

# L. Zoe Almeida

Aquatic Ecology Laboratory  
Department of Evolution, Ecology & Organismal Biology  
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## **EDUCATION**

**Doctoral Program**, Department of Evolution, Ecology & Organismal Biology 2016 – Present  
Ohio State University, Columbus, OH  
Dissertation: “Effects of early life environmental conditions on Lake Erie walleye individuals and population”  
Advisors: Drs. Elizabeth Marschall and Stuart Ludsin

**Masters of Science**, Forestry and Natural Resources Department May 2016  
Ecological Sciences and Engineering Interdisciplinary Graduate Program  
Purdue University, West Lafayette, IN  
Thesis: “Lake Erie Hypoxia: Assessing Habitat Quality and the Effects on the Physiology and Behavior of Lake Erie Yellow Perch”  
Advisor: Dr. Tomas Höök

**Bachelors of Arts**, Biology, Magna Cum Laude May 2011  
Scripps College, Claremont, CA  
Thesis: “Effects of Invasive Herbivory and Temperature on the Survivorship of a Rare Plant of the California Channel Islands”  
Advisor: Dr. Diane Thomson

## **RESEARCH EXPERIENCE**

*National Science Foundation (NSF) Graduate Fellow, Distinguished University Graduate Fellow,  
Graduate Research Associate* 2016 – Present  
Aquatic Ecology Laboratory, Department of Evolution, Ecology & Organismal Biology  
Ohio State University, Columbus, Ohio

- Explore how latent effects (carry-over effects from early life environments) influence Lake Erie walleye individuals, cohorts, and the population
- Examine the factors that influence latent effects across species with meta-analyses
- Conduct experiments with larval walleye to evaluate latent effects on performance by manipulating first-feeding dietary polyunsaturated fatty acids and following with a standardized, high-quality juvenile diet
- Collect larval and juvenile Lake Erie walleye to compare diets, growth rates, and fatty acid composition across years (1994-1999, 2011-2013, 2016-2019) and environmental conditions
- Examine which factors affect young adult growth in Lake Erie walleye cohorts with model selection and structural equation modeling, including early life and recent environmental conditions
- Explore how different latent effect life history strategies within individuals affect populations in variable environments using a demographic model
- Mentor undergraduate researchers and technicians in conducting independent research projects
- Supervise team of 2-4 technicians to conduct sampling and process samples
- Collaborate with academic and governmental (Ohio Department of Natural Resources – Division of Wildlife) researchers across disciplines
- Manage annual budget of approximately \$190,000 and write quarterly and annual reports
- Preparing 5 publications and presented at 4 national or international conferences and 4 regional conferences

*Visiting Researcher*

July – August 2015

Peter Eklöv Laboratory, Department of Ecology and Genetics, Limnology  
Uppsala University, Uppsala, Sweden

- Explored the potential for seasonal hypoxia to disrupt stable niche use by examining a series of trophic indicators in Eurasian perch across multiple lakes
- Partnered with international sampling crews to collect zooplankton, macroinvertebrate, and fish samples in remote lakes across Sweden
- Sorted and identified zooplankton and macroinvertebrate samples in preparation for stable isotope analyses
- Processed fish muscle tissue samples for stable isotope analyses and extracted and analyzed fatty acids from muscle tissues
- Analyzed fish morphology using landmark-based geometric morphometrics with TPSdig2 and MorphoJ
- Analyzed stable isotopes and fatty acids with multivariate statistics in R
- Preparing 1 publication and presented at 1 international conference

*NSF Graduate Research Fellow, David M. Knox Graduate Fellow*

2013 – 2016

Tomas Höök Laboratory, Forestry and Natural Resources Department  
Purdue University, West Lafayette, Indiana

- Explored the influence of seasonal hypolimnetic hypoxia on habitat quality, physiology, and behavior of fish in Lake Erie
- Conducted laboratory experiments to examine the physiological effects of acute and chronic hypoxia exposure on juvenile yellow perch
- Conducted laboratory experiments to determine how juvenile yellow perch behaviorally respond to hypoxia when food items may or may not be within hypoxic waters
- Identified the *hif-1α* primer for yellow perch (GenBank accession no. KX050166) to be identical to the *hif-1α* primer for Eurasian perch using PCR and agarose gel electrophoresis
- Extracted RNA from tissues of juvenile yellow perch exposed to chronic and acute hypoxia, and ran qPCR to determine gene expression of *igf-1β*, *cyp19a1a*, *hsp70*, *socs3*, and *hif-1α* in all tissues
- Statistically compared behavioral and physiological responses of juvenile yellow perch to hypoxia with Bayesian analyses
- Examined how a metric of habitat quality, growth rate potential (GRP), was positively and negatively affected by expected changes in environmental conditions across a range of nutrient loading (0.1 – 1.9 times projected phosphorus loading) among four fish species in Lake Erie's central basin
- As a side project from my thesis, determined a biologically-relevant threshold of hypoxia for fish using a meta-analysis of studies that examined fish consumption and growth in response to a range of oxygen concentrations
- As a side project from my thesis, examined the potential for yellow perch egg skeins to deter egg predation by conducting feeding and preference experiments with rusty crayfish and round goby
- Mentored an undergraduate researcher in conducting an independent research project
- Published 3 articles and preparing 1 article for publication
- Presented at 4 national or international conferences and 1 regional conferences
- Wrote 3 articles for the general public summarizing different projects

*Fisheries Technician*

February – August 2012

Wally Noerenberg & Main Bay Hatcheries, Prince William Sound Aquaculture Corporation  
Esther Island & Main Bay, Alaska

- Assisted in daily operations of a large-scale hatchery including animal husbandry, maintenance, minor construction, and spawning
- Assessed growth and feed conversion with wet weights
- Operated small skiffs and power tools

*Field Technician*

June – August 2011

David Reznick Laboratory, Foundations in Integrative Biological Research  
Trinidad and Tobago, West Indies

- Assisted in field work, sample processing, and maintaining data integrity on long-term research of rapid evolution in guppies
- Tagged fish with Visible Implant Elastomer
- Operated manual shifting and 4-wheel drive vehicles

*Undergraduate Thesis Research*

September 2010 – May 2011

Diane Thomson Laboratory, Keck Science Department  
Scripps College, Claremont, California

- Explored how an invasive herbivore (feral pigs) and climate warming affected the survivorship of a California Channel Islands endemic plant
- Organized data from the previous 10+ years of surveys on Santa Rosa Island and Santa Cruz Island before and after pigs were removed
- Analyzed data with SPSS graphs and step-wise logistic regressions
- Presented at 1 departmental research symposium and to scientists at USGS
- Wrote and submitted as my thesis

*NSF Research Experiences for Undergraduates Intern*

June – August 2010

James Perry Laboratory, Virginia Institute of Marine Science, Gloucester Point, Virginia  
College of William and Mary, Williamsburg, Virginia

- Designed and conducted an experiment determining the responses of three freshwater marsh plants to increasing salinity that may be more prevalent with rising sea levels
- Conducted field work in freshwater marshes
- Analyzed data with ANOVAs and t-tests in SigmaPlot
- Presented at 2 departmental research symposia
- Completed a final report of the research

*Bull Foundation Summer Research Fellow*

June – July 2009

Diane Thomson Laboratory, Firestone Center for Restoration Ecology, Costa Rica  
Scripps College, Claremont, California

- Conducted fieldwork and analyzed data on a project evaluating the regeneration of a secondary tropical forest in Costa Rica
- Presented at 1 departmental research symposium
- Completed a final report of the research

**RESEARCH GRANTS**

Great Lakes Fishery Commission: “A unified model of walleye recruitment”

PIs: G. Hansen (University of Minnesota), S.A. Ludsin (OSU), E.A. Marschall (OSU), R. Budnick (OSU), L.Z. Almeida (OSU) 2020 – 2022

Research Grant

\$187,728 over 2 years

Support for collaborative workshop with researchers across North America and postdoctoral research

Ohio Department of Natural Resources, Division of Wildlife – Federal Aid in Sport Fish Restoration Project

Funds: “Is food quality limiting walleye recruitment in Lake Erie?”

PIs: E.A. Marschall (OSU), S.A. Ludsin (OSU), L.Z. Almeida (OSU) 2016 – 2020

Research Grant

\$190,000 annually

Support for research including salary for technicians & graduate students, field and lab supplies

## **RESEARCH AWARDS**

- National Science Foundation – Graduate Research Fellowship (NSF GRFP) 2013  
Research Fellowship  
\$136,000  
Tuition, fees, and stipend support to be used over 3 of 5 years for graduate study  
Awarded to approximately 14% of applicants per year during 2010-2014
- Ohio State University – Distinguished University Fellowship 2016  
Research Fellowship  
\$58,000  
Tuition waiver plus stipend support to be used over 2 years for Doctorate of Philosophy
- Purdue University – David M. Knox Fellowship 2013  
Research Fellowship  
\$18,000  
Tuition waiver plus stipend support to be used over 1 year for Master of Science
- National Science Foundation – Research Experiences for Undergraduates Grant (NSF REU) 2010  
Research Fellowship  
\$4,000  
Stipend support for undergraduate summer research
- Bull Foundation – Student Research Fellowship 2009  
Research Fellowship  
\$5,000  
Stipend support for undergraduate summer research

## **PUBLICATIONS and MANUSCRIPTS** (\*Advised undergraduate student)

- Almeida, L.Z.**, T.M. Sesterhenn, D.K. Rucinski, T.O. Höök. Nutrient loading effects on fish habitat quality in a large lake: Trade-offs between production and hypoxia. *In Preparation*. Target Journal: *Freshwater Biology*.
- Almeida, L.Z.**, K. Scharnweber, T.O. Höök, K. Holmgren, M. Dahlberg, P. Eklöv. Using morphology and trophic markers to indicate fish niche use in seasonally hypoxic lakes. *In Preparation*. Target Journal: *Freshwater Biology*.
- Almeida, L.Z.**, S.M. Hovick, S.A. Ludsin, E.A. Marschall. Which factors determine the long-term effects of poor early life nutrition? A meta-analytic review. *In Preparation*. Target Journal: *Ecology Letters*.
- Almeida, L.Z.**, S.C. Guffey, M.S. Sepúlveda, T.O. Höök. 2017. Behavioral and physiological responses of yellow perch (*Perca flavescens*) to moderate hypoxia. *Comparative Biochemistry and Physiology – Part A: Molecular & Integrative Physiology*, 209(July), 47-55. DOI: 10.1016/j.cbpa.2017.04.009
- Hrycik, A.R., **L.Z. Almeida**, T.O. Höök. 2017. The effect of hypoxia on growth and consumption: Toward determining a biologically relevant threshold of dissolved oxygen. *Oikos*, 126, 307-317. DOI: 10.1111/oik.03678
- Almeida, L.Z.**, S.C. Guffey, T. Krieg\*, T.O. Höök. 2017. Predators reject yellow perch egg skeins. *Transactions of the American Fisheries Society*, 146(1), 173-180. DOI: 10.1080/00028487.2016.1249294

**PRESENTATIONS** (\*Advised undergraduate student)

- Almeida, L.Z.**, M.D. Faust, S.A. Ludsin, E.A. Marschall. “Field-based evidence of latent effects on Lake Erie Walleye growth rates.” *Joint American Fisheries Society & The Wildlife Society Annual Meeting* (September 2019). Oral Presentation.
- Honorable Mention for American Fisheries Society Fish Habitat Section Best Student Paper
- Almeida, L.Z.**, J. Grayson, K. Dabrowski, S.A. Ludsin, E.A. Marschall. “Early life diet quality has lingering effects on juvenile walleye (*Sander vitreus*).” *International Association of Great Lakes Research Annual Meeting* (June 2019). Oral Presentation.
- Grayson, J., **L.Z. Almeida**, S.A. Ludsin, E.A. Marschall, K. Dabrowski. “The effect of *Artemia* enrichment with PUFA and  $\alpha$ -tocopherol on the performance of walleye *Sander vitreus* larvae.” *World Aquaculture Society Meeting* (March 2019). Oral Presentation.
- Almeida, L.Z.**, M.D. Faust, S.A. Ludsin, E.A. Marschall. “Evaluating the influence of past and current environments on Lake Erie walleye growth rates.” *Midwest Fish and Wildlife Conference* (January 2019). Oral Presentation.
- Bobay, L.A.\* , **L.Z. Almeida**, E.A. Marschall, S.A. Ludsin. “Toward examining climate effects on yellow perch recruitment: How do Lake Erie larval yellow perch diets vary within a year?” *Midwest Fish and Wildlife Conference* (January 2019). Oral Presentation.
- Ulin, K.E., **L.Z. Almeida**, D.A. Dippold, T.A. Brown, E.A. Marschall, S.A. Ludsin. “Validating daily otolith increment deposition in aquarium-reared juvenile walleye, *Sander vitreus*.” *Midwest Fish and Wildlife Conference* (January 2019). Poster.
- Almeida, L.Z.**, M.D. Faust, S.A. Ludsin, E.A. Marschall. “Evaluating the influence of past and current environments on Lake Erie walleye growth rates.” *Lake Erie – Inland Waters Annual Research Review* (December 2018). Oral Presentation.
- Bobay, L.A.\* , **L.Z. Almeida**, E.A. Marschall, S.A. Ludsin. “Toward examining climate effects on yellow perch recruitment: How do Lake Erie larval yellow perch diets vary within a year?” *Lake Erie – Inland Waters Annual Research Review* (December 2018). Poster.
- Ulin, K.E., **L.Z. Almeida**, D.A. Dippold, T.A. Brown, E.A. Marschall, S.A. Ludsin. “Validating daily otolith increment deposition in aquarium-reared juvenile walleye, *Sander vitreus*.” *Lake Erie – Inland Waters Annual Research Review* (December 2018). Poster.
- Bobay, L.A.\* , **L.Z. Almeida**, E.A. Marschall, S.A. Ludsin. “Toward examining climate effects on yellow perch recruitment: How do Lake Erie larval yellow perch diets vary within a year?” *2018 Autumn Undergraduate Research Festival* (November 2018). Poster.
- Ludsin, S.A., D.A. Dippold, T. Farmer, **L.Z. Almeida**, J.M. Hood, C. May, J. Stone, E.A. Marschall. “Understanding and predicting climate change impacts on yellow perch recruitment in Lake Erie.” *Larval Fish Conference* (June 2018). Oral Presentation.
- Almeida, L.Z.**, A.L. Huddleston, E.F. Roseman, J.M. Hood, S.A. Ludsin, E.A. Marschall. “Do changing winter conditions alter Lake Erie larval walleye diet phenology?” *Larval Fish Conference* (June 2018). Oral Presentation.
- Brown, T.A.\* , D.A. Dippold, **L.Z. Almeida**, E.A. Marschall, S.A. Ludsin. “Evaluating basin-specific early growth rates as a Lake Erie walleye stock discrimination tool.” *Ohio State University Denman Undergraduate Research Forum* (April 2018). Poster.
- Almeida, L.Z.**, M.D. Faust, S.A. Ludsin, E.A. Marschall. “Lake Erie walleye growth rates in relation to past and current environments.” *Great Lakes Fishery Commission, Lake Erie Committee – Walleye Task Group Meeting* (February 2018). Oral Presentation – Invited.
- Almeida, L.Z.**, M.D. Faust, S.A. Ludsin, E.A. Marschall. “Lake Erie walleye growth rates in relation to past and current environments.” *Lake Erie – Inland Waters Annual Research Review* (February 2018). Oral Presentation.
- Brown, T.A.\* , D.A. Dippold, **L.Z. Almeida**, E.A. Marschall, S.A. Ludsin. “Evaluating basin-specific early growth rates as a Lake Erie walleye stock discrimination tool.” *Lake Erie – Inland Waters Annual Research Review* (February 2018). Poster.
- Almeida, L.Z.**, S.A. Ludsin, E.A. Marschall. “Does food quality or quantity in early life affect fitness later

- in life?” *Ecological Society of America Annual Meeting* (August 2017). Oral Presentation.
- Almeida, L.Z.**, K. Scharnweber, T.O. Höök, K. Holmgren, M. Dahlberg, P. Eklöv. “Using morphology and trophic markers to indicate fish niche use in seasonally hypoxic lakes.” *International Association of Great Lakes Research Annual Meeting* (May 2017). Oral Presentation.
- Almeida, L.Z.**, A.L. Huddleston, S.A. Ludsins, J.M. Hood, E.A. Marschall. “Assessing lower food web changes in Lake Erie’s western basin and consequences for walleye.” *Lake Erie – Inland Waters Annual Research Review* (February 2017). Poster.
- Almeida, L.Z.**, S.C. Guffey, T.A. Krieg\*, T.O. Höök. “Do Yellow Perch Egg Skeins Deter Predation?” *International Association of Great Lakes Research Annual Meeting* (June 2016). Oral Presentation.
- Almeida, L.Z.**, S.C. Guffey, M.S. Sepúlveda, T.O. Höök. “The Effects of Moderate Hypoxia on Yellow Perch (*Perca flavescens*) Foraging Behavior and Physiology.” *Midwest Fish & Wildlife Conference* (January 2016). Oral Presentation.
- Almeida, L.Z.**, S.C. Guffey, M.S. Sepúlveda, T.O. Höök. “Yellow Perch Behavioral and Physiological Responses to Hypoxia.” *International Association of Great Lakes Research Annual Meeting* (May 2015). Oral Presentation – Invited.
- Krieg, T.\*, **L.Z. Almeida**, S.C. Guffey, T.O. Höök. “Do Gelatinous Skeins Deter Predation of Yellow Perch Eggs?” *American Fisheries Society Annual Meeting* (August 2014). Poster.
- Almeida, L.Z.**, T.M. Sesterhenn, D. Rucinski, T.O. Höök. “Effects of Altered Nutrient Loading on Habitat Quality for Lake Erie Fishes.” *International Association of Great Lakes Research Annual Meeting* (May 2014). Oral Presentation.
- Almeida, L.Z.**, D. Thomson. “Effects of Invasive Herbivory and Climate Change on the Survivorship of a Rare Plant of the California Channel Islands.” *USGS Channel Islands native plant quarterly meeting* (May 2011). Oral Presentation – Invited.
- Almeida, L.Z.**, D. Thomson. “Effects of Invasive Herbivory and Climate Change on the Survivorship of a Rare Plant of the California Channel Islands.” *Keck Science Department Poster Session* (April 2011). Poster.
- Almeida, L.Z.**, L. Sutter, J. Perry. “Responses of Tidal Freshwater Plants to Increases in Salinity.” *Joint Science Department, Summer Research Symposium* (September 2010). Oral Presentation
- Almeida, L.Z.**, D. Thomson. “Tree Demography and Stand Characteristics of a Regenerating Tropical Secondary Forest.” *Joint Science Department, Summer Research Symposium* (September 2010). Oral Presentation.
- Almeida, L.Z.**, L. Sutter, J. Perry. “Responses of Tidal Freshwater Plants to Increases in Salinity.” *Virginia Institute of Marine Science Research Experience for Undergraduates Summer Program* (August 2010). Oral Presentation.

### **UNDERGRADUATE MENTORING**

Research Mentor, Undergraduate Research Student, Luke Bobay 2017-Current  
Ohio State University

Project Title: “Examining phenological mismatch between yellow perch and their prey through larval gut content analysis.”

- Helped create project, collect data
- Assisted student learn R and statistical techniques to analyze data
- Helped create presentations

Research Mentor, Undergraduate Research Student, Taylor Brown 2017-2018  
Ohio State University

Project Title: “Evaluating basin-specific early growth rates as a Lake Erie walleye stock discrimination tool.”

- Co-Created project and assisted student in developing laboratory techniques and data management
- Assisted student analyze data and create presentations

Research Mentor, Discovery Park Undergraduate Research Intern, Tyler Krieg 2014  
Purdue University  
Project Title: “Do yellow perch skeins protect eggs from predation?”

- Created project and assisted student in establishing laboratory techniques
- Assisted student analyze data and create presentations

### **TEACHING EXPERIENCE**

Assisted with teaching in two traditional semester-long courses and two field ecology courses involving developing course materials (e.g., lectures, laboratory activities, quizzes, tests, homework), guest lecturing, overseeing laboratory activities, and grading

Introduction to Biological Studies – Aquatic Biology (EEOB 1930), Teaching Assistant 2017  
Ohio State University

- Introduced undergraduate and high school students to aquatic habitats and organisms at Stone Lab on Lake Erie and surrounding areas for non-majors (20 students)
- Taught 1 lecture on the physio-chemical characteristics of lakes
- Led and supervised invertebrate sampling of streams and rivers using various sampling gears including seines, dip-nets, and D-nets
- Assisted with identification of phytoplankton, zooplankton, macroinvertebrates, and fishes
- Graded assignments and exams

Fish Ecology (FNR 455), Teaching Assistant 2016  
Purdue University

- Covered topics related to fish and their interactions with their environment from individuals (bioenergetics) to ecosystems (community ecology) for fisheries majors (25 students)
- Created weekly assignments and quizzes
- Led review sessions in preparation of exams
- Held weekly office hours and met with students by appointment
- Graded assignments including grant proposals

Fisheries Summer Practicum (FNR 371), Teaching Assistant 2015  
Purdue University

- Applied techniques learned during the semester in FNR 351 to conduct a project comparing stream health between contaminated and non-contaminated streams in the Upper Peninsula of Michigan for fisheries majors (12 students)
- Led backpack electroshocking sampling of streams
- Assisted with labs including identifying organisms caught during sampling
- Graded assignments

Aquatic Sampling Techniques (FNR 351), Teaching Assistant 2015  
Purdue University

- Provided the theoretical basis and practical application of aquatic sampling techniques to fisheries majors (20 students)
- Taught 1 lecture on how to examine, analyze, and interpret fish diets and molecular markers of diets
- Created a diet reconstruction laboratory to pair with the lecture on fish diets for which students had to extract and identify gut contents
- Assisted with laboratory exercises including blood collection, necropsies, otolith extraction, counting rings on scales and otoliths, setting sampling nets such as under-ice gillnetting, backpack electroshocking, and seining
- Created laboratory questions and midterm questions
- Graded laboratory assignments and midterms

## **PROFESSIONAL SERVICE**

- Student Member, American Fisheries Society Publications Overview Committee: 2018-2020
- Graduate co-representative, Evolution, Ecology, & Organismal Biology Seminar Committee: 2018-2019
- Graduate representative, Evolution, Ecology, & Organismal Biology Diversity Committee: 2017-2019
- Aquatic Seminar Coordinator, Fisheries and Aquatic Sciences, Purdue University: 2015-2016
- Session Co-Chair, “Anthropogenic Influences on Aquatic Food Webs,”  
International Association of Great Lakes Research Annual Conference: 2015
- Catering Chair, “#Science: Effective Interdisciplinary Communication”  
Ecological Sciences and Engineering Program Fall Symposium, Purdue University: 2014
- Graduate Co-Advisor for Christmas Lake, Indiana sampling survey, Purdue AFS: 2014
- Manuscript and grant reviewer for: *Science of the Total Environment*, *Environmental Toxicology & Chemistry*, *Environmental Science & Technology*, *Freshwater Biology*, *Transactions American Fisheries Society*, *Journal of Applied Ichthyology*, Ohio Sea Grant

## **POPULAR PUBLICATIONS**

To reach a broader audience within and beyond the scientific community, I write a blog article or another general public article to accompany each of my first-author peer-reviewed publications.

**Almeida, L.Z.** 2017. Yellow perch and the hypoxia Goldilocks zone. *The Fisheries Blog*, May 8, 2017.  
<https://thefisheriesblog.com/2017/05/08/yellow-perch-and-the-hypoxia-goldilocks-zone/>

**Almeida, L.Z.** 2017. Predators reject yellow perch egg skeins. *The Fisheries Blog*, February 6, 2017.  
<https://thefisheriesblog.com/2017/02/06/predators-reject-yellow-perch-egg-skeins/>

**Almeida, L.Z.** 2015. Anticipating the future for habitat quality in the central basin of Lake Erie. Old Woman Creek National Estuarine Research Reserve Tech. Bulletin No. 3, Ohio Dept. Natural Resources.

## **HONORS & AWARDS**

Fish Habitat Section, American Fisheries Society – Honorable Mention Best Student Paper Award 2019  
2019 American Fisheries Society Annual Meeting  
Presentation titled: “Field-based evidence of latent effects on Lake Erie Walleye growth rates”

American Fisheries Society – Honorable Mention John E. Skinner Memorial Award 2019  
Travel Grant  
Reimbursement of registration expenses (\$320)  
Funding to present at the 2019 American Fisheries Society Annual Meeting

Great Lakes Fishery Commission – Student Travel Award 2019  
Travel Grant  
\$1,500  
Funding to present at the 2019 American Fisheries Society Annual Meeting

North Central Division, American Fisheries Society, Walleye Technical Committee –  
Sander Award Student Travel Grant 2019  
Travel Grant  
\$400  
Funding to present at the 2019 Midwest Fish and Wildlife Conference

Early Life History Section, American Fisheries Society – Grace Klein-MacPhee Student Travel Grant 2018  
Travel Grant  
\$300  
Funding to present at the 2018 Larval Fish Conference



Ohio State University – Council of Graduate Students Career Development Grant Travel Grant \$350 Funding to attend the Joint National Institute for Mathematical and Biological Synthesis – Mathematical Biological Institute – Centre for Applied Mathematics in Bioscience and Medicine 2017 summer graduate program (NIMBioS, Knoxville, TN)	2017
Purdue University – Purdue Graduate Student Government Conference Travel Grant Travel Grant \$1,000 Funding to attend the American Fisheries Society Annual Meeting in 2014 to present a poster	2014
Scripps College – James E. Scripps Scholarship Scholarship Half tuition for 4 years based on merit	2007 – 2011
State of Idaho – Robert Byrd Scholarship Scholarship \$1,000 per year of undergraduate enrollment Merit-based Idaho resident scholarship	2007 – 2011

## **OUTREACH**

- Ohio State University Museum of Biodiversity Open House volunteer, 2017-2019
- Graduate Evolution & Ecology Students Bioblitz set-up volunteer, 2017
- Worthington, Ohio Science Day volunteer judge, 2017, 2019
- Aquatic Ecology Laboratory (AEL) “Art in the Environment” High School Course, Lab Visit Guide, 2016
- AEL Annual 6<sup>th</sup> Grade Visit, in-school Presenter and Lab Guide, 2016-2018
- Ohio State University Fall Undergraduate Research Student Poster Forum, Judge, 2016
- Ecological Sciences and Engineering “Capturing Resilience,” Summit Volunteer, 2013
- American Fisheries Society Annual Meeting, Volunteer, 2013
- International Association of Great Lakes Research Conference, Volunteer, 2013
- Illinois-Indiana Sea Grant Children’s Education Booth, Indiana State Fair, Volunteer, 2013

## **PROFESSIONAL ASSOCIATIONS**

Ecological Society of America  
American Fisheries Society  
Early life history section of the American Fisheries Society  
International Association of Great Lakes Research