreach event / Interview on the urban greening/cooling project “GreenPrint”	Aug 21, 2025
Salt River Summit – tabled at the event for University of Louisville Dept of Biology	March, 2025
<i>Kentucky Watershed Watch</i> – Stream biomonitoring Training (macroinvertebrates)	June 8, 2024

Local Schools

Moore Elementary School Day of Science – demonstrated plant uptake of carbon dioxide	March 23, 2023
<i>duPont Manual High School</i> - mentored Khushi Pola in her junior research project on tree methane emissions in urban parks	Oct 2021-Oct 2022
<i>Louisville Regional Science and Engineering Fair</i> – poster and presentation judge	2021, 2022

University of Louisville Biology Department

- Graduate Program Committee (2022-present), Personnel Committee (ad hoc member, 21-22 academic year)
- ad hoc Horner Management Group, Biology Graduate Curriculum, and Ecology and Evolutionary Biology Curriculum Committees

University of Louisville (university-wide)

Sustainable Operations Committee (2022-present)
University Sustainability Council Education and Research Committee (2022-present)

Scientific Community

<i>Workshop Organizer, 2025 Symposium on Urbanization and Stream Ecology. “Ecosystem Service Tradeoffs in Urban Waters”</i> (link)	May 13-16, 2025
<i>Special Session Organizer and Chair, ASLO 2021 Aquatic Sciences Virtual Meeting. “SS79 New perspectives on the functional roles of fauna in wetlands, lakes, and other aquatic ecosystems”</i> 22–27 June 2021 (link)	June 2021

Reviews for *Agronomy; Aquatic Ecology; Diversity; Ecological Engineering; Ecological Restoration; Entomologia Experimentalis et Applicata; Estuarine, Coastal and Shelf Science; Freshwater Biology; Freshwater Science; Journal of Environmental Quality; Journal of Sustainable Water in the Built Environment; Limnology & Oceanography; Pedosphere; PloS ONE; Scientific Reports; Science of the Total Environment; Soil & Tillage Research; Water, Air, & Soil Pollution; Water Research*

* *With the exception of Education and Professional Appointments, activities listed in all sections are since 2010*