Kerry Leigh McGowan

Email: kerry.mcgowan@wsu.edu, Website: kerrymcgowan.github.io

SUMMARY

Ph.D. Candidate at Washington State University in Pullman, WA, with 4+ years of experience in computational biology examining evolution and population genetics. I develop pipelines to analyze terabytes of multi-omics data to visualize patterns and test hypotheses about adaptation.

TECHNICAL SKILLS

- High-performance computing
- Implementation of command line software
- Singularity containers
- Bash, R, Python
- ggplot2, tidyverse, matplotlib, Seaborn, sklearn
- Data cleaning (tidy data) and visualization
- Statistics (Frequentist and Bayesian)
- Unsupervised clustering (PCA, MDS, hierarchical)
- Version control with Git and GitHub
- RNA/DNA extraction, quantification, library preparation

WORK EXPERIENCE

Lead Researcher, School of Biological Sciences, Washington State University, Pullman, WA, 2017-present
Conducted population genetics analyses on extremophile fish, led research team of undergraduates.
Results: Lead author publication, $16,100 in awards and scholarships, presented at 14 conferences.

Intern, Departments of Entomology and Invertebrate Zoology, Smithsonian National Museum of Natural History, Washington, D.C., 2016
Examined treehopper insect morphology and catalogued specimens of freshwater bivalves.
Results: Described almost 300 species of treehopper insects, fragile bivalve specimens properly stored.

NSF Research Experience for Undergraduates Participant, Integrative Biology and Ecology of Marine Organisms, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA, 2014
Conducted a self-designed study examining epibiotic communities on intertidal molluscs.
Results: Lead author publication, presented at 2 conferences.

EDUCATION

Washington State University, School of Biological Sciences, Pullman, WA, 2017-present
Ph.D. Candidate in Biology with Graduate Certificate in Bioinformatics, GPA: 4.0

Muhlenberg College, **Allentown, PA, 2011-2015**
B.S. in Biology, *summa cum laude*

SELECTED PUBLICATIONS (out of 5 total)

McGowan KL, Passow CN, Arias-Rodriguez L, Tobler M, Kelley, JL. 2019. Expression analyses of cave mollies (*Poecilia mexicana*) reveal key genes involved in early-stage eye regression. *Biology Letters*. 15(10). DOI: 10.1098/rsbl.2019.0554

Brown AP, **McGowan KL**, Schwarzkopf EJ, Greenway RS, Rodriquez LA, Tobler M, Kelley JL. 2019. Local ancestry analysis reveals genomic convergence in extremophile fishes. *Philosophical Transactions of the Royal Society B*. 374(1777). DOI: 10.1098/rstb.2018.0240

McGowan KL, Iyengar EV. 2017. The difference between a rock and a biological hard place: epibionts in the rocky intertidal. *Marine Biology.* 164(109). DOI: 10.1007/s00227-017-3131-z