THE UNIVERSITY OF BRITISH COLUMBIA
Curriculum Vitae for Faculty Members

Date: Jan 18 2022

1. SURNAME: O'Connor **FIRST NAME**: Mary **INITIALS**: I.

2. DEPARTMENT/SCHOOL: Zoology

3. FACULTY: Science

4. PRESENT RANK: Associate Professor **SINCE**: 1 Jul 2016

5. POST-SECONDARY EDUCATION

University or Institution	Degree	Subject Area	Dates
University of North Carolina – Chapel Hill	Ph.D.*	Ecology	Dec 2008
Brown University	B.S.	Aquatic Biology	May 2000

*Title of Ph.D. Dissertation: Linking physiological rates and community ecology: effects of ocean temperature on dispersal and species interactions. Supervised by Dr. John F. Bruno.

Special Professional Qualifications

SCUBA certification (NAUI Open Water, Rescue Diver, AAUS Scientific Diver, CAUS Scientific Diver)

6. EMPLOYMENT RECORD

(a) Prior to coming to UBC

University, Company or Organization	Rank or Title	Dates
National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, CA, USA	Post-doctoral Fellow	1/2009 – 12/2010
University of Washington, School of Aquatic and Fisheries Sciences	Research Scientist	2003
Environmental Defense Fund	Research Associate	2001-2002
University of Washington, Department of Zoology	Research Technician	1998-2001

(b) At UBC

Rank or Title	Dates
Assistant Professor	2011-2016
Associate Professor	2016 - present

Affiliations outside UBC

Rank or Title	Dates
External Faculty, Santa Fe Institute (SFI)	2019 - present
External Faculty, Waterloo Institute for Complexity and Innovation (WICI)	2019 - present
Deputy Director, Canadian Institute for Ecology and Evolution	2019 - present
Affiliated Faculty, Hakai Beach Institute (HBI)	2016 - present

(c) Date of granting of tenure at U.B.C.: July 1, 2016

7. LEAVES OF ABSENCE

University, Company or Organization at which Leave was taken	Type of Leave	Dates
N/A	Maternity Leave	1/2012 – 12/2012
Eawag (Swiss Federal Institute of Aquatic Sciences and Technology)	Study Leave	7/2017 – 6 /2018

8. TEACHING

(a) Areas of special interest and accomplishments

My teaching philosophy centers on my expectation that students can learn advanced ecological concepts and skills and can communicate and critically understand advanced scientific material. I design learning exercises to support student growth toward this goal through a blend of lecture, discussion, 'hands-on' practice, and question-driven participation in the research process.

I teach undergraduate and graduate ecology courses, and I teach science, research and writing to undergraduates, graduates, post docs and research associates in my research group. In the classroom, I emphasize learning through the process of research, and I employ a flipped classroom model in which students contribute to discussions and active learning in every class meeting. Each year, I mentor ~3 undergraduates in Directed Studies (Biol 448), Honours (Biol 449) or work learn positions, ~6 graduate students, and ~2 PDFs. Former students now apply the research and writing skills and motivation gained while with my research group to jobs and graduate programs throughout the U.S. and Canada.

(b) Courses Taught at UBC (evaluation scores in following table)

Advanced Ecology (Biol. 306) eight times
Aquatic Ecology (Biol 402) three times
Ecosystems – Graduate Module (Biol 548j) 5 times
Community Ecology – Graduate Module (Biol 548g) one time

Session	Course Number	Total Scheduled Hours	Class Size	Total Hours Taught per Course			
				Lectures	Tutorials	Labs	Other
2019W2	BIOL 306 Sec 101	37	90	19	0	12[#]	0
2019W1	BIOL 402 Sec 101	37	22	37	0	28	20*
2019W1	BIOL 548 Sec j	12	14	12	0	0	0
2018W2	BIOL 548 Sec j	12	14	12	0	0	0
2018W2	BIOL 548 Sec g	12	11	12	0	0	0
2018W1	BIOL 306 Sec 101	37	91	19	0	0	0
2016W2	BIOL 548 Sec j	12	10	12	0	0	0
2016W1	BIOL 306 Sec 101	37	146	16	0	6	0
2016W1	BIOL 402 Sec 101	37	23	37	0	28	20*
2015W1	BIOL 306 Sec 101	37	99	16	0	6	0
2015W1	BIOL 548 Sec j	12	9	12	0	0	0
2014W1	BIOL 306 Sec 101	37	119	16	0	6	0
2014W1	BIOL 402 Sec 101	37	24	37	0	28	20*
2014W2	BIOL 548 Sec j	12	3	12	0	0	0
2013W1	BIOL 306 Sec 201	37	115	14	0	6	4
2012W2	BIOL 306 Sec 201	37	112	17	0	0	4
2012W2	BIOL 306 Sec 202	37	30	17	0	0	4
2010W2	BIOL 306 Sec 202	37	78	17	0	6	4
2010W2	BIOL 306 Sec 201	37	119	17	0	6	4

*This course includes a 48-hour weekend field trip to lakes in BC.
[#] Prior to 2019, Biol 306 was co-instructed with a Botany professor, and included 3 3-hour labs, led by the Lab-coordinator. After 2019, my co-instructor and I converted the course to have 9-3hour labs, and we wrote the labs. In 2019W, a lab coordinator helped us to implement the labs. In all years, the hours entered here represent the total hours for the course divided by 2

Courses and workshops outside UBC

Hypotheses in Synthesis – Canadian Institute for Ecology and Evolution, Living Data Project; July 2 2020; co-leader with Drs. Jennifer Sunday, Chris Lortie and Joey Bernhardt. A 3-hour workshop.

A summary of student evaluations of teaching effectiveness scores over the past eight years for University Module on formal evaluations (Q 1-6).

Session	Course Number	*Student evals	Sample comments from anonymous evaluations
2019W2	BIOL 306 (Advanced Ecology) Sec 101	4.2	"I just wanted to say thank you for BIOL 306! It was incredibly insightful and I really appreciate the changes made to the course to align more with your research, as your interest was palpable and inspiring. Although I am a student in the Faculty of Arts, I really love ecology and environmental sciences, and I am planning on applying to graduate school studying environmental management next year, and this course has been really foundational to that decision. I also really appreciate your kindness and patience in re-explaining a lot of these concepts to me outside of class!"
2019W1	BIOL 402 (Aquatic Ecology)	#4.5	
2019W1	BIOL 548 (Ecosystems) Sec j	NA	
2018W2	BIOL 548 (Ecosystems) Sec j	NA	*No evaluations submitted for the grad modules (as far as I can tell)*
2018W2	BIOL 548 (Community Ecology) Sec g	NA	
2018W1	BIOL 306 (Advanced Ecology) Sec 101	4	"Mary was a great lecturer; she was clear, went at a good pace, and asked questions that I felt let me know whether I understood what she was trying to teach. She is approachable and easy to talk to, which is something that I think should be valued in professors because it promotes students to engage in the class and/or attend office hours. There was a good balance in lecture time and discussion time, and I had fun!"
2016W2	BIOL 548 (Ecosystems) Sec j	NA	
2016W1	BIOL 306 (Advanced Ecology) Sec 101	4	
2016W1	BIOL 402 (Aquatic Ecology) Sec 101	4.8	"This was one of my favourite courses throughout my university experience." "Mary was one of the best, if not the best, instructors I've had during my time in sciences. Showed genuine concern for student learning and was very approachable. Communicated subject matter very effectively"
2015W1	BIOL 548 (Ecosystems) Sec j	4.6	
2015W1	BIOL 306 (Advanced Ecology) Sec 201	4	
2014W1	BIOL 402 (Aquatic Ecology) Sec 101	4.7	"This is an outstanding course- perhaps one of UBC's best." "I really liked that the course was built around a central research project ... I think this is something that myself and other undergraduate students really benefit from as scientists."

2014W1	BIOL 306 (Advanced Ecology) Sec 201	4	"Mary is very effective at communicating difficult concepts, gives clear learning goals, and very fair exams. Overall, one of the better teachers I have had at UBC."
2014W2	BIOL 548 (Ecosystems) Sec j	NA	
2013W1	BIOL 306 (Advanced Ecology) Sec 201	4.4	"…it is clear that she wants students to learn rather than just telling us the information."
2012W2	BIOL 306 (Advanced Ecology) Sec 202	4.1	"Mary is an effective instructor as she was able to weave the course's central themes into seemingly disconnected topics."; "Inspired me to be interested in ecology"
2012W2	BIOL 306 (Advanced Ecology) Sec 201	4.1	"Excellent teacher. Communicates very well and make the concepts very easy to understand. Keep doing what you're doing." "I felt like Mary's lectures were relevant and got me excited about current topics and questions in ecology"
2010W2	BIOL 306 (Advanced Ecology) Sec 202	3.6	"Dr. O'Connor brings enthusiasm and interest to the subject matter. She encourages discussion and conversation in class." "I really appreciated how Dr. O'Connor adjusted her teaching style when students were struggling."
2010W2	BIOL 306 (Advanced Ecology) Sec 201	3.5	"Really helpful and nice in office hour" "Delivery of material is good and you are knowledgeable about the subject"

* Student evaluation scores, out of a maximum of 5, are presented for University Module Item 6 ("overall effectiveness").

[#]Dean of Science acknowledged that I received one of the highest evaluations in Faculty of Sciences this term.

Undergraduate Student Supervision (16 students over the past 5 years)

Programs include Directed Studies (e.g., Biol 448; 3 credits unless otherwise indicated), Honours (e.g., Biol 449), and work study. See Section 8(a).

Supervisory roles: Supervisor = S, co-supervisor = CS.

Student Name	Program Type	Year		Supervisory Role
		Start	Finish	
Patricia Sun	BIOL 448	1/2011	4/2011	S
	Work study	5/2011	12/2011	S
Andrew Huang[1]	BIOL 448 (6 cr)	6/2011	12/2011	S
Coreen Forbes[2]	BIOL 448	9/2011	12/2011	S
David Xiao Song[3]	BIOL 448	1/2012	4/2012	S
Sarah Amundrud[4]	NSERC USRA BIOL 449	1/2011	5/2012	S
Winnie Cheung[5]	Work study	1/2012	4/2012	S
Carolyn Prentice[6]	BIOL 449	5/2012	5/2013	S
	BIOL 448	6/2011	7/2011	S
	Work study	6/2011	7/2011	S
Stephanie Connor[7]	BIOL 448	9/2012	12/2012	S
Taran Rallings	Work study	9/2012	5/2013	S
Nicole Knight[8]	EOSC/ENV 449	3/2013	4/2014	S

	UBC SURE award	5/2013	8/2014	S
Jemma Titheridge	BIOL 449	6/2014	4/2015	S
Virginie Bloisvert-Plante	APBI 449 Honours	9/2014	5/2015	S
Baldwin Huang	Research assistant	9/2014	4/2015	S
Melinda Yogendran	Work study	5/2014	5/2015	S
Melanie Overhill[9]	Biol 448	9/2014	12/2014	S
Gwen Griffiths	Biol 448	1/2015	4/2015	S
	Biol 449	5/2015	5/2016	S
Theodore Back	Biol 448 (6 cr)	6/2015	8/2015	S
	Work study	6/2015	8/2015	S
Allison Dennert[10]	Technician	5/2015	8/2016	S
Scott Brydle	Biol 448	9/2015	12/2015	S
Bobby Chen	Work Study	5/2015	8/2015	CS
Sachiko Ouchi	Biol 448	9/2015	7/2016	S
Alexander Chila	Work study	5/2016	4/2017	S
	Biol 448	1/2017	4/2017	S
Sandra Emry[11]	NSERC USRA	5/2016	8/2016	S
Evgeniya Yangel[14]	Biol 448	9/2016	12/2016	S
	Work Learn	6/2018	9/2018	CS
Cori-Anne Huisman	Biol 449	9/2016	4/2017	S
Amir Gohari	Biol 448	1/2017	4/2017	S
Keila Stark[15]	Biol 448	5/2017	5/2018	CS
	USRA	6/2018	8/2018	S
Katie Tjaden-McClement	USRA	5/2018	8/2018	S
Clare Atkinson	USRA	5/2018	8/2018	S
Mikalyn Trinca	Volunteer	11/2018	4/2019	S
Andreanna Schultz	Biol 448	1/2019	4/2019	S
Andreanna Schultz	Biol 448	9/2019	12/2019	S
Carmen Wu[12]	Volunteer, SURE	1/2019	8/2019	S
Emily Lim[13]	Technician	5/2019	9/2019	S
Grace Wells	Biol 449, NSERC USRA	5/2020		S
Maggie Slein	Honours	5/2020	5/2021	CS

[1]Andrew Huang published his research (Huang et al, Oikos, 2015).
[2]Coreen Forbes is now an NSERC-funded PhD student in my research group.
[3]David Xiao Song pursued an MSc in Computer Science at UBC.
[4]Sarah Amundrud published her research (Amundrud et al. Journal of Animal Ecology, 2015).
[5]Winnie Cheung has worked as a research technician in UBC Botany since 2012.
[6]Carolyn Prentice collaborated with Nicole Knight to publish her research (Knight et al Marine Biology Research 2015), and earned an MSc in Marine Ecology at SFU (2015).
[7]Stephanie Connor earned her MSc in Ecology at UNB.

[8]Nicole Knight is an NSERC-funded PhD student at McGill University, and collaborated with Carolyn Prentice to publish Carolyn's Biol 448 project (Knight et al Marine Biology Research 2015).
[9]Melanie Overhill is currently a MSc student in Aquatic Ecology at Queens University.
[10]Allison Dennert is MSc student at SFU
[11]Sandra Emry is PhD student at UBC
[12]Carmen Wu is employed at Advisian environmental consulting as a technician
[13]Emily Lim is now a MSc student at Simon Fraser University
[14]Evgeniya Yangel is now a MSc student at UBC-Zoology co-supervised by myself and Dr. Laura Parfrey.
[15]Keila Stark is now in my lab pursueing a PHD, and holder of a UBC 4YF and NSERC PGSD

(c) Graduate Research Supervision (12 over the past 5 years)

Supervisory roles: Supervisor = S, co-supervisor = CS, committee member = CM.

Student Name	Program Type	Year		Supervisory Role
		Start	Finish	
Natalie Stafl[1]	MSc	1/2011	4/2013	S
Jessica Garzke[2]	Visiting PhD	4/2012	9/2012	CS
Ross Whippo[3]	MSc	9/2011	12/2013	S
Dana Haggarty[4]	PhD	9/2012	11/2015	CS
Natalie Caulk[5]	MSc	9/2013	7/2015	S
Matthew Barbour[6]	PhD	9/2015	8/2016	CS
Matt Seigle[7]	PhD	1/2012	7/2017	CS
Joanna Bernhardt[8]	PhD	9/2011	5/2018	S
Coreen Forbes	PhD	9/2014		S
Emily Adamczyk[9]	PhD	9/2015		S (yr 1-3) CS (yr 4-5)
John Cristiani	PhD	9/2016		S
Kaleigh Davis[11]	PhD	9/2017		S
Mairin Deith[10]	PhD	8/2016		CS (MSc) S (PhD)
Adrienne Contasti[10]	PhD	8/2016	10/2020	CS
Evgeniya Yangel[11]	MSc	9/2018	4/2021	CS
Keila Stark[12]	PhD	9/2019		S
Matthew Christensen[13]	MSc	7/2020		S
Margaret Slein	PHD	09/2021		S
Calla Raymond	PHD	09/2021		S

[1]Natalie Stafl is employed as the Invasive Species Coordinator for the Columbia-Shuswap Invasive Species Society in Revelstoke, B.C., and is a certified biologist.
[2]Jessica Garzke visited for one of her PhD dissertation research projects. Her PhD program was at the University of Kiel (GEOMAR) in Germany, her primary supervisor was Dr. Ulrich Sommer. I was the primary supervisor of her 6-month research project and subsequent writing for the work done at UBC.
[3]Ross Whippo is the Research Technician for the Marine Global Earth Observatory (MarineGEO) based at the Smithsonian Institution in Washington, D.C.; now pursuing a PhD at University of Oregon, funded by an NSF-Grad fellowship.
[4]Dana Haggarty joined my lab in 2013, when I became her co-supervisor with Dr. Jon Shurin (UCSD). I served as her resident co-supervisor for the last 2 years of her dissertation, during which time she was writing. I did not supervise the field research or provide funding, and Jon Shurin has been her primary supervisor.
[5]Natalie Caulk is employed as a Research Associate at the Moore Foundation in California.
[6]I became Matt Barbour's primary supervisor, nominally, when his supervisor (Dr. Greg Crutsinger) left UBC. Matt joined our lab meetings and I provided some mentorship in the final year of his PhD.

[7]Matt Seigle was co-supervised with Dr. Rick Taylor (Zoology). Rick and I jointly covered Matt's stipend funding, I supported the research costs and provide the majority of face-to-face mentoring. Matt was an active member of my lab group. He is now employed at the environmental consulting firm ESSA in Vancouver.
[8]Joanna Bernhardt held an NSERC Vanier Scholarship, two UBC University Fellowships (4YF, 1 YF) while in my lab; now she is an NSERC PDF and Yale University Hutchinson Post-Doctoral Fellow.
[9]Emily Adamczyk holds a UBC University 4-year fellowship.
[10]Mairin Deith and Adrienne Contasti's supervisor (Dr. Jed Brodie) left UBC but remained their primary intellectual supervisor. Mairin joined my lab group.
[11]Kaleigh Davis is supported by an Institute for the Ocean and Fisheries (IOF) fellowship.
[12]Evgeniya Yangel is completing her MSc in our lab.
[13]Keila Stark is holds a UBC 4YF and holds an NSERC PGSD (ranked in the top 10 in Canada in her cohort)
[14]Matt Christensen is an MSc student in our lab.

(d) **Graduate Student Committees (45 over the last 5 years, not including my own students).** Supervision of all students is in the capacity of research advisor for research projects.

Student Name	Program Type	Year		Supervisor	Department/Faculty University / Department
		Start*	Finish*		
James Hehre	PhD	2011	2012	Daniel Pauly	Fisheries
Diana Rennison	PhD	2011	2012	Dolph Schluter	Zoology
Leah Biery	MSc	2011	2012	Daniel Pauly	Fisheries
Kyle Demes	PhD	2011	2013	Chris Harley	Zoology
Rebecca Gooding	PhD	2011	2013	Chris Harley	Zoology
Kang Wang	MSc	2011	2013	Evgeny Pakhomov	EOS
Robyn Zerebecki	PhD	2012	2013	Greg Crutsinger	Zoology
Rebecca Kordas	PhD	2010	2014	Chris Harley	Zoology
Jocelyn Nelson	MSc	2012	2014	Chris Harley	Zoology
Teri O'Meara	PhD	2011	2014	Mike Piehler	Marine Sciences, UNC – Chapel Hill
Jennifer Jorve	PhD	2010	2015	Chris Harley	Zoology
Meghan Vaughn	MSc	2012	2015	Chris Harley	Zoology
Katherine Anderson	MSc	2011	2017	Chris Harley	Zoology
Alathea Letaw	PhD	2010	2016	Diane Srivastava	Zoology
Andrew MacDonald	PhD	2011	2016	Diane Srivastava	Zoology
Sean Naman	PhD	2013	2017	John Richardson	Forestry
Lindsay Aylesworth	PhD	2012	2016	Amanda Vincent	Fisheries
Seth Rudman	MSc	2011	2016	Dolph Schluter	Zoology
Melissa Guzmann	PhD	2014	2019	Diane Srivastava	Zoology
Mark Robertson	MSc	2015	2017	Leticia Aviles	Zoology
Rebecca Guenther	PhD	2011	2016	Patrick Martone	Botany
Norah Brown	PhD	2012	2017	Chris Harley	Zoology
Adrienne Contasti	PhD	2014	2016	Jed Brodie	Zoology
Matthew Barbour	PhD	2012	2016	Greg Crutsinger	Zoology
Philippe Fernandez	MSc	2014	2015*	Leticia Aviles	Zoology
Allison Stocks	MSc	2014	2015	Amanda Vincent	Zoology
Joanne Breckenridge	PhD	2013		Evgeny Pakhomov	EOS
Karen Frazer	PhD	2014	2019	Eric Taylor	Zoology
Tanvi Vaidyanathan	PhD	2014		Amanda Vincent	Fisheries
Matt Strimas-Mackey	MSc	2015	2016	Jedediah Brodie	Botany/Zoology
Ferdous Nawar	MSc	2014	2016	Laura Parfrey	Botany/Zoology
Melissa Chen	MSc	2015	2017	Laura Parfrey	Botany/Zoology
Sandra Emry	PhD	2016		Chris Harley	Zoology
Mackenzie Kinney	PhD	2017		Dolph Schluter	Forestry

Lian Kwan	MSc	2015	2016	Evgeny Pakhomov	EOS
Samantha Straus	MSc/PhD	2016		Leticia Aviles	Zoology
Jillian Dunic	PhD	2017		Isabel Cote	Simon Fraser University
Iwao Fujii	MSc	2016	2018	Amanda Vincent	Institute of Oceans and Fisheries
Roseanna Gamlen-Greene	PhD	2016		John Richardson	Forest and Conservation Sciences
Rebecca Atkins	PhD	2015		Craig Osenburg	University of Georgia
Andrea Tabi	PhD	2016	2019	Owen Petchey	University of Zurich
Katrina Kaur	PhD	2018		Matt Pennell	Zoology
Natalie Westwood	PhD	2016		Diane Srivastava	Zoology
Sara Cannon	PhD	2016		Simon Donner	UBC Geography
Minako Ito	PHD	2015		Massa Nakaoka	Hokkaido University
Megan Szojka	MSc	2019	2020	Rachel Germain	Zoology
Julia Huggins	PhD	2019		Sean Crowe	UBC Microbiology
Teresa Silverthorn	MSc	2019	2020	John Richardson	UBC Forest and Conservation Sciences
Ross Whippo	PhD	2018		Aaron Galloway	Oregon Institute of Marine Biology
Hubert du Pontavice	PhD	2019		William Cheung	UBC Zoology
Leo Gaskins	PhD	2019		Brian Silliman	Duke University
Carla Difilippo	MSc	2019	2020	Michelle Tseng	UBC Zoology
Mariella Becu	MSc	2019		John Richardson	UBC Forest and Conservation Sciences
Stefanie Lane	PhD	2019		John Richardson	UBC Forest and Conservation Sciences
Ambre Sozynski	PhD	2019		William Cheung	UBC Institute of the Ocean and Fisheries
Pierre Rogy	PhD	2019	2020	Diane Srivastava	UBC Zoology
	PhD	2020			UBC Zoology
Josef Garen	PhD	2019		Sean Michaletz	UBC Botany
Esteban Agudo	PhD	2020		John Bruno	UNC Chapel Hill
Alicia Andersen	PhD	2020		Brian Hunt	UBC Institute of the Ocean and Fisheries
Gaurav Singh-Varma	MSc	2020		Claire Kremen	UBC Zoology/IRES
Jihyun Kim	MSc	2021		Michelle Tseng	UBC Zoology/Botany

*beginning or end of my involvement

Post-doctoral supervision (11 over the last 5 years)

Name	Start	Finish	Supervisor(s)	Project title
[1]Adrien Stier (UBC Killam PDF)	2012	2013	Mary O'Connor	Spatial Pattern in Biodiversity

[3]Michelle Tseng (UBC Botany)	2013	2016	Mary O'Connor	Evolution to temperature in communities
[2]Robin Elahi (US NSF Biomath PDF)	2014	2016	Mary O'Connor, Rebecca Tyson (UBC-O) and Giulio de Leo (Stanford University)	Metabolic ecology and the temperature size rule
[4]Jennifer Sunday (NSERC PDF, UBC Biodiversity PDF)	2014	2017	Chris Harley, Mary O'Connor	How will life respond to climate change?
[6]Patrick Thompson (UBC Killam, NSERC PDF)	2016	2020	Mary O'Connor	How does climate change affect ecological communities?
[5]Sarah Joy Bittick	2017	2019	Mary O'Connor	Quantifying human impacts and solutions in seagrass meadows in Boundary Bay, BC
Matthew Whalen	2017		Mary O'Connor, Patrick Martone	Spatial and temporal variation in biodiversity
[7]Devin Lyons	2018	2020	Mary O'Connor, Chris Harley	Spatial and temporal variation in biodiversity
[9]Lindsay Davidson	2019	2021	Mary O'Connor (nominal supervisor)	Spatial and temporal variation in biodiversity
Jacob Usinowicz	2019		Mary O'Connor	Integrating information theory into ecological theory
Devin Kirk	2019		Mary O'Connor, Erin Mordecai (Stanford)	Metabolic scaling and disease theory
[8]Norah Brown	2020	2020	Mary O'Connor	100 Islands Biodiversity Project
[10]Julián Idrobo	2020	2021	Mary O'Connor	Cree Traditional Knowledge and Land Use in Eastern James Bay
Ed Tekwa	2020		Mary O'Connor	Hakai Biodiversity Synthesis Project

[1]Adrien Stier was a Killam Fellow and is now an Associate Professor at University of California – Santa Barbara.
[2]Robin Elahi as a US NSF PDF and is now tenure track Lecturer at Hopkins Marine Station, Stanford University.
[3]Michelle Tseng is now an Assistant Professor at the University of British Columbia - Zoology.
[4]Jennifer Sunday was an NSERC and Biodiversity Research Centre postdoc and is now an assistant professor at McGill University.
[5]Sarah Joy Bittick was a Liber Ero Fellow and is now an assistant professor at Loyola Marymount University.
[6]Patrick Thompson was an NSERC and Killam Fellow, now a biologist with Fisheries and Oceans Canada (DFO).
[7]Devin Lyons is employed as a biologist full time with Fisheries and Oceans Canada (DFO).
[8]Norah Brown is now an NSERC funded postdoc based in Fisheries and Oceans Canada (DFO).
[9]Lindsay Davidson is now a Research Scientist at Fisheries and Oceans Canada (DFO).
[10]Julián Idrobo is a Research Chair in Indigenous Environmental Knowledge at Aurora College, Yukon.

(e) Continuing Education Activities

(f) Visiting Lecturer (indicate university/organization and dates)

- Guest lecturer, Global Sustainability – Carrying capacity, Ecosystem Service, Limits of Growth Sustainable Governance. (1 2-hour lecture and 1 field trip). Special Program for Nitobe College in the University of British Columbia, UBC, 2015, 2016, 2018, 2019
- Guest lecturer (1 90-min lecture), BIOL 526 (Advanced Community Analysis), UBC, 2011W
- Guest lecturer (1 90-min lecture), ZOOL 502 (Skills & Concepts for Advanced Ecology), UBC 2011W
- Guest lecturer (1 90-min lecture), ZOOL 502 (Skills & Concepts for Advanced Ecology), UBC 2013W
- Guest lecturer (1 90-min lecture), ZOOL 502 (Skills & Concepts for Advanced Ecology), UBC 2014W
- Guest lecturer (1 90-minute lecture), Climate Change and Marine Ecosystems, University of Victoria, Dr. Julia Baum instructor; Jan 2021.
- Guest lecturer (1 90-minute lecture), Climate Change and Marine Ecosystems, University of Victoria, Dr. Julia Baum instructor; Jan 2022.
- Guest lecturer (1 120-minute lecture and discussion), Ecology, Complex Systems and Climate Change, Santa Fe Institute (SFI), Santa Fe, New Mexico, US., Jan 2022.

(g) Other

9. SCHOLARLY AND PROFESSIONAL ACTIVITIES

(a) Areas of special interest and accomplishments

My research contributions reflect my success initiating and leading cross-disciplinary collaborations to solve problems in biodiversity and climate change ecology. My ***long-term objective is to lead a synthesis of ecological and evolutionary principles into a coherent framework that brings new insights and perspective on nature as a living changing system***. I have pursued this objective by proving concrete connections between disparate ecological theories (principally biodiversity theory and metabolic theory) and by demonstrating how ecological change can be understood in terms of general principles. I conduct experiments, collaborate, lead international working groups, and mentor students. I have been elected to intellectual leadership roles including *Scientific Chair* for a Gordon Research Conference, *Secretariat* for the international Western Society of Naturalists, and *Associate Director* for the Canadian Institute for Ecology and Evolution, a national consortium of research institutes. I have contributed to major collaborative grants and I have won prestigious international science awards.

(b) Research or equivalent grants (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC))

Total funded value of competitive grants as principle investigator:	**$1,675,416**
Total funded value of competitive grants as co-investigator:	**$7,368,000**
Total funded value of competitive grants:	**$9,043,416**

Granting Agency	Subject	COMP	$ Per Year	Yr	Principal Investigator	Co-Investigator(s)
DFO	Development of a Standardized Framework for Data Compilation and Transfer of Eelgrass Habitat Extent Data	C	$12,000	2020	O'Connor, MI	M. Wong
NSERC – Steacie Supplement	E. W. R. Steacie Fellowship	C	$125,000 $125,000	2021 2022	O'Connor, MI	
NSERC - CREATE	The Living Data Project	C	$150,000 $300,000 $300,000 $300,000 $300,000 $300,000 $300,000	2020 2021 2022 2023 2024 2025 2026	Srivastava, D	Finlay, K Ng. R Pither, J Pollock, L Sunday, J Harvey, E O'Connor, M I Poisot, T Simpson, G Taylor, S
DFO	Estimating Blue Carbon Storage Capacity of Canada's Eelgrass	C	$75,951.75 $75,951.75	2019 2020	O'Connor, MI	Melisa Wong (DFO)
DFO	Understanding nearshore seascape connectivity	C	$34,500 $34,500	2019 2020	Rubidge, E	O'Connor, MI Cristiani, J Gale, K Robb, C Hannah, C Thupaki, P Hessing-Lewis, M Schram, C
CIEE	How does life deal with uncertainty in fluctuating environments?	C	$9000	2020	Bernhardt, J	O'Connor, MI Sunday, J Gonzalez, A
NSERC (DG)	Discovery Accelerator Supplement (DAS)	C	$40,000 $40,000 $40,000	2018 2019 2020	O'Connor, MI	
NSERC (DG)	Developing a Metabolic Scaling and Biodiversity Framework to estimate Ecosystem Adaptive Capacity	C	$55,000 $55,000 $55,000 $55,000 $55,000	2018 2019 2020 2021 2022	O'Connor, MI	
CFI - JELF	Seagrass Biodiversity Solutions (SeaBiS)	C	$100,000	2018-2021	O'Connor, MI	
BCKDF	Seagrass Biodiversity Solutions (SeaBiS)	C	$100,000	2018-2021	O'Connor, MI	
EAWAG (Switzerland)	Does Community Openness Affect Resilience of Freshwater Ecosystems	C	$45,000	2017 2018	O'Connor, MI	Altermatt, F
Killam Research		C	$3000	2017 2018	O'Connor, MI	

Fellowship (UBC)	Enhancing a multi-scale approach to predicting ecological change					
NSERC (Research Tools and Instruments)	Operations and Maintenance – Bamfield Marine Science Centre	C	$150,000	2017 2018	Anholt, B	10 co-applicants[8]
NSERC (Strategic Network Grant)	Canadian Healthy Oceans Network II	C	$994,344 $999,768 $998,795 $997,869 $987,814	2015 2016 2017 2018 2019	Snelgrove, P	38 co-applicants[8]
Tula Foundation	Microbes to Macrophytes	C	$55,000	2015	Parfrey, L	Martone, P O'Connor[7], MI Harley, C
Peter Wall Institute for Advanced Studies	Wall Scholar Award	C	$20,000	2015	O'Connor, MI	
CIEE	Understanding recent biodiversity change across spatial and temporal scales	C	$16,000	2015	O'Connor, MI [6]	Gonzalez, A
iDiv	sChange: Biodiversity change through time	C	$30,000	2015	Supp, S	O'Connor[5], MI Dornelas, M
NSERC (RTI)	Research skiff to study marine ecology and evolution at the Bamfield Marine Sciences Centre	C	$81,410	2015	Rogers, SM	Anholt, BR Cote, IMC Baum, JK O'Connor, MI[4]
Sloan Foundation	Sloan Fellowship, Ocean Sciences	C	$25,000 $25,000	2013 2014	O'Connor, MI	
Peter Wall Institute for Advances Studies	Peter Wall Institute Early Career Start-up Research Award	C	$1000	2013	O'Connor, MI	
NCEAS	Synthesizing Theory and Databases to Advance a General Framework for How Warming Affects Trophic Interactions	C	$60,000	2012-2013	O'Connor, MI[3]	Greig, H
NSERC (DG)	Quantifying the effect of temperature on herbivory	C	$22,000 $22,000 $22,000 $22,000 $22,000	2013 2014 2015 2016 2017	O'Connor, MI	
CFI Infrastructure Operating Fund	Operating fund for Facility for Integrative Global Change Ecology (FIGCE)	C	$30,000	2013	O'Connor, MI	

NSERC (DG)	Quantifying the effect of temperature on herbivory	C	$26,000 $26,000	2011-2012	O'Connor, MI[2]	
CFI/BCKDF	Facility for Integrative Global Change Ecology (FIGCE)	C	$290,000*	2012	O'Connor, MI	
CIEE	Integrating body size and thermal scaling to understand the effects of temperature on food webs	C	$18,000	2012	Greig, H	O'Connor, MI[1]
UBC	Mobility Grant	C	$1500	2012	O'Connor, MI	
NSERC	Excellence top-up grant	C	$5000	2011	O'Connor, MI	
BMSC	Bamfield Research Support Grant	C	$5000	2012	O'Connor, MI	

1. I co-wrote this grant with then-postdoc Hamish Greig. Hamish is the lead author on the proposal, and I mentored and was heavily involved in the grant. Subsequently, I led the working group that was funded.
2. This 2011 Discovery Grant was initially funded for 5 years at $26,000/yr. In 2012, I was nominated for a DG Accelerator grant by UBC, and re-applied for NSERC.
3. I led the collaboration with Hamish Greig, and subsequently led the working group funded on this project.
4. Sean Powers led this initiative, and I supported the proposal through contributions of text. This grant provided a new dive vessel for all researchers at BMSC. My research group is one of many users of the research skiff.
5. I collaborated with postdoc Sarah Supp, and mentored her in the process of writing this proposal and leading the subsequent working group in collaboration with Maria Dornelas. This is an even partnership among the three of us.
6. I collaborated equally with Andrew Gonzalez to write this proposal and lead the subsequent working groups (see sec 9 (f)).
7. I contributed to the seagrass macrophyte portion of this proposal; funds support sample analysis and processing in the Parfrey lab, and we collaborate on the interpretation in the context of seagrass ecology, and collection of samples in the field.
8. I contributed ~2 pages of text to this major grant proposal. The funds will cover a 3-year PhD seagrass biodiversity research project in my lab (estimated $28K/yr for years 1-3).
   * for CFI grant, I have only included here the CFI / BCKDF funds that were competitive, and excluded additional 35K in matching funds from vendor or in-kind contributions.

(c) Research or equivalent contracts (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC).

Granting Agency	Subject	COMP	$ Per Year	$ to Candidate	Yr	Principal Investigator	Co-Investigator(s)
Ducks Unlimited	Blue carbon	Yes	19000	19000	2021	O'Connor, MI	
DFO	Blue Carbon data synthesis platform	NC	12,000	$12,000	2020	O'Connor, MI	M. Wong
Worley Parsons	Research on Impacts of Small Craft Harbor on Arctic Char diets	NC	162400	162400	2022	O'Connor, MI	

Worley Parsons	Assessing small craft harbor ecological impact in Arctic Bay, Nunavut	NC	$11,130	$11,130	2021	O'Connor, MI	
Vancouver Fraser Port Authority	Estimating Blue Carbon storage capacity of eelgrass beds in the Lower Mainland of BC	NC	$15,000	$15,000	2020	O'Connor, MI	
Niskamoon Corporation	Coastal Habitat Comprehensive research project	NC	$514,173 $313,700	$111,225 $99,500	2019 2020	O'Connor	Humphries, LeBlon
Niskamoon Corporation	Cree Knowledge and Land Use in Eastern James Bay	NC	$70,000	$70,000	2020, 2022	O'Connor	Idrobo
Hakai Institute	Biodiversity Postdoc – Norah Brown	NC	$55,000	$55,000	2020 2021	O'Connor	
Hakai Institute	Changing Seascapes program	NC	$47,500 $47,500 $19,500 $19,500	$1000 $4000 $4000 $4000	2014 2015 2016 2017	Hessing-Lewis	O'Connor, Salomon, Watson

(d) Invited Seminars (25 in the past 5 years)

2021 UQAM Evolution in Communities Symposium

2020 Our Changing Biosphere: Understanding Our Future from First Principles,
University of Washington, School of Aquatic and Fisheries Science (SAFS).
Our Changing Biosphere: Understanding Our Future from First Principles,
University of British Columbia, Department of Zoology, Promotion Seminar
Aquacosm-Plus Webinar Series, hosted by ICMB University of Oldenburg, Germany

2019 Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Duke University, Ecology Department, Durham, North Carolina, USA
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Rutgers University, Ecology Department Annual ***Eminent Ecologist*** speaker, NJ, USA

Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Santa Fe Institute (SFI), Santa Fe, New Mexico, USA
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Institute for the Ocean and Fisheries, University of British Columbia, Vancouver, CAN
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Duke University Marine Lab, Beaufort, NC, USA

2018 Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
University of Montana, Bozeman, Montana, USA
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Annual ***Graduate Student Invited speaker***, *Simon Fraser University*, Vancouver, CAN
Toward a Unified Science of Ecological Change, *Reed College*, Portland, Oregon, USA
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
Oxford University, Oxford, England, UK
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling
EAWAG, Kastanienbaum, Switzerland
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling. ***Annual E. O. Wilson Biodiversity Lecture****, Helmoltz Centre*, Oldenburg, Germany
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling.
National Centre for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, California, USA
Toward a Unified Science of Ecological Change: Advances and Challenges in Biodiversity and Metabolic Scaling.
Imperial College London, Silwood Park, England, UK
Toward a Unified Ecological Science
University of Zurich, Zurich, Switzerland

2017 Marine Biodiversity in a time of humans: biodiversity crisis or resilient living system?
University of California, Davis – Bodega Bay Marine Lab, Bodega Bay, California, USA
The Tyranny of Temperature in Ecological Systems
University of California – Davis, Davis, California, USA
The Tyranny of Temperature in Ecological Systems
University of California – Santa Cruz, Santa Cruz, California, USA
The Tyranny of Temperature in Ecological Systems
University of Florida, Gainesville, Florida USA
Synthesizing Ecological Theory and Data to Understand Global Change.
Distinguished Lecture, *Eawag*, Zurich, Switzerland

2016 The Tyranny of Temperature in Ecological Systems
Hopkins Marine Station, Stanford University, Monterey, California, USA
The Tyranny of Temperature in Ecological Systems
Eawag, Zurich, Switzerland
Marine Biodiversity in a time of humans: biodiversity crisis or resilient living system?
Oregon Institute of Marine Biology (OIMB), Charleston, Oregon, USA
Biodiversity Change (or not?): Challenges and Next Steps.
German Synthesis Centre of Biodiversity Sciences (sDIV), Leipzig, Germany
Biodiversity Change Through Time: The recent past, current challenges and a vision for the future
Harvard University, Herbaria Seminar Series. Cambridge, Massachusetts, USA
The Tyranny of Temperature in Ecological Systems
Wall Wednesday Seminar Series, Peter Wall Institute for Advanced Studies, UBC

2015 *University of Chicago*, Ecology and Evolution seminar series, Chicago, Illinois, USA
McGill University, annual ***Student-invited speaker*** for Organismal Biology, Montreal, QC, CAN
University of Arizona, Ecology and Evolution seminar series, Phoenix, Arizona, USA
University of Colorado-Boulder, Ecology and Evolutionary Biology seminar series, Boulder, Colorado, USA

2014 *Japanese Association of Marine Biological Stations*, Tokyo, Japan
Sapporo University, Sapporo, Japan
National Marine Fisheries Service, NOAA, Seattle, Washington, USA
Oregon State University, Corvallis, Oregon, USA

2013 *Columbia University*, New York, New York, USA
University of Victoria, Victoria, BC, CAN
Dartmouth College, Dartmouth, New Hampshire, USA
Environment Canada, Pacific Wildlife Research Centre, Delta, BC, CAN

2011 *Bodega Marine Lab*, UC – Davis, CA, USA
Simon Fraser University, Vancouver, BC, CAN
Western Washington University, Bellingham, Washington, USA

2009 *University of Santa Barbara*, Ecology, Evolution and Marine Biology Department, CA, USA
University of British Columbia, ***interview seminar*****,** Vancouver, BC, CAN
University of Toronto, ***interview seminar***, St. George Campus, Toronto, CAN
Carnegie Institute for the Environment, ***interview seminar,*** Stanford University, Palo Alto, CA, USA

(e) Other Presentations (All conferences indicated in section g)

2018 UBC Zoology Grad Symposium

2016 Uncharted Waters: novel ecosystems in the marine environment. Panel discussion as part of Harvard University's center for the Environment series entitled Ecological Systems in the Anthropocene. *Discussion moderator (invited).* Feb 3.

UBC Science ONE weekly lunch seminar (*invited*)

2015 Understanding Recent Biodiversity Change. Organized and participated in symposium: UBC, May 4th, 2015.

Sea Change and the Anthropocene: a curriculum to mobilize the witness of ecology + art. *Invited talk.* Hosted by Edith Krause and Erica Grimm at Trinity Western University, Langley, BC

(f) Other: Working Groups and Workshops. For funding details see section 9(b). (leader of 7 meetings in last 5 years, invited to 12 meetings in last 5 years)

2021 CAN BON Exploratory Workshop, Hosted by NSERC, ECCC, DFO, CSA NRCan, PC and GEO BON. *Invited participant*

The impacts of thermal mismatches on host-parasite systems. *Led by D. Kirk and M. I. O'Connor*, funded by UBC's Biodiversity Research Centre Cluster grants.

Blue Carbon Working Group (WWF)

Global Ocean Accounts Partnership (GOAP) Second Global Ocean Dialogue on Ocean Accounting, hosted by Fisheries and Oceans Canada with support from UN Economic and social Commission for Asia and the Pacific. *Invited*; our research presented by collaborator M. Wong.

2020 Integrating biodiversity observations for robust detection of biodiversity change. *Led by M. I. O'Connor*, funded by Hakai Beach Institute and Tula Foundation.

The impacts of thermal mismatches on host-parasite systems. *Led by D. Kirk and M. I. O'Connor*, funded by UBC's Biodiversity Research Centre Cluster grants.

An Empiricist's Guide to Ecological theory. *Led by T. Grainger, R. Germain*. *Invited participant.*

2019 How does life deal with uncertainty in fluctuating environments? *Led by J. Bernhardt, J. Sunday, M. O'Connor and A. Gonzalez*, funded by the Canadian Institute for Ecology and the Environment (CIEE).

Synthesis and Visioning Meeting. *Led by B. Halpern*. Funded by the National Center for Ecological Analysis and Synthesis (NCEAS) in California. *Invited participant.*

2018 Operationalizing Information Theory in Ecology. *Led by M. I. O'Connor*, funded by UBC's Biodiversity Research Centre.

MPA Network Monitoring Workshop. Led by R. Stanley, DFO. Included scientists and managers from across Canada to address challenges of monitoring MPAs in Canada. Montreal, QC. *Invited Participant.*

Scaling biodiversity and ecosystem function. *Led by Andrew Gonzalez and Michel Loreau*, funded by QCBS and CNRS. *Invited participant.*

Long-term Ecological Research: Scaling-up Productivity Responses to Changes in Biodiversity, National Center for Ecological Analysis and Synthesis (NCEAS), led by F. Isbell, L. Dee and J. Cowles. *Invited participant.*

Information in Ecology, *Led by M. O'Connor and F. Altermatt*; funded by Swiss Federal Institute of Aquatic Sciences.

2017 Does Community Openness Affect Resilience of Freshwater Ecosystems? *Led by M. O'Connor and F. Altermatt;* funded by Swiss Federal Institute of Aquatic Sciences.

Scaling biodiversity and Ecosystem Function. Led by A. Gonzalez, M. Loreau and P. Thompson. *Invited participant.*

Long-term Ecological Research: Scaling-up Productivity Responses to Changes in Biodiversity, National Center for Ecological Analysis and Synthesis (NCEAS), *led by F. Isbell, L. Dee and J. Cowles. Invited participant.*

Trophic Metacommunities. UBC Collaborative group resulting from a student reading group I initiated. Biodiversity Centre funded group led by R. Germain, M. Guzmann and P. Thompson. *Invited participant.*

Identifying Wildcards to Climate Change. UBC working group, led by D. Srivastava. *Invited participant.*

Eelgrass working group, Canada's Healthy Oceans Network II (CHONe II). Ottawa.

CEC Workshop on Addressing Vulnerabilities of Coastal Ecosystems and Communities along North America's Pacific Coast. A joint meeting between Canadian, Mexican and American managers and scientists on the Pacific Coast. Led and funded by the Commission for Environmental Cooperation. *Invited Participant.*

2016 Quantifying Biodiversity Change Through Time. German Synthesis Centre of Biodiversity Sciences (sDIV), Leipzig, Germany. Feb 22-27. *Co-Leader with Maria Dornelas and Sarah Supp.*

Blue Carbon Experts Trinational Meeting. Led by the Commission for Environmental Cooperation, and included representatives from the United States, Canada and Mexico. Tofino, B.C. *Invited participant.*

BC Eelgrass Faunal Monitoring Working Group, ongoing, 2016. *Invited participant (could not attend meeting). Led by Julia Baum and Josie Iacarella, UVic.* Funded by CIEE and Hakai Beach Institute.

2015 Understanding Recent Biodiversity Change Across Spatial and Temporal Scales. Gault Nature Reserve, McGill University, Mont St-Hilaire, QC. June 1-5. *Co-Leader with Andrew Gonzalez*. Funded by CIEE/QCBS.

Understanding Recent Biodiversity Change Across Spatial and Temporal Scales. UBC Biodiversity Research Centre, UBC, Vancouver, B.C. May 4-9. *Co-Leader with Andrew Gonzalez*. Funded by CIEE/ UBC Biodiversity Centre.

2014 Biodiversity Change. iDiv Biodiversity Synthesis Center, Leipzig, Germany. October 10-12. *Invited participant.*

2013 Synthesizing Theory and Databases to Advance a General Framework for How Warming Affects Trophic Interactions. National Center for Ecological Analysis and Synthesis (NCEAS). June 3 - 7. *Co-Leader with Hamish Grieg.*

Climate Change and Seagrasses in the Pacific Northwest, Friday Harbor Research Labs, Washington State. January 23-35. *Invited participant.*

2012 Synthesizing Theory and Databases to Advance a General Framework for How Warming Affects Trophic Interactions. National Center for Ecological Analysis and Synthesis (NCEAS). December 8 - 12. *Co-Leader with Hamish Grieg.*

Integrating Body Size and Thermal Scaling to Understand the Effects of Temperature on Food Webs, Malcom Knapp Research Forest, UBC. Funded by Canadian Institute for Ecology and Evolution (CIEE), June 22-26. *Co-Leader with Hamish Grieg.*

Towards Understanding the Marine Biological Impacts of Climate Change, National Center for Ecological Analysis and Synthesis (NCEAS), led by Anthony Richardson and Elvira Poloczanska, April 29 – May 3. *Invited participant*.

2011 Workshop on Theory and Management, UC Davis, Davis, CA. May 5-10. *Invited participant*

Biodiversity and Ecosystem Function, National Center for Ecological Analysis and Synthesis (NCEAS) working group, led by Bradley Cardinale, David Hooper and Emmett Duffy. March 21-25. *Invited participant*. Funded by NCEAS.

Biodiversity and Ecosystem Function, National Center for Ecological Analysis and Synthesis (NCEAS) working group, led by Bradley Cardinale, David Hooper and Emmett Duffy. October 10-14. *Invited participant*. Funded by NCEAS.

Towards Understanding the Marine Biological Impacts of Climate Change, National Center for Ecological Analysis and Synthesis (NCEAS), led by Anthony Richardson and Elvira Poloczanska, May 10-14. *Invited participant*.

Towards Understanding the Marine Biological Impacts of Climate Change, National Center for Ecological Analysis and Synthesis (NCEAS), led by Anthony Richardson and Elvira Poloczanska, October 2-6. *Invited participant*.

Working Group II, *Chapter 30: Ocean Regions*, Intergovernmental Panel on Climate Change Fifth Assessment Report. Meeting in Santa Barbara, October 7. *Contributing Author.*

2010 Zostera Experimental Network (ZEN), a community of seagrass experimental ecologists led by Emmett Duffy at the Virginia Institute of Marine Sciences (VIMS), December 18-22. *Invited participant*.

Biodiversity and Ecosystem Function, National Center for Ecological Analysis and Synthesis (NCEAS) working group, led by Bradley Cardinale, David Hooper and Emmett Duffy. August 9 – 13. *Invited participant*.

Towards Understanding the Marine Biological Impacts of Climate Change, National Center for Ecological Analysis and Synthesis (NCEAS), led by Anthony Richardson and Elvira Poloczanska, April 18-22. *Invited participant*.

Towards Understanding the Marine Biological Impacts of Climate Change, National Center for Ecological Analysis and Synthesis (NCEAS), led by Anthony Richardson and Elvira Poloczanska, October 14-18. *Invited participant*.

Envisioning a Sustainable Seafood System, National Center for Ecological Analysis and Synthesis (NCEAS), led by Larry Crowder and Marty Smith, January 4-6. *Invited participant.*

Envisioning a Sustainable Seafood System, National Center for Ecological Analysis and Synthesis (NCEAS), led by Larry Crowder and Marty Smith, November 2-5. *Invited participant.*

2009 Towards Understanding the Marine Biological Impacts of Climate Change, National Center for Ecological Analysis and Synthesis (NCEAS), led by Anthony Richardson and Elvira Poloczanska, September 14-18. *Invited participant*.

Envisioning a Sustainable Seafood System, National Center for Ecological Analysis and Synthesis (NCEAS), led by Larry Crowder and Marty Smith, March 11-13. *Invited participant.*

Envisioning a Sustainable Seafood System, National Center for Ecological Analysis and Synthesis (NCEAS), led by Larry Crowder and Marty Smith, March 16-20. *Invited participant.*

2007 Exotic Species: A Source of Insight into Ecology, Evolution and Biogeography, National Center for Ecological Analysis and Synthesis (NCEAS), led by Dov Sax, Jay Stachowicz and Steve Gaines. September 10-12. *Invited participant.*

2006 Insight from Exotics, National Center for Ecological Analysis and Synthesis (NCEAS), led by Dov Sax, Jay Stachowicz and Steve Gaines. September 25-27. *Invited participant.*

2005 Insight from Exotics, National Center for Ecological Analysis and Synthesis (NCEAS), led by Dov Sax, Jay Stachowicz and Steve Gaines. October 16-20. *Invited participant.*

(g) Conference Participation (Organizer, Keynote Speaker, etc). All presentations are first-authored talks or, when indicated, first-authored posters. Presentations by my students or collaborators on which I am a non-presenting co-author are not listed.
**** indicates Invited Speaker***

2021 *UBC Climate Change Research Symposium, Vancouver, Canada

2020 *Ecological Society of America, virtual conference

2019 *Iceland Biological Society Bi-Annual Meeting, ***Keynote,*** Reykjavik, Iceland
*Conference on Global Change and Biodiversity, Monte Verità, Switzerland.

2018 *Gordon Research Conference, Unifying Ecology Across Scales. Biddeford, Maine, USA.

2017 *British Ecological Society, Aquatic Group Annual Meeting, London, England, UK.
*Canadian Society for Ecology and Evolution, Victoria, BC, CAN.

2016 *Western Society of Naturalists, Presidential Symposium, Monterey, California, USA.
*Gordon Research Conference, Unifying Ecology Across Scales. Biddeford, Maine, USA.
*Gordon Research Conference, Predator-Prey Interactions. Ventura, California, USA.

2015 *Ecological Society of America 100th Annual Meeting, Baltimore, Maryland, USA.
*Canada's Healthy Oceans Network 2 (CHONE2) first annual meeting, Montreal, QC, CAN.

2014 *Canadian Society of Ecology and Evolution (CSEE), Montreal, QC, CAN.
*Joint Aquatic Sciences Meeting (JASM), Portland, OR, USA.
*Zostera Experimental Network (ZEN) Conference, Washington DC, USA.
Gordon Research Conference: Unifying Ecology Across Scales, Biddeford, Maine, USA. *Invited discussion leader.*

2013 *Ecological Society of America (ESA) Annual Meeting, Minneapolis, MN, USA. *Session organizer.*

2012 *Climate Change and Species Interactions, National Science Foundation meeting and Cary Conference, Cary Institute, NY, USA.

2011 *National Council on Science and the Environment (NCSE) Changing Oceans meeting, Washington, D.C., USA.

2010 *AQUASHIFT Conference: Life in Changing Waters, Kiel, Germany. ***Keynote*** *speaker.*
Gordon Research Conference on Metabolic Ecology, Biddeford, Maine, USA. *Invited participant* (poster presentation).

*Ecological Society of America (ESA), Annual Meeting, Pittsburgh, PA, USA.

2009 *British Ecological Society (BES) Annual Meeting. Hatfield, England, UK.

2008 *American Society for Limnology and Oceanography (ASLO – Ocean Sciences). Orlando, FL, USA.

2006 Gordon Research Conference on Metabolic Ecology. Lewiston, Maine, USA. *Invited participant* (poster presentation)

10. SERVICE TO THE UNIVERSITY

(a) Areas of special interest and accomplishments

I contribute to my academic communities and UBC through service and leadership in formal and informal ways. My office, lab and students are members of the Biodiversity Research Centre (BRC), a community of biodiversity researchers at UBC, and our work space is in the BRC building. I serve as an **Associate Director for the BRC**, and in this role I support the director and BRC community. Recently, my leadership activities here include organizing a series of lunchtime discussions on the topic of our centre expansion, leading a survey of centre faculty research themes, representing the BRC in Ottawa for UBC's Day on the Hill, and contributing as a core member to the Biodiversity proposal for Faculty of Science's call for new research cluster hires. I have also organized and hosted an 'alternative career panel discussion for students in the BRC, and I have organized a series of lunchtime meetings for ecologists in the community to enhance social and intellectual connections within this group that is spread among many buildings and departments on campus. These examples capture my leadership style, which emphasizes community building, community engagement, and ensuring representation of all stakeholders in decision making.

(b) Memberships on committees, including offices held and dates

University level

Canada Research Chair, Special Call Adjudication Committee (2020)
Peter Wall Institute for Advanced Studies (PWIAS) meeting with external review committee, January 2020
UBC Diving Control Board (DCB), a university-level committee to manage SCUBA diving policies (2020-present)
UBC Banting Fellowship review committee (2018)
UBC Dive Safety committee (2015-2020)
Bamfield Marine Science Centre (BMSC) animal care review committee (2014 – 2019)

Faculty of Science

Delegation, UBC 'Day on the Hill', representing Faculty of Science and Biodiversity Research Centre, March 9-10, 2020
Governance Team, Institute for Biodiversity Solutions (IBioS) (2020 -) (weekly meetings and multiple job searches)

Biodiversity Research Centre

Associate Director, Biodiversity Research Centre, UBC (2013- present)
Program Review Committee (2020), **Chair** of office space user group, a committee to develop programming plans for potential Biodiversity Research Centre expansion
BRITE graduate intern selection committee, Biodiversity Research Centre (2011-2019)
BRITE fellowship committee (2013, 2014)
Host, Alternative Career Panel Discussion, Biodiversity Research Centre (2011, 2014)

Departmental – standing committees

Executive committee, Department of Zoology, (2018-Dec 2020)
Graduate Admission and Fellowship Committee, Department of Zoology (2018 – Dec 2020)
Safety committee, Department of Zoology (2014-2016) – monthly meetings plus lab inspections and trainings

Departmental – one-time committees

Faculty Search Committee: Connectivity Scientist, Departments of Zoology and Geography
Formative Teaching Assessment committee, Chair, Department of Botany, Sean Michaletz (2020)
Summative Assessment committee, Chair, Department of Zoology: Matt Pennell (2020)
Reappointment Committee: Department of Zoology, Phil Matthews (2017)
Faculty Search committee: Ecologist, Departments of Zoology and Botany (2016)
Faculty Search committee: CRC Microbial Ecology, Departments of Zoology and Botany (2011)
Faculty Search committee: CRC Microbial Ecology, Departments of Zoology and Botany (2013)
Faculty Search committee CRC Conservation Ecology, Departments of Zoology and Botany (2010-2011)

(c) Other service, including dates

Examiner for Honours Thesis defenses:
Amanda Doyle (Honours, UBC Biology, April 2021)
Cassandra Konecny (Honours, UBC Zoology, April 2016)
Jake Dytnersky (Honours, UBC Zoology, April 2016)
Kasey Moran (Honours, UBC Zoology, April 2015)
Allison Dennert (Honours, UBC Zoology, April 2015)
Cora Skaien (Honours, UBC Zoology, May 2013)
Kathryn Fisher (Honours, UBC Botany, April 2011)
Theraesa Coyle (Honours, EOS, April 2012)

Departmental Examiner for Thesis defenses:
Luis Camacho (PhD, UBC Zoology, Nov 2020)
Micah Scholer (PhD, UBC Zoology, Apr 2020)
Alex deBruyn (MSc, UBC Zoology, 2019)
Emilie Stump (MSc, UBC Zoology, Oct 2018)
Xiong Zhang (PhD, UBC Zoology, Sept 2018)
Pierre Rogy (MSc, UBC Zoology, Aug 2018)
Jennifer Selgrath (PhD, UBC Zoology, Jun 2017)
Timothy Healy (PhD, UBC Zoology Dec 2016)
Filippe Fernandez (MSc, UBC Zoology, Aug 2016)
Angela Nicolas (MSc, UBC Zoology, Dec 2015)
Monica Yau (MSc, UBC Zoology, Nov 2014)
Sam Yue (MSc, UBC Zoology, July 2014)
Stefan Dick (MSc, UBC Zoology, Jan 2014)
James Slogan (PhD, UBC Zoology, July 2013)
Virginia Noble (MSc, UBC Zoology, May 2013)
Youhua Chen (MSc, UBC Zoology, Feb 2013)
Matthew Siegle (MSc, UBC Zoology, Nov 2011)
Laura Southcott (MSc, UBC Zoology, Jul 2011)

University Examiner for Thesis defenses:
Pedro Gonzalez Espinosa (PhD, UBC Geography, Nov 2021)
Patricia Woodruff (PhD, UBC Institute for the Oceans and Fisheries, Sept 2021)
Sam Starko (PhD, UBC Botany, 2019)
Celine Michels (PhD, Microbiology and Immunology, 2019)
Alex Leung (PhD, UBC Forest and Conservation Sciences, 2019)
Rachel Wilson (MSc, UBC Botany, Dec 2016)
Gerald Singh (PhD, UBC IRES, Sept 2016)
Timothy Healy (PhD, UBC Zoology, Sept 2016)
Ryan Germain (PhD, UBC Forestry, Sept 2015)
Danika Kleiber (PhD, UBC Fisheries, June 2014)
Ana Marcela Chara (MSc, UBC Forest and Conservation Sciences, 2014)
Rebecca Guenther (MSc, UBC Botany, April 2011)

Chair for thesis defenses:
Varsha Mathur (PhD, UBC Botany, October 2020)

Ellika Crichton (MSc, UBC Zoology, June 2020)
Jennifer Allan (PhD, UBC Political Science, March 2017)
Manon Picard (MSc, UBC Zoology, July 2014)
Gyan Harwood (MSc, UBC Zoology, Oct 2013)

University Examiner for Comprehensive Exams:
Patrick Pata (UBC Institute for the Oceans and Fisheries, 2020)
Cheng Chen (UBC Forest and Conservation Sciences, 2019)
Katy Davis (UBC Botany, 2018)
Ana Chara (UBC Forestry, 2014)

11. SERVICE TO THE COMMUNITY

(a) Memberships in scholarly societies, including offices held and dates

- **Deputy Director**, Canadian Institute for Ecology and Evolution (CIEE) (2019-2020).
- Canadian Society for Ecology and Evolution (2014, 2017)
- American Society for Limnology and Oceanography (2008, 2014)
- Ecological Society of America (2003, 2005, 2010, 2013, 2014, 2015, 2016, 2020)
- British Ecological Society (2009)
- Western Society of Naturalists (2009, 2014, 2016, 2018, 2019, 2020);
- **Secretariat/governing body,** Western Society of Naturalists (2018-2020); this is a substantial service commitment with monthly obligations of several to many hours and involves organizing an annual conference of ~400 people. In 2020, this was a virtual conference for the first time.

(b) Memberships in other societies, including offices held and dates

- International biogeography Society, Steering Committee (2020)

(c) Memberships on scholarly committees, including offices held and dates

(d) Memberships on other committees, including offices held and dates

- IMEDEA Scientific Advisory Board 2021-2023
- Schmidt Science Fellowship, Review Committee 2021
- Canada's Healthy Ocean's Network (CHONe2) Board (2018- 2021)
- Living Data Project Training committee (2020 -)
- Living Data Project Data Rescue Committee (2020 -)
- Living Data Project Working Group Committee (2020 -)
- Ecolunch seminar planning committee, NCEAS (2009)
- Seminar planning committee, UNC Ecology curriculum (Chair 2004-2005, member 2003-2005)

- Interdisciplinary symposium organized for 10th Anniversary of UNC Royster Fellowship (2006)

(e) Editorships (list journal and dates)

indicates open access journals

Ecological Monographs (2017-2020)
Ecology (2017-2020)
Frontiers in Marine Sciences (2015)
Ecology Letters (2015-2019)
*Ecology and Evolution (2013-2015)
*PLoS ONE (2011-2013)
Proceedings of the National Academy of Sciences (PNAS) guest editor (2014, 2015, 2019, 2021)
*Frontiers in Ecology and Evolution, Editor, Special Issue (2018)

(f) Reviewer (journal, agency, etc. including dates)

Reviewer for journals: I have reviewed approximately 1 ms every 2 months since 2009. I have listed journals below, for many of these journals I have reviewed more than once.

The American Naturalist
Coral Reefs
Ecography
Ecology
Ecological Archives (data papers)
Ecology Letters
Ecological Monographs
Functional Ecology
Global Change Biology
Global Ecology and Biogeography
The ISME Journal (Nature)
Journal of Applied Ecology
Marine Biodiversity
Marine Biology
Marine Ecology
Marine Ecology-Progress Series
Nature Climate Change
Nature
Nature Ecology and Evolution
Oecologia
Oikos
Philosophies
Proceedings of the Royal Society of London – Series B
Proceedings of the National Academy of Sciences (PNAS)
Science

Reviewer for granting agencies:

NSERC Discovery grants

NSERC Strategic Project Grants
Canadian Foundation for Infrastructure (CFI)
Environmental Protection Agency (EPA) for call on "Ecological Impacts from the Interactions of Climate Change, Land Use Change and Invasive Species"
Portuguese Foundation for Science and Technology (FCT)
Graduate Women in Science Fellowships
New York Sea Grant

(g) External examiner (indicate universities and dates)

Dachin Frances (PhD, University of Toronto, Mississauga, July 2018)
Diego Barneche Rosado (PhD, MacQuarie University, Australia, July 2015)
Sam Fey (PhD, Dartmouth College, New Hampshire, USA, May 2013)

(h) Consultant (indicate organization and dates)

Consultant, Hatfield Consulting, on seagrass restoration, 2020

(i) Other service to the community

- Gordon Conference Vice Chair – elected, Unifying Ecology Across Scales (2014-2016)
- Gordon Conference Chair - elected, Unifying Ecology Across Scales (2016-2018)

Public communication and outreach on my science:

- Live interview for Roundhouse Radio (Vancouver, BC, CAN) on Jan 6th, 2016
- Interview for Oregon Public Broadcasting (OPB) in August 2013 on Poloczanska et al (2013) in Marine Climate Impacts research.
- Press coverage of O'Connor et al., 2009, in *Science*, *Scientific American*, *New Scientist*, *NPR*.
- Local National Public Radio (NPR) coverage of research on temperature and larval dispersal, (2007).

Interviews as an expert on climate change ecological impacts:

- Interview for article 'Sharks, Snakes and Giant Squid: Climate Change driving exotic species North into B.C., but killing others', published in The Province, and then in the National Post. (March 2015)
- Profiled by The Scientist magazine in their series on young scientists to watch. Article title: "Mary O'Connor: Warming Up." (2013)

12. AWARDS AND DISTINCTIONS

(a) Awards for Teaching (indicate name of award, awarding organizations, date)

Nominated, Killam Mentoring Award, Zoology Department, UBC (Fall 2016 and 2017)
Nominated, Killam Teaching Award, UBC (Fall 2014)
Graduate Mentor Support Grant ($500), UNC-Chapel Hill Office of Undergraduate Research (2006)

(b) Awards for Scholarship (indicate name of award, awarding organizations, date)

Highly Cited Researcher, Environment and Ecology, Web of Science / Clarivate Analytics, (2020). I was recognized formally for having published multiple papers cited in top 1% of citations in this field.

E. W. R. Steacie Fellowship (awarded March 2020) – This NSERC Fellowship is awarded annually to six researchers within 14 years of their PHD across all sciences in Canada. It is one of the most prestigious fellowships available to Canadian researchers.

Steacie Prize for Natural Sciences (2019) – This Prize for research is awarded annually to one scientific researcher in Canada under the age of 40. It is named in honour of E. W. R. Steacie, but otherwise is unrelated to the NSERC Steacie Fellowship. The Steacie Prize is adjudicated and awarded by the private E. W. R. Steacie Memorial Fund.

Highly Cited Researcher, Environment and Ecology, Web of Science / Clarivate Analytics, (2019). I was recognized formally for having published multiple papers cited in top 1% of citations in this field.

Highly Cited Researcher, Cross Sciences, Web of Science / Clarivate Analytics, (2018) I was recognized formally for having published multiple papers cited in top 1% of citations in all sciences.

Killam Research Enhancement Award (2017) – This is a competitive award at UBC at the university level often used to support sabbatical research.

International Research Professional Excellence Prize, International Ecology Institute, Oldendorf, Germany (2016). This is an international award based on research excellence and early career stage. It is awarded annually to one researcher worldwide.

Early Career Fellow, Ecological Society of America (2016-2019). By nomination, a cohort of early career leaders are selected annually from an international community of researchers for a three-year term as a Fellow.

Killam Research Prize, UBC (2016) – A university level competitive research prize awarded annually to five scholars for research excellence.

Wall Scholars Research Award, Peter Wall Institute for Advanced Studies (2015). A one-year fellowship awarded from a university-wide competitive process.

Ocean Sciences Research Fellowship, Alfred P. Sloan Foundation (2013-2014) – a competitive fellowship awarded annually to 10 fellows from an international applicant pool of early career researchers.

Start-up Award, Peter Wall Institute for Advanced Studies (2013)
Royster 5-year Fellowship, UNC-Chapel Hill (2003-2008)
Budweiser Conservation Scholarship, National Fish and Wildlife Association (2007)
Smith Research Grant, UNC-Chapel Hill (2006)
Travel Grant, UNC-Chapel Hill ($475; 2005)
Hughes Fellowship: Grant for Undergraduate Research, Brown University ($800; 2000)
Undergraduate Teaching / Research Assistantship, Brown University ($2200; 1998)

(c) Awards for Service (indicate name of award, awarding organizations, date)

(d) Other Awards

13. OTHER RELEVANT INFORMATION (Maximum One Page)

THE UNIVERSITY OF BRITISH COLUMBIA

Publications Record

SURNAME: **O'Connor** **FIRST NAME**: **Mary** **INITIALS: I.**

Date: 21 Dec 2021

1. REFEREED PUBLICATIONS

(a)

Authorship philosophy: Authorship implies a specific contribution: text, analysis, data, or project design, and in most cases, two or more of these contributions, consistent with guidelines outlined the Ecological Society of America (ESA). *First and second author positions* reflect primary and secondary contributions in terms of time, effort, data and project leadership. When lead authors are students or postdocs under my supervision or participants in NCEAS/CIEE working groups I lead (sec 9 (b) and (f)), *last author position implies senior authorship* (leadership of the larger project plus, at minimum, direct contributions to the writing and design of the work). The **74 peer-reviewed primary research papers** listed here for which citation data exist have been **cited 8849 times in total**, **h-index = 38** (Publons / Researcher ID May 21 2021) [Google scholar: H-index = 42 14088 total citations]. My web of Science Researcher ID is F-2275-2010.

*Publications of primary importance are papers that reflect my major personal contributions toward my long-term research goals. I have underlined the identifying numbers of papers for which I was first, second or senior author.

About the journals: I publish in peer-reviewed journals that reach a broad audience of ecologists, natural scientists or, when relevant, policy makers. The audience of a journal, including open access options and journal reputation (but not necessarily impact factor), is the primary consideration in my publishing decisions. When appropriate, I have added notes to explain my contribution to multi-authored publications.

Legend for status and role of co-authors:

[#] undergraduates under my direct mentorship
[o] graduate students under my direct mentorship
[+] postdocs under my direct mentorship
****** Products from working groups that I led, and which were funded through successful grant proposals that I wrote or co-wrote, and multi-day workshops that I organized (Sec 9(f)).
[t] My PhD supervisor.
[=] Indicates equal contribution of authors.
HCP: according to ISI web of science, 'Highly Cited Papers' are in the top 1% of Plant and Animal Science for their publication year.

80. **O'Connor, M. I.,** Griffiths G., Forbes, C., Sanders-Smith R., Hessing-Lewis, M. , Olson, A., L. Wegener Parfrey. *Accepted.* An experimental test reveals spatial controls on the seagrass *Zostera marina* and epiphyte *Smithora naiadum*. *Aquatic Botany.*

79. ºSiegle, M. R., R. B. Taylor, **M. I. O'Connor**. *Accepted*. Short-term population growth rates influenced by experimental heat waves do not predict long-term abundance trends. *ICB.*

78. Gross, Collin; Duffy, J; Hovel, Kevin; Kardish, Melissa; Reynolds, Pamela; Boström, Christoffer; Boyer, Katharyn; Cusson, Mathiew; Eklöf, Johan; Engelen, Aschwin; Eriksson, Klemens; Fodrie, Joel; Griffin, John; Hereu, Clara; Hori, Masakazu; Hughes, A Randall; Ivanov, Mikhail; Jorgensen, Pablo; Kruschel, Claudia; Lee, Kun-Seop; Lefcheck, Jonathan; McGlathery , Karen; Moksnes, Per-Olav; Nakaoka, Masahiro; **O'Connor, Mary**; O'Connor, Nessa; Olsen, Jeanine; Orth, Robert; Peterson, Bradley; Reiss, Henning; Rossi, Francesca; Ruesink, Jen; Sotka, Erik; Thormar, Jonas; Tomas, Fiona; Unsworth, Richard; Voigt, Erin; Whalen, Matt; Ziegler, Shelby; Stachowicz, Jay. The biogeography of community assembly: latitude and predation drive variation in community trait distribution in a guild of epifaunal crustaceans. *Accepted.* Proceedings of the Royal Society – Series B. Submitted summer 2021.

77. **O'Connor, M. I.,** A. Mori, A. Gonzalez, L. E. Dee, M. Loreau, M. Avolio, J. E. K. Byrnes, W. Cheung, J. Cowles, A. T. Clark, Y. Hautier, H. Hector, K. Komatsu, T. Newbold, C. L. Outhwaite, R. B. Reich, E. Seabloom, L. Williams, A. Wright, F. Isbell. 2021. Grand challenges in biodiversity-ecosystem functioning research in the era of science-policy platforms require explicit consideration of feedbacks. *Proceedings of the Royal Society of London, Series-B.*

76. ºIto, M., Lin, A. H-J, **O'Connor, M. I.,** Nakaoka, M. 2021. Large-scale analysis of the seasonal growth and reproductive traits for the intertidal seagrass *Zostera japonica*: a comparison of native and non-native populations. Marine Ecology-Progress Series.

75. ºCristiani, J., E. Rubidge, C. Forbes, B. Moore-Maley, and **M. I. O'Connor**. 2021. A biophysical model and network analysis of invertebrate community dispersal reveals regional patterns of seagrass habitat connectivity. Frontiers in Marine Science.

74. Grainger, T. Senthilnathan, A., Ke, P-J; Barbour, M., Jones, N., DeLong, J., Otto, S., **O'Connor, M. I.**, Coblentz, K., Goel, N., Sakarchi, J., Szojka, M., Levine, J., Germain, R. 2021. An empiricist's guide to using ecological theory. *The American Naturalist.*

73. ºBernhardt, J. R. and **M. I. O'Connor**. 2021. Aquatic biodiversity enhances multiple nutritional benefits to humans. *Proceedings of the National Academy of the United States of America.* 118(15) e1917487118.

72. Srivastava, D. S., L. Coristine, A. L. Angert, M. Bontrager, S. L. Amundrud, J. L. Williams, A. C.Y. Yeung, D. R. de Zwaan, P. L. Thompson, S. N. Aitken, J. M. Sunday, **M. I. O'Connor**, J. Whitton, N. E. M. Brown, C. D. MacLeod, L. W. Parfrey, J. R. ºBernhardt, J. Carrillo, C. D.G. Harley, P. T. Martone, B. G. Freeman, M. Tseng, S. D. Donner. 2021. Wildcards in Climate Change Biology. *Ecological Monographs*.

71. Murphy, G., J. Dunic, E. M. ºAdamczyk, S. J. +Bittick, I. Côté, J. ºCristiani, E. A. Geissinger, R. S. Gregory, H. Lotze, **M. I. O'Connor**, C. A. S. Araújo, E. M. Rubidge, N. D. Templeman, M. Wong. 2021. From coast to coast to coast: Ecology and management of seagrass ecosystems across Canada. *FACETS* 6: 139-179.

70. Hernan Martinez, G., M. Ortega, A. Josep, K. Boyer, S. Cimon, V. Combes, M. Cusson, C. Hereu, M. Hessing-Lewis, K. Hovel, P. Jorgensen, S. Kiriakopolos, N. Kollars, **M. I. O'Connor**, J. Olsen, P. Reynolds, J. Ruesink, E. Voigt, F. Tomas. 2021. Resource availability shapes latitudinal gradients of plant defense against herbivory in a marine foundation species. *Global Ecology and Biogeography.* 30(1): 220-234.

69. Trevizan Segovia, B., R. Sanders, E. Morien, E. ºAdamczyk, C. ºForbes, M. Hessing-Lewis, **M. I. O'Connor,** L. W. Parfrey. *2020.* Microeukaryotes associated with seagrass *Zostera marina* are spatially structured. *Journal of Eukaryotic Microbiology*. 68(1): e12827.

68. Sanders Smith, R., B. T. Segovia, C. ºForbes, M. Hessing-Lewis, E. Morien, M. A. Lemay, **M. I. O'Connor,** L. W. Parfrey. *2020.* Host-specificity and core taxa of seagrass leaf microbiome identified across tissue age and geographical regions*.* Frontiers in Ecology and Evolution*.* 8: 605304.

67. #Stark, K. A., P. L. +Thompson, J. Yakimishyn, L. Lee, E. M. ºAdamczyk, M. Hessing-Lewis, **M. I. O'Connor**. *2020.* Beyond a single patch: local and regional processes explain diversity patterns in a seagrass epifaunal metacommunity. Marine Ecology-Progress Series. *Marine Ecology Progress Series.* 655: 91-106.

66. ºBernhardt, J. R., J. R. Sunday, **M. I. O'Connor**, A. Gonzalez. 2020. Life in fluctuating environments*. Philosophical Transactions of the Royal Society, B.* 375: 20190454.

65. Halpern, B., E. Borer, A. P. Dobson, D. Vazquez, B. J. Enquist, L. Gerber, **M. I. O'Connor**, C. Lortie, E. Berlow, R. Williams, F. Davis, G. Willard, H. Froelich, H. Regan. 2020*.* Ecological synthesis and its role in advancing knowledge. *Bioscience.* 70(11): 1005-1014.

*64. **O'Connor, M. I.,** M. Pennell, F. Altermatt, B. Matthews, C. Melian, A. Gonzalez. 2019*.* Principles of ecology revisited: integrating information and ecological theories for a more unified science. *Frontiers in Ecology and Evolution.* 7: Article 219.

63. Fey, S.B., D. A. Vasseur, K. Alujevic, K. J. Kroeker, M. L. Logan, J. P. DeLong, **M. I. O'Connor**, S. Peacor, V. H. W. Rudolf, R. L. Selden, A. Sih, S. Clusella-Trullas. 2019. Opportunities for Behavioral Rescue Under Rapid Environmental Change. *Global Change Biology* 25: 3110-3120.

*62. **Chase, J., B. McGill, P. L. Thompson, L. Antao, A. Bates, S. Blowes, M. Dornelas, A. Gonzalez, A. Magurran, S. Supp, M. Winter, A. Bjorkman, H. Bruelheide, J. E. K. Byrnes, J. Cabral, R. Elahi, C. Gomez, H. Guzmán, F. Isbell, I. Myers-Smith, H. Jones, J. Hines, M. Vellend, C. Waldock, **M. I. O'Connor**. 2019. Species richness change across spatial scales. *Oikos* 128:8 1079-1091. Highlighted as *Editors Choice.*

*61. ºGarzke, J., S. J. #Connor, U. Sommer, and **M. I. O'Connor**. 2019. Food chain length modifies the effect of temperature on ecosystems. *PLoS Biology* 17(6): e2006806.

*60. +Stier, A. C., S. C. Lee, and **M. I. O'Connor**. 2019. Temporal variation in dispersal modifies dispersal-diversity relationships in a seagrass metacommunity. *Marine Ecology Progress Series* 613: 67-76.

*59**.** ºWhippo, R., N. S. #Knight, C. #Prentice, J. ºCristiani, M. ºSiegle, **M. I. O'Connor**. 2018. Epifaunal diversity patterns within and among seagrass meadows suggest landscape scale biodiversity processes. *Ecosphere* 9(11) e02490.

58. Röhr, M. E., M. Holmer, J. K. Baum, M. Björk, D. Chin, L. Chalifour, S. Cimon, M. Cusson, M. Dahl, D. Deyanova, J. E. Duffy, J. S. Eklöf, J. K. Geyer, J. N. Griffin, M. Gullström, C. M. Hereu, M. Hori, K. A. Hovel, A. R. Hughes, P. Jorgensen, S. Kiriakopolos, P-O. Moksnes, M. Nakaoka, **M. I. O'Connor**, B. Peterson, K. Reiss, P. L. Reynolds, F. Rossi, J. Ruesink, R. Santos, J. J. Stachowicz, F. Tomas, K.-S. Lee, R. K. F. Unsworth, C. Boström. 2018. Blue carbon storage capacity of temperate eelgrass (*Zostera marina*) meadows. *Global Biogeochemical Cycles* 32(10) 1457-1475.

57. Guzman, L., R. Germain, C. ºForbes, S. Straus, **M. I. O'Connor**, D. Gravel, D. Srivastava, P. L. +Thompson. 2018. Towards a multi-trophic extension of metacommunity ecology. *Ecology Letters* 22(1): 19-33.

*56. ºBernhardt, J. R., J. M. +Sunday, P. L. +Thompson, and **M. I. O'Connor**. 2018. Nonlinear averaging of thermal experience predicts population growth rates in a thermally variable environment. *Proceedings of the Royal Society of London-B* 285: 20181076

*55. ºBernhardt, J. R., J. M. +Sunday, and **M. I. O'Connor**. 2018. Metabolic theory and the temperature size rule explain the temperature dependence of population carrying capacity. *The American Naturalist* 192(6): 687-697.

54. +Thompson, P. L., A. Gonzalez, **M. I. O'Connor**, F. Isbell, M. Loreau. 2018. The strength of the biodiversity-ecosystem function relationship depends on spatial scale. *Proceedings of the Royal Society of London, B.* 285: 20180038.

53. Louca, S., M. F. Polz, F. Mazel, M. B. N. Albright, J. A. Huber, **M. I. O'Connor**, M. Ackermann, A. S. Hahn, D. S. Srivastava, S. A. Crowe, M. Doebeli, L. W. Parfrey. 2018. Function and functional redundancy in microbial systems. *Nature Ecology and Evolution* 2: 936-943.

52. Iacarella, J., ºAdamczyk, D. Bowen, L. Chalifour, A. Eger, W. Heath, S. Helms, M. Hessing-Lewis, B. Hunt, A. MacInnis, **M. I. O' Connor,** C. L. K**.** Robinson, J. Yakimishyn, J. Baum. 2018. Anthropogenic disturbance homogenizes seagrass fish communities. *Global Change Biology* 24: 1904-1918.

51. ºSiegle, M. R., R. B. Taylor, **M. I. O'Connor.** 2018. Prior heat accumulation reduces survival during subsequent experimental heat waves. *Journal of Experimental Marine Biology and Ecology* 501: 109-117.

50. Barnes, A. D., N. Eisenhauer, C. Scherber, M. Jochum, J. Lefcheck, **M. I. O'Connor**, P. de Ruiter, and U. Brose. 2018. Energy flux: the link between multi-trophic biodiversity and ecosystem functioning. *Trends in Ecology and Evolution* 33(3): 186-197.

49. Reynolds, P. L., J. Stachowicz, K. Hovel, C. Bostrom, K. Boyer, M. Cusson, J. Eklof, F. Engel, A. Engelen, B. K. Eriksson, J. Fodrie, J. Griffin, C. Hereu, M. Hori, T. Hanley, M. Ivanov, P. Jorgensen, C. Kruschel, K-S. Lee, K. McGlathery, P-O Moksnes, M. Nakaoka, F. Tomas Nash, **M. I. O'Connor**, N. O'Connor, R. Orth, F. Rossi, E. Sotka, R. Unsworth, M. Whalen, J. E. Duffy. 2018. Latitude, temperature and habitat complexity predict predation pressure in eelgrass across the Northern Hemisphere. *Ecology* 99(1): 29-35.

48. Ruesink, J., J. J. Stachowicz, P. L. Reynolds, C. Bostrom, M. Cusson, J. Douglass, J. Eklof, A. Engelen, M. Hori, K. Hovel, K. Iken, P-O Moksnes, M. Nakaoka, **M. I. O'Connor**, J. Olsen, E. E. Sotka, M. Whalen, J. E. Duffy. 2017. Form-function relationships in a marine foundation species depend on scale: a shoot to global perspective from a distributed ecological experiment. *Oikos* 127(3):364-374.

47. Isbell, F., A. Gonzalez, M. Loreau, J. Cowles, S. Diaz, A. Hector, G. M. Mace, D. A Wardle, **M. I. O'Connor**, J. E. Duffy, L. A. Turnbull, P. L. Thompson, A. Larigauderie. 2017. Linking the influence and dependence of people on biodiversity. *Nature* 564, 65-72.

46. M. M. Osmond, M. Barbour, J. [ø]Bernhardt, J. Sunday, M. Pennell, **M. I. O'Connor**. 2017. Warming induced changes to body size stabilize consumer-resource dynamics. *The American Naturalist* 189: 718-725.

*45. **O'Connor, M. I.**, A. Gonzalez, J. E. K. Byrnes, B. J. Cardinale, J. E. Duffy, L. Gamfeldt, J. Griffin, D. U. Hooper, B. Hungate, A. Paquette, P. Thompson, L. Dee, K. Dolan. 2017. A general biodiversity-function relationship is mediated by trophic level. *Oikos* 126: 18-31.

44. Gonzalez, A., B. J. Cardinale, J. E. K. Byrnes, F. Isbell, G. R. H. Allington, D. G. Brown, A. Endsley, D. U. Hooper, **M. I. O'Connor** and M. Loreau. 2016. The challenge of estimating global patterns of local biodiversity change: a critique of recent papers finding no net loss of local diversity. *Ecology* 97(8): 1949-1960.

43. Brown, C., **M. I. O'Connor,** E. S. Poloczanska, L. Buckley, M. Burrows, C. Duarte, B. Halpern, J. Pandolfi, C. Parmesan, A. J. Richardson. 2016. Ecological and methodological drivers of species' distribution and phenology responses to climate change. *Global Change Biology* 22(4) 1548-1560.

*42. [+]Tseng, M. and **M. I. O'Connor**. 2015. Predation pressure accelerates evolutionary response of prey to temperature change. *Biology Letters* 11:20150798.

41. [ł]Bruno, J. F., L. A. Carr, and **M. I. O'Connor**. 2015. Marine Metabolic Ecology: Exploring the role of temperature in the ocean through metabolic scaling. *Ecology* 96(12): 3126-3140.

- I contributed the historical material and perspective, the structure of the paper in terms of grouping the main research questions, the table of equations that synthesizes progress in scaling theory in recent years, and the sections on food webs and ecosystems. All authors collaborated equally on writing the text.

40. #Huang, A., M. Essak and **M. I. O'Connor**. 2015. Top-down control by great blue herons *Ardea Herodias* regulates seagrass-associated epifauna. *Oikos* 124(11): 1492-1501.

- I supervised the research that A. Huang did for his directed studies project. I mentored the writing process, and revised the manuscript.

39. Atkins, R. L., J. N. Griffin, C. Angelini, **M. I. O'Connor**, B. R. Silliman. 2015. Consumer-plant interaction strength: importance of body size, density and metabolic biomass. *Oikos* 124(10): 1274-1281.

- I joined this project after the three-month snail density manipulative experiment was complete. I contributed an interpretation of metabolic scaling of interaction strength, and mentored undergraduate Atkins in analysis and writing of the work in this context.
- This paper was highlighted as *Editors' Choice* for the September 2015 issue.

* 38. +Elahi, R., **M. I. O'Connor**, J. E. K. Byrnes, J. Dunic, B. K. Eriksson, M. J. S. Hensel, and P. J. Kearns. 2015. Recent trends in local-scale marine biodiversity reflect community structure and human impacts. *Current Biology* 25(14): 1938-1943.

- I designed the research project (identified the question and research methods and answer it), mentored R. Elahi for the research project, and contributed to the final text and revisions.

37. ºStafl, N. and **M. I. O'Connor**. 2015. American pikas' (Ochotona princeps) foraging response to hikers and sensitivity to heat in an alpine environment. *Arctic, Antarctic and Alpine Research* 47(3): 519-527.

- I mentored N. Stafl in this project, contributed a few paragraphs of writing to the manuscript, and edited the manuscript.

36. Duffy, J. E., P. L. Reynolds, C. Bostrom, J. A. Coyer, M. Cusson, S. Donadi, J. G. Douglass, J. Eklof, A. Engelen, B. K. Eriksson, S. Fredriksen, L. Gamfeldt, C. Gustafsson, G. Hoarau, M. Hori, K. Hovel, K. Iken, J. S. Lefcheck, P-O. Moksnes, M. Nakaoka, **M. I. O'Connor**, J. L. Olsen, J. P. Richardson, J. L. Ruesink, E. E. Sotka, J. Thormar, M. A. Whalen, J. J. Stachowicz. *2015.* Biodiversity mediates top-down control in eelgrass ecosystems: A global comparative experiment. *Ecology Letters* 18:696-705.

- I led 2 seasons of experimental field-work, contributing the only data from Western Canada to this global networked experimental project. I funded the labour and partial research supplies for our local project. I also edited and helped revise the manuscript.

35. #Amundrud, S. L, D. S. Srivastava, and **M. I. O'Connor**. 2015. Indirect effects of predators control herbivore richness and abundance in a benthic eelgrass (*Zostera marina*) mesograzer community. *Journal of Animal Ecology* 84(4): 1092-1102.

- I mentored S. Amundrud in this project, and edited and revised the manuscript with her.

34. **DeLong, J., B. Gilbert, J. B. Shurin, V. M. Savage, C. F. Clements, A. I. Dell, H. S. Greig, C. D. G. Harley, P. Kratina, K. S. McCann, T. D. Tunney, D. A. Vasseur, **M. I. O'Connor**. 2015. The body size dependence of trophic cascades. *The American Naturalist*. 185: 354-366.

- I contributed to project design and interpretation, and contributed text reviewing previous work and thinking on the strength of trophic cascades

33. [#]Knight, N. S., [#]C. Prentice, [+]M. Tseng, and **M. I. O'Connor**. 2015. A comparison of epifaunal invertebrate communities in native eelgrass *Zostera marina* and non-native *Zostera japonica* at Tsawwassen, B. C. *Marine Biology Research* 11(6): 564-571.

- I mentored C. Prentice and N. Knight in the research and writing of this paper.

32. **O'Connor[=], M. I.,** J. Holding[=], C. V. Kappel, C. M. Duarte, K. Brander, C. J. Brown, J. F. [t]Bruno, L. Buckley, M. T. Burrows, B. S. Halpern, W. Kiessling, P. Moore, J.M. Pandolfi, C. Parmesan, E. Poloczanska, D. Schoeman, W. Sydeman, A. J. Richardson. 2015. A Confidence Index for Attribution of Biological Impacts of Climate Change. *Global Ecology and Biogeography* 24(1): 64-76. [OPEN ACCESS]

- I wrote and edited this manuscript and organized diverse and divergent contributions from multiple co-authors.

* 31. **Gilbert, B., T. D. Tunney, K. S. McCann, J. P. DeLong, D. A. Vasseur, V. Savage, J. B. Shurin, A. I. Dell, B. T. Barton, C. D. G. Harley, H. M. Kharouba, P. Kratina, J. L. Blanchard, C. Clements, M. Winder, H. S. Greig and **M. I. O'Connor**. 2014. A bioenergetic framework for the temperature dependence of trophic interaction strength. *Ecology Letters* 17: 902-914.

- I collaborated in development of the research problem, the conceptual context for the problem, and the approach to its analytical solution. I collaborated with B. Gilbert and other authors to write the paper.

* 30. Clarke, A. and **M. I. O'Connor**. 2014. Carnivores are cool: diet and body temperature in vertebrates. *Global Ecology and Biogeography* 23: 1000-1008.

- I collaborated in identifying the research problem and its solution. I contributed the phylogenetic analysis (PGLS), and collaborated on writing the manuscript.

29. Gerber, L. R., M. d. M. Mancha-Cisneros, **M. I. O'Connor** and E. R. Selig. 2014. Climate change impacts on connectivity in the ocean: Implications for conservation. *Ecosphere* 5(3) Article 33. [OPEN ACCESS]

- I developed the concept of how temperature affects connectivity, and wrote sections of this manuscript on functional and structural connectivity.

28. **Vasseur, D.A., J. P. DeLong, B. Gilbert, H.S. Greig, C. D. G. Harley, K.S. McCann, V. Savage, T.D. Tunney, and **M. I. O'Connor**. 2014. Increased temperature variation poses a greater risk to species than climate warming. *Proceedings of the Royal Society, B* 201: 20131612.

- I assisted in the conceptual development and writing of the project, and synthesized data for analysis.
- **Highly Cited Paper (HCP)**

27. Burrows, M. T., D. Schoeman, A. J. Richardson, J. G. Molinos, A. Hoffman, L. B. Buckley, P. Moore, C. J. Brown, J. F. [t]Bruno, C. M. Duarte, B. S. Halpern, O. Hoegh-Guldberg, C. V. Kappel, W. Kiessling, **M. I. O'Connor,** J.M. Pandolfi, C. Parmesan, W. J. Sydeman, S. Ferrier, K. Williams, and E. S. Poloczanska. 2014. Climate velocity and geographical limits to shifts in species' distributions. *Nature.* 507: 492-495.

- I contributed to conceptual development and interpretation of the analysis, and to writing of the manuscript on source-sink concepts and ecosystem re-organization.

26. Balvanera, P., I. Syddique, L. Dee, A. Paquette, F. Isbell, A. Gonzalez, J. Byrnes, **M. I. O'Connor**, B. A. Hungate, J. N. Griffin. 2014. Linking biodiversity and ecosystem services: current uncertainties and the necessary next steps. *Bioscience* 64(1): 49-57.

- I contributed to conceptual development, and I contributed text on seagrass biodiversity, ecosystem function and services.

25. Poloczanska, E. S., C. J. Brown, W. J. Sydeman, W. Kiessling, D. S. Schoeman, P. J. Moore, K. Brander, J. F. [t]Bruno, L. B. Buckley, M. T. Burrows, C. M. Duarte, B. S. Halpern, J. Holding, C. V. Kappel, **M. I. O'Connor**, J. M. Pandolfi, C. Parmesan, F. Schwing, S. A. Thompson, A. J. Richardson. 2013. Global Imprint of Climate Change in Marine Life. *Nature Climate Change* 3: 919-925.

- I contributed to the overall project design and interpretation, figure design and writing. I also synthesized and contributed data on salt-marsh ecosystems.
- **Highly Cited Paper (HCP)**

* 24. Gilbert, B. and **M. I. O'Connor**. 2013. Climate change and species interactions: Beyond local communities. *Annals of the New York Academy of Sciences* 1297: 98-111.

- I contributed to project design, interpretation and writing.

23. Leis, J. M., J. E. Caselle, I. R. Bradbury, T. Kristiansen, J. K. Llopiz, M. J. Miller, **M. I. O'Connor**, C. B. Paris, A. L. Shanks, S. M. Sogard, S. E. Swearer, E. A. Treml, R. D. Vetter, R. R. Warner. *2013.* Does fish larval dispersal differ between high and low latitudes? *Proceedings of the Royal Society of London, B* 280: 20130327.

- I collaborated with S. Sogard to write text for the section on temperature and larval development.

22. Cuddington, K., M.-J. Fortin, L. Gerber, A. Hastings, A. Liebhold, **M. I. O'Connor**, C. Ray. 2013. Ecological management in a changing world requires process-based models. *Ecosphere* 4(2) Article 20. [OPEN ACCESS]

- I contributed to project design, and specifically text on climate change context for process-based models.

21. Klinger, D. H., M. Turnipseed, J. L. Anderson, F. Asche, L. Crowder, A. G. Guttormsen, B. S. Halpern, **M. I. O'Connor**, R. Sagarin, K. A. Selkoe, G. Schester, M. D. Smith, P. Tyedmers. 2012. Moving beyond the fished or farmed dichotomy. *Marine Policy* 38: 369-374.

- I collected and analyzed data on lobster and other fisheries, and I contributed to writing the text around these case studies.

20. Hooper, D. U., E. C. Adair, B. J. Cardinale, J. E. K. Byrnes, B. A. Hungate, K. L. Matulich, A. Gonzalez, J. E. Duffy, L. Gamfeldt and **M. I. O'Connor**. 2012. A global synthesis reveals biodiversity loss as a major driver of ecosystem change. *Nature* 486: 105-108.

- I contributed to project design and development, analysis of data, and interpretation and editing of the manuscript.
- **Highly Cited Paper (HCP)**

19. Wolkowich, E. M., J. Regetz, and **M. I. O'Connor**. 2012. Advances in global change research require open science at the individual-level. *Global Change Biology* 18: 2102-2110.

- I contributed to project design and development, I wrote text on implementing open science in research groups, and to editing the manuscript.

18. Long, Z. T., **M. I. O'Connor** and J. F. ᵗBruno. *2012.* Effects of predation on intraspecific aggregation of prey and prey diversity in a subtidal marine food web. *Journal of Experimental Marine Biology and Ecology* 416: 115-120.

- I contributed data from three experiments I had led (partially published in papers # 7 and # 3) and edited the manuscript.

17. Burrows, M. T., D. Schoeman, C. M. Duarte, **M. I. O'Connor**, L. B. Buckley, C. V. Kappel, C. Parmesan, B. S. Halpern, C. J. Brown, K. Brander, J. F. ᵗBruno, J.M. Pandolfi, W. J. Sydeman, A. J. Richardson, E. S. Poloczanska. 2012. Invasive species unchecked by climate response. Letter: Response to Hulme. *Science* 335: 538-539.

- I contributed arguments and text on why velocity of climate change estimates are not confounded by invasive species.

* 16. Burrows, M. T., D. Schoeman, L. B. Buckley, P. Moore, E. S. Poloczanska, K. Brander, C. J. Brown, J. F. ᵗBruno, C. M. Duarte, B. S. Halpern, J. Holding, C. V. Kappel, W. Kiessling, **M. I. O'Connor,** J.M. Pandolfi, C. Parmesan , F. B. Schwing, W. J. Sydeman , A. J. Richardson. 2011. The Pace of Shifting Climate in Marine and Terrestrial Ecosystems. *Science* 334: 652-655.

- I contributed to the development of the concept and method and its presentation, and edited the manuscript.

* 15. **O'Connor, M. I.,** E. R. Selig, M. L. Pinsky and F. Altermatt. 2012. Toward a conceptual framework for climate change ecology. *Global Ecology and Biogeography* 21: 693-703.

- I designed the research and wrote the manuscript. Coauthors contributed specific sections of text reflecting their expertise, and collaborated on editing and revisions.

* 14. **O'Connor, M. I**⁼., B. Gilbert⁼, and C. J. Brown. 2011. Theoretical predictions for how temperature affects the dynamics of interacting herbivores and plants. *The American Naturalist* 178(5): 626-638.

- I initiated the project and wrote the manuscript. I collaborated with B. Gilbert to design the theoretical research approach. B. Gilbert and C. Brown contributed the mathematical theory; all authors edited the manuscript.

13. Cardinale, B. J., K. Matulich, D. U. Hooper, J. E. Byrnes, J. E. Duffy, L. Gamfeldt, P. Balvanera, **M. I. O'Connor**, and A. Gonzalez. 2011. The functional role of producer diversity in ecosystems. *American Journal of Botany* 98(3): 572-592.

- I contributed text on future directions, and edited the manuscript.
- **Highly Cited Paper (HCP)**

* 12. Kordas, R., C. D. G. Harley, **M. I. O'Connor**. 2011. Community ecology in a warming world: thermal influence on interspecific interactions. *Journal of Experimental Marine Biology and Ecology* 400: 218-226.

- Third most highly cited paper (of 341) published in this journal in 2011;
- **Highly Cited Paper (HCP)**

11. **O'Connor, M. I**., C. R. Violin, A. Anton, L. M. Ladwig and M. F. Piehler. 2011. Shoreline stabilization alters patterns of macroalgal primary production near salt marshes. *Wetlands Ecology and Management* 19:131-140. [OPEN ACCESS]

- All authors collected field data. I wrote the manuscript and analyzed the data under the mentorship of M. Piehler.

10. Smith, M. D., C. A. Rohiem, L. B. Crowder, B. S. Halpern, M. Turnipseed, J. L. Anderson, F. Asche, L. Bourillon, A. G. Guttormsen, A. Khan, L. A. Liguori, A. McNevin, **M. I. O'Connor**, D. Squires, P. Tyedmers, C. Brownstein, K. Carden, D. H. Klinger, R. Sagarin, K. A. Selkoe. 2010. Sustainability and Global Seafood. *Science.* 327: 784-786.

- I contributed to the development of the project, and made minor contributions of text and manuscript edits.

9. Moran, E. R., P. L. Reynolds, L. M. Ladwig, **M. I. O'Connor**, Z. T. Long, and J. F. ᵗBruno. 2010. Predation intensity is negatively related to plant species richness in a benthic marine community. *Marine Ecology Progress Series* 400: 277-282.

- I collaborated on the experimental design and procedures, and writing of the manuscript.

* 8. **O'Connor, M.I**., M. F. Piehler, D. M. Leech, A. Anton and J.F. ᵗBruno. 2009. Warming and resource availability shift metabolism of a marine food web. *PLoS Biology* 7(8) e1000178.

- I designed the research and wrote the manuscript, under the mentorship of M. Piehler and J. Bruno. All authors collected data.

7. **O'Connor, M.I.** and J.F. ᵗBruno. 2009. Predator richness has no effect in a diverse marine food web. *Journal of Animal Ecology* 78: 732-740.

- I designed the research, collected data and wrote the manuscript.
- Featured as an *In Focus* article with commentary by S. Loreaux and M. Loreau. 2009. Disentangling multiple predator effects in biodiversity and ecosystem functioning research. *Journal of Animal Ecology* 78(4): 695-698.

* 6. **O'Connor, M.I.** 2009. Warming strengthens an herbivore-plant interaction. *Ecology* 90(2) 388-398.

- I designed the research, collected data and wrote the manuscript.

5. Sax, D. F., J. J. Stachowicz, J. H. Brown, J. F. ᵗBruno, M. N. Dawson, S. D. Gaines, R. K. Grosberg, A. Hastings, R. D. Holt, M. M. Mayfield, **M. I. O'Connor,** and W. R. Rice. 2007. Ecological and evolutionary insights from species invasions. *Trends in Ecology and Evolution*. 22(9): 465-471.

- I contributed to the text on dispersal, and to manuscript edits.
- **Highly Cited Paper (HCP)**

* 4. **O'Connor, M.I.,** J.F. ᵗBruno, S.D. Gaines, B.S. Halpern, S.E. Lester, B.P. Kinlan and J.M. Weiss. 2007. Temperature control of larval dispersal: implications for marine ecology, evolution and conservation. *Proceedings of the National Academy of Sciences of the United States of America* 104: 1266-1271. [OPEN ACCESS]

- Commentary on #4 by Duarte, C. M. 2007. Marine ecology warms up to theory. *Trends in Ecology and Evolution* 22:331-333.
- **Highly Cited Paper (HCP)**

3. ᵗBruno, J.F. and **M.I. O'Connor**. 2005. Cascading effects of predator diversity and omnivory in marine food webs. *Ecology Letters* 8: 1048-1056.

- I collected data and collaborated with J. Bruno to write the manuscript.

2. McDonald, R., M. McKnight, D. Weiss, E. Selig, **M.I. O'Connor**, C. R. Violin, A. Moody. 2005. Species compositional similarity and ecoregions: Do ecoregion boundaries represent zones of higher species turnover? *Biological Conservation* 126: 24-40.

- I contributed to data analysis and manuscript writing and editing.
- recommended by P. Kareiva to Faculty of 1000.

1. Wonham, M. J., **M. O'Connor** and C. D. G. Harley. 2005. Positive effects of a dominant invader on introduced and native mudflat species. *Marine Ecology Progress Series,* 289: 109-116.

- I collected data in the field and processed samples in the lab, and contributed to writing the manuscript.

(b) Conference Proceedings

(c) Other

O1 Hoegh-Guldberg, O., C. Ronghuo, P. B. Brewer, V. J. Fabry, K. Hilmi, S. Jung, E. Poloczanska, S. Sundby, J. Bell, C. J. Brown, M. T. Burrows, L. Cao, S. Donner, C. M. Eakin, A. Eide, B. Halpern, C. R. McClain, S. McKinnell, **M. O'Connor**, C. Parmesan, R. Ian Perry, A. J. Richardson, S. Schoeman, S. Signorini, W. Skirving, D. Stone, W. Sydeman, R. Zhang, R. van Hooidonk. *Chapter 30. The Ocean*. In: Climate Change 2014: Impacts, Adaptation and Vulnerability, Fifth Assessment Report (AR5), **Intergovernmental Panel on Climate Change** (IPCC). 2014.

O2 Cavender-Bares, J., M. T. K. Arroyo, R. Abell, D. Ackerly, D. Ackerman, M. Arim, J. Belnap, F. Castañeda Moya, L. Dee, N. Estrada-Carmona, J. Gobin, F. Isbell, R. Jaffe, G. Köhler, M. Koops, N. Kraft, N. Mcfarlane, C. Martínez-Garza, J. P. Metzger, A. Mora, M. Oatham, A. Paglia, J. Pedrana, P. L. Peri, G. Piñeiro, R. Randall, W. W. Robbins, J. Weis, and S. R. Ziller. Chapter 3: Status, trends and future dynamics of biodiversity and ecosystems underpinning nature's contributions to people. In IPBES (2018): The IPBES regional assessment report on biodiversity and ecosystem services for the Americas. Rice, J., C. S. Seixas, M. E. Zaccagnini, M. Bedoya-Gaitán, and N. Valderrama. (eds.). Secretariat of the **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services**, Bonn, Germany, pp. 171-293, contributing author: **Mary I. O'Connor** (Canada).

O3 Nagel, E. J., G. Murphy, J. Fast, S. J. Bittick, E. M. Adamczyk, M. I. O'Connor, M. C. Wong, H. K. Lotze. Application of a coastal human impact metric and nitrogen loading model to 9 eelgrass

(Zostera marina) meadows in British Columbia. Canadian Technical Report of Fisheries and Aquatic Sciences ####

2. NON-REFEREED PUBLICATIONS

(a) Journals

A. J. Richardson, C. J. Brown, W. J. Sydeman, W. Kiessling, P. J. Moore, K. Brander, J. F. ᵗBruno, L. Buckley, M. T. Burrows, C. M. Duarte, B. S. Halpern, O. Hoegh-Guldberg, J. Holding, C. V. Kappel, **M. I. O'Connor**, J. M. Pandolfi, C. Parmesan, D. S. Schoeman, F. Schwing, E. S. Poloczanska. 2012. Meeting Report: Climate Change and Marine Life. *Biology Letters*. Published online.

(b) Conference Proceedings / Published Abstracts

(c) Other

O'Connor, M. I., D. Barneche, A. L. González, J. Messier. *2020.* Editorial: Unifying Ecology Across Scales: Progress, Challenges and Opportunities. *Frontiers in Ecology and Evolution.*

O'Connor, M. I. review of Marine Ecosystems: Human Impacts on Biodiversity, Functioning and Services. 2019. *Quarterly Review of Biology* 93: 26-27.

O'Connor, M. I. and J. Bernhardt. 2018. The Metabolic Theory of Ecology and the cost of parasitism. *PLoS Biology*.

Pennell, M. and **M. I. O'Connor**. 2017. A modest proposal for unifying macroevolution and ecosystem ecology. *The American Naturalist* 189: ii-iii.

O'Connor, M. I., J. ºBernhardt, and N. ºCaulk. 2015. Food webs. *Oxford Bibliographies* in Ecology. Ed: David Gibson. EIC: David Gibson. New York. Oxford University Press. June 29 2015.

Parrish, J.K., and K. Litle, *Editors*. 2004. "Where the River Meets the Sea: Case Studies of Pacific Northwest Estuaries". MO authored text, performed data analysis and produced figures. Work and publication funded by NOAA Coastal Ocean Program on award # NA960P0238.

O'Connor, M., M. Wonham, and C. Harley, 2001. Quantifying the impacts of an invader: The Asian mud snail Batillaria attramentaria on the mud flats of Padilla Bay, Wa. Washington State Department of Ecology (Publication No. 02-06-016), Padilla Bay National Estuarine Research Reserve Technical Report No. 25, 35 pp.

O'Connor, Mary. "Assessing the ecological impact of an introduced species: The Asian mud snail finds a home in Padilla Bay." *Puget Sound Notes* (44), Dec. 2000.

3. BOOKS

(a) Authored

(b) Edited

(c) Refereed Chapters

Cd. **O'Connor, M. I.,** J. R. Bernhardt, K. Stark, J. Usinowicz, and M. Whalen. *In press.* Chapter 6: Experimental evidence for how biodiversity affects ecosystem functioning. Ecological and Societal Consequences of Biodiversity Loss. Eds: M. Loreau, A. Hector, F. Isbell. ISTE Publishing Group, UK.

Ca. Jarvis, L., K. McCann, and **M. I. O'Connor**. *2019.* The asymmetrical impacts of climate change on food webs. In *Biodiversity and Climate Change, Vol II.* Edited by T. Lovejoy and L. Hannah. Yale University Press. Pp. 416.

Cb. **O'Connor, M. I**. and J. E. K. Byrnes. *2014.* Biodiversity and Ecosystem Functioning. In *Marine Community Ecology and Conservation*, Edited by M. Bertness, B. Silliman, J. Stachowicz and J. Bruno. Sinauer. Pp. 109-130.

Cc. **O'Connor, M. I.** and [t]Bruno, J. F. *2012.* Marine Invertebrates, in *Metabolic Ecology: A Scaling Approach* (eds R. M. Sibly, J. H. Brown and A. Kodric-Brown), John Wiley & Sons, Ltd, Chichester, UK. Pp. 188-197.

4. PATENTS

5. SPECIAL COPYRIGHTS

6. ARTISTIC WORKS, PERFORMANCES, DESIGNS

Poetry of Science:

2008. A poem about my research has been published in the *New Yorker* and the *New York Times* (online);

2009. I have collaborated with poet Melinda Palacio for a public Poetry of Science event in Santa Barbara, California, USA, organized by Santa Barbara Poet Laureate David Starkey. *2009.*

7. OTHER WORKS

Papers resulting from research and writing by students and post-docs in my lab, but on which I am not a co-author. For these papers, I provided minor mentorship in the writing, manuscript preparation or study design.

[+]Elahi, R., Sebens, K., and G. de Leo. 2016. Ocean warming and the demography of declines in coral body size. *Marine Ecology Progress Series* 560:147-158.

ºSiegle, M. R., Robinson, C. L. K. & J. Yakimishyn. 2014. The effect of region, body size, and sample size on the weight-length relationships of small-bodied fishes found in eelgrass meadows. *Northwest Science* 88(2) 140-154.

ºSiegle, M. R., E. B. Taylor, K. M. Miller. R. E. Withler, K. L. Yamanaka. 2013. Subtle population geneteic structure in Yelloweye Rocksfish (*Sebastes ruberrimus*) is consistent with a major oceanographic division in British Columbia, Canada. *PLoS ONE* 8: e71083.

ºBernhardt, J. R. and H. M. Leslie. 2012. Resilience to climate change in coastal marine ecosystems. *Annual Review of Marine Systems* 5: 8.1-8.22.

Papers resulting from working groups that I led, but on which I am not a co-author. For these papers, I contributed to the project development or design in some way, but not sufficiently to merit co-authorship (by my own standards).

**Bowler, D. E., A.D. Bjorkman, M. Dornelas, I. H. Myers-Smith, L. M. Navarro, A. Niamir, S.R. Supp, C. Waldock, M. Vellend, S. A. Blowes, K. Böhning-Gaese, H. Bruelheide, R. +Elahi, L.H. Antão, J. Hines, F. Isbell, H.P. Jones, A.E. Magurran, J. S. Cabral, M. Winter, and A.E. Bates. 2020. Mapping human pressures on biodiversity across the planet uncovers anthropogenic threat complexes. *People and Nature*.

**Blowes, S. A., S. R. Supp, L. H. Antao, A. Bates, H. Bruelheide, J. M. Chase, F. Moyes, A. Magurran, B. McGill, I. H. Myers-Smith, M. Winter, A. D. Bjorkman, D. E. Bowler, J. E. K. Byrnes, A. Gonzalez, J. Hines, F. Isbell, H. P. Jones, L. M. Navarro, P. L. Thompson, M. Vellend, C. Waldock, M. Dornelas. 2019. The geography of biodiversity change in marine and terrestrial assemblages. *Science.* 366: 339-345.

8. <u>WORK SUBMITTED</u> (including publisher and date of submission)

WSb. +Kirk, D., **M. I. O'Connor** and E. A. Mordecai. *In revision.* Scaling effects of temperature on parasitism from individuals to host-parasite systems. *ELife.* Submitted Aug 2021.

WSc. ºAdamczyk, E. A., **M. I. O'Connor**, L. Wegener-Parfrey. Seagrass (*Zostera marina*) transplant experiment uncovers microbial selectivity and core microbiome. *Molecular Ecology.* Submitted Nov 2020, *in revision*.

WSe. **Dunic, J. C., R. Elahi, M. J. S. Hensel, P. J. Kearns, **M. I. O'Connor**, D. Acuna, A. Honig, A. R. Wilson, and J. E. K. Byrnes. *In review*. Human activities influence the direction and magnitude of local biodiversity change over time. *PLoS Biology Submitted Jan 2020*.

WSh. Fronhofer, E. A., L. Govaert, **M. I. O'Connor**, S. J. Schreiber, F. Altermatt. *In revision*. The shape of density dependence and the relationship between population growth, intraspecific competition and equilibrium population density. *Oikos.* Submitted Dec 2018. *BioRxiv:* https://doi.org/10.1101/485946

WSk. Forest Isbell, Patricia Balvanera*, Akira S Mori*, Jin-Sheng He*, James M. Bullock*, Ganga Ram Regmi, Eric W. Seabloom, Simon Ferrier, Osvaldo E. Sala, Nathaly R. Guerrero-Ramírez, Julia Tavella, Daniel J. Larkin, Bernhard Schmid, Charlotte L. Outhwaite, Pairot Pramual, Elizabeth T. Borer, Michel Loreau, Taiwo Crossby Omotoriogun, David O. Obura, Maggie Anderson, Cristina Portales-Reyes, Kevin Kirkman, Pablo M Vergara, Adam Thomas Clark, Kimberly J Komatsu, Owen L. Petchey, Sarah R. Weiskopf, Laura J. Williams, Scott L. Collins, Nico Eisenhauer, Christopher H Trisos, Delphine Renard, Alexandra J. Wright, Poonam Tripathi, Jane Cowles, Jarrett E.K. Byrnes, Peter B Reich, Andy Purvis, Zati Sharip, **Mary I. O'Connor**, Clare E. Kazanski, Nick M. Haddad, Eulogio H. Soto, Laura E. Dee, Sandra Díaz, Chad R. Zirbel, Meghan L. Avolio, Shaopeng Wang, Zhiyuan Ma, Jingjing Liang, Hanan C. Farah, Justin Andrew Johnson, Brian W. Miller, Yann Hautier, Melinda D. Smith, Johannes M H Knops, Bonnie J.E. Myers, Zuzana V. Harmáčková, Jorge Cortés, Michael B. J. Harfoot, Andrew Gonzalez, Tim Newbold, Jacqueline Oehri, Marina Mazón, Cynnamon Dobbs, and Meredith S. Palmer. *In Review.* Expert estimates of biodiversity loss and its drivers and consequences. *Nature.* Submitted March 23 2021.

WSl. Usinowicz, J. and **M. I. O'Connor**. The fitness value of ecological information in a variable world. *In Revision*. Ecology Letters. Submitted Sept 2021.

Gonzalez et al One Earth Submitted, in review.