

University of Massachusetts Lowell  
Department of Biological Sciences  
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## Education

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- 2020 Ph.D. in Oceanography, University of Connecticut  
2019 Graduate Certificate in Geographic Information Systems, University of Connecticut  
2015 M.S. in Biology, University of California, San Diego  
2014 B.S. in Ecology, Behavior & Evolution from University of California, San Diego  
Minor in Marine Science, Scripps Institution of Oceanography

## Research & Professional Experience

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- 2025 **Assistant Professor**  
University of Massachusetts Lowell, Department of Biological Sciences
- 2022-2024 **NSF Ocean Sciences Postdoctoral Fellow**  
University of Vermont, Department of Biology
- 2020-2022 **Postdoctoral Research Associate**  
University of Connecticut, Marine Sciences Department
- 2015-2020 **Graduate Researcher - University of Connecticut**
- 2014-2015 **Graduate Researcher - Scripps Institution of Oceanography**
- 2012-2014 **Undergraduate Research Assistant - Scripps Institution of Oceanography**

## Grant Funding

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- 2024 **Smithsonian Institute, Edward B. and Phyllis E. Reed Research Fellowship.** “Examining spatial patterns in the thermal limits of North American diaptomid copepods”. PI. **\$12,000**
- 2022 **Connecticut SeaGrant, Undergraduate Research Fellowship Support.** “Combining long-term records of body size and abundance to estimate decadal changes in copepod biomass”; Co-wrote with PI (H.G. Dam). **\$5,000**
- 2021 **National Science Foundation Ocean Sciences Postdoctoral Fellowship.** “Comparing the genomic basis of adaptation across seasonal and spatial temperature gradients in a widespread marine copepod”. PI. **\$314,000**
- 2021 **University of Connecticut Postdoctoral Seed Award.** “Compiling an atlas of copepod thermal tolerance for the state of Connecticut”. PI. **\$2,000**
- 2020 **National Science Foundation, Biological Oceanography.** “Linking eco-evolutionary dynamics of thermal adaptation and grazing in copepods from highly seasonal environments”; Co-wrote with PI (H.G. Dam). **\$534,000**
- 2020 **University of Connecticut Doctoral Travel Fellowship (\$1,000)**

- 2020 University of Connecticut **Doctoral Dissertation Fellowship** (\$2,000)
- 2016-2019 University of Connecticut, **Marine Science Predoctoral Fellowship**  
**Four awards:** \$1,000 - \$2,800
- 2016 **University of Connecticut Research Excellence Program.** “Evolution Across a Thermal Gradient: Local Adaptation, Plasticity and Gene Flow in a Pelagic Copepod”; Co-wrote with PI (H.G. Dam). **\$24,000**

## **Publications** (\* - Equal contributions; ‡ graduate student mentee; ° undergraduate mentee)

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20. Bogan, S., **Sasaki, M.C.**, & Kelley, J., (*invited; in prep*) “Evolutionary Genetics of Phenotypic Plasticity: Historical Discrepancies, Challenges under Climate Change, and Genomic Solutions” Proposal accepted at Functional Ecology
19. **Sasaki, M.C.\***, Isanta-Navarro, J.\*, & Govaert, L.\* (*in review after revision*) “Testing the waters: aquatic experimental ecology and the balance between realism and feasibility”. Submitted: Nature Communications
18. Vermandele, F., **Sasaki, M.C.**, Winkler, G., Dam, H.G., Madeira, D., & Calosi, P. (*in review after revision*) “Sex-specific physiological responses to the simultaneous exposure to hypoxia and marine heatwave events”. Submitted: Global Change Biology
17. Diamond, S., Martin, R., Avery, A., Bellino, G., Deme, G., Fleming, D., McCluney, K., Prileson, E., & **Sasaki, M.C.** (*submitted*) “Spatial and temporal redistribution of arthropod communities in a desert city is driven by thermophily, body size and mass”. Submitted: Ecological Monographs
16. Griffiths, J.\*, **Sasaki, M.C.\***, Neylan, I., & Kelly, M. (*in review after revision*) “Experimental Evolution: A powerful tool to understand trade-offs and genomic architecture during rapid evolution”. Submitted: Global Change Biology
15. **Sasaki, M.C.**, Finiguerra, M., & Dam, H.G. (*in review after revision*) “Seasonally variable thermal performance curves prevent adverse effects of heatwaves”. Submitted: Journal of Animal Ecology (Preprint: <https://doi.org/10.1101/2023.05.09.540050>)
14. Selden, C., LaBrie, R., Ganley, L., Crocker, D., Peleg, O., Perry, D., Reich, H, **Sasaki, M.C.**, Thibodeau, P., Isanta-Navarro, J. (2024) “Is our understanding of aquatic ecosystems sufficient to quantify ecologically-driven climate feedbacks?”. Global Change Biology, 30(6), <https://doi.org/10.1111/gcb.17351>
13. Rueda Moreno, G.° & **Sasaki, M.C.** (2023) “Starvation reduces thermal limits of the widespread copepod *Acartia tonsa*”. Ecology and Evolution, 13(10), <https://doi.org/10.1002/ece3.10586>
12. **Sasaki, M.C.**, Woods, C., & Dam, H.G. (2023) “Parasitism does not reduce thermal limits in the intermediate host of a bopyrid isopod”. Journal of Thermal Biology, 117, <https://doi.org/10.1016/j.jtherbio.2023.103712>
11. Holmes-Hackerd, M.‡, **Sasaki, M.C.**, & Dam, H.G. (2023) “Naupliar exposure to warming does not affect ontogenetic patterns in respiration, body size, or development time in the widespread copepod *Acartia tonsa*”. PLOS One, 18(4), <https://doi.org/10.1371/journal.pone.0282380>
10. **Sasaki, M.C.**, Barley, J., Kelly, M., Gignoux-Wolfsohn, S., Hays, C., Putnam, A., Sheth, S., Villeneuve, A., & Cheng, B. (2022) “Greater evolutionary divergence of thermal limits within marine than terrestrial species”. *Nature Climate Change*, 12, <https://doi.org/10.1038/s41558-022-01534-y>

9. Gosh, A., Robinson, A., Chiapella, A., ... **Sasaki, M.C.**, et al. (2022) "EcoDAS: An Effective Platform for Developing Professional Collaborations Among Early Career Aquatic Scientists". *L&O Bulletin*, 30, <https://doi.org/10.1002/lob.10485>
8. Barley, J., Cheng, B., **Sasaki, M.C.**, Gignoux-Wolfsohn, S., Hays, C., Putnam, A., Sheth, S., Villeneuve, A., & Kelly, M. (2021) "Limited plasticity in thermally tolerant populations: evidence for a trade-off". *Proceedings of the Royal Society B*, 288(1958), 20210765. <https://doi.org/10.1098/rspb.2021.0765>
7. deMayo, J. A., Girod, A.°, **Sasaki, M.C.**, & Dam, H.G. (2021) "Adaptation to simultaneous warming and acidification carries a thermal tolerance cost in a marine copepod". *Biology Letters*. <https://doi.org/10.1098/rsbl.2021.0071>
6. **Sasaki, M.C.**, & Dam, H.G. (2021b) "Global patterns in copepod thermal tolerance". *Journal of Plankton Research*, 43(4): 598-609. <https://doi.org/10.1093/plankt/fbab044>
5. **Sasaki, M.C.**, & Dam, H.G. (2021a) "Negative relationship between thermal tolerance and plasticity in tolerance emerges during experimental evolution in a widespread marine invertebrate". *Evolutionary Applications*, 14(8): 2114-2123. <https://doi.org/10.1111/eva.13270>
4. **Sasaki, M.C.**, & Dam, H.G. (2020) "Genetic differentiation underlies seasonal variation in thermal tolerance, body size, and plasticity in a marine copepod". *Ecology and Evolution*, 10(21), 12200-12210. <https://doi.org/10.1002/ece3.6851>
3. **Sasaki M.C.** & Dam H.G. (2019) "Integrating patterns of thermal tolerance and phenotypic plasticity with population genetics to improve understanding of vulnerability to warming in a widespread copepod". *Global Change Biology*, 25(12), 1-18. <https://doi.org/10.1111/gcb.14811>
2. **Sasaki, M.C.**, Hedberg, S.°, Richardson, K.°, & Dam, H.G. (2019) "Complex interactions between local adaptation, phenotypic plasticity, and sex affect vulnerability to warming in a widespread marine copepod". *Royal Society Open Science*, 6(3), 182115. <https://doi.org/10.1098/rsos.182115>
1. Pereira, R.J.\* , **Sasaki, M.C.\***, & Burton, R. (2017) "Adaptation to a latitudinal thermal gradient within a widespread copepod species: the contributions of genetic divergence and phenotypic plasticity". *Proceedings of the Royal Society B*, 284(1853), 20170236. <https://doi.org/10.1098/rspb.2017.0236>

## Teaching Experience (15 assignments total)

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### University of Connecticut

2021	Instructor of Record - Plankton Ecology
2018-2020	Lab Instructor - Marine Biology
2016-2019	Lab Instructor - Principles of Biology I
2015-2017	Graduate Teaching Assistant & Lab Instructor - Plankton Ecology
2017	Graduate TA - Measurements & Analyses in Coastal Ecosystems

### Guest Lectures

2022	Invertebrate Biology; 1 lecture
2018-2022	Marine Biology; 2-4 lectures per semester
2015-2019	Principles of Biology; 2-4 lectures per semester

2015-2019 Plankton Ecology; 2 lectures per semester  
2018 General Ecology; 1 lecture

### **University of California, San Diego & Scripps Institution of Oceanography**

2015 Graduate TA & Lab Instructor - Coral Reef Environment  
2014 Lead Instructor - Marine Invertebrate Biology and Ecology  
UCSD: Academic Connections  
2013-2014 Undergraduate TA - Biodiversity

## **Seminars & Presentations**

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### **Invited Seminars**

2024 University of Denver – Biology Department  
2024 University of Massachusetts Lowell – Biology Department  
2023 University of Vermont – Biology Department  
2022 Shoals Marine Lab – Evolution in Changing Seas research coordination network  
2022 University of Maryland – Horn Point seminar  
2022 University of Maine – School of Marine Sciences  
2021 Louisiana State University – Systematics, Ecology, and Evolution series  
2021 CSU Sacramento – Ecology, Evolution, and Conservation series  
2021 Northern Arizona University – Biology Department  
2019 University of Rhode Island – Bay Informed Lecture series

### **Select Contributed Talks**

2024 3rd Joint Congress on Evolutionary Biology – Montreal, Canada  
2024 15<sup>th</sup> International Conference on Copepoda  
2023 ASLO Aquatic Sciences Meeting – Palma de Mallorca, Spain  
2021 Evolution Meeting - Virtual  
2021 ASN Asilomar – Virtual  
2019 Evolution Meeting – Providence, Rhode Island (**Hamilton Symposium Finalist**)  
2019 Long Island Sound Research Conference – Port Jefferson, New York  
2019 ASLO Aquatic Sciences Meeting – San Juan, Puerto Rico  
2018 Second Joint Congress on Evolutionary Biology – Montpellier, France  
2017 13<sup>th</sup> International Conference on Copepoda – San Pedro, California (**Received Kabata Award for Best Student Presentation**)  
2016 ASLO Summer Meeting – Santa Fe, New Mexico

## **Mentorship**

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2023 - now Aly Roger (Undergraduate; she/her), University of Vermont  
2023 - now Chanchal Saratkar (Undergraduate; she/they), University of Vermont  
2023 - now Sydney Sharp (Undergraduate; she/her), University of Vermont  
2024 Rama Al Namee (High school student; she/her), South Burlington High School  
2024 Elizabeth Nahstoll (High school student; she/her), South Burlington High School  
2024 Winnie Adamson (High school student; she/her), South Burlington High School  
2023-2024 Yuuki Real (Undergraduate; he/him), University of Vermont  
2023 Jamie Cull-Host (Undergraduate; he/they), University of Vermont  
2022-2023 Gaia Rueda Moreno (Undergraduate; they/them), New York University  
2023 Ali Arvelo (Undergraduate), University of Vermont

2022-2023	Maria Ocasio Lopez (Undergraduate thesis; she/her), UConn
2020-2022	Mathew Holmes-Hackerd (Masters thesis; he/him), UConn
2020	Thad Allen (Undergraduate; he/him), Colorado College
2020	Jacek Wojciechowski (High school student), Ledyard High School
2019	Hannah Smith (Undergraduate; she/her), UConn
2019-2020	Ciara Hayes (Undergraduate; she/her), UConn
2019	Benjamin Vajdos (High school student), Ledyard High School
2017	Sydney Hedberg (Undergraduate; she/her), Gustavus Adolphus College
2016	Kailin Richardson (Undergraduate; she/her), Savannah State University

## Honors & Awards

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2018-2021	Four nominations for the UConn <b>Outstanding Graduate Teaching</b> award
2019	Finalist in the <b>W.D. Hamilton Award Symposium</b> at Evolution Meeting
2019	<b>William A. Lund Jr. Award</b> for best Marine Sciences graduate paper
2015-2019	Six <b>Recognitions of Teaching Excellence</b> , UConn Office of the Provost
2017	<b>Kabata Award</b> for best talk at the International Conference on Copepoda
2015	Nominated for <b>Teaching Excellence Award</b> at Scripps Institution of Oceanography

## Professional Development

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2023 - now	AGU Leadership Academy and Network for Diversity and Inclusion in the Geosciences (LANDInGs)
2022-2023	Integrating Society, Ecology, Evolution, and Plasticity (SEEP) workshops to advance urban evolutionary ecology
2022	Evolution in Changing Seas RCN Training and Integration Workshop
2021	Ecological Dissertations in the Aquatic Sciences (ECO-DAS) Symposium
2019	Evolution in Changing Seas RCN Synthesis Workshop
2016	NSF Advanced Training Program in Antarctica for Early-Career Scientists

## Outreach & Service Activities

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2023-2024	Scientific advisor for South Burlington High School's Vermont STEM Fair team
2023	Organized scientific session for ASLO Aquatic Sciences Meeting - "Resilience and Recovery in Aquatic Systems: The Impacts of Rapid Acclimation and Adaptation"
2022	Designed and led series of "R for Marine Scientists" workshops at University of Connecticut
2021-2022	Co-chair of 2022 Gordon Research Seminar (Ocean Global Change Biology) – <i>Cancelled due to COVID-19</i>
2020-2022	Planning Committee for Coastal Perspectives Lecture Series
2020-2022	Planning Committee for Connecticut Darwin Day
2018-2022	Coordinator & Instructor for UConn Student Support Services Summer STEM program
2016-2021	Organizer for UConn Marine Science Day
2020	Future Frogmen Panel on Climate Change and Marine Species
2019	Volunteer at Mystic CT Sip & Science event
2019	Volunteer at New London Public Library's Annual Science Day

2017-2019 Senator in University of Connecticut Graduate Student Senate  
2017-2019 President of the Marine Sciences Graduate Student Organization  
2016-2019 Science Judge for the National Ocean Science Bowl  
2018 Coordinator for the UConn Feng Research Colloquium  
2018 Volunteer and Presenter at UConn Highschool Marine Makerfaire

**Peer reviewer:** American Naturalist, Biology Letters, Ecology, Ecology Letters, Ecology & Evolution, Ecotoxicology, Frontiers in Ecology & Evolution, Global Change Biology, Journal of Molluscan Studies, Journal of Plankton Research, Journal of Thermal Biology, Journal of Visualized Experiments, Limnology & Oceanography, Marine Biology, Molecular Ecology, Nature Communications, Oecologia, PLOS One, and Scientific Reports.

**Ad hoc reviewer:** NSF Polar Programs & Division of Environmental Biology

**Review panelist:** NSF Ocean Sciences

## **Professional Society Membership**

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ASLO - Association for the Sciences of Limnology and Oceanography

ASN - American Society of Naturalists

SORTEE - Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology

SSE - Society for the Study of Evolution

WAC - World Association of Copepodologists