

# KARINA JOHANNE NIELSEN, PHD

## CURRICULUM VITA

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Estuary & Ocean Science Center: [eoscenter.sfsu.edu](http://eoscenter.sfsu.edu)  
San Francisco State University  
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3150 Paradise Dr.  
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### **EDUCATION**

Ph.D., Oregon State University, 1998

Dissertation: *Bottom-up and top-down forces in tidepools: the influence of nutrients, herbivores, and wave exposure on community structure*. Co-advisors: Jane Lubchenco & Bruce A. Menge

B.S., *Summa Cum Laude*, Brooklyn College - City University of New York, 1992

Honors Thesis: *Patterns of mussel (Guekensia demissa) recruitment to a Spartina alterniflora salt marsh*. Advisor: David R. Franz

Hampshire College, September 1979 - June 1982

Coursework in art history, fine art photography, filmmaking and holography.

### **PROFESSIONAL EXPERIENCE**

2018 – present Executive Director, Estuary & Ocean Science Center, San Francisco State University

2014 – 2017 Director, Romberg Tiburon Center for Environmental Studies, San Francisco State University

2014 – present Professor, Department of Biology, San Francisco State University

2013 – 2014 Professor, Department of Biology, Sonoma State University

2007 – present Senior Research Associate, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)

2010 – 2011 Faculty Research Associate, Academic Affairs, Office of Research & Sponsored Programs, Sonoma State University

2008 – 2013 Associate Professor, Department of Biology, Sonoma State University

2003 – 2008 Assistant Professor, Department of Biology, Sonoma State University

2000 Instructor, Hatfield Marine Science Center, Oregon State University

1993 – 1998 Research Assistant, Department of Biology, Oregon State University

1992 – 1998 Teaching Assistant, Departments of Zoology & Biology, Oregon State University

1992 – 1993 Research Assistant, Department of Biology, Brooklyn College, City University of New York

### **POSTDOCTORAL RESEARCH EXPERIENCE**

2000 – 2003 Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) Postdoctoral Research Associate, Department of Zoology, Oregon State University.

1998 – 2000 National Science Foundation International Postdoctoral Fellowship, Estación Costera de Investigaciones Marinas (ECIM), Universidad Católica de Chile.

**GRANTS AND FELLOWSHIPS**

- 2020 – 2022 **Ocean Protection Council** \$824,809 Restoring Eelgrass in Living Shorelines: Opportunities to Combine Shore Protection with Amelioration of Ocean Acidification PI: Katharyn Boyer; co-PI: Karina Nielsen (EOS Center, SF State).
- 2019 – 2022 **Ocean Protection Council** \$1,000,000 Evaluating the performance of California's MPA network through the lens of sandy beach and surf zone ecosystems. PI: Jenifer Dugan (University of California Santa Barbara) co-PIs: Robinette, D (Point Blue Conservation Science), Page, H (University of California Santa Barbara), Garza, J (National Oceanic and Atmospheric Administration - Southwest Fisheries), Jarrin, JM (Humboldt State University), Nielsen, KJ (San Francisco State University), Lindquist, K (Greater Farallones Association), Nueman, K (Point Blue Conservation Science), Colwell, M (Humboldt State University), Miller, R (University of California Santa Barbara), Hamilton, S (Moss Landing Marine Laboratories/San Jose State University), Ricker, S (California Department of Fish and Wildlife), Mulligan, T (Humboldt State University).
- 2018 – 2021 **California State Coastal Conservancy** \$190,000 Nature-based Rocky Habitat Restoration and Education PI: Karina Nielsen (EOS Center, SF State); co-PI: Chela Zabin (Smithsonian Environmental Research Center).
- 2016 – 2021 **National Science Foundation** \$2,922,930. NSF Research Traineeship (NRT): RIP-TIDES: Research Intensive Pedagogical Training of InterDisciplinary Estuarine Scientists. PI: Nielsen, KJ (San Francisco State University) Co-PIs: Komada, T, Cochlan, W (San Francisco State University). Original Lead PI: Jonathan Stillman
- 2016 – 2021 **National Oceanographic and Atmospheric Administration** subaward to Nielsen SFSU \$ \$469,234 CeNCOOS Partnership: Ocean Information for Decision Makers: PIs: Primary contact: Henry Ruhle, Director (CeNCOOS at MBARI); (co-investigators in alphabetic order): R. Bochenek (Axiom Data Science); D. Wendt, R. Walter, K. Davis (California Polytechnic State University ); C. Whelan (CODAR Ocean Sensors); F. Shaughnessy, J. Anderson (Humboldt State University); F. Chavez (Monterey Bay Aquarium Research Institute); J. Paduan (Naval Postgraduate School); J. Doyle (Navy Research Laboratory); J. Barth (Oregon State University); K. Nielsen (San Francisco State University); T. Connolly, J. Smith, K. Coale (San Jose State University); J. Largier (University of California Davis); Y. Chao (University of California Los Angeles); R. Kudela, C. Edwards, A. Moore, D. Costa (University of California Santa Cruz)
- 2016 – 2018 **California Sea Grant** \$271,546 Understanding the role of oyster mariculture on ecosystem health in coastal California: Water quality in Drakes Estero before and after oyster mariculture. PI: Frances Wilkerson (San Francisco State University); co-PIs: Dick Dugdale (SF State), Karina Nielsen (SF State), Alex Parker (California Maritime Academy)
- 2016 – 2017 **San Francisco Estuary Partnership (Environmental Protection Agency)** \$69,884. The Ocean's influence on SF Bay: Assessing the Bay's exposure to ocean acidification. PI: Nielsen, KJ (San Francisco State University) Co-PIs: John Largier (University of California Davis) and Phil Trowbridge (San Francisco Estuary Institute) in partnership with the San Francisco Estuary Program (SFEP)

- 2014 – 2017 **California Ocean Science Trust** \$450,000 The Ecological State of Northern California's Sandy Beaches and Surf Zones: A Baseline Characterization for MPA Assessment. PI: Nielsen, KJ (San Francisco State University); co-PIs: Milligan, T (Humboldt State University); Dugan, JE (University of California, Santa Barbara; Craig, S (Humboldt State University); Laucci, R. (Tolowa Dee-ni' Nation).
- 2012 – 2013 **California Sea Grant** \$10,000 Cultivation and molecular identification of Gonyaulacoid dinoflagellates associated with mortalities of abalone. PIs: O'Kelly, C.J. (Friday Harbor Laboratories, University of Washington) & K. J. Nielsen (Sonoma State University).
- 2011 – 2012 **California Sea Grant** \$10,000 Molecular identity of Gonyaulacoid dinoflagellates associated with mortalities of abalone, urchins and other marine invertebrates in Sonoma County, California, August – September 2011. PIs: O'Kelly, C.J. (Friday Harbor Laboratories, University of Washington) & K. J. Nielsen (Sonoma State University).
- 2011 – 2016 **National Science Foundation** \$1,119,999 Collaborative Research: The role of calcifying algae as a determinant of rocky intertidal macrophyte community structure at a meta-ecosystem scale. PIs: Menge, BA (Oregon State University) & Nielsen, KJ (Sonoma State University/ San Francisco State University); co-PIs: Hacker, S & Chan, F (Oregon State University)
- 2011 – 2016 **National Oceanographic and Atmospheric Administration** \$10,245,630 (subaward to Nielsen/SSU, then SFSU \$692,201) CeNCOOS: Integrating marine observations to inform decision makers and the general public. PIs: Primary contact: David Anderson, Director (CeNCOOS @MBARI) (preceded by Leslie Rosenfeld); (co-investigators in alphabetic order): Barbara Block (Hopkins Marine Lab), Mark Carr (PISCO, UC Santa Cruz), Yi Chao (Jet Propulsion Lab/UCLA), Francisco Chavez (MBARI), Jim Doyle (Naval Research Laboratory) Chris Edwards (UC Santa Cruz) Oliver Fringer (Stanford), Toby Garfield (San Francisco State / Romberg Tiburon Center), Raphe Kudela (UC Santa Cruz), Rik Kvitek (CSUMB), John Largier (UC Davis / Bodega Marine Lab), Steven Le (Science Applications International Corporation), Erika McPhee-Shaw (Moss Landing Marine Laboratory), Mark Moline (California Polytechnic Institute), Andy Moore (UC Santa Cruz), Hanna Nevins (Marine Wildlife Veterinary Care & Research Center), Karina Nielsen (Sonoma State), Jeff Paduan (Naval Postgraduate School), Frank Shaughnessy (Humboldt State University), Igor Shulman (Naval Research Laboratory), Bill Sydeman (Farallon Institute)
- 2011 – 2014 **California Ocean Science Trust** \$290,000 Sandy beach ecosystems: Baseline characterization and evaluation of monitoring metrics for MPAs along the south coast of California PI: Dugan, JE (University of California, Santa Barbara; co-PIs: Page, H (University of California, Santa Barbara); Nielsen, KJ (Sonoma State University); Bursek, J (Channel Islands National Marine Sanctuary)
- 2010 – 2013 **California Ocean Science Trust** \$288,667 Baseline Monitoring of Ecosystem and Socioeconomic Indicators for MPAs along the North Central Coast of California: Sandy Beaches. PI: Karina J Nielsen (Sonoma State University); co-PIs: Steven Morgan (UC-Davis, Bodega Marine Lab), Jenifer Dugan (UC- Santa Barbara, Marine Science Institute).

- 2008 – 2011 **National Oceanographic and Atmospheric Administration** \$3,281,529 (\$120,000 to Nielsen/SSU). CeNCOOS: Long-term monitoring of environmental conditions in support of protected marine area management in central and northern California total award. PI: Steven Ramp (Monterey Bay Aquarium Research Institute (MBARI)); Co-PIs: Francisco Chavez (MBARI), Frank Shaughnessy & Greg Crawford (Humboldt State University), Toby Garfield (San Francisco State University), Mitchell Craig (CSU – East Bay), Mark Moline (California Polytechnic State University), Kenneth Coale (Moss Landing Marine Lab), Raphael Kudela (UC- Santa Cruz), John Largier (UC-Davis, Bodega Marine Lab), et al.
- 2007 – 2010 **National Science Foundation** \$678,398 Collaborative Research: Scaling up from community to meta-ecosystem dynamics in the rocky intertidal - a comparative-experimental approach; PIs: Bruce Menge (Oregon State University)& Karina Nielsen (Sonoma State University); Co-PIs: Sally Hacker (Oregon State University) & Francis Chan (Oregon State University).
- 2006 – 2009 **California Sea Grant** \$128,000 Collecting Sea Palms: planning for sustainable use in a variable environment; Co-PI: Carol Blanchette (University of California, Santa Barbara)
- 2006 – 2007 **Center for Integrative Coastal Observation, Research and Education (CICORE)** \$50,000 Sonoma State University intertidal zone water quality monitoring; Co-PI: Dan Crocker (Sonoma State University)
- 2002 – 2003 **National Science Foundation** SGER (Co PI): \$100,000 A shoaling hypoxic zone on the Oregon coast: genesis and mechanisms; PI: Bruce Menge (Oregon State University) Co-PIs: Karina Nielsen, Francis Chan & Jane Lubchenco (Oregon State University)
- 1998 – 2000 **National Science Foundation** International Postdoctoral Fellowship \$92,900 Upwelling patterns and marine plant-herbivore interactions: Linking benthic and pelagic processes.
- 1997 – 1998 **American Association of University Women** Dissertation Fellowship \$4,500 The relative importance of nutrients, herbivory and wave exposure in structuring tidepool communities.
- 1997 **National Science Foundation** International Planning Grant \$4,900 Marine macrophytes and grazers: Linking coastal oceanography and rocky intertidal community ecology.
- 1995 – 1996 **University Club Foundation** Graduate Fellowship \$5,000
- 1995 ***Sigma Xi Grant-in-Aid of Research*** \$1,000 Bottom up forces in marine microcosms: An experimental manipulation of nutrients in tidepool communities.

#### **HONORS, SCHOLARSHIPS AND AWARDS**

- 2019 Marin County Board of Supervisors, recognition of ocean climate science engagement in proclamation for World Oceans Day
- 2017 Fellow, California Academy of Sciences
- 2011 Santa Rosa Chamber of Commerce, Excellence in Education Award
- 1999 David and Lucile Packard Foundation, Hopkins Marine Station Scholarship
- 1997 Western Society of Naturalists, Best Paper Award, honorable mention
- 1996 University Club Graduate Fellowship
- 1994 – 1997 OSU - Department of Zoology, Research Fund Awards

- 1993           Phycological Society of America, Croasdale Fellowship  
 1993           University of Washington, Friday Harbor Labs Scholarship  
 1992           ***Sigma Xi***  
 1991           ***Phi Beta Kappa***  
 1991           Merck Summer Research Scholars Fellowship  
 1991           Philip Gisses Memorial Scholarship  
 1990 – 1992   Libby Kohl Banks Scholarship  
 1990           Rose Weinstein Scholarship  
 1990           Saul Lyons Scholarship

#### **PUBLICATIONS (PEER-REVIEWED)**

- Menge, B.A., Close, S.L., Hacker, S.D., Nielsen, K.J. and Chan, F., 2020. Biogeography of macrophyte productivity: Effects of oceanic and climatic regimes across spatiotemporal scales. **Limnology and Oceanography**.  
<https://doi.org/10.1002/lno.11635>
- Wilson, J.R., Wilkerson, F.P., Blaser, S.B., Nielsen, K.J. 2020. Phytoplankton Community Structure in a Seasonal Low-Inflow Estuary Adjacent to Coastal Upwelling (Drakes Estero, CA, USA). **Estuaries and Coasts** <https://doi.org/10.1007/s12237-020-00792-3>
- Close, S.L., Hacker, S.D., Menge, B.A., Chan, F. and Nielsen, K.J. 2020. Biogeography Of Macrophyte Elemental Composition: Spatiotemporal Modification Of Species-Level Traits. **Ecosystems**. doi:10.1007/s10021-020-00484-w.
- Hacker S.D., Menge B.A., Nielsen K.J., Chan F., Gouhier T.C. 2019. Regional processes are stronger determinants of rocky intertidal community dynamics than local biotic interactions. **Ecology**:e02763.
- Saarman E.T., Owens B., Murray S.N., Weisberg S.B., Ambrose R.F., Field J.C., Nielsen K.J., Carr M.H. 2018. An ecological framework for informing permitting decisions on scientific activities in protected areas. **PLoS one** 13(6):e0199126.
- Freiwald, J., Meyer, R., Caselle, J.E., Blanchette, C.A., Hovel, K., Neilson, D., Dugan, J., Altstatt, J., Nielsen, K.J. and Bursek, J. 2018. Citizen science monitoring of marine protected areas: Case studies and recommendations for integration into monitoring programs. **Marine Ecology** 39, p.e12470. doi.org/10.1111/maec.12470
- Chan, F., Barth, J.A., Blanchette, C.A., Byrne, R.H., Chavez, F., Cheriton, O., Feely, R.A., Friederich, G., Gaylord, B., Gouhier, T., Hacker, S., Hill, T., Hofmann, G. McManus, M.A., Menge, B.A., Nielsen, K.J., Russell, A., Sanford, E., Sevadjan, J., Washburn, L. 2017. Persistent spatial structuring of coastal ocean acidification in the California Current System. **Scientific Reports**, 7:2526 Published online 2017 May 31. doi: 10.1038/s41598-017-02777-y.
- Liebowitz, D., K.J. Nielsen, J. Dugan, S. Morgan, D. Malone, J. Largier, D. Hubbard, M. Carr. 2016. Ecosystem connectivity and trophic subsidies of beaches. **Ecosphere** 7(10): e01503. 10.1002/ecs2.1503.
- Kroeker, K., Sanford, E.; Rose, J., Blanchette C., Chan, F., Chavez, F., Gaylord, B., Helmuth, B., Hill, T., Hofmann, G., McManus, M., Menge, B., Nielsen, K.J., Raimondi, P., Russell, A., Washburn, L. 2016. Interacting environmental mosaics drive geographic variation in mussel performance and species interactions. **Ecology Letters** 19:771-779.
- Barner, A.K.\*, S. D. Hacker, B. A. Menge & K. J. Nielsen. 2016. The complex net effect of reciprocal interactions and recruitment facilitation maintains an intertidal kelp community. **Journal of Ecology** 104:33-43.

- Murray, S., Weisberg, S., Raimondi, P., S. Ambrose, R., Bell, C., Blanchette, C., Burnaford, J., Dethier, M., Engle, J., Foster, M., Miner, M., Nielsen, K.J., Pearse, J., Richards, D. and Smith, J. 2016. Level of Agreement in Evaluating the Ecological States of West Coast Rocky Intertidal Communities: A Best Professional Judgment Exercise. **Ecological Indicators** 60:802-814.
- Menge, B.A., T.C. Gouhier, S.D. Hacker, F. Chan and K. J. Nielsen. 2015. Are meta-ecosystems organized hierarchically? A model and test in rocky intertidal habitats. **Ecological Monographs** 85:213-233.
- Heather Tallis, Jane Lubchenco, and 238 co-signatories including K.J. Nielsen. Working together: A call for inclusive conservation. 2014. **Nature** 515:27-28
- Burnaford, J., K.J. Nielsen & S.L. Williams. 2014. Celestial mechanics affect emersion time and patterns of abundance of an ecosystem engineer, the intertidal kelp *Saccharina sessilis*. **Marine Ecology Progress Series** 509:127-136.
- Krenz, C., B.A. Menge, T. L. Freidenburg, J. Lubchenco, F. T. Chan, M. M. Foley & K. J. Nielsen. 2011. Ecological subsidies to rocky intertidal communities: linear or non-linear changes along a consistent geographic upwelling transition? **Journal of Experimental Marine Biology and Ecology** 409: 361-370.
- McPhee-Shaw, E., K.J. Nielsen, J. L. Largier & B. A. Menge. 2011. Nearshore Chlorophyll-a events and wave-driven transport. **Geophysical Research Letters** 38
- Thompson, S. A., H. Knoll, C. A. Blanchette & K. J. Nielsen 2010. Population consequences of biomass loss due to commercial collection of the wild seaweed *Postelsia palmaeformis*. **Marine Ecology Progress Series** 413:17-31.
- Sanford, E., M. E. Wood\*, K. J. Nielsen. 2010. A non-lethal method for estimation of gonad and pyloric caecum indices in sea stars. **Invertebrate Biology** 128:372-380.
- Menge, B. A., F. T. Chan, K. J. Nielsen, E. D. Lorenzo & J. Lubchenco. 2009. Climatic variation alters supply side ecology: impact of climate patterns on phytoplankton and mussel recruitment. **Ecological Monographs** 79:379-95.
- Kavanaugh, M. T.\*, K. J. Nielsen, B. A. Menge, F. T. Chan, R. M. Letelier, L. M. Goodrich. 2009. Experimental assessment of the effects of shade on an intertidal kelp: do phytoplankton blooms inhibit growth of open coast macroalgae? **Limnology & Oceanography** 54:276-288.
- Barth, J. A., B. A. Menge, J. Lubchenco, F. T. Chan, J. M. Bane, A. R. Kirincich, M. A. McManus, K. J. Nielsen, S. D. Pierce & L. Washburn. 2007. Delayed upwelling alters nearshore coastal ocean ecosystems in the northern California Current. **Proceedings of the National Academy of Sciences** 104:3791-3794.
- Nielsen, K. J., C. A. Blanchette, B. A. Menge & J. Lubchenco 2006. Physiological snapshots reflect ecological performance of the sea palm, *Postesia palmaeformis*, (Phaeophyceae) across intertidal elevation and exposure gradients. **Journal of Phycology** 42, 548-559.
- Bracken, M. & K. J. Nielsen 2004. Nitrogen loading by invertebrates increases diversity of intertidal seaweeds. **Ecology** 85(10):2828-2836
- Grantham, B. A., F. T. Chan, K. J. Nielsen, D. Fox, J. A. Barth, A. Huyer, J. Lubchenco, and B. A. Menge 2004. Nearshore upwelling-driven hypoxia signals ecosystem and oceanographic changes in the NE Pacific. **Nature** 429:479-754
- Nielsen, K. J. & S. A. Navarrete 2004. Mesoscale regulation comes from the bottom-up: intertidal interactions between consumers and upwelling. **Ecology Letters** 7(1):31-41.

- Nielsen, K. J. 2003. Nutrient loading and consumers: agents of change in open-coast macrophyte assemblages. **Proceedings of the National Academy of Sciences** 100: 7660-7665.
- Wieters, E., D. M. Kaplan, A. Sotomayor, S. A. Navarrete, J. L. Largier, K. J. Nielsen & F. Véliz. 2003. Spatial and temporal variation in chlorophyll-a with respect to local upwelling intensity in central Chile. **Marine Ecology Progress Series** 249:93-105.
- Nielsen, K. J. 2001. Bottom-up and top-down forces in tidepools: test of a simple food-chain model in an intertidal community. **Ecological Monographs** 71(2): 187-217.
- Nielsen, K. J. & D. R. Franz 1995. The influence of adult conspecifics and shore level on recruitment of the ribbed mussel *Geukensia demissa* (Dillwyn). **Journal of Experimental Marine Biology and Ecology** 188:89-98.

#### BOOK CHAPTERS

- Blanchette, C.A., M.W. Denny, J.M. Engle, B. Helmuth, L.P. Miller, K.J. Nielsen, and J. Smith. 2016. Intertidal. In H. Mooney and E. Zavaleta, (Eds.) **Ecosystems of California**. University of California Press.
- Bakker, J., K.J. Nielsen, J. Alberti, F. Chan, S.D. Hacker, O.O. Iribarne, D.P.J. Kuyper, B.A. Menge, M. Schrama & B.R. Silliman. 2015. Bottom-up and top-down interactions in coastal interface systems. In K. LaPierre and T. Hanley (Eds.) **Trophic Ecology: Bottom-Up and Top-Down Interactions across Aquatic and Terrestrial Systems**. Cambridge University Press. pp. 157-200.
- Nielsen, K. J. 2007. Algae, overview. In M. Denny and M. S. Gaines, (Eds.), **Encyclopedia of the Rocky Intertidal**. University of California Press.

#### IN PRESS

- Backe, K, Hines, E, Nielsen, KJ, George, D, Twohy, E, Lowry, M. Effects of sea-level rise and storm enhanced flooding on Pacific harbor seal habitat: a comparison of haul-out changes at the Russian and Eel River Estuaries. **Aquatic Conservation: Marine and Freshwater Ecosystems**. *In Press*.

#### IN PREPARATION

- Rosenau, NA, Galavotti, H, Yates, K, Bohlen, C, Hunt, CW, Liebman, W, Brown, C, Pacella, S, Largier, J, Nielsen, KJ, Hu, X, McCutcheon, M, Vasslides, J, Poach, M, Ford, T, Johnston, K, Steele, A. Integrating high-resolution coastal acidification monitoring data across seven U.S. estuaries. *In preparation for* **Frontiers in Marine Science**,
- Nielsen, K. J., T. C. Goughier, B. A. Menge, F. T. Chan, E. E. McPhee-Shaw, J. L. Largier & P. T. Raimondi. Synoptic forcing and local scale dynamics of surfzone phytoplankton in the northern California Current Ecosystem over 9 years and 8 degrees of latitude. *In preparation for* **Progress in Oceanography**.
- Paquin, A., K. J. Nielsen & J. L. Largier. The green thread: seasonal- and event-scale forcing of phytoplankton abundance and community composition along an open-coast rocky shore *In preparation for* **Limnology & Oceanography**.

#### ADMINISTRATIVE REPORTS, PROGRAM REVIEWS, PROPOSALS

- Nielsen, K.J. 2018, 2019, 2020. Annual Report for the Estuary & Ocean Science Center, San Francisco State University

- Nielsen, K.J. 2017. Estuary & Ocean Science Center: Connecting Science Society and the Sea for a Healthy Planet. Research and Service Organization Proposal, San Francisco State University.
- Nielsen, K.J. 2014, 2015, 2016, 2017 Annual Report for the Romberg Tiburon Center for Environmental Studies, San Francisco State University
- Harvey, J., Lee, C., Nielsen, K.J., Zachos, J. 2016. Institute of Marine Science, University of California, Santa Cruz. Program Review. External reviewer report for University of California, Santa Cruz.
- Nielsen, K.J. 2013. Moss Landing Marine Laboratories M.S. Program Review. External reviewer report for San Jose State University.
- Nielsen, K.J. 2010. Supporting Faculty Research and Scholarship: A Survey of Faculty Needs in Support of Externally Funded Research and Scholarship (2009-2010). A Collaborative project of Academic Affairs and the Faculty Subcommittee on Sponsored Projects, SSU Academic Senate.
- Nielsen, K.J. 2010. Supporting Faculty Scholarship: A Summary of Interviews with the Faculty. A report for the Division of Academic Affairs, Sonoma State University

#### **PUBLICATIONS (OTHER)**

##### ***Technical Reports***

- Sievanen, L, Phillips, J, C Colgan, G Griggs, J Finzi Hart, E Hartge, T Hill, R Kudela, N Mantua, KJ Nielsen, L Whiteman. 2019. California's Coast and Ocean Summary Report. California's Fourth Climate Change Assessment. Publication number: SUMCCC4A-2018-011. <http://www.climateassessment.ca.gov/state/docs/20180827-OceanCoastSummary.PDF>
- Cope, J., Raimondi, P., Fay, G., Jiao, Y., Nielsen, K., Tissot, B., and White, W. Final report of the scientific and technical review panel: Scientific peer review of proposed recreational red abalone management strategies. California Ocean Science Trust, Oakland, CA. October, 2018. [http://www.oceansciencetrust.org/wp-content/uploads/2018/10/AbalonePeerReview\\_Final\\_Oct2018.pdf](http://www.oceansciencetrust.org/wp-content/uploads/2018/10/AbalonePeerReview_Final_Oct2018.pdf)
- Nielsen, K., Stachowicz, J., Carter, H., Boyer, K., Bracken, M., Chan, F., Chavez, F., Hovel, K., Kent, M., Nickols, K., Ruesink, J., Tyburczy, J., and Wheeler, S. Emerging Understanding of the potential role of seagrass and kelp as an ocean acidification management tool in California. California Ocean Science Trust, Oakland, California, USA. January 2018. <http://www.oceansciencetrust.org/wp-content/uploads/2018/01/OA-SAV-emerging-findings-report-1.30.18.pdf>
- Trowbridge, P., Shimabuku, I., Wheeler, S., Knight, E., Nielsen, K., Largier, J., Sutula, M., Valiela, L., Nutters, H. 2017. Summary of Workshop on Monitoring for Acidification Threats in West Coast Estuaries: A San Francisco Bay Case Study. October 19-20, 2016, San Francisco Estuary Institute, Richmond, CA. [http://www.sfei.org/sites/default/files/biblio\\_files/SFEI%20Full%20OA%20Workshop%20Summary\\_final.pdf](http://www.sfei.org/sites/default/files/biblio_files/SFEI%20Full%20OA%20Workshop%20Summary_final.pdf)
- Nielsen, KJ, Dugan, JE, Mulligan, T, Hubbard, DM, Craig, SF, Laucci, R, Wood, ME, Barrett, DR, Mulligan, HL, Schooler, N, & Succow, ML. 2017. Baseline Characterization of Sandy Beach Ecosystems along the North Coast of California. Final Report to California Sea Grant and Ocean Science Trust. 166 pp. <https://caseagrants.ucsd.edu/sites/default/files/38-Nielsen-Final.pdf>
- Ambrose, R.F., Bernstein, B., Anderson, S.S., Carr, M.H., Murray, S.N., Nielsen, K.J., Raimondi, P.T. 2016. Marine Mitigation in California: going beyond traditional approaches,



**California Ocean Protection Council Science Advisory Team, California Ocean Science Trust**, Oakland, California, USA. May 2016.

- Dugan, J.E., Hubbard, D.M., Nielsen, K.J., Altstatt, J. & Bursek, J. 2015. Baseline Characterization of Sandy Beach Ecosystems Along the South Coast of California. Final Report for California Sea Grant and Ocean Science Trust. 113 pp. <http://oceanspaces.org/sites/default/files/scmpa-24-final-report.pdf>
- Carr, M.H., K.J. Nielsen, J. Prince, P. Raimondi, S.C. Schroeter and B. Tissot. 2014. Final Report of the Science Advisory Committee Scientific and Technical Review of the Survey Design and Methods Used by the California Department of Fish and Wildlife to Estimate Red Abalone (*Haliotis rufescens*) Density. **California Ocean Science Trust, California Ocean Protection Council and California Department of Fish and Wildlife**. <http://calost.org/pdf/science-advising/peer-review/Abalone%20Review%20Final%20Report%20FINAL.pdf>
- Nielsen, K.J., S.G. Morgan & J. E. Dugan. 2013. Baseline Characterization of Sandy Beach Ecosystems in California's North-Central Coast Region. **Final Report for the Monitoring Enterprise**. October 14, 2013
- Rogers-Bennett, L., R. Kudela, K. J. Nielsen, A. Paquin\*, C. O'Kelly, G. Langlois, D. Crane & J. Moore. 2012. Dinoflagellate bloom coincides with marine invertebrate mortalities in northern California. **Harmful Algae News**
- California MLPA Master Plan Science Advisory Team# (2011, January 13). *Methods Used to Evaluate Marine Protected Area Proposals in the North Coast Study region*. Sacramento, CA: Marine Life Protection Act Initiative 31 October 2012, <http://www.dfg.ca.gov/mlpa/pdfs/northcoastproposals/evaluationmethods.pdf>  
#KJN is a co-author and was a member of the Science Advisory Team
- Nutrients Supply Affects Seaweed Diversity. 2005. **PISCO Coastal Connections** 4:12-13. An annual publication of the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO). [http://www.piscoweb.org/files/file/Coastal\\_Connections/PCC4-Final-Booklet.pdf](http://www.piscoweb.org/files/file/Coastal_Connections/PCC4-Final-Booklet.pdf)
- Sunlight Shapes Shoreline Ecology. 2005. **PISCO Coastal Connections** 4:12-13. An annual publication of the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO). [http://www.piscoweb.org/files/file/Coastal\\_Connections/PCC4-Final-Booklet.pdf](http://www.piscoweb.org/files/file/Coastal_Connections/PCC4-Final-Booklet.pdf)
- Perspectives, opinions, letters, statements, and blogs**
- Domingo, C. Simonis, U., Marzke, R., Burrus, L., Baird Jr., T., Puder, A., Dekens, P., Siong-The, K., Oliphant, A., Hsu, E., Barranci, J., Wright, C., Nielen, K., Fuse, M., Horvath, L. 2020. Announcing a CoSE Task Force for Anti-Racism. 20 August 2020. <https://cose.sfsu.edu/announcing-cose-task-force-anti-racism>
- Nielsen, K.J. 2020. Listen, learn, and reset your compass to build an anti-racist future. Anti-Racism Statement. Bayside Newsletter, Estuary & Ocean Science Center, 4 June, 2020. <https://eoscenter.sfsu.edu/content/listen-learn-and-reset-your-compass-build-anti-racist-future>
- Hill, TM, Nielsen, KJ, Cloyd, ET, Knight, E. 2018. Why we need #ClimateFriday: Centering discussions on climate change impacts and solutions. Medium.com. November 30, 2018. <https://medium.com/@phyllospadix/why-we-need-climatefriday-37e60c9c5585>

- Ramirez KS, Berhe AA, Burt J, Gil-Romera G, Johnson RF, Koltz AM, Lacher I, McGlynn T, Nielsen KJ, Schmidt R, Simonis JL. 2018. The future of ecology is collaborative, inclusive and deconstructs biases. **Nature Ecology & Evolution** 2(2):200.
- Nielsen, K.J. 2014. Applying Scientific Thinking to Decision-Making. Perspectives from the Ocean Protection Council – Science Advisory Team -- Part 2. Ocean Spaces blog post, December 8, 2014. <http://oceanspaces.org/blog/perspectives-opc-sat-part-2-applying-scientific-thinking-decision-making>
- December 15, 2008, Op-Ed, Nielsen, K. J., A bailout plan for ocean ecosystems, **The Ukiah Daily Journal**, Ukiah, CA
- May 1, 2008, Op-Ed, Nielsen, K. J., Don't let sea palms go the way of salmon, **The Mendocino Beacon**, Mendocino, CA
- April 29, 2004, Op-Ed, Nielsen, K. J., Don't miss chance to save our oceans, **The Press Democrat**, Santa Rosa, CA

### MEDIA COVERAGE

- June 27, 2018. An acidified San Francisco Bay? No one's studied that yet, by Eric Simons. Bay Nature, <https://baynature.org/article/acidified-sf-bay/>
- March 15, 2018. BOB and MARI Will Monitor Water Chemistry in the San Francisco Bay, by Karla Lant. Environmental Monitor. <https://www.fondriest.com/news/bob-mari-will-monitor-water-chemistry-san-francisco-bay.htm>
- March 16, 2018. BOB and MARI Start Monitoring the Bay, San Francisco Estuary Partnership. <https://www.sfestuary.org/bob-and-mari-start-monitoring-the-bay/>
- January 21, 2018. Radio Interview by Margie Shafer KCBS on climate change and research at the Estuary & Ocean Science Center.
2017. At a snail's place: In which the distribution of a common Pacific Coast sea snail explains the underlying logic of the universe, by Eric Simons In WEIRD, UGLY, RARE, a series showcasing the stories of species it's hard to tell stories about. They're weird. They're ugly. They're rare. **Bay Nature**. <https://baynature.org/biodiversity/>
- October, 25, 2016. Tiburon's Romberg center gets \$3M for master's program on coastal cities, by Mark Prado. **Marin Independent Journal**. <http://www.marinij.com/article/NO/20161025/NEWS/161029864>
- February 1, 2014. Creating a marine reserve snapshot; collaborative project sets baseline for protected areas, by Will Houston. **The Times-Standard**. [http://www.times-standard.com/ci\\_25041666/creating-marine-reserve-snapshot-collaborative-project-sets-baseline](http://www.times-standard.com/ci_25041666/creating-marine-reserve-snapshot-collaborative-project-sets-baseline)
- January 1, 2012. Killer algae on Sonoma coast, by Aleta George, **Bay Nature**. <http://baynature.org/articles/jan-mar-2012/ear-to-the-ground/killer-algae-on-sonoma-coast>
- October 27, 2011 Radio interview by Cal Winslow, **Mendocino Public Radio (KZYX &Z)**, Mendocino Institute's Environmental Issues mini-series, show covered recent dinoflagellate bloom and associated die-off of abalone and other marine life and discussion of newly established marine protected areas.
- October 13, 2011. Cryptic phytoplankton may hold answer, by Ryan Jacobs, **Point Reyes Light**. <http://www.ptreyeslight.com/article/cryptic-phytoplankton-may-hold-answer>
- October 3, 2011. Red tide rising: Harmful phytoplankton blooms, by Jennifer Skene, **QUEST** (KQED, San Francisco). <http://science.kqed.org/quest/2011/10/03/red-tide-rising/>

- September 23, 2011, Killer red tide baffles scientists, by John Upton, **The Bay Citizen**.  
<http://www.baycitizen.org/environment/story/killer-red-tide-baffles-scientists/>
- September 23, 2011. What's next for Abalone hunters? by Sam Scott, **Santa Rosa Press Democrat**.  
<http://www.pressdemocrat.com/article/20110923/articles/110929705>
- June 17, 2009. Radio interview by Christina Aanistad, **Mendocino Public Radio (KZYX &Z)**, Evening Local News, segment on conflict between north coast seaweed harvesters and the Marine Life Protection Act.
- October 7, 2005. Could you please pass the Sea Palm? West coast seaweed popular gourmet snack; harvesting regulations limited, by Bob Norberg, **Santa Rosa Press Democrat**.  
[http://www.sonoma.edu/users/n/nielseka/press/Press\\_Democrat\\_07OCT05.pdf](http://www.sonoma.edu/users/n/nielseka/press/Press_Democrat_07OCT05.pdf)
- March 2003, interview appearance on, **Oregon Public Broadcasting: Oregon Field Guide**, segment on Oregon's marine hypoxic zone.
- August 7, 2002. Dead marine life signals a sea change, by Jonathon Brinkman, **The Oregonian**.
- August 1, 2002. Researchers puzzle over seawater, by Susan Palmer, **The Register-Guard**.
- July 31, 2002., 'Dead Zone' May Explain Crab Die-Off, by Alison Frost, **Oregon Public Broadcasting (Oregon Considered)**.
- July 31, 2002. Dead sea life afflicts coastal zone, by Jonathon Brinkman, **The Oregonian**.
- July 31, 2002. Researchers find cause of coastal crab and fish die off, by Joel Gallob, **The Newport News-Times**.

## TEACHING EXPERIENCE

### UNDERGRADUATE COURSES

Sonoma State University, Department of Biology, Rohnert Park, CA

- **A Watershed Year**. Lecture, Discussion, and Laboratory Instruction and Curriculum Development for a new, NSF-funded 'freshman year experience' for STEM majors; the course integrates critical thinking, philosophy of science, pre-calculus math and biology; co-taught with Dr. Jeremy Qualls [Physics & Astronomy], Dr. Brigitte Lahme [Mathematics & Statistics], Dr. John Sullins III [Philosophy], Dr. Suzanne Rivoire [Computer Science], Dr. Martha Shott [Mathematics & Statistics] and Dr. Nathan Rank [Biology]. (Fall 2012 – Spring 2014 )
- **Marine Botany** (Lecture & Laboratory) (Fall 2011)
- **Marine Ecology** (Lecture & Laboratory) (Spring 2004 – 2008, 2010 - 2014)
- **Invertebrate Biology** (Lecture & Laboratory) (Fall semesters 2003 – 2013)
- **Diversity, Structure & Function** (Lecture and Laboratory content including supervision and training of graduate teaching assistants) (Fall 2003 – 2008; co-taught with Dr. Nathan Rank, Sonoma State University, Department of Biology)
- **Biological Oceanography** (Lecture) (Spring 2005, 2006)
- **Ocean Science Literacy for School & Society**. Lecture & supervision of student teaching in local public elementary schools. (Spring 2006, 2007; co-taught with Dr. Paula Lane [School of Education])
- **Special Studies, Research Experience and Honors Research**. Supervised research experiences for biology majors in my lab group. (Spring 2004 – present; 2-7 students every semester)

Hatfield Marine Science Center & Biology Program, Oregon State University, Newport, OR.

- **Marine Ecology** (Lecture & Laboratory) (Spring 2000)

GRADUATE COURSESSan Francisco State University, Interdisciplinary Marine & Estuarine Sciences, Tiburon, CA

- **Professional Internship** (Fall 2018, 2019, 2020)
- **Writing & Professional Skills Workshop** (Spring 2020, 2021)
- **Foundations in Global Change in Urbanized Coasts and Estuaries** (Fall 2017, 2018, 2019)

Sonoma State University, Department of Biology, Rohnert Park, CA

- **Applied Data Analysis** (Spring 2009, 2010, 2011)
- **Professional Skills** (Fall 2008)
- **Philosophy of Science** (Fall 2006)
- **Sound Science and Sound Bites: Ecology in the News** (Fall 2004)

GRADUATE STUDENT ADVISEES

Mehak Jain (**NSF Research Trainee**), MS anticipated 2022; TBD

Carl Hendrickson (**NSF Research Trainee**), MS anticipated 2021; Understanding the effect of living shoreline projects on the ecosystem services of eelgrass (*Zostera marina*) to enhance the outcomes of restoration projects. (co-advised with Katharyn Boyer)

Elizabeth Max, MS anticipated 2021; California mussel condition and trends in relation to climate indices in the rocky intertidal of the Farallon Islands.

Byron Riggins (**NSF Research Trainee**), MS anticipated 2021; Characterizing the capacity of *Fucus distichus* beds to ameliorate coastal acidification on estuarine rocky shores.

Chelsey Wegener (**NSF Research Trainee**), MS anticipated 2021; Responses of *Fucus distichus* reproductive ecology to changing carbonate chemistry and salinity.

Ryan Hartnett; MS Fall 2016 (Marine Science, San Francisco State University); Connecting the dots in the Gulf of the Farallones: linking physical ocean conditions to the ecological success of planktivorous predators.

Athena Maguire; MS 2016 (Biology, Sonoma State University); Ecology of the ecoparasitic pyramidellid snail, *Evalea tenuisculpta* and its host, the red abalone, *Haliotis rufescens*.

Jill Stokes; MS 2016, (Biology, Sonoma State University); Physiological ecology of the intertidal kelp *Saccharina sessilis*.

Preston Malm; MS 2016, (Biology, Sonoma State University) Trophic subsidies: links between rocky and sandy shore ecosystems

Mustafa Gül (**International Graduate Fellow, Ministry of National Education, Turkey**); MS 2015 (Biology, Sonoma State University); Climate change impacts on interactions between native and exotic marine species.

Suzanne Garcia; MS not completed (Biology, Sonoma State University); The influence of source waters on phytoplankton community structure in Point Reyes National Seashore and Bodega Bay, California.

Adele Paquin ; MS 2012 (Biology, Sonoma State University); Patterns of nearshore phytoplankton composition within a northern California upwelling cell.

- Marian Parker; MS 2009 (Biology, Sonoma State University); Reproductive output of *Balanus glandula* and *Chthamalus dalli*: can oceanography trump the effects of competitive exclusion?
- Heather Knoll (**CA Sea Grant Trainee**); MS not completed (Biology, Sonoma State University); *Postelsia* in the face of human exploitation: mechanisms of population persistence.
- Megan Wood (**EPA STAR Fellow**); MS 2008 (Biology, Sonoma State University); Reproductive output of a keystone predator and its preferred prey: the differential influence of oceanographic regime and local habitat.
- Sarah Ann Thompson (**CA Sea Grant Trainee**); MS 2007 (Biology, Sonoma State University); Balancing conservation with commercial use: an experiment to guide sustainable exploitation of an ecologically vulnerable kelp.

#### GRADUATE STUDENT COMMITTEES

- Tettlebach, Christian; MS anticipated 2021. Effects of climate change on the herbivory of eelgrass (*Zostera marina*) by an invasive grazer in San Francisco Bay. (MS committee member, Advisor: Katharyn Boyer).
- Abby Mohan; MS 2019. Benefits to community well-being from mangrove restoration activities. (MS committee member, Advisor: Ellen Hines).
- Backe, Karen; MS 2018. Effects of Sea-level Rise and Storm Enhanced Flooding on Pacific Harbor Seal Habitat: a Comparison of Haul-out Changes at the Russian and Eel River Estuaries. (MS committee member, Advisor: Ellen Hines)
- Wilson, Jessica; MS 2028. Spatial and Temporal Changes in Phytoplankton Communities in Drakes Estero, a Low-inflow Estuary. (MS committee member, Advisor: Frances Wilkerson)
- Chenchen Shen; PhD 20XX (Zoology, Oregon State University); *Corallina vancouveriensis*: impact of ocean acidification and consequences for its role as an ecosystem engineer; (PhD Committee member; Advisor: Bruce Menge)
- Letzing, Sandy; MS 2013 (Marine Resource Management, Oregon State University); Characterizing the response of coralline algae to ocean acidification and nutrient changes in the California current system. (MS Committee member; Advisor: Francis Chan)
- Joshua Cutler; MS 2012 (Biology, Sonoma State University); Behavioral plasticity of female northern elephant seals drive fine-scale foraging success (MS Committee member; Advisor: Dan Crocker)
- Frederique Lavoipierre; MS 2011 (Biology, Sonoma State University); Effects of floral resources and local environment on tri-trophic interactions (MS Committee member; Advisor: Nathan Rank)
- Betsy Kelso; MS 2011 (Biology, Sonoma State University); Sex differences in fuel use and metabolism during development in fasting northern elephant seals (MS Committee member; Advisor: Dan Crocker)
- Meghan Skaer; MS 2009; (Biology, Sonoma State University); Evaluating the influence of cattle grazing on a coastal prairie in central California (MS Committee member; Advisor: Hall Cushman)
- Catherine Hare; MS 2010 (Biology, Sonoma State University); Algal culturing using wastewater and potential for production of biodiesel. (MS Committee member; Advisor: Michael Cohen)

- Dawn Graydon; MS 2009 (Biology, Sonoma State University); Ecology and management of an endangered butterfly: the importance of host plant characteristics, exotic plants and interactions with ants (MS Committee member; Advisor: Hall Cushman)
- Lovissa Sonnerstedt; MS 2008 (Biology, Sonoma State University); Physiological ecology of Elephant Seals (MS Committee member; Advisor: Dan Crocker).
- Emi Yamamoto; MS 2008 (Biology, Sonoma State University); Characterization of Mycophagous Amoebae Strain ANN04-395 and its Potential for Biocontrol of *Phytophthora ramorum* (MS Committee member; Advisor: Michael Cohen)
- Michele Early; MS pending (Biology, Sonoma State University); Evaluating the influence of biotic and abiotic factors on valley oak distributions in the Santa Rosa Plain, California (MS Committee member; Advisor: Caroline Christian)
- Michelle Cooper; MS 2006 (Biology, Sonoma State University); The effects of recreation on the dispersal of an exotic forest pathogen (MS Committee member; Advisor: Hall Cushman).
- Joan Schwann; MS 2006 (Biology, Sonoma State University); Influence of goat grazing on invasive species in vernal pools (MS Committee member; Advisor: Hall Cushman).
- Rich Hunter; MS 2006 (Biology, Sonoma State University); Development and evaluation of a model incorporating spatial and temporal variability in a plant-pathogen invasion: Spread of *Phytophthora ramorum* in California landscapes (MS Committee member; Advisor: Ross Meentemeyer, Geography).
- Kristina Stanton; MS 2006 (Institute of Interdisciplinary Studies, Sonoma State University); Ecology education: a case study of a fourth grade tide pool and conservation experience (MS Committee member; Advisor: Paula Lane, School of Education).
- Maria Kavanaugh; MS 2005 (Zoology, Oregon State University); Phytoplankton shading of Benthic Macrophytes: Implications for Community Structure (MS Committee member; Advisor: Bruce Menge).
- Melissa Foley; PhD 2009 (Ecology & Evolutionary Biology, University of California, Santa Cruz) Effect of terrestrial inputs on marine communities (Qualifying Exam Committee Member; Advisor: Pete Raimondi).

#### TEACHING ASSISTANT EXPERIENCE

##### Hatfield Marine Science Center & Biology Program, Oregon State University, Newport, OR.

- **Marine Ecology** (1994, 1997, 1998; *Bruce Menge*, instructor)
- **Invertebrate Zoology** (1994, 1997; *Sylvia Yamada*, instructor)
- **Marine Phycology** (Full responsibility for lab exercises; 1995, *Carol Blanchette*, instructor; 1997, *Kathy Van Alstyne*, instructor)

##### Biology Program and Department of Zoology, Oregon State University, Corvallis, OR

- **General Biology** (1992-1993)
- **Human Anatomy and Physiology** (1993-1994)

#### OTHER TEACHING EXPERIENCE

**Supervisor**, undergraduate research assistants, Department of Zoology, Oregon State University, Corvallis, OR (September 1993- June 1998)

**Biology Tutor**, Peer Tutoring Program, Brooklyn College - City University of New York (September 1990 - June 1992)

**Exhibitor and Software Demonstrator**, PC-ORD: Multivariate Analysis of Ecological Data (Ver. 2.0), MjM Software, Ecological Society of America, August 1995, Snowbird, Utah.

**Assistant to the Director of Public Programs and Nature Walk Guide**, The Brooklyn Center for the Urban Environment, Prospect Park, Brooklyn, NY (March 1987- June 1992).

**WORKSHOPS** (\*organizer/co-organizer)

**\*Ocean Protection Council SF Bay Academic Roadshow.** Lightning talks, networking, and engagement with the Ocean Protection Council, Ocean Science Trust and California's two Sea Grant programs (California Sea Grant and USC Sea Grant). March 5, 2020, Estuary & Ocean Science Center - San Francisco State University, Tiburon, CA.

**Integrated Ocean Observing for a Changing California Coastline.** Presenter: Nearshore & estuarine ecosystem health. Organizer: Southern and Central and Northern California Ocean Observing Systems workshop. November 19, 2019. Sacramento, CA

**Bay Beaches Briefing.** Organized by the State Coastal Conservancy. Many environmental partners, agencies, and local landowners in the Bay Area are considering coarse grain beach restoration designs to help adapt to sea level rise and protect shorelines from erosion. Both natural and restored coarse grain beaches can include different grain sizes (sand, pebble, cobble, gravel, rock) as well as vegetation and other natural features. Bay beaches are being incorporated into living shorelines approaches and have been prioritized for more testing and study in several regional projects including SF Bay Subtidal Habitat Goals, Baylands Ecosystem Goals Update, and SF Bay Adaptation Atlas. Many groups are helping to address data gaps and working on innovative assessment and planning projects to better understand beach foreshore/backshore dynamics; engineering and nature-based design considerations; and developing conceptual restoration designs. Presenter: *EOS Center: Rocky intertidal and coarse beach design*. May 21, 2020, virtual meeting (via Zoom).

**Living Shorelines & Resilience in the SF Bay Area.** Organized by: San Francisco Bay and Outer Coast Sentinel Site Cooperative. These workshops provide an introduction to the living shorelines design approach, and share information about the state of the science and best practices around living shorelines (i.e. nature-based or green infrastructure) shoreline adaptation strategies. These workshops are geared towards San Francisco Bay Area professionals who work or may work in the near future on shoreline adaptation projects in various capacities, including land and natural resource managers, scientists, municipal and regional planners, consultants, engineers, community conservation organizations, and key community leaders. Panel presenter: *Perspectives on Living Shorelines*. March 1st, 2019, Bay Area Metro Center, Yerba Buena Room, 375 Beale St, San Francisco 94105

**Marin County Sea Level Rise Adaptation Workshop.** Hosted by: Marin County's Sea Level Rise: C-SMART and BayWAVE, Drawdown: Marin, and the California State Coastal Conservancy. Presentation: Estuary & Ocean Science Center shoreline restoration & adaptation. Mill Valley, CA March 21<sup>st</sup>, 2019.

**\*Monitoring for Acidification Threats in West Coast Estuaries: A San Francisco Bay Case Study.** Organized by: San Francisco Estuary Institute; Romberg Tiburon Center for Environmental Studies, San Francisco State University; Coastal and Marine Sciences Institute, University of California Davis; Southern California Coastal Water Research Project Authority; U.S. Environmental Protection Agency; San Francisco Estuary Partnership; and California Ocean Science Trust. Funding provided by: U.S.

Environmental Protection Agency through the San Francisco Estuary Partnership; Regional Monitoring Program for Water Quality in San Francisco Bay; California Ocean Science Trust; and California Sea Grant. San Francisco Estuary Institute, Richmond, CA. October 19-20, 2016.

**Developing Principles & Good Practice for Expert Judgments** (sponsored by the MPA Monitoring Enterprise) National Center for Ecological Analysis and Synthesis (NCEAS) Santa Barbara, CA, January 25-26, 2012

**\*Understanding and Developing Recommended Responses to Harmful Algal Bloom (HAB) Events in California** (sponsored by CA Ocean Science Trust and CA Sea Grant, with meeting space donated by Monterey Bay Aquarium Research Institute). January 11, 2012.

**In Pursuit of Bio-Criteria for Evaluating the Condition of Rocky Intertidal Communities, Workshop II** (sponsored by the University of Southern California Sea Grant Program with Assistance from the Bureau of Ocean Energy Management, Regulation and Enforcement). February 2012. Invited participant. Southern California Coastal Water Research Project, Costa Mesa, CA.

**In Pursuit of Bio-Criteria for Evaluating the Condition of Rocky Intertidal Communities, Workshop I** (sponsored by the University of Southern California Sea Grant Program with Assistance from the Bureau of Ocean Energy Management, Regulation and Enforcement). March 2010. Invited participant. Wrigley Marine Science Center (University of Southern California), Catalina Island.

**\*Los Fondos de Estudios Avanzados en Areas Prioritarias (FONDAP) - Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) Workshop on Marine Primary Productivity**, ECIM, Universidad Católica de Chile, Las Cruces, Chile, May 1999. Presentation: Nielsen K.J. 1999. Growth and abundance patterns of marine phototrophs along the central Chilean coast.

**Andrew J. Mellon Foundation Working Group**, ECIM, Universidad Católica de Chile, Las Cruces, Chile, December 1998. Presentation: Nielsen, K. J. 1998. Temporal and spatial variation in patterns of upwelled nutrients: How might oceanographic climate play a role in structuring algal assemblages in temperate upwelling ecosystems?

## **SERVICE**

### **PROFESSIONAL SERVICE - CURRENT**

May 2020 – present. Trustee, **California Ocean Science Trust**, Board of Trustees

January 1, 2020 – present. President, **Western Association of Marine Laboratories**.

<http://waml.naml.org/>

January 1, 2020 – present. Treasurer, **National Association of Marine Laboratories**.

<http://www.naml.org/>

January 1, 2020 – present. Executive Committee, **CSU Council on Ocean Affairs, Science & Technology**.

February 2018 – present. Co-Lead **Master Plan for the Romberg Tiburon Campus**, San Francisco State University <https://plan.sfsu.edu/rctcmp>

September 2014 – present, Board Member, **San Francisco Bay National Estuarine Research Reserve Management Advisory Board**.

February 2010 – present, Governing Council, **Central & Northern California Ocean Observing System**; <https://www.cencoos.org/organization-overview/staff-governing-council/>



February 2008 – present, **California Ocean Protection Council Science Advisory Team.**  
<https://www.opc.ca.gov/science-advisory-team/>

**PROFESSIONAL SERVICE - PAST**

- January 1, 2018 – December 31, 2019. President-Elect, **Western Association of Marine Laboratories.** <http://waml.naml.org/>
- January 1, 2018 – December 31, 2019. Chair, Executive Committee Chair, **CSU Council on Ocean Affairs, Science & Technology.**
- September 2016 – Strategic Planning Committee member, **Shoals Marine Laboratory.**
- June 11, 2015 – May, 2020. Liaison to the **Ocean Science Trust Board of Trustees** for the Ocean Protection Council Science Advisory Team.
- September 2013 –2017, Co-Chair **California Ocean Protection Council Science Advisory Team;** <https://www.opc.ca.gov/science-advisory-team/>
- August 2013 – June 2014, Scientific Advisory Committee, Red Abalone Density Estimates, **California Department of Fish and Wildlife and Ocean Science Trust;**  
<http://calost.org/science-advising/?page=ongoing-reviews>
- September 2012 – 2018, Scientific Working Group, Research in Marine Protected Areas, **California Department of Fish and Wildlife and California Ocean Protection Council Science Advisory Team**
- June 2012- 2016, Editorial Board, **Journal of Phycology.**
- January 2012 – 2013, Policy Committee, **Phycological Society of America**
- January 2012, co-organizer with Raphael Kudela (University of California, Santa Cruz) and administrative support from Errin Kramer-Wilt (Ocean Science Trust), **Understanding and Developing Recommended Responses to Harmful Algal Bloom (HAB) Events in California** (sponsored by CA Ocean Science Trust and CA Sea Grant, with meeting space donated by Monterey Bay Aquarium Research Institute). January 11, 2012. <http://calost.org/resources/?page=workshops>
- May 2012, External Program Reviewer, **Moss Landing Marine Laboratories, San Jose State University,** M. S. Program.
- September 2009 – January 2011, Scientific Consultant & Grant Writer, **Noyo Center for Science and Education at Fort Bragg.** Collaborative project: City of Fort Bragg and Sonoma State University to create a nature interpretive and marine research center. Worked with City staff, Susan Lohr (private consultant), Claudia Luke (SSU Field Stations and Nature Preserves), Sheila Semens (California Coastal Conservancy), Saeid Rahimi (Interim Dean, School of Science and Technology, SSU) to develop a plan gifting SSU land, design plans and phase 1 construction of the *Noyo Center* <http://city.fortbragg.com/pages/viewpage.lasso?pagename=4%7CMarine%20Science%20Institute>
- September 2010 – January 2011, **co-chair** with Claudia Luke, Director, Sonoma State University Preserves, **SSU Ad Hoc Committee on Academic Enhancement Opportunities** (Noyo Center for Science and Education at Fort Bragg).
- December 2009 – 2010, **California Marine Life Protection Act Initiative Science Advisory Team** (North Coast); <http://www.dfg.ca.gov/marine/mpa/ncsat.asp>
- January 2009, symposium organizer, “Marine Ecological Theory in Practice: Informing Marine Conservation Strategies in the 21st Century”, **International Temperate Reef Symposium,** Adelaide, Australia
- July 2007 – September 2008, **California Marine Life Protection Act Initiative Science Advisory Team** (North-Central Coast); <http://www.dfg.ca.gov/marine/mpa/mpsat.asp>
- October, 2006. **Northern California Forum for Diversity in Graduate Education.** Invited panelist. Mills College, Oakland, CA.

- June 2003, symposium organizer, "Linking Algae, Oceanography and Marine Ecology", **Phycological Society of America**, Glendon Beach, OR.
- February 2003, scientific reviewer, "Life in a Tide Pool" by Steven Otfinosko, **Newbridge Educational Publishing**, New York, NY.
- October 2002, invited speaker, **Understanding Marine Protected Areas (MPAs) and Marine Reserves: Scientific Realities and Public Perceptions**, A Workshop for Oregon Media, sponsored by **Communication Partnership for Science and the Sea (COMPASS), Ocean Wilderness Network, SeaWeb, Oregon State University & PISCO**. The Oregon Ocean: A Nature Tour. LeSells Stewart Center, Corvallis, OR
- September 2000 -2002, scientific advisory panel, **Oregon State Department of Parks and Recreation**, Monitoring protocol for the first permit issued for the commercial collection of seaweeds in Oregon.
- November 2000, co-instructor (with Gary Allison), **SAS Workshop: Elementary Statistics and Data Manipulation using SAS Software**, training workshop for graduate students and lab technicians, Lubchenco - Menge lab group, Oregon State University.
- June 1997, played role of 'Intertidal Ecologist' for **Math in the Middle of Nature** (educational video funded by **NSF** and **South Carolina Educational Television**)
- October 1996 & 1995, Panelist, **Life in Graduate School, Symposium on Graduate Study in Science for Undergraduate Women**, Oregon State University, Corvallis, OR
- February 1995, Symposium Organizer, "Science and Society," **Pacific Ecology Conference**, Oregon Institute of Marine Biology, Charleston, OR

#### UNIVERSITY COMMITTEES

##### *Current*

- March 2021- present, Vice President for Administration and Finance, **Administrative Search Committee**, San Francisco State University.
- August 2020 – present, **Academic Senate**, Senator for the College of Science & Engineering, and member of the Strategic Issues Standing Committee, San Francisco State University
- August 2014 – present, **Science Council**, College of Science & Engineering, San Francisco State University.

##### *Past*

- July 2020 – November 2020. **Ad Hoc Anti-Racism Committee**, College of Science & Engineering, San Francisco State University
- August 2017 – July 2018, **University Research Council**, San Francisco State University.
- October 2016-January 2017, Co-chair, Executive Director of Government Relations and Community Relations, **Administrative Search Committee**, San Francisco State University.
- August 2013 – August 2014, **Budget Committee**, Department of Biology, Sonoma State University.
- September 2011- August 2014, Internal Advisory Group, **S<sup>3</sup>: Stepping up STEM at Sonoma State University, NSF STEM Talent Expansion Program (STEP)**.
- August 2013 – December 2013, **Faculty Search Committee**, Department of Biology, Sonoma State University.
- August 2011 – December 2011, **Director of the Office of Sponsored Programs Search Committee**, Faculty Affairs, Sonoma State University.
- August 2012 – May 2013, **Department of Biology Reappointment, Tenure and Promotion Committee**, Sonoma State University.

- May 2010 – December 2011, **Chair, Department of Biology Reappointment, Tenure and Promotion Committee**, Sonoma State University.
- August 2008 – January 2009, **Director of the Office of Sponsored Programs Search Committee**, Faculty Affairs, Sonoma State University.
- August 2007 – December 2007, **Faculty Search Committee**, Department of Biology, Sonoma State University.
- August 2007 – May 2009, **Chair, Faculty Subcommittee on Sponsored Programs**, Sonoma State University.
- January 2006 – May 2007 & August 2000 – May 2011, **Faculty Subcommittee on Sponsored Programs**, Sonoma State University.
- August 2004 – May 2007, **Biology Department Graduate Committee**.
- August 2006 – May 2008, **Chair, Budget Committee**, Department of Biology, Sonoma State University.
- September 2005 – 2009, **Budget Committee**, Department of Biology, Sonoma State University.
- March 2005 – May 2006, **Information Technology Strategic Planning Committee**, Sonoma State University.
- August 2006 – May 2007, **School of Science & Technology Elections Committee**, Sonoma State University.
- August 2004 – May 2006, **Chair, School of Science & Technology Elections Committee**, Sonoma State University.
- August 2005 – May 2006, **Chair, Biology Department Computer Committee**.
- August 2004 – May 2005 & August 2006 – May 2007, **Biology Department Computer Committee**.
- February 2004, **International Programs**, Faculty interviewer for CSU's statewide study abroad program; selection of SSU students to advance to state-wide selection process.
- September 1995– June 1996, Graduate Student Representative, **Graduate Council, Oregon State University**, Corvallis, OR
- September 1993– 1998, **Graduate Student Welfare Committee**, Department of Zoology, Oregon State University, Corvallis, OR
- June 1994–February 1995, Chair of Steering Committee, **Pacific Ecology Conference**, Oregon Institute of Marine Biology, Charleston, OR

### **INVITED PRESENTATIONS**

#### **SCIENTIFIC MEETINGS**

- Nielsen, K.J., 2019. Meeting of waters in a time of change. **Connections between the SF Bay & Greater Farallones Sanctuary Symposium**. Estuary & Ocean Science Center - Bay Conference Center, Tiburon, CA October 16, 2019
- Nielsen, K. J. 2019. San Francisco Bay is a Hope Spot for people and ocean wildlife (Zooming Out to the Full System, plenary presentation). **14th Biennial State of the San Francisco Estuary Conference**. Scottish Rite Center in Oakland, CA. October 21 – 22, 2019.
- Nielsen, K. J. 2015. Rock, sand, water: meta-ecosystems at the land-sea interface. **Western Society of Naturalists, Presidential Symposium: Global Change Marine Ecology** (Gretchen Hoffman, Organizer). Sacramento CA. November 5-8, 2015.
- Nielsen, K. J. 2012. Synopsis of the Sonoma Harmful Algal Bloom(HAB) Event. **Understanding and Developing Recommended Responses to Harmful Algal**

- Bloom (HAB) Events in California**, Scientific Workshop hosted by the **Ocean Science Trust and CA Sea Grant**. Monterey Bay Aquarium Research Institute, Moss Landing, CA. January 11, 2012.
- Nielsen, K. J. 2008. Low Recruitment Success From A Large, Competent Larval Pool: Is Negative Selection Or Habitat Choice To Blame? **Western Society of Naturalists, Presidential Symposium: Women in Marine Biology: Personal Perspectives from the Field** (Kathy-Ann Miller, organizer), Vancouver, British Columbia, Canada, 6-9 November 2008.
- Nielsen, K. J. 2007. Intercepting light: the key to understanding interactions among, and the contributions of, benthic and pelagic photosynthesizers in highly productive, nearshore ecosystems. **PISCO Scientific Symposium**, Corvallis, OR 10-13 December 2007.
- Nielsen, K. J. 2006. Macroalgae reveal the underappreciated role of resources in structuring benthic marine communities **Phycological Society of America**, mini-symposium: **The Experimental Ecology - Macroalgae Connection** (Robert Paine, organizer), Juneau AK, 7-12 July 2006.
- Nielsen, K. J., P. Halpin, T. Freidenberg, B. A. Menge & J. Lubchenco. 2004. Grazer-alga interactions: Glimpses of generality across temperate rocky shores. **Geographical Ecology: Variation in and Control of Species Interaction Intensity over Regional and Global Scales, Symposium** (Bruce Menge, organizer), **Ecological Society of America Annual Meeting**, Portland, OR August 2004.
- Grantham, B., K. J. Nielsen, & F. Chan 2002. Hypoxia and enrichment of inshore waters at 44.3N. **U.S. GLOBEC NEP-CCS SI Meeting**, Oregon State University, Corvallis, OR. 19-21 November, 2002.
- Nielsen, K. J., P. Halpin, T. Freidenberg & B. A. Menge 2000. Upwelling, macrophytes, and herbivory in Oregon, New Zealand and Chile. **PISCO - Mellon Symposium: Dynamics of Pacific Coastal Upwelling Ecosystems**, Oregon State University, Corvallis, OR, 14-20 December 2000.
- Blanchette, C., T. Freidenburg, K. Nielsen & P. Halpin 2000. Bottom-up effects on macrophyte assemblages in relation to upwelling intensity. **PISCO - Mellon Symposium: Dynamics of Pacific Coastal Upwelling Ecosystems**, Oregon State University, Corvallis, OR, 14-20 December 2000.
- Sotomayor, A., E. Wieters, D. Kaplan, S. Navarrete & K. J. Nielsen 2000. Spatial and temporal variation in chlorophyll-a on the central coast of Chile. **PISCO - Mellon Symposium: Dynamics of Pacific Coastal Upwelling Ecosystems**, Oregon State University, Corvallis, OR, 14-20 December 2000.
- Nielsen, K. J. & K.L. Van Alstyne, 1997. Ecological effects of harmful algal blooms on benthic marine communities. **Red Tides and Harmful Algal Blooms: Evidence of Ecosystem Reorganization Symposium** (Michelle Wood, organizer), **Society for Conservation Biology Annual Meeting**, Victoria, B. C., Canada, June 1997.

#### UNIVERSITY/RESEARCH SEMINARS

- Nielsen, K.J. & J. Largier. 2019. Monitoring ocean-shed & watershed influences on the carbonate chemistry of SF Bay, **San Francisco Estuary Institute**, Richmond, CA. March 2019.
- Nielsen, K.J., 2018. Bringing an ocean perspective to an urban estuary. **Darling Marine Laboratory, University of Maine**, Walpole, MN, May 2018.

- Nielsen, K.J., 2015. Community structure and cross-ecosystem connectivity: the ecology of sandy beaches on California's north-central coast. Department of Earth & Climate Science, **San Francisco State University**, February 2015
- Nielsen, K. J., 2012. Synoptic forcing and local scale dynamics of surfzone phytoplankton in the northern California Current Ecosystem over 9 years and 8 degrees of latitude. **Humboldt State University**, December 2013.
- Nielsen, K. J., 2012. Phytoplankton in the surfzone: more than just food for filter feeders. **California State University, Fullerton**. January 2012.
- Nielsen, K. J., 2010. Reproductive output from the intertidal: spatial and temporal variation of strongly interacting species. **Moss Landing Marine Laboratory**, April 2010.
- Nielsen, K. J. 2006. Macroalgae reveal the underappreciated role of resources in structuring benthic marine communities. **Romberg Tiburon Center for Environmental Studies, San Francisco State University**, October 2006.
- Nielsen, K. J. 2005. Making a life from marine ecology and conservation; or how I got an office with an ocean view. **Santa Rosa Junior College Biology Forum**. May 2005.
- Nielsen, K. J., F. Chan, B. Grantham, J. Barth, A. Huyer, D. Fox, B. Menge & J. Lubchenco 2005. Upwelling-driven Hypoxia and Ecological Perturbation in the California Current. **Bodega Marina Laboratory, University of California, Davis, University of California**, February 2005
- Nielsen, K. J., S.A. Thompson\*, M. Parker\*, K. Lehmann\*, R. Kalmoni\* & A. White. 2005. Sea palms and barnacles: Research on slimy and spineless seashore denizens enlivens student learning. Faculty Exposition of Scholarship & Sponsored Research, **Sonoma State University**, Rohnert Park, CA. April 2005.
- Nielsen, K. J. 2004. Nutrients, upwelling and herbivory on temperate rocky shores: Disentangling bottom-up from top-down in a marine ecosystem. **Humboldt State University Biology Seminar Series**. October 2004.
- Nielsen, K. J. 2003. Capturing the light fantastic: tidal and oceanographic influences on intertidal algae.
- **Bodega Marine Laboratory, University of California, Davis**, September 2003
  - **Sonoma State University**, Department of Biology, October 2003.
- Nielsen, K. J. 2002. Environmental context sets the stage: role reversals by invertebrate consumers in marine ecosystems. **Sonoma State University**, Department of Biology, December 2002.
- Nielsen, K. J., B. Grantham & F. T. Chan. 2002. Hypoxia, anoxia and marine 'dead zones': what's natural and what's not? **Western Oregon University**, Department of Biology, November 2002.
- Nielsen, K. J. 2002. Seaweeds, sunshine and shades: micro- and meso- scale influences on intertidal plants. **Oregon Institute of Marine Biology, University of Oregon**, November 2002.
- Nielsen, K. J. 2001. From tide pools to rocky reefs nutrient supply influences community structure in upwelling ecosystems.
- **State University of New York, Stony Brook**, December 2001
  - **Brooklyn College, City University of New York**, December 2001
- Nielsen, K. J. 2001. Bottom-up forces shape the abundance and diversity of intertidal macroalgae in upwelling ecosystems of North and South America. **San Diego State University, Department of Biology**, March, 2001.

- Nielsen, K. J. 2000. Upwelling, herbivory, and algal productivity: the influence of bottom-up forces on rocky shores in central Chile. **Departamento de Ecología, Universidad Católica de Chile**, Santiago, Chile, August 2000 .
- Nielsen, K. J., 1999. Producción Primaria en el Océano (Primary Production in the Ocean; delivered in Spanish). *Guest lectures for Marine Ecology course* (Miriam Fernandez, Instructor), **Departamento de Ecología, Universidad Católica de Chile**, Santiago, Chile, July 1999.

#### PUBLIC PRESENTATIONS

- Nielsen, K.J., Boyer, K, Iselin, J., Benner, JD., Hanson, L. 2021. Bay Visions 2021: The Power of Plants Will Protect the Bay. Piedmont Garden Club, Woodside-Atherton Garden Club, Marin Garden Club, Hillsborough Garden Club, Orinda Garden Club, and Carmel-By-the-Sea Garden Club. **Affiliates of the Garden Club of America**. Zoom webinar. January 13, 2021.
- Nielsen, K.J., 2020. Blue Carbon: Ocean Climate Connections and Blue Solutions. **Rotary Climate Action Team, San Francisco Rotary Club**. Virtual presentation (via Zoom). November 19, 2020.
- Nielsen, K.J., 2020. Moderator, *Picture A Scientist* Film Screening and Panel Discussion. **College of Science & Engineering, San Francisco State University**. Sponsored by Women in Science & Engineering (WISE), EOS Center (Estuary & Ocean Science Center), NSF IT Catalyst Grant to SF State. Panelists: Carmen Domingo, Diane Harris, Yadira Ibarra, Amanda Johnson, Tomoko Komada, Leora Nanus, Imani Robinson. San Francisco State University, virtual presentation (via Zoom). October 26, 2020.
- Iselin, J. & K.J. Nielsen 2020. The art and science seaweed: the beauty and intrigue of our Pacific Coast seaweeds. **Great Mother Conference, West Coast Gathering**, 2020. Saint Dorothy's Rest, Camp Meeker, CA. February 21–23, 2020
- Iselin, J. & K.J. Nielsen 2019. Seaweed Soirée! **Greater Farallones National Marine Sanctuary Association**. The Bay Model, Sausalito, CA. November 16, 2019.
- Nielsen, K.J. 2019. Hope, innovation + conservation for a changing ocean. *Keynote speaker*. **Noyo Center for Marine Science**. September 15, 2019. Fort Bragg, CA.
- Nielsen, K.J. 2019. Climate Adaptation + Conservation in San Francisco Bay: Resilience, Adaptation and Managed Retreat. **Rotary International**, Petaluma, CA. August 14, 2019.
- Nielsen, K.J. 2019. Predicting, detecting, and preparing for increasing acidification. Panel presentation moderated by Alexis Valauri-Orton. Co-panelists: Jan Newton, Nichole Price, Joseph Salisbury, Brett Veerhusen. **Capitol Hill Ocean Week, National Marine Sanctuaries Association**. June 4-6, 2019.
- Nielsen, K.J. 2016. From the Sierras to the Sea. **Golden State Waters Action Summit: San Francisco Bay and the World Ocean**, The Bay Institute, San Francisco Belle , Pier 3, Embarcadero, San Francisco, CA. April 13-14, 2016.
- Nielsen, K.J., 2015. Coastal Marine Ecosystems. Threatened Oceans – Damaged Habitat and Plastic Pollution, **Environmental Forum of Marin Lecture Series, The Bay Model**, Sausalito, CA. February 28, 2015.
- Nielsen, K.J. 2014. From Cod Packing to Climate Change: The Past, Present and Future of the Romberg Tiburon Center for Environmental Studies. **Belvedere Tiburon Library, Adult Evening Lecture Series**, Tiburon, CA. September 11, 2014.
- Nielsen, K. J. 2013. Looking After the Big Blue: Now and Seven Generations Forward. **No Name Women's Group**, Odd Fellows Pacific Hall, Santa Rosa, CA. March 27, 2013.

- Nielsen, K. J. 2011. Marine Biodiversity of California's Seashore. **Bioforum Lecture Series, California Academy of Sciences, San Francisco, CA** March 11, 2011.
- Nielsen, K. J. 2011. Coastal Waters. The Mendocino Coast: An Eco-communitarian Conference. **The Mendocino Institute**. Caspar, CA. February 18-20<sup>th</sup> 2011.
- Nielsen, K. J., 2010. What is an Ocean Ecosystem? St. Michael's Episcopal Church, Fort Bragg, CA & Humboldt Area Foundation Conference Center Eureka, CA (**sponsored by the California Ocean Science Trust & COMPASS (Communication Partnership for Science and the Sea)**), February 9 & 10, 2010.
- Nielsen, K. J., 2010. Sustainable seafood? Says who? **The Sustainability Lecture series, University Library & Schulz Information Center, Sonoma State University**, March 2010.
- Nielsen, K. J. 2007. Shifting Seascapes. **Library Lecture Series: Citizens Of The World: On Common Ground? Schulz Information Center, Sonoma State University**, May 2007.
- Nielsen, K. J. 2002. The mysterious hypoxic zone off Oregon's coast. **15<sup>th</sup> Annual Coast Conference, Oregon Shores Conservation Coalition and Coast Watch**, Newport, OR, October 2002.
- Nielsen, K. J. 2000. Ecology of intertidal seaweeds. **13<sup>th</sup> Annual Coast Conference, Oregon Shores Conservation Coalition and Coast Watch, Hatfield Marine Science Center**, Newport, OR, October 2000.
- Nielsen, K. J. 1997. Women doing science: past and present. Keynote Address, **South Coast Saturday Academy of the South-Western Oregon Youth Association Boys' and Girls' Club's 7<sup>th</sup> Annual Women in Science Careers Day, Oregon Institute of Marine Biology**, Charleston, OR, February 1997.

#### UNIVERSITY ADMINISTRATION AND PLANNING MEETINGS

- Nielsen, K.J. 2019. Climate change, sea change & solutions for our future. **SF State Campus Leadership Forum**, San Francisco State University, November 19, 2019.
- Maloney, B., Nielsen, K.J., Martinez, M., and Foster, B. 2019. Designing a campus that invites underrepresented voices. **Society of College and University Planning, Pacific Regional Conference |The Role of Discourse Today**. University of Colorado Boulder, Boulder, CO, March 27-29, 2019.
- Anthes, J., Nielsen, K.J., Uhlig, A., Raak, L., Maxfield, C., Foster, B., Maloney, B. 2018. What good looks like: The Living Community Challenge and campus master planning. **CSU Facilities Management Conference, Building Collaborative Communities: Navigating Challenges, Charting Innovations**. Monterey, CA, October 28-31, 2018

#### CONTRIBUTED PRESENTATIONS

##### SCIENTIFIC MEETINGS

- Nielsen, K.J. and Zabin, C. Co-Chairs, Revealing San Francisco Bay's Natural and Constructed Rocky Shores: Ecological Insights to Inform Nature-Based Adaptation and Restoration. Poster Cluster Session, **14<sup>th</sup> Biennial State of the San Francisco Estuary Conference**, Oakland CA. October 21-22, 2019.
- Nielsen, KJ and Zabin, C. 2019. Revealing San Francisco Bay's natural and constructed rocky shores: ecological insights to inform nature-based adaptation and restoration

- Barceló Rosario, D<sup>^</sup>., E. Max<sup>+</sup>, C. Zabin & KJ Nielsen. 2019. Distributional limits of San Francisco Bay rockweed populations are influenced by substratum slope and tidal height\*
  - Riggins, B<sup>+</sup>., C. Wegener<sup>+</sup>, D. Barceló Rosario<sup>^</sup>, C. Zabin & KJ Nielsen. 2019. Rockweed beds of San Francisco Bay are habitat for abundant invertebrate prey for fishes and birds.
  - C. Wegener<sup>+</sup>, B. Riggins<sup>+</sup>, and KJ. Nielsen. 2019. Reproductive phenology of the rockweed, *Fucus distichus*, in San Francisco Bay.
    - <sup>^</sup>NSF REU summer intern, <sup>+</sup>IMES MS student, \*Student Poster Award, 2<sup>nd</sup> Place
- Nielsen, K.J. Dugan, J., Wood, M.E.\*, Hubbard, D., Mulligan, T., Craig, S., Laucci, R., Schooler, N. Geographic variation in the structure of California's sandy beach ecosystems. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Saarman, E.T., Owens, B., Ambrose, R.F., Carr, M.H., Field, J.C., Murray, S.N., Nielsen, K.J., Weisberg, S.B. Research and education in protected areas: a novel ecologically-based permitting decision framework. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Hettinger, A.\* Chan, F., Hacker, S., Nielsen, K.J., Barner, A., Menge, B. Missing the full story: examining responses of coralline algae to environmental variability in the context of ocean acidification. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Succow, M.L., Barrett, D.R., Mulligan, H.L., Mulligan, T.J., Nielsen, K.J., Craig, S.F. Where the surf meets the sand: predation by redbait surfperch on pacific sand crabs within northern California sandy beaches. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Hartnett, R.J.\* Nielsen, K.J., Wilkerson, F., Elliott, M., Nur, N., & Jahncke, J. Developing marine food web models to evaluate blue whale, Cassin's auklet and salmon responses to long- and short-term changes in oceanography in the California Current. **North Pacific Marine Science Organization Annual Meeting (PICES)**, San Diego, CA, November 1-13, 2016. **BEST POSTER AWARD**
- Hartnett, R. J.\* Nielsen, K.J., Wilkerson, F. P., Nur, N., Jahncke, J. Connecting the dots in the Gulf of the Farallones: linking physical ocean conditions and nutrients to the ecological success of planktivorous predators. **Ocean Sciences Meeting**, New Orleans, Louisiana, February 21-26, 2016.
- Nielsen, K.J., Mulligan, T., Dugan, J., Craig, S., Laucci, R. Connecting communities, building capacity and creating ecosystem resilience through MPA monitoring in northern California. **Western Society of Naturalists**, Sacramento CA. November 5-8, 2015
- Freiwald, J., Caselle, J., Meyer, R., Blanchette, C., Hovel, K., Neilson, D., Dugan, J., Altstatt, J., Nielsen, K.J., Bursek, J. Challenges and opportunities for citizen science monitoring of MPAs in California: case studies and recommendations. **Western Society of Naturalists**, Sacramento CA. November 5-8, 2015
- Succow, M.L.\* , Barrett, D.R., Mulligan, H.L., Mulligan, T.J., Nielsen, K.J., Craig, S.F. Got crabs? Predation by redbait surfperch on pacific sand crabs on northern California sandy beaches. **Western Society of Naturalists**, Sacramento CA. November 5-8, 2015
- Maguire, A.K.\* , Nielsen, K.J., Rogers-Bennett, L. The blood sucking ectoparasitic snail (*Evalea tenuisculpta*) and its red abalone host (*Haliotis rufescens*): A cryptic infestation of concern on wild and aquacultured abalone in California. **National Shellfisheries Association 107th Annual Meeting**, Monterey, California March 22-26, 2015



- Liebowitz, D.M., Nielsen, K.J., Dugan, J.E., Morgan, S.G., Malone, D.P., Largier, J.L., Hubbard, D.M., Carr, M.H. Ecosystem connectivity and trophic subsidies of beaches. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014
- Maguire, A.K.\*, Nielsen, K.J., Rogers-Bennett, L. The blood sucking Vampire snail, *Evalea tenuisculpta*, Infects red abalone, *Haliotis rufescens*, in northern California. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014
- Gül, M.R.\*, Nielsen, K.J. Invasion success of *Botrylloides violaceus* under contrasting conditions of temperature, food availability and species richness. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014
- Hartnett, R.H.\*, Nielsen, K.J., Wilkerson, F.P., Jahncke, J. Connecting the dots in the Gulf of the Farallones: from physical ocean conditions to ocean productivity to the top of the food web. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014
- Nielsen, K. J. 2013. Contrasting community structure, trophic links and ecosystem connectivity of long versus pocket beaches along California's north-central coast.
- **Coastal and Estuarine Research Federation**, San Diego, CA. November 3-7, 2013.
  - **Western Society of Naturalists**, Oxnard, CA, November 7-10, 2013.
- Barner, A. K.\*, S. D. Hacker, B. A. Menge, K. J. Nielsen & F. Chan. Context-dependent spatial variation of interaction between kelp canopy and understory in a coastal upwelling system. **Ecological Society of America Annual Meeting**, Minneapolis, MN, August 2013.
- O'Kelly, C. J., G.J. Mottet, A. Paquin & K.J. Nielsen. The Gonyaulax shell game: Deducing the identity of a putative emergent HAB along the central California coast. **Harmful Algal Blooms in the California Current Symposium, CALCOFI Conference**, Asilomar Conference Center, Pacific Grove, CA, 4-6 December 2012.
- Nielsen, K. J., T. C. Goughier, B. A. Menge, F. T. Chan, E. E. McPhee-Shaw, J. L. Largier & P. T. Raimondi. Synoptic forcing and local scale dynamics of surfzone phytoplankton in the northern California Current Ecosystem over 9 years and 8 degrees of latitude. **Eastern Pacific Ocean Conference**, Mt. Hood, OR, 19-22 September 2012.
- Close, S. L.\*, F. T. Chan, K. J. Nielsen, S. D. Hacker, B. A. Menge. Nutrient content of rocky intertidal macrophytes and its relation to environmental variability across a large biogeographic region. **Ecological Society of America Annual Meeting**, Portland, OR, August 2012.
- Stokes, J. A\* & K. J. Nielsen. Don't bully the bullate: A new wrinkle on how two forms of an intertidal kelp enable it to cope with environmental stress. **California State University (CSU) – Council on Ocean Affairs Science and Technology (COAST) Faculty-Student Poster Reception**. CSU Board of Trustees Meeting, Long Beach, CA, January 2012.
- Close, S. L.\*, F. T. Chan, K. J. Nielsen, S. D. Hacker, B. A. Menge. Linking nutrient content of intertidal macrophytes to ambient nutrient availability across a large biogeographic region. **Western Society of Naturalists Annual Meeting**, Vancouver, WA, November 2011.
- Malm, P. D.\*, Nielsen, K. J. The role of grain size and wrack composition in structuring talitrid amphipod populations on northern California beaches. **Western Society of Naturalists Annual Meeting**, Vancouver, WA, November 2011.
- Nielsen, K. J., S. G. Morgan, J.E. Dugan. Sand crab population monitoring in MPAs: a methodological comparison to inform development of ecosystem indicators. **Western Society of Naturalists Annual Meeting**, Vancouver, WA, November 2011.

- Paquin, A. L.\*, K. J. Nielsen & J. L. Largier. An abundance of nearshore phytoplankton: unraveling what drives the 'green ribbon' along an upwelling coast. **Western Society of Naturalists** Annual Meeting, Vancouver, WA, November 2011.
- Stokes, J. A.\*, K. J. Nielsen. Blade morphology variation ameliorates emersion stress and photosynthetic performance of the intertidal kelp *Saccharina sessilis*. **Western Society of Naturalists** Annual Meeting, Vancouver, WA, November 2011.
- Tait, L. W. B. A. Menge, S. D. Hacker, F.T. Chan & K. J. Nielsen. Impacts of climate change on the primary productivity of macroalgae: effects of pH and temperature on net productivity. **Western Society of Naturalists** Annual Meeting, Vancouver, WA, November 2011.
- Nielsen, K. J., S. D. Morgan & J. E. Dugan. Baseline characterization and monitoring of sandy beaches in California's north central coast MPAs. **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Schneider, L.\*, T. Nguyen\*, & K. J. Nielsen. Coralline algal turf communities in northern California: Community structure and potential as a bioindicator of local seawater carbonate saturation state. **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Stokes, J. A.\*, K. J. Nielsen. Variation in blade morphology ameliorates emersion stress and photosynthetic performance of the intertidal kelp *Saccharina sessilis*. **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Malm, P. D.\* & K. J. Nielsen. Do macrophyte wrack species composition and input rates influence the distribution and abundance of talitrid amphipod (*Megalorchestia* spp.) populations on northern California beaches? **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Paquin, A. L.\*, K. J. Nielsen & J. L. Largier. An abundance of nearshore phytoplankton: what drives formation and oscillations of the 'green ribbon' over short time scales? **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Paquin, A., M. Tift, D. Crocker, K. Nielsen & E. McPhee-Shaw. Phytoplankton to predators: marine ecology, physiology and oceanography at Sonoma State University (SSU). **California State University (CSU) – Council on Ocean Affairs Science and Technology (COAST) Faculty-Student Poster Reception**. CSU Board of Trustees Meeting, Long Beach, CA, January 2011.
- McPhee-Shaw, E.E., K. J. Nielsen & J. Largier. Near-coast chlorophyll *a* events and wave-driven transport. **57th annual Eastern Pacific Ocean Conference**, Mount Hood, OR, September 22-26 2010.
- Nielsen, K. J., S. A. Thompson, C. A. Blanchette & H. Knoll. Save the seaweeds: Applying ecological insights to avoid "boom and bust" commercial exploitation of wild populations. **Internation Temperate Reef Symposium**, Adelaide, Australia, January 2009.
- Thompson, S.A., K. J. Nielsen, C.A. Blanchette, B. Brockbank & H. Knoll. Effects of commercial collection on growth and reproductive output of *Postelsia palmaeformis*. **Ecological Society of America**, San Jose, CA August 2007.
- Lubchenco, J., F. Chan, J. Barth, B. Menge, J. Bane, D. Fox, A. Kirincich, M. McManus, K.J. Nielsen, C. Peterson, J. Pierce, L. Washburn, and H. Weeks. Arrhythmias in the coastal ocean off the west coast of the US. **Ecological Society of America**, San Jose, CA August 2007.

- Nielsen, K. J., S.A. Thompson & C.A. Blanchette. Deficits in biological knowledge and literacy impede management and protection of the Sea Palm, *Postelsia palmaeformis*. **International Temperate Reef Symposium**, Santa Barbara, CA 2006.
- Thompson, S. A. & K. J. Nielsen. Assessing the impact of commercial collecting on *Postelsia palmaeformis*. **Western Society of Naturalists 86<sup>th</sup> Annual Meeting**, Monterey Bay, CA, November 2005.
- Nielsen, K. J., P. Halpin, T. Freidenberg, B.A. Menge and J. Lubchenco. 2004. A biogeographic meta-analysis of herbivore effects on intertidal macroalgae. **Western Society of Naturalists 85<sup>th</sup> Annual Meeting**, Rohnert Park, CA, November 2004.
- Kavanaugh, M.T., K. J. Nielsen and B.A. Menge. Phytoplankton shading of marine benthic macrophytes: implications for community structure. **Western Society of Naturalists 85<sup>th</sup> Annual Meeting**, Rohnert Park, CA, November 2004.
- Nielsen, K. J., C.A. Blanchette, B.A. Menge, B. Grantham & J. Lubchenco. Capturing the light fantastic: oceanographic and tidal influences on intertidal algae. **Phycological Society of America**, Gleneden, OR 2003.
- Bracken, M. E. & K. J. Nielsen. Nitrogen loading by invertebrates increases growth and diversity of intertidal seaweeds. **Phycological Society of America**, Gleneden, OR 2003.
- Chan, F., B. A. Menge, K. J. Nielsen, and J. Lubchenco. Nutrient use efficiency and coastal productivity: comparative perspectives on ecosystem structure and mechanisms of control. **Phycological Society of America**, Gleneden, OR 2003.
- Menge, B. A., G. Allison, T. Freidenburg, M. Kavanaugh, J. Lubchenco, K. J. Nielsen, C. Schoch, and S. Wood. Local to coastal-scale macrophyte community structure: surprising patterns and possible mechanisms. **Phycological Society of America**, Gleneden, OR 2003.
- Nielsen, K. J., B.A. Menge, B. Grantham & J. Lubchenco. Macrophytes, phytoplankton, and upwelling: light limitation in the intertidal zone? **International Temperate Reef Symposium**, Christchurch, New Zealand January 2003.
- Nielsen, K. J., C.A. Blanchette, B.A. Menge & J. Lubchenco. Fluorescing sea palm fronds: do snapshots of physiological state reflect ecological performance? **Western Society of Naturalists**, Monterey, CA November 2002.
- Nielsen, K. J., F. Chan, B.A. Grantham, D. Fox, M. Amend, R. Davis-Born, J. Lubchenco & B. A. Menge. Unusual Die-Off off Oregon's Coast Associated with a Persistent Low-Oxygen Zone.
- **Ecological Society of America**, Tucson, AZ August 2002.
  - **International Temperate Reef Symposium**, Christchurch, New Zealand January 2003.
- Nielsen, K. J., B.A. Menge, B. A. Grantham, & J. Lubchenco. Light attenuation, upwelling, and community structure on rocky shores: can persistent phytoplankton blooms limit macrophytes? **Ecological Society of America**, Tucson, AZ August 2002.
- Nielsen, K. J., B.A. Menge, & J. Lubchenco. Fluorescing fronds: Snapshots of the physiological state of intertidal macrophytes. **Society for Integrative and Comparative Biology**, Anaheim, CA. 2002.
- Nielsen, K. J., B.A. Grantham, B.A. Menge & J. Lubchenco. Rocky Intertidal Oceanography: Local Scale Modification of a Large Scale Template. **Western Society of Naturalists**, Venture, CA 2001.

- Nielsen, K. J. & S.A. Navarrete 2000. Do bottom-up factors drive variation in algal assemblages on rocky shores? Upwelling and herbivory along the central Chilean coast. **Ecological Society of America**, Snowbird, UT, August 2000.
- Nielsen, K. J. 1997. Nutrients and grazing in tidepools: bottom-up and top-down forces generate structure in a marine community.
- **International Temperate Reef Symposium**, Santiago, Chile, July 1997.
  - **Western Society of Naturalists**, La Paz, Mexico, January 1997.
  - **Ecological Society of America**, Providence, RI, August 1996.
- Van Alstyne, K.L. & K. J. Nielsen, 1996. The use of randomization methods to analyze data from multiple-choice feeding-preference experiments. **Ecological Society of America**, Providence, RI, August 1996.
- Nielsen, K. J. 1996. Nutrients and grazing in tidepools: an experimental evaluation of bottom-up and top-down forces in a marine community. **Biology Graduate Student Symposium**, Hatfield Marine Science Center, South Beach, OR, March 1996.
- Nielsen, K. J. 1993. The role of adult conspecifics and recruitment variability on the horizontal distribution of ribbed mussels in Jamaica Bay, NY. **Western Society of Naturalists**, Otter Crest, Newport, OR January 1993.
- Nielsen, K. J. 1992. Ribbed mussel (*Geukensia demissa*) recruitment in Jamaica Bay, NY. **New England Estuarine Research Society**, May 1992.
- Franz, D.R. , P. Ficara, K. J. Nielsen, & J.T. Tanacredi 1991. Can ribbed mussels be used to monitor environmental quality in Jamaica Bay (Gateway National Recreation Area)? Preliminary results. **2<sup>nd</sup> National Park Service Conference on Science and Natural Resource Management in the North Atlantic Region**, November 1991.

#### COMMUNITY SERVICE

- Nielsen, KJ. 2020. Estuary & Ocean Science Center research and tour of SF State's Romberg Tiburon Campus. **Marin County Civil Grand Jury**. SF State- Romberg Tiburon Campus, Tiburon, CA. February 3, 2020.
- Summer 2011, Faculty Mentor (to Katie Azcárraga, Maria Carrillo High School), **Summer High School STEM Internship Program (SHIP)**; a partnership between the School of Science and Technology (SST) at Sonoma State University and the Sonoma County Office of Education (SCOE).
- Spring 2009, 2011, Fall 2008, 2007, Squid Anatomy & Biology (one-day classroom science activity with SSU Department of Biology MS students), **Austin Creek Elementary School**, Santa Rosa, CA
- August 2008, March 2006, Tidepool Life Activity, **The Living Room: A Daytime Shelter for Homeless Women & Children**, Santa Rosa, CA
- July 2007, Tidepool Life Activity, **Excel: A Unique Enrichment Program for Grades 4-9**, Sonoma State University, Rohnert Park, CA
- Spring 2007, Supervision, training & placement of 14 Sonoma State University students into 7 **Sonoma County Public Elementary Schools** to teach Ocean Science Lessons.
- Spring 2006, Supervision, training & placement of 12 Sonoma State University students into 6 **Sonoma County Public Elementary Schools** to teach Ocean Science Lessons.
- December 2002, volunteer presentation and lab activity, "Intertidal Zone Ecology and Field Experiments," for Marine Science class, **Corvallis High School**, Corvallis, OR
- October 2002, invited speaker, **Oregon Sea Grant, Scientist and Fishermen Exchange (SAFE)**. Review of onshore, subtidal and nearshore research in progress by PISCO. Englund's Marine Supply, Newport, OR.

November 2000, presenter, **The 24th Annual Science and Engineering Workshop for Middle School Girls**, organized by the **Association for Women in Science**. Lab tour and hands-on demonstration of methods used to sample phytoplankton abundance in the nearshore environment

1995- 2002, Job Shadow and Mentor, **School-to-Career Program, Corvallis School District 509J**, Corvallis, OR

### REVIEWER

Biological Bulletin, California Sea Grant, Deep Sea Research, Ecology, Ecological Monographs, Ecology Letters, Estuarine, Coastal & Shelf Science, Inter-American Institute for Global Change Research, Journal of Phycology, Journal of Experimental Marine Biology and Ecology, Limnology and Oceanography, Limnology and Oceanography Methods, Marine Ecology Progress Series, National Estuarine Research Reserve, National Oceanographic and Atmospheric Administration, National Science Foundation, People and Nature, Revista Chilena de Historia Natural, University of California Press

### PROFESSIONAL SOCIETIES

Coastal and Estuarine Research Federation, Ecological Society of America, Western Society of Naturalists, Phycological Society of America, American Institute of Biological Science, American Geophysical Union, Sigma Xi

### LANGUAGES

English - *fluent*

Spanish- *proficient in reading, listening, and writing; conversational in speaking*

### PROFESSIONAL DEVELOPMENT & ADVANCED COURSES

**Climate Action Pursuit: Toward Justice and Resilience**. Second Nature and Intentional Endowments Network. Climate Action Pursuit. Conference/workshops for learning, planning, acting, and leading on equity and climate in our campuses and communities. February – December 2021.

<https://secondnature.org/climateactionpursuit-2/>

**Science Coding Immersion Program**, San Francisco State University. 1 June – 9 July

2021. <https://pleunipennings.wordpress.com/science-coding-immersion-program>

**Building Gender Equity in the Academy: Institutional Strategies for Change**, AAAS Sea Change. February – May 2021. <https://seachangeinstitute.aaas.org>

**Undoing Racism in the GeoSciences**, a community-wide journal-reading and policy-design curriculum to help Geoscientists unlearn racism and improve accessibility, justice, equity, diversity, and inclusion. NSF and Woods Hole Oceanographic Institute. January – May 2021. <https://urgeo-science.org>

**Academics for Black Survival and Wellness**. Training for non-black participants to make actionable change to address anti-black racism in their personal lives and academia. June 2020. <https://www.academics4blacklives.com/>

**Communicating Ocean Science, California Center for Ocean Sciences Education Excellence (COSEE), The Lawrence Hall of Science, University of California – Berkeley**; June 6-8, 2005.

<http://www.coseeca.net/programs/communicatingoceancesciences/>

**Biomechanics and Ecological Physiology of Intertidal Communities**, Mark Denny and George Somero, instructors, Hopkins Marine Station, Stanford University, Summer 1999

**Invertebrate Zoology**, Stan Rachootin and Patricia Morse, instructors, Friday Harbor Laboratories, University of Washington, Summer 1993

**Marine Phycology**, Tom Mumford and Sandra Lindstrom, instructors, Friday Harbor Laboratories, University of Washington, Summer 1993