



KERSTIN WASSON, Ph.D.

Research Coordinator, Elkhorn Slough
National Estuarine Research Reserve
1700 Elkhorn Road, Royal Oaks, CA 95076
kerstin.wasson@gmail.com 831 728 2822

EXPERTISE

- ~Coastal conservation science
- ~Oyster and marsh restoration
- ~Ecosystem-based management
- ~Invasion biology

EDUCATION

1990-1996 **Ph.D. Biology**,
University of California
Santa Cruz

1986-1989 **B.A. Biology**,
Oberlin College, OH

1988-1999 **Study Abroad**,
Former East/West Germany,
Universität Rostock, Tübingen

APPOINTMENTS

2000-present **Research
Coordinator**, Elkhorn
Slough NERR

2003-present **Adjunct
Professor**, Ecology &
Evolutionary Biology,
UC Santa Cruz

1998-1999 **Asst. Professor**,
Humboldt State University

1997-1999 University of
California **President's
Postdoctoral Fellow**

1996-1997 **Adjunct Professor**,
Biology, University of
Washington

RECENT GRANT-FUNDED PROJECTS

The nation's past and future estuaries: detecting estuarine habitat loss and opportunities for future restoration in and around National Estuarine Research Reserves, NERR Science Collaborative, **\$600,000**, 2021-2023

The risks and rewards of conservation aquaculture for marine foundation species, Science and Nature for People Partnership / NCEAS, **\$149,915**, 2019-2021

Developing eDNA tools to detect rare listed amphibians in central California, USFWS Section 6 Funds, **\$264,917**, 2020-2023

Building a coastwide Olympia oyster network to improve restoration outcomes and enhance community engagement, National Estuarine Research Reserve Science Collaborative, **\$250,000**, 2018-2019

Blue carbon at Elkhorn Slough: regional carbon sequestration through salt marsh restoration, California Cap and Trade Fund, **\$2,996,768**, 2015-2019

Southern Sea Otters in Elkhorn Slough: investigating habitat use and foraging to inform estuarine management, Sea Otter Recovery Fund, **\$71,364**, 2013-2014

RECENT AWARDS

National Wetlands Hero Award,
Environmental Law Institute, Washington D.C.
National Estuarine Research Reserve Impact Award

LANGUAGES

Fluent Spanish and German

SELECTED PUBLICATIONS

First, second or last authorship in peer-reviewed international journals

- Wasson**, K., Tanner, K.E., Woolfolk, A., McCain, S. and Suraci, J.P. **2021**. Top-down and sideways: Herbivory and cross-ecosystem connectivity shape restoration success at the salt marsh-upland ecotone. *Plos One* 16(2), p.e0247374.
- Thomsen, A.S., Krause, J., Appiano, M., Tanner, K.E., Endris, C., Haskins, J., Watson, E.B., Woolfolk, A., Fountain, M.C., **Wasson**, K. **2021**. Monitoring vegetation dynamics at a tidal marsh restoration site: integrating field Methods, remote sensing and modeling. *Estuaries and Coasts*, DOI: 10.1007/s12237-021-00977-4
- Haskins, J., Endris, C., Thomsen, A. S., Gerbl, F., Fountain, M. C., & **Wasson**, K. **2021**. UAV to inform restoration: a case study from a California tidal marsh. *Frontiers in Environmental Science*, 9, 81. <https://doi.org/10.3389/fenvs.2021.642906>.
- Ridlon, A.D., **Wasson**, K., Waters, T., Adams, J., Donatuto, J., Fleener, G., Froehlich, H., Govender, R., Kornbluth, A., Lorda, J. and Peabody, B., **2021b**. Conservation aquaculture as a tool for imperiled marine species: Evaluation of opportunities and risks for Olympia oysters, *Ostrea lurida*. *Plos One*, 16(6), <https://doi.org/10.1371/journal.pone.0252810>
- Ridlon, A. D., Marks, ..8 other authors.... & **Wasson**, K. **2021a**. Conservation of marine foundation species: learning from native oyster restoration from California to British Columbia. *Estuaries and Coasts*, <https://doi.org/10.1007/s12237-021-00920-7>
- Wasson**, K., Gossard, D.J., ...7 other authors...and Hughes, B.B. **2020**. A scientific framework for conservation aquaculture: A case study of oyster restoration in central California. *Biological Conservation*, 250, p.108745.
- Fork, S., Pernet, B., **Wasson**, K. **2020**. Establishment of an extensive breeding population of a marine pulmonate snail far poleward of its previously documented range. *Marine Biodiversity Records* 13:5.
- Wasson**, K., Fabian R.A.,...13 other authors...and Byers, JE. **2020**. Multiple factors contribute to the spatially variable and dramatic decline of an invasive snail in an estuary where it was long-established and phenomenally abundant. *Biological Invasions* 22: 1181-1202
- Wasson**, K., Ganju, N.,...7 other authors... and Raposa, K.B. **2019b**. Understanding tidal marsh trajectories: evaluation of multiple indicators of marsh persistence. *Environmental Research Letters* 14, 124073.
- Wasson**, K., Raposa, K.,...17 other authors and Guy, R. **2019a**. Pattern and scale: evaluating generalities in crab distributions and marsh dynamics from small plots to a national scale. *Ecology*, p.e02813.
- Jeppesen, R., M. Rodriguez, J. Rinde, J. Haskins, B. Hughes, L. Mehner, and K. **Wasson**. **2018**. Effects of hypoxia on fish survival and oyster growth in a highly eutrophic estuary. *Estuaries and Coasts*.41:89-98.

- Eby, R., Scoles, R., Hughes, B.B., **Wasson, K.** 2017. Serendipity in a salt marsh: detecting frequent sea otter haul outs in a marsh ecosystem. *Ecology* 98:2975-2977.
- Wasson, K.**, Jeppesen, R., ...9 other authors and Hughes, B.B. 2017. Eutrophication decreases salt marsh resilience through proliferation of algal mats. *Biological Conservation* 212: 1-11.
- Wasson, K.**, Hughes, B.B.,...14 other authors and...Zacherl, D. 2016. Coast-wide recruitment dynamics of Olympia oysters reveal limited synchrony and multiple predictors of failure. *Ecology* 97:3503-16.
- Raposa, K.B., **Wasson, K.**,...13 other authors and...Lerberg, S. 2016. Assessing tidal marsh resilience to sea-level rise at broad geographic scales with multi-metric indices. *Biological Conservation* 204:263-275.
- Zabin, C.J, **Wasson, K.**, Fork, S. 2016. Restoration of native oysters in a highly invaded estuary. *Biological Conservation* 202:78-87.
- Wasson, K.**, B. Suarez, A.,...8 other authors and Feliz, D. 2015. Lessons learned from an ecosystem-based management approach to restoration of a California estuary. *Marine Policy* 58:60-70.
- Hughes, B.B., Eby, R., Van Dyke, E., Tinker, M.T., Marks, C.I., Johnson, K.S., **Wasson, K.** 2013. Recovery of a top predator mediates negative eutrophic effects on seagrass. *Proceedings of the National Academy of Sciences* 110:15313-15318.
- Wasson, K.**, Woolfolk A, Fresquez C. 2013. Ecotones as indicators of changing environmental conditions: Rapid Migration of Salt Marsh–Upland Boundaries. *Estuaries and Coasts* 36(3):654-664.
- Wasson, K.**, Woolfolk, A. 2011. Salt marsh-upland ecotones in central California: vulnerability to invasions and anthropogenic stressors. *Wetlands* 31:1-14.
- Wasson, K.** 2010. Informing Olympia oyster restoration: evaluation of factors that limit populations in a California estuary. *Wetlands* 30:449-459.
- Watson, E. B., **Wasson, K.**, ...5 other authors and Wheatcroft, R. A. 2010. Applications from paleoecology to environmental management and restoration in a dynamic coastal environment. *Restoration Ecology* 19:765-775
- Gee, A. K., **Wasson, K.**, Shaw, S. L., Haskins, J. 2010. Signatures of restoration and management changes in the water quality of a central California estuary. *Coasts and Estuaries* 33:1004-1024.
- D'Amore, A., Hemingway, V., **Wasson, K.** 2010. Do a threatened native amphibian and its invasive congener differ in response to human alteration of the landscape? *Biological Invasions* 12(1):145-153.
- Martone, R. and **Wasson, K.** 2008. Impacts and interactions of multiple human perturbations in a California salt marsh. *Oecologia* 158(1):151-163.