Hannah E. Cohen

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440 Church St, Ann Arbor, MI 48109

Education

2024- University of Michigan, Ann Arbor, Advisor Dr. Karen Alofs
Environment and Sustainability, Doctoral Student

2017-2019 Georgia Southern University, Advisor Dr. Emily A. Kane
Thesis: The Role of Local Adaptation on Biting Performance in Trinidadian Guppies
Biology, Master of Science

2010-2014 University of Hawai'i at Mānoa
Biology, Bachelor of Science

Teaching experience

2025 Graduate Student Instructor: University of Michigan, Ann Arbor, January 2025-present. Supervisor: Dr. Karen Alofs. Instructor for Ecology of Fishes Lab.

2017 Graduate Teaching Assistant: Georgia Southern University, August 2017-May 2018. Supervisor: Michelle Tremblay. Instructor for General Biology Lab.

2017 Teaching Assistant: Pomona College, January-May 2017. Supervisor: Dr. Daniel Martinez. Assistant instructor for Bioinformatics.

Professional Experience

2021 Fish Specialist/Laboratory Manager: Rutgers, The State University of New Jersey, November 2021-May 2024. Supervisor: Dr. Tetsuya Nakamura. Maintain zebrafish facilities and conduct basic experiments of zebrafish genetics. Provides routine technical support relative to scientific research work or projects of a laboratory and/or teaching program. Collects and completes basic preparation of samples and specimens. Ordering, stock making, and molecular experiments.

2018 Graduate Research Assistant: Georgia Southern University, August 2018-December 2019. Principal Investigators: Drs. Emily Kane and Christian Cox. Biomonitoring the recovery of campus ponds. Conducting field surveys, fish identification, and recording, analyzing, and disseminating data. Mentored undergraduate students in proper field techniques and data collection methods.

2017 Biomechanics Research Assistant: Georgia Southern University, June 2017-December 2019. Supervisor: Dr. Emily Kane. Video data collecting, processing, and statistical analysis such as ANOVAs and ANCOVAs using Matlab and JMP. Authored many lab protocols such as Standard Operating Procedures and Institutional Animal Care and Use Protocols. Managed the laboratory, including scheduling and supervising multiple undergraduate student workers.

2015 Research Assistant: Pomona College, May 2015-May 2017. Principal Investigator: Dr. Daniel Martínez. Maintained laboratory, including caring for *Hydra* species and managing the purchase order process. Mentored and supervised six undergraduate students' work in the lab as well as their development of three scientific presentations. Administered and kept thorough records on long-term experiments.

2013 Research Assistant: Water Resources Research Center- Wormlab, August 2013- February 2014. Principal Investigator: Dr. Julie Bailey-Brock. Ocean Sewage Outfall Biomonitoring Project. Elutriation of large benthic samples, assortment of marine invertebrates into their classes, and preservation in ethanol after collecting data.

2012 Laboratory Assistant: Kewalo Marine Laboratory, September-December 2012. Principal Investigator: Dr. Mark Q. Martindale. Husbandry for starlet sea anemone (*Nematostella vectensis*).

2011 Internship: Kim Holland Lab at the Hawai'i Institute of Marine Biology, January 2011-August 2012. Supervisor: James Anderson. Preparation of food and feeding various species of sharks, tuna, and stingrays. Clean tanks and equipment. Recording of data on behaviors of aforementioned animals.

Publications

Wei, J., Wood, T.W.P., Flaherty, K., Fitch O.E., Ali S., Enny A., Andrescavage A., Brazer D., Navon D., **Cohen H.E.**, Gordon D., Shanabag A., Kuroda S., Stewart T.A., Braasch I. & Nakamura T. (2025). Distinct ossification trade-offs illuminate the shoulder girdle reconfiguration at the water-to-land transition. *Nature Communications*, 16(1), 1-16. https://doi.org/10.1038/s41467-025-60236-z

Cohen HE, Ray W, Hawkins O, and Kane EA. (2022). Potential for anthropogenic fin damage to affect individual responses to prey in bluegill sunfish (*Lepomis macrochirus*): a new hypothesis for kinematic studies. *Integrative and Organismal Biology*, 4(1).

Cohen, H.E. and Kane, E.A. (2021). Biting kinematics do not differ between ecologically divergent populations of Trinidadian guppies. *Journal of Zoology*. https://doi.org/10.1111/jzo.12924

Kane EA, **Cohen HE**, Hicks WR, Mahoney ER and Marshall CD (2019). Beyond suction-feeding fishes: Identifying new approaches to performance integration during prey capture in aquatic vertebrates. *Integrative and Comparative Biology*, 59(2), 456-472

Notes & other Publications

Chung AK, Levendosky MW, **Cohen HE**, Hall BE, Meyer SC, Sanchez-Ruiz JA, Watts JC (2019). Geographic Distribution note for *Anolis sagrei*. Herpetological Review, 50(2), 327

Presentations (* indicates presenter)

2022 **Hannah E. Cohen**, William Ray, Olivia Hawkins, and Emily A. Kane*. *Effects of anthropogenic fin damage on prey capture kinematics and capture success in bluegill sunfish* (*Lepomis macrochirus*). Louisiana Chapter American Fisheries Society Meeting, Thibodaux, LA.

2022 William R. Ray*, **Hannah E. Cohen**, Olivia H. Hawkins, Emily A. Kane. *Fin Damage Leads To Less Consistent Locomotor Control and Reduced Success During Feeding In Bluegill Sunfish (Lepomis macrochirus).* Society for Integrative and Comparative Biology, Phoenix, AZ.

2021 Emily A. Kane*, **Hannah E. Cohen**, Sofia Perez, Kristen Smith, Kristene Moody. *On the heritability of integrated biomechanical phenotypes in Trinidadian guppies (Poecilia reticulata)*. Poeciliid Fishes Virtual Conference.

2020 **Hannah E. Cohen*** and Emily A. Kane. *When the Expected Doesn't Happen: A Lack of Local Adaptation in Trinidadian Guppies.* Society for Integrative and Comparative Biology, Austin, TX.

Updated 10/2025

2019 **Hannah E. Cohen***, Emily A. Kane. *Damaged Goods: Do Injuries Affect Swimming Performance During Prey Capture in Bluegill?* Society for Integrative and Comparative Biology, Tampa, FL.

2019 Emily A. Kane*, **Hannah E. Cohen**, Chris D. Marshall. *Beyond Suction-Feeding Fishes: Diverse Strategies for Integrating Functional Systems during Prey Capture in Vertebrates*. Society for Integrative and Comparative Biology, Tampa, FL.

2018 **Hannah E. Cohen***, Emily A. Kane. *Local Adaptation of Morphology and Diet Does Not Predict Feeding Behavior in Guppies (Poecilia reticulata)*. Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.

2018 **Hannah E. Cohen***, Emily A. Kane. *The role of local adaptation on biting performance in Trinidadian guppies.* Society for Integrative and Comparative Biology, San Francisco, CA.

2016 **Hannah E. Cohen***, William Montgomery, Daniel E. Martínez. *Transcriptome of Sexual Differentiation and Induced Aging in Hydra oligactis.* Pomona College Summer Undergraduate Research Program Symposium.

Grants & Awards

2025 University of Michigan -SEAS Honors - Courtney R. Wilson Award: **$2,000**

2019-2020 GSU Student Sustainability Fee Proposal: Dating, dining, and ducks: Continued monitoring the recovery of campus lakes after dredging. **$19,000** for 1 year of graduate student stipends and supplies. PIs: **Cohen HE**, Kane EA, and Cox CL.

2018-2019 Georgia Southern University Center for Sustainability Research Assistantship: **$12,000**

2018 Student Government Association of Georgia Southern University Travel Grant: **$156**

2018 Graduate Student Professional Development Fund of Georgia Southern University: **$609**

Service

2025- PhD representative to School for Environment & Sustainability Tenure & Promotions Committee

Outreach

2019-2020,

2025-2026 Letters to a Pre-Scientist: Pen pal to middle school students, engaging them with science communication and outreach

2020-2022 Georgia Southern University Undergraduate Mentoring: William Ray, *How swimming performance is affected by injuries in Bluegill Sunfish*.

2019 Georgia Southern STEMfest: Science outreach to grade school children

2019 Center for Sustainability Showcase: Poster presentation of Pond Recovery Project to the general public.

2018-2019 Pond Recovery Project: Involving undergraduate students and the public in surveying ponds.

Professional Memberships

2018-present American Society of Ichthyologists and Herpetologists

2017-2020 Society for Integrative and Comparative Biology

Research Skills

Basic knowledge of Matlab, R

Updated 10/2025

Molecular techniques such as genotyping, PCR, and DNA construction.
Multiple field collection techniques
Video analysis
Fish colony management