Carolyn Kolbe Tepolt
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RESEARCH INTERESTS

I use marine species invasions as natural experiments in rapid adaptation, examining how – and how quickly – marine populations respond to novel conditions. I'm particularly interested in how larval dispersal shapes the adaptive mechanisms that species can draw on when coping with short-term changes. By coupling high-throughput sequencing with physiology and ecology, I examine adaptation at multiple levels. My main areas of research are thermal adaptation in green crabs (*Carcinus maenas*), and coevolution in the crab-barnacle *Rhithropanopeus harrisii-Loxothylacus panopaei* host-parasite system. I also study the interplay of dispersal, selection, and physiology in a range of other marine species including American lobsters, barnacles, and tunicates.

EDUCATION

PhD **Stanford University**, Department of Biology 2014
Committee: Stephen Palumbi (advisor), George Somero, Elizabeth Hadly, Hunter Fraser

MSc **University of Otago**, Department of Zoology 2004
Advisors: Ian Jamieson, Jonathan Waters
Awarded with Distinction

BS **College of William & Mary**, Departments of Chemistry and Biology 2002
Advisor: Lizabeth Allison
Awarded with Honors in Biology

RESEARCH AND PROFESSIONAL EXPERIENCE

Woods Hole Oceanographic Institution, Woods Hole, MA 2017 – present
Associate Scientist (pre-tenure), Department of Biology (2021 – present)
Assistant Scientist, Department of Biology (2017 – 2021)

Smithsonian Institution, Washington, DC 2014 – 2017
Smithsonian Biodiversity Genomics Postdoctoral Fellow
Advisor: Gregory Ruiz
Project: Host-parasite coevolution across an invasion mosaic

Stanford University, Hopkins Marine Station, Pacific Grove, CA 2008 – 2014
PhD in Biology
Advisor: Stephen Palumbi
Thesis Research: Adaptation to temperature in a marine invasive species

Hopkins Marine Station of Stanford University, Pacific Grove, CA 2007 – 2008
Laboratory Technician, Molecular Ecology laboratory
Primary responsibility: Marine population genetics

United States Environmental Protection Agency, Cincinnati, OH 2005 – 2007
Contractor, Molecular Ecology Research Branch
Supervisor: Mark Bagley
Research: Invasion genetics of green crabs and other projects

University of Otago, Dunedin, New Zealand 2003 – 2004
MSc in Zoology
Advisors: Ian Jamieson & Jonathan Waters
Thesis Research: Conservation genetics of highly endangered bird species

Charles River Laboratories, Wilmington, MA 2002 – 2003
Technologist, Molecular Diagnostics Division
Primary responsibility: Genetic testing for infectious bacterial, viral, and fungal pathogens

College of William & Mary, Williamsburg, VA 1998 – 2002
BS in Chemistry & Biology
Advisor: Lizabeth Allison
Honors Research: Genetic basis of tuberculosis susceptibility in humans
(In collaboration with the **Dana-Farber Cancer Institute**)

FELLOWSHIPS AND SCHOLARSHIPS

Smithsonian Biodiversity Genomics Postdoctoral Fellow 2014 – 2016
Stanford Center for Computational, Evolutionary, and Human Genomics Fellow 2013 – 2014
National Defense Science and Engineering Graduate Fellow 2010 – 2013
EPA Science To Achieve Results Fellowship *declined to accept NDSEG*
Stanford Graduate Fellow 2008 – 2013

AWARDS AND HONORS

Francesca Gherardi Memorial Prize (for research in the biology of invasive animals) 2015
Shortlist, Best Student Paper Prize, Division of Ecology and Evolution 2014
Society for Integrative and Comparative Biology Annual Meeting
Young Investigator Presentation Award 2013
International Conference on Marine Bioinvasions
Arthur C. Giese Award for Original Experimental Work in Marine Biology 2013
1st Place, Steel Prize (science writing for non-scientists) 2013
Eugene C. and Aileen E. Haderlie Memorial Award 2011
Wessells Award (outstanding teaching assistant, Stanford Department of Biology) 2010
Excellence in Teaching Award 2009

PUBLICATIONS

WHOI student authors underlined. Student authors at other institutions *underlined and italicized*.

Du J, **Tepolt CK**, Grason EW, McDonald PS, Jia Y, Zhang WG. (2024) Dispersal pathways of European green crab larvae into and throughout the eastern Salish Sea. *Progress in Oceanography* 223:103245.

Reese TC, Blakeslee A, Crane L, *Fletcher LS*, Repetto MF, *Smith N*, *Stancil C*, **Tepolt CK**, Toscano BJ, Griffen BD. (2024) Shift from income breeding to capital breeding with latitude in the invasive Asian shore crab *Hemigrapsus sanguineus*. *Scientific Reports* 14:6654.

McGaughran A, Dhabi M, [and 24 authors, including **Tepolt C**]. (2024) Genomic tools in biological invasions: current state and future frontiers. *Genome Biology and Evolution* 16:evad230.

Tobias Z, Solow A, **Tepolt C**. (2024) Local adaptation and developmental plasticity shape spatiotemporal variation of post-larval thermal tolerance in the golden star tunicate, *Botryllus schlosseri*. *Journal of Thermal Biology* 119:103763.

Pineda J, **Tepolt C**, Starczak V, Alatalo P, Shapiro S. (2024) Concentration and condition of American lobster postlarvae in small-scale convergences. *Fisheries Oceanography* 33:e12657.

Tepolt CK. Thermal Biology. [book chapter] (2023) For: *Ecophysiology of the green shore crab Carcinus maenas and closely related species.* Ed: I McGaw & D Weihrauch. London: Elsevier. pp. 231-247.

Griffen BD, Bolander M, Blakeslee A, Crane L, Repetto MF, **Tepolt CK**, Toscano BJ. (2023) Past energy allocation overwhelms current energy stresses in determining energy allocation trade-offs. Ecology and Evolution 13:e10402.

Dykman LD, Kuris AM, **Tepolt CK**, Solow AR, Mullineaux LS. (2023) The influence of isolation, disturbance, and the biological community on parasite diversity at deep-sea hydrothermal vents. *Proceedings of the Royal Society B* 290:20230877.

Williams JD, Boyko CB, **Tepolt CK**, Blakeslee AMH. (2023) Cryptic diversity in endoparasitic isopods (Bopyroidea: Entoniscidae) from mud crabs along the Atlantic coast of the USA revealed by molecular and larval characters: the long and the short of it. *The Journal of Crustacean Biology* 43:1-20.

Reese TC, Alder J, *Asay EG*, Blakeslee AMH, *Cabrera D*, Crane L, *Fletcher L*, *Pinkston E*, Repetto M, *Smith N*, *Stancil C*, **Tepolt CK**, Toscano B, Griffen BD. (2023) Effects of season and latitude on the diet quality of the invasive Asian shore crab. *Marine Ecology Progress Series* 704:67-79.

Griffen BD, Alder J, Anderson III, L, *Asay EG*, Blakeslee AMH, Bolander M, *Cabrera D*, Carver J, Crane L, DiNuzzo ER, Fletcher LS, Luckett J, Meidell M, *Pinkston E*, *Reese TC*, Repetto M, *Smith N*, *Stancil C*, **Tepolt CK**, Toscano BJ, Vernier A. (2022) Latitudinal and temporal variation in injury and its impacts in the invasive Asian shore crab *Hemigrapsus sanguineus*. *Scientific Reports* 12:16557.

Tepolt CK, Grosholz ED, De Rivera C, Ruiz GM (2022) Balanced polymorphism fuels rapid selection in an invasive crab despite high gene flow and low genetic diversity. *Molecular Ecology* 31:55–69. **Profiled in Molecular Ecology News and Views.**

Tobias ZJC, Fowler AE, Blakeslee AMH, Darling JA, Torchin ME, Miller AW, Ruiz GM, **Tepolt CK**. (2021) Invasion history shapes host transcriptomic response to a body-snatching parasite. *Molecular Ecology* 30:4321–4337.

Blakeslee AMH, *Pochtar D*, Fowler AE, *Moore C*, *Lee T*, *Barnard R*, *Swanson K*, *Lukas L*, *Ruocchio M*, Torchin ME, Miller AW, Ruiz GM, **Tepolt CK**. (2021) Invasion of the body snatchers: parasite introduction influences host distribution and response to salinity in invaded estuaries. *The Proceedings of the Royal Society B* 288:20210703.

Grosholz E, Ashton G, Bradley M, Brown C, Ceballos-Osuna L, Chang A, de Rivera C, Gonzalez J, Heineke M, Marraffini M, McCann L, Pollard E, Pritchard I, Ruiz G, Turner B, **Tepolt C** (2021) The Hydra effect, overcompensation, and the failure to eradicate an invasive predator. *Proceedings of the National Academy of Sciences USA* 118:e2003955118.

Tepolt CK, Palumbi SR (2020) Rapid adaptation to temperature via a potential genomic island of divergence in the invasive green crab, *Carcinus maenas*. *Frontiers in Ecology and Evolution* 8:580701.

Tepolt CK, Blakeslee AMH, Fowler AE, Darling JA, Torchin ME, Miller AW, Ruiz GM (2020) Strong genetic structure in a widespread estuarine crab: A test of potential versus realized dispersal. *Journal of Biogeography* 47:2532–2542.

Fowler AE, Blakeslee AMH, Bortolus A, Dias J, **Tepolt CK**, Schwindt E. (2020) Current research, pressing issues, and lingering questions in marine invasion science: lessons from the Tenth International Conference on Marine Bioinvasions (ICMB-X). *Aquatic Invasions* 15: 1-10.

Tepolt CK, Blakeslee AMH, Fowler AE, Torchin M, Darling J, Miller W, Ruiz G (2020) Recent introductions reveal differential susceptibility to parasitism across an evolutionary mosaic. *Evolutionary Applications* 13:545–558

Blakeslee AMH, Manousaki T, Vasileiadou K, **Tepolt CK** (2020) An evolutionary perspective on marine invasions. *Evolutionary Applications* 13:479–485

Coyle AF, *Voss ER*, **Tepolt CK**, Carlon DB. (2019) Mitochondrial genotype influences the response to cold stress in the European green crab *Carcinus maenas*. *Journal of Experimental Biology* 222:jeb203521

Sherman CDH, Rollins LA, Miller AD, Richardson MF, **Tepolt CK**, Lotterhos KE (2016) What are we missing about marine invasions? Filling in the gaps with evolutionary genomics. *Marine Biology* 163:198

Tepolt CK, Palumbi SR (2015) Transcriptome sequencing reveals both neutral and adaptive divergence in a marine invader. *Molecular Ecology* 24: 4145–4158

Tepolt CK (2015) Adaptation in marine invasions: a genetic approach. *Biological Invasions* 17(3): 887-903. **Invited review.**

Tepolt CK, Somero GN (2014) Master of all trades: thermal acclimation and adaptation of cardiac function in a broadly-distributed marine invasive species, the European green crab, *Carcinus maenas*. *Journal of Experimental Biology* 217: 1129-1138. **Featured in Nature Research Highlights and Inside JEB; Shortlist, 2014 JEB Outstanding Paper Prize.**

Vanderhoeven S, Brown CS, **Tepolt CK**, Tsutsui ND, Vanparys V, Atkinson S, Mahy G, Monty A (2010) Linking concepts in the ecology and evolution of invasive plants: network analysis shows what has been most studied and identifies knowledge gaps. *Evolutionary Applications* 3: 193-202

Tepolt CK, Darling JA, Bagley MB, Geller JB, Blum MJ, Grosholz ED (2009) European green crabs (*Carcinus maenas*) in the northeastern Pacific: genetic evidence for high population connectivity and current-mediated expansion from a single introduced source population. *Diversity and Distributions* 15: 997–1009

Darling JA, Bagley MJ, Roman J, **Tepolt CK**, Geller JB (2008) Genetic patterns across multiple introductions of the globally invasive crab genus *Carcinus*. *Molecular Ecology* 17(23): 4992-5007

Darling JA, **Tepolt CK** (2008) Highly sensitive detection of invasive shore crab (*Carcinus maenas* and *Carcinus aestuarii*) larvae in mixed plankton samples using polymerase chain reaction and restriction fragment length polymorphisms (PCR-RFLP). *Aquatic Invasions* 3(2): 141-152

Tepolt CK, Blum MJ, Lee VA, Hanson ED (2007) Genetic analysis of the Chinese mitten crab (*Eriocheir sinensis*) introduced to the North American Great Lakes and St. Lawrence Seaway. *Journal of Great Lakes Research* 33: 658-667

Boessenkool S, Taylor S, **Tepolt C**, Komdeur J, Jamieson IG (2007) Large mainland populations of South Island robins retain greater genetic diversity than offshore island refuges. *Conservation Genetics* 8(3): 705-714

Tepolt CK, Bagley MJ, Geller JG, Blum MJ (2006) Characterization of microsatellite loci in the European green crab (*Carcinus maenas*). *Molecular Ecology Notes* 6: 343-345

MANUSCRIPTS IN REVIEW OR REVISION

Student authors underlined. Student authors at collaborators' institutions *underlined and italicized*.

Dykman LN, **Tepolt CK**, Blend CK, Mullineaux LS. Discovery of indirect parasite life cycles at deep-sea hydrothermal vents. In post-review revision for *Marine Ecology Progress Series*.

Tobias Z, **Tepolt C**. Clinal variation of thermal tolerance during northward range expansion in the invasive golden star tunicate, *Botryllus schlosseri*. In review at *The Journal of Experimental Biology*.

Viard F, **Tepolt C**. Using genomics to understand if and how marine invaders adapt. Chapter in review for *Invasion Genomics* book to be published by CABI.

MENTORING

MIT-WHOI Joint Program in Oceanography 2018 – present

PhD students:
- Zac Tobias (2024 PhD)
- Kela Bakari (PhD anticipated 2027)

PhD committee member:
- Lauren Dykman (2022 PhD)
- Cory Berger (2023 PhD)
- Jane Weinstock (PhD anticipated 2024)
- Michael Meneses (MS anticipated 2024)

Woods Hole Oceanographic Institution 2019 – present

Postdoctoral researchers:
- Amy Van Cise (WHOI Postdoctoral Scholar, 2019-2021)

Yaamini Venkataraman (WHOI Postdoctoral Scholar / NSF Fellow, 2021 – present)
Sara Gonzalez (WHOI Postdoctoral Scholar, 2022 – present)
Alex Ascher (Postdoctoral Investigator / Guest Investigator, 2023 – present)

Undergraduate researchers:

NSF REU summer fellows:

Jeanette Gray, Kela Bakari, James Heiser, Julia Kelso

Kelso won the Best Student Poster Award in Comparative Physiology and Biochemistry at the 2024 Society for Integrative & Comparative Biology conference.

Partnership Education Program scholars:

Christabelle Agyapong, Lauren Stephenson

Cape Cod Community College program students:

Mikayla Newbrey, Shayla Flaherty, McCaela Acord, Vanessa Calloway

Newbrey placed 3rd in the student poster competition at the 2023 International Conference on Marine Bioinvasions.

Other programs:

Corey McElroy, Gareth Miller

Smithsonian Environmental Research Center 2014 – 2017

Undergraduate researchers:

Darin Rummel, Connor Hinton

High School researcher:

Pavan Ravindra

Hopkins Marine Station of Stanford University 2013 – 2014

Undergraduate researcher, California State University at Monterey Bay:

Timothy Fuller

Fuller placed first in the Ecology poster competition at the 2013 SACNAS conference.

Other institutions 2018 – present

PhD committee member:

Becca Barnard (2019 MS, East Carolina University)
Renee Halloran (2023 PhD, University of Massachusetts, Dartmouth)
Darby Pochtar (2023 PhD, George Mason University)
Carter Stancil (PhD anticipated 2026, East Carolina University)

TEACHING

MIT-WHOI Joint Program in Oceanography 2018 – present

Co-instructor and developer, Environmental Bioinformatics
Co-instructor and developer, Topics in Marine Molecular Ecology
Co-instructor and developer, Topics in Marine Adaptation
Co-instructor and developer, Topics in Marine Metapopulations

Woods Hole Oceanographic Institution 2024 – present

Faculty facilitator, Writing a Better Science Proposal workshop

Other institutions, guest lectures

Sea Education Association, Marine Biodiversity and Conservation (2023 & 2024)
George Mason U., Marine Ecology (2023)
SSF / PEP program lecture (2022)
Marine Parasitology and Disease field course, Shoals Marine Laboratory (2022)

Other institutions, outside examiner 2023 – present

MSc thesis, University of Waikato (New Zealand)

National Museum of Natural History Peer-Led Bioinformatics Workshop 2016

Taught bioinformatics workshops on genomics, data analysis, and plotting.

Hopkins Marine Station of Stanford University, Pacific Grove, CA 2010
Teaching Assistant: Molecular Ecology (lecture and labs)
Wessells Award for Outstanding Course Assistant in Biology
Teaching Assistant: Experimental Design and Probability
Stanford University, Stanford, CA 2008
Teaching Assistant: Biology Core - Genetics, Biochemistry, and Molecular Biology
Excellence in Teaching Award
University of Otago, Dunedin, New Zealand 2004
Demonstrator: Eukaryotic Genetics (labs)
Demonstrator: Introductory biology (labs)

INVITED SEMINARS AND PRESENTATIONS

U. of Massachusetts at Amherst Organismic and Evolutionary Biology seminar, Amherst MA 2024
Delta Invasive Species Symposium 2023
Keynote. SMBE: Role of the Genome in Biological Invasions. Hamilton, NZ. 2022
East Carolina University, Biology Department Seminar (virtual). 2021
Annual Shellfish Conference and Tradeshow, Green Crab Science session (virtual). 2021
U. of Massachusetts at Dartmouth, Biology Department Seminar (virtual). 2021
APS Comparative Physiology: Complexity & Integration Conference. New Orleans, LA. 2018
Asian Evolutionary Research Conference. Shenzhen, China. 2018
Salish Sea Ecosystem Conference, Green Crab Science Panel. Seattle, WA. 2018
U. of Maine, School of Marine Sciences Seminar. Orono, ME. 2018
Stonehill College, Biology Department Seminar. Easton, MA. 2017
Bowdoin College, Biology Department Seminar. Brunswick, ME. 2016
Old Dominion U., Biological Sciences Seminar. Norfolk, VA. 2016
George Washington U., Biological Sciences Seminar. Washington, DC. 2016
Woods Hole Oceanographic Inst., Biology Department Special Seminar. Woods Hole, MA. 2016
U. of Delaware, College of Earth, Ocean, & Environment Seminar. Lewes, DE. 2016
Temple U., Department of Biology Seminar. Philadelphia, PA. 2016
Fort Johnson Marine Science Seminar, College of Charleston. Charleston, SC. 2015
Smithsonian Inst. for Biodiversity Genomics—Global Genome Initiative. Washington, DC. 2015
Francesca Gherardi Memorial Seminar, University of Florence. Florence, Italy. 2015
Humboldt State U., Biological Sciences Seminar. Arcata, CA. 2013
Ecological Genomics Symposium. Kansas City, MO. 2013

CONTRIBUTED PRESENTATIONS AND INTERNAL TALKS

International Conference on Aquatic Invasive Species, Halifax NS Canada 2024
ICES WG on the Introduction and Transfer of Marine Organisms. Seville, Spain. 2024
American Lobster Initiative Summit, Portland ME. 2024
Alaska Marine Science Symposium, Anchorage AK. 2024
PICES Annual Meeting, Seattle WA. 2023
International Conference on Marine Bioinvasions, Baltimore MD. 2023
American Lobster Initiative Summit, Portland ME. 2023
Western Regional Panel on Aquatic Invasive Species, Anchorage AK. 2022
Salish Sea Ecosystem Conference, virtual. 2022
Benthic Ecology Meeting, Portsmouth NH. 2022
Woods Hole Oceanographic Institution, Biology Department Seminar, virtual. 2020
ICES WG on the Introduction and Transfer of Marine Organisms. Gdynia, Poland. 2020
ICES WG on the Introduction and Transfer of Marine Organisms. Weymouth, England. 2019
International Conference on Marine Bioinvasions. Puerto Madryn, Argentina 2018
Marine Evolution Conference. Stromstad, Sweden. 2018
Benthic Ecology Meeting (poster presented by REU student) 2018

ICES Annual Science Conference, Ft. Lauderdale FL 2017
Helminthological Society of Washington Spring Meeting 2016
Tidewater Chapter, American Fisheries Society Meeting 2016
Benthic Ecology Meeting 2016
International Conference on Marine Bioinvasions (2 oral presentations) 2016
Science & Coffee, Smithsonian Environmental Research Center 2016
Science & Coffee, Smithsonian Environmental Research Center 2015
Society for Integrative and Comparative Biology Annual Meeting 2014
Shortlist, Division of Ecology and Evolution's Best Student Paper Prize
International Conference on Marine Bioinvasions 2013
Young Investigator Presentation Award
Evolution 2013
Society for Integrative and Comparative Biology Annual Meeting 2013
Western Society of Naturalists Annual Meeting 2012
Western Society of Naturalists Annual Meeting 2008
Western Society of Naturalists Annual Meeting 2007
International Conference on Aquatic Invasive Species (Poster) 2007
MolEcol03 (Molecular Ecology, University of Otago) 2003
Threatened Island Birds Workshop 2003

PUBLIC LECTURES AND STAKEHOLDER MEETINGS

Massachusetts Lobsterman's Association Weekend, Hyannis MA (presented by co-PI) 2024
Washington European Green Crab Manager's Symposium (contributed posters) 2024
Washington Green Crab Task Force meeting (virtual) 2023
Alaska Invasive Species Partnership meeting presentation (virtual) 2023
Washington European Green Crab Multi-Agency Coordination Group (virtual) 2023
Middleborough High School Science Cafe, Middleborough, MA 2023
Washington Sea Grant Crab Team, Seattle, WA (virtual) 2021
Sippican Philosophical Society, Marion, MA (virtual) 2021
WHOI's Ocean Science Cafe lecture series 2019
Darling Marine Center Friday Science Seminar 2018
Road Scholar evening lecture, Cape Cod and Woods Hole trip 2017
Woods Hole Oceanographic Institution, Science Made Public lecture series 2017
Apalachicola National Estuarine Research Reserve, Public Lecture 2015
Smithsonian Environmental Research Center, Evening Public Lecture Series 2015

OCEANOGRAPHIC CRUISES

Day cruises (7 total) on the R/V Gulf Challenger, southern Gulf of Maine 2021
RR2102 (R/V Thomas G. Thompson with ROV Jason & AUV Sentry, 9N East Pacific Rise) 2021
AT42-21 (R/V Atlantis with DSV Alvin & AUV Sentry, 9N East Pacific Rise) 2019-2020
AT42-06 (R/V Atlantis with DSV Alvin & AUV Sentry, 8N seamounts & 9N East Pacific Rise) 2018
AT37-12 (R/V Atlantis with DSV Alvin, 9N East Pacific Rise) 2017

SELECTED OUTREACH

Massachusetts Marine Educators Workshop 2021
Gave talk discussing marine invasive species in the context of Massachusetts learning objectives to a group of approximately 25 middle- and high-school teachers; designed and ran hands-on exercises related to this topic
Washington Sea Grant's Crab Team 2019, 2021

Presented genetic results to citizen science volunteers; these volunteers conduct ongoing monitoring and sample collection at the European green crab's expanding range edge in the Salish Sea

Salish Sea Transboundary Action Plan for Invasive European Green Crab 2019
Contributed data that was used in the development of this plan, a joint Washington-British Columbia management document published by the Puget Sound Partnership

Deep-Sea Exploration in the 21st Century 2018
Led ship tours & assisted with WHOI-UNOLS-NSF outreach event in San Diego

Chesapeake Bay Parasite Project 2015 – 2017
Helped lead teams of 4-18 volunteer citizen scientists in day-long ecological surveys of mud crab and invasive parasite prevalence in the Chesapeake Bay; surveys took place over the course of the summer and contributed to a 15-year ecological data set.

Expert Is In, Sant Ocean Hall, National Museum of Natural History 2016
Engaged 190 museum visitors with a hands-on research display on mud crab parasitism.

Smithsonian Environmental Research Center Open House 2016

Educational tour leader, Hopkins Marine Station 2009 – 2014
Gave tours of Hopkins research and history to high school and college students and interested outside groups; led approximately one tour per month.

Co-founder and editor of sciencefare.org 2011 – 2013
Wrote, edited, and ran a blog dedicated to teaching the scientific method through cooking, sponsored by science education nonprofit Iridescent.

Volunteer scientist for Ocean Heroes 2009 – 2013
Assisted in planning and running educational field trips for underserved middle school students in the Seaside Boys and Girls Club.

Television appearance, Top Chef Masters S3E8 "Blinded Me With Science" 2011

SELECTED SERVICE TO THE SCIENTIFIC COMMUNITY

ICES Working Group: Introduction and Transport of Marine Organisms 2017 – present
US delegate 2018 – present; invited speaker / participant in 2017

European Green Crab Management Plan Working Group 2022 – 2023
Invited member of expert group created to advise the federal Aquatic Nuisance Species Task Force. Author (one of 31), of the 2023 Management Plan for the European Green Crab.

PICES Advisory Panel: Marine Non-indigenous Species 2022 – present

Co-editor, Aquatic Invasions Special Issue on Marine Invasion Research 2018 – 2020

Co-organizer, Evolution in Marine Invasion session, Int. Conf. on Marine Bioinvasions 2018

Co-editor, Evolutionary Applications Special Issue on Marine Invasion Evolution 2018 – 2020

Co-organizer, *Evolutionary Biology of Marine Invasions session, Marine Evolution 2018*

ICES Scientific Report 2019
Author (one of 52), report of the Working Group on Introductions and Transfers of Marine Organisms (WGITMO).

Peer reviewer (papers) 2008 – present
Aquatic Invasions, BioInvasions Records, Biological Bulletin, Biological Invasions, BMC Ecology, Crustaceana, Diversity and Distributions, Ecological Indicators, Ecology and Evolution, Evolution, Evolutionary Applications, Fisheries Research, Global Ecology and Biogeography, Heredity, ICES Journal of Marine Science, iScience, Journal of Experimental Biology, Marine Biology, Marine Ecology Progress Series, Molecular Ecology, Molecular Ecology Resources, NeoBiota, PeerJ, Philosophical Transactions B, PLoS ONE, Scientific Reports

Panelist (grants and fellowships) 2021 – present
NSF Biological Oceanography, NSF Division of Biological Infrastructure, Maine Sea Grant

Ad hoc reviewer (grants and fellowships) 2015 – present
NSF Biological Oceanography, National Science Center of Poland, French National Research Agency, Israel Science Foundation, New Hampshire Sea Grant, USC Sea Grant, Maine

Agricultural and Forest Experiment Station, Graduate Women in Science fellowship program, National Defense Science and Engineering Graduate fellowship program

SELECTED INSTITUTIONAL SERVICE

WHOI VP/Dean Selection Committee 2022 – present
WHOI Biology Hiring Committee 2018 – 2023
MIT-WHOI Joint Program Admissions Committee 2018 – 2020
WHOI Biology Seminar co-coordinator 2019 – 2020
Smithsonian-Cornell Joint Retreat 2015
Represented Smithsonian Env. Research Center at a retreat to develop collaboration and a joint graduate training program between Smithsonian and Cornell University.
Fellowship evaluation committee, Smithsonian Biodiversity Genomics Fellowship 2015
Ecological Genomics planning committee, Smithsonian Env. Research Center 2014 – 2017
Three-person team responsible for conceiving and planning a Center for Ecological Genomics at SERC; proposal involves a 5-year plan for facilities, equipment, and personnel. Obtained $84,600 of funding for the first year of the project.
Co-organizer, Science & Coffee series, Smithsonian Env. Research Center 2014 – 2015
Liaison to the Monterey Area Research Institutions' Network for Education 2012 – 2013
Planned and organized seminars and educational programs at seven collaborating marine research and policy institutions around the Monterey Bay.
Co-organizer, Stanford Oceans Colloquium 2013
Lead organizer, Graduate student-run Fall Seminar Series, Stanford University 2011
Co-organizer, Graduate student-run Fall Seminar Series, Stanford University 2010
Organizer, 16th University of Otago Zoology Postgraduate Colloquium 2003

POPULAR PRESS INTERVIEWS

WIRED, M. Simon 8 November 2023
The Hidden, Awful Way That Climate Change Imperils Animals
Oceanus Magazine, D. Levin Spring 2020
Uncharted Waters
Boston Globe, F Freyer 7 August 2019
Cracking the secret of green crabs
WHOI Ocean Insights, C. Tepolt 25 April 2019
Seeing Green (crabs)
Encyclopedia of Puget Sound, Y Venkataraman 15 May 2018
Where did the Puget Sound green crabs come from? We're still not sure
Washington Sea Grant, E Grason 25 April 2018
Where are the European Green Crab in the Salish Sea Coming From?
Cape Cod Times, E Genter 18 September 2017
Green crab count in progress on Nantucket
Side Door podcast, T Cohn & M Detrie 23 November 2016
Masters of Disguise: Tales of deception and trickery
ECU News Service, J Norwood 22 July 2016
Shell Snatchers: Parasite hijacks mud crab life cycle
ABC2 News, D Harrison 31 March 2016
Body snatching parasite turns mud crabs to crab zombies
onEarth magazine, A Opar 18 February 2016
Weird Science: Zombie Crabs!
Chesapeake Bay News, J Valente 28 October 2015
'Zombie' crabs invade the Chesapeake Bay
Hakai magazine, C Arnold 20 October 2015
The Crab-Walking Dead

Chesapeake Bay Journal, L Lutz 19 October 2015
Invasion of body snatchers turns mud crabs into zombies
On The Edge newsletter, C Patrick Summer 2015
Can Crabs Adapt Their Way Out of an Invasion?
WAMU: American University Radio, J Wilson 29 June 2015
'Bodysnatching' Parasite Sweeping Through Crab Populations In Chesapeake Bay
Shorelines blog, C Patrick 23 June 2015
Under the Apron, into the Genome

OTHER EXPERIENCE AND SKILLS

Long-distance backpacking: Pacific Crest Trail solo through-hike (2,500+ miles) in 2014
Programming in python, R, and bash: scripting for bioinformatic analyses
Science writing for non-scientists: co-founding editor and writer for sciencefare.org (2011-2015)
Field station caretaking: live-in caretaker for the Hopkins Marine Station in Pacific Grove, CA
Basic electronics: building and repairing field equipment for thermal biology experiments