

Jake Lawlor

PhD Candidate

CONTACT

McGill University
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PROGRAMMING SKILLS

Languages

R - proficient
MATLAB - familiar

Web

R Shiny
HTML
CSS
Markdown

Version Control

Git

EDUCATION

- 2020- **Ph.D. Biology** McGill University
Effects of species traits, protective status, and environmental forces on species range shifts
ADVISED BY DR. JENNIFER SUNDAY
- 2017-19 **M.S. Biology** Western Washington University
Modeling climate-dependent larval growth rate and duration of Olympia oysters in the Salish Sea
ADVISED BY DR. SHAWN ARELLANO
- 2011-15 **B.Sc. Environmental Science** The University of Texas

GRANTS AND FELLOWSHIPS

- 2021 **Quebec Doctoral Research Scholarship** FRQNT
• \$77,000 fellowship for 3.5 years
- Dr. Lawrence Light Graduate Fellowship in Sustainability** McGill U
• \$10,000 fellowship + \$4,000 for undergraduate researcher
- 2020 **Computational Biodiversity Science and Services (BIOS²) Fellowship** NSERC CREATE
• \$10,500 fellowship + \$2,000 mobility funds, renewable 3 years
- International Graduate Tuition Award** McGill U
• \$13,500 international tuition award, renewable 4 years
- 2019 **Biology Student Conference Travel Grant** Western Washington U
- College of Science & Engineering Student Travel Award** Western Washington U
- Ross Travel Grant** Western Washington U
- 2018 **Visiting Internship Student Award** Hong Kong U Sci & Tech
• 2-month internship in the Chan Quantitative Plankton Ecology Lab
- Enhancement of Graduate Research Fund Project Grant** Western Washington U
- Steve Sulkin Graduate Research Fellowship** Shannon Pt. Marine Center
- 2015 **Multicultural Initiative in Marine Science: Undergraduate Participation** NSF
• One of eight nationally selected for 6-month NSF marine science research program

HONOURS AND AWARDS

- 2023 **Excellence Award** Quebec Centre for Biodiversity Science
- 2022 **Graduate Mobility Award** BIOS² Program
- Graduate Research Enhancement and Travel Award** McGill Biology
- Student Conference Travel Award** Living Data Project
- 2021 **Learning and Development Award (LeaDA) x3** Quebec Centre for Biodiversity Science
- 2020 **Learning and Development Award (LeaDA) x2** Quebec Centre for Biodiversity Science
- Best Poster Presentation Award** Quebec Centre for Biodiv. Sci. Conference
- Outstanding Graduate Student Award** Western Washington U. Graduate School
- Outstanding Graduate Research Award** Western Washington U Dept. Biology
- 2019 **Honorable Mention Graduate Student Presentation** PERS Conference 2019
- 2018 **"Washingtonian of the Day" Award** Awarded by Gov. Jay Inslee
- 2013 **Tanzania: Wildlife Conservation Program Scholarship** School for International Training
- 2011-13 **Undergraduate Merit-Based Scholarship** UT Jackson School of Geosciences

PUBLICATIONS

- 2023 **Priorities for synthesis research in ecology and environmental science**
Halpern, B., Boettiger, C., Dietze, M., Gephart, J., Gonzalez, P., Grimm, N., Großmann, P., ... Lawlor, J. (127 authors total).
ECOSPHERE 14:1 E4342 [HTTPS://DOI.ORG/10.1002/ECS2.4342](https://doi.org/10.1002/ECS2.4342)

- 2022 **Ten simple rules for teaching yourself R**
Lawlor, J., Banville, F., Forero-Muñoz, N.R., Hébert, K., Martínez-Lanfranco, J.A., Rogy, P., and McDonald, A
 PLOS COMPUTATIONAL BIOLOGY 18(9): E1010372. [HTTPS://DOI.ORG/10.1371/JOURNAL.PCBI.1010372](https://doi.org/10.1371/JOURNAL.PCBI.1010372)
- Notes from the past show how local variability can stymie urchins and the rise of the reds in the Gulf of Maine
Byrnes, J.E.K., Brown, A., Sheridan, K., Peller, T., Lawlor, J., Beaulieu, J., Muñoz, J., Hesketh, A., Pereira, A., Knight, N., Bledsoe, B., Burant, J.B., Super, L., Dijkstra, J.A., Benes, K.
 ECOEVORXIV; [10.32942/OSF.IO/U6EXY](https://doi.org/10.32942/OSF.IO/U6EXY) — SUBMITTED
- 2020 **Temperature and salinity, not acidification, predict near-future larval growth and larval habitat suitability of Olympia oysters in the Salish Sea.**
Lawlor, J., and Arellano, S.
 SCIENTIFIC REPORTS 10:13787; [HTTPS://DOI.ORG/10.1038/S41598-020-69568-W](https://doi.org/10.1038/s41598-020-69568-w)
- Software Package - [PNWColors](#): Color Palettes Inspired by Nature in the US Pacific Northwest
Lawlor, J.
 PNW_COLORS R PACKAGE VERSION 0.1.0. (>12K DOWNLOADS FROM [CRAN](#))
- In prep **Interactive effects of predation and climate on the distributions of marine shellfish in the Northwest Atlantic.**
Zabihi-Seissan, S., Baker, K.D., Stanley, R.R.E., Tunney, T.D., Beauchamp B., Benoit, H., Brickman, D., Chabot D., Cook, A., Deslauriers, D., Koen-Alonso, M., Lawlor, J., LeBris, A., Mullaney, D.R.J., Roux, M.J., Skanes, K.R., Wang, Z., Pedersen, E.J.
 SUBMITTED
- In prep **Mechanisms, detections, and impacts of species redistributions under climate change**
Lawlor, J., Comte, L., Lenoir, J., Grenouillet, G., Baecher, J.A., Bandara, R.M.W.J., Bertrand, R., Chen, I-C., Diamond, S., Lancaster, L., Moore, N., Muriene, J., Oliveira, B., Pinsky, M., Rolland, J., Rubenstein, M., Scheffers, B., Thompson, L., van Amerom, B., Villalobos, F., Weiskopf, S., Sunday, J.

EMPLOYMENT AND INTERSHIPS

- 2022 **Marine Conservation Network Design Web App Developer - [see more](#)**
Fisheries and Oceans Canada | Maritimes
- 2021 **Vaccine-Preventable Diseases Data Science & Data Journalism Intern**
Precision Analytics | Montreal, QC
- Interactive Web App Developer for Exploring Species Distribution Model Outputs - [see app](#)
Fisheries and Oceans Canada - Aquatic Climate Change Adaptation Services Program | Maritimes
- 2020 **Freelance Data Analyst / Data Visualization Specialist - [upwork freelance profile](#)**
Clients include a California Carbon Pricing Consultancy, ACLU of Washington, and CratedWithLove food delivery service.
- 2019 **Larval Biology Research Associate**
Shannon Point Marine Center | Anacortes, WA
- R/V Tiglax 14-Day Research Cruise Consultant
Northern Gulf of Alaska Long Term Ecological Research Study Area | Seward, AK
- 2018 **Chan Quantitative Plankton Ecology Lab Visiting Internship Student**
Hong Kong University of Science and Technology | Hong Kong SAR, China
- 2017 **Shellfish Research Hatchery Technician**
University of North Carolina Wilmington CREST Research Park | Wilmington, NC
- 2016 **Arellano Larval Lab Research Technologist**
Shannon Point Marine Center | Anacortes, WA
- 2015 **Matz Coral Genomics and Adaptation Lab Undergraduate Research Assistant**
The University of Texas | Austin, TX
- National Science Foundation Undergraduate Research Fellow
Shannon Point Marine Center | Anacortes, WA
- 2014 **Phelps Social Neuroscience Lab Undergraduate Research Assistant**
The University of Texas | Austin, TX
- Vertebrate Paleontology Lab Curation and Collections Assistant
The University of Texas Pickle Research Campus | Austin, TX

CONFERENCE PRESENTATIONS

- 2023 **Species on the Move Conference, Oral Presentation | Bonita Springs, FL**
Assessing Global Marine Protected Areas In The Context Of Anticipated Species Range Shifts
- 2022 **Ecological Society of America/Canadian Society for Ecology & Evolution, Talk | Montreal, QC**
Shifts in the thermal affinity of a Gulf of Maine intertidal community over 35 years
- Ecological Forecasting Initiative, Poster | Virtual**
A Framework for Forecasting Sea Urchin Recruitment on the North American West Coast
• CO-PRESENTATION WITH UNDERGRADUATE MENTEE, VICTOR CRUZ
- 2021 **Québec Centre for Biodiversity Science, Poster | Virtual**
What do we need to accurately detect range shifts?
- 2020 **Québec Centre for Biodiversity Science, Poster + Speed Talk | Virtual**
How have we detected range shifts? A review and synthesis
• CO-PRESENTATION WITH UNDERGRADUATE MENTEE, BRIT VAN AMEROM
• BEST POSTER PRESENTATION AWARD
- Western Society of Naturalists Conference, Oral Presentation | Virtual**
Using interacting environmental gradients to predict larval success in future oceans
- 2019 **Species on the Move Conference, Poster Presentation | Kruger NP, South Africa**
Scaling up climate-dependent larval growth rates and behaviors to population distributions of oysters in a changing ocean
- Pacific Estuarine Research Society (PERS) Conference, Fast Talk | Anacortes, WA**
Effects of interacting climate stressors on Olympia oyster larval growth rate and duration
• GRADUATE STUDENT PRESENTATION HONORABLE MENTION
- 2017 **International Larval Biology Symposium, Poster Presentation | Honolulu, HI**
Effects of multiple stressors on Olympia oyster larval swimming
- 2015 **WWU All University Scholars Week, Poster Presentation | Bellingham, WA**
Effects of acidification and warming on Olympia oyster larval swimming and growth
- Pacific Estuarine Research Society (PERS), Poster Presentation | Seattle, WA**
Effects of acidification and warming on Olympia oyster larval swimming and growth
- NOAA Alaska Fisheries Science Center, Oral Presentation | Seattle, WA**
Oysters in a changing ocean: effects of acidification and warming on larval swimming
- 2014 **UT Environmental Science Institute Symposium, Poster Presentation | Austin, TX**
*Intertidal donation in stands of *Sonneratia alba* on the shorelines of Northern Tanzania*
- School for International Training Symposium, Oral Presentation | Arusha, Tanzania**
Intertidal donation in Northern Tanzanian mangrove stands

TEACHING

Programming Workshop Instructor

- 2023 **Data Science Life Cycle Series (6 workshops)** McGill Computational and Data Systems Initiative
(RECOGNIZED IN MCGILL CO-CURRICULAR RECORD)
Data Wrangling in R
Exploratory Data Analysis in R
Data Visualization in R: Introductory
Data Visualization in R: Intermediate
Quarto / R Markdown
Creating Shiny Dashboards in R
- 2022 **Shiny Apps for Communicating Science [slides](#) | [repo](#)** QCBS R Symposium
Shiny Apps for Communicating Science Living Data Project Working Group
- 2021 **Software Carpentry (3-hour section - tidyR)** BIOS2 Program
Programming in R: 4-hour workshop Quebec Centre for Biodiv. Sci.
Data Visualization in R: 4-hour workshop Quebec Centre for Biodiv. Sci.

2020	○	Creating Shiny Apps in R: 6-hour workshop & development	BIOS2 Program
	○	Generalized Additive Models in R: 4-hour workshop	Quebec Centre for Biodiv. Sci.
	○	Software Carpentry: 16-hour workshop	BIOS2 Program
	○	Data Carpentry: 16-hour workshop	BIOS2 Program
	○	Introduction to R: 4-hour workshop	Quebec Centre for Biodiv. Sci.
	○	Data Visualization in R: 4-hour workshop & development	Quebec Centre for Biodiv. Sci.

Guest Lecturer

2022	○	Ocean Climate Change Biology <i>"Climate-driven shifts in marine ecosystems"</i>	WWU Marine & Coastal Sci.
2022	○	Introduction to Graduate Studies in Biology <i>"Data Visualization as a Professional Skill:"</i>	McGill Biology Grad Studies
2021	○	Introduction to Graduate Studies in Biology <i>"Data Visualization as a Professional Skill:"</i>	McGill Biology Grad Studies
	○	Summer NSF REU R Workshop Series <i>"101 Things You Can Do in RStats"</i>	Shannon Point Marine Center
2020	○	BIOL 407: Marine Ecology <i>Guest lecture in marine biogeography and proposal writing</i>	WWU Marine & Coastal Sci.
	○	BIOL 399: Intro Experimental Design and Statistics <i>Guest lecture in statistical programming</i>	Oregon Inst. of Marine Biol

Teaching Assistant

2021	○	ATOC 184: The Science of Storms	McGill Atmospheric & Ocean Sci.
2020	○	ATOC 185: Natural Disasters	McGill Atmospheric & Ocean Sci.
	○	ATOC 184: The Science of Storms	McGill Atmospheric & Ocean Sci.
2018	○	BIOL 465: Algae	WWU Biology
	○	BIOL 405: Marine Ecology	WWU Biology
2017	○	BIOL 101: Introductory Biology six sections	WWU Biology
2015	○	UGS 302: Austin Area Environmental Issues (undergrad TA)	U. Texas Env. Sci.

CAMPUS AND COMMUNITY SERVICE

<i>cont.</i>	○	Peer Reviewer, see verified reviews on ORCID <i>Ecology Letters (1)</i> <i>Ecography (2)</i> <i>FACETS (1)</i> <i>USGS Internal Review (1)</i>	
2022	○	BIPOC Undergraduate Research Award Selection Committee Member - Grad. Representative <i>McGill Department of Biology Montreal, QC</i>	
2021	○	Data Analyst <i>McGill Biology Graduate Student Association Montreal, QC</i>	
	○	BIPOC Undergraduate Research Award Selection Committee Member - Grad. Representative <i>McGill Department of Biology Montreal, QC</i>	
	○	New Faculty Student Search Committee Member - Spousal Hire Search <i>McGill Department of Biology Montreal, QC</i>	
2020	○	Pro Bono Data Scientist for Quebec Nonprofit Organizations <i>Data for Good Montreal Montreal, QC</i>	
2019	○	New Faculty Student Search Committee Member - Professor and Marine Lab Director Searches <i>Western Washington University Marine and Coastal Science Program Bellingham, WA</i>	
2018	○	Graduate Student Advisory Council - Marine Center Representative <i>Shannon Point Marine Center & Western Washington University Bellingham, WA</i>	

- 2014 **Vice President**
Texas Geological Energy and Environmental Leadership Organization (GEELO) | Austin, TX
- 2011-14 **Volunteer Science Tutor for Standardized Test Preparation**
Neighborhood Longhorn Program | Austin, TX

CERTIFICATES, WORKSHOPS & SPECIAL COURSES

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|------|---|---|
| 2022 | BIOSHIFTS Working Group (x2) | Cent. for the Synth. and Analysis of Biodiv. |
| | Near-term Ecological Forecasting Short Course | Near-term Ecological Forecasting Initiative |
| o | Marine Biodiv. & Clim. Change Working Group (x2) | Conservation International |
| 2021 | Data Driven Ecological Synthesis Short Course | Comp. Biodiv. Science & Services (BIOS ²) |
| | Certificate in Synthetic and Collaborative Science | NSERC-CREATE Living Data Project |
| | Coastal Oceans Working Group | NSERC-CREATE Living Data Project |
| | Data Science x Design Creators Conference | Data Science x Design |
| o | Future of Synthesis in Science Workshop | NCEAS (Virtual) |

SCIENCE COMMUNICATION

- 2018-19 **Instagram Manager, Shannon Point Marine Center — @wwushannonpoint**
- 2018 **Science Journalist, University of Washington Puget Sound Institute**
The Puget Sound Coastal Storm Modeling System
Published Aug. 2018 in Encyclopedia of Puget Sound

OUTDOOR EDUCATION AND OUTREACH

- Summers **Sea Kayak Guide / Naturalist on one-day to five-day Kayak Trips**
2015-19 *Anacortes Kayak Tours | Anacortes, WA*
- 2019 **Monthly "Outdoor Friday" Program Leader**
Fiddlehead Montessori School | Anacortes, WA
- 2019 **Outdoor School Substitute Teacher**
Fidalgo Nature School | Anacortes, WA
- 2017 **International Trip Guide for High School Students - Thailand**
Adventures Cross Country | Mill Valley, CA & Bangkok, Thailand
- 2016 **Marine Ecology Outdoor School Instructor for 3-day Programs**
Academic Adventures | Anacortes, WA
- 2015 **Marine Science Elementary Teacher for 2nd Grade Classrooms**
Anacortes School District | Anacortes, WA
- Summers **Summer Camp Environmental Stewardship Director**
2012-14 *John Knox Ranch | Fischer, TX*
- 2014 **After-School Outdoor Education Program Leader**
Camp Fire USA | Austin, TX