Michael G. Jacox

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EDUCATION

2012 Ph.D. Ocean Sciences, University of California - Santa Cruz

2005 B.S. Aerospace Engineering, Applied Mathematics Minor, University of Colorado - Boulder

PROFESSIONAL APPOINTMENTS

2017 – Research Oceanographer, NOAA Southwest Fisheries Science Center, Monterey, CA and NOAA Physical Sciences Laboratory, Boulder, CO

2014 – Assistant Project Scientist, UC Santa Cruz and NOAA/SWFSC, Monterey, CA

2012 – 2014 Post-doctoral Researcher, University of California, Santa Cruz, CA

AWARDS

2022 Employee of the Year, NOAA Southwest Fisheries Science Center

2021 U.S. Department of Commerce Bronze Medal
For major advances in linking environmental variability to groundfish recruitment on the west coast

2019 US CLIVAR Early Career Climate Leadership Award
For outstanding contributions to interdisciplinary community activities to synthesize understanding of climate and marine ecosystem predictability

2017 Team Member of the Year, NOAA Southwest Fisheries Science Center

2014 Best Talk, Physical Oceanography and Climate Committee, PICES Annual Meeting

TEACHING

2015 – 2019 Instructor, Inquiry Institute, UCSC Institute for Scientist and Engineer Educators

2019 Guest Lecturer, ENSTU 309 – Science and Policy of Global Change, California State University Monterey Bay

2013 Guest Lecturer, METR/OCN 450 - Air-Sea Interactions, San Francisco State University

2011 Course Designer/Lead Instructor, Workshop for Engineering and Science Transfers, UCSC

2011 Teaching Assistant, OCEA80A - Life in the Sea, UCSC

2010 Course Designer/Instructor, Akamai Maui Short Course, Maui Community College (now UH Maui College), HI

2009 Course Designer/Instructor, Ocean Sciences Laboratory, UCSC Diversity Forum

SERVICE

2022 –	Co-chair, *NOAA Climate, Ecosystems and Fisheries Initiative (CEFI) National Modeling Team*
2022 –	Member, *NOAA CEFI National Decision Support Team*
2022 –	Member, *NOAA CEFI National Coordination Team*
2022 –	Co-chair, *WMO Task Team on Climate Services and Fisheries*
2022	Member, Ecological Forecasting Partnership Team, *NSF-NOAA Bilateral Leadership Roundtable*
2021 –	Author, Oceans and Marine Resources chapter, *Fifth National Climate Assessment*
2021	Program Committee Member, *Ocean Sciences Meeting 2022*, Honolulu, HI
2020 –	Co-chair, *NOAA Marine Ecosystems Task Force*
2020 – 2022	Co-chair, *NOAA Climate and Fisheries Initiative Implementation Team*
2020 – 2021	Member, *NMFS West Coast Wind Energy Working Group*
2019 – 2020	Co-chair, *NOAA Climate and Fisheries Initiative Expert Team on Near Term Forecasting*
2019 – 2022	Member, *NOAA CMIP6 Task Force*
2017 – 2022	Co-chair, *PICES Working Group 40 – Climate and Ecosystem Predictability*
2017 – 2020	Co-chair, *NOAA Marine Prediction Task Force*
2018 – 2020	Member, *CLIVAR Research Focus Group on Eastern Boundary Upwelling Systems*
2019	Session co-chair, *PICES Annual Meeting*, Victoria, Canada.
2018	Session co-chair, *International Symposium on the Effects of Climate Change on the World's Oceans*, Washington D.C.
2018	Session co-chair, *Ocean Sciences Meeting*, Portland, OR.
2016	Conference co-chair, *Eastern Pacific Ocean Conference*, Mt. Hood, OR
2016	Session co-chair, *Ocean Sciences Meeting*, New Orleans, LA.
2015	Session co-chair, *Eastern Pacific Ocean Conference*, Fallen Leaf Lake, CA
Editing	Guest editor, *Frontiers in Marine Science* special collection "North Pacific climate and ecosystem predictability on seasonal to decadal timescales".
	Guest editor, *Geophysical Research Letters* special issue "Advancing prediction of coastal marine ecosystems".
Journal Reviewing	*Biogeosciences, Climate Dynamics, Climatic Change, Deep Sea Research Part II, Earth's Future, Elementa: Science of the Anthropocene, Environmental Science and Technology, Estuaries and Coasts, Geophysical Research Letters (4), Journal of Geophysical Research (10), Journal of Physical Oceanography, Nature (3), Nature Climate Change, Nature Communications (2), Nature Geoscience, Ocean Modelling, Ocean Science, Oceanography, PLOS ONE, Progress in Oceanography (4), Remote Sensing, Remote Sensing of Environment, Science Advances, Scientific Reports (2)*
Proposal Reviewing	*National Science Foundation*, *Natural Environment Research Council (UK)*, *Swiss National Supercomputing Center*

POSTDOCTORAL ADVISING

2022 – Allison Cluett (UCSC/SWFSC)
2021 Dillon Amaya (U Colorado/PSL)
2020 – Nathali Cordero Quiros (UCSC/SWFSC; co-advised with S. Bograd)
2019 – Tim Frawley (UCSC/SWFSC; co-advised with S. Bograd and E. Hazen)
2018 – Mercedes Pozo Buil (UCSC/SWFSC)
2018 – Stefan Koenigstein (UCSC/SWFSC)
2018 – James Smith (UCSC/SWFSC; co-advised with D. Tommasi)
2018 – 2019 Erin Satterthwaite (California Sea Grant; co-advised with S. Bograd and E. Hazen)
2018 – 2019 Jonathan Sweeney (UCSC/SWFSC; co-advised with S. Stohs)
2017 – 2022 Stephanie Brodie (UCSC/SWFSC; co-advised with S. Bograd and E. Hazen)
2016 – Heather Welch (UCSC/SWFSC; co-advised with S. Bograd and E. Hazen)

UNDERGRADUATE ADVISING (HOLLINGS SCHOLARS)

2022 Ellen Jorgensen (Syracuse)
2021 – 2022 Victoria Boatwright (Georgetown)
2021 Cristian Swift (U Washington)
2021 Julia McElhinny (Wake Forest)
2020 Elizabeth Saraf (U Rhode Island)

GRANTS RECEIVED

2020 – 2023 **M. Jacox**, M. Alexander, J. Dias, D. Tommasi, M. Pozo Buil. Improving the utility of global climate forecasts for regional fisheries applications. *NOAA MAPP*. $649,486.

2020 – 2023 M. Pozo Buil, **M. Jacox**, D. Tommasi, J. Fiechter, S. Bograd, R. Rykaczewski. Understanding the variability and projecting future changes of biogeochemistry in the California Current Upwelling System. *NOAA MAPP*. $500,487.

2020 – 2023 M. Alexander, C. Deser, **M. Jacox**. Developing a process based understanding of marine heat waves: present and future. *NOAA CVP/MAPP*. $459,147.

2020 – 2023 M. Pozo Buil, N. Lovenduski, E. Di Lorenzo, **M. Jacox**, S. Bograd, E. Hazen. Mechanisms of interannual- to decadal-scale predictability for ocean physics and biogeochemistry in the California Current System. *NOAA CVP*. $851,263.

2020 – 2022 **M. Jacox**, B. Muhling, T. Frawley, S. Brodie, J. Smith, D. Tommasi, H. Welch, S. Bograd, E. Hazen, H. Dewar. Dynamic decision-support tools to counter IUU fishing for North Pacific albacore. *NOAA OLE*. $508,648.

2019 – 2021 R. Rykaczewski, **M. Jacox**, M. Garcia-Reyes, B. Black, S. Bograd, W. Sydeman. Coupled climate stressors along the west coast of North America: Drought, marine heat waves, HABs, and hypoxia. *NOAA MAPP.* $199,307.

2018 – 2021 **M. Jacox**, S. Bograd, C. Edwards, E. Hazen, A. Moore, C. Wilson. Assimilating NOAA VIIRS data into near-teal-time ocean models to support fisheries applications off the US west coast. *NOAA JPSS.* $422,292.

2018 – 2021 E. Hazen, **M. Jacox**, D. Robinson, C. Wilson, S. Bograd. Using VIIRS to operationalize dynamic EBFM tools on the U.S. East and West Coasts. *NOAA JPSS.* $590,340.

2018 – 2021 C. Edwards, C. Anderson, E. Bayler, J. Fiechter, R. Kudela, A. Moore, E. Hazen, **M. Jacox**, A. Kurapov, P. MacCready, J. Newton, H. Ruhl. Advancing the West Coast Ocean Forecasting System through assessment, model development, and ecological products. *NOAA COMT.* $899,108.

2018 – 2021 S. Green, L. Crowder, S. Bograd, E. Hazen, **M. Jacox**. Traits-based tools to inform cross-jurisdictional fisheries management under climate change. *Lenfest.* $401,200 ($0 to UCSC/SWFSC).

2018 – 2020 S. Parker-Stetter, D. Chu, S. Gauthier, C. Harvey, M. Hunsicker, **M. Jacox**, O. Shelton, R. Thomas, N. Tolimieri. Quantifying spatiotemporal distribution, abundance, and environmental drivers of euphausiids in the California Current Large Marine Ecosystem. *NOAA FATE.* $170,000 ($10,000 to UCSC/SWFSC).

2017 – 2020 **M. Jacox**, M. Alexander, S. Bograd, E. Curchitser, C. Edwards, J. Fiechter, E. Hazen, A. Himes-Cornell, R. Rykaczewski, S. Stohs. From physics to fisheries: A social-ecological management strategy evaluation for the California Current Large Marine Ecosystem. *NOAA COCA.* $1,991,674 ($1,645,765 to UCSC/SWFSC).

2017 – 2020 **M. Jacox**, M. Alexander, S. Bograd, C. Edwards, J. Fiechter, E. Hazen, S. Siedlecki. Downscaled seasonal forecasts for living marine resource management off the US west coast. *NOAA MAPP.* $538,194 ($385,190 to UCSC/SWFSC).

2017 – 2020 E. Hazen, **M. Jacox**, S. Bograd. A fine-scale dynamic management tool to minimize whale ship strike risk in the northeast Pacific. *Benioff Ocean Initiative.* $363,796.

2017 – 2018 S. Bograd, **M. Jacox**, C. Edwards. Biological ocean reanalyses for fisheries applications off the US West Coast. *NOAA CIO.* $149,946.

2016 – 2017 H. Bailey, L. Crowder, S. Bograd, E. Hazen, D. Robinson, C. Wilson, **M. Jacox**, K. Scales, D. Briscoe. El Niño Watch revised - An improved index for reducing Loggerhead Turtle bycatch in the California Current. *NOAA BREP.* $134,262 ($81,174 to UCSC/SWFSC).

2011 **M. Jacox**. Dr. Earl Myers and Ethel Myers Oceanographic and Marine Biology Trust Research Grant. $1,500.

2009 **M. Jacox**. Friends of Long Marine Lab Student Research Award. $750.

PEER-REVIEWED PUBLICATIONS

Lezama-Ochoa, N., S. Brodie, H. Welch, **M.G. Jacox**, M. Pozo Buil, J. Fiechter, M. Cimino, B. Muhling, H. Dewar, E.A. Becker, K.A. Forney, D. Costa, S.R. Benson, N. Farchadi, C. Braun, R. Lewison, S.J. Bograd, and E.L. Hazen (2023), Divergent responses of highly migratory species to climate change in the California Current, *Diversity and Distributions,* doi:10.1111/ddi.13800.

Hardy, N.A., C. Matuch, Z. Roote, I. George, B.A. Muhling, **M.G. Jacox**, E.L. Hazen, S.J. Bograd, L.B. Crowder, and S.J. Green (2023), Trait-based analyses reveal global patterns in diverse diets of albacore tuna (*Thunnus alalunga*), *Fish and Fisheries,* doi:10.1111/faf.12807.

Brodie, S., M. Pozo Buil, H. Welch, S.J. Bograd, E.L. Hazen, J.A. Santora, R. Seary, I.D. Schroeder, and **M.G. Jacox** (2023), Ecological forecasts for marine resource management during climate extremes, *Nature Communications,* 14, 7701, doi:10.1038/s41467-023-43188-0.

Jacox, M.G., M. Pozo Buil, S. Brodie, M.A. Alexander, D.J. Amaya, S.J. Bograd, C.A. Edwards, J. Fiechter, E.L. Hazen, G. Hervieux, and D. Tommasi (2023), Downscaled seasonal forecasts for the California Current System: Skill assessment and prospects for living marine resource applications, *PLOS Climate,* 2(10), e0000245, doi:10.1371/journal.pclm.0000245.

Mogen, S., N.S. Lovenduski, S. Yeager, L. Keppler, J. Sharp, S.J. Bograd, N. Cordero Quiros, E. Di Lorenzo, E.L. Hazen, **M.G. Jacox**, and M. Pozo Buil (2023), Skillful multi-month predictions of ecosystem stressors in the surface and subsurface ocean, *Earth's Future, 11, e2023EF003605*, doi:10.1029/2023EF003605.

Pozo Buil, M., J. Fiechter, **M.G. Jacox**, S.J. Bograd, and M.A. Alexander (2023), Evaluation of different bias correction methods for dynamical downscaled future projections of the California Current upwelling system, *Earth and Space Science*, doi:10.1029/2023EA003121.

Shi, H., M. Pozo Buil, S.J. Bograd, M. García-Reyes, **M.G. Jacox**, B.A. Black, W.J. Sydeman, and R.R. Rykaczewski (2023), Future change of summer hypoxia in the coastal California Current, *Frontiers in Marine Science*, doi:10.3389/fmars.2023.1205536.

Welch, H., M.S. Savoca, S. Brodie, **M.G. Jacox**, B.A. Muhling, T.A. Clay, M.A. Cimino, S.R. Benson, B.A. Block, M.G. Conners, D.P. Costa, F.D. Jordan, A.W. Leising, C.S. Mikles, D.M. Palacios, S.A. Shaffer, L.H. Thorne, J.T. Watson, R.R. Holser, L. Dewitt, S.J. Bograd, and E.L. Hazen (2023), Impacts of marine heatwaves on top predator distributions are variable but predictable, *Nature Communications*, doi:10.1038/s41467-023-40849-y.

Liu, O.R., E.J. Ward, S.C. Anderson, K.S. Andrews, L.A.K. Barnett, S. Brodie, G. Carroll, J. Fiechter, M.A. Haltuch, C.J. Harvey, E.L. Hazen, P.-Y. Hernvann, **M.G. Jacox**, I.C. Kaplan, S. Matson, K. Norman, M. Pozo Buil, R.L. Selden, A. Shelton, and J.F. Samhouri (2023), Species redistribution creates unequal outcomes for multispecies fisheries under projected climate change, *Science Advances*, 9, 33, eadg5468, doi:10.1126/sciadv.adg5468.

Alexander, M.A., J.D. Scott, **M.G. Jacox**, C. Deser, D.J. Amaya, A. Capotondi, and A.S. Phillips (2023), A survey of coastal conditions around the continental US using a high-resolution ocean reanalysis, *Progress in Oceanography*, 216, 103055, doi:10.1016/j.pocean.2023.103055.

Vestfals, C.D., K.N. Marshall, N. Tolimieri, M.E. Hunsicker, A.M. Berger, I.G. Taylor, **M.G. Jacox**, and B.D. Turley (2023), Stage-specific drivers of Pacific hake (*Merluccius productus*) recruitment in the California Current Ecosystem, *Fisheries Oceanography*, doi:10.1111/fog.12634.

Raghukumar, K., T. Nelson, **M.G. Jacox**, C. Chartrand, J. Fiechter, G. Chang, L. Cheung, and J. Roberts (2023), Projected cross-shore changes in upwelling induced by offshore wind farm development along the California coast, *Communications Earth & Environment*, 4, 116, doi:10.17882/94046.

Amaya, D.G., **M.G. Jacox**, M.R. Fewings, V.S. Saba, M.F. Stuecker, R.R. Rykaczewski, A.C. Ross, C.A. Stock, A. Capotondi, C.M. Petrik, S.J. Bograd, M.A. Alexander, W. Cheng, A.J. Hermann, K.A. Kearney, and B.S. Powell (2023), Marine heatwaves need clear definitions so coastal communities can adapt, *Nature*, 616, 29-32, doi:10.1038/d41586-023-00924-2.

Amaya, D.G., **M.G. Jacox**, M.A. Alexander, J.D. Scott, C. Deser, A. Capotondi, and A. Phillips (2023), Bottom marine heatwaves along the continental shelves of North America, *Nature Communications*, 14, 1038, doi:10.1038/s41467-023-36567-0.

Smith, J.A., M. Pozo Buil, B. Muhling, D. Tommasi, S. Brodie, T.H. Frawley, J. Fiechter, S. Koenigstein, A. Himes-Cornell, M.A. Alexander, S.J. Bograd, N. Cordero Quirós, L.B. Crowder, E. Curchitser, S.J. Green, N.A. Hardy, A.C. Haynie, E.L. Hazen, K. Holsman, G. Le Fol, N. Lezama-Ochoa, R.R. Rykaczewski, C.A. Stock, S. Stohs, J. Sweeney, H. Welch, and **M.G. Jacox** (2023), Projecting climate change impacts from physics to fisheries: a view from three California Current fisheries, *Progress in Oceanography*, accepted.

McClure M.M., M.A. Haltuch, E. Willis-Norton, D.D. Huff, E.L. Hazen, L.G. Crozier, **M.G. Jacox**, M.W. Nelson, K.S. Andrews, L.A.K. Barnett, A.M. Berger, S. Beyer, J. Bizzarro, D. Boughton, J.M. Cope, M. Carr, H. Dewar, E. Dick, E. Dorval, J. Dunham, V. Gertseva, C.M. Greene, R.G. Gustafson, O.S. Hamel, C.J. Harvey, M.J. Henderson, C.E. Jordan, I.C. Kaplan, S.T. Lindley, N.J. Mantua, S.E. Matson, M.H. Monk, P. Moyle, C. Nicol, J. Pohl, R.R. Rykaczewski, J.F. Samhouri, S. Sogard, N. Tolimieri, J. Wallace, C. Wetzel, and S.J. Bograd (2023) Vulnerability to climate change of managed stocks in the California Current large marine ecosystem, *Frontiers in Marine Science*, 10:1103767, doi:10.3389/fmars.2023.1103767.

Fennie, H.W., R. Seary, B. Muhling, S.J. Bograd, S. Brodie, M. Cimino, E.L. Hazen, **M.G. Jacox**, E. McHuron, S. Melin, J. Santora, J. Suca, J. Thayer, A.R. Thompson, P. Warzybok, and D. Tommasi (2023), An anchovy ecosystem indicator of marine predator foraging and reproduction, *Proceedings of the Royal Society B*, accepted.

Frawley, T.H., B. Muhling, S. Brodie, H. Blondin, H. Welch, M.G. Arostegui, S.J. Bograd, C.D. Braun, M.A. Cimino, N. Farchadi, E.L. Hazen, D. Tommasi, and **M.G. Jacox** (2023), Dynamic human, oceanographic, and ecological factors mediate transboundary fishing overlap across the Pacific high seas, *Fish and Fisheries*, 25, 60-81, doi:10.1111/faf.12791.

Amaya, D. J., M. A. Alexander, J. D. Scott, and **M. G. Jacox** (2023), An evaluation of high-resolution ocean reanalyses in the California Current System, *Progress in Oceanography*, 210, 102951, doi:10.1016/j.pocean.2022.102951.

Bograd, S. J., **M. G. Jacox**, E. L. Hazen, E. Lovecchio, I. Montes, M. Pozo Buil, L. Shannon, W. J. Sydeman, and R. R. Rykaczewski (2023), Climate change impacts on eastern boundary upwelling systems, *Annual Reviews of Marine Science*, doi:10.1146/annurev-marine-032122-021945.

Karp, M., S. Brodie, J. Smith, K. Richerson, R. Selden, O. Liu, B. Muhling, J. Samhouri, L. Barnett, E. Hazen, D. Ovando, J. Fiechter, **M.G. Jacox**, and M. Pozo Buil (2022), Projecting species distributions using fishery dependent data, *Fish and Fisheries*, 24(1), 71-92, doi:10.1111/faf.12711.

Minobe, S., A. Capotondi, F. Chai, M.G. Jacox, M. Nonaka, and R.R. Rykaczewski (2022), Editorial: North Pacific climate and ecosystem predictability on seasonal to decadal timescales, *Frontiers in Marine Science*, 9, doi:10.3389/fmars.2022.1111272

Cordero Quirós, N., **M.G. Jacox**, M. Pozo Buil, and S.J. Bograd (2022), Future changes in eddy kinetic energy in the California Current System from dynamically downscaled climate projections, *Geophysical Research Letters*, doi:10.1029/2022GL099042.

Koenigstein, S., **M.G. Jacox**, M. Pozo Buil, J. Fiechter, B.A. Muhling, S. Brodie, P. Kuriyama, T.D. Auth, E.L. Hazen, S.J. Bograd, and D. Tommasi (2022), Population projections of Pacific sardine driven by ocean warming and changing food availability in the California Current, *ICES Journal of Marine Science*, doi:10.1093/icesjms/fsac191.

Schroeder, I.D., J.A. Santora, N. Mantua, J.C. Field, B.K. Wells, E.L. Hazen, **M.G. Jacox**, and S.J. Bograd (2022), Habitat compression indices for monitoring ocean conditions and ecosystem impacts within coastal upwelling systems, Ecological Indicators, 144, 109520, doi:10.1016/j.ecolind.2022.109520.

Thompson, A.R., E.P. Bjorkstedt, S.J. Bograd, J.L. Fisher, E.L. Hazen, A. Leising, J.A. Santora, E.V. Satterthwaite, W.J. Sydeman, M. Alksne, T.D. Auth, S. Baumann-Pickering, N.M. Bowlin, B.J. Burke, E.A. Daly, H. Dewar, J.C. Field, N.T. Garfield, A. Giddings, R. Goericke, J. Hildebrand, C.A. Horton, K.C. Jacobson, **M.G. Jacox**, et al. (2022), State of the California Current System in 2021: Winter is coming?, Frontiers in Marine Science, doi:10.3389/fmars.2022.958727.

Frawley, T., B. Muhling, H. Welch, K. Seto, S.-K. Chang, F. Blaha, Q. Hanich, M. Jung. E.L. Hazen, **M.G. Jacox**, and S. Brodie (2022), Clustering of disaggregated fisheries data reveals functional longline fishing fleets across the Pacific, *One Earth*, 5, 1002-1018, doi:10.1016/j.oneear.2022.08.006.

Koehn, L., L.K. Nelson, J.F. Samhouri, K. Norman, **M.G. Jacox**, A. Cullen, J. Fiechter, M. Pozo Buil, and P.S. Levin (2022), Social-ecological vulnerability of fishing communities to climate change: a US West Coast case study, *PLOS ONE,* doi:10.1371/journal.pone.0272120.

Brodie, S., J.A. Smith, B.A. Muhling, L.A. Barnett, G. Carroll, P. Fiedler, S.J. Bograd, E.L. Hazen, **M.G. Jacox**, K.S. Andrews, C.L. Barnes, L.G. Crozier, J. Fiechter, A. Fredston, M.A. Haltuch, C.J. Harvey, E. Holmes, M.A. Karp, O.R. Liu, M.J. Malick, M. Pozo Buil, K. Richerson, C.N. Rooper, J. Samhouri, R. Seary, R.L. Selden, A.R. Thompson, D. Tommasi, E.J. Ward, and I.C. Kaplan (2022), Recommendations for quantifying and reducing uncertainty in climate projections of species distributions, *Global Change Biology*, doi:10.1111/gcb.16371.

Minobe, S., A. Capotondi, **M.G. Jacox**, M. Nonaka, and R.R. Rykaczewski (2022), Toward regional marine ecological forecasts using global climate model predictions from subseasonal to decadal timescales: bottlenecks and recommendations, *Frontiers in Marine Science*, 9:855965, doi:10.3389/fmars.2022.855965.

Jacox, M.G., M.A. Alexander, D. Amaya, E. Becker, S.J. Bograd, S. Brodie, E.L. Hazen, M. Pozo Buil, and D. Tommasi (2022), Global seasonal forecasts of marine heatwaves, *Nature*, 604, 486-490, doi:10.1038/s41586-022-04573-9.

Mogen, S.C., N.S. Lovenduski, A.R. Dallmann, L. Gregor, A.J. Sutton, S.J. Bograd, N. Cordero Quiros, E. Di Lorenzo, E.L. Hazen, **M.G. Jacox**, M. Pozo Buil, and S. Yeager (2022), Ocean biogeochemical signatures of the North Pacific Blob, *Geophysical Research Letters*, doi:10.1029/2021GL096938.

Shi, H., F.F. Jin, R.C.J. Wills, **M.G. Jacox**, D.J. Amaya, B.A. Black, R.R. Rykaczewski, S.J. Bograd, M. Garcia-Reyes, and W.J. Sydeman (2022), Global decline in ocean memory over the 21st century, *Sciences Advances*, 8(18), eabm3468, doi:10.1126/sciadv.abm3468.

Smith, J.A., M. Pozo Buil, J. Fiechter, D. Tommasi, and **M.G. Jacox** (2022), Projected novelty in the climate envelope of the California Current at multiple spatial-temporal scales, *PLOS Climate*, 1(4): e0000022, doi:10.1371/journal.pclm.0000022.

Amaya, D.J., **M.G. Jacox**, J. Dias, M.A. Alexander, K.B. Karnauskas, J.D. Scott, and M. Gehne (2022), Subseasonal-to-seasonal forecast skill in the California Current System and its connection to coastal Kelvin waves, *Journal of Geophysical Research – Oceans*, doi:10.1029/2021JC017892.

Hunsicker, M.E., E.J. Ward, M.A. Litzow, S.C. Anderson, C.J. Harvey, J.C. Field, J. Gao, **M.G. Jacox**, S. Melin, A.R. Thompson, and P. Warzybok (2022), Tracking and forecasting community responses to climate perturbations in the California Current Ecosystem, *PLOS Climate*, 1(3): e0000014, doi:10.1371/journal.pclm.0000014.

Shi, H., M. García-Reyes, **M.G. Jacox**, R.R. Rykaczewski, B.A. Black, S.J. Bograd, and W.J. Sydeman (2021), Co-occurrence of California drought and Northeast Pacific marine heatwaves under climate change, *Geophysical Research Letters*, 48, e2021GL092765, doi:10.1029/2021GL092765.

Fiechter, J., M. Pozo Buil, **M.G. Jacox**, M.A. Alexander, and K.A. Rose (2021), Projected shifts in 21st century sardine distribution and catch in the California Current, *Frontiers in Marine Science*, 8, 874, doi:10.3389/fmars.2021.685241.

Weber, E.D., T. Auth, S. Baumann-Pickering, T.R. Baumgartner, E.P. Bjorkstedt, S.J. Bograd, B.J. Burke, J.L. Cadena-Ramirez, E.A. Daly, M. de la Cruz, H. Dewar, J.C. Field, J.L. Fisher, A. Giddings, R. Goericke, E. Gomez-Ocampo, J. Gomez-Valdes, E.L. Hazen, J. Hildebrand, C.A. Horton, K.C. Jacobson, **M.G. Jacox**, et al. (2021), State of the California Current 2019-2020: Back to the future with marine heatwaves?, *Frontiers in Marine Science*, doi:10.3389/fmars.2021.709454.

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SUBMITTED MANUSCRIPTS

Amaya, D.J., N. Maher, C. Deser, M.G. Jacox, M.A. Alexander, M. Newman, J. Dias, and J. Lou. Future changes in seasonal climate predictability.

Barceló, C., J. Ruzicka, M.G. Jacox, M. Pozo Buil, A. Rovellini, E. Daly, J. Fiechter, P.-Y. Hernvann, and L. Ciannelli. Non-linear and alternative spatial effects of climate change on the Northern California Current Ecosystem: Insights from a climate and eco-physiology linked end-to-end model.

Deser, C., A.S. Phillips, M.A. Alexander, D.J. Amaya, A. Capotondi, M.G. Jacox, and J.D. Scott. Future changes in the intensity and duration of marine heat and cold waves: Insights from coupled model initial-condition large ensembles.

Samhouri, J.F., B.E. Feist, M.G. Jacox, O.R. Liu, K. Richerson, E. Steiner, J. Wallace, K. Andrews, L. Barnett, A.H. Beaudreau, L. Bellquist, M. Pozo Buil, M.A. Haltuch, A. Harley, C.J. Harvey, I.C. Kaplan, K. Norman, A. Phillips, L.K. Rasmuson, E.J. Ward, C. Whitmire, R.L. Selden. Stay or go? Geographic variation in risks due to climate change for fishing fleets that adapt in-place or adapt on-the-move.

Shi, H., M. Garcia-Reyes, **M.G. Jacox**, B.A. Black, R.R. Rykaczewski, S.J. Bograd, and W.J. Sydeman. Common driver and recent change of compound Gulf of Alaska marine heatwaves and U.S. West Coast drought.

ADDITIONAL PUBLICATIONS

Mills, K.E., E.B. Osborne, R.J. Bell, C.S. Colgan, S.R. Cooley, M.C. Goldstein, R.B. Griffis, K. Holsman, **M. Jacox**, and F. Micheli, 2023: Ch. 10. Ocean ecosystems and marine resources. In: Fifth National Climate Assessment. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA, doi:10.7930/NCA5.2023.CH10.

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Jacox, M.G., D.L. Rudnick, and C.A. Edwards (2017), Dominant physical mechanisms driving ecosystem response to ENSO in the California Current System, *US Clivar Variations*, 15(1), 22-26.

Tommasi, D., **M.G. Jacox**, M.A. Alexander, S. Siedlecki, F.E. Werner, C.A. Stock, and N.A. Bond (2017), Seasonal forecasts of ocean conditions in the California Current Large Marine Ecosystem, *US Clivar Variations*, 15(1), 41-46.

Moore, A.M., C.A. Edwards, J. Fiechter, and **M.G. Jacox** (2015), Observing system impacts on estimates of California Current transport, in *Coastal Ocean Observing Systems*, edited by Liu, Kerkering and Weisberg, pp. 351-372, Elsevier Inc.

Edwards, C.A., A.M. Moore, H. Song, J.P. Mattern, **M.G. Jacox**, and J. Fiechter (2015), Hindcasting and nowcasting the physical and biological state of the California Current System, *CalCOFI Rep. 56*.

Jacox, M.G. (2012), Controls on primary productivity and its measurement in the California Current System, PhD Dissertation, University of California, Santa Cruz.

Jacox, M.G. and M.L. Powers (2010), Science on Sunday: the prospective graduate student workshop in ocean science, in *Astronomical Society of the Pacific Conference Series 436, Learning from Inquiry in Practice*, pp. 247-257, edited by L. Hunter & A. J. Metevier, ASP, San Francisco, CA.

INVITED PRESENTATIONS

2023 University of California, Santa Cruz, CA.

2022 Moss Landing Marine Laboratories, Moss Landing, CA.

2022 US CLIVAR Workshop on Future US Earth System Reanalysis, Boulder, CO.

2022 US CLIVAR Workshop on Daily to Decadal Ecological Forecasting Along North American Coastlines, Woods Hole, MA.

2021 NOAA Climate Diagnostics and Prediction Workshop, Virtual.

2021 Ocean and Coastal Community Modeling Workshop, Virtual.

2021 Southwest Fisheries Science Center Seminar Series, Virtual.

2021 SubX Forum, Virtual.

2021 U.S.-Japan symposium on the Fate of Fisheries in a Climate Changed World, Virtual.

2021 National Adaptation Forum, Virtual.

2020 International S2S Prediction Project, Virtual.

2020 94th Meeting of the National Academy of Sciences Ocean Studies Board, Virtual.

2020 US CLIVAR Predictability, Predictions, and Applications Interface, Virtual.

2019 NOAA Earth System Science and Modeling Annual Workshop, Silver Spring, MD.

2019 NOAA Climate Connections Meeting, Silver Spring, MD.

2019 NOAA Ocean Color Coordinating Group, webinar.

2019 Estuary and Ocean Science Center, San Francisco State University, Tiburon, CA.

2019 Scripps Institution of Oceanography, La Jolla, CA.

2018 UC Davis Bodega Marine Laboratory, Bodega Bay, CA.

2018 International Symposium on Changes in Transitional Areas of the Pacific, La Paz, Mexico.

2018 Ocean Sciences Meeting (poster), Portland, OR.

2017 Gordon Research Conference, Biddeford, ME.

2017 Scripps Institution of Oceanography, La Jolla, CA.

2016 University of California, Santa Cruz, CA.

2016 Forecasting ENSO Impacts on Marine Ecosystems of the US West Coast, La Jolla, CA.

2016 PISCO Annual Meeting, Santa Cruz, CA.

2015 NOAA Southwest Fisheries Science Center, La Jolla, CA.

2015 University of Colorado, Boulder, CO.

2014 NOAA Geophysical Fluid Dynamics Laboratory, Princeton, NJ.

2014 University of California, Santa Cruz, CA.

2013 University of California, Berkeley, CA.

2013 San Francisco State University, San Francisco, CA.

CONTRIBUTED ORAL PRESENTATIONS

2023 Symposium on the Effects of Climate Change on the World's Ocean, Bergen, Norway.
2022 Open Science Conference on Eastern Boundary Upwelling Systems, Lima, Peru.
2022 Ocean Sciences Meeting, Virtual.
2021 NOAA General Modeling Meeting and Fair, Virtual.
2020 Ocean Sciences Meeting, San Diego, CA.
2019 PICES Annual Meeting, Victoria, Canada.
2018 PICES Annual Meeting, Yokohama, Japan.
2018 Symposium on the Effects of Climate Change on the World's Oceans, Washington, D.C.
2018 Ocean Sciences Meeting, Portland, OR.
2017 PICES Annual Meeting, Vladivostok, Russia.
2016 Ocean Sciences Meeting, New Orleans, LA.
2015 Eastern Pacific Ocean Conference, Fallen Leaf Lake, CA.
2015 Symposium on the Effects of Climate Change on the World's Oceans, Santos, Brazil.
2014 PICES Annual Meeting, Yeosu, South Korea.
2013 45th International Liège Colloquium on Ocean Dynamics, Liège, Belgium.
2010 International Meeting of Students in Physical Oceanography, Seattle, WA.

CONTRIBUTED POSTER PRESENTATIONS

2018 Symposium on the Effects of Climate Change on the World's Oceans, Washington, D.C.
2015 Application of Seasonal to Decadal Climate Predictions for Marine Resource Management, Princeton, NJ.
2014 Ocean Sciences Meeting, Honolulu, HI.
2012 American Geophysical Union Annual Fall Meeting, San Francisco, CA.
2011 Gordon Research Conference – Coastal Ocean Modeling, South Hadley, MA.
2010 Learning from Inquiry in Practice, Santa Cruz, CA.
2009 Eastern Pacific Ocean Conference, Victoria, BC, Canada.

FIELD EXPERIENCE

2011 Monterey Bay 2011 (3 cruises; UCSC; R/V John Martin)
2010 Monterey Bay 2010 (UCSC; R/V John Martin)
2009 Monterey Bay 2009 (4 cruises; UCSC; R/V John Martin)
2008 Monterey Bay 2008 (6 cruises; UCSC; R/V John Martin)
2005 – 2008 Monthly Cruises (MBARI, R/V Point Lobos)
2007 Unmanned surface vehicle development, Palmetto, FL
2006 – 2007 Chief scientist, instrument deployments, Monterey Bay (12 cruises, R/V Sheila B)
2006 Airborne CO_2 flux measurement (Purdue University)
2006 Unmanned airborne CO_2 monitor deployment, Quincy, WA