

Emily M. Adamczyk

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

Research interests: Temporal and spatial variation of invertebrate and microbial diversity in seagrass ecosystems.

EDUCATION

University of British Columbia , PhD Candidate in Zoology Marine Community Ecology. Advisors: Mary I. O'Connor and Laura Wegener Parfrey	2015 – present
University of California, San Diego , MSc in Biology Thesis: Effects of food web interactions and climate on $p\text{CO}_2$ in San Diego Reservoirs. Advisor: Jonathan Shurin	2014
University of California, San Diego , BSc in General Biology and minor in Music	2013

RESEARCH POSITIONS

UBC BRITE Internship with Parks Canada: I worked with scientists from Parks Canada, Department of Fisheries and Oceans, Florida State University, the Hakai Institute, Council of the Haida Nation, and Pacific Urchin Harvest Association on the Chiixuu Tll iinasdll (Nurturing Seafood to Grow) kelp forest restoration project in Gwaii Haanas National Park Reserve, Haida Gwaii. I developed multiple experiments to determine the short and long-term ecological effects of culling sea urchins.	May – Sept 2018
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PEER-REVIEWED PUBLICATIONS

Adamczyk, E. M., O'Connor, M. I., Parfrey, L. W. Seagrass (*Zostera marina*) transplant experiment uncovers microbial selectivity and core microbiome. *In prep.*

Graham, O. J., Adamczyk, E. M., Schenk, S., Parfrey, L. W., Dawkins, P., Harvell, C.D. The role of the eelgrass microbiome in mediating risk of seagrass wasting disease. *In prep.*

Ito, M. A., Namba, M., Adamczyk, E. M., O'Connor, M. I., Nakaoka, M. Regional comparison reveals reduced shoot density and enhanced sexual reproduction in non-native seagrass populations. *In prep.*

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. Ten people-centered rules for socially sustainable ecosystem restoration. *Submitted.*

Simon, A. D. F., Adamczyk, E. M., Basman, A., Gartner, H., Gibbs, C., Gibbs, D., Harbo, R., Harris, L., Lamb, A., Lambert, P., McDaniel, N., Starzomski, B. M.. Toward an atlas of Salish Sea biodiversity: the flora and fauna of Galiano Island, British Columbia, Canada. Part I. Marine zoology. *Submitted.*

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., 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 M. C. Wong. 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.**, Hessing-Lewis, M., 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., Wegener Parfrey, L. 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.**, Bowen, D., Chalifour, L., Eger, A., Heath, W., Helms, S., Hessing-Lewis, M., Hunt, B. P. V., MacInnis, A., O'Connor, M. I., Robinson, C. L. K., Yakimishyn, J., 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

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.

FELLOWSHIPS AND AWARDS

University of British Columbia – Zoology Graduate Fellowship	2019
Women Divers Hall of Fame – Marine Conservation Scholarship	2017
University of British Columbia – Four Year Doctoral Fellowship	2015

TALKS AND PRESENTATIONS

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

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

Adamczyk, E. M., L. Wegener Parfrey, and M. I. O'Connor. 2018. Does the eelgrass microbiome prevent or facilitate eelgrass wasting disease? *Ecology and Evolution retreat*.

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

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

Adamczyk, E. M., M. L. Campbell, and M. I. O'Connor. 2017. Does human development impact faunal diversity in eelgrass meadows? *UBC Zoology Graduate Student Association Symposium*.

Adamczyk, E. M. and M. I. O'Connor. 2016. A stitch in time: Weaving together species interactions in the Salish Sea. *UBC Zoology Graduate Student Association Symposium*.

Adamczyk, E. M. and M. I. O'Connor. 2016. A stitch in time: Weaving together species interactions in the Salish Sea. *Salish Sea Ecosystem Conference*.

Adamczyk, E. M. and J. B. Shurin. 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 J. B. Shurin. 2014. How do seasonal changes in food web dynamics and climate affect carbon dioxide flux from San Diego reservoirs? *Annual UCSD Biology Student Research Showcase*.

INVITED WORKSHOPS AND WORKING GROUPS

- 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
I collaborated with seven 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). ZEN is global network of scientists from 11 countries studying eelgrass ecosystem functioning through experiments and long-term monitoring.
- COMPASS and Data Management workshop, CHONe II Meeting, Gatineau, QC, Canada** 2017
I participated in COMPASS (Communication Partnership for Science and the Sea) training in how to communicate science to the general public and refreshed data management skills in R (tidyverse packages).
- Workshop, CHONe II / DEVOTES Indicators Workshop, Montreal, QC, Canada** 2016
I 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
I 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, 2016
I participated in a symposium where Hakai researchers and associate scientists presented current research on Calvert and Quadra Island, BC.
- Workshop, Seagrass BC, Victoria, BC, Canada** 2016
I 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
I 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.

SYNERGISTIC ACTIVITIES

Eelgrass nutrient indicator survey: I 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. We will compare these data to other meadows in BC and the east coast of Canada to build a nutrient indicator model to predict areas affected by human activities as part of a CHONe II project. Vancouver Island, BC, University of British Columbia	August 2017
Comparative study between eelgrass communities of British Columbia and Japan: I worked with a team to collect eelgrass from 5 intertidal meadows in Hokkaido, Japan, to compare with eelgrass meadows in BC. We processed samples and will compare invertebrate biodiversity between the meadows. Akkeshi Marine Station, Hokkaido, Japan	August 2016

LEADERSHIP

IMERSS Marine Ecology Research Coordinator , Galiano Island, BC	2020 – present
IMERSS Communications Co-Coordinator , Galiano Island, BC	2020 – present
Steering committee member for IMERSS (Institute for Multidisciplinary Ecological Research in the Salish Sea), Galiano Island, BC	2019 – present
President of the UBC Zoology Graduate Student Association , Vancouver, BC	2017–2018
Social Media Co-coordinator , <i>2018 World Conference on Marine Biodiversity</i> Montreal, QC	2017–2018
Participant in a COMPASS workshop , <i>CHONe II Meeting</i> , Gatineau, QC, Canada,	2017
Website manager (student site) , CHONe II (Canadian Healthy Oceans Network II)	2016 – 2017

OUTREACH AND PUBLIC TALKS

Science Odyssey: Human Science Library , Symbiosis BC virtual mentoring event (1.5 hrs)	2021
Marine ecology interpreter , Galiano Island BioBlitz Montague Harbor, Galiano Island, BC (4 hrs)	2019
Open Science Network Mentor , STEM Mentoring Event, David Thompson Secondary School, Vancouver, BC (4 hrs)	2019
(Invited) YEET! Youth Innofest (Youth Exploration and Experimentation in Technology) , “ <i>Community Ecology: Food webs and stable isotopes</i> ” (2.5 hrs) New Westminster, BC	2019
(Invited) Open Science Network public talk , “ <i>Diving into seagrass: Exploring BC’s coastal marine biodiversity</i> ”, Vancouver, BC	2019
Open Science Network Mentor , STEM Mentoring Cafe, UBC Faculty of Pharmaceutical Sciences, Vancouver, BC (4 hrs)	2018, 2019
Eelgrass ecosystem interpreter , Gwaii Haanas Beach Walk Haida Heritage Centre, Skidegate, Haida Gwaii, BC (3 hrs)	2018

(Invited) Nature Vancouver – Marine Biology Section public talk , “ <i>Seagrass ecosystems: Exploring marine biodiversity along BC’s coast</i> ” Vancouver, BC	2018
(Invited) Wonders of the Salish Sea public talk , “ <i>Seagrass ecosystems in the Salish Sea</i> ” Vancouver, BC	2018
Open Science Network Mentor , STEM Mentoring Event, Templeton Secondary School, Vancouver, BC (8 hrs)	2017, 2018
‘Way Cool’ public talk , “ <i>Seagrass meadows are way cool because...</i> ” Beaty Biodiversity Museum at UBC, Vancouver, BC	2017
(Invited) Co-leader - Eelgrass Citizen Science Workshop , Friends of Semiahmoo Bay White Rock, BC (4 hrs)	2017
Public Outreach Volunteer , Canadian Society for Ecology & Evolution (CSEE) Victoria, BC (4 hrs)	2017
Science Fair Judge , Greater Vancouver Regional Science Fair University of British Columbia, Vancouver, BC (36 hrs)	2016 – 2021
Aquarist Assistant , Birch Aquarium at Scripps Institution of Oceanography University of California, San Diego (250 hrs)	2013 – 2015

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant

UBC , BIOL 140, Laboratory Investigations in Life Science	Winter 2021
UBC , MICB 447, Experimental Microbiology	2020, 2021
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 Lectures

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 (11 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 senior intern (Co-advised by Dr. Jonathan Shurin)	2013-2014

SCUBA CERTIFICATES AND QUALIFICATIONS

CAUS Level II (Qualified in Vancouver, BC)	2017
<i>Total dives >20m: 4</i>	
<i>Total dive hours: 2</i>	
Canadian Red Cross – Wilderness & Remote First Aid	2017
CAUS Level I (Qualified in Vancouver, BC)	2016, renewed 2018
<i>Total dives <20m: 144</i>	
<i>Total dive hours: 105</i>	
Dive Accident Management	2016, renewed 2018
Divers Alert Network– CPR/First Aid/AED/Emergency Oxygen	2016, renewed 2018
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