BRETT A. POULIN, PH.D.

Assistant Professor, Department of Environmental Toxicology, University of California Davis, Davis, California, July 2020 – present.

WORK CONTACT INFORMATION

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EDUCATION

Ph.D., Environmental Engineering; University of Colorado Boulder; Boulder, Colorado; Conferred December 15, 2016 (attended from June 2013 – December 2016)

M.S., Environmental Engineering; University of Colorado Boulder; Boulder, Colorado; Conferred May 10, 2013 (attended from August 2011 – May 2013)

B.S., Chemistry; University of California at Santa Cruz; Santa Cruz, California; Conferred June 12, 2008 (attended September 2003 – June 2008)

B.S., Molecular, Cell, and Developmental Biology; University of California at Santa Cruz; Santa Cruz, California; Conferred June 12, 2008 (attended September 2003 – June 2008)

PAST POSITIONS

Chemist and Science Lead, U.S. Geological Survey, Organic Carbon Mitigation in Aquatic Environments Laboratory, Boulder, Colorado, December 2016 – July 2020.

Graduate Research Assistant, University of Colorado Boulder, Boulder, Colorado, August 2011 – December 2016.

Chemist - Pathways Career Internship Student Trainee, U.S. Geological Survey, Organic Carbon Mitigation in Aquatic Environments Laboratory, Boulder, Colorado, June 2010 – August 2016.

Undergraduate Research Assistant, University of California at Santa Cruz, February 2005 – June 2008.

AWARDS AND HONORS

2015 Pathfinder Graduate Student Fellowship, CUAHSI.

2012 Student Travel Fellowship, U.S. Department of Energy Subsurface Biogeochemical Research Meeting, Annual Principle Investigator Meeting, Washington, D.C.

2008 Thesis Honors, Chemistry, University of California at Santa Cruz.

2008 Undergraduate Dean's Award, Chemistry, University of California at Santa Cruz.

2008 Undergraduate Chancellor's Award, Division of Physical and Biologic Sciences, University of California at Santa Cruz.

PUBLICATIONS

2021 **Poulin, B.A.** Janssen, S.J., Rosera, T.J., Krabbenhoft, D.P., Eagles-Smith, C.A., Ackerman, J.T., Stewart, A.R., Kim, E., Baumann, Z., Kim, J.-H., Manceau, A. Isotopic fractionation from *in vivo* methylmercury detoxification in waterbirds. *ACS Earth and Space Chemistry*. DOI: 10.1021/acsearthspacechem.1c00051.

Hosen, J.D., Allen, G.H., Amatuli, G., Breitmeyer, S., Cohen, M.J., Crump, B.C., Lu., Y.H., Payet, J.P., **Poulin, B.A.**, Stubbins, A., Yoon, B., Raymond, P.A. (2021) River network travel time is correlated with dissolved organic matter composition in rivers of the contiguous United States. *Hydrological Processes* e14124, DOI: 10.1002/hyp.14124.

Sikder, M., Croteau, M.-N., **Poulin, B.A.**, and Baalousha, M. (2021) Effect of nanoparticle size and natural organic matter composition on the bioavailability of polyvinylpyrrolidone coated platinum nanoparticles to a model freshwater invertebrate. *Environmental Science & Technology* 55, 2452-2461, DOI: 10.1021/acs.est.0c05985.

Manceau A., Bourdineaud J.-P., Oliveira R.B., Sarrazin S.L.F., Krabbenhoft D.P., Eagles-Smith C.A., Ackerman J.T., Stewart A.R., Ward-Deitrich C., Estela del Castillo Busto M., Goenaga-Infanta H., Wack A., Retegan M., Detlefs B., Glatzel P., Bustamante P., Nagy K.L., **Poulin B.A.** (2021) Demethylation of methylmercury in bird, fish, and earthworm. *Environmental Science & Technology* 55, 1527-1534, DOI: 10.1021/acs.est.0c04948.

2020 Kurek, M., **Poulin, B.A.**, McKenna, A.M., Spencer, R.G.M. (2020) Deciphering dissolved organic matter: Ionization, dopant, and fragmentation insights via Fourier transform-ion cyclotron resonance mass spectrometry. *Environmental Science & Technology* 54, 16249-16259, DOI: 10.1021/acs.est.0c05206.

Sikder, M., Wang, J., **Poulin, B.A.**, Tfaily, M.M., Baalousha, M. (2020) Nanoparticle size and natural organic matter composition determine aggregation behavior of polyvinylpyrrolidone coated platinum nanoparticles. *Environmental Science: Nano*. DOI: 10.1039/D0EN00659A.

Baldwin, A., **Poulin, B.A.,** Naymik, J., Hoovestol, C., Clark, G., and Krabbenhoft, D.P. (2020) Seasonal dynamics and interannual variability in mercury concentrations and loads through a three-reservoir complex. *Environmental Science & Technology* 54, 9305-9314, DOI: 10.1021/acs.est.9b07103.

Orem, W.H., Fitz, C., Krabbenhoft, D.P., **Poulin, B.A.**, Varonka, M.S., and Aiken, G.R. (2020) Ecosystem-scale modeling and field observations of sulfate and methylmercury distributions in the Florida Everglades: Responses to reductions in sulfate loading. *Aquatic Geochemistry*, DOI: 10.1007/s10498-020-09368-w.

2019 **Poulin, B.A.,** Ryan, J.N., Tate, M.T., Krabbenhoft, D.P., Hines, M.E., Barkay, T., Schaefer, J., and Aiken, G.R. (2019) Geochemical factors controlling dissolved elemental mercury and

methylmercury formation in Alaskan wetlands of varying trophic status. *Environmental Science & Technology* 53, 6203-6213, DOI: 10.1021/acs.est.8b06041.

O'Donnell, J.A., Carey, M.P., Koch, J.C., Xu, X., **Poulin, B.A.**, Walker, J., and Zimmerman, C.E. (2019) Permafrost hydrology drives the assimilation of old carbon by stream food webs in the Arctic. *Ecosystems*, DOI: 10.1007/s10021-019-00413-6.

2017 **Poulin, B.A.**, Gerbig, C.A., Kim, C.S., Stegemeier, J.P., Ryan, J.N., and Aiken, G.R. Effects of sulfide concentration and dissolved organic matter characteristics on the structure of nanocolloidal metacinnabar. (2017) *Environmental Science & Technology* 51, 13133-13142, DOI: 10.1021/acs.est.7b02687.

Poulin, B.A., Ryan, J.N., Nagy, K.L., Stubbins, A., Dittmar, T., Orem, W., Krabbenhoft, D.P., and Aiken, G.R. (2017) Spatial dependence of reduced sulfur in Everglades dissolved organic matter controlled by sulfate enrichment. *Environmental Science & Technology* 51, 3630-3639, DOI: 10.1021/acs.est.6b04142.

2016 **Poulin, B.A.**, Aiken, G.R., Nagy, K.L., Manceau, A., Krabbenhoft, D.P., and Ryan, J.N., (2016) Mercury transformation and release differs with depth and time in a contaminated riparian soil during simulated flooding. *Geochimica et Cosmochimica Acta* 176, 118-138, DOI: 10.1016/j.gca.2015.12.024.

2015 Manceau, A., Lemouchi, C., Enescu, M., Gaillot, A.-C., Lanson, M., Magnin, V., Glatzel, P., **Poulin, B.A.**, Ryan, J.N., Aiken, G.R., Gautier-Luneau, I., and Nagy, K.L. (2015) Formation of mercury sulfide from Hg(II)–thiolate complexes in natural organic matter. *Environmental Science & Technology* 49, 9787-9796, DOI: 10.1021/acs.est.5b02522.

2014 **Poulin, B.A.**, Ryan, J.N., and Aiken, G.R. (2014) Effects of iron on optical properties of dissolved organic matter. *Environmental Science & Technology* 48, 10098-10106, DOI: 10.1021/es502670r.

2012 Black, F.J., **Poulin, B.A.**, and Flegal, A.R. (2012) Factors controlling the abiotic photo-degradation of monomethylmercury in surface waters. *Geochimica et Cosmochimica Acta* 84, 492-507, DOI: 10.1016/j.gca.2012.01.019.

In Review or Under Revision

Manceau, A., Brossier, R., Poulin, B.A. Chemical forms of mercury in pilot whales from species-averaged mercury isotope signatures. *In Review at ACS Earth and Space Chemistry (submitted 03/28/2021)*.

BOOK CHAPTERS

Orem, W.H., Krabbenhoft, D.P., **Poulin, B.A.**, Aiken, G.R. 2019. Aquatic Cycling of Mercury. In *Mercury and the Everglades. A Synthesis and Model for Complex Ecosystem Restoration* (Rumbold, D.G., Pollman, C.D., Axelrad, D.M., Eds.), Springer, Springer Nature Switzerland. pp. 1-12.

Orem, W.H., Krabbenhoft, D.P., **Poulin, B.A.**, Aiken, G.R. 2019. Sulfur Contamination in the Everglades, a Major Control on Mercury Methylation. In *Mercury and the Everglades. A Synthesis and Model for Complex Ecosystem Restoration* (Rumbold, D.G., Pollman, C.D., Axelrad, D.M., Eds.), Springer, Springer Nature Switzerland. pp. 13-48.

CONFERENCE PRESENTATIONS

2021 **Poulin, B.A.,** O'Donnell, J.A., Carey, M.P., Koch, J.C., Orem, W., Krabbenhoft, D.P. The biogeochemistry of mercury, sulfur, and organic carbon in wetlands – from the subtropic to the Arctic. Oral presentation. 13th International Symposium on Biogeochemistry of Wetlands. March 22-25, 2021. Virtual.

Krabbenhoft, D.P., **Poulin, B.A.**, Tate, M., Ogorek, J., DeWild, J., Janssen, S., Orem, W., Varonka, M. Biogeochemical controls on mercury methylation in Everglades peat soils spanning a large range of trophic enrichment. Oral presentation. 13th International Symposium on Biogeochemistry of Wetlands. March 22-25, 2021. Virtual.

Peterson, B., McMahon, T., Poulin, B.A., Krabbenhoft, D.P., Orem, W., Babiarz, C. Identification of mercury-methylating organisms along a trophic gradient in the Florida Everglades. Oral presentation. 13th International Symposium on Biogeochemistry of Wetlands. March 22-25, 2021. Virtual.

Yoder, A.M., Baldwin, A.K., Marvin-DiPasquale, M., **Poulin, B.A.**, Naymik, J., Krabbenhoft, D.P. Trends in major chemical constituents along a river-reservoir system, Hells Canyon Complex, ID-OR. Oral presentation. 31st Annual Idaho Water Quality Workshop. January 26-28, 2021. Virtual.

Baldwin, A.K., Tate, M., Yoder, A., Krabbenhoft, D.P., Larsen, C., Naymik, J., **Poulin, B.A.** Mercury contributions from major tributaries to the Snake River. Oral presentation. 31st Annual Idaho Water Quality Workshop. January 26-28, 2021. Virtual.

2020 **Poulin, B.A.**, Bourdineaud J.-P., Oliveira R.B., Sarrazin S.L.F., Krabbenhoft D.P., Eagles-Smith C.A., Ackerman J.T., Stewart A.R., Ward-Deitrich C., Estela del Castillo Busto M., Goenaga-Infanta H., Wack A., Retegan M., Detlefs B., Glatzel P., Bustamante P., Nagy K.L., Manceau A. Methylmercury detoxification in vertebrates: novel insights from X-ray spectroscopy and stable isotopes. Oral presentation. SETAC North America 41st Annual Meeting. November 15-19, 2020. Virtual.

Krabbenhoft, D.P., **Poulin, B.A.**, Tate, M., Janssen, S., Ogorek, J., Dewild, J. Biogeochemical controls of mercury methylation in wetlands: From the subarctic to the subtropic. Oral presentation. SETAC North America 41st Annual Meeting. November 15-19, 2020. Virtual.

Tate, M., Krabbenhoft, D.P., Naymik, J., Eagles-Smith, C., **Poulin, B.A.**, Baldwin, A., Larsen, C., Gastelecutto, N., Myers, R., Marvin-DiPasquale, M., Willacker, J., Janssen, S., Dewild, J., Ogorek, J., Babiarz, C. Drivers of methylmercury accumulation in Brownlee Reservoir, Idaho and Oregon. Oral presentation. SETAC North America 41st Annual Meeting. November 15-19, 2020. Virtual.

Babiarz, C., Krabbenhoft, D.P., Tate, M., Dewild, J., Ogorek, J., Janssen, S., Aiken, G., **Poulin, B.A.**, Orem, W., Vronka, M., Kline, J., Castro, J., Spatial and temporal patterns in water quality, mercury and methylmercury from Everglades National Park. Oral presentation. SETAC North America 41st Annual Meeting. November 15-19, 2020. Virtual.

Peterson, B., **Poulin, B.A.**, McMahon, K., Krabbenhoft, D.P. Identification of mercury-methylating organisms along a trophic gradient in the Florida Everglades. Oral presentation. SETAC North America 41st Annual Meeting. November 15-19, 2020. Virtual.

2019 O'Donnell, J., Carey, M.P., Koch, J.C., **Poulin, B.A.**, Zimmerman, C.E. Shifting bottom-up controls on food webs in streams draining permafrost landscapes of the Arctic. Poster Presentation. American Geophysical Union Fall Meeting. December 9-13, 2019. San Francisco, CA.

Orem, W.H., Krabbenhoft, D.P., **Poulin, B.A.**, and Aiken, G.R. Stable isotope signatures and sulfur biogeochemistry in the Florida Everglades. Oral Presentation. Greater Everglades Ecosystem Restoration Meeting. April 22 – 25, 2019. Coral Springs, FL.

Peterson, B.D., **Poulin, B.A.**, McMahon, K.D., and Krabbenhoft, D.P. Identification of mercury-methylating organisms along a sulfate gradient. Oral Presentation. Greater Everglades Ecosystem Restoration Meeting. April 22 – 25, 2019. Coral Springs, FL.

Poulin, B.A., Aiken, G.R., Orem, W., and Krabbenhoft, D.P. The biogeochemistry of mercury, sulfur, and organic carbon in the Florida Everglades. Oral Presentation (invited). Greater Everglades Ecosystem Restoration Meeting. April 22 – 25, 2019. Coral Springs, FL.

Breitmeyer, S.E., Foks, S.S., McCall, G.H., and **Poulin, B.A.** Dissolved organic carbon concentration and composition of coastal and major inland rivers in the U.S. Geological Survey National Water Quality Network. Poster Presentation. 11th National Monitoring Conference. March 25-29, 2019. Denver, CO.

2018 **Poulin, B.A.**, Ryan, J.N., Nagy, K.L., Podgorski, D.C., Zito, P., Orem, W., Krabbenhoft, D.P., and Aiken, G.R. New insights on dissolved organic sulfur chemistry by complementary atomic-level and molecular-level approaches. Oral Presentation (invited). Goldschmidt 2018. August 12 – 17, 2018. Boston, MA.

Sikder, M., Barasch, D., Croteau, M.-N., **Poulin, B.A**., and Baalousha, M. Effect of size and natural organic material on the uptake of platinum nanoparticles in freshwater snail, *lymnaea stagnalis*. Oral Presentation. 19th International Conference on Heavy Metals in the Environment. July 22 – 25, 2018. Athens, GA.

Orem, W., Bates, A.L., Schell T., Scott, A., Fitz, C., Aiken, G.R., **Poulin, B.A.**, and Krabbenhoft, D.P. Methods of sulfur analysis in wetlands studies and applications to mercury biogeochemistry. Oral Presentation. 12th International Symposium on Biogeochemistry of Wetlands. April 23 – 26, 2018. Coral Springs, FL.

Poulin, B.A., Breitmeyer, S., Jones, M., Ryan, J.N., Orem, W., Krabbenhoft, D.P. Molecular- and atomic-level approaches to characterize dissolved organic matter: Insights for mercury bioavailability in the Florida Everglades. Oral Presentation (invited). 12th International Symposium on Biogeochemistry of Wetlands. April 23 – 26, 2018. Coral Springs, FL.

Poulin, B.A., Podgorski, D.C., Antweiler, R.C., Marvin-DiPasquale, M., Naymik, J., Myers, R., Tate, M., DeWild, J., Baldwin, A., Aiken, G.R., Krabbenhoft, D.P. High spatial and temporal resolution optical and molecular characterization of dissolved organic matter in reservoirs in the Hells Canyon Complex (Snake River, Idaho): Insights on mercury biogeochemistry. Oral Presentation. Association for the Sciences of Limnology and Oceanography – 2018 Ocean Sciences Meeting. February 11-16, 2018. Portland, OR.

2017 Webster, J.P., **Poulin, B.A.**, Callagon, E., Nagy, K.L., Manceau, A., Aiken, G.R., and Ryan, J.N. Mercury binding by ash-laden sediment generated by wildfire increases following simulated reservoir deposition. Oral Presentation. 13th International Conference on Mercury as a Global Pollutant. July 16 – 21, 2017. Providence, RI.

Krabbenhoft, D.P., DeWild, J., Ogorek, J., Aiken, G.R., **Poulin, B.A.**, Hines, M., Barkay, T., and Shaeffer, J. Biogeochemical controls on mercury methylation in Alaskan peatlands spanning a large range of trophic status. Oral Presentation. 13th International Conference on Mercury as a Global Pollutant. July 16 – 21, 2017. Providence, RI.

Poulin, B.A., Lepak, R.F., Tate, M.T., Krabbenhoft, D.P. Hurley, J.P., Nagy, K.L., Ryan, J.N., and Aiken, G.R. Mercury isotope fractionation during dark reduction in saturated East Fork Poplar Creek soil. Poster Presentation. 13th International Conference on Mercury as a Global Pollutant. July 16 – 21, 2017. Providence, RI.

Poulin, B.A., Ryan, J.N., Krabbenhoft, D.P., Barkay, T., Hines, M., and Aiken, G.R. Dissolved organic matter and nutrient controls on aqueous mercury speciation in Alaskan wetlands. Oral Presentation. 13th International Conference on Mercury as a Global Pollutant. July 16 – 21, 2017. Providence, RI.

Poulin, B.A., Ryan, J.N., Nagy, K.L., Stubbins, A., Dittmar, T., Orem, W., Krabbenhoft, D.P., and Aiken, G.R. The influences of dissolved organic matter on mercury bioavailability in the Florida Everglades: Insights on organic sulfur chemistry. Oral Presentation (invited). Greater Everglades Ecosystem Restoration Meeting, April 17 – 21, 2017. Coral Springs, FL.

Poulin, B.A., Ryan, J.N., Nagy, K.L., Stubbins, A., Dittmar, T., Orem, W., Krabbenhoft, D.P., and Aiken, G.R. Dependence of reduced sulfur in Everglades dissolved organic matter on sulfate enrichment. Oral Presentation. American Chemical Society National Meeting & Exposition, April 2 – 6, 2017. San Francisco, CA.

2016 **Poulin, B.A.**, Ryan, J.N., Nagy, K.L., Stubbins, A., Dittmar, T., and Aiken, G.R. Abiotic addition of sulfide to dissolved organic matter. Oral Presentation. Association for the Sciences of Limnology and Oceanography – Ocean Sciences Meeting, February 21 – 26, 2016. New Orleans, LA.

2015 **Poulin, B.A.**, Anthony, C., Ryan, J.N., Stubbins, A., and Aiken, G.R. The influence of sulfate reduction on the chemistry of organic matter in the Everglades. Oral presentation, Greater Everglades Ecosystem Restoration Conference, April 21 – 23, 2015. Coral Springs, FL.

Poulin, B.A., Ryan, J.N., Stubbins, A., and Aiken, G.R. Abiotic addition of sulfide to dissolved organic matter. Poster presentation, American Chemical Society National Meeting & Exposition, March 22 – 26, 2015. Denver, Colorado.

2013 **Poulin, B.A.**, Aiken, G.R., Ryan, J.N., Manceau, A., and Nagy, K.L. Mercury transformation and release dynamics under saturation conditions in contaminated riparian soils. Poster presentation, 11th International Conference on Mercury as a Global Pollutant. July 28 – August 2, 2013. Edinburgh, United Kingdom.

2012 **Poulin, B.A.**, Aiken, G.R., Ryan, J.N., and Nagy, K.N. Dynamics of mercury release in flooded soils from Oak Ridge, Tennessee. Poster presentation, U.S. Department of Energy Subsurface Biogeochemical Research Annual Meeting, May 14 – 15, 2012. Washington D.C.

Poulin, B.A., Ryan, J.N., and Aiken, G.R. The effects of iron on the optical properties of dissolved organic matter: Iron speciation, pH, and dissolved organic matter source material. Oral presentation, 8th National Monitoring Conference, April 30 – May 4, 2012. Portland, OR.

2011 **Poulin, B.A.**, Aiken, G.R., Ryan, J.N., and Nagy, K.L. Dynamics of mercury release in flooded soils from Oak Ridge, Tennessee. Poster presentation, 10th International Conference on Mercury as a Global Pollutant, July 16 – 21, 2011. Halifax, Nova Scotia.

2010 **Poulin, B.A.** and Aiken, G.R. The effects of ferric and ferrous iron on the optical properties of dissolved organic matter. Oral presentation, American Geophysical Union Fall Meeting, December 13 – 17, 2010. San Francisco, CA.

Invited Lectures

2020 University of Califirnia, Davis. Forensics Sceinces Graduate Group Seminar Series. "Mercury in the Environment: From Ecosystems to Organisms." Virtual presentation. November 13, 2020.

University of Califirnia, Davis. Department of Environmental Toxicology Fall 2020 Seminar Series. "Mercury Detoxification in Vertebrates: Application of X-ray Techniques and Stable Isotope Measurements". Virtual presentation. October 1, 2020.

2019 The Center for Water, Earth Science and Technology – University of Colorado Boulder: Aiken Distinguished Seminar Series. "Unraveling the Multifaceted Roles of Dissolved Organic Carbon on Mercury Biogeochemistry," University of Colorado Boulder, Boulder. October 9, 2019.

University of Colorado Boulder – Chemistry Department Instrumental Analysis Course. "Optical, Molecular, and Atomic Approaches in Organic Geochemistry: Tools for Water Resource Management and Contaminants Research," University of Colorado Boulder, Boulder. April 15, 2019.

Colorado School of Mines: Environmental Engineering Department Seminar Series. "Optical and Molecular Approaches in Organic Geochemistry: Tools for Water Resource Management and Contaminants Research," Colorado School of Mines. March 8, 2019.

2017 University of Colorado Boulder – Institute of Arctic and Alpine Research Organic Geochemistry Seminar Series. "Dissolved organic sulfur chemistry in a sulfate enriched wetland: Insights from ultrahigh resolution mass spectrometry and X-ray absorption spectroscopy," Institute of Arctic and Alpine Research, University of Colorado Boulder. February 15, 2017.

2016 University of Wisconsin – Madison, Civil & Environmental Engineering Seminar Series. "Mercury transformation and release differs with depth and time in a contaminated riparian soil during simulated flooding," University of Wisconsin, Madison. February 19, 2016.

TEACHING

University of Colorado Boulder – Education Department. Development of education curriculum on mercury cycling for week-long course for practicing STEM teachers – Course Title: *Geohabits of Mind: Teaching and Learning Earth Systems* (Lead Instructor: Dr. Jeffery Writer). Summer 2018, Summer 2019.

CURRENT RESEARCH SUPPORT

2021 Assessment of Mercury Cycling in Brownlee, Oxbow, and Hells Canyon Reservoirs. Idaho Power Company, April 1, 2021 – December 31, 2021 ($64,125).

2019 Microbial Drivers of Mercury Methylation in Freshwater Eutrophic Systems, National Institute of Water Resources – U.S. Geological Survey National Competitive Grant Program. October 1, 2019 – September 30, 2022; PI: Kathrine McMahon and James Hurley, University of Wisconsin, Madison ($221,160), Collaborators B.A. Poulin (University of California, Davis) and D.P. Krabbenhoft (USGS).

2017 Collaborative Research: Investigation of the Effects of Organic Matter and Sulfur in the Environmental Fate of Mercury, National Science Foundation, Geobiology and Low Temperature Geochemistry Program, Division of Earth Sciences (EAR-1629698), January

1, 2017 to December 31, 2021, PI: J.N. Ryan, University of Colorado Boulder ($288,200), co-PI B.A. Poulin (previously G.R. Aiken), University of California, Davis.

PAST RESEARCH SUPPORT

2015 Collaborative Research: Linking microbial diversity, gene expression, and the transformation of terrestrial organic matter in major U.S. rivers, National Science Foundation, Division Of Environmental Biology (DEB-1457794), October 13, 2015 to April 30, 2020, PI: B. Crump, Oregon State University, co-PI B.A. Poulin (previously G.R. Aiken), USGS ($90,633).

PROFESSIONAL ACTIVITIES

Convene Conference Sessions

2021 13th International Symposium on Biogeochemistry of Wetlands, Session Title: *The Interplay of Ecosystem Restorations and Effects on Wetland Biogeochemistry: Lessons from the Florida Everglades*. Co-convener (D. Krabbenhoft), March 22-25, 2021. Virtual.

2020 SETAC North America 41st Annual meeting, Session Title: *Ecological Pathways of Mercury* and Associated Live Discussion Session, Co-conveners (J. Ackerman, C. Eagles-Smith, D. Krabbenhoft, S. Janssen, M. Chumchal), November 15-19, 2020. Virtual.

2020 National Conference on Ecosystem Restoration (NCER), Session Title: *The Intersection and Interactions between Ecosystem Restoration and Mercury Contamination*, Co-conveners (D. Krabbenhoft, C. Eagles-Smith), August 2 – 6, 2020, Portland, OR. (*postponed until 2021*)

13th International Symposium on Biogeochemistry of Wetlands, Session Title: *The Interplay of Ecosystem Restorations and Effects on Wetland Biogeochemistry: Lessons from the Florida Everglades*, Co-conveners (D. Krabbenhoft, W. Orem), April 27 – 30, 2020, Baton Rouge, LA. (*postponed until 2021*)

2019 – Greater Everglades Ecosystem Restoration Conference, Session Title: *Advanced Biogeochemical Science toward a Better Understanding of Mercury Cycling and Ecosystem Restoration*, Co-conveners (D. Krabbenhoft, W. Orem), April 22 – 25, 2019, Coral Springs, FL.

12th International Symposium on Biogeochemistry of Wetlands, Session Title: *New and Emerging Tools and Techniques for the Study of Biogeochemistry in Wetlands*, Co-conveners (D. Krabbenhoft, W. Orem), April 23 – 26, 2018, Coral Springs, FL.

2017 – Greater Everglades Ecosystem Restoration Conference, Session Title: *Biogeochemical Controls and Effects of Mercury Contamination of the Everglades: An Ecosystem Perspective*, Co-conveners (D. Krabbenhoft, W. Orem), April 17 – 20, 2017, Coral Springs, FL.

Professional Societies

American Chemical Society Member (2014 – Present).

American Geophysical Union Member (2017 – Present).

External Proposal Reviews

National Science Foundation - Division of Earth Systems, Geobiology and Low-Temperature Geochemistry Program (2016, 2018, 2019)

Stanford Synchrotron Radiation Lightsource (2016, 2017)

Department of Energy Subsurface Biogeochemical Research Program Panel Review (2017).

POPULAR PRESS AND MEDIA

"From Antarctica to California: how water birds detoxify mercury" News from the European Synchrotron Radiation Facility. March 2, 2021. https://www.esrf.eu/home/news/general/content-news/general/from-antarctica-to-california-how-water-birds-detoxify-mercury.html

THESES AND DISSERTATIONS

2016 Poulin, B.A. Investigations of redox-dependent processes involving mercury, sulfur, and dissolved organic matter. Ph.D. Dissertation, University of Colorado Boulder, Boulder, CO, 2016, 231 pp.

2013 Poulin, B.A. The effects of iron on optical properties of dissolved organic matter. M.S. Thesis, University of Colorado Boulder, Boulder, CO, 2013, 67 pp.

2008 Poulin, B.A. Environmental factors controlling abiotic photo-demethylation of monomethylmercury in wetland surface waters. B.S. Thesis (Chemistry), University of California at Santa Cruz, Santa Cruz, CA, 2008, 61 pp.