

DEON H. KNIGHTS

Earth Science & Geology
Environmental Studies
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EDUCATION

Ph.D. (2020), The Ohio State University, School of Earth Sciences
M.S. (2016), The Ohio State University, School of Earth Sciences
B.S. (2012), University of Delaware (Geology Major, Mandarin minor)
Mandarin Certificate (2013), Xiamen University

PROFESSIONAL EXPERIENCE

Assistant Professor – Vassar College (August 2022-Present)

Department of Earth Science & Geography, Environmental Studies Program Poughkeepsie, NY

NSF EAR Postdoctoral Fellow – West Virginia University (2020-2022)

Department of Geology and Geography, West Virginia University

Visiting Researcher – Los Alamos National Laboratory (Summer 2019)

Earth & Environmental Science Division (2019)

PUBLICATIONS

Knights, D., Piliouras, A., Schwenk, J., Hariharan, J., & Russoniello, C. (2023). Seasonal and morphological controls on nitrate retention in Arctic deltas. *Geophysical Research Letters*, 50(7), e2022GL102201.

Knights, D., A.H. Sawyer, D.A. Edmonds, E.A. Olliver, R.T. Barnes (2021). The Relationship between Delta form and Nitrate Removal Function Revealed by Numerical Modeling Experiments. *Water Resources Research*, 57, e2021WR030974. <https://doi.org/10.1029/2021WR030974>

Knights, D., Sawyer, A. H., Barnes, R. T., Piliouras, A., Schwenk, J., Edmonds, D. A., & Brown, A. M. (2020). Nitrate removal across ecogeomorphic zones in Wax Lake Delta, Louisiana (USA). *Water Resources Research*, 56(8), e2019WR026867.

Knights, D., K.C. Parks, A.H. Sawyer, C.H. David, T.N. Browning, K.M. Danner, and C.D. Wallace, (2017), Direct groundwater discharge and vulnerability to hidden nutrient loads along the Great Lakes coast of the United States, *Journal of Hydrology*, 554, doi:10.1016/j.jhydrol.2017.09.001.

Knights, D., A.H. Sawyer, R.T. Barnes, C. Musial, and S. Bray (2017), Tidal controls on riverbed denitrification along a tidal freshwater zone, *Water Resources Research*, 53, doi: 10.1002/2016WRD19405.

Musial, C., A.H. Sawyer, R.T. Barnes, S. Bray, and **D. Knights** (2015), Surface water- groundwater exchange dynamics in a tidal freshwater zone, *Hydrological Processes*, 30(5), doi:10.1002/hyp.10623.

Sawyer, A.H., D.A. Edmonds, and **D. Knights** (2015), Surface water-groundwater connectivity in deltaic distributary channel networks, *Geophysical Research Letters*, 42, doi:10.1002/2015GL0666156.

SELECTED AWARDS & GRANTS

NSF Earth Sciences Postdoctoral Fellowship, (\$174,000) (September 2020)
The Ohio State University, Presidential Fellowship (August 2019)
Co-Author of Supplemental National Science Foundation (\$32,760) (February 2019)
Geological Society of America, Hydrogeology Div. Student Research Award (November 2018)
Michael S. Johnson Graduate Student Award (April 2018)
International Association of GeoChemistry (IAGC) Student Grant (May 2018)
Geological Society of America Research Grant (April 2015 & April 2018)
Friends of Orton Hall Travel Grant (October 2016 & October 2014)
Ronald E McNair Graduate Student Fellowship (August 2013)
Ronald E McNair Scholarship (June 2010-May 2012)
HSK (Mandarin Proficiency Test) Level 4 of 6 (May 2013)
Chinese Confucius Institute Scholarship, Xiamen University, China (August 2012-May 2013)
University of Delaware Department of Geology Special Merit Award (May 2012)
Delaware EPSCoR [National Science Foundation] Scholarship (June 2010-May 2012) University of Delaware Academic Merit Scholarship (August 2008-May 2012)

TEACHING

ESNT-107 Global Change and Sustainability (Vassar College)
ENST-124 Essentials of Environmental Science (Vassar College)
ESCI-235 Water (Vassar College)
ESCI-265 Resource Extraction (Vassar College)
ESCI-368 GIS in Environmental Justice (Vassar College)
GEOL-493 Climate Change and Sustainability (West Virginia University)

Teaching Assistantships

ES-5651-Hydrogeology (The Ohio State University)
ES-2204-Exploring Water Issues (The Ohio State University)
ES-1121-The Dynamic Earth (The Ohio State University)
ES-1100-Planet Earth (The Ohio State University)

INVITED SEMINAR PRESENTATIONS

Texas Tech University, Department of Geosciences (November 2023)
Cary Institute of Ecosystem Studies (August 2023)
Virginia Institute of Marine Science (November 2021)
University of Pittsburgh, Department of Geology and Environmental Science (September 2021)
University of Virginia, Department of Environmental Sciences (February 2021)
Wageningen University, Hydrology and Quantitative Water Management Group (May 2021)
University of Southampton, School of Geography and Environmental Science (January 2021)
University of Texas, Jackson School of Geosciences (November 2020)
Appalachian State University, Department of Geological and Environmental Sciences (October 2020)
Los Alamos National Laboratory, Climate, Ocean & Sea Ice Modelling (COSIM) seminar (July 2019)
University of Delaware, Earth, Ocean and Environment Department (May 2018)
The Ohio State University, School of Earth Sciences (April 2018)

INVITED CLASS LECTURES

West Virginia University (2023)
University of Redlands (2021)

1ST AUTHOR OR STUDENT* CONFERENCE PRESENTATIONS

Knights, D. (2024) Modeling Nitrate Transport and Retention in Arctic Deltas, Goldschmidt Fall Meeting August 18-24, 2024 Chicago, IL (invited oral presentation)

Hoffman, K. *, D Knights, (2023) The effects of seasonality and nutrient loading on nutrient uptake in an urban beaver wetland, AGU Fall Meeting. December 11-15, 2023 (poster)

Knights, D., A.H. Sawyer, D.A. Edmonds, E.A. Olliver, R.T. Barnes, (2020) The Relationship between Delta form and Nitrate Removal Function Revealed by Numerical Modeling Experiments, AGU Online Fall Meeting. December 1-17, 2020 (oral)

Knights, D., A.H. Sawyer, D.A. Edmonds, E.A. Olliver, R.T. Barnes, (2020) The Relationship between Delta form and Nitrate Removal Function Revealed by Numerical Modeling Experiments, Geological Society of America, Connects Online Fall Conference. October 26-30, 2020 (oral)

Knights, D., A.H. Sawyer, R.T. Barnes, A. Piliouras., J. Schwenk., D.A. Edmonds, A.M. Brown, E. Olliver (2019) Nitrate removal across ecogeomorphic zones in Wax Lake Delta, Louisiana (USA), Fall AGU Conference. December 9-13, 2019. San Francisco, CA (oral)

Knights, D., K.C. Parks, A.H. Sawyer, C.H. David, T.N. Browning, K.M. Danner, C.D. Wallace (2016) Estimation of Groundwater Discharge and Nutrient Inputs to a Lake Erie Shoreline, Northwestern Black Graduate Student Association Conference. April 15, 2017. Chicago, IL (poster)

Knights, D., K.C. Parks, A.H. Sawyer, C.H. David, T.N. Browning, K.M. Danner, C.D. Wallace (2016) Estimation of Groundwater Discharge and Nutrient Inputs to a Lake Erie Shoreline, Geological Society of America Fall Conference. September 25-28, 2016. Denver, CO (poster)

Knights, D., A.H. Sawyer, R.T. Barnes, C. Musial, and S. Bray (2015) Tidal Controls on Denitrification in Coastal Riverbeds, Geological Society of America Fall Conference. November 1-4, 2015). Baltimore, MD (oral)

Knights, D., A.H. Sawyer (2014) A Numerical Study of Tidal Impact on Denitrification in Coastal Sediment. Fall AGU Conference. December 15-19, 2014. San Francisco, CA (poster)

GRADUATE COMMITTEE SERVICE

Lindsey Aman, Department of Geology and Geography, WVU (MS, 2022)

UNDERGRADUATE STUDENT RESEARCH MENTEES

Jillian Hamman, Chemistry, Vassar College (present)

Kyra Hoffman, Environmental Studies, Vassar College (2023-2024)

Amelia Zaononi, Department of Geology and Geography, WVU (2022)

Rachel Chidlow, Department of Geology and Geography, WVU (2021)

Alexander Brown, School of Earth Sciences, OSU (2018-2020)

Kevin Parks, School of Earth Science, OSU (2016-2017)

SERVICE TO THE COLLEGE

Appeals Committee (2024)

Office of Community Engaged Learning Advisory (2023-present)

SOCIETY MEMBERSHIP

Black in Marine Science (2022-Present)

Coastal & Estuarine Research Federation (2020-Present)

American Geophysical Union (2013-Present)

Geological Society of America (2013-Present)

SELECTED SYNERGISTIC ACTIVITIES

Reviewer for grants:

NSF Hydrologic Sciences

NSF Postdoctoral EAR

Reviewer for journals:

Water Resources Research, Limnology and Oceanography, Environmental Research Letters, Earth Surface Dynamics, Journal of Great Lakes Research, Hydrogeology Journal, PlosOne, Inland Waters

Other activities:

Department of Community and Family Service, Youth Environmental talk (2024)
Earth's Reflection Panel Discussion, The Art Effect, Trolley Barn Poughkeepsie (2024)
Mid-Hudson Young Environmental Scientists (MH-YES) Scientist mentor (2023-present)
Environmental Research and Praxis at Vassar Symposium Panel (2024)
The Luce Initiative on Asian Studies and the Environment at Vassar College Faculty Mentor (2023)
Black STEM Mentor Vassar College Panel (2023)
Hosted two day workshop on environmental justice with invited speaker Nalleli Cobo (Spring 2023)
AGU Hydrology Section Student Subcommittee JEDI and Development boards (2020-2022)
Black Graduate and Professional Student Caucus mentor (Fall, 2018-2020)
Life sports at the Ohio State University- Youth Leadership Academy mentor (2017-2019)
Hydrogeology Event Supervisor for Science Olympiad (Fall, 2016-Fall, 2018)
Ohio Union Activities Board Graduate member (Spring, 2016-Spring, 2019)
Graduate Student Representative (August 2016-May 2018)
International Study (2013), Xiamen University
Each one Reach one Mentor, University of Delaware (Fall 2010- Spring 2011)
President, Caribbean Student Alliance, University of Delaware (2011-May 2012)
Enviro-mentor, University of Delaware (Feb 2011-May 2012)