

Louise M. Stevenson, Ph.D.
Aquatic Ecologist, Toxicology Lab PI
Environmental Sciences Division

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Professional Preparation

Amherst College	Amherst, MA	Biology B.A., 2009
University of California, Santa Barbara	Santa Barbara, CA	Ecology Ph.D., 2016
Univ of California, Santa Barbara	Santa Barbara, CA	Ecotoxicology 2016-18

Appointments

2020-pres. Associate R&D Staff Member (Researcher) and Toxicology Lab Principal Investigator (PI), Aquatic Ecology Group, Environmental Sciences Division, Oak Ridge National Lab, Oak Ridge, TN

2018-2020 Assistant Professor of Environmental Toxicology, Department of Biological Sciences, Bowling Green State University

2016-2018 Postdoctoral researcher, Ecology, Evolution and Marine Biology, University of California, Santa Barbara

2013-2016 Graduate Student Researcher, UC Center for Environmental Implications of Nanotechnology

2013-2016 Graduate Research Fellow, Center for Nanotechnology and Society

Publications

Peer-reviewed publications

Mathews, T., Stevenson, L., Pickhardt, P. C., Murphy, C. A., Nisbet, R. M., Antczak, P., Garcia-Reyero, N. & Gergs, A. 2020. The Effect of Dietary Exposure to Coal Ash Contaminants Within Food Ration on Growth and Reproduction in *Daphnia magna*. *Environmental Toxicology and Chemistry*. doi: 10.1002/etc.4819

CA Murphy, RM Nisbet, P Antczak, N Garcia-Reyero, A Gergs, K Like, T Mathews, EB Muller, D Nacci, A Peace, CH Remien, IR Shultz, LM Stevenson, and KH Watanabe. 2018. Incorporating sub-organismal processes into dynamic energy budget models for ecological risk assessment. *Integrated Environmental Assessment and Management*, DOI: 10.1002/ieam.4063

LM Stevenson, AS Adeleye, Y Su, Y Zhang, AA Keller, and RM Nisbet. 2017. Remediation of cadmium toxicity by sulfidized nano-iron: The importance of organic material. *ACS nano*, 11(10), 10558-10567.

LM Stevenson, KE Krattenmaker, E Johnson, AJ Bowers, AS Adeleye, E McCauley, and RM Nisbet. 2017. Standardized toxicity testing may underestimate ecotoxicity: Environmentally-relevant food rations increase the toxicity of silver nanoparticles to *Daphnia*. *Environmental toxicology & chemistry*, DOI: 10.1002/etc.3869.

T Partridge, M Thomas, BH Harthorn, N Pidgeon, A Hasell, L Stevenson, C Enders. 2017. Seeing futures now: Emergent US and UK views on shale development, climate change and energy systems. *Global Environmental Change*, 42:1-12.

AS Adeleye, LM Stevenson, Y Su, RM Nisbet, Y Zhang, and AA Keller. 2016. Influence of phytoplankton on fate and effects of modified zero-valent iron nanoparticles. *Environmental science & technology*, 50: 5597–5605.

AC Brown, LM Stevenson, HM Leonard, K Nieves-Puigdoller, and ED Clotfelter. 2014. Phytoestrogens β -Sitosterol and Genistein Have Limited Effects on Reproductive Endpoints in a Female Fish, *Betta splendens*. *BioMed Research International*, vol. 2014, Article ID 681396.

LM Stevenson, H Dickson, T Klanjscek, AA Keller, E McCauley, and RM Nisbet. 2013. Environmental Feedbacks and Engineered Nanoparticles: Mitigation of Silver Nanoparticle Toxicity to *Chlamydomonas reinhardtii* by Algal Produced Organic Compounds. *PLoS ONE*, 8(9): e74456.

LM Stevenson, AC Brown, TM Montgomery, and ED Clotfelter. 2011. Reproductive

consequences of exposure to waterborne phytoestrogens in male fighting fish *Betta splendens*. *Archives of Environmental Contamination and Toxicology*, 60:501-510.

Submitted/in preparation

AL Peace, ... LM Stevenson, Hao Wang. Stoichiometric ecotoxicology for a multi-substance world. *BioScience*. Submitted.

LM Stevenson, EB Muller, D Nacci, BW Clark, A Whitehead, RM Nisbet. An integrated bioenergetics and TK/TD model of suborganismal and organismal responses of *Fundulus heteroclitus* exposed to dioxin-like chemicals.

LM Stevenson, KE Krattenmaker, E McCauley, and RM Nisbet. AgNPs toxic to individuals have no effect on populations of *Daphnia*: Ecological feedbacks save daphnid populations from AgNP toxicity.

Active and previous research support

Sea Grant – NOAA *McCluney (PI)* *2/20-1/22*

“Variation in contaminant concentrations in wastewater and in biota of streams of NW Ohio”
\$120,000

To identify and quantify contaminants (such as PFAS, illicit drugs, and pharmaceuticals) present in wastewater and stream organisms.

Role: co-PI

Building Strength Grant, BGSU *Stevenson (PI)* *7/19-6/20*

“You are what you eat: does corn grown on dredged material impact body and brain development?” \$9,956

This project is to study the impact of dietary exposure of corn grown on dredged material to maternal rats on their offspring’s development, including neurological function.

Sea Change Ventures Grant, BGSU *Stevenson (PI)* *6/19-3/20*

“Integrating quantitative thinking into environmental toxicology: using computational models to solve real-world biological problems” \$10,228

This grant is to fund development of a quantitative ecotoxicology module for an environmental toxicology course at BGSU.

Ohio Lake Erie Commission – Lake Erie Protection Fund *Rúa (PI)* *10/18-12/19*

“Improving soil health and monitoring contaminant movement to increase plant production and quality on dredged material” \$49,990

Funded to study the agricultural use of dredged material from Lake Erie and to monitor contaminant bioaccumulation into crop material and runoff.

Role: co-PI

Departmental Start-Up Grant, BGSU *Stevenson (PI)* *9/18-5/20*

Research Start-Up Funds

The purpose of this grant is for set of the PI’s laboratory and fund preliminary studies needed to be competitive for extramural research support.

Invited seminars

2020 The Ohio State University in Columbus, OH. Ecology, Evolution, and Organismal Biology departmental seminar. Host: Dr. Roman Lanno.

2020 University of Minnesota in Saint Paul, MN. Ecology, Evolution, and Behavior departmental seminar. Host: Dr. Valery Forbes.

2020 Wright State University in Dayton, OH. Biological Sciences departmental seminar. Host: Dr. Megan Rua.

2019 Oak Ridge National Laboratory. Oak Ridge, TN. Invited to give seminar to Aquatic Sciences research group. Host: Dr. Theresa Mathews.

2018 SETAC Ohio Valley Regional Chapter Meeting. Columbus, OH. Invited abstract for session. Platform talk: “Extrapolating the effects of food and silver nanoparticle stress on individuals to populations of *Daphnia*: an empirical and theoretical approach”

2018 Society for Environmental Toxicology and Chemistry (SETAC), Europe. Rome, Italy. Invited abstract for session. Platform talk: "Connecting suborganismal and organismal responses using Dynamic Energy Budget Modeling and the ecological model species *Fundulus heteroclitus*"

Service

2019-pres. SETAC National Meeting Planning Committee, Community Engagement Subcommittee, Abstract Review Committee
2018-pres. SETAC Student Advisory Committee
2018-pres. SETAC Inclusive Diversity Committee member
2019-2020 Research Committee, Department of Biological Sciences, BGSU
2018-2020 Social Committee, Department of Biological Sciences, BGSU
2018-2020 SETAC Ohio Valley Regional Chapter, Member of Board of Directors
2017-2020 SETAC Early Career Committee member, Senior Resource Group Liaison
2013-2015 SETAC, North America Student Advisory Council, Outreach Subcommittee chair
2013-2015 SETAC, Southern California Regional Chapter, Member of Board of Directors
2010-2014 UCSB Ecology, Evolution, and Marine Biology (EEMB) Graduate Student Advisory Committee, Funding Peer
2013-2018 Amherst College, Amherst Pathways Program, Alumni Mentor
2013-2016 The Hockaday School, Girls Advancing in Science, Technology and Mathematics (GAINS) Network, Alumni Mentor

Journal peer reviewer

Bulletin of Mathematical Biology	Environmental Pollution
Chemosphere	Environmental Sciences – Nano
Ecology Letters	PeerJ
Ecotoxicology	Methods in Ecology and Evolution
Ecotoxicology and Environmental Safety	Toxics
Environmental Science and Technology	Water Environment Research

Presentations

2020 SETAC Carolinas Chapter Meeting. Boone, NC (virtual).
2019 SETAC North America National Meeting. Toronto, Ontario, Canada.
2019 SETAC Europe. Helsinki, Finland (presented by coauthor).
2018 SETAC Special Session: Extrapolation between levels of biological organization. Brussels, Belgium (presentation and poster presented by coauthors)
2018 SETAC Europe. Rome, Italy
2018 SETAC Ohio Valley Regional Chapter Meeting. Columbus, OH
2017 Ecological Society of America. Portland, OR
2017 Sustainable Nanotechnology Organization. Los Angeles, CA
2016 SETAC Young Environmental Scientists Meeting. Gainesville, FL
2015 SETAC North America National Meeting. Salt Lake City, UT
2014 Democratizing Technologies: Assessing the Roles of NGOs in Shaping Technological Futures. Santa Barbara, CA (Rapporteur)
2013 Sustainable Nanotechnology Organization. Santa Barbara, CA (poster)
2013 UC CEIN Nanotechnology EH&S Forum. Los Angeles, CA (poster)
2013 SETAC Young Environmental Scientists Meeting. Krakow, Poland
2012 SETAC North America National Meeting. Long Beach, CA
2012 International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Alberta, Canada (poster)

Graduate student mentorship

Committee member

Ashley Julian	Doctoral degree	Wright State University
Alexandra Neal	Doctoral degree	BGSU
Alessia Saul	Master's degree	BGSU
Dale Schink	Master's degree	BGSU

Adenike Shittu	Master's degree	BGSU
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Graduated

Carrie Coy	Master's degree	BGSU	Committee member
Kristi Weighman	Master's degree	BGSU	Committee member
Allie Steele	Doctoral degree	BGSU	Committee member
Melanie Marshall	Doctoral degree	BGSU	Committee member

Awards & Fellowships

2014 & 2015	UCSB Instructional Improvement Grant, "Population Ecology in the Introductory Biology Laboratories": Part 1 (2014) and Part 2 (2015)
2010-2013	National Science Foundation Graduate Research Fellow
2013	Young Environmental Scientists Meeting Travel Grant, Krakow, Poland
2012 & 2014	Worster Summer Research Fellowship Program, UCSB
2012	International Conference on the Environmental Effects of Nanomaterials Student Travel Award, Alberta, Canada
2010	The Lloyd I. Rosenblum Memorial Fellowship for Graduate Studies, Amherst College

Teaching and Mentoring Experience

2020	Bowling Green State University (BGSU), <i>Environmental Toxicology</i> Taught accelerated course in Environmental Toxicology as an upper-level course for biology majors) with in-person and online sections.
2019	BGSU, <i>Concepts in Biology I</i> Taught large lecture course in Intro Biology to majors. Incorporated Learning Assistants & team-based learning strategies for active learning.
2019	BGSU, <i>Life in the Sea</i> Taught online course on Life in the Sea to non-biology majors.
2018	BGSU, <i>Seminar in Individual Based Modeling (August-December)</i> Developed a graduate-level seminar in which students developed, coded, and analyzed an IBM on their research.
2017	UCSB, Bren School of Environmental Science and Management, <i>Lecturer - Environmental Toxicology (April-June)</i> Developed an Environmental Toxicology course for students in the Masters of Environmental Science and Management Program.
2010-16	UCSB, Nisbet/McCauley Lab, <i>Graduate Student</i> Mentored undergraduate lab assistants; all students conducted independent research projects.
2013-16	UCSB, Ecological Modeling, <i>Teaching Assistant (January-March)</i> Taught computer laboratory sections (MATLAB) for an upper level undergraduate and graduate course on Ecological Modeling.
2015	Science Buddies Science Fair Project, <i>Author</i> Project title: "Looking Downstream: Could Nanosilver in Consumer Products Affect Pond Life?" Online here: https://goo.gl/doQFwa .
2015	UCSB, Software Carpentry Bootcamp for R, <i>Instructor (April)</i>
2014 & 2015	UCSB Instructional Improvement Grant Received grants to redesign Intro Bio computational ecology lab
2012-15	UCSB, Toxics in the Environment, <i>Invited Lecturer (March)</i>
2012 & 2014	UCSB, Worster Summer Research Fellowship Program (<i>June-September</i>) Funding for undergraduate-graduate student research teams.
2013 & 2014	UCSB, Freshmen Summer Start Program, <i>Invited Lecturer (August)</i>
2013	UCSB, Introduction to Ecology, <i>Teaching Assistant (June-July)</i>