

Adam Hallaj

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Field/Career interests

Bioinformatics, Biomimicry, CAD/CAM, Sustainable manufacturing.

Education

B.S. in Biology. Temple University, Philadelphia, PA December 2019

Professional Experience

Undergraduate Researcher with the Cordes Laboratory, Temple University. June 2017 - January 2020

- Assist in designing, setting up, and conducting ecological experiments in aquaria.
- Live invertebrate specimen care (mainly cnidarians).
- In-laboratory cold-water recirculating aquarium setup and maintenance.
- Water chemistry analysis: perform titrations on a Mettler Toledo DL15 titration device to assess total alkalinity of water samples acquired from fieldwork, in-lab experiments, and for routine lab aquaria maintenance.

Lab Technician with the Bernal Laboratory, Auburn University. March 2020 - Present

- Optimization of aquarium monitoring system for remote access using a raspberry pi computer.
- Assembly of *Lutjanus synagris* transcriptome using the Alabama Supercomputer.
- Management and compilation of monthly spending statement reports.
- Supervisor of chemical inventory and hazardous waste.

Field Work

Costa Rica Margin Expedition (ROCHITS) aboard the *R/V Atlantis* with *HOV Alvin*. 10 days at sea. Chief Scientist: Erik Cordes.

October 2018

- Identified and processed deep-sea biological samples collected during submarine dives.
- Assisted in the deployment and retrieval of CTD rosettes, analyzed accompanying data, and preserved water samples for further lab analysis.
- Set up and managed water filtration system to provide fresh seawater for live samples.

Experimental Experience

Cold water coral response to multiple stressors: High temperature affects recovery from short term pollution exposure
Weinnig A.M., **Hallaj A.**, Gomez C.E., Cordes E.E.

Published, *Scientific Reports*

- Aquarium maintenance.
- Perform RNA extractions for transcriptomic analysis.

Effects of temperature increase on the metabolic performance of the cold-water coral *Lophelia pertusa*

Manuscript submitted, *Coral Reefs*

Gomez C.E., Gori A., Winnig A.M., **Hallaj A.**, Keller A., Cordes E.E.

- Perform incubations with live coral to assess changes in excretion, respiration, and feeding rates.
- Aquarium maintenance.
- Statistical analysis of resulting data using excel and R.

Presentations

Physiological Response of the Cold-Water Coral *Lophelia pertusa* to short term temperature changes at the Symposium for Undergraduate Research and Creativity

April 2019

References

Erik E. Cordes, Ph.D.

Biology Professor, Temple University

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