

Fiona Beaty

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www.fionabeaty.ca

EDUCATION

- Present** PhD candidate, Department of Zoology
University of British Columbia, Canada
- “Marine resilience in the Anthropocene: understanding the adaptive capacity of marine social-ecological systems to change”
 - Committee: Christopher Harley (advisor), Amanda Vincent, Michelle Tseng, Dolph Schluter
 - Mitacs fellow with Ocean Wise, National Geographic Early Career Explorer, COMPASS Ocean Science Leadership Fellow, UBC Public Scholar, Ocean Leaders Fellow
- 2015** BA&Sc (Bachelor of Arts and Science)
McGill University, Canada
- Graduated with distinction (top 25% of the 2015 Faculty of Science graduating class)
- 2014** Exchange semester
Universidad del Salvador, Argentina

WORK AND RESEARCH EXPERIENCE

Non-profit sector

- 2018 – Present** **Project Director**, MakeWay Charitable Society
- Howe Sound/Átl'ka7sem Marine Reference Guide
 - www.howesoundguide.ca
- 2018-Present** **Regional coordinator**, SeaChange Marine Conservation Society
- Salish Sea Nearshore Habitat Recovery Project
 - www.seachangesociety.com
- 2016-2019** **Project Manager and Research Assistant**, Ocean Wise
- Howe Sound Biodiversity
 - www.howesoundconservation.ca
 - www.habitatprotection.ca
- 2013** **Conservation Crew**, That Nature Trust of British Columbia
- Academia*
- 2016** **Field Research Assistant**, McGill University
- Advisor: Andrew Hendry, Eco-evolutionary dynamics
- 2015** **Independent Research Project**, McGill University
- Advisor: Hans Larsson, Developmental Evolution Lab
- 2015** **Lab Research Assistant**, McGill University
- Advisors: Andrew Hendry, Rowan Barrett

AWARDS, GRANTS, AND HONOURS

Academic – total amount \$187,360 CAD

- 2021-2022** Mitacs Accelerate \$75,000
- 2020-2021** UBC Public Scholar \$6000
- 2020-2021** COMPASS Leaders for Sea Change (non-monetary)
- 2019-2020** Mitacs Accelerate \$40,000
- 2020** Vanier Canada Graduate Scholarship – UBC nomination
- 2017,2018,2019** Ocean Leaders Fellowship \$12,000, \$12,000, \$11,000
- 2019** National Geographic Early Career Explorer \$10,000 USD

2019	Star Award – Ocean Wise (non-monetary)
2018, 2019	Hollyhock Scholarship \$200, \$560
2018	Pacific Northwest Shellfish Club \$1000
2017-2020	UBC Faculty of Science Award \$2000 each year
2017	Nature Vancouver Scholarship \$1000
2015	Graduation honour: distinction (top 25% of McGill's 2015 Faculty of Science graduating class)
2015	Dixie Park Science Undergraduate Research Award \$5600
2013	Mobility award \$1000
2011	J W McConnell Scholarship \$3000

Non-profit fundraising – total \$585,000 CAD

2020	Canada Summer Jobs, Federal Government \$10,000
2020	BC Parks: Regional Park Enhancement Funding \$5,000
2019	Real Estate Foundation \$120,000
2019	Royal Bank of Canada \$5000
2019	North Family Foundation \$115,000
2018	Sitka Foundation \$115,000
2018-2020	Local government donations from Howe Sound \$60,000
2018	Vancouver Foundation – Level Youth develop grant \$10,000
2018	Moore Foundation through Tides Canada's Marine Planning Fund \$30,000
2017	Moore Foundation through Tides Canada's Marine Planning Fund \$80,000
2017	Ocean and Science Freshwater Contribution Program – DFO \$35,000

PUBLICATIONS

Peer-reviewed

In review:

- Beaty F**, Davis K, and Sanchez C. 2021. A flexible risk assessment framework for marine plastic pollution based on waste management and ecological impact data.

Book Chapters, Reports, and Websites

- Beaty F** and Wright N. 2020. Eelgrass: transplants and restoration for critical habitat. In: Miller A, Chapman J, Dearden A, Ross P (Ed.). 2020. Ocean Watch Átl'ka7tsem/Txwnéwu7ts/Howe Sound Edition 2020. Ocean Wise Research Institute. Vancouver, B.C., Canada. 204-212 pg. Available online: <http://oceanwatch.ca>
- Antone M, Williams J, Rudkowsky N, and **Beaty F**. 2020. Report on the Indigenous Stewardship Network workshop. Howe Sound/ Átl'ka7tsem Marine Reference Guide. Available online: <http://howesoundguide.ca/resources>
- Watkinson M, Chang M, **Beaty F**, Wilhelmson C, and Roberts M. 2020. Diversity Equity and Inclusion in the Salish Sea Ecosystem Conference – Legacy document. 21 pgs. Available upon request.
- Beaty F** and Sanford D. 2019. Eelgrass survey report for the Town of Gibsons. Howe Sound/ Átl'ka7tsem Marine Reference Guide. Available online: <http://howesoundguide.ca/resources>
- Beaty F**, Nahanee C, Knight, F, McAuley L, Simons R, and Tobe E. 2019. Cumulative effects monitoring program pilot for Howe Sound/ Átl'ka7tsem. Prepared by the Squamish River Watershed Society for the Squamish Nation.
- Beaty F**, van Riet W, Wareham B, and Schultz J. 2019. Howe Sound/ Átl'ka7tsem Marine Conservation Assessment. Coastal Ocean Research Institute, Ocean Wise. Available online: <http://howesoundconservation.ca>
- Beaty F** and Bodtker K. 2018. Seafood Industry Jobs. In: Bodtker, K. (Ed.). 2018. Ocean Watch: British Columbia Edition. Coastal Ocean Research Institute, Ocean Wise. Vancouver, B.C., Canada. 323 pp. Available online: <http://oceanwatch.ca>
- Beaty F** and Bodtker K. 2018 Fishing and Sense of Place. In: Bodtker, K. (Ed.). 2018. Ocean Watch: British Columbia Edition. Coastal Ocean Research Institute, Ocean Wise. Vancouver, B.C., Canada. 323 pp. Available online: <http://oceanwatch.ca>

- Beaty F** and Bodtker K. 2018. Industry productivity. In: Bodtker, K. (Ed.). 2018. Ocean Watch: British Columbia Edition. Coastal Ocean Research Institute, Ocean Wise. Vancouver, B.C., Canada. 323 pp. Available online: <http://oceanwatch.ca>
- Beaty F**, Schultz J, Davidson S., and Day A. 2017. Ocean Watch: Marine Habitat Restoration Guide. Coastal Ocean Research Institute, Ocean Wise. Vancouver, B.C., Canada. pp. 56. Available online: <http://habitatprotection.ca>

Op-eds and Blogs

- Beaty F**. Sept 2020. Smoke and acid: where wildfires meet the ocean. The Narwhal. Available online: <https://thenarwhal.ca/wildfire-ocean-acidification-covid-19/>
- Beaty F**. Nov 2020. 'I love you all so much'. Imago Theatre. Available online: <https://www.imagotheatre.ca/en/blog/2020/11/9/i-love-you-all-so-much>

Edited and/or Reviewed

- Miller A and John B. reviewed by **Beaty F** and Marliave J. 2020. Plankton: the foundation of the foodweb. In: Miller A, Chapman J, Dearden A, Ross P (Ed.). 2020. Ocean Watch Átl'ka7tsem/Txwnéwu7ts/Howe Sound Edition 2020. Ocean Wise Research Institute. Vancouver, B.C., Canada. 204-212 pg. Available online: <http://oceanwatch.ca>
- Gilday L, Husby W, Turner B. 2020. Exploring Bowen's marine world: A marine atlas of Nexwlélexwem/Bowen Island. Bowen Island Conservancy. Bowen Island, Canada. pp. 55.
- Yumagulova, L. 2020. Understanding ocean literacy in Canada: Pacific Regional Report. Canadian Ocean Literacy Coalition. pp. 39.

LEADERSHIP AND SERVICE

- 2020-Present **Associate**, Pacific Wildlife Foundation
- 2020-Present **Member**, Salish Sea Voluntary No-Anchor Zones working group, transboundary
- 2020-Present **Member**, informal Diversity Equity and Inclusion working group, Ocean Wise
- 2020-Present **Advisor**, Institute for Multidisciplinary Ecological Research in the Salish Sea
- 2018-Present **Founder and coordinator**, Conservation Discussion Group, UBC
- www.zoology.ubc.ca/conservation/
- 2019-2020 **Program Committee**, Salish Sea Ecosystem Conference
- Sub-committees: Diversity, Equity & Inclusion, Arts & Public Engagement, and Poster
- 2017-2018 **Project Lead**, Underwater Council of British Columbia
- 2014 **Assistant Naturalist**, Tompkins Conservation
- Parque Iberá, Argentina
- 2014-2015 **Research Assistant**, McGill University
- McGill Research Group Investigating Canadian Mining in Latin America (MICLA)
- 2011-2018 **Stage manager, lighting & costume designer**, McGill Theatre, UBC

TEACHING AND MENTORING

- 2020 **Guest lecture**, Community-based research for conservation and climate action, **Quest University**, Biodiversity in British Columbia
- 2020 **Guest lecture**, The human dimension of restoration ecology, a case study of community-led conservation in British Columbia, **British Columbia Institute of Technology (BCIT)**, Planning for Ecological Restoration (RENR 7007)
- 2020 **Guest lecture**, The nearshore: a social-ecological perspective. **Kwantlen Polytechnic University – Wilson School of Design**, Systems Design/Design for Complexity (DEPD2410)
- 2018-2019 **Teaching Assistant**, University of British Columbia
- Experimental Biology of Invertebrates, BIOL 326, instructor Dr. Christopher Harley

Undergraduate students supervised

- 2020-2021 Lara Calvo, Undergraduate Research Assistant
- 2020 Madeleine DesBrisay, Volunteer

2019	Jessica Kennedy & Theresa Nguyen, Field Assistants
2018	Carolina Sánchez, Undergraduate Research Assistant
2018	12 undergraduate students who helped with a laboratory mesocosm experiment

PRESENTATIONS

Scientific Conferences:

- Beaty F**, Calvo L, and Harley CDG. A meta-analysis of the interactive effects of ocean warming and acidification on marine ectotherm performance, Poster at *Western Society of Naturalists* (Nov 2020). [Link](#)
- Beaty F**. The Howe Sound/Átl'ka7tsem Marine Reference Guide: implementing bottom-up and community led marine spatial planning, *Salish Sea Ecosystem Conference* (April 2020). [Link](#)
- John B and **Beaty F**. Connecting nodes throughout the Salish Sea: a bottom-up approach to strengthening informed decision-making, policy making, and marine spatial planning, Poster at *Salish Sea Ecosystem Conference* (April 2020). [Link](#)
- Stehfest K, Wareham B, **Beaty F**, van Riet W, Grames P. Spatial conservation planning in Átl'ka7tsem /Howe Sound: Bringing together science and design, *Salish Sea Ecosystem Conference* (April 2020). [Link](#)
- Beaty F**, Gehman AL, Brownlee G, Harley CDG. A search for local adaptation reveals high plasticity and maladaptation in an intertidal whelk, *Western Society of Naturalists* (November 2019)
- Beaty F**, Brownlee G, Gehman AL, Harley CDG. Local adaptation impacts biological responses to climate-linked stressors, *Western Society of Naturalists* (November 2018)
- Beaty F** and Wareham B. Howe Sound/Átl'ka7tsem Marine Conservation Assessment, *Salish Sea Ecosystem Conference* (April 2018)
- Beaty F**. Local adaptation to multiple climate-linked stressors in marine invertebrates, Poster at *Eco-Evo retreat* (November 2017)

Workshops, discussion groups and panels

- Beaty F**, Howe Sound/ Átl'ka7tsem Marine Reference Guide. *Ocean Watch Howe Sound Launch*, Ocean Wise Marine Conservation Association. (August 2020).
- Beaty F**, Mapping ocean mysteries in support of conservation. *Ask an Expert lecture series*, Ocean Wise Marine Conservation Association. (May 2020). [Link](#)
- Beaty F**, Resilience in the Anthropocene: the social and ecological dimensions of adaptation to climate change in the Salish Sea. *Wonders of the Salish Sea*. (May 2020 – postponed due to COVID-19)
- Beaty F**, Howe Sound Research and Conservation. *Pacific and Atlantic Science Enterprise evaluation workshop*, DFO. (March 2020)
- Beaty F**, Wareham B, Stehfest K, Van Riet W, and Schultz J. Átl'ka7tsem /Howe Sound – a story of community building, ecological recovery, and conservation opportunities. *Ocean Wise and David Suzuki Foundation public engagement event, Vancouver*. (March 2020)
- Beaty F**, Marine Spatial Planning and GIS on the South Coast of British Columbia – case studies and partnership building. *MSP and GIS workshop*. (February 2020)
- Beaty F**, Davis K, Gowton C. The science to policy interface – taking a dose of our own medicine. *Conservation Discussion Group*. (January 2020)
- Beaty F**, Civic engagement in science and data: a case study of marine conservation in British Columbia. *Ocean Bridge National Call*. (December 2019). [Link](#)
- Beaty F**, Indigenous world views in marine spatial planning and marine conservation. *Indigenous youth engagement in Atl'ka7tsem workshop*. (August 2019)
- Beaty F**, Davis K, Gowton C, Bittick SJ. Eco-anthro dimensions of conservation. *Conservation Discussion Group UBC* (January 2019)
- Beaty F**, Adamczyk E. How well does research achieve its desired outcomes: a look into the scientific processes, methods, and responsibilities that underscore conservation research, *Conservation Discussion Group UBC* (October 2018)
- Beaty F**, Davis K. A national plastics policy for Canada, *Liu Institute for Global Affairs, School of Public Policy and Global Affairs* (October 2018)

- Beaty F**, Schultz J. Linking regional marine conservation initiatives with the Sustainable Development Goals (SDGs), *Howe Sound SDG workshop* (September 2018)
- Beaty F**, Lewis R. Átl'ka7tsem /Howe Sound marine collaboration, *Salish Sea Ecosystem Statement of Cooperation working group meeting* (September 2018)
- Beaty F**. What is marine conservation? *Rockfish habitat sculpture & marine conservation workshop for artists at the Vancouver Aquarium/Ocean Wise* (May 2018)
- Beaty F**, Davis K. UBC's Plastics - A short path to the ocean. Poster in *Zero Waste Food Ware Strategy Consultation Event*, UBC (2018)

Government outreach

- Beaty F**. The social and ecological value of nearshore ecosystems. *Islands Trust – Keats Island Nearshore Working Group*. (June 2020).
- Beaty F**, Castazano M, and Wright N. Nearshore restoration in Mannion Bay. *Environment and Climate Action Advisory Committee (Bowen Island Municipality)*. (June 2020).
- Beaty F** and Sanford D. Seagrass protection, restoration, and distribution: survey results and local government actions. *Town of Gibsons council presentation* (January 2020)
- Beaty F** and Sanford D. Marine shorelines as critical habitats. *Town of Gibsons council presentation* (July 2019).
- Beaty F**. Howe Sound/ Átl'ka7tsem marine reference guide and marine conservation assessment, *Howe Sound Community Forum* (May 2018 and April 2019)
- Beaty F**. Howe Sound/ Átl'ka7tsem marine initiatives, Coastal Marine Working Group to advise the District of West Vancouver (March 2019).
- Beaty F**. Howe Sound/ Átl'ka7tsem marine initiatives, Islands Trust quarterly council meeting (September 2018), Department of Fisheries and Oceans (June 2018), presentations to Mayor and Councils of Village of Lions Bay, the Islands Trust, the Town of Gibsons, and the District of West Vancouver, Bowen Island Municipality, Squamish-Lillooet Regional District, District of Squamish (Dec 2017-February 2018, Dec 2018 – April 2019)

Community outreach and education

- Beaty, F**. From seagrass to stewardship: a the story of a community united around a love for the sea among us. *Bowen Island Nature Club – Keynote speaker*. (Jan 2021).
- Beaty F**. Mobilizing community knowledge to protect ocean health, culture, and livelihoods in Howe Sound/Átl'ka7tsem. *Nature Vancouver – Marine Biology lecture*. (Jan 2021).
- Beaty F**. Mobilizing community knowledge to protect ocean health, culture, and livelihoods in Howe Sound/Átl'ka7tsem. *Nicholas Sonntag Marine Education Centre – lecture series*. (Jan 2021). [Recording](#).
- Beaty F**. World Oceans Day: Eelgrass and youth empowerment in marine conservation. *Squamish Wave of Change, BlueMar4Change*. (June 2020).
- Beaty F**. Howe Sound/ Átl'ka7tsem Marine Conservation Assessment – webinar. *Ocean Wise volunteers* (April 2020).
- Beaty F** and Simons R. Howe Sound/ Átl'ka7tsem Marine Reference Guide. *West Howe Sound industry groups*. (February 2020).
- Beaty F**, Howe Sound/Atl'ka7tsem Marine Reference Guide. *Squamish Rotary Club*. (September 2019)
- Beaty F** and Simons R. Howe Sound/ Átl'ka7tsem marine conservation and regional cooperation. West Howe Sound Community Association (June 2019).
- Beaty F**. I find my identity in the sea around us. *Nature of Home lecture series*. Bowen Island Conservancy (April 2019)
- Beaty F**, Wareham B, Lewis R, van Riet W. Howe Sound/ Átl'ka7tsem Marine Conservation and Education opportunities for Squamish nation. *Squamish Nation Education Department* (April 2019)
- Beaty F**, Wareham B, Schultz J, van Riet W. Howe Sound/Átl'ka7tsem Marine Conservation Assessment – community meetings. *Squamish, Gibsons, Bowen Island, West Vancouver* (Feb – March 2019)
- Beaty F**, Wright N. Nearshore ecology and eelgrass restoration, *Sea Ranch, Camp Suzuki, and Brigade Bay Community Associations* (August - October 2018)
- Beaty F**. Nearshore ecology and community development, *Islands Trust Community Meeting* (October 2018)
- Beaty F**. Wright N. Salish Sea nearshore habitat recovery project, *Gambier Island Conservancy community workshop* (August 2018)
- Beaty F**. Howe Sound/Atl'ka7tsem mapping and conservation, *Squamish First Nation elders meeting* (July 2018)

Beaty F. Howe Sound/ Átl'ka7tsem marine initiatives, *West Howe Sound Community Association* (April 2018)

Beaty F, Davis K. UBC's plastics – a short path to the ocean, *Making Waves ocean conservation community event* (May 2018), *Zero Waste Committee at UBC* (May 2018)

Beaty F. Howe Sound Rockfish conservation area proposal, *Underwater Council of BC* (Sept 2017)

WORKSHOPS AND EVENTS

Workshops led:

- 2020 Local government GIS and marine spatial planning workshop
- 2020 Anti-racism in marine sciences lab discussion & reading group
- 2020 Indigenous Guardian Watchmen and Stewardship program in Howe Sound/Átl'ka7tsem
- 2020 GIS and Marine Spatial Planning on the South Coast
- 2019 Indigenous youth engagement in Átl'ka7tsem
- 2018-20 Conservation Discussion Group
- 2018-20 Marine Reference Guide Steering committee meetings
- 2018 Howe Sound/ Átl'ka7tsem marine conservation assessment – knowledge gathering workshop
- 2018 Salish Sea Nearshore restoration community meetings

Workshops attended:

- 2020 Week-long intensive with COMPASS for leadership and science communication training – Leaders for Sea Change fellowship
- 2020 Ethics of change-making – UBC Public Scholars
- 2020 Translating research to policy – UBC Public Scholars
- 2020 Anti-racism in ocean sciences – UBC Ocean Leaders
- 2020 Municipal Natural Assets Initiative – Coastal Resilience & Natural Assets Pilot in the Town of Gibsons
- 2020 Alchemy of Group Facilitation – Hollyhock
- 2017-20 Howe Sound Community Forums – Howe Sound/Átl'ka7tsem Biosphere Region Initiative
- 2018 Transgenerational knowledge transfer – Galiano Island Conservancy
- 2018 Sustainable Development Goals in Howe Sound/Átl'ka7tsem – Howe Sound/Átl'ka7tsem Biosphere
- 2018 Salish Sea Ecosystem working group – Environment and Climate Change Canada & Environmental Protection Agency
- 2018 Problem vessels in Howe Sound – Bowen Island Municipality
- 2018 Conservation finance workshop – Peter Wall Institute
- 2017 Leopold leadership program, environmental leadership workshop – UBC Ocean Leaders
- 2017 Story-telling and science communication workshop – UBC Ocean Leaders
- 2017 BioTAP – Teaching Skills workshop – UBC

Events led:

- 2021 Stories from the Bay – Howe Sound/ Átl'ka7tsem Marine Reference Guide ([link](#))
- 2020 Celebrate the Sound/Átl'ka7tsem – Howe Sound/ Átl'ka7tsem Marine Reference Guide ([link](#))
- 2019 Squamish Estuary shoreline clean-up – Howe Sound/ Átl'ka7tsem Marine Reference Guide
- 2019 Kwum Kwum/Defense Islands shoreline clean-up and cultural canoe journey with Squamish Nation youth – Howe Sound/Átl'ka7tsem Marine Reference Guide
- 2019 Historic boat tour to culturally important sites with Squamish Nation youth – Howe Sound/Átl'ka7tsem Marine Reference Guide
- 2018-20 Eelgrass restoration in Howe Sound/Átl'ka7tsem – SeaChange Marine Conservation Society

PRESS AND MEDIA

- 2020 The Undercurrent on eelgrass transplant and community-led stewardship ([link](#))
- 2020 The Coast Reporter on eelgrass distribution and policy development ([link](#))
- 2019 The Chief article on National Geographic grant ([link](#))
- 2019 Coast Reporter on Marine Conservation Assessment ([link](#))
- 2018 Ryan Jespersen interview on Ocean Plastics ([link](#))
- 2017 Bowen Island Undercurrent on the Howe Sound/Átl'ka7tsem Marine Reference Guide ([link](#))
- 2018 CBC interview on Ocean Plastics ([interview link](#), [article link](#))

2018 Coast Reporter on Howe Sound volunteering ([link](#))

SKILLS AND CERTIFICATIONS

Field skills: Aquatic and marine field research (lake-stream stickleback monitoring on Vancouver Island using minnow traps; reciprocal transplants on Vancouver and Calvert Islands using intertidal cages; community-based research in Howe Sound/Atka7sem), field telemetry on giant anteaters

Lab skills: Multiple stressor factorial mesocosm experiment, heart rate monitoring using infrared sensors and picoscope software and oscilloscopes, incubator experiments, DNA extraction, PCR, microsatellite analysis, Geneious, Structure, live fish and invertebrate care

Personal skills: Public speaking, group facilitation, project management, organization, science communication, editing, writing, research, basic graphic design, and management skills

Certifications: Wilderness/Remote First Aid (2020), PADI open water dive certification (2018), WHMIS and Hazardous Waste Disposal (2017), Animal care (2016), basic first aid

Languages: Fluent English, intermediate Spanish and French.

Technology: Basic WordPress, FileMaker, JavaScript, GIS. Skilled with Microsoft Office and R.

References: Available upon request.