

Emily M. Adamczyk

Biodiversity Research Centre | Department of Zoology
University of British Columbia | Unceded xʷməθkʷəy̓əm (Musqueam) territory
Vancouver, BC, Canada V6T 1Z4
adamczyk@zoology.ubc.ca
www.emilyadamczyk.com

EDUCATION

Ph.D.	University of British Columbia (Zoology) Dissertation: Effects of human activities, environment, and time on eelgrass-associated epifaunal communities. Advisors: Mary I. O'Connor and Laura Wegener Parfrey	2022
M.S.	University of California, San Diego (Biology) Thesis: Effects of food web interactions and climate on $p\text{CO}_2$ in San Diego Reservoirs. Advisor: Jonathan Shurin	2014
B.S.	University of California, San Diego (General Biology, minor in Music)	2013

FELLOWSHIPS, AWARDS, AND HONORS

Zoology Graduate Fellowship – University of British Columbia (\$15,000 CAD)	2019
Marine Conservation Scholarship – Women Divers Hall of Fame (\$2,000 USD)	2017
Four Year Doctoral Fellowship – University of British Columbia (\$72,800 CAD)	2015
Capital One Academic All-District Team (CoSIDA) – University of California, San Diego In recognition of accomplishments as a college scholar-athlete excelling in both academics and athletics	2012
Athlete of the Year – University of California, San Diego	2012
Athletic Director's Honor Roll – University of California, San Diego	2012
All-American Swimmer – University of California, San Diego	2012
All-American Swimmer – University of California, San Diego	2011

COMMUNITY-BASED RESEARCH AND CONSERVATION COLLABORATIONS

Collaborative research projects with Indigenous community partners combining traditional ecological knowledge and western science to monitor biodiversity and implement restoration and conservation management plans.

Coastal Habitat Comprehensive Research Project – Eelgrass Study	Sept. 2022
<i>Partnerships:</i> Cree Nation Government, Niskamoon Corporation, Hydro-Québec, University of British Columbia, Université du Québec à Rimouski, McGill University, and the University of New Brunswick.	
<i>Contributions:</i> Collaborated with Cree community land users and a UBC scientist to test a protocol for sampling Canada goose diets in a remote field location in James Bay, QC.	
Eelgrass biodiversity surveys and mapping	June 2022
<i>Partnerships:</i> University of British Columbia, BC Parks, and the Tla'amin Nation.	
<i>Contributions:</i> Collaborated with BC Parks scientists and Tla'amin Nation Guardians in Desolation Sound Provincial Park, BC, to map eelgrass for stern tie development and assess eelgrass ecosystem health for restoration initiatives.	

Institute for Multidisciplinary Ecological Research in the Salish Sea (IMERSS)2019 –
present

Partnerships: Whiteswan Environmental, Hakai Institute, Galiano Conservancy Association, Canadian Institute for Ecology and Evolution, and the University of British Columbia.

Contributions: I am a co-founder and current Chair of the Board of Directors and Executive Committee where I advance our vision of practicing community-based and Indigenous-led long-term ecological research in the Salish Sea bioregion. I also initiated a partnership with the Parfrey Lab at UBC to research eelgrass-associated bacteria, fungi, and diatom interactions and succession.

Biodiversity Research: Integrative Training and Education (BRITE) InternshipMay –
Sept.
2018

Partnerships: Council of the Haida Nation, Parks Canada, University of British Columbia, Fisheries and Oceans Canada, Florida State University, University of Oregon, Hakai Institute, and the Pacific Urchin Harvest Association.

Contributions: In collaboration with project partners of the Chiixuu Tll iinasdll (Nurturing Seafood to Grow) kelp forest restoration project in Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site, I developed and implemented multiple experiments (via SCUBA) to determine the short and long-term ecological effects of culling sea urchins.

PEER-REVIEWED PUBLICATIONS

- Ito, M. A., Namba, M., Adamczyk, E. M., O'Connor, M. I., Nakaoka, M. Combination of interspecific and intraspecific comparisons revealed significant trait changes for non-native seagrass. *Submitted*.
- Graham, O. J., Adamczyk, E. M., Schenk, S., Dawkins, P., ... Parfrey, L. W., Harvell, C. D. The role of the eelgrass microbiome in mediating risk of seagrass wasting disease. *Submitted*.
- Adamczyk, E. M., O'Connor, M. I., Parfrey, L. W. (2022). Seagrass (*Zostera marina*) transplant experiment reveals core microbiota and resistance to environmental change. *Molecular Ecology*. doi.org/10.1111/mec.16641
- Simon, A. D. F., Adamczyk, E. M., ..., and Starzomski, B. M. (2022). Toward an atlas of Salish Sea biodiversity: the flora and fauna of Galiano Island, British Columbia, Canada. Part I. Marine zoology. *Biodiversity Data Journal*. doi.org/10.3897/BDJ.10.e76050
- Elias, M., Kandel, M., Mansourian, S., Meinen-Dick, R., Crossland, M., Joshi, D., Kariuki, J., Lee, L. C., McElwee, P., Sen, A., Sigman, E., Singh, R., Adamczyk, E. M., ... Winowiecki, L. (2021). Ten people-centered rules for socially sustainable ecosystem restoration. *Restoration Ecology*. doi.org/10.1111/rec.13574
- Lee, L. C., McNeill, D., Ridings, P., Featherstone, M., Okamoto, D. K., Spindel, N. B., Galloway, A. W. E., Saunders, G. W., Adamczyk, E. M., Reshitnyk, L., Pontier, O., Post, M., Irvine, R., Wilson, N., and Bellis, V. (2021). Chiixuu Tll iinasdll: Indigenous ethics and values lead to ecological restoration for people and place in Gwaii Haanas. *Ecological Restoration*. doi.org/10.3368/er.39.1-2.45
- Murphy, G. E. P., Dunic, J. C., Adamczyk, E. M., Bittick, S. J., Côté, I. M., Cristiani, J., Geissinger, E. A., Gregory, R. S., Lotze, H. K., O'Connor, M. I., Araújo, C. A. S., Rubidge, E. M., Templeman, N. D., and Wong, M. C. (2021). From coast to coast to coast: Ecology and management of seagrass ecosystems across Canada. *FACETS*. doi.org/10.1139/facets-2020-0020
- Stark, K. A., Thompson, P. L., Yakimishyn, J., Lee, L., Adamczyk, E. M., Helsing-Lewis, M., and O'Connor, M. I. (2020). Beyond a single patch: local and regional processes explain diversity patterns in a seagrass epifaunal metacommunity. *MEPS*. doi.org/10.3354/meps13527

Segovia, B. T., Sanders-Smith, R., **Adamczyk, E. M.**, Forbes, C., Hessing-Lewis, M., O'Connor, M. I., and Parfrey, L. W. (2020). Microeukaryotic communities associated with the seagrass *Zostera marina* are spatially structured. *Journal of Eukaryotic Microbiology*. doi.org/10.1111/jeu.12827

Iacarella, J. C., **Adamczyk, E.**, ..., and Baum, J. K. (2018). Anthropogenic disturbance homogenizes seagrass fish communities. *Global Change Biology*. doi:10.1111/gcb.14090

Adamczyk, E. M. and J. B. Shurin. (2015). Seasonal changes in plankton food web structure and carbon dioxide flux from Southern California reservoirs. *PLoS ONE* 10(10): e0140464. doi:10.1371/journal.pone.0140464

INVITED WORKSHOPS AND WORKING GROUPS

- Shikaapashkwh Symposium**, Chisasibi, Eeyou Istchee, QC, Canada 2022
Discussed Coastal Habitat Comprehensive Research Project results with Cree community members and interviewed Cree land users for their perspective on the project and next steps
- IMERSS Visioning Retreat**, Galiano Island, BC, Canada 2019
Collaborated with naturalists and scientists throughout the Salish Sea to establish a community-based research institute on Galiano Island, BC.
- Workshop, ZEN (Zostera Experimental Network) Seagrass Phenology**, Vancouver, BC, Canada 2017
Collaborated with scientists from Canada, Japan, USA, and Sweden to gather for data and information to write a manuscript on *Zostera marina* community phenology based on the Plankton Ecology Group model (Sommer et al. 1986).
- COMPASS and Data Management workshop, CHONe II Meeting**, Gatineau, QC, Canada 2017
Participated in COMPASS (Communication Partnership for Science and the Sea) training in how to communicate science to the broad audiences and refreshed data management skills in R (tidyverse packages).
- Workshop, CHONe II / DEVOTES Indicators Workshop**, Montreal, QC, Canada 2016
Worked with other CHONe II students during DEVOTES training to better understand the effects of human activities and climate on marine ecosystems and biodiversity by assessing and selecting biological indicators.
- Workshop, Eelgrass Faunal Monitoring**, Victoria, BC, Canada 2016
Collaborated on a BC-wide eelgrass fish and invertebrate survey network between multiple universities, Parks Canada, DFO, and various NGOs to assess the impact of human activities on eelgrass communities. Manuscript published in *Global Change Biology*.
- Research Exchange, Hakai Institute Research Exchange**, Nanaimo, BC, Canada 2015,
Participated in a symposium where Hakai researchers and associate scientists presented current research on Calvert and Quadra Island, BC. 2016
- Workshop, Seagrass BC**, Victoria, BC, Canada 2016
Participated in a meeting with university researchers, DFO, Parks Canada, citizen scientists, and NGOs and discussed areas of collaboration between seagrass scientists throughout BC.
- Network Meeting, NSERC Strategic Research Program - Canadian Healthy Oceans Network (CHONe II)**, Montreal, QC, Canada 2015
Participated in the first CHONe II meeting with researchers and government scientists (39 researchers from 11 Canadian universities and multiple federal research labs) and discussed various projects, collaboration opportunities, and deadlines for deliverables.

PROFESSIONAL POSITIONS

Hatfield Consultants – Marine Biologist , North Vancouver, BC	2022
IMERSS Board of Directors – Chair , Galiano Island, BC	2021 – present
IMERSS Executive Committee – Chair , Galiano Island, BC	2021 – present
IMERSS Marine Ecology Research Coordinator , Galiano Island, BC	2020 – 2021
IMERSS Communications Co-Coordinator , Galiano Island, BC	2020 – 2021
Steering Committee Member for IMERSS (Institute for Multidisciplinary Ecological Research in the Salish Sea), Galiano Island, BC	2019 – present
English Bay Swim Club – Masters 101 and Substitute Coach , Vancouver, BC	2017 – present
English Bay Swim Club – Executive Board Member , Vancouver, BC	2017 – 2019
Co-President of the UBC Zoology Graduate Student Association , Vancouver, BC	2017 – 2018
Social Media Co-coordinator , 2018 World Conference on Marine Biodiversity Montreal, QC	2017 – 2018
Webmaster , Canadian Heathy Oceans Network graduate student committee	2016 – 2017

TECHNICAL REPORTS

Nagel, E. J., Murphy, G., Fast, J., Bittick, S. J., **Adamczyk, E. M.**, O'Connor, M. I., Wong, M. C., Lotze, H. K. (2021). Application of a coastal human impact metric and nitrogen loading model to ten eelgrass (*Zostera marina*) meadows in British Columbia. Fisheries and Oceans Canada.

CONFERENCE TALKS, PRESENTATIONS, AND SEMINARS

Adamczyk, E. M. (2022). Eelgrass communities in British Columbia: Effects of humans, space, and time. *UBC Biodiversity Legendary Internal Seminar Series – Exit Seminar*.

Ito, M. A., Mizuho, N., **Adamczyk, E. M.**, O'Connor, M.I., and Nakaoka, M. (2021). Regional comparison revealed altered ecosystems services for non-native *Zostera japonica* compared to native congener. *26th Biennial Coastal and Estuarine Research Federation conference*.

Lee, L. C., Okamoto, D. K., Galloway, A.W. E., Spindel, N. B., **Adamczyk, E. M.**, and Bellis, V. (2020). Chiixuu Tll iinasdll: Nurturing seafood to grow in Gwaii Haanas. *Parks Canada Gwaii Haanas Speaker Series*.

Adamczyk, E. M., O'Connor, M. I., and Parfrey, L.W. (2019). Eelgrass transplant experiment reveals insight to microbial community assembly. *100th Annual Meeting of the Western Society of Naturalists*.

Adamczyk, E. M. (2019). Kelp forest restoration in Gwaii Haanas, Haida Gwaii. *UBC Biodiversity Legendary Internal Seminar Series*.

Adamczyk, E. M., and O'Connor, M. I. (2018). Seasons of seagrass: Seasonal and temporal dynamics of *Zostera marina* communities. *99th Annual Meeting of the Western Society of Naturalists*.

Adamczyk, E. M., Parfrey, L. W., and O'Connor, M. I. (2018). Does the eelgrass microbiome prevent or facilitate eelgrass wasting disease? *UBC Biodiversity Research Centre Ecology and Evolution Symposium*.

Adamczyk, E. M., and O'Connor, M. I. (2018). Identifying human impacts on eelgrass faunal biodiversity in British Columbia, Canada. *4th World Conference on Marine Biodiversity*.

Graham, O. J., Klohmann, C., **Adamczyk, E. M.**, ..., and Harvell, C. D. (2018). Latitudinal variation in seagrass wasting disease from Puget Sound to Alaska. *Salish Sea Ecosystem Conference*.

Adamczyk, E. M., Campbell, M. L., and O'Connor, M. I. (2017). Identifying human impacts on eelgrass faunal biodiversity in Barkley Sound, Vancouver Island. *Canadian Society for Ecology & Evolution conference*.

- Adamczyk, E. M.**, Campbell, M. L., and O'Connor, M. I. (2017). Does human development impact faunal diversity in eelgrass meadows? *UBC Zoology Graduate Student Association Symposium*.
- Adamczyk, E. M.** and O'Connor, M. I. (2016). A stitch in time: Weaving together species interactions in the Salish Sea. *UBC Zoology Graduate Student Association Symposium*.
- Adamczyk, E. M.** and O'Connor, M. I. (2016). A stitch in time: Weaving together species interactions in the Salish Sea. *Salish Sea Ecosystem Conference*.
- Adamczyk, E. M.** and Shurin, J. B. (2014). Impacts of seasonal variation in trophic interactions and climate on carbon dioxide flux from San Diego reservoirs. *99th Annual Meeting of the Ecological Society of America*.
- Adamczyk, E.M.** and Shurin, J.B. (2014). How do seasonal changes in food web dynamics and climate affect carbon dioxide flux from San Diego reservoirs? *University of California, San Diego Biology Student Research Showcase*.

COLLABORATIVE ACADEMIC RESEARCH POSITIONS

- Eelgrass wasting disease experiments** 2018 – 2020
Partnerships: Cornell University, Friday Harbor Labs, and the University of British Columbia.
Contributions: Collaborated with scientists from to understand the interactions of the protist pathogen *Labyrinthula zosterae* (causative agent of eelgrass wasting disease) and the eelgrass microbiome.
- Eelgrass nutrient indicator survey** August 2017
Partnerships: Canadian Healthy Oceans Network (II) and the University of British Columbia.
Contributions: Led a team to sample 5 intertidal eelgrass meadows throughout Vancouver Island, BC, for invertebrate biodiversity surveys, eelgrass wasting disease monitoring, and collected shoots for carbon, hydrogen, and nitrogen analysis.
- Eelgrass-associated invertebrate biodiversity surveys** 2016 – 2018
Partnerships: Hakai Institute and the University of British Columbia.
Contributions: Led a team to collect eelgrass samples from 6-10 subtidal meadows near Calvert Island, BC as part of a long-term biodiversity monitoring project.
- Comparative study of eelgrass communities of British Columbia and Japan** August 2016
Partnerships: Hokkaido University (Akkeshi Marine Station) and the University of British Columbia
Contributions: Collaborated with a team of to collect eelgrass from 5 intertidal meadows in Hokkaido, Japan, to compare with eelgrass-associated invertebrates and fish to fauna in British Columbia.

PUBLIC TALKS (* Denotes invited talk)

- * **IMERSS annual general meeting**, Galiano Island, BC 2021
 Talk title: Seasons in the Salish Sea
- * **Open Science Network**, Vancouver, BC 2019
 Talk title: Diving into seagrass: Exploring BC's coastal marine biodiversity
- * **Nature Vancouver – Marine Biology Section**, Vancouver, BC 2018
 Talk title: Seagrass ecosystems: Exploring marine biodiversity along BC's coast
- * **Wonders of the Salish Sea**, Vancouver, BC 2018
 Talk title: Seagrass ecosystems in the Salish Sea, Vancouver, BC

'Way Cool' series, UBC Beaty Biodiversity Museum, Vancouver, BC 2017
 Talk title: Seagrass meadows are way cool because...

OUTREACH AND SERVICE (* Denotes invited event)

Science Odyssey: Human Science Library 2021
 Symbiosis BC virtual mentoring event

Galiano Island BioBlitz - Marine ecology interpreter 2019
 Montague Harbor, Galiano Island, BC

*** Open Science Network STEM Mentor** 2019
 David Thompson Secondary School, Vancouver, BC

*** YEET! Innofest (Youth Exploration and Experimentation in Technology)** 2019
 Booth title: Community Ecology: Food webs and stable isotopes, New Westminster, BC

*** Open Science Network STEM Mentor** 2018, 2019
 UBC Faculty of Pharmaceutical Sciences, Vancouver, BC

Gwaii Haanas Beach Walk - Eelgrass ecosystem interpreter 2018
 Haida Heritage Centre, Skidegate, Haida Gwaii, BC

Open Science Network STEM Mentor 2017, 2018
 Templeton Secondary School, Vancouver, BC

*** Co-leader - Eelgrass Citizen Science Workshop** 2017
 Friends of Semiahmoo Bay, White Rock, BC

Public Outreach Volunteer 2017
 Canadian Society for Ecology & Evolution (CSEE), Victoria, BC

Science Fair Judge 2016 – 2021
 Greater Vancouver Regional Science Fair, UBC, Vancouver, BC

Aquarist Assistant 2013 – 2015
 Birch Aquarium at Scripps Institution of Oceanography, UCSD, CA (250 hrs)

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant

UBC, BIOL 140, Laboratory Investigations in Life Science Winter 2021
 UBC, MICB 447, Experimental Microbiology 2020, 2021, 2022
 UBC, BIOL 402, Aquatic Ecology 2016, 2017, 2019
 UCSD, BIEB 176, Conservation and the Human Predicament Spring 2014
 UCSD, BILD 3, Organismic and Evolutionary Biology Winter 2014
 UCSD, BIEB 102, Introductory Ecology – Organisms and Habitat Fall 2013

Guest Lecturer

University of British Columbia, Aquatic Ecology 2020
 Quest University, Community Ecology 2020
 Cornell University, CORALS microbial community ecology section 2018, 2019, 2020

Mentor

IMERSS Community Development Leaders (3 leaders) 2020 – 2021
 UBC Undergraduate Research Assistants (15+ students); O'Connor and Parfrey labs 2016 – present
 UCSD Preuss School High school student 2014 – 2017
 UCSD Undergraduate Research Assistants (5 students); Shurin Lab 2014
 UCSD BSc Environmental Systems intern (Co-advised by Dr. Jonathan Shurin) 2013-2014

ATHLETIC EXPERIENCE

USA Swimming Olympic Trials Competitor 2008, 2012

NCAA Division II National Champion; 200 Breaststroke	2012
NCAA Division II Intercollegiate Swimmer, University of California, San Diego	2010 – 2012
NCAA Division I Intercollegiate Swimmer, University of California, Santa Barbara	2009 – 2010

CERTIFICATES AND QUALIFICATIONS

SCUBA diving

In the process of obtaining Canadian commercial diving certification

CAUS Level II (Qualified in Vancouver, BC)	2017
Total dives >20m: 4	
Total dive hours: 2	
CAUS Level I (Qualified in Vancouver, BC)	2016, 2018
Total dives <20m: 146	renewed 2022
Total dive hours: 107	
Dive Accident Management	2016, 2018, 2022
Divers Alert Network– CPR/First Aid/AED/Emergency Oxygen	2016, renewed 2022
PADI Rescue (Certified in San Diego, CA)	2013
PADI Enriched Air (Certified in San Diego, CA)	2012
PADI Advanced (Certified in Los Angeles, CA)	2010
PADI Open Water (Certified in Los Angeles, CA)	2009

Technical skills

Advanced (5+ years):

R, git, Office, GSuite including Google Cloud products

Intermediate (1-3 years):

Adobe Illustrator and Photoshop

Beginner (6 months – 1 year):

QGIS, QIIME2

Languages

English (Mother tongue)

Spanish (Intermediate conversational)

German (Beginner conversational)

Other

Class 5 Canadian Driver's License and Vehicle	
Avalanche Safety Training (AST-1+) – Canada West Mountain School	2022
Safe Sport Training – Coaching Association of Canada	2020
Canadian Red Cross – Wilderness & Remote First Aid	2017