



Amy E. Fowler, PhD

Assistant Professor, Potomac Environmental Research and Education Center

Education

PhD, Marine Science, Auckland University

Key Interests

Invasive Species | Global Change | Biodiversity | One Health: Parasitology | Community and Populations | Aquatic Ecosystems | Invertebrates

CONTACT

Phone: 703-993-5956 | Email: afowler6@gmu.edu

Website: <https://esp.gmu.edu/faculty-staff/faculty-bios/amy-fowler/>

SELECT PUBLICATIONS

- › Fowler AE., *et al.* (2020). Temporal shifts in a vector's propagule supply characteristics and implications for invasion ecology. *Marine Ecology Progress Series*, 641: 13-24.
- › Fowler AE., *et al.* (2016). Opening Pandora's bait box: a potent vector for biological invasions of live marine species. *Diversity and Distributions*, 22(1): 30-42.
- › Fowler AE., *et al.* (2016). Relationships between meteorological and water quality variables and fisheries-independent white shrimp (*Litopenaeus setiferus*) catch in the ACE Basin NERR, South Carolina. *Estuaries and Coasts*, 41(1): 79-88.

Research Focus

My general research interests and experiences include global aquatic invertebrate species patterns, biodiversity, phenotypic plasticity, parasitology, and community and population level interactions of aquatic invertebrates, especially those concerning invasions. I have experience working in freshwater, estuarine, and marine systems both in the United States and globally. Currently, my laboratory at GMU has three main topics of study: host-parasite interactions, invasion dynamics and processes, and natural resource management of commercially and recreationally important aquatic invertebrate species.

Current Projects

- Long-term assessment of invertebrate communities in the Potomac River: Indications of environmental change? Using a 40 year data set collected by PEREC, we are uncovering changes to the invertebrate community in the Potomac and linking changes to environmental drivers brought on by legislation (i.e., the Clean Water Act).
- Comparatively parasitology of native and invasive freshwater snails in the Potomac. Invasive species can leave parasites behind in a novel location or become a novel vector for native parasites in a new location; some of these parasites are of concern for humans. Here, we investigate parasites living within native and invasive species of freshwater snails in the Potomac River.
- Impacts of two functionally distinct invaders on facilitation and community succession. In 2018, a new invasive snail was found in Baltimore County, inhabiting streams already invaded by an invasive diatom known as rocksnot. Here, we are performing field manipulations to determine the interaction these two invaders have on the structuring of native invertebrate communities.
- Co-PI of GMU OSCAR Undergraduate Summer Team Impact Grants (2017-2020).