

Richelle Tanner, Ph.D.  
richelle.tanner@richelletanner.com | www.seaclab.com  
Environmental Science & Policy Program, Chapman University

**RESEARCH FIELD:** Effects of climate change on human and ecological communities

## EDUCATION

Year	Degree
2018	<b>Ph.D. Integrative Biology;</b> University of California, Berkeley Climate change effects on thermal tolerance plasticity and population dynamics in the eelgrass sea hare, <i>Phyllaplysia taylori</i> (Advisors: Jonathon Stillman & Wayne Sousa)
2015	<b>B.S. Environmental Studies;</b> University of Southern California Correlating secondary productivity and habitat composition in a Southern California Marine Protected Area (Advisors: David Ginsburg & Lisa Collins)
2015	<b>B.M. Jazz Studies;</b> University of Southern California, Thornton School of Music Piano Performance

## PROFESSIONAL EXPERIENCE

Year	Institution	Details
2022-present	Chapman University	Director & Advisor, Environmental Science & Policy Program
2021-present	Chapman University	Assistant Professor of Environmental Science & Policy, Schmid & Wilkinson Colleges
2021-present	Southern California Academy of Sciences	Board of Directors; DEI Chair
2020-present	Journal of Zoology	Senior Editor, Reviews & Perspectives
2019-2021	National Network for Ocean and Climate Change Interpretation (NNOCCI)	Science Director
2020-2021	University of California, Davis	CA Sea Grant Delta Science Postdoctoral Fellow (Advisor: Anne Todgham)
2018-2020	Washington State University	Postdoctoral Research Associate, School of Biological Sciences (Advisor: Wes Dowd)
2015	Naval Postgraduate School	Naval Research Enterprise Internship Program (Advisor: Wendell Nuss)

## HONORS & AWARDS (since 2015)

Year	Organization	Description
2024	Chapman University	Undergrad. Research Mentorship Award
2023	Chapman University	On-Campus Conference Award
2023	Chapman University	Co-Teaching Award
2023	Chapman University	Pedagogical Innovation Award
2015-2018	National Science Foundation	Graduate Research Fellowship (\$132K)

**GRANTS (since 2020)**

Year	Source	Details
2025	USC Sea Grant	Rapid Response Funding, \$10K
2024-2026	NASA	CONNECT-SBG, \$300K (co-PI)
2024-2026	NSF	BIO-LEAPS, \$495K
2023-2024	California Sea Grant	Pathways to Inclusive Research Training, \$75K
2022-2023	Chapman University	Research Seed Funding, \$20K
2021-2024	Delta Stewardship Council	Delta Science Award, \$152K (\$1M award)
2021-2023	NOAA	NNOCCI support, \$100K
2022-2023	NOAA	eeBLUE – NNOCCI research support, \$15K
2021	Company of Biologists	Scientific Meeting Grant, £3,000
2020	Company of Biologists	Scientific Meeting Grant, £2,000
2020-2022	California Sea Grant	Delta Science Fellowship, \$230K
2020-2021	Evolving Seas Research Coordination Network	Junior Professional Development Exchange, \$2,000
2020	Society for Integrative and Comparative Biology (NSF)	Travel Funding, NSF-funded complementary session, \$1,300
<b>Grants under review</b>		
2024	NSF	CAREER, \$1.05M
2024	EPA	Environmental Justice Grants, \$1.4M
2025	CA Coastal Conservancy	Explore the Coasts, \$100K

**PUBLICATIONS & PRESENTATIONS**

Google Scholar: <https://scholar.google.com/citations?user=Jxy-8a8AAAAJ&hl=en>

**PEER REVIEWED**

<sup>§</sup>Mentored student

24. **Tanner RL**, Wang-Claypool C, Bowie RCK, Stillman JH (2025). Variation in thermal tolerance plasticity and the costs of heat exposure in the estuarine sea hare, *Phyllaplysia taylori*. *Ecosphere*.
23. **Tanner RL**, Burnett NP, King EE, Todgham AE (2025). Remodeling pedagogical evaluation tools to incorporate student self-efficacy and sense of belonging in scientific research. *Biochemistry and Molecular Biology Education*. doi: 10.1002/bmb.21881
22. Haworth L<sup>§</sup>, Nancollas S, Landa S<sup>§</sup>, Todgham AE, & **Tanner RL** (2024). Invasion stress mitigates climate stress in a brackish marsh amphipod. *Journal of Applied Ecology*. 00: 1-14. doi: 10.1111/1365-2664.14847
21. Gleason LU, Fekete FJ, **Tanner RL**, & Dowd WW (2023). Multi-omics reveals largely distinct transcript-and protein-level responses to the environment in an intertidal mussel. *Journal of Experimental Biology*, 226(22), jeb245962.
20. Hagani JS, Takekawa JY, Chappell SC, **Tanner RL**, Ernst AR, Kettenring KM (2023). A remote sensing approach to assess the historical invasion of *Phragmites australis* in a brackish coastal marsh. *Frontiers in Ecology and Evolution*. 11: 1171245. doi: 10.3389/fevo.2023.1171245
19. **Tanner RL** & Onthank KL (2022). Open source solutions in experimental design: an introduction to the symposium. *Integrative & Comparative Biology*. ica132. doi: 10.1093/icb/icac132 **Special symposium grouping** “Open technology in experimental biology”.

18. **Tanner RL** & Moore TY (2022). Virtual expeditions facilitated by open source solutions broaden student participation in natural history research. *Integrative & Comparative Biology*. icac065. doi: 10.1093/icb/icac065 **Special symposium grouping** “Open technology in experimental biology”.
17. Oellermann M, Jolles JW, Ortiz D, Seabra R, Wenzel T, Wilson H, & **Tanner RL** (2022). Open hardware in science: the benefits of open electronics. *Integrative & Comparative Biology*. icac043. doi: 10.1093/icb/icac043 **Special symposium grouping** “Open technology in experimental biology”.
16. **Tanner RL**, Gleason LU, & Dowd WW (2022). Environment-driven shifts in interindividual variation and phenotypic integration within subnetworks of the mussel transcriptome and proteome. *Molecular Ecology*. 31(11): 3112-3127. doi: 10.1111/mec.16452
15. Burnett NP, Hernandez AM, King EE, **Tanner RL**, & Wilsterman K (2022). A push for inclusive data collection in STEM organizations. *Science*. 376(6588):37-39. doi: 10.1126/science.abo1599
14. Nguyen KH, Akiona AK, Chang CC, Chaudhary VB, Cheng S, Johnson SK, Kahanamoku SS, Lee A, de Leon Sanchez EE, Segui LM, & **Tanner RL** (2021). Who are we? Highlighting nuances in Asian American experiences in ecology and evolutionary biology. *Ecological Society of America Bulletin*. e01939. doi: 10.1002/bes2.1939
13. Bonanno A, Ennes M, Hoey J, Moberg E, Nelson SM, Pletcher N, & **Tanner RL** (2021). Empowering hope-based climate change communication techniques for the Gulf of Maine. *Elementa*. 9(1): 00051. doi: 10.1525/elementa.2020.00051 **Invited submission** to special issue “Gulf of Maine 2050”.
12. Burnett NP, Armstrong EJ, Romero R, Runzel C, & **Tanner RL** (2021). Kelp morphology and herbivory are maintained across latitude despite geographic shift in kelp-wounding herbivores. *Biological Bulletin*. 241(2): 168-184. doi: 10.1086/715039
11. McAlpine-Bellis L<sup>S</sup>, Stillman JH, & **Tanner RL** (2021). Acclimation to future climate exposes vulnerability to cold extremes in intertidal sea hares. *Integrative and Comparative Biology*. doi: 10.1093/icab087 **Invited submission** to *Integrative and Comparative Biology*.
10. **Tanner RL**, Grover N, Anderson ML, Crocker KC, Dutta S, Horner AM, Hough LE, Moore TY, Rosen GL, Stack-Whitney K, Summers A (2021). Examining Cultural Structures and Functions in Biology. *Integrative and Comparative Biology*. doi:10.1093/icb/icab140 **Invited submission** to special issue from the NSF Reintegrating Biology Jumpstart Meeting.
9. **Tanner RL** & Collins LE (2021). Using publicly-available long-term climate records in undergraduate interdisciplinary big data curriculum. *Journal of College Science Teaching*. 51(2): 51-55.
8. Burnett NP, King EE, Salcedo MK, **Tanner RL**, & Wilsterman K (2020). Conference scheduling undermines diversity efforts. *Nature Ecology & Evolution*. 4: 1283-1284. doi: 10.1038/s41559-020-1276-5
7. **Tanner RL**, Bowie RCK, & Stillman JH (2020). Parental effects on thermal tolerance plasticity under climate change scenarios in the eelgrass sea hare. *Marine Ecology Progress Series*. 634: 199-211. doi: 10.3354/meps13207
6. **Tanner RL**, Obaza AK, & Ginsburg DW (2019). Secondary Production of Kelp Bass *Paralabrax clathratus* in Relation to Coastal Eelgrass *Zostera marina* Habitat in a Southern California Marine Protected Area. *Southern California Academy of Sciences Bulletin*. 118(3): 158-172. doi: 10.3160/0038-3872-118.3.158
5. Wang T<sup>S</sup>, **Tanner RL**, Armstrong EJ, Lindberg DR, & Stillman JH (2019). Thermal plasticity in file limpet, *Lottia limatula*, across oceanic to estuarine gradients in habitat temperature. *Aquatic Biology* 28: 113-125. doi: 10.3354/ab00714
4. **Tanner RL** & Dowd WW (2019). Inter-individual variation in responses to environmental variation and environmental change: Integrating across traits and time. *Comparative Biochemistry and*

*Physiology Part A: Molecular and Integrative Physiology* 238. doi:10.1016/j.cbpa.2019.110577  
**Invited submission** to special issue “Mechanisms of biological sensitivity and resistance to a rapidly changing ocean”.

3. **Tanner RL**, Faye LE<sup>S</sup>, & Stillman JH (2019). Temperature and salinity sensitivity of respiration, grazing, and excretion rates in the estuarine eelgrass sea hare, *Phyllaplysia taylori*. *Marine Biology* 166:109. doi:10.1007/s00227-019-3559-4
2. Armstrong EJ, **Tanner RL**, & Stillman JH (2019). Warm-adaptation is negatively correlated with upper thermal tolerance plasticity in North Eastern Pacific nudibranch mollusks. *Physiological and Biochemical Zoology* 92(4): 430-444. <https://doi.org/10.1086/704519> **Featured on issue cover.**
1. **Tanner RL** (2018). Predicting *Phyllaplysia taylori* (*Anaspidea: Aplysiidae*) presence in Northeastern Pacific estuaries to facilitate grazer community inclusion in eelgrass restoration. *Estuarine, Coastal and Shelf Science* 214: 110-119. doi:10.1016/j.ecss.2018.09.011

### IN REVIEW

25. **Tanner RL** & Wilsterman KE (*major revision*). Beyond diversity initiatives: building a community of care in scientific societies. *BioScience*.

### REPORTS

- Takekawa J, Ma Z, Kettenring K, Matzek V, & **Tanner RL** (2023). Delta Science Tracker: Science activity #52581. <https://sciencetracker.deltacouncil.ca.gov/node/52581>
- Tanner RL** (2022). Delta Science Tracker: Science activity #49872. <https://sciencetracker.deltacouncil.ca.gov/node/49872>
- Tanner RL** & student contributors (2022). California Water Accessibility Communications Toolkit. [www.seaclab.com/outreach-training](http://www.seaclab.com/outreach-training)
- Ocean Science Trust (2022). Pathways to advance diversity, equity, and inclusion in California’s coastal and ocean sciences. [https://www.oceansciencetrust.org/wp-content/uploads/2022/08/Pathways-to-Advance-DEI-in-CA-Coastal-and-Ocean-Sciences-2022\\_rev.pdf](https://www.oceansciencetrust.org/wp-content/uploads/2022/08/Pathways-to-Advance-DEI-in-CA-Coastal-and-Ocean-Sciences-2022_rev.pdf) [contributor]
- Tanner RL** (2022). Community function under *Phragmites* invasion stress in tidal wetlands in Suisun Marsh. State Water Contractors.
- Tanner RL** & student contributors (2021). Orange County Oil Spill Communications Toolkit. [www.seaclab.com/outreach-training](http://www.seaclab.com/outreach-training)
- Anderson M, Crocker K, Dutta S, Grover N, Horner A, Hough L, Mangiamele L, Moore T, Rosen G, Stack-Whitney K, Summers A, & **Tanner R** (2020). Knowledge hidden in nuances: from molecules to society. *NSF Reintegrating Biology Jumpstart Meeting*.
- Oellermann M, Jolles JW, Ortiz D, Seabra R, Wenzel T, Wilson H, & **Tanner RL** (2021). Harnessing the Benefits of Open Electronics in Science. <https://arxiv.org/abs/2106.15852>

### HANDLING EDITOR *as a Senior Editor at the Journal of Zoology*

- Marshall BE (in review). Honeyguides, Honey Badgers and Humans: Re-examining a Unique Relationship.
- Arbuckle K (2024). Low socioeconomic status is an under-recognised source of challenges in academia.
- Sampaio AS (in review). Predictors of *Scorpiones* Order: A Scientometric Analysis
- Kadir A (rejected). Never truly knowing the native *Chondromorpha Xanthotricha*: depicting insufficiency in India’s millipede record.
- Echols, S (in revision). Rewilding with Ungulates to Promote North American Rangeland Biodiversity.

- Sattar, A (desk rejected). Exploring the interplay between diet and gut microbiome composition in insects: implications for behavior and ecology.
- Lopez-Bedoya, PA (rejected after review). Knowledge shortfalls on amphibian diets in Colombia: future trends and challenges.
- Christyraj, JDS (desk rejected). Functional significance of earthworm clitellum in regulating the various biological aspects of cell survival and regeneration.
- Chessman, B (2024). The conundrum of turtle and tortoise basking: a critical review.
- Carbajal, A (2023). Non-invasive measurement of glucocorticoids: the reptile perspective.
- Van der Wal (2023). Do honey badgers and greater honeyguide birds cooperate to access bees' nests? Ecological evidence and honey-hunter accounts.
- Hsu, GC (2023). An experimental framework for quantifying the degree of intraguild predation in a three-species omnivorous food web in the field.
- Pretorius, M (2023). Quantifying crop-feeding and viral infection of Pteropodid bats in tropical and subtropical landscapes.
- Cram, D (2022). Oxidative Stress and Cognition in Ecology.
- Parameter, M (2022). What to do with low O<sub>2</sub>: redox adaptations in animals native to hypoxic environments.
- Córdoba-Aguilar, A (2022). Dragon colors: the nature, function, and evolution of Odonata (dragonfly and damselfly) coloration.
- Schalz, S (retracted). Local Adaptation or Phenotypic Plasticity? A Systematic Review of Common Garden Experiments with Avian Populations.

### SYMPOSIA ORGANIZED

Year	Event
2025	4S Conference "The Politics and Praxis of Participatory Knowledge Production"
2024	Southern California Academy of Sciences, Orange, CA Host university for the conference.
2022	Society for Integrative and Comparative Biology Annual Meeting, Phoenix, AZ "Open Source Solutions in Experimental Design"
2021	Society for Experimental Biology Annual Meeting, Antwerp, BE <b>*RESCHEDULED FROM 2020 DUE TO COVID-19</b> "Science with Impact: Lowering the barriers to science with Open Hardware"
2021	Society for Experimental Biology Annual Meeting, Antwerp, BE <b>*RESCHEDULED FROM 2020 DUE TO COVID-19</b> "Open Electronics in Experimental Biology"
2020	NNOCCI, Annual Planning Retreat, virtual "Incorporating Justice, Equity, Diversity, and Inclusion Moving Forward"
2020	NNOCCI, Annual Conference, virtual "Ask a Scientist"
2019	NNOCCI, virtual "Extreme Events Webinar"

### INVITED PRESENTATIONS

Year	Event
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- 2025 Los Angeles Natural History Museum  
“Novel and equitable climate research is impossible without community science”
- 2024 Environmental Studies Seminar, USC  
“Co-management of natural resources and climate action in California”
- 2024 Bodega Marine Laboratory Seminar Series, UC Davis  
“Participatory science for nearshore management solutions: how prioritizing people over data leads to novel and more equitable research directions”
- 2024 Climate Justice Conference, CSU Dominguez Hills  
“Improving accessible spatial data to increase participation in local environmental governance and climate education”
- 2024 Schmid Seminar Series, Chapman University  
“Participatory community science broadens ecological discoveries and societal impact”
- 2024 Research Colloquium Week, National Sea Grant  
“Improving public science literacy through empowering multilingual student researchers”
- 2024 Pathways to Inclusive Research Training Workshop, California Sea Grant  
“Improving public science literacy through empowering multilingual student researchers”
- 2024 Summer Faculty Research Seminar Series, Chapman University Center for Undergraduate Excellence  
“An advocacy-based research agenda for climate change biology”
- 2024 The Philosophy of Science Communication Workshop, Colorado State University  
“Building trust, sense of belonging, and values-based language for diverse stakeholder collective action”
- 2024 BIO-LEAPS PIs Meeting, National Science Foundation  
“Beyond DEI initiatives: how conferences can foster communities of care”
- 2023 Delta Invasive Species Symposium, Delta Science Council  
“Strategic communication for collective action in wetland management and restoration”
- 2023 Gordon Conference for Biology Education Research, Bates College  
“Fostering a community of care in our classrooms and conferences”
- 2023 Summer Faculty Research Seminar Series, Chapman University Center for Undergraduate Excellence  
“An advocacy-based research agenda for climate change biology”
- 2022 California State University Northridge Biology Department Seminar Series  
“Science is not apolitical: an imperative of community advocacy in climate change biology research”
- 2022 Interagency Ecological Program (IEP) Annual Workshop  
“*Phragmites* invasion in tidal wetlands: community stress or climate refuge?”
- 2021 Thoreau Environmental Fellows Program, University of Florida  
“Social change for climate change: strategies from the National Network for Ocean and Climate Change Interpretation”
- 2021 Schmid Science Forum, Chapman University  
“Socio-ecological approaches to climate change adaptation”
- 2021 Department seminar series, Chapman University  
“Socio-ecological effects of climate on communities”

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- 2020 McGuire Seminar Series, University of Florida **\*VIRTUAL DUE TO COVID-19**  
“The effects of environmental variation on ecosystem function in nearshore habitats”
- 2020 Barrows Lecture, Project Dragonfly, University of Miami **\*VIRTUAL DUE TO COVID-19**  
“Climate change effects and community-level solutions”
- 2020 Department seminar series, Biology Program, University of Alaska Southeast **\*VIRTUAL DUE TO COVID-19**  
“How does environmental variation influence physiology in intertidal invertebrates?”
- 2020 Department seminar series, Chesapeake Biological Laboratory, University of Maryland **\*CANCELED DUE TO COVID-19**  
“Climate change effects: from society to evolutionary biology”
- 2020 Department seminar series, Biology Department, University of Mississippi  
“How does environmental variation influence physiology in nearshore invertebrates?”
- 2019 Department seminar series, Biological Sciences Department, Sacramento State University  
“How does environmental variation influence physiology in intertidal invertebrates?”
- 2019 Biolunch, School of Biological Sciences, Washington State University  
“Inter-individual variation in *Mytilus* mussel physiology”
- 2019 Science Talk, Portland OR  
“Social strategies for climate communication” (workshop)
- 2019 Department seminar series, Department of Biology, Walla Walla University  
“How does environmental variation influence physiology in intertidal invertebrates?”
- 2018 Department seminar series, School of Biological Sciences, Washington State University  
“Thermal tolerance plasticity of the eelgrass sea hare in a changing climate”
- 2018 Special seminar, Monterey Bay Aquarium, Monterey CA  
“The eelgrass sea hare: super slugs in a changing climate”
- 2018 Department seminar series, Estuary and Ocean Science Center, Department of Biology, San Francisco State University  
“Climate change effects on thermal tolerance plasticity and population dynamics in the eelgrass sea hare, *Phyllaplysia taylori*”
- 2018 Department seminar series, Integrative Biology, UC Berkeley  
“Climate change effects on thermal tolerance plasticity and population dynamics in the eelgrass sea hare, *Phyllaplysia taylori*”
- 2017 Department seminar series, Estuary and Ocean Science Center, Department of Biology, San Francisco State University  
“Ask me about climate change: a strategic approach to talking about climate change with the public”
- 2017 Summer seminar series, Roskilde University, Sømestationen  
“Physiological effects of climate change on a sea slug in San Francisco Bay”
- 2016 50 years of research on Catalina Island, Southern California Academy of Sciences annual meeting, Los Angeles CA

### CONTRIBUTED CONFERENCE PRESENTATIONS (ORAL)

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- | Year | Event  |
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| 2025 | 4S, Seattle WA<br><b>Tanner R.L.</b> & Keeler-May G. “Cooperative natural resource management in a mixed private-public wetland” |

- 2024 Western Society of Naturalists (WSN), Portland OR  
**Tanner R.L.**, Landa S., Pacheco A.M., Haworth L.E., and Todgham A.E. “The effects of *Phragmites australis* invasion stress on community function in restored tidal wetlands of Suisun Marsh”
- 2024 IEP Annual Workshop, Sacramento CA  
“Strategic communication for collective action in wetland management and restoration: engaging with the public, landowners, and agencies”
- 2023 Society for Experimental Biology (SEB), Edinburgh Scotland  
**Tanner R.L.**, Haworth L.E., Nancollas S., and Todgham A.E. “Can invasion stress mitigate climate stress? The physiological performance of mud-dwelling invertebrates in a restored tidal wetland”
- 2022 WSN, Oxnard CA  
**Tanner R.L.**, Haworth L.E., Nancollas S., and Todgham A.E. “Can invasion stress mitigate climate stress? The physiological performance of mud-dwelling invertebrates in a restored tidal wetland”
- 2022 Society for Integrative and Comparative Biology (SICB), Phoenix AZ  
“An introduction to the symposium: open technology in experimental biology”
- 2021 SEB, virtual  
**Tanner R.L.**, Bowie R.C.K., Wang-Claypool C.Y., & Stillman J.H. “High thermal tolerance, but not its plasticity are driven by habitat temperature and genotype in an intertidal sea hare”
- 2021 SICB, virtual  
**Tanner R.L.**, Bowie R.C.K., Wang-Claypool C.Y., & Stillman J.H. “High thermal tolerance, but not its plasticity are driven by habitat temperature and genotype in an intertidal sea hare”
- 2020 WSN, virtual  
**Tanner R.L.** “Sea slugs safeguard seagrasses: an overview of thermal tolerance in epiphyte grazers”
- 2020 SICB, Austin TX  
**Tanner R.L.**, Gleason L.U., & Dowd W.W. “Pathway-dependent patterns of gene and protein variation exposed by thermal stress in the intertidal mussel”
- 2019 SICB, Tampa FL  
**Tanner R.L.**, Gleason L.U., & Dowd W.W. “Transcriptomic and proteomic analyses of inter-individual variation among intertidal mussels”
- 2019 SICB, Tampa FL  
**Tanner R.L.** “Social change for climate change: communication tactics from the National Network for Ocean and Climate Change Interpretation”
- 2018 SEB, Florence, Italy  
**Tanner R.L.** & Stillman J.H. “Parent-specific plasticity in reproduction and development limit population response to climate change in the eelgrass sea hare, *Phyllaplysia taylori*”
- 2018 SICB, San Francisco CA  
**Tanner R.L.** & Stillman J.H. “Transgenerational thermal tolerance plasticity may play a role in maintaining seasonal differences between populations of *Phyllaplysia taylori* with climate change”
- 2017 Western Society of Naturalists (WSN), Pasadena CA  
**Tanner R.L.**, Sousa W.P., & Stillman J.H. “Local extirpation of *Phyllaplysia taylori* from San Francisco Bay after heavy winter rains”



- 2017 SEB, Göthenburg Sweden  
**Tanner R.L.** & Stillman J.H. “The role of developmental plasticity under temperature and pH stress in locally adapted *Phyllaplysia taylori* populations”
- 2017 SICB, New Orleans LA  
**Tanner R.L.**, Armstrong E.J., Sousa W.P., & Stillman, J.H. “Locally adapted *Phyllaplysia taylori* populations in Central California show higher thermal tolerance plasticity potential”
- 2016 Beyond the Golden Gate Symposium, Tiburon CA  
**Tanner R.L.** “Incorporating the invertebrate grazer, *Phyllaplysia taylori*, into the eelgrass restoration framework: physiological and ecological investigations”
- 2016 WSN, Monterey CA  
**Tanner R.L.**, Sousa W.P., & Stillman J.H. “Acute thermal stress during embryonic development influences hatching success differently based on maternal origin in the sea hare, *Phyllaplysia taylori*”
- 2016 SICB, Portland OR  
**Tanner R.L.**, Obaza A.K., & Ginsburg D.W. “Correlating Secondary Productivity and Habitat Composition of Eelgrass Beds in a Southern California Marine Protected Area”
- 2014 WSN, Tacoma WA  
**Tanner R.L.**, Obaza A.K., & Ginsburg D.W. “Correlating Secondary Productivity and Habitat Composition of Eelgrass Beds in a Southern California Marine Protected Area”

**CONTRIBUTED CONFERENCE PRESENTATIONS (POSTER)**

Year	Event
2021	SEB, virtual <b>Tanner R.L.</b> , LeClair T.A., Langrell J., & Dowd W.W. “Manipulating body temperatures of individual mussels in the laboratory using Arduino-based solutions”
2020	SICB, Austin TX <b>Tanner R.L.</b> “Building a network of science communicators for change: strategies from the National Network for Ocean and Climate Change Interpretation”
2018	SEB Special Session (The height, breadth, and depth of physiological plasticity), Florence Italy <b>Tanner R.L.</b> , Armstrong E.J., Sousa W.P., & Stillman J.H. “Plasticity of upper critical limits in the eelgrass sea hare, <i>Phyllaplysia taylori</i> , not correlated with habitat thermal history”
2014	Southern California Academy of Sciences, Camarillo CA Staniec K.J., <b>Tanner R.L.</b> , Obaza, A.K. & Ginsburg D.W. “Correlating Secondary Productivity and Habitat Composition of Eelgrass Beds in a Southern California Marine Protected Area”

\*Only first (and first co-)author presentations listed. >60 co-authored presentations, including those of mentored students, not listed.

**TEACHING AND MENTORING****UNIVERSITY COURSES TAUGHT**

Term	Course #	Title	Section
Interterm 2024	Chapman University, ENV329A	Diverse Perspectives in Conservation Biology	Lecture/Lab/Field
Fall 2023, 2024	Chapman University, ENV201	Introduction to Environmental Justice	Lecture
Spring 2022	Chapman University, ENV329	Applications in Invertebrate Zoology	Lecture/Lab
Fall 2021, 2022, 2023	Chapman University, ENV101	Introduction to Environmental Science	Lecture
Fall 2021, 2022; Spring 2025	Chapman University, ENV360	Environmental Advocacy Through Story	Lecture
Spring 2018	UC Berkeley, IB 103LF (Graduate Student Instructor)	Invertebrate Zoology	Laboratory
Fall 2015	UC Berkeley, IB/EPS/GEOG c82 (Graduate Student Instructor)	Oceans	Discussion (3)
Summer 2014	USC, ENST 320A (Teaching Assistant)	Water and Soil Sustainability	Laboratory

**GUEST LECTURES**

Term	Course (University)	Topic
Spring 2024	Marine Biology (Chapman University)	Community-involved marine science
Spring 2022, 2023	Marine Biology (Chapman University)	Mollusk physiology
Fall 2020	Life at the Extremes (University of Alaska Southeast)	Intertidal invertebrate physiology
Fall 2018	Field Ecology (St. Mary's College)	Sea hare ecophysiology
Spring 2016	Invertebrate Zoology (UC Berkeley)	Nudibranchs and climate change
Fall 2015	Oceans (UC Berkeley)	Marine community ecology

**CERTIFICATES**

Year	Description	Organization
2018	Certificate in Teaching and Learning in Higher Education	University of California, Berkeley
2018	Expert Facilitator in Science Communication Instruction	National Network for Ocean and Climate Change Interpretation

**CURRICULUM DEVELOPMENT****Course curricula development**

Pilot Year	Title	Organization (Role)	Target Audience
2024	Diverse Perspectives in Conservation Biology	Chapman University (Lead)	Undergraduate students

2023	Introduction to Environmental Justice	Chapman University (Lead)	Undergraduate students
2021	Environmental Advocacy Through Story	Chapman University (Lead)	Undergraduate students
2021	Climate change communication: using social science research in framing	NNOCCI (Co-lead)	Graduate students
2021	Suisun Food Webs Research Experience for Undergraduates	UC Davis (Lead)	Undergraduate students
2018	Expert Level Facilitator Training Course	NNOCCI (Contributor)	Informal science educators & early career academics
2017	Indirect effects of climate change on intertidal invertebrates	Community Resources for Science (Lead)	3 <sup>rd</sup> grade students
2016 & 2017	National trivia bowl question development (biology focus)	National Ocean Sciences Bowl (Lead)	High school students
2015	Food webs in estuaries	Community Resources for Science (Lead)	3 <sup>rd</sup> grade students
2015	IB/EPS/GEOG c82 discussion materials	UC Berkeley (Contributor)	Undergraduate students

**Training workshop development**

Pilot Year	Title	Organization (Role)	Target Audience
2024	Community of Care Conference Leaders Workshop	SySTEM BIO-LEAPS (Lead)	Senior leadership of professional societies
2023	Equity, Diversity, Inclusion Associate Editors Workshop	Chapman University (Lead)	Academic journal leadership
2022	Framing for Climate Science Workshop	Chapman University (Lead)	Advocacy groups
2018	Science Communication Beginner Workshop	NNOCCI (Lead)	Early career academics

**Workshop for teaching newly developed curricula**

Pilot Year	Title	Organization (Role)	Target Audience
2017	Environmental Literacy Summer Institute	Lawrence Berkeley Hall of Science (Contributor)	K-5 teachers
2016	Indirect effects of climate change on intertidal invertebrates	San Francisco State University (Contributor)	Middle school teachers

**UNDERGRADUATE STUDENTS MENTORED: >90 individuals at 10 institutions since 2015**

**PUBLIC OUTREACH****INVITED OUTREACH PRESENTATIONS**

Year	Event
2025	Lakeside Chats, Rotary Nature Center Friends “Participatory science for nearshore management solutions: how prioritizing people over data leads to novel and more equitable research directions”
2025	California Invasive Species Advisory Committee “Socio-ecological approaches to Phragmites coordinated management and recommended solutions”
2024	Suisun Adaptive Management Advisory Team “Socio-ecological approaches to Phragmites coordinated management and recommended solutions”
2024	Delta Stewardship Council Science for Communities Workshop “Little Manila Rising Youth Organizers Program”
2024	Metropolitan Water District of Southern California “Strategic Communications and Framing Seminar”
2023	Brain Public “Our social responsibility for equitable climate action”
2022	Climate Reality Project Orange County Chapter “Climate communication and advocacy”
2022	State Water Contractors Science Advisory Board “Joining social and ecological approaches for invasive species management and wetland restoration in Suisun Marsh”
2022	Sustainable Living Fair ( <b>keynote address</b> ) “The power of sharing your climate story”
2022	Irvine Councilman Larry Argan’s Earth Year Event “Nudibranchs and climate change: community science in Orange County”
2022	Delta Interagency Invasive Species Council “Joining social and ecological approaches for invasive species management and wetland restoration in Suisun Marsh”
2022	Science on Tap “Socioecological approaches to climate solutions”
2021	California Fish & Wildlife, Orange County Coastkeepers, LA Nature for All “Orange County Oil Spill Communications Toolkit”
2020	Suisun Adaptive Management Advisory Team “ <i>Phragmites</i> stress impacting community function in Tule Red”
2020	Suisun Resource Conservation District Landowner Meeting “ <i>Phragmites</i> stress impacting community function in Tule Red”
2020	Washington State University Wildlife Society “How does environmental variation influence physiology in nearshore invertebrates?”

- 2020 Skype A Scientist (2 events, internationally)  
“Climate change effects on our oceans”
- 2019 Skype A Scientist LIVE  
“Superheroes of our seas: how physiology forecasts climate change effects”  
<https://www.youtube.com/watch?v=ayFYJDDQCZE>
- 2018 Skype A Scientist (4 events, nationally)  
“Is it getting hot in here? Sea slug physiology tells us how the oceans are changing”
- 2017 Point Reyes National Seashore Association “Science at the Seashore”, Inverness CA  
“Do your neighbors make you crabby? Behavioral physiology and climate change”
- 2017 Instructor Seminar Series, NatureBridge, San Francisco CA  
“Restoration in the Bay Area: what we learn from physiology and ecology”
- 2017 Deep Dive into Ocean Acidification Workshop, Bay Area Climate Literacy Impact Collaborative, San Francisco CA  
“The physiological effects of climate change and ocean acidification on marine invertebrates”
- 2017 Marin Science Seminar, San Rafael CA  
“How does physiological plasticity shift climate change responses in the eelgrass sea hare?”

**SERVICE CONTRIBUTIONS**

Year	Organization	Role
2024-2029	US Department of Homeland Security: Science, Advice, and Guidance for Emergencies Program	Subject Matter Expert
2024-pres. 2024	Friends of the Colorado Lagoon Delta Stewardship Council	Board member Science for Communities Research Contributor
2024-pres.	Santa Monica Bay Restoration Commission	Technical Advisory Board Member
2023-pres.	Orange City Council	Sustainability Sub-Committee Member
2021-pres.	Chapman University	Search Committee Member (6 searches)
2023, 2025	Southern California Academy of Sciences	Research Training Program AAAS meeting faculty delegate
2022-2023	Council on Undergraduate Research: Scholars Transformed Through Research	Faculty mentor
2022	National Center for Faculty Development & Diversity: Faculty Success Program	Participant
2021-2022	Women Editors in Ecology Round Table	Participant
2021-pres.	Frontiers in Physiology Journal	Peer Reviews Editor
2020	Western Society of Naturalists	Student Presentation Judge, Session Moderator
2020	“Asking Different Questions” Scholars, UC Davis Feminist Research Institute	Participant
2020	NSF “Organismal System-type Modeling Network” RCN	Participant, <b>*CANCELED FOR COVID-19</b>

2020	NSF “Genome-to-Phenome” RCN	SICB Session Chair, complementary session
2019	NSF Reintegrating Biology Jumpstart Meeting	Participant
2019-2021	NSF “Evolving Seas” RCN	Participant, <b>*CANCELED FOR COVID-19</b>
2019-2022	Society for Integrative and Comparative Biology	Student Presentation Judge
2018-2021	National Network for Ocean and Climate Change Interpretation (NNOCCI), Boston, MA	Science Committee
2018	Monterey Bay Aquarium, Monterey CA	Exhibit advisor
2016-2018, 2021	National Ocean Sciences Bowl, Washington D.C.	Competition Judge
2017	NNOCCI, Boston, MA	Science Fellow
2016	Exploratorium, San Francisco CA	Exhibit advisor
2015	womENST (undergraduate professional development series at USC)	Co-founder
2015	California Science Center, Los Angeles CA	Exhibit contributor
2013-2015	USC Joint Education Project, Los Angeles CA	Presenter

*Peer reviewer since 2016 for journals including the Proceedings of the Royal Society B, Nature Climate Change, Evolutionary Applications, Journal of Applied Ecology, Biological Reviews, Journal of Evolutionary Biology, Physiology & Behavior, Hydrobiologia, Journal of Comparative Physiology A, Journal of Sea Research, Frontiers Physiology, Scientific Reports, and EvoDevo.*

#### **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

Year	Organization
2023-present	Coastal Estuarine Research Federation (CERF)
2015-2022	Society for Integrative and Comparative Biology (SICB)
2016-present	Society for Experimental Biology (SEB)
2019-2020	American Physiological Society (APS)
2017-2018	Graduate Women in Science
2016-present	500 Women Scientists
2014-present	Western Society of Naturalists (WSN)
2014-present	Southern California Academy of Sciences (SCAS)
2014-present	Phi Beta Kappa Honor Society
2013-present	American Academy of Underwater Sciences