

DAISY BUZZONI (she/her)

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~ Marine Ecologist & Science Communicator ~

I love uncovering hidden stories of the natural world and finding creative ways to share them.

Education

2012-2016: *University of Oxford, UK*

BA Hons Biological Sciences (MA Oxon), Upper-Second Class Honours

2018-2020: *Rosenstiel School of Marine & Atmospheric Science, University of Miami, USA*

MS in Marine Biology and Ecology, GPA of 3.8/4.0

2020-2025: *University of Victoria, Canada*

PhD in Biology, GPA 9.0/9.0

Peer-Reviewed Publications

- Bath E., **Buzzoni D.**, Ralph T., Wigby S. & Sepil I. (2021) 'Male condition influences female post mating aggression and feeding in *Drosophila*.' *Functional Ecology* (35) 1288–1298.
<https://doi.org/10.1111/1365-2435.13791>
- Buzzoni D.**, Cunning R. & Baker A.C. (2023) 'The role of background algal symbionts as drivers of shuffling to thermotolerant Symbiodiniaceae following bleaching in three Caribbean coral species.' *Coral Reefs* (42) 1285–1295. <https://doi.org/10.1007/s00338-023-02428-x>
- Lachs L., Humanes A., Mumby P.J., Donner S.D., Bythell J., Beauchamp E., Bukourou L., **Buzzoni D.**, de la Torre Cerro R., East H.K., Edwards A.J., Golbuu Y., Martinez H.M., van der Steeg E., Ward A., Guest J.R. (2024) 'High coral heat tolerance at local-scale thermal refugia.' *PLOS Climate* (3), no.7: e0000453.
<https://doi.org/10.1371/journal.pclm.0000453>
- Humanes A., Lachs L., Beauchamp E., Bukourou L., **Buzzoni D.**, Bythell J., Craggs J., de la Torre R., Edwards A.J., Golbuu Y., Martinez H.M., Palmowski P., van der Steeg E., Sweet M., Ward A. & Guest J.R. (2024) 'Selective breeding enhances coral heat tolerance to marine heatwaves.' *Nature Communications* (15) 8703. <https://doi.org/10.1038/s41467-024-52895-1>
- Starko, S., Epstein, G., Chalifour, L., Bruce, K., **Buzzoni, D.**, Csordas, M., Dimoff, S., Hansen, R., Maucieri, D., McHenry, J., Tietjen, K.L., Timmer, B. & Baum, J.K. (2025) 'Ecological responses to extreme climatic events: a systematic review of the 2014-16 Northeast Pacific marine heatwave.' *Oceanography and Marine Biology: an Annual Review* (63) 42-96. <https://doi.org/10.1201/9781003589600-2>
- de la Torre Cerro R., Beauchamp E., **Buzzoni D.**, Craggs J., East H.K., Edwards A.J., Golbuu Y., Humanes A., Lachs L., Martinez H.M., Mill, A., van der Steeg E., Ward A. & Guest J.R. (2025) 'Evaluating the role of moonlight-darkness dynamics as proximate spawning cues in an *Acropora* coral.' *Coral Reefs* (44) 501–512. <https://doi.org/10.1007/s00338-025-02618-9>
- Buzzoni, D.**, Lachs, L., Beauchamp, E., Bukourou, L., Bythell, J., Edwards, A.J., Golbuu, Y., Humanes, A., Martinez, H.M., Mereb, G., Baum, J.K. & Guest, J.R. (2026) 'Algal symbionts indicate heatwave vulnerability in corals from hotspots but not from thermal refugia.' *Molecular Ecology* (35), no.2: e70243.
<https://doi.org/10.1111/mec.70243>
- Buzzoni, D.**, Van Nynatten, A., Cunning, R. & Baum, J.K. (2026) 'Persistent legacy effects of marine heatwaves on coral symbioses.' *Global Change Biology* (32), no.3: e70818.
<https://doi.org/10.1111/gcb.70818>

Awards & Fellowships

Competitive research funding secured: **\$8,000 USD** for MS & **\$173,490 CAD** for PhD

- University of Miami's Rosenstiel School David Rowland Fellowship (2019), \$5,000 USD
- Gumbo Limbo's Gordon Gilbert Research Grant (2019), \$2,500 USD
- Fieldwork assistance from SeaKeepers Society (read about the collaboration [here](#)) est. \$500 USD
- University of Victoria Graduate Entrance Award (2020), \$5,000 CAD
- University of Victoria Graduate Award (2020, 2021, 2022), \$6,472 CAD
- CUPE Conference Award Fund (2021), \$360 CAD

- Margaret ‘Marmie’ Hess Graduate Fellowship (2021-24), \$45,000 CAD. Read a press release about my inaugural fellowship [here](#)
- Study Abroad Studentship from The Leverhulme Trust (2022-24), \$95,000 CAD
- Maureen De Burgh Memorial Scholarship (2023), \$900 CAD
- Cassels Shaw Graduate Fellowship (2024), \$6,000 CAD
- Alfred and Adriana Potvin Graduate Scholarship in Ocean Sciences (2024), \$1,653 CAD
- King Platt Memorial Award (2025), \$3,000 CAD
- Dr. Arne H. Lane Graduate Fellowships in Marine Sciences (2025), \$10,105 CAD
- Contributed to the writing and editing of a successful \$900,000 CAD NSERC Discovery Grant for a tropical coral reef research program (2023).

Scientific Presentations

- Final Honours School oral presentation (University of Oxford, UK): ‘Evidence for the adaptive response of tropical corals to climate change-induced bleaching’, 2016.
- Intern Symposium oral presentation (Cape Eleuthera Institute, Bahamas): ‘Genotype and nursery effects on *Acropora cervicornis* growth’, 2017
- Protect Our Reefs Symposium oral presentation (Mote Marine Lab, USA): ‘Vectoring thermotolerant symbionts into restored corals: a field study’, 2019.
- Marine Biology & Ecology Departmental Seminars oral presentation (University of Miami, USA): ‘Hard graft: Vectoring thermotolerant symbionts into corals’, 2019.
- Graduate & Postdoctoral Research Symposium oral presentation (University of Miami, USA): ‘Primed candidates: Lab manipulations for field interventions seeding corals with thermally-tolerant algal symbionts’, 2020.
- Reef Conservation UK oral presentation (online): ‘A novel field-based method of vectoring thermotolerant algal symbionts (family Symbiodiniaceae) into coral colonies’, 2020.
- Western Society of Naturalists oral presentation (online): Title as above, 2020.
- International Coral Reef Symposium oral presentation (online): ‘A novel field-based method of vectoring thermotolerant algal symbionts (family Symbiodiniaceae) into coral colonies’, 2021.
- International Coral Reef Symposium oral presentation (Bremen, Germany): ‘Marine heatwaves and local stressors drive partner shifts and diversity changes across coral-Symbiodiniaceae symbioses’, 2022.
- Advanced Training Course Attendee Symposium oral presentation (Woods Hole Oceanographic Institute: Marine Biological Laboratory, USA): ‘Main character energy: The role of algal symbionts in shaping coral reefs’ responses to heatwaves’, 2023.
- Departmental Graduate Symposium oral presentation (University of Victoria, Canada): ‘Does local disturbance influence reversion to pre-heatwave symbionts in corals recovering from a severe heatwave?’, 2023.
- Departmental Graduate Symposium oral presentation (University of Victoria, Canada): ‘Multi-year heatwave hangover in coral symbioses’, 2024. *Awarded 2nd place prize for best presentation.
- Departmental Graduate Symposium oral presentation (University of Victoria, Canada): ‘Can symbiotic indicators predict intrapopulation coral heatwave tolerance in thermal hotspots & refugia?’, 2025.
- Departmental Seminar oral presentation (University of Victoria, Canada): ‘Persistent changes in algal symbionts on the world’s coral reefs under climate change’, 2025.

Research Experience

British Schools Exploring Society expedition, Pacaya Samiria National Reserve, Peru, 2011

- Performed terrestrial and aquatic ecological surveys during a 6-week long youth leadership expedition.
- Conducted an independent study into factors affecting the frequency & amplitude of frog calls.

Volunteer, ReefCI, Placencia, Belize, 2015

- 3 weeks performing lionfish elimination and conducting coral reef monitoring surveys.

Undergraduate researcher, University of Oxford, 2015

- Dissertation: Male Condition Influences Female-Female Post-Mating Aggression via Ejaculate Transfer in *Drosophila melanogaster*.

- Designed and executed independent experiments for a dissertation investigating sexual conflict.
Volunteer, Gili Shark Conservation, Gili Air, Indonesia, 2016
- 6 weeks conducting baited remote underwater video surveys and roving pelagic fish surveys.
Reef Ecology & Restoration Intern, Cape Eleuthera Institute, Bahamas, 2017
- 5 months participating in projects including: i) Feeding trials for the use of spider crabs as herbivores in multi-trophic aquaculture, ii) Interviews with fishermen & consumers to establish a base-line parrotfish fishery, and iii) Establishing, monitoring & out-planting from coral nurseries.
MS, University of Miami, USA, 2018-2020
- Thesis: A Novel Field-Based Method of Vectoring Thermotolerant Algal Symbionts (Family Symbiodiniaceae) into Coral Colonies.
- Investigated community dynamics of corals' algal symbionts in field colonies following a manipulation intervention for increasing coral bleaching resilience.
- Gained experience in field techniques including reef mapping, coral coring, tissue sampling and spawn collection.
- Learned coral husbandry methods, imaging-PAM fluorometry to monitor health, DNA extraction and quantitative PCR for quantifying DNA from known taxa.
Woods Hole Marine Biological Laboratory, USA, 2023
- Selected as one of 40 graduate & postdoctoral researchers to attend the STAMPS (Strategies and Techniques for Analysing Microbial Population Structures) intensive summer course.
PhD, University of Victoria, Canada, 2020-2025
- Thesis: Persistent Changes in Coral-Microalgal Symbioses with Climate Change-Amplified Heat Stress.
- Investigated community dynamics of microbial symbionts under local disturbance and heatwave exposure.
- Developed molecular skills in PCR for amplifying DNA, gel electrophoresis, spectrophotometry and Next-Generation DNA sequencing for quantifying and characterising DNA, and bioinformatics for interpreting DNA sequence data.
- Designed, planned and executed a research project in Palau and was joint expedition scientific lead for research in Kiritimati.

Teaching & Mentoring

Mentoring

- Mentored undergraduate honours students Prati Rosen and Corinne Allen in field and molecular techniques, coral husbandry, scientific writing and data management (University of Miami, 2018-2020).
- Mentored high school research scholar Leah Bukurou in DNA extraction and DNA spectrophotometry (Palau International Coral Reef Center, 2022).
- Student talk judge at Pacific Ecology and Evolution Conference (Victoria, Canada, 2022).
- Mentored undergraduate research assistant Ray Stiles in the uses of molecular techniques in coral ecology, including training in DNA extraction and DNA spectrophotometry (University of Victoria, 2023).
- Vancouver Island Regional Science Fair judge (Victoria, 2023).
- Organised and led a weekly paper discussion on coral reef ecology for graduate students and post-doctoral researchers in the department (University of Victoria, 2022-2024).

Teaching

- Taught classes in coral reef ecology to kindergarten, middle school and high school students (Cape Eleuthera Institute, Bahamas, 2017).
- Employed as a tutor in biological sciences and scientific critical thinking (Enjoy Education, Mayfair Consultants, Seneca Learning Ltd., UK, 2017-2018).
- Guest lecture 'Coral Reef Resilience' (graduate course, University of Miami, 2020).
- Teaching assistant for graduate course 'Reef Coral Biology and Ecology' (2020). Led paper discussions, lectured and graded term papers and exams.
- Teaching assistant for undergraduate course 'Evolution & Biodiversity' (2020). Lectured, marked term papers & exams.

- Guest lecture ‘Coral Conservation & Interventions’ (undergraduate course, University of Victoria, 2021).
- Teaching assistant for undergraduate course ‘Principles of Ecology’ (2021). Lectured, marked term papers & exams.
- Grade 11 class lecture and capstone mentorship, ‘Challenges and Solutions in Coral Reef Conservation’ (online, 2023).
- Day of coral reef biology classes for ages 4-7, St Stephens Primary School (UK, 2023, 2025).
- Guest lecture ‘Marine Heatwave-Driven Transformations of Coral Reef Ecosystems’ (undergraduate course, University of Victoria, 2024).

Manuscript peer review

- 2022: *Bio Science*
- 2023: *Microbial Ecology, Coral Reefs*
- 2024: *Coral Reefs, PLOS One*
- 2026: *Scientific Reports, Ecology and Evolution, Communications Biology*

Science Communication & Public Engagement

- Initiated a collaboration with renowned biology educator and comedian Ze Frank and was subsequently the scientific advisor and a contributing videographer for the short film ‘True Facts: Reef Coral is a Crazy Animal’, which has accrued >1.5 million views (2023).
- Volunteered with the Canadian Association of Girls in Science in running STEM activity days (Victoria, 2022-2025). Coordinated and led interactive events, ‘The Science of Scuba’ (2024), ‘Help the Kelp’ (2025).
- Selected as one of 30 participants nationwide for SciComCan (science communication Canada) 2025.

Outreach events

- Led marine science activities at ‘Ocean Kids’ (University of Miami, 2019).
- Led marine science activities at ‘Women in Science Showcase’ (University of Miami, 2019).
- Panellist at the Biscayne National Park Palette Knife Exhibition opening (USA, 2019).
- Gave 5 public outreach talks with the University of Victoria Speakers Bureau (online, 2021).
- Marine invertebrate show and tell dives, Oaklands elementary school (Victoria, 2025).

Additional Skills

- **Coding:** Advanced proficiency in the use of the coding language R (13 years’ experience) for data analysis and visualisation. Intermediate proficiency in Bash and HTML coding and the use of GIS for spatial analysis, with beginner proficiency coding in Python.
- **Diving:** PADI Divemaster (2016), AAUS (USA, 2018) and CAUS (Canada, 2020) scientific diver, with over 500 logged dives.
- **Photography:** Specialising in underwater photography. Employed as conference photographer (Reef Futures Symposium Florida, 2018). Awarded 3rd place in the University of Miami Student Underwater Photo Competition 2019, 2nd place in 2020 and 1st place in the University of Victoria STEM photography competition 2021.
- Motorboat operator certification (USA, 2019), full UK drivers’ licence (2015).
- Wilderness first aid provider (2023), DAN emergency first responder CPR and oxygen provider (2016, 2018, 2021, 2023).

References (please reach out for reference contact information and availability)

- Dr James Guest: Principal investigator, University of Newcastle, UK. James and I worked together to design, carry out and publish my PhD research conducted in Palau.
- Dr Alex Van Nynatten: Post-doctoral researcher, University of Victoria, Canada. Alex mentored me during my PhD and we coauthored Kiritimati research.
- Dr Ross Cunning: Research biologist, Shedd Aquarium, USA. Ross was on my supervisory committee for both my MS and my PhD and we have coauthored several papers together.
- Dr Gerry Gourlay: Instructor & lecturer, University of Victoria, Canada. I worked with Gerry during my time volunteering with the Canadian Association of Girls in Science.