Michael Frederick Meyer
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Education

Ph.D. Candidate in Environmental and Natural Resource Science — 2015 - present
Washington State University School of the Environment
Advisor: Stephanie Hampton
NSF Graduate Research Fellowship (2015-2020)
GPA: 3.79/4.00

B.S. Biology (Concentration: Ecology and Evolution) — 2010 – 2014
Minor in Conservation and Biodiversity
Advisors: Bob Aldridge and Gerardo Camilo
Saint Louis University, St. Louis, MO
GPA: 3.65/4.00

B.A. Russian Studies — 2010 – 2014
Minor in Russian and East European Area Studies
Advisor: David Murphy
Saint Louis University, St. Louis, MO
GPA: 3.65/4.00

B.A. International Studies — 2010 – 2014
Minor in Catholic Studies
Advisors: David Borgmeyer and Chris Collins
Saint Louis University, St. Louis, MO
GPA: 3.65/4.00

Fellowships, Internships, Scholarships, and Awards (Funding organizations in parentheses)

Environmental Data Initiative's Featured Dataset — 2020
Robert Lane Scholarship for Environmental Science (Washington State University) — 2019
Best student poster (Northwest Scientific Association) — 2019
Robert Lane Scholarship for Environmental Science (Washington State University) — 2018
Robert Lane Scholarship for Environmental Science (Washington State University) — 2017
GPSA Graduate Student Travel Grant (Washington State University) — 2016
Robert Lane Scholarship for Environmental Science (Washington State University) — 2016
NSF Graduate Research Fellow — 2015 – 2020
Fulbright Research Student Fellow (U.S. State Department) — 2014 – 2015
Irkutsk State University, Irkutsk, Russian Federation
Advanced Critical Language Alumni Development Grant (U.S. State Department) — 2015
Advanced Critical Language Scholar in Russian (US. State Department) — 2014
Institute of Humanitarian and Social Studies, Kazan, Russian Federation
Tahoe-Baikal Institute Alumni Research Exchange (Saint Louis University) — 2013
Biological Research Institute at Irkutsk State University, Irkutsk, Russian Federation

Biotechnology and Russian Language Internship (U.S. Department of Education) 2013
Moscow State University, Moscow, Russian Federation
Tahoe-Baikal Institute Summer Environmental Exchange 2012
(Tahoe-Baikal Institute and Saint Louis University)
Saint Louis University Vice-Presidential Scholarship 2010 – 2014

Peer Reviewed Publications (* indicates that authors contributed equally)

Meyer, M.F., T. Ozersky, K.H. Woo, K. Shchapov, A.W.E. Galloway, J. Schram, E.J. Rosi, D.D. Snow, M.A. Timofeyev, Yu.M. Zaitseva, D.Yu. Karnaukhov, N.A. Bondarenko, M.R. Brousil, S.E. Hampton. **Under Review.** Effects of spatially heterogeneous lakeside development on nearshore biotic communities in a large, deep, oligotrophic lake (Lake Baikal, Siberia).

Meyer, M.F., T. Ozersky, K.H. Woo, K. Shchapov, A.W.E. Galloway, J. Schram, E.J. Rosi, D.D. Snow, M.A. Timofeyev, Yu.M. Zaitseva, D.Yu. Karnaukhov, N.A. Bondarenko, M.R. Brousil, S.E. Hampton. **Under Review.** A unified dataset of co-located sewage pollution, periphyton, and benthic macroinvertebrate community and foodweb structure from Lake Baikal (Siberia).

Sharma, S.*, **M.F. Meyer***, J. Culpepper*, X. Yang*, S.E. Hampton, S.A. Berger, M.R. Brousil, S.C. Fradkin, S.N. Higgins, K.J. Jankowski, G. Kirillin, A.P. Smits, E.C. Whitaker, F. Yousef, S. Zhang. **2020.** Integrating perspectives to understand lake ice dynamics in a changing world. Journal of Geophysical Research – Biogeosciences. https://doi.org/10.1029/2020JG005799

Meyer M.F.*, S. G. Labou*, A. N. Cramer, M. R. Brousil, B. T. Luff. **2020**. Global Lake area, Climate, and Population (GLCP) Dataset. Scientific Data 7:174. https://doi.org/10.1038/s41597-020-0517-4.

Rheubert, J. L., **M.F. Meyer**, R. Strobel, M. Pasternak, R. Charvat. **2020.** Predicting antibacterial activity from snake venom proteomes. PLoS ONE 15(1): e0226807. https://doi.org/10.1371/journal.pone.0226807.

Meyer, M. F., S. M. Powers, and S. E. Hampton. **2019.** An evidence synthesis of pharmaceuticals and personal care products (PPCPs) in the environment: imbalances among compounds, sewage treatment techniques, and ecosystem types. Environmental Science & Technology. https://doi.org/10.1021/acs.est.9b02966.

Hampton, S. E., S. McGowan, T. Ozersky, S. G. P. Virdis, T. T. Vu, T. L. Spanbauer, B. M. Kraemer, G. Swann, A. W. Mackay, S. M. Powers, **M. F. Meyer**, S. G. Labou, C. M. O'Reilly, M. DiCarlo, A. W. E. Galloway, & S. C. Fritz. **2018**. Recent ecological change in ancient lakes. Limnology and Oceanography. http://doi.wiley.com/10.1002/lno.10938.

Bedulina D., **Meyer M.F.**, Gurkov A., Kondratyeva K., Baduev B., Gusdorf R., Timofeyev M. **2017**. Intersexual differences of heat shock response between two amphipods Eulimnogammarus verrucosus and Eulimnogammarus cyaneus in Lake Baikal. PeerJ 5:e2864. https://doi.org/10.7717/peerj.2864.

Meyer, M. F., S. E. Hampton, T. Ozersky, O. O. Rusanovskaya, & K. H. Woo. **2016**. Vulnerability of rotifers and copepod nauplii to predation by Cyclops kolensis (Crustacea, Copepoda) under varying temperatures in Lake Baikal, Siberia. Hydrobiologia. https://doi.org/10.1007/s10750-016-3005-2.

Non-peer reviewed publications (* indicates that authors contributed equally)

Meyer, M. F.*, R. Ladwig*, H. A. Dugan, and 26 others. **In press**. Virtual growing pains: Initial lessons learned from organizing virtual workshops, summits, conferences, and networking events during a global pandemic. Limnology and Oceanography Bulletin.

Meyer, M. F.*, and J. A. Zwart*. **2020.** Virtual Summit: Incorporating Data Science and Open Science in Aquatic Research. Limnology and Oceanography Bulletin 29: 144–146. doi:https://doi.org/10.1002/lob.10411

Meyer, M. F., M. R. Brousil, A. N. Cramer, B. P. Lanouette, J. C. Padowski, and S. E. Hampton. **2020**. The Global Lake Area, Climate, and Population Dataset: A New Tool for Addressing Critical Limnological Questions. Limnology and Oceanography Bulletin 29: 110–116. doi:https://doi.org/10.1002/lob.10406

Meyer M.F.*, S. G. Labou*, A. N. Cramer, M. R. Brousil, B. T. Luff. **2019.** Global Lake area, Climate, and Population (GLCP) Dataset. EarthArXiv.

Advanced-stage projects for publication (Intended submission by 31 May 2021)

Atkins, K., T. Shannon, **M.F. Meyer**, N. Framstead, I.A. Oleksy, D. Gurung. Integrating ecological and hydrological perspectives in understanding lake surface-groundwater processes.

Meyer, M.F., M.R. Brousil, E.H. Bloom, B.W. Lee, M.L. Armstrong, D.W. Crowder, S.E. Hampton. Detecting and predicting pharmaceutical and personal care product (PPCP) accumulation in preserved bees in the Pacific Northwest.

Published Datasets (* indicates that authors contributed equally)

Meyer, M. F., T. Ozersky, K. H. Woo, and others. **2020**. A unified dataset of co-located sewage pollution, periphyton, and benthic macroinvertebrate community and food web structure from Lake Baikal (Siberia). doi:10.6073/PASTA/76F43144015EC795679BAC508EFA044B

Labou S.G.**, M.F. Meyer***, M. R. Brousil, A. N. Cramer, B. T. Luff. **2019**. Global Lake area, Climate, and Population (GLCP) Dataset. Environmental Data Initiative. https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=394

Meyer, M., T. Ozersky, K. Woo, A. W. E. Galloway, M. R. Brousil, and S. Hampton. **2015**. Baikal Food Webs.doi:10.17605/OSF.IO/9TA8Z

Presentations and Invited Talks ($^{+}$ indicates canceled due to COVID19 pandemic)

Meyer M.F., T. Ozersky, K.H. Woo, K. Shchapov, D. Snow, E.J. Rosi, N. Bondarenko, M.A. Timofeev, Y.M. Zaisteva, D.Yu. Karnaukhov. M.R. Brousil, S.E. Hampton. Effects of lakeside development on nearshore benthic communities in Lake Baikal (Siberia). 2020. Ecological Society of America.

Meyer, M. F., S. M. Powers, and S. E. Hampton. An evidence synthesis of pharmaceuticals and personal care products (PPCPs) in the environment: imbalances among compounds, sewage treatment techniques, and ecosystem types. 2020. Ecological Society of America.

Meyer, M.F., M.R. Brousil, A.N. Cramer, B.P. Lanouette, J.C. Padowski, S.E. Hampton. 2020. Accessing the power of remote sensing for applied limnological questions using the global lake area, climate, and population (GLCP) dataset. Virtual Summit: Incorporating Data Science and Open Science Techniques in Aquatic Research.

Meyer, M.F., J.L. Rheubert, R. Charvat. Predicting antibiotic efficacy using snake venom proteomes. 2020^{+}. useR. St. Louis, MO.

Meyer, M.F., M.R. Brousil, A.N. Cramer, B.P. Lanouette, S.E. Hampton. Accessing the power of remote sensing for applied limnological questions using the global lake area, climate, and population (GLCP) dataset. 2020^{+}. Association for the Sciences of Limnology and Oceanography. Madison, WI.

Meyer, M.F., M.R. Brousil, E.H. Bloom, B.W. Lee, M.L. Armstrong, D.W. Crowder, S.E. Hampton. Detecting and predicting pharmaceutical and personal care product (PPCP) accumulation in preserved bees in the Pacific Northwest. 2020+. Northwest Scientific Association. Eugene, OR.

Meyer M.F., S. E. Hampton, M. R. Brousil, A. N. Cramer. Quantifying changes in high elevation lake surface area over 20 years (1995-2015) in relation to climate and human population. 2019. Global Lake Ecological Observatory Network (GLEON) 21. Huntsville, ON, Canada.

Meyer M.F., B.T. Luff. Vulnerability of rotifer and copepod nauplii to predation in Flathead Lake (MT). 2019. Northwest Scientific Association. Lewiston, ID.

Meyer M.F., S.G. Labou, A.N. Cramer, M.R. Brousil. 2018. Global Lake area, Climate, and Population Dataset. American Geophysical Union. Washington D.C.

Cramer, A.N., **M.F. Meyer**, S.G. Labou, M.R. Brousil. 2018. Quantifying changes in global lake surface area over 21 years (1995-2015) in relation to climate and human population. American Geophysical Union. Washington D.C.

Meyer M.F., S.E. Hampton, T. Ozersky, K.H. Woo, K. Schapov, D. Snow, E.J. Rosi, N. Bondarenko, M.A. Timofeev, Y.M. Zaisteva, D. Yu. Karnaukhov. 2018. Effects of lakeside development on nearshore benthic communities along the southwestern shore of Lake Baikal (Siberia). ASLO 2018 summer conference. Victoria, B.C.

Meyer M.F. 2017. The effects of lakeside development on nearshore benthic communities in large, deep, oligotrophic lakes. Invited seminar at Flathead Lake Biological Stations, University of Montana, Polson, MT.

Meyer M.F., D. Bedulina. 2015. Экология между масштабами: методы молекулярной экологии в анализе популяционного ответа на стрессовое воздействие (Ecology Between Scales: Methods of Molecular Ecology in the Analysis of Population-Level Responses to Stress). Concluding Presentation of Fulbright Research at the Biological Research Institute, Irkutsk, Russian Federation.

Meyer M.F. 2015. Экология в 3Д: Измерение биоразнообразие в 21-ом веке (Ecology in 3D: Measuring Biodiversity in the 21st Century). Invited student speaker at the Russian Academy of the Science's Institute for Ecology, Cryology, and Natural Resources, Chita, Russian Federation.

Meyer. M.F. 2014. Забота об окружающей среде и охрана культурного наследия: Философский вопрос о взаимоотношениях между защитой природы и духовностью в бассейне озера Байкал (Caring for Creation and Nurturing Nature: Philosophical Questions about the Relationship Between Protecting Nature and Spirituality in the Lake Baikal Watershed). Invited Speaker for the National Traveling Conference for Young Researchers at the Russian Academy of Sciences' Geographical Institute, Irkutsk, Russian Federation.

Meyer M.F. 2013. Environmental Spirituality of the Lake Baikal Watershed: An Analysis in the Relationship between Spirituality and Environmentalism. Speaker for the Central Slavic Conference. St. Louis, MO.

Meyer M.F. 2013. The Lake Tahoe and Baikal Watersheds: A Case of Environmentalism and Social Justice. Speaker for the "Local and Global Social Justice Conference" at Saint Louis University. St. Louis, MO.

Meyer M.F. 2012. The Tahoe and Baikal Watersheds: An Analysis of Science, Politics, Economics and Culture. Speaker for the Central Slavic Conference. St. Louis, MO.

Meyer M.F., K. Ficken, M. Roberston. 2012. Ландшафтно-экологическое обоснование экологической тропы вдоль реки «выдрыной». (Landscape Survey of an Ecological Trail along the Vydrinaya River). Speaker and Translator at the research colloquium at the Baikalsky Biosphere Preserve, Tankhoj, Russian Federation.

Gurkov A., A. Makarshina , **Meyer M.F.**, S. Dreher, J. Evans. 2012. Monitoring of the Upper Truckee River. Speaker and Translator for research colloquium hosted by the California Tahoe-Conservancy. Tahoe, CA.

Professional Service

Reviewer for: *Ecological Informatics, BioScience, Journal of Hazardous Materials*

Co-organizer of the Virtual Summit: Integrating Data Science & Open Science Techniques in Aquatic Research. July 2020. 160+ virtual attendees.

Teaching Experience

Instructor for Reproducible Research Techniques with R: Intro to Modeling, Wash. St. Univ	2020
Instructor for Data Carpentry for Ecologists, Wash. St. Univ	2019
Instructor for Software Carpentry for Ecologists, Wash. St. Univ	2019
Co- and lead for R Statistical Computing Working Group at Wash. St. Univ.	2019
Instructor for Data Management Workshop, Northwest Scientific Assoc.	2019
Instructor for Data Carpentry for Ecologists, Wash. St. Univ	2018
Teaching Assistant for HONORS290: Science as a Way of Knowing, Wash. St. Univ.	2018
Teaching Assistant for HONORS290: Science as a Way of Knowing, Wash. St. Univ.	2017
Teaching Assistant for HONORS290: Science as a Way of Knowing, Wash. St. Univ.	2016
Teaching Assistant for BIOL306 (Cell Structure and Function Laboratory), St. Louis Univ.	2014
Teaching Assistant for BIOL104 (Principles of Biology I), St. Louis Univ.	2013

Invited Lectures

R-Working Group at WSU: “Introduction to R”	2020
R-Working Group at WSU: “Exhaustive Model Selection and Validation in R”	2020
R-Working Group at WSU: “Distance-based multivariate statistics in R”	2019
R-Working Group at WSU: “An Introduction to data.table”	2019
R-Working Group at WSU: “Text Analysis in R”	2018
R-Working Group at WSU: “Using Venom Protein Data to Predict Antibiotic Efficacy”	2018
R-Working Group at WSU: “Incorporating R Markdown into Regular Practice”	2017
Developmental Biology at WSU: “A [Brief] Introduction to Biological Wastewater Treatment”	2017
R-Working Group at WSU: “Introduction to Spatial Statistics”	2016
R-Working Group at WSU: “Data Manipulation using dplyr and reshape2”	2016

Professional Development and Workshops

Enabling Interdisciplinary and Team Science Training Course, AIBS, Virtual	2020
Fundamentals of Ecosystem Ecology, Cary Institute, Millbrook, NY	2019
Certified Carpentries Instructor, Seattle, WA	2018
Spatial Statistics in Stream Networks, Pullman, WA	2017
Creative Writing in Environmental Sciences, Pullman, WA	2017
GIS Aquatic Ecology and Hydrology Workshop, St. Louis, MO	2016
AAAS Catalyzing Advocacy in Science and Engineering, Washington D.C.	2016

Outreach Work

The Science Pawdcast podcast guest	2020

LGBTstem podcast guest 2020
Sunnyside Elementary speaker for career day, Pullman, WA 2018
Graduate Mentor for Washington State University Water Resources Club 2016 – 2018
Invited Speaker, Moscow-Pullman "Science After Dark" Lecture Series 2016
Committee Member for UNESCO Associated Schools, Lyceum ISU, Irkutsk, Russian Fed. 2015
Board Member for Tahoe-Baikal Institute 2012 – 2014
Finance Committee
Programming Committee
Admissions Committee

Special Skills

Languages:

- English (Native)
- Russian (Advanced)
    - US State Department Oral Proficiency Indicator: Advanced-High
    - Interpreter certification by Test of Russian as a Foreign Language (Chita, Russia, 2015)
- Polish (Elementary)
- Czech (Elementary)
- Bosnian Serbo-Croatian (Elementary)

Computational and Analytical Skills:

- R, GIS, Google Earth Engine, High Performance Computing
- Spatial statistics, time series analysis, multivariate analytics
- Liquid-Chromatography Mass-Spectroscopy, Gas-Chromatography Mass-Spectroscopy

Professional Organizations

βββ (Biological Honor Society), Association for the Sciences of Limnology and Oceanography (ASLO), International Association for Great Lakes Research (IAGLR)