

Michelle E. Gannon, Ph.D.

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Education

- Ph.D. Environmental Sciences, Drexel University (2021)
Advising Committee: David Velinsky, Rick McCourt, Gary Rosenberg, Sue Kilham, Jocelyn Sessa, Alberto Pérez-Huerta, John Wehmiller
- M.S. Geological Sciences, The University of Alabama (2016)
Advising Committee: Alberto Pérez-Huerta, Paul Aharon, Fred Andrus, Natasha Dimova, Julie Olson
- B.S. Geological Sciences, Temple University (2013)
Environmental Sciences, Temple University (2012)

Experience and Appointments

- 2023- present Assistant Teaching Professor: Department of Biodiversity, Earth and Environmental Sciences: Drexel University
Classes Taught:
- Geochemistry; Introduction to Environmental Chemistry; Earth Systems Processes; Introduction to Geographic Information Systems; Marine Field Methods; Physical Geology; Introduction to Environmental Sciences; Issues in Global Change
- 2023 - 2025 Associate Chemistry Laboratory Manager: Patrick Center for Environmental Research: Biogeochemistry: The Academy of Natural Sciences of Drexel University
Primary Instrument Operator:
- Agilent 8800-QQQ Inductively Coupled Plasma Mass Spectrometer
 - Elementar Isoprime100 Isotope Ratio Mass Spectrometer with Pyrocube Elemental Analyzer and Multiflow Prep System
 - Carlo Erba Flash 1112 Elemental Analyzer
- 2021 - 2023 Post-Doctoral Researcher: Patrick Center for Environmental Research: Biogeochemistry: The Academy of Natural Sciences of Drexel University
- 2021 - 2023 Adjunct Professor: Department of Biodiversity, Earth and Environmental Sciences: Drexel University
- 2018 - 2021 Graduate Research Assistant: Biogeochemistry: The Academy of Natural Sciences of Drexel University
- 2017 - 2021 Graduate Research Associate: The Academy of Natural Sciences of Drexel University
- 2015 - present Petrographic Thin Section Preparation Laboratory and Equipment Manager: Drexel University and the Academy of Natural Sciences of Drexel University
- 2015 - 2018 Teaching Assistant: Drexel University
- 2013 - 2015 Teaching Assistant: The University of Alabama
- 2012 - 2013 Biogeochemistry Technician: The Academy of Natural Sciences of Philadelphia
- 2012 - 2013 Intern: Resource Conservation and Recovery Act (RCRA), The Environmental Protection Agency, Region 3

Publications (* student author)

- Frankenstein D, Paley D*, Ward DC, **Gannon ME**, Rinehart SA. (2026) Temperature and leaf chemical composition affect litter decomposition rates across an urban heat gradient in Philadelphia, PA. *Urban Ecosystems* 29:5
- Champlin LK, **Gannon ME**, Sessa J, Watson EB. (2024) Bivalve shells reflect ^{15}N enrichment in a fertilizer-dominated estuary. *Marine Pollution Bulletin* 207:116902
- Krause JR, **Gannon ME**, Oczkowski AJ, Schwartz MJ, Champlin LK*, Steinmann D, Maxwell-Doyle M, Pirl E, Allen V*, Watson EB. (2022) Stable isotope assessment of nitrogen pollution underscores the importance of tidal flushing on nutrient dynamics in a New Jersey (USA) estuary. *Water*: 15:15
- Watson EB, Hinojosa-Corona A, Krause JR, Herguera JC, McDonnell J, Manríquez KRV, **Gannon ME**, Gray A. (2020) Lagoon biogeochemical processing is reflected in spatial patterns of sediment stable isotopic ratios. *Journal of Marine Science and Engineering* 8:874
- Gannon ME**, Pérez-Huerta A, Aharon P, Street SC (2017) A Biomineralization Study of the Indo-Pacific Giant Clam *Tridacna gigas*. *Coral Reefs* 36:503-517

Technical Reports

- Keller DH, Maguire T, Kurz MJ, Morrill D, Curran T, Heiczinger J, **Gannon ME** (2024) Estimation of fish BAF for selected PFAS contaminants in marine and freshwater systems. Submitted to the New Jersey Department of Environmental Protection, Trenton, NJ
- Horwitz RJ, Casselman JM, Overbeck P, **Gannon ME**, Keller DH (2022) Assessing Abundance and Age Distribution of Juvenile American Eel within the Delaware River. Submitted to The National Park Service, Beach Lake, PA
- Watson EB, **Gannon ME** (2020) Stable isotope (CNS) variability in flora and fauna of Barnegat Bay, New Jersey. Submitted to the Partnership for the Delaware Estuary, Wilmington, DE

Grants and Scholarships

- \$92,000** Philadelphia Water Department: Surface Water Enhancement Model to Rinehart SA, Bucholz J, Velinsky DJ, **Gannon ME** (2026)
- \$167,929** Pennsylvania Sea Grant: Understanding the food web impacts of the invasive northern snakehead on Pennsylvania's largest tidal freshwater wetland to Keller DH, **Gannon ME**, Maguire T, Velinsky DJ (2024)
- \$2500** Paleontological Society of America, Outreach and Education Grant to **Gannon ME**, Sessa J, Godfrey K, Velinsky DJ (2023)
- \$9500** Estuarine Research Committee (2021) to Velinsky DJ, Weckstein J, **Gannon ME**, Halley M
- \$900** American Malacological Society (2019)
- \$2000** Conchologists of America, Walter Sage Memorial Award (2019)
- \$800** Paleontological Society of America, Steven M. Stanley Award (2016)
- \$1500** Geological Sciences Advisory Board (GSAB) Student Scholarship Fund (2014)
- \$650** W. Gary Hooks Endowed Geology Fund Scholarship (2013-2014)

Community Outreach and Synergistic Activities

- 2026 - current Dissertation Committee Member for Cennet Ulukavek (Drexel: BEES)
- 2025 - current Dissertation Committee Member for Erika Hansen (Drexel: BEES)
- 2025 - 2026 Master's Thesis Committee Member for Aviva Lerman (Drexel: BEES)

2025 - current Drexel BEES Curricular Transition Committee
 2025 - current Drexel BEES Undergraduate Committee
 2025 - current Temple University Upward Bound Math and Science Program: primary instructor for Environmental Science and Environmental Chemistry
 2024 Drexel BEES NSF GRFP Preparation Group
 2024 Lacawac Sanctuary Conservation and Leadership Academy: Co-Director
 2019 - present Save Barnegat Bay Student Grant Review Committee
 2018 - 2020 Scientist Saturday at the Academy of Natural Sciences: coordinate graduate student research presentations for museum guests
 2016 - present BEES Fall Field Experience (Leader from 2024)
 2016 - 2023 Drexel Environmental Science Leadership Academy: Director: Waretown, NJ; Lacawac, PA; Red Lodge, MT
 2015 Raising the Bar Partnership Program: primary geology instructor, sixth grade, Eastwood Middle School
 2014 - 2015 Tuscaloosa Magnet School Elementary Partnership Program: primary geology instructor, second grade

Students Advised (#High School; *Undergraduate; &Masters)

2026 - present Kelsey Johnson*: Petrographic assessment of Wissahickon Schist (DrexLab)
 2026 - present Kai Doron*: Petrographic assessment of Wissahickon Schist (Drexel Co-Op)
 2026 - present Sylvia Solomon*: Marsh sediment analysis before restoration and Petrographic assessment of Wissahickon Schist (Drexel Co-Op and DrexLab)
 2025 - present Rachel Jean-Charles*: Elemental chemistry of road dust and Green Stormwater Infrastructure in Philadelphia using an X-Ray Fluorometer (DrexLab)
 2025 - present Erick Valentin*: Elemental chemistry of road dust and Green Stormwater Infrastructure in Philadelphia using an X-Ray Fluorometer (Federal Work Study and Drexel Co-Op)
 2025 - 2026 Michaela Sullivan&: Communicating Species Presence at the Lighthouse Center for Natural Resource Education with the Public
 2025 Cristabella Sunoto#, Nina Ortiz#: Northern Snakehead Food Web Reconstruction
 2025 Anthony More*: Elemental chemistry of road dust (Drexel Mini Grant)
 2024 – 2026 Olivia Maddox*: Stable isotope chemistry of marsh flora (Drexel ASURS; Drexel Senior Research)
 2024 - 2025 Dylan Paley*: Leaf litter decomposition across an urban gradient (Drexel ASURS)
 2024 - 2025 Jackson Quitel*: Stable isotope chemistry of marsh fishes (Drexel Senior Research)
 2024 - 2025 Emilie Vaysse*: Ocean Acidification Education (Drexel Senior Research)
 2023 - 2024 Leslie Wong*: Fingerprinting the Delaware River Watershed using Piper Diagrams
 2022 - 2025 Alice Andrews*: Identifying patterns of Ocean Acidification in *Tridacna* (University of Pennsylvania Senior Research)
 2021 - 2023 Kayla Aughenbaugh*: Assessing Hardness in Delaware River Watershed (Drexel Senior Research)
 2021 - 2022 Emily Johns*: Migratory patterns of the Hermit Thrush (*Catharus*) (Drexel Senior Research)
 2021 - 2022 Ryan Garber#: Sulfur isotope chemistry of boring sponges

- 2021 - 2022 Jerrin Jacob*: Assessing Dissolved Chloride in Delaware River Watershed (Drexel Senior Research)
- 2019 - 2021 Victoria Allen*: Bioerosion in giant clam shells; Stable isotope chemistry of flora in Barnegat Bay, NJ (Drexel STAR; Federal Work Study)
- 2019 Helen Liu#: Shell microstructure in *Corculum*
- 2019 Jacob Janavel#: Stable isotope chemistry of fauna in Barnegat Bay, NJ
- 2017 - 2019 Christian Pirnot*: Igneous Rock Thin Section Preparation
- 2017 - 2018 Jonathan Galuchie*: Stable isotope analysis of giant clam shells
- 2016 - 2018 Marley Chertok*: Photosymbiosis in Fraginae
- 2017 Ari Yamaguchi*, Adrienne Remo*, Dustin Kopala*, Matt Gentry*: Photosymbiosis and shell microstructure in Cardiidae (Drexel Senior Research)
- 2017 Sydney Lodge#: Chemistry of Philadelphia Waterways

Conference Presentations (* student author)

- Gannon ME**, Keller DH, Morgan K, Velinsky DJ. Food web impacts of the invasive northern snakehead on tidal freshwater wetlands. September 2026. American Fisheries Society Annual Meeting, Columbus, OH. *Oral Presentation*
- Christiansen SA, Andrews A, **Gannon ME**, Kostick HL, Mann ME. Evaluating oxygen isotope temperature calibrations from *Tridacna derasa* and *Hippopus hippopus* to identify trends in sea surface temperature and regional hydroclimate. December 2025. American Geophysical Union Annual Meeting, New Orleans, LA. *Poster Presentation*
- Frankenstein D, Paley D, Ward D, **Gannon ME**, Rinehart S. Temperature and leaf chemistry affect litter decomposition across an urban heat island gradient in Philadelphia, PA. August 2025. Ecological Society of America Annual Meeting, Baltimore, MD. *Poster Presentation*
- Aughenbaugh K*, **Gannon ME**, Velinsky DJ. The Influence of Bedrock Composition on Surface Water Chemistry in the Delaware River Basin. Society for Freshwater Science Annual Meeting, Philadelphia, PA. June 2024. *Poster Presentation*
- Wong L*, Maguire T, **Gannon ME**. Fingerprinting the Delaware River Watershed using Piper Diagrams. Society for Freshwater Science Annual Meeting, Philadelphia, PA. June 2024. *Poster Presentation*
- Allen V*, **Gannon ME**, Velinsky DJ. Holey Shell: Quantifying Bioerosion in *Tridacna derasa* Shells. American Malacological Society Annual Meeting, Virtual. June 2021. *Poster Presentation*
- Gannon ME**, Watson EB, Oczkowski A, Raper KL, Velinsky DJ. Spatial and temporal variability of stable isotopes in flora and fauna of Barnegat Bay, NJ. Coastal and Estuarine Research Federation Biennial Meeting, Mobile, AL. November 2019. *Oral Presentation*
- Gannon ME**, Watson EB, Oczkowski A, Raper K, Velinsky D. Stable isotope (CNS) variability in modern and historical fauna of Barnegat Bay, NJ. GSA Annual Meeting, Phoenix, AZ. September 2019. *Poster Presentation*
- Gannon ME**, Velinsky DJ, Romanek CS. Detangling stable carbon isotopes in giant clam shells: Discrepancies between shell layers and the Suess Effect. GSA Annual Meeting. Phoenix, AZ. September 2019. *Poster Presentation*
- Allen V*, **Gannon ME**, Velinsky D. The Secret Life of Plants: Stable Isotope (CNS) spatial variability in flora throughout Barnegat Bay, NJ. STAR Scholars Summer Showcase of Drexel University. Philadelphia, PA. August 2019. *Poster Presentation*
- Gannon ME**, Aharon P. Is Microstructural Variability in Giant Clams (*T. gigas*) Controlled by Periodicity in Solar Irradiance? AGU Annual Meeting, Washington, D.C. December 2018.

Poster Presentation

- Gannon ME.** Photosymbiosis in Heart Cockles: Do microstructural windows vary across genus *Corculum*? GSA Annual Meeting, Indianapolis, Indiana. November 2018. *Oral Presentation*
- Gannon ME, Velinsky D.** Stable Carbonate Isotopes in Giant Clam Shells. GSA Annual Meeting, Seattle, WA. October 2017. *Oral Presentation*
- Chertok M*, **Gannon ME**, Rosenberg G. Heart Cockle Windows and Translucency: Implications for Environmental Studies. GSA Annual Meeting, Seattle, WA. October 2017. *Poster Presentation*
- Gannon ME.** Stable Carbonate Isotopes in Giant Clam Shells. Malacological Society Annual Meeting, Newark, DE. July 2017. *Oral Presentation*
- Yamaguchi A*, Gentry M*, **Gannon ME**, Rosenberg G, Remo A*, Kopala D*, Horwitz R. Photosymbiosis in subfamily Fraginae. American Malacological Society Annual Meeting: Newark, DE. July 2017. *Oral Presentation*
- Rehm L, McCourt RM, **Gannon ME**, Sweeney AM. Giant clam mantle color is correlated to the reef environment. American Malacological Society Annual Meeting: Newark, DE. July 2017. *Poster Presentation*
- Kurz M, Velinsky D, **Gannon ME**, Zelanko P. Field and lab-based analytical approaches for environmental biogeochemistry. Symposium on Cross-Disciplinary Analytical Approaches, Philadelphia, PA. June 2017. *Poster Presentation*
- Gannon ME.** Can strawberry cockles (*Frugum* spp.) be useful environmental archives? American Fisheries Society Mid-Atlantic Chapter Annual Meeting. Bordentown, NJ. October 2016. *Poster Presentation*
- Gannon ME, Zelanko P, Velinsky D.** Implications of Algal Bioerosion on Giant Clam Shell Chemistry. GSA Annual Meeting, Denver, CO. September 2016. *Oral Presentation*
- Gannon ME.** *Frugum* spp. as Potential (Paleo-) Environmental Archives. GSA Annual Meeting, Denver, CO. September 2016. *Poster Presentation*
- Gannon ME, Zelanko P.** Stable Isotope Applications in Aragonitic Giant Clam Shells. Advanced Stable Isotope Techniques and Applications Conference. Philadelphia, PA. June 2016. *Poster Presentation*
- Gannon ME, Aharon P, Pérez-Huerta A.** Microstructural Changes in Fossil Giant Clam Shells through 200 ka: Initial Results. GSA Annual Meeting, Baltimore, MD. November 2015. *Oral Presentation*
- Gannon ME, Pérez-Huerta A, Aharon P.** Shell Biomineralization of Giant Clams (*T. gigas*) from the raised coral reef terraces of Huon Peninsula, Papua New Guinea: Implications for paleoclimate reconstructions. GSA Annual Meeting, Vancouver. October 2014. *Poster Presentation*
- Gannon ME, Pérez-Huerta A, Aharon P.** Preliminary investigation of biomineralization of giant clam (*Tridacna gigas*) shells. Gordon Research Conference and Gordon Research Seminar: Biomineralization, New London, NH. August 2014. *Poster Presentation*
- Gannon ME.** Class Bivalvia as Paleoclimate Indicators: A Review. Symposium for Biodiversity, The Academy of Natural Sciences and Drexel University, Philadelphia, PA. October 2012. *Poster Presentation*