**Curriculum Vitae**

**Dr. Kerstin Wasson**

**Current positions**

*Research Coordinator, Elkhorn Slough National Estuarine Research Reserve (since 2000)*

1700 Elkhorn Road, Watsonville, CA 95076 USA

email:wasson@ucsc.eduphone: (831) 728-2822

*Adjunct Associate Professor, Department of Ecology and Evolutionary Biology (since 2003)*

University of California, Santa Cruz, CA 95064 USA

**Synopsis**

Conservation scientist with emphasis on ecosystem-based management and restoration ecology

**Past Employment & Professional Experience**

*Assistant Professor*

Department of Biological Sciences, Humboldt State University, CA. 1998-9.

*University of California President's Postdoctoral Fellow*

Department of Biology, University of California, Santa Cruz, CA. 1997-8.

*Visiting Researcher*

Friday Harbor Laboratories, University of Washington, San Juan Island, WA. 1993-7.

*Visiting Faculty*; Sabbatical leave replacement for Dr. Alan Kohn

Department of Zoology, University of Washington, Seattle, WA. 1997.

*Teaching Assistant; Lecturer*

Biology Department, University of California, Santa Cruz, CA. 1990-1996.

**Education**

*Degrees*

Ph.D., University of California, Santa Cruz, 1996.

B.A., Oberlin College, Ohio, 1989.

*Foreign languages*

German: fluent

Spanish: fluent

French: fair

**National Awards**

National Estuarine Research Reserve Impact Award, 2015.

National Wetlands Award for Science Research, Environmental Law Institute, 2018.

**Academic Advising**

*Graduate students supervised*

A. D’Amore (Ph.D. received 2007)

R. Preisler (Ph.D. received 2010)

 C. Fresquez (Ph.D. received 2014)

 B. Hughes (Ph.D. received 2014)

 K. Behesti (Ph.D. anticipated 2020)

*Postdoctoral researchers funded and supervised*

 A. Ritter (2006)

 A. Gee (2007-9)

 A. D’Amore (2008-10)

 E.B. Watson (2009-2011)

 J. Nelson (2011-2012)

 A. Ridlon (2019-2020)

**Selected grants awarded**

*“Building a coastwide Olympia oyster network to improve restoration outcomes and enhance community engagement”*, NERR Science Collaborative, **$250,000**, 2018-2019

*“Thin-layer sediment placement: evaluating an adaptation strategy to enhance coastal marsh resilience across the NERRS”*, NERR Science Collaborative, **$499,999**, 2017-2019

“*Blue carbon at Elkhorn Slough: regional carbon sequestration through salt marsh restoration*”, California Cap and Trade Fund, **$2,996,768**, 2015-2022

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

“*Pioneering an innovative adaptive management approach to native oyster restoration at Elkhorn Slough*”, Environmental Enhancement Fund, California Dept. of Fish and Game, $95,480, 2012-2014

 “*Managing for resilience in the face of climate change: a scientific approach to targeted oyster restoration in San Francisco Bay and Elkhorn Slough, California*”, National Estuarine Research Reserve Science Collaborative, $908,006, 2011-1014

“*Putting people to work restoring ecosystem resilience in Elkhorn Slough while protecting critical coastal infrastructure*”, American Recovery and Reinvestment Act, $3,940,735, 2009-2011

“*A novel approach combining rapid paleoecological assessments with geospatial modeling and visualization to help coastal managers design salt marsh conservation strategies in the face of environmental change*”, Cooperative Institute for Coastal & Estuarine Environmental Technology, $280,615; 2009-2011

“*Creating a corridor of habitat to support threatened amphibians*”, National Fish and Wildlife Foundation, $120,000, 2008-2010

 “*Investigating indicators of eutrophication in estuarine habitats of the Elkhorn Slough watershed*”, Central Coast Regional Water Quality Control Board, $49,680, 2007-8

“*Monitoring amphibian habitat use in the Elkhorn Slough watershed*”, USFWS and California Department of Fish and Game, $75,000, 2008-9

“*Biogeographic investigation of variation in abundance, habitat use and behavior of the European green crab*”, National Sea Grant Aquatic Invasive Species Program, $16,754, 2006-8

“*An integrated approach to understanding and addressing threats to estuarine habitats: ecosystem-based management at Elkhorn Slough, California*”, Packard and Resources Legacy Fund Foundations, **$1,200,000**, 2006-8

“*Expansion and enhancement of a 15-year north Monterey County water quality monitoring program*”, Central Coast Regional Water Quality Control Board, **$170,200**, 2005-7

“*Coordinating stewardship of Elkhorn Slough: development of a tidal wetland action plan*”, **$300,000**, California Resources Agency Coastal Impact Assistance Program, 2003-6

**Selected publications**

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.

Santana, R., Lessa, J. Haskins, Wasson, K. 2018.Continuous monitoring reveals drivers of dissolved oxygen variability in a small California estuary. *Estuaries and Coasts* 41:99-113.

Wasson, K., Jeppesen, R., Endris, C., Perry, D.C., Woolfolk, A., Beheshti, K., Rodriguez, M., Eby, R., Watson, E.B., Rahman, F., Haskins, J., Hughes, B.B. 2017. Eutrophication decreases salt marsh resilience through proliferation of algal mats. *Biological Conservation* 212: 1-11.

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.

Bible, J.M., Cheng, B.S., Chang, A.L., Ferner, M.C., Wasson, K., Zabin, C.J., Latta, M., Sanford, E., Deck, A. and Grosholz, E. D. 2017. Timing of stressors alters interactive effects on a coastal foundation species. *Ecology* 98:2468–2478.

Wasson, K., Hughes, B.B., Berriman, J.S., Chang, A.L., Deck, A.K., Dinnel, P.A., Endris, C., Espinoza, M., Dudas, S., Ferner, M.C., Grosholz, E.D., Kimbro, D., Ruesink, J.L., Trimble, A., Vander Schaaf, D., Zabin, C.J., 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., Smith, E., Crooks, J.A., Delgado, P., Fernald, S.H., Ferner, M.C., Helms, A., Hice, L.A., Mora, J.W., Puckett, B., Sanger, D., Shull, S., Spurrier, L., Stevens, R., 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.

Hughes, B.B., Hammerstrom, K.K., Grant, N.E., Hoshijima, U., Eby, R. and Wasson, K., 2016. Trophic cascades on the edge: fostering seagrass resilience via a novel pathway. *Oecologia* 1-11.

Wasson, K., B. Suarez, A. Akhavan, E. McCarthy, J. Kildow, K. S. Johnson, M. C. Fountain, A. Woolfolk, M. Silberstein, L. Pendleton, and D. Feliz. 2015. Lessons learned from an ecosystem-based management approach to restoration of a California estuary. *Marine Policy* 58:60-70.

Fork, S., Woolfolk, A., Akhavan, A., Van Dyke, E., Murphy, S., Candiloro, B., Newberry, T., Schreibman, S., Salisbury, J., Wasson, K. 2015. Biodiversity effects and rates of spread of non-native eucalypt woodlands in central California. *Ecological Applications* 25:2306-2319.

Wasson, K., C. Zabin, J. Bible, S. Briley, E. Ceballos, A. Chang, B. Cheng, A. Deck, E. Grosholz, A. Helms, M. Latta, B. Yednock, D. Zacherl and M. Ferner. 2015. A Guide to Olympia Oyster Restoration and Conservation: Environmental conditions and sites that support sustainable populations. Elkhorn Slough National Estuarine Research Reserve. Available from [www.oysters-and-climate.org](http://www.oysters-and-climate.org)

Cheng, B. S., Bible, J. M., Chang, A. L., Ferner, M. C., Wasson, K., Zabin, C. J., Latta, M., Deck, A., Todgham, A. E., Grosholz, E. D. 2015. Testing local and global stressor impacts on a coastal foundation species using an ecologically realistic framework. *Global change biology* 21:2488-2499.

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.

Hughes, B.B., Haskins, J.C., Wasson, K., Watson, E.B. 2011. Identifying factors that influence expression of eutrophication in a central California estuary. *Marine Ecology Progress Series* 439:19-30.

Watson, E. B., Wasson, K., Pasternack, G. B., Woolfolk, A., Van Dyke, E., Gray, A. B., Pakenham, A., Wheatcroft, R. A. 2011. Applications from paleoecology to environmental management and restoration in a dynamic coastal environment. *Restoration Ecology* 19:765-775.

Wasson, K. 2010. Informing Olympia oyster restoration: evaluation of factors that limit populations in a California estuary. *Wetlands* 30:449-459.

Wasson, K., Woolfolk, A. 2010. Salt marsh-upland ecotones in central California: vulnerability to invasions and anthropogenic stressors. *Wetlands* 31:1-14.

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* 33:1004-124.

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.

Preisler, R.K., Wasson, K., Wolff, W.J., Tyrrell, M.C. 2009. Invasions of estuaries vs. the adjacent open coast: a global perspective. Chapter 19 in *Marine Bioinvasions: Ecology, Conservation and Management Perspectives*, G Rilov and J Crooks (editors).

Martone, R. and Wasson, K. 2008. Impacts and interactions of multiple human perturbations in a California salt marsh. *Oecologia* 158(1):151-163.

Siciliano, D., Wasson, K., Potts, D.C., Olsen, R.C. 2008. Evaluating hyperspectral imaging of wetland vegetation as a tool for detecting estuarine nutrient enrichment. *Remote Sensing of Environment* 112:4020-433.

Ritter, A.F., Wasson, K., Lonhart, S.I., Preisler, R.K., Woolfolk, A., Griffith, K.A., Connors, S., Heiman, K. 2008. Ecological signatures of anthropogenically altered tidal exchange in estuarine ecosystems. *Estuaries and Coasts* 31(3):554-571.

Wasson, K., Fenn, K., Pearse, J.S. 2005. Habitat differences in marine invasions of Central California. *Biological Invasions* 7:935-948.

Van Dyke, E. and Wasson, K. 2005. Historical ecology of a central California estuary: 150 years of habitat change. *Estuaries* 28(2):173-189.

Wasson, K. and Lyon, B. 2005. Flight or flight: flexible anti-predatory strategies in porcelain crabs. *Behavioral Ecology* 16:1037-1041.

Wasson, K. 2002. A review of the invertebrate phylum kamptozoa (Entoprocta) and synopsis of kamptozoan diversity in Australia and New Zealand. *Transactions of the Royal Society of South Australia* 126:1-20.

Wasson, K., Lyon, B.E., and Knope, M. 2002. Hair-trigger autotomy in porcelain crabs is a highly effective escape strategy. *Behavioral Ecology* 13:481-486

Tamburri, M.N., Wasson, K., and Matsuda, M. 2002. Ballast water deoxygenation can

 prevent aquatic introductions while reducing ship corrosion. *Biological Conservation* 103:331-341.

Sterflinger, K., Hain, M., Scholz, J., and Wasson, K. 2001. Fungal infections of a colonial marine invertebrate: diversity and morphological consequences. *Facies* 45:31-38.

Wasson, K., Zabin, C.J., Bedinger, L., Diaz, C.M., and Pearse, J.S. 2001. Biological invasions of estuaries without international shipping: the importance of intraregional transport. *Biological Conservation* 102(2):143-153.

Wasson, K., Von Holle, M., Toft, J., and Ruiz, G. 2000. Detecting invasions of marine organisms: kamptozoan case histories. *Biological* *Invasions* 2:59-74.