

LIAN WINSLOW GUO

Contact
+1 858-602-8373
lguo@umass.edu

Current Address
32 Kendrick Pl. #3
Amherst, MA 01002

EDUCATION

- University of Massachusetts Amherst, Amherst, MA** (anticipated Dec 2021)
- PhD Candidate in the Organismic and Evolutionary Biology (OEB) Program, 4.0 cumulative GPA
 - Certificate in Sustainable Aquaculture – University of Bergen, Norway
- Scripps College, Claremont, CA** (May 2014)
- Bachelor of Arts in Organismal Biology (honors), Cum Laude, 3.69 cumulative GPA

HONORS AND AWARDS

- 2020** – Irwin Martin Award recipient (\$2500), Sigma Xi Grants in Aid of Research recipient (\$983), American Fisheries Society Habitat Section Travel Award Recipient (\$100)
- 2019** – Graduate School Dissertation Fieldwork Grant recipient (\$3754), UMass Amherst Three Minute Thesis Runner-Up, National Socio-Environmental Synthesis Center Fellow (\$2000), International Council for the Exploration of the Sea (ICES) Early Career Travel Award (\$730)
- 2018** – OEB Research Grant Award (\$1000), Graduate School Dissertation Research Grant recipient (\$374), American Fisheries Society Southern New England Chapter (SNEC) Travel Award (\$500), American Fisheries Society Equal Opportunities Section Travel Award (\$500), College of Natural Sciences Teaching Fellow, Alan Alda Center for Communicating Science Workshop Selected Attendee
- 2017** – Cronin Research Award recipient (\$500), NSF GRFP Honorable Mention recipient, Life Sciences Graduate Research Council Best Student Talk (3rd place), OEB Research Assistantship Award
- 2014** – Scripps College Capstone Day presenter, William M. Keck Research Fellow (\$4000)

PUBLICATIONS

- Guo, LW, S McCormick, E Schultz, and A Jordaan.** Effects of Temperature and Food Ration on Juvenile Anadromous Alewife Growth and Proximate Composition. *In preparation.* Journal of Fish Biology.
- ***Guo, LW, Marjadi, MN, Drakopoulos, L, Koehn, Z, Panchang, S, and D Robertson.** Negative Socio-Environmental Feedback Loop Fosters Inequality for Urban Marine Subsistence Fishers. *In revision.* Environmental Science and Policy.
- ***Guo, LW, Panchang, S, Drakopoulos, L, Koehn, Z, Robertson, D, and M Marjadi.** 2020. Transdisciplinary Synthesis Research in Unruly Environments: Reflecting on a Case Study of Vulnerability and Urban Fishing in the American Gulf Coast. *15. Practices of Health in Unruly Environments*
- Guo, LW.** 2020. Worried about hair loss? So are these seals. Conservation Physiology 8.1 (2020): coaa072.
- Thompson, AR, Chen, D, **Guo, LW, Hyde, JR, and W Watson.** 2017. Larval abundances of rockfishes that were historically targeted by fishing increased over 16 years in association with a large marine protected area. Royal Society Open Science 4:170639
- Khalil, A, Parker, M, Brown, SE, Cevik, SE, **Guo, LW, Jensen, J, Olmsted, A, Portman, D, Wu, H, and A Suvorov.** 2017. Perinatal Exposure to 2,2',4,4' -Tetrabromidihenyl Ether Impairs Male Reproductive Health in Adult Rats. Toxicology.
- Thompson, AR, Hyde, JR, Watson, W, Chen, D, and **LW Guo.** 2016. Rockfish assemblage structure and spawning locations in southern California identified through larval sampling. Marine Ecology Progress Series. 547:177-192
- Guo, LW.** 2014. Effects of Variable and Constant Acclimation Regimes on the Upper Thermal Tolerance of Intertidal Barnacle, *Balanus Glandula*. Scripps Senior Theses. Paper 331.

*all authors hold equal authorship

PRESENTATIONS & POSTERS

- Guo, LW, Mannarino, H, McCormick, SD, and A Jordaan.** “Can Food Availability Mitigate the Physiological Impacts of Temperature in Juvenile Blueback Herring?” Sep 14, 2020. American Fisheries Society Virtual Annual Meeting. Oral Presentation.
- Slocombe, M, Marjadi, M, Devine, M, **Guo, LW, Jordaan, and A Roy.** “Temporal Shifts in Migratory River Herring Diets and Zooplankton Assemblages within a Connecticut River Cove.” Jan 13, 2020. American Fisheries Society Southern New England Chapter. Cambridge, MA. Poster.
- Guo, LW, McCormick, SD, Schultz, E, Lynch, A, Sprankle, K, and A Jordaan.** “When It’s Hot for Herring: Linking Temperature Effects on Juvenile River Herring Physiology to Range Shifts.” Sep 11, 2019.

- International Council for Exploration of the Sea Annual Science Conference. Gothenburg, Sweden. Oral Presentation.
- Marjadi, MN, **Guo, LW**, Drakopoulos, L, Koehn, Z, Panchang, S, and D Robertson. "Increased Risk for Urban Subsistence Fishers: Why Fisheries and Urban Policy Should Match Fishing Practices." Sep 10, 2019. International Council for Exploration of the Sea Annual Science Conference. Gothenburg, Sweden. Poster.
- Lees, Ashley, **Guo, LW**, Lynch, A, Devine, M, and A Jordaan. "Effects of temperature and food ration on somatic and otolith growth in juvenile Blueback Herring (*Alosa aestivalis*)." Jun 27, 2019. American Fisheries Society Southern New England Chapter. Hadley, Massachusetts. Oral Presentation.
- Guo, LW**, McCormick, SD, Schultz, E, Lynch, A, Sprankle, K, and A Jordaan. "Fueling Up: How Temperature and Food Availability Affect Anadromous Juvenile River Herring Growth and Energetics." Mar 19, 2019. Connecticut River Research and Management Forum. Hadley, Massachusetts. Oral Presentation.
- Guo, LW**. "Hot for Herring: Why Physiology Matters in a Warming World." Mar 1, 2019. University of Massachusetts Amherst Three Minute Thesis Competition. Amherst, Massachusetts. Oral Presentation.
- Guo, LW**, McCormick, SD, Schultz, E, and A Jordaan. "Hot Herring: Exploring the Effects of Temperature on Juvenile River Herring." Oct 18, 2018. Massachusetts River Herring Network Meeting. East Falmouth, Massachusetts. Oral Presentation.
- Marjadi, MN, **Guo, LW**, Drakopoulos, L, Koehn, Z, Panchang, S, and D Robertson. "Subsisting on data-poor fish consumption advisories: the mismatch between fishing communities, access, and toxicology." August 23, 2018. American Fisheries Society Annual Meeting. Atlantic City, New Jersey. Oral Presentation.
- Guo, LW**, McCormick, SD, Schultz, E, and A Jordaan. "Warming Lakes: How Temperature Affects Anadromous Juvenile River Herring Physiology." Aug 20, 2018. American Fisheries Society National Meeting. Atlantic City, New Jersey. Oral Presentation.
- Drakopolus, L, Robertson, D, Marjadi, MN, Koehn, Z, Panchang, S and **LW Guo**. "Fishing the Crescent City: urban subsistence as sites of (in)justice and socioecological entanglement." April 26, 2018. Giving Voice, Being Seen: Community Agency and Design Action in a Time of Climate Change Symposium. Seattle, Washington. Oral Presentation.
- Robertson, D, Drakopolus, L, Marjadi, MN, Panchang, S, Koehn, Z, and **LW Guo**. "Urban ecologies of vulnerability and risk: Spatial patterns of urbanization, inequality, and subsistence fishing in New Orleans." April 14, 2018. American Association of Geographers Annual Meeting. New Orleans, Louisiana. Oral Presentation.
- Guo, LW**, McCormick, SD, and A Jordaan. "Lost Habitants of the Pioneer Valley: the River Herring Story." Apr 7, 2018. Pioneer Valley Ecological Research and Management Symposium. Mass Audubon Arcadia Wildlife Sanctuary. Oral Presentation.
- Guo, LW**, Froburg, KM, Devine, M, and A Jordaan. "Measuring Otolith Growth to Infer River Herring Physiology." Jan 27, 2018. Environmental Conservation Graduate Student Symposium. University of Massachusetts, Amherst. Oral Presentation.
- Froburg, KM, **Guo, LW**, Devine M and A Jordaan. "Evaluation of Otolith Growth Decoupling Phenomena in Juvenile Anadromous Alewives." Jan 10, 2018. American Fisheries Society Southern New England Chapter Conference. Poster.
- Guo, LW**, McCormick, SD, and A Jordaan. "Effects of Temperature and Food Limitation on Energetic Tradeoffs in Juvenile Anadromous Alewives." Nov 17, 2017. Life Sciences Graduate Research Council. University of Massachusetts Amherst. Oral Presentation.
- Guo, LW** and SE Gilman. "Effects of Variable and Constant Acclimation Regimes on the Upper Thermal Tolerance of Intertidal Barnacle, *Balanus Glandula*." May 7, 2014. Scripps Capstone Day. Claremont, California. Oral Presentation.
- Guo, LW** and SE Gilman. "Effects of Variable and Constant Acclimation Regimes on the Upper Thermal Tolerance of Intertidal Barnacle, *Balanus Glandula*." Nov 7, 2013. Western Society of Naturalists Conference. Ventura, California. Poster.

Invited Speaking Events:

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| "Forage Fish and Climate Adaptation: Science and Management" Panel | (Sep 2020) |
| "Perspectives on Covid-19 and Anti-Asian Bias and Xenophobia" Panel | (Sep 2020) |
| "Skype with a Scientist" | (May 2020) |
| "Strategies for Remote Work/Learning" Panel | (April 2020) |

Media:

"Lian discusses fishy business." We Know Some Stuff, CFRU 94.1. 18 Sep 2020.

https://www.cfru.ca/?s=We%20Know%20Some%20Stuff&posttype_search=mcm_recording.

"AFS Diversity and Inclusion Day Preview." Fisheries Diversity and Inclusion Podcast. 9 Sep 2020.

<https://fisheriespodcast.podbean.com/e/di-podcast-ep4-afs-diversity-and-inclusion-theme-day-preview/>

"Heidi, Lian, Louis, and Gabe." Lab Talk with Laura. 20 Mar 2019.

<https://soundcloud.com/labtalkwithlaura/ep-25-heidi-lian-louis-and-gabe>

RESEARCH EXPERIENCE

Cronin Aquatic Resource Center, Sunderland, MA (Aug 2015 – Current)

Graduate Student (Advisors: Dr. Adrian Jordaan and Dr. Stephen McCormick)

- Direct and maintain laboratory facilities for river herring research, including mentoring undergraduates in animal husbandry, field sampling, otolith dissections/aging, and professional development
- Measure effects of temperature and food availability on physiology in larval and juvenile alewife and blueback herring in the laboratory and field

SESYNC: Fishing and Urban Inequality, Annapolis, MD (Oct 2017 – May 2019)

Graduate Pursuit Fellow

- Provide biology, ecology, physiology, and toxicology expertise to interdisciplinary team of students
- Evaluate inclusion of subsistence fishing and cooking practices within urban and environmental policy in Tampa, FL and New Orleans, LA
- Examine inequalities in access to healthy food (fish) in urban areas

UMass Amherst Department of Public Health, Amherst, MA (Jan – Jul 2016)

Graduate Student (Supervisor: Dr. Alexander Suworov)

- Used RNA-sequencing to assemble testis transcriptome of mice perinatally exposed to BDE-47 and estimate long-term, physiological effects of BDE-47 exposure on reproduction

Southwest Fisheries Science Center (NMFS), La Jolla, CA (Jul 2014 – Jul 2015)

Scientist II Contractor, FRD, Plankton Sorter (Supervisor: Dr. Andrew Thompson)

- Removed target study species (rockfish, anchovy, squid, etc.) from ethanol-preserved plankton samples
- Genetically sequenced larval rockfish to determine temporal and spatial changes in rockfish assemblages from 1997 – 2013 in Southern California Bight

Senior Thesis, Claremont, CA (Jul – Dec 2013)

William M. Keck Research Fellow (Advisor: Dr. Sarah Gilman)

- Measured critical thermal maximum (CT_{max}) of differently acclimated *Balanus glandula* to examine current thermal tolerance hypotheses of organisms adapted to heterogeneous thermal environments
- Designed tide tanks to create cold (<20.4°C), warm (<26.5°C), and variable (2 days cold, 2 days warm) acclimation treatments; created methodology for testing CT_{max} of *B. glandula*

Independent Study Project, Lizard Island, Australia (Apr – May 2013)

Laboratory and Field Assistant (Advisor: Dr. Jairo Rivera Posada)

- Determined efficacy of bile salts, a novel control solution, in causing *Acanthaster planci* mortality
- Evaluated safety of using bile salts in the field by monitoring disease transmission from dying *A. planci* to exposed coral, fish, and invertebrates

W. M. Keck Science Department, Claremont, CA (Sep 2012 – May 2014)

Laboratory Assistant (Advisor: Dr. Sarah Gilman)

- Measured respiration rate and recorded opercular/cirral behaviors of immersed *Balanus glandula* following low-tide exposure
- Conducted lethal limit trials of *B. glandula* for one-hour exposures to high temperatures

Southwest Fisheries Science Center (NMFS), La Jolla, CA (May - Aug 2011/2012)

Intern (Advisor: Dr. Andrew Thompson)

- Sorted and identified nekton and plankton in the laboratory and onboard a NOAA vessel
- Sorted and identified otoliths and squid beaks found in shark and dolphin stomach contents
- Genetically sequenced and identified 10,000+ specimens of larval rockfish to species

TEACHING AND MENTORING EXPERIENCE

University of Massachusetts Amherst Teaching Assistant (Sep 2015 – May 2020)

- Prepared for and led laboratory or discussion sections; provided supplemental teaching through review

sessions and office hours

- Designed and taught first-year seminar as a College of Natural Sciences Teaching Fellow, introducing students to environmental challenges and adaptations, scientific thinking, and resources for college life
- Courses taught: Animal Behavior, Ecology of Fishes, Fisheries Science and Management, Cell and Molecular Biology, Introductory Biology, How Temperature Shapes Life (*instructor of record*)

Undergraduate Mentor (June 2017 – Current)

- Train and mentor undergraduate students in husbandry/aquaculture, experimentation, fish sampling, bomb calorimetry, and otolith growth/aging analysis (22 students to date)

STEM Ambassador Program Graduate Student Mentor (Sep 2016 – May 2017)

- Taught/mentored five first-year undergraduates from underrepresented backgrounds in general science skills and topics within functional morphology and physiology; helped students form hypotheses and execute a group research experiment

OEB Mentorship Committee Member and Mentor (May 2016 – May 2017)

- Organized mentors for incoming OEB graduate students and plan community events to incorporate new students into the community; mentored an OEB student during their first year at UMass Amherst

Undergraduate Mailing List (Nov 2015 – April 2018)

- Created and maintained a mailing list to share opportunities for research, scholarships, and local events with interested undergraduates

OUTREACH AND COMMUNITY-BUILDING EXPERIENCE

American Fisheries Society Diversity and Inclusion Standing Committee Member (Nov 2020 – Current)

- Provide recommendations to American Fisheries Society leadership on achieving diversity and inclusion within our professional society

American Fisheries Society Climate Ambassador (Nov 2020 – Current)

- Collaborate with a cohort of 30 Ambassadors to learn and experiment with new science communication methods for diverse audiences, focused around climate change and fisheries

Fisheries Diversity and Inclusion Podcast Host (Oct 2020 – Current)

- Organize content and interview guest speakers on topics related to diversity and inclusion in fisheries

Diversity, Equity, and Inclusion Committee (Jan 2020 – Current)

- Founded and lead a 50+ member committee to address issues related to affinity/support, academic equity, and justice and accountability in our interdepartmental graduate programs in biology.

Conservation Physiology in Action (Jan 2020 – Current)

- Distill recent papers in conservation physiology into editorial articles for a general audience

Organismic and Evolutionary Biology Student Body President (Aug 2019 – July 2020)

- Organized student body committees, events, and semester meetings
- Served as liaison between OEB faculty and student body

SNEC 2020 Winter Meeting Program Committee (Jun 2019 – Feb 2020)

- Planned logistics for the regional winter conference and recruit student participation

Faculty Council for Public Engagement and Outreach (Oct 2018 – May 2020)

- Represented graduate student body in helping develop university-wide metrics to track outreach and public engagement (OPE); advise university on how to reach Strategic Plan OPE goals

Graduate School Dissertation Research Grant Review Committee (Oct 2018 – May 2019)

- Serve as student representative to review and recommend dissertation grants for funding

American Fisheries Society Equal Opportunities Section Outreach Committee (Aug 2018 – Current)

- Serve as committee chair (Nov 2019 – Current)
- Build online diversity, equity, and inclusion toolkit to improve workplace climate
- Develop marketing materials (e.g. section logo) to broaden reach of section, highlight fisheries scientists from underrepresented groups

Environmental Conservation Graduate Student Symposium Organizing Committee (Mar 2018 – Feb 2019)

- Organized annual departmental colloquium to feature graduate student work and increase collaboration among community members and local stakeholders

Interdepartmental Graduate Programs (IDGP) Student Advisory Committee (Sep 2017 – May 2019)

- Represent the Organismic and Evolutionary Biology Program in identifying IDGP graduate student issues, developing professional development/outreach programming, and outlining goals for the near future

- Science Night for Deerfield Women's Group** (Oct 2016)
- Organized speakers for a climate change themed science talk for a local Women's Group
- Food for Thought Committee** (Aug 2016 – May 2018)
- Planned hosts and food for annual series of scientific lunch discussions, featuring controversial or novel topics in fields within organismic and evolutionary biology
- That's Life [Science] Outreach Blog** (Oct 2015 – Current)
- Organize a staff of 30+ graduate students to write blog posts communicating diverse topics in life science
 - Provide professional development opportunities to graduate and undergraduate students to practice science communication
 - Host workshops (e.g. science communication, Girl Scout Animal Habitat Badge) and collaborations (e.g. Pipettes and Paintbrushes) to find novel science outreach avenues in the local community
- UMass Amherst American Fisheries Society (AFS) student subunit** (Oct 2015 – Current)
- Develop workshops and events for UMass undergraduates to learn about environmental conservation research and potential career paths
 - Host events (e.g., Day in the Life of a Scientist) and interactive tables at local science fairs (e.g., Earth Day, Cambridge Science Fair) to educate young children and families about fisheries science
- Life Science Café** (Sep 2015 – May 2020)
- Organize speakers and content for monthly Science Café events, in the form of information interviews or trivia nights, providing an interactive forum to share science research with the general public
- Graduate Women in STEM (GWIS) Outreach Committee** (Sep 2015 – May 2017)
- Developed new STEM-themed workshops for Girls Inc. to expose girls from low-educational backgrounds to a breadth of potential careers and female role models who are in these fields
- Southwest Fisheries Science Center Outreach Volunteer** (Nov 2014, Mar – Apr 2015)
- Created and hosted an interactive, educational table at the Aquarium of the Pacific representing the diverse research goals of Southwest Fisheries Science Center
 - Introduced National Marine Fisheries Service's mission and research focuses to local high school students; answered questions concerning education and careers in marine biology
 - Showcased recent rockfish barotrauma research, promoted use of commercially available rockfish descender devices, and discussed proposed/enforced regulations for recreational highly migratory species with local fishermen and the general public
 - Hosted a BE WISE (Better Education for Women in Science and Engineering) workshop teaching high school girls about measuring age and growth in commercial fish species