

Emily M. Adamczyk

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EDUCATION

University of British Columbia , PhD student 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 , BS in General Biology and minor in Music	2013

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

PUBLICATIONS

- Iacarella, J. C., **Adamczyk, E. M.**, 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
- Adamczyk, E. M.** and J. B. Shurin. 2014. Effects of trophic interactions and climate on CO_2 flux from reservoirs. *UC San Diego Saltman Quarterly* 11:49.
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TALKS AND PRESENTATIONS

- 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

- 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** 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.

Research Exchange, Hakai Institute Research Exchange, Nanaimo, BC, Canada 2015

I attended in a symposium where Hakai researchers and associate scientists presented current research taking place on Calvert Island, BC.

RESERACH EXPERIENCE

Part I: SCUBA diving experience

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 a 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

Gwaii Haanas, Haida Gwaii, BC (39 dives <40m deep)

Eelgrass Human Impact Surveys: I led eelgrass surveys to build on data from invertebrate surveys in 2016. We collected eelgrass and invertebrates from 8 subtidal meadows in Barkley Sound, BC, to determine how eelgrass invertebrate biodiversity varied between impacted and non-impacted meadows (part of my PhD thesis). We also collected eelgrass to monitor for wasting disease. I organized the field trip, led the field work and sample processing, and I am currently analyzing data and writing a manuscript for this research. August 2017

Bamfield Marine Sciences Centre, Bamfield, BC (10 dives <20m deep)

Eelgrass Transplant Experiment & Biodiversity Surveys: I led an eelgrass transplant experiment between 4 eelgrass meadows to monitor how eelgrass-associated microbial communities changed in different environments (part of my PhD thesis). We collected and swabbed eelgrass for microbes and transplanted the eelgrass to different meadows. I also organized and led an annual eelgrass invertebrate biodiversity survey in 6 eelgrass meadows for the O'Connor lab. I am currently learning DNA extraction and PCR techniques to sequence DNA for bacteria diversity analysis. June-July 2017

Hakai Institute, Calvert Island, BC (20 dives <20m deep)

Eelgrass Biodiversity Surveys: I worked with a team of Hakai and O'Connor lab divers to collect eelgrass, algae, kelp, and associated epifaunal invertebrates from 14 different sites as part of a long-term study on spatial and temporal variation of invertebrate biodiversity. June-July 2016

Hakai Institute, Calvert Island, BC (14 dives <20m deep)

Eelgrass Human Impact & Kelp Forest Surveys: I planned and led surveys where we collected eelgrass and associated epifaunal and infaunal invertebrates from 8 subtidal meadows in Barkley Sound, BC, for invertebrate biodiversity surveys along a human impact gradient (part of my PhD thesis). I also collected various algae and kelp from 2 sites for invertebrate biodiversity surveys. June 2016

Bamfield Marine Sciences Centre, Bamfield, BC (13 dives <20m deep)

Part II: Other research experience

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
Eelgrass community phenology: I lead a team of volunteers (including undergrads, grad students, and postdocs) to sample an intertidal eelgrass meadow for eelgrass shoots, epifaunal and infaunal invertebrates, water quality, and fish to build a community seasonality model based on trends in species abundance (part of my PhD thesis. We sample once per month at low tide (at night during winter months). I also coordinate sample processing with volunteers and identify invertebrates using microscopy. Tsawwassen, BC	Nov 2015-present
MSc Student: My MSc thesis focused on seasonal changes in food web interactions and climate on carbon dioxide flux from San Diego reservoirs. I weekly sampled three lakes with a kayak to collect water and invertebrate samples to analyze and identify in the lab. Shurin Lab, University of California, San Diego	2013-2014
Field Assistant: I helped a PhD student sample alpine lakes to study impacts of fish predation along a temperature gradient. We backpacked throughout the Sierra Nevada mountain range to collect water and detritus samples and processed them in a lab. Yosemite National Park and Inyo National Forest, Shurin Lab, UC San Diego	Summer 2013
Undergraduate Researcher: I ran a series of grazing trial experiments to determine how grazing rates differed across various species of freshwater copepods and algae. Shurin Lab, UC San Diego	Jan-May 2013
Habitat Restoration Intern: I worked with a team to restore coastal sage scrub and salt marsh habitats. Cheadle Center for Biodiversity and Ecological Restoration, UC Santa Barbara	Jan-March 2010

OUTREACH ACTIVITIES

YEET! Youth Innofest (Youth Exploration and Experimentation in Technology), <i>“Community Ecology: Food webs and stable isotopes”</i> (2.5 hours)	2019
Open Science Network public talk, <i>“Diving into seagrass: Exploring BC’s coastal marine biodiversity”</i>	2019
Nature Vancouver – Marine Biology Section public talk, <i>“Seagrass ecosystems: Exploring marine biodiversity along BC’s coast”</i>	2018
Open Science Network - STEM Mentoring Cafe, UBC Faculty of Pharmaceutical Sciences (4 hours)	2018
Wonders of the Salish Sea public talk, <i>“Seagrass ecosystems in the Salish Sea”</i>	2018
UBC Zoology Graduate Student Association, President	2017–2018

Social Media Co-coordinator , 2018 World Conference on Marine Biodiversity	2017–2018
Open Science Network - STEM Mentoring Event , Templeton Secondary School Vancouver, BC (8 hours)	2017, 2018
‘Way Cool’ public talk , “ <i>Seagrass meadows are way cool because...</i> ” Beaty Biodiversity Museum at UBC, Vancouver, BC	2017
Eelgrass Citizen Science Workshop , Friends of Semiahmoo Bay White Rock, BC (4 hours)	2017
Public Outreach Volunteer , Canadian Society for Ecology & Evolution (CSEE) Victoria, BC (4 hours)	2017
Science Fair Judge , Greater Vancouver Regional Science Fair University of British Columbia (21 hours)	2016, 2017, 2018
Whale Watching Volunteer , Birch Aquarium at Scripps Institution of Oceanography, University of California, San Diego (40 hours)	2014
Discovery Lab Assistant , Birch Aquarium at Scripps Institution of Oceanography University of California, San Diego (30 hours)	2014 – 2015
Aquarist Assistant , Birch Aquarium at Scripps Institution of Oceanography University of California, San Diego (250 hours)	2013 – 2015
Exhibitor , San Diego Festival of Science and Engineering University of California, San Diego SCUBA club (SeaDeucers) (8 hours)	2013
Tide Pool Interpreter , Birch Aquarium at Scripps Institution of Oceanography University of California, San Diego (30 hours)	2012 – 2013
Snowy Plover Docent , Coal Oil Point Reserve University of California, Santa Barbara (30 hours)	2010
Student Naturalist , Eaton Canyon Nature Center Department of Parks and Recreation, County of Los Angeles (300 hours)	2005 – 2008

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant

UBC, BIOL 402, Aquatic Ecology	Fall 2016, 2017
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

Mentor

UBC Undergraduate Research Assistants (9 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