

Christine L. Huffard

chuffard@mbari.org

EDUCATION

- 2005 Ph.D. Integrative Biology
University of California, Berkeley
“The behavioral ecology and locomotion of *Abdopus aculeatus* (d’Orbigny 1834)”
- 1997 B.S. Marine Science with Honors
Long Island University, Southampton College, Southampton, NY

Professional Experience

- 2017-current Research Specialist, Monterey Bay Aquarium Research Institute (MBARI)
- 2014-current Project Manager, Pelagic-Benthic Coupling lab, MBARI
- 2012-2017 Senior Research Technician, MBARI
- 2012-current Research Associate, Invertebrate Zoology and Geology
California Academy of Sciences
- 2009-2011 Marine Conservation Science and Monitoring Advisor
Conservation International Indonesia
- 2007-2008 Postdoctoral Fellow
Monterey Bay Aquarium Research Institute

Short-term positions and consultancies

- 2012 Monitoring Consultant
World Wildlife Fund
- 2012 Conservation Science Consultant
Conservation International Indonesia
- 2003, 04, 06 Monitoring Consultant
Natural Equity, Sage Foundation
- 2002 Biologist and Senior Scientist
Operation Wallacea Research Programme
- 2002 Monitoring Consultant
The Nature Conservancy, Komodo Field Office, Indonesia

Publications

*student or intern

Miguez-Salas, O. **C. L. Huffard**, K. L. Smith Jr., P. McGill, F.J. Rodríguez-Tovar. (2020) Faunal assemblage changes, bioturbation and benthic storms at an abyssal station in the northeastern Pacific. Deep-Sea Research I: Oceanographic Research Papers. 160: 103277. doi: 10.1016/j.dsr.2020.103277

Huffard C. L., C. A. Durkin, S. E. Wilson, P. McGill, Rich Henthorn, K. L. Smith Jr. (2020) Temporally-resolved mechanisms of deep-ocean particle flux and impact on the seafloor carbon cycle in the northeast Pacific. Deep-Sea Research II. 173: 104763. doi: 10.1016/j.dsr2.2020.104763

Smith Jr., K. L., **C.L Huffard**, H.A. Ruhl (2020). Thirty-year time series study at a station in the abyssal NE Pacific: An introduction. DSR II, 173, 104764.

Shaw, T., C. Boucher, K.L. Smith Jr, **C.L. Huffard**. (2020) Model study of oxygen mass transfer into persistent aggregate layers in the deep sea Deep-Sea Research II. 173: 104760. doi: 10.1016/j.dsr2.2020.104760

L. Kuhnz, H.A. Ruhl, **C.L. Huffard**, K.L. Smith. (2020) Benthic megafauna assemblage change over three decades in the abyss: Variations from species to functional groups Deep-Sea Research II. 173: 104761. doi: 10.1016/j.dsr2.2020.104761

*Durden, J.M., B.J. Bett, **C.L. Huffard**, C. Pebody, H.A. Ruhl, K.L. Smith Jr. (2020) Response of deep-sea deposit-feeding rates to detrital inputs: a comparison of two abyssal time-series sites. Deep-Sea Research II 173: 104677. doi: 10.1016/j.dsr2.2019.104677

Smith, K.L. Jr., **C.L. Huffard**, P. McGill, A.D. Sherman, T. Connolly, S. von Thun, L. Kuhnz (2020). Gelatinous zooplankton abundance and benthic boundary layer currents in the abyssal Northeast Pacific: a 3-yr time series study. Deep-Sea Research II 173: 104654. doi: 10.1016/j.dsr2.2019.104654

*Morse, P., **C.L. Huffard**. (2019) Tactical Tentacles: New Insights on the Processes of Sexual Selection among the Cephalopoda. Frontiers in Physiology 10:1035. doi: 10.3389/fphys.2019.01035

*Durden, J., B. Bett, **C.L. Huffard**, H.A. Ruhl, K.L. Smith Jr. (2019) Abyssal deposit feeding rates consistent with the Metabolic Theory of Ecology. Ecology 100(1):e102564

Smith, K.L. Jr., H.A. Ruhl, **C.L. Huffard**, M. Messié, M. Kahru. (2018) Episodic organic carbon fluxes from surface ocean to abyssal depths during long-term monitoring in NE Pacific. Proceedings of the National Academy of Sciences. 115 (48) 12235-12240

Dornelas M, et al. (2018) BioTIME: A database of biodiversity time series for the Anthropocene. Global Ecology and Biogeography 27(7): 760-786.

*Morse, P., S.R. Kjeldsen, M.G. Meekan, M.I. McCormick, J.K. Finn, **C.L. Huffard**, K. R. Zenger (2018) Genome-wide comparisons reveal a clinal species pattern within a holobenthic octopod - the Australian Southern Blue-Ringed Octopus, *Hapalochlaena maculosa* (Cephalopoda: Octopodidae). Ecology and Evolution 8:2253–2267

- *Morse, P., **C.L. Huffard**, M.G. Meekan, M.I. McCormick, K.R. Zenger (2018) Mating behaviour and postcopulatory fertilization patterns in the southern blue-ringed octopus, *Haplochlaua maculosa*. Animal Behaviour 136:41–351
- Smith Jr., K.L., A.D. Sherman, P. R. McGill, R.G. Henthorn, J. Ferreira, **C.L. Huffard**. (2017) Evolution of monitoring an abyssal time-series station in the N.E. Pacific over 28 years. Oceanography
- Fox, H.E., M.D. Barnes, G. Ahmadi, G. Kao, L. Glew, K. Haisfield, N.I. Hidayat, **C.L. Huffard**, L. Katz, S. Mangubhai, Purwanto (2017) Generating actionable data for evidence-based conservation in the global center of marine biodiversity. Biological Conservation 210:299–309
- *Morse, P., K.R. Zenger, M.I. McCormick, M.G. Meekan, **C.L. Huffard** (2016) Chemical cues correlate with agonistic behaviour and female mate choice in the southern blue-ringed octopus, *Haplochlaua maculosa* (Hoyle, 1883) (Cephalopoda: Octopodidae). Journal of Molluscan Studies doi:10.1093/mollus/eyw045 (9 pp)
- McGill P.R., R.G. Henthorn, L.E. Bird, **C.L. Huffard**, D.V. Klimov, K.L. Smith, Jr. (2016) Sedimentation Event Sensor: new ocean instrument for in-situ imaging and fluorometry of sinking particulate matter. Limnology and Oceanography Methods 14(12):853–863
- Dunlop, K.M., D. van Oevelen, H.A. Ruhl, **C.L. Huffard**, L.A. Kuhnz, K.L. Smith, Jr. (2016) Carbon cycling in the deep eastern North Pacific benthic food web: Investigating the effect of organic carbon input. Limnology and Oceanography 61: 1956–1968
- Smith Jr., K.L, **C.L. Huffard**, A.D. Sherman, H.A. Ruhl (2016) Decadal change in sediment community oxygen consumption in the abyssal northeast Pacific. Aquatic Geochemistry 22:401–417
- Huffard, C.L.**, L.A. Kuhnz, *L. Lemon, A.D. Sherman, K.L. Smith, Jr. (2016) Demographic indicators of change in a deposit-feeding abyssal holothurian community (Station M, 4000m). Deep-Sea Research I: Oceanographic Research Papers 109:27–39
- *Morse, P., K.R. Zenger, M.I. McCormick, M.G. Meekan, **C.L. Huffard** (2015) Nocturnal mating behaviour and dynamic male investment of copulation time in the southern blue-ringed octopus, *Haplochlaua maculosa* (Cephalopoda: Octopodidae). Behaviour 152(14):1883–1910
- Smith, K.L. Jr., M. Messié, A.D. Sherman, **C.L. Huffard**, B.W. Hobson, H.A. Ruhl, A. Boetius (2015) Navigating the uncertain future of global oceanic time series. EOS 96, doi: 10.1029/2015EO038095
- Caldwell, R.L., A. Ross, A. Rodaniche, **C.L. Huffard** (2015) Behavior and body patterns of the Larger Pacific Striped Octopus. Plos One doi: 10.1371/journal.pone.0134152 (17 pp)
- *Rude, J., A. *Minks, B. *Doheny, M. *Tyner, K. *Maher, **C.L. Huffard**, N.I. Hidayat, H. Grantham (2015) Ridge to reef modeling for use within land-sea planning under data-poor conditions. Aquatic Conservation: Marine and Freshwater Ecosystems 26(2):251–264
- *Laguionie-Marchais, C., L.A. Kuhnz, L.A., **C.L. Huffard**, H.A. Ruhl, K.L. Smith, Jr. (2015) Spatial and temporal variation in sponge spicule patches at Station M, North East Pacific. Marine Biology 162(3):617 – 624

Huffard, C.L., M. Bartick (2015) Wild *Wunderpus photogenicus* and *Octopus cyanea* employ asphyxiating 'constricting' in interactions with other octopuses. *Molluscan Research* 35(1):12–16

Huffard, C.L., S. von Thun, A.D. Sherman, K. Sealey, K.L. Smith, Jr. (2014) Pelagic Sargassum community change over a 40-year period: temporal and spatial variability. *Marine Biology* 161:2735–2751

Kuhnz, L.A, H.A. Ruhl, **C.L. Huffard**, K.L. Smith Jr. (2014) A benthic megafaunal community in the abyssal northeast Pacific: structural changes over a 24-year time series. *Progress in Oceanography* 124:1–11

Smith Jr. K.L., A.D. Sherman, **C.L. Huffard**, P.R. McGill, R. Henthorn, S.Von Thun, H.A. Ruhl, M. Kahru, M.D. Ohman (2014) Large salp bloom export from the upper ocean and benthic community response in the abyssal northeast Pacific: day to week resolution. *Limnology and Oceanography* 59(3):745–757

Huffard, C.L. (2013, Invited review) Cephalopod neurobiology: an introduction for biologists working in other model systems. *Invertebrate Neuroscience* 13(1):11–18

Huffard, C.L. (2013, Invited book chapter) Social learning in Cephalopods: A natural history perspective. In *Social learning theory: phylogenetic considerations across animal, plant, and microbial taxa* (ed. K Clark), pp. 131–146. New York, NY: Nova Science Publisher.

Smith Jr., K.L., H.A. Ruhl, M. Kahru, **C.L. Huffard**, A.D. Sherman. (2013) Deep ocean communities impacted by changing climate over 24 years in the abyssal northeast Pacific Ocean. *Proceedings of the National Academy of Sciences* 110(49):19838–19841

Bush, S.L., H.J.T. Hoving, **C.L. Huffard**, B.H. Robison, L.D. Zeidberg (2012) Brooding and sperm storage by the deep-sea squid *Bathyteuthis berryi* (Cephalopoda: Decapodiformes). *Journal of the Marine Biological Association of the United Kingdom* 92(7):1629–1636

Mangubhai, S., M.V. Erdmann, J.R. Wilson, **C.L. Huffard**, F. Ballamu, N.I. Hidayat, C. Hitipeuw, M.E. Lazuardi, D. Pada, G. Purba, C. Rotinsulu (2012) Papua Bird's Head Seascape: emerging threats, challenges and opportunities in the global center of marine biodiversity. *Marine Pollution Bulletin* 64:2279–2295

Williams, B.L., V. Lovenburg, **C.L. Huffard**, R.L. Caldwell (2011) Chemical defense in pelagic octopus paralarvae: Tetrodotoxin alone does not protect individual paralarvae of the greater blue-ringed octopus (*Hapalochlaena lunulata*) from common reef predators. *Chemoecology* 21:131–141

Huffard, C.L., R.L. Caldwell, F. Boneka (2010) Male-male and male-female aggression may influence mating associations in wild octopuses (*Abdopus aculeatus*). *Journal of Comparative Psychology* 124(1):38–46

Huffard, C.L., N. Saarman, H. Hamilton, B. Simison (2010) The evolution of conspicuous facultative mimicry in octopus: an example of secondary adaptation? *Biological Journal of the Linnean Society* 101(1):68–77

Huffard, C.L., P. Godfrey-Smith (2010). Field observations of mating in *Octopus tetricus* Gould 1852 and *Amphioctopus marginatus* (Taki, 1964). *Molluscan Research* 30(2):81–86 (cover photo)

Dimara, R., A. Fauzan, M. Lazuardi, D. Pada, G.R. Allen, M.V. Erdmann, **C.L. Huffard**, L.S. Katz, & R. Winterbottom. (2010) Pisces, Teleostei, Gobiidae, illustrated list of additions to the fauna of the Raja Ampat Islands, Indonesia. Checklist 6(4):619–625

Huffard, C.L., B. Gentry, D.W. Gentry (2009). Description of the paralarvae of *Wunderpus photogenicus* Hochberg, Norman & Finn, 2006 (Cephalopoda: Octopodidae). Raffles Bulletin of Zoology 57(1):109–112

Huffard, C.L., R.L. Caldwell, N. DeLoach, D.W. Gentry, P. Humann, B. MacDonald, B. Moore, R. Ross, T. Uno, S. Wong (2008) Individually unique body color patterns in octopus (*Wunderpus photogenicus*) allow for photoidentification. PLoS ONE 3(11): e3732 (5 pp)

Huffard, C.L., R.L. Caldwell, F. Boneka (2008) Mating behavior of *Abdopus aculeatus* (d'Orbigny 1834) (Cephalopoda: Octopodidae) in the wild. Marine Biology 154:353–362

Huffard, C.L. (2007) Four new species of shallow water octopus from the Kingdom of Tonga. Molluscan Research 27(3): 147–170

Huffard, C.L. (2007) Ethogram of *Abdopus aculeatus* (d'Orbigny, 1834) (Cephalopoda: Octopodidae): can behavioral characters inform octopodid taxonomy and systematics? Journal of Molluscan Studies 73:185–193

Huffard, C.L. (2006) Locomotion by *Abdopus aculeatus*: walking the line between primary and secondary defenses. The Journal of Experimental Biology 209:3697–3707 (cover photo)

Huffard, C.L., F.G. Hochberg (2005) Description of a new species of the genus *Amphioctopus* (Mollusca: Octopodidae) from the Hawai'ian islands. Molluscan Research 25(3):113–128

Huffard, C.L., F. Boneka, R.J. Full (2005) Underwater bipedal locomotion by octopuses in disguise. Science 307:1927

Huffard, C.L., R.L. Caldwell (2002). Inking in a blue-ringed octopus, *Hapalochlaena lunulata* (Quoy & Giamard, 1832), with a vestigial ink sac. Pacific Science 56(3):255–257

Marine Conservation Science Technical Reports and Protocols

Huffard C.L., J. Wilson, C. Hitipeuw, C. Rotinsulu, S. Mangubhai, M.V. Erdmann, W. Adnyana, P. Barber, J. Manuputty, M. Mongdong, G. Purba, K. Rhodes, & H. Toha (2012) Ecosystem based management in the Bird's Head Seascape: turning science into action. Ecosystem Based Management Program: Conservation International, The Nature Conservancy, and World Wildlife Fund Indonesia.

Stone, G., **C.L. Huffard**, M.V. Erdmann, E. Montague, B. Robison & R. Rotjan (2011) Seamount Expedition in Raja Ampat, West Papua, Indonesia: A trip report of science activities.

Lazuardi, M.E., R. Mambrasar, E. Mambraku, S. Mayor, Defy Pada, **C.L. Huffard**, E. Montague, B. Robison, & M.V. Erdmann (2011) Conservation value of East Waigeo. Conservation International.

Lazuardi, M.E., **C.L. Huffard**, & K. Tjandra (2010). Community perceptions in the Raja Ampat Regency, Indonesia. (In Bahasa Indonesia) Conservation International Indonesia.

Huffard, C.L. (2010) A lobster monitoring protocol for community members of marine protected areas in Raja Ampat, Papua. Conservation International Indonesia

Huffard, C.L., M.V. Erdmann & T. Gunawan (2009) Defining geographic priorities for marine biodiversity conservation in Indonesia. Based on data inputs from G. Allen, P. Barber, S. Campbell, L. Devantier, M.V. Erdmann, M. Halim, T. Hitipeuw, Guswindia, B. Hoeksema, M. Hutomo, B. Kahn, Y. Noor, M.K. Moosa, K. S. Putra, Suharsono, E. Turak, J. Randall, R. Salm, C. Veron, C. Wallace

Huffard, C.L. (2009) Aerial monitoring protocol for the Drifter Experimental Ultralight, Raja Ampat, Papua. Conservation International Indonesia

Bertrand, J.F. & **C.L. Huffard**. (2004). Report on the coral reef community survey conducted 1 year after the installation of Ecoreefs ceramic module. A monitoring report

Huffard, C.L., M.V. Erdmann, & M. Moore (2004) The economic and conservation benefits of coral reef rehabilitation: baseline study of bombed reef in Bunaken National Park, Indonesia. A monitoring report

Fox, H. & **C.L. Huffard** (2002) Enhancing Reef Recovery in Komodo National Park, Indonesia: Coral Reef Rehabilitation at Ecologically Significant Scales. Interim Report: Project Installation

Teaching

- | | |
|------------|---|
| 2011-2012 | <u>Making the Most of Monitoring (West Papua, Indonesia)</u>
Conservation International Indonesia |
| 2011 | <u>Understanding Marine Biodiversity (West Papua, Indonesia)</u>
Conservation International Indonesia |
| 2010-2012 | <u>Spiny Lobster monitoring (West Papua, Indonesia)</u>
Conservation International Indonesia |
| 2004-2005 | <u>National Science Foundation GK-12 Graduate Student Teaching Fellow
California and Global Biodiversity</u>
Pittsburg Unified School District, CA with University of California, Berkeley (G11- 12) |
| 2003 | <u>Introduction to the Science of Living Organisms</u>
University of California, Berkeley |
| 2001 | <u>Outstanding Graduate Student Instructor Award</u>
University of California, Berkeley |
| 2001 | <u>Biology and Geomorphology of Tropical Islands (Moorea, French Polynesia field course)</u>
University of California, Berkeley at the Gump Field Station |
| 2001 | <u>Animal Biology: A Behavioral View</u>
University of California, Berkeley |
| 1999, 2006 | <u>General Biology (three semesters)</u>
University of California, Berkeley |

1999 General Biology, Field Ecology Elective (two semesters)
University of California, Berkeley

Invited Scientific Talks

- 2020 Thalassa Dive Resorts, Indonesia Weekly seminar, Online
Octopuses of North Sulawesi
- 2020 Wild Wonder Nature Journaling Conference, Online
Keynote presentation: Carbon in California's abyss: the good, the bad, and the hungry
- 2020 Moss Landing Marine Laboratories Seminar
Don't blink: what we've learned from persistent autonomous instruments at the Station M abyssal time series
- 2019 Monterey Bay Aquarium: chefs speaking up for science-based fishery management in the U.S. Monterey Bay Aquarium Research Institute
Climate Change and Plastics—what's ahead for fisheries?
- 2019 American Association of Textile Chemists and Colorists: Apparel/Textiles Sustainability Conference, Resilient Textile Systems: Through the Lens of Soil and Sea. Monterey, CA, USA.
Keynote presentation: What we put into the oceans.
- 2018 University of California, Los Angeles Center for Southeast Asian Studies
Marine conservation science in the heart of the Coral Triangle
- 2018 Seymour Marine Discovery Center Science Sundays
Carbon in California's abyss: as told by sea pigs, time lapse, and a record-breaking Rover
- 2018 California Academy of Sciences Explore, Explain and Sustain Life Seminar Series
Deep-sea invertebrates respond to California's changing climate
- 2017 Bite of Science Teacher Enrichment Program Monterey Bay Aquarium Research Institute
Deep-sea carbon uptake off the California Coast (Station M, 4000 m)
- 2016 California State University, Monterey Bay Science & Environmental Policy Seminar
Recent changes in an abyssal sea floor community off the California Coast
- 2013 San José State University, Biological Sciences Seminar
The evolution of conspicuous mimicry in octopuses
- 2012 World Wildlife Fund Conservation Science Program Seminar
Temporal patterns in marine resource use in Raja Ampat, Eastern Indonesia
- 2012 University of California, Santa Cruz, Conservation Biology Course Lecture
Conservation Biology in Indonesia: Monitoring, managing, and mitigating change in the global center of marine biodiversity

2012	<u>United States Agency for International Development, Jakarta, Indonesia Seminar</u> Incorporating sustainable fisheries into marine protected area design
2011	<u>National Oceanic and Atmospheric Administration, Pacific Grove Seminar</u> Part I: Marine conservation science in West Papua Part II: Cephalopod reproduction
2011	<u>Monterey Bay Aquarium Staff Lecture</u> Deep Sea Cephalopods
2011	<u>Raja Ampat Marine Protected Area (MPA) Network, West Papua, Indonesia Stakeholder presentation</u> Resource use monitoring in Raja Ampat
2010	<u>Bird's Head MPA Network, West Papua, Indonesia Stakeholder Presentation</u> Land-sea considerations for development in the Bird's Head Seascape
2010	<u>Monterey Bay Aquarium Research Institute Seminar</u> Marine conservation science in West Papua: technology, transects, and tradition
2008	<u>Moss Landing Marine Laboratories Seminar</u> Sex and the modern octopus: Big bullies, small sneakers and fecund females
2005	<u>Bunaken National Marine Park Stakeholder Presentation</u> Ecoreef [®] reef restoration in Bunaken National Park
2003	<u>University of Guam, Marine Laboratory Seminar</u> Mate guarding in the <i>Octopus horridus</i> group
2000	<u>Universitas Sam Ratulangi, Manado, Indonesia Marine Invertebrate Biology Course lecture</u> Cephalopod biology and behavior

Field Research Experience

(range of years if >2 trips)

1996-current	California	Monterey Bay, Santa Barbara Basin, Station M, RV Western Flyer, RV Pt. Lobos, RV Rachel Carson, SRVX, RV Robert Gordon Sproul
2016	Solomon Islands	Gizo
1997-2014	Hawai'i	Hawai'i, Maui, Oahu, RV Townsend Cromwell
2000-2012	Indonesia	Bali, Banggai Islands, Bunaken National Park, Cendrawasih Bay National Park, Komodo National Park, Kaimana, Lembeh, Raja Ampat, Toli-Toli, Wakatobi National Park
2008	Antarctica	RV Nathaniel B Palmer
2007	Mexico	Gulf of California, RV New Horizon
1999-2006	French Polynesia	Mo'orea, Rurutu, Tahiti
2006	Line Islands	Palmyra Atoll
2003, 2005	Australia	Cape Tribulation, Lizard Island, Moreton Bay

2003	Guam	Pago Bay
1997	Grand Banks	RV Delaware II, RV Albatross IV

Museum Research Experience

1996	Santa Barbara Museum of Natural History
1997	Smithsonian Museum of Natural History

Outreach and Public Education

Featured scientist interviews

2020	“Deep-Sea Research Lab Gives Scientists Insight Into Climate Change” KAZU (radio, web article)
2020	“Robots in the abyss: 30 years of research on the abyssal plain provides clues to climate change” MBARI (video)
2020	“Mysteries of the Deep with MBARI's Dr. Crissy Huffard — Talking Deep-Sea Cephalopods!” Monterey Bay Aquarium and MBARI (live stream)
2019	Cephalopod Week 2019: Science Friday Movie Night San Francisco, CA
2016	The Shape of Life website (online)
2015	“Run octopus run” Science Friday (video)
2011	“The Sea of Miracle: Indonesia Raja Ampat” NHK (video)
2008	“The erotic lives of octopuses” Day to day, NPR (radio)
2005	“Fancy footwork: octopuses go bipedal” All things considered, NPR (radio)
2002	“The Survival Game” The Shape of Life, Sea Studios, Inc. (video)

Additional press coverage

Associated Press, ABC News, BBC, CNN, CBC, Deep Sea News, Guardian UK, National Geographic Magazine, NationalGeographic.com, NY Times, ReefCentral, Santa Cruz Sentinel, Scienceblogs, Science Daily, Science News, ScubaDiver Australasia, Smithsonian.com, The Onion, The Scientist, Wetpixel, Wired

Popular science writing

2013-2018	Mbari.org online outreach, various blog entries, and tweets about Station M research
2014	“The Octopus Lady” Catamaran Literary Reader 5:13-16. (Invited non-fiction essay)
2013	“Social learning in Cephalopods: a natural history perspective” (Invited) In Social Learning Theory: Phylogenetic Considerations across Animal, Plant, and Microbial Taxa. Ed. Kevin Clark
2012	“Don’t test the venom” Wetpixel.com
2011	Indonesia Expedition 2011, New England Aquarium Global Explorers blog “Studying Indonesia’s Underwater Magician” Conservation International blog “Creepy Critters: Diving with Crocodiles” Conservation International blog
2009	Interviews with staff, Mbari.org

General public talks

American Museum of Natural History Milstein Science Series (2015, 2017), Chicago Marine Aquarium Society, Marine Aquarium Roundtable of Sacramento, MBARI Open House, New England Aquarium,

Oakland Museum of Natural History, San Francisco Ocean Film Festival (children's selections), SEABAY Bay Area Saltwater Enthusiasts

GK-12 presentations

Primos Elementary School (PA, USA), Shipley Academy (PA, USA), SMASH Math and Science Academy (CA, USA), Roosevelt High School (HI, USA)

Additional outreach

2019	MBARI Cephalopod week instastory
2012-2017	MBARI Open House
2010	Science advisor- <u>Octopus Sukkah</u> , multi-media art installation by Jessica Tully San Francisco Museum of Modern Art, 30 September 2010
2005-2009	Contributing Scientist- The Tree of Life Website, Cephalopoda
2004, 2005	Website Illustrator- U.C. Berkeley Museum of Paleontology Understanding Evolution
1996	Website Content Science Advisor- Smithsonian Institution, The Search for the Giant Squid

Panels and Workshops

2012, 2013	Coral Reef Preservation Meeting National Center for Ecological Analysis and Synthesis, Santa Barbara, CA
2012	Global MPA Conference, Invited Panelist WildAid, San Francisco, CA
2011	Fisheries Innovation Workshop National Geographic, Monterey, CA
2010	Ecosystem Based Management Synthesis Workshop Organizer and Participant Bird's Head Seascape Ecosystem Based Management Program, Bali, Indonesia