Michael R. Stukel
(mstukel@fsu.edu)
(http://www.myweb.fsu.edu/mstukel/)

Employment and Contact Information:

Associate Professor
Earth, Ocean, and Atmospheric Science Department
Center for Ocean-Atmospheric Prediction Studies (COAPS)
Florida State University
Earth, Ocean, and Atmos Building (EOA) Rm. 6089
1011 Academic Way
(850)645-0960

Interests: Biologically mediated carbon export and new production
^{234}Th and carbon cycling in the global ocean
Plankton trophic dynamics
Biogeochemical, ecological, and fisheries modeling

Education

SCRIPPS INSTITUTION OF OCEANOGRAPHY – U. OF CALIFORNIA, SAN DIEGO
Ph.D. - Biological Oceanography - 2011 - Adviser: Michael R. Landry
M.Sc. - Marine Biology - 2010 - Adviser: Michael R. Landry

NORTHWESTERN UNIVERSITY, Evanston, IL
B.A. - Integrated Sci. & Biology - 2004

Post-docs

2011-2014 Horn Point Laboratory, UMCES Advisers: R. Hood & V. Coles
Model Diatom-Diazotroph Assemblages – Amazon Plume
2011-2014 Lamont-Doherty Earth Observatory, Columbia Adviser: H. Ducklow
Seasonal Cycle of Export in the Western Antarctic Peninsula

Appointments

2014-2019 Assistant Professor, Earth, Ocean, and Atmospheric Science Dept, Florida State U.
2019- Associate Professor, Earth, Ocean, and Atmospheric Science Dept, Florida State U.

Peer-Reviewed Publications

Bold and italicized = graduate or undergraduate students in the Stukel Lab

2023 and in press

Stukel, M. R., ***J. P.. Irving***, ***T. B. Kelly***, M. D. Ohman, ***C. K. Fender***, ***N. Yingling*** (accepted). Carbon sequestration by multiple biological pump pathways in a coastal upwelling biome. Nature Communications.

Landry, M. R., S. R. Rivera, **M. R. Stukel**, K. E. Selph (accepted). Comparison of bacterial carbon production estimates from dilution and ^{3}H-leucine methods across a strong gradient in ocean productivity. Limnology and Oceanography: Methods

Fender, C. K., M. Décima, A. Gutiérrez-Rodríguez, K. E. Selph, ***N. Yingling***, **M. R. Stukel** (accepted). Prey size spectra and predator to prey size ratios of Southern Ocean salps. Marine Biology.

Décima, M., **M. R. Stukel**, S. C. Nodder, A. Gutiérrez-Rodríguez, K. E. Selph, A. Lopes dos Santos, K. Safi, ***T. B. Kelly***, F. Deans, S. E. Morales, F. Baltar, M. Latasa, M. Y. Gorbunov, M. Pinkerton (2023). Salp blooms drive strong increases in passive carbon export in the Southern Ocean. Nature Communications. 14:425 doi: 10.1038/s41467-022-35204-6

2022

Stukel, M. R., M. Décima, M. R. Landry (2022). Quantifying biological carbon pump pathways with a data-constrained mechanistic model ensemble approach. Biogeosciences. 19: 3595-3624. doi: 10.5194/bg-19-3595-2022

Gerard, T., J. T. Lamkin, ***T. B. Kelly***, A. N. Knapp, R. Laiz-Carrion, E. Malca, K. E. Selph, A. Shiroza, ***T. A.***

Shropshire, **M. R. Stukel**, R. Swalethorp, ***N. Yingling***, M. R. Landry (2022). Bluefin Larvae in Oligotrophic Ocean Foodwebs, Investigations of Nutrients to Zooplankton: Overview of the BLOOFINZ-Gulf of Mexico program. Journal of Plankton Research. 44(5): 600-617. doi: 10.1093/plankt/fbac038

Valencia, B., **M. R. Stukel**, A. E. Allen, J. P. McCrow, A. Rabines, M. R. Landry (in press). Microbial communities associated with sinking particles across an environmental gradient from coastal upwelling to the oligotrophic ocean. Deep-Sea Research I. doi: 10.1016/j.dsr.2021.103668

Yingling, N., ***T. B. Kelly***, K. E. Selph, M. R. Landry, A. N. Knapp, S. A. Kranz, **M. R. Stukel** (in press). Taxon-specific phytoplankton growth, nutrient utilization, and light limitation in the oligotrophic Gulf of Mexico. Journal of Plankton Research. doi:10.1093/plankt/fbab028

Stukel, M. R., T. Gerard, ***T. B. Kelly***, A. N. Knapp, R. Laiz-Carrión, J. T. Lamkin, M. R. Landry, E. Malca, K. E. Selph, A. Shiroza, T. A. Shropshire, R. Swalethorp (in press). Plankton food webs in the oligotrophic Gulf of Mexico spawning grounds of Atlantic Bluefin tuna. Journal of Plankton Research. doi:10.1093/plankt/fbab001

Shropshire, T. A., S. L. Morey, E. P. Chassignet, M. Karnauskas, V. J. Coles, E. Malca, R. Laiz-Carrion, O. Fiksen, P. Reglero, A. Shiroza, J. M. Quintanilla Hervas, T. Gerard, J. Lamkin, **M. R. Stukel** (in press). Trade-offs between risks of predation and starvation in larvae make the shelf break an optimal spawning location for Atlantic Bluefin tuna. Journal of Plankton Research. doi: 10.1093/plankt/fbab041

Stukel, M. R., H. W. Ducklow, O. M. Schofield (in press). Seasonal variability in carbon:^{234}thorium ratios of suspended and sinking particles in coastal Antarctic waters: Field data and modeling synthesis

Shiroza, A., E. Malca, J. Lamkin, T. Gerard, M. R. Landry, **M. R. Stukel**, R. Laiz-Carrión, R. Swalethorp, (in press). Active prey selection in developing larvae of Atlantic bluefin tuna (Thunnus thynnus) in spawning grounds of the Gulf of Mexico. J. Plankton Res. doi: 10.1093/plankt/fbab020

Stukel, M. R., ***T. B. Kelly***, M. R. Landry, K. E. Selph, R. Swalethorph (in press). Sinking carbon, nitrogen, and pigment flux within and beneath the euphotic zone in the oligotrophic, open-ocean Gulf of Mexico. Journal of Plankton Research. doi: 10.1093/plankt/fbab001

Feng, M., S. Lin, W. Zhang, C. Wang, H. Liu, S. Cheung, H. Li, **M. R. Stukel**, ***J. P. Irving***, N. Li (in press). Micro/meso-scale distinction and horizontal migration of tintinnid (Ciliophora: Tintinnida) assemblages in three regions around the North Pacific Ocean. Frontiers in Marine Science.

Selph, K. E., R. Swalethorp, **M. R. Stukel**, ***T. B. Kelly***, A. N. Knapp, K. Fleming, T. Hernandez, M. R. Landry (in press). Phytoplankton community composition and biomass in the oligotrophic Gulf of Mexico. Journal of Plankton Research. doi: 10.1093/plankt/fbab006

Knapp, A. N., R. K. Thomas, **M. R. Stukel**, ***T. B. Kelly***, M. R. Landry, K. E. Selph, E. Malca, T. Gerard, J. Lamkin (in press). Constraining the sources of nitrogen fueling export production in the Gulf of Mexico using nitrogen isotope budgets. Journal of Plankton Research. doi: 10.1093/plankt/fbab049

Landry, M. R., K. E. Selph, **M. R. Stukel**, R. Swalethorp, ***T. B. Kelly***, J. L. Beatty, C. R. Quackenbush (2021). Microbial food web dynamics in the oceanic Gulf of Mexico. Journal of Plankton Research. doi:10.1093/plankt/fbab021

2021

Kelly, T. B., A. N. Knapp, M. R. Landry, K. E. Selph, ***T. A. Shropshire***, R. Thomas, **M. R. Stukel** (2021). Lateral advection supports nitrogen export in the oligotrophic open-ocean Gulf of Mexico. Nature Communications. 12(1): 3325. doi: 10.1038/s41467-021-23678-9

Stukel, M. R., M. Décima, K. E. Selph, A. Gutiérrez-Rodríguez (2021). Size-specific grazing and competitive interactions between large salps and protistan grazers. Limnology and Oceanography. 66:2521-2534. doi: 10.1002/lno.11770

Valencia, B., **M. R. Stukel**, A. E. Allen, J. P. McCrow, A. Rabines, B. Palenik, M. R. Landry (in press). Relating sinking and suspended microbial communities in the California Current Ecosystem: Digestion resistance and the contributions of phytoplankton taxa to export. Environmental Microbiology. 23(11): 6734-6748. doi:10.1111/1462-2920.15736

Solo-Gabriele, H. M., T. Fiddaman, C. Mauritzen, C. Ainsworth, D. M. Abramson, I. Berenshtein, E. P. Chassignet8, S. S. Chen, R. N. Comny, C. D. Court, W. K. Dewar, J. W. Farrington, M. Feldman, A. C. Ferguson, E. Fetherston-Resch, D. French-McCay, Christine Hale, R. He, V. H. Kourafalou, K. Lee, Y. Liu, M. Masi, E. S. Maung-Douglass, S. L. Morey, S. A. Murawski, C. B. Paris, N. Perlin, E. L. Pulster, A. Quigg, D. J. Reed, J. J. Ruzicka, P. A. Sandifer, J. G. Shepherd, B. H. Singer, **M. R. Stukel**, T. T. Sutton, R. H. Weisberg, D. Wiesenburg, C. A. Wilson, M.Wilson, K. M. Wowk, C. Yanoff, D. Yoskowitz (2021). Towards integrated

modeling of the long-term impacts of oil spills. Marine Policy. 131: 104554. doi: 10.1016/j.marpol.2021.104554

Dukhovskoy, D. S. S. L. Morey, E. P. Chassignet, X. Chen, V. J. Coles, L. Cui, C. K. Harris, R. Hetland, T.-J. Hsu, A. J. Manning, **M. R. Stukel,** K. Thyng, J. Wang (in press). Development of the CSOMIO coupled ocean-oil-sediment-biology model. Frontiers in Marine Science. 8:194. doi: 10.3389/fmars.2021.629299

Chabert, P., F. d'Ovidio, V. Echevin, **M. R. Stukel**, M. D. Ohman (2021). Cross-shore flow and implication for carbon export in the California Current Ecosystem: a Lagrangian analysis. Journal of Geophysical Research: Oceans. 126: e2020JC016611. doi: 10.1029/2020JC016611

Ingels, J., R. B. Aronson, C. R. Smith, A. Baco, H. M. Bik, J. A. Blake, A. Brandt, M. Cape, D. Demaster, E. Dolan, E. Domack, S. Fire, H. Geisz, M. Gigliotti, H. Griffiths, K. M. Halanych, C. Havermans, F. Huettman, S. Ishman, S. Kranz, A. Leventer, A. R. Mahon, J. McClintock, M. L. McCormick, B. G. Mitchell, A. Murray, L. Peck, A. Rogers, B. Shoplock, K. E. Smith, B. Steffel, **M. R. Stukel**, A. Sweetman, M. Taylor, A. R. Thurber, M. Truffer, A. Van de Putte, A. Vanreusel, M. A. Zamoran-Duran. Antarctic Ecosystem Responses following Ice Shelf Collapse and Iceberg Calving: Science Review and Future Research (2021). WIREs Climate Change. 12:e682. doi: 10.1002/wcc.682

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Stukel, M. R. (2020). Investigating equations for measuring dissolved inorganic nutrient uptake in oligotrophic conditions. Limnology and Oceanography: Methods. 18 (11): 656-672. doi: 10.1002/lom3.10392

Lüskow, F., E. A. Pakhomov, **M. R. Stukel**, M. Décima (2020). Biology of *Salpa thompsoni* at the Chatham Rise, New Zealand: Demography, growth, and diel vertical migration. Marine Biology. 167: 175. doi: 10.1007/s00227-020-03775-x

Landry, M. R., **M. R. Stukel**, M. Decima (in press). Food-web fluxes support high rates of mesozooplankton respiration and production in the equatorial Pacific. Marine Ecology Progress Series. 652:15-32. doi: 10.3354/meps13479

Shropshire, T. A., S. L. Morey, E. P. Chassignet, A. Bozec, V. J. Coles, M. R. Landry, R. Swalethorp, G. Zapfe, **M. R. Stukel**, (2020). Quantifying spatiotemporal variability in zooplankton dynamics in the Gulf of Mexico with a physical-biogeochemical model. Biogeosciences. 17: 1-23. doi: 10.5194/bg-17-1-2020

Stukel, M. R., K. A. Barbeau (2020). Investigating the nutrient landscape in a coastal upwelling region and its relationship to the biological carbon pump. Geophysical Research Letters. 47. e2020GL087351. doi: 10.1029/2020GL087351

Kranz, S. A., S. Wang, ***T. B. Kelly***, **M. R. Stukel**, R. Goericke, M. R. Landry, N. Cassar (2020). Lagrangian studies of marine primary production: A method comparison in the CCE-LTER upwelling region. Journal of Geophysical Research: Oceans. 125, e2019JC015984. doi: 10.1029/2019JC015984

Wang, S., S. Kranz, ***T. B. Kelly***, H. Song, **M. R. Stukel**, N. Cassar (2020). Lagrangian studies of net community production: assessing the effect of diel and multi-day non-steady state factors and vertical fluxes. Journal of Geophysical Research: Biogeosciences. 125, e2019JG005569 doi: 10.1029/2019JG005569

Kahru, M., **M. R. Stukel**, R. Goericke, ***T. B. Kelly*** (2020). Satellite estimation of carbon export by sinking particles in the California Current. Deep-Sea Research II 173. 104639. doi: 10.1016/j.dsr2.2019.104639

2019

Stukel, M. R., M. D. Ohman, ***T. B. Kelly***, T. Biard (2019). The roles of suspension-feeding and flux-feeding zooplankton as gatekeepers of particle flux into the mesopelagic ocean. Frontiers in marine Science 6: 397. doi: 10.3389/fmars.2019.00397

Kelly, T. B., P. C. Davison, R. Goericke, M. R. Landry, M. D. Ohman, **M. R. Stukel** (2019). The importance of mesozooplankton vertical migration for sustaining a mesopelagic food web. Frontiers in Marine Science. 6:508 doi: 10.3389/fmars.2019.00508

Fender, C. K., ***T. B. Kelly***, L. Guidi, M. D. Ohman, M. C. Smith, **M. R. Stukel** (2019). Investigating particle size-flux relationships and the biological pump across a range of plankton ecosystem states from coastal to oligotrophic. Frontiers in Marine Science. 6:603. doi: 10.3389/fmars.2019.00603

Stukel, M. R., ***T. B. Kelly*** (2019). The Carbon:234Thorium ratios of sinking particles in the California current ecosystem 2: Examination of a thorium sorption, desorption, and particle transport model. Marine Chemistry **211**: 37-51. doi: 10.1016/j.marchem.2019.03.005

Stukel, M. R., ***T. B. Kelly***, L. I. Aluwihare, K. A. Barbeau, R. Goericke, J. W. Krause, M. R. Landry, M. D.

Ohman (in press). The Carbon:^{234}Thorium ratios of sinking particles in the California Current Ecosystem 1: Relationships with plankton ecosystem dynamics**.** Marine Chemistry. doi: 10.1016/j.marchem.2019.01.003

Décima, M., **M. R. Stukel**, L. Lopez-Lopez, M. R. Landry (2019). The ecological role of pyrosomes in the Costa Rica Dome. Limnology and Oceanography. **64**: 728-743. doi: 10.1002/lno.11071

Gutierrez-Rodriguez, A., **M. R. Stukel**, A. Lopes dos Santos, T. Biard, R. Scharek, D. Vaulot, M. R. Landry, F. Not (2019). High contribution of Rhizaria (Radiolaria) to vertical export in the California Current Ecosystem revealed by DNA metabarcoding. ISME Journal. doi: 10.1038/s41396-018-0322-7

Bourassa, M. A., T. Meissner, I. Cerovecki, P. S. Chang, D. Xiaolong, G. D. Chiara, C. Donlon, D. S. Dukhovskoy, J. Elya, A. Fore, M. R. Fewings, R. C. Foster, S. T. Gille, B. Haus, S. Hristova-Veleva, H. M. Holbach, Z. Jelenak, J. A. Knaff, S. A. Kranz, A. Manaster, M. Mazloff, C. Mears, A. Mouche, M. Portabella, N. Reul, L. Ricciardulli, E. Rodriguez, C. Sampson, D. Solis, A. Stoffelen, **M. R. Stukel**, B. Stiles, D. Weissman, F. Wentz (2019). Remotely sensed winds and wind stresses for marine forecasting and ocean modeling. Frontiers in Marine Science. 6:443 doi: 10.3389/fmars.2019.00443

2018

Stukel, M. R., M. Décima, M. R. Landry, K. E. Selph (2018). Nitrogen and isotope flows through the Costa Rica Dome upwelling ecosystem: The crucial mesozooplankton role in export flux. Global Biogeochemical Cycles. 32: 1815-1832. doi: 10.1029/2018GB005968

Kelly, T. B., R. Goericke, M. Kahru, H. Song, **M. R. Stukel** (2018). Spatial and interannual variability in export efficiency and the biological pump in an eastern boundary current upwelling system with substantial lateral advection. Deep-Sea Research I. 140: 14-25. doi: 10.1016/j.dsr.2018.08.007

Morrow, R. M., M. D. Ohman, R. Goericke, ***T. B. Kelly***, B. M. Stephens, **M. R. Stukel** (2018). Primary production, mesozooplankton grazing, and the biological pump in the California Current Ecosystem: Variability and response to El Nino. Deep-Sea Research I. 140: 52-62. doi: 10.1016/j.dsr.2018.07.012

Stukel, M. R., T. Biard, J. W. Krause, M. Ohman (2018). Giant Phaeodaria in the twilight zone: Their role in the carbon cycle. Limnology and Oceanography. 63(6): 2579-2594. doi: 10.1002/lno.10961

Biard, T., J. Krause, **M. R. Stukel,** M. Ohman (2018). The significance of giant phaeodarians (Rhizaria) to biogenic silica export in the California Current Ecosystem. Global Biogeochemical Cycles 32(6): 987-1004. doi: 10.1029/2018GB005877

Stukel, M. R., M. Décima, ***T. B. Kelly*** (2018). A new approach for incorporating ^{15}N isotopic data into linear inverse ecosystem models with Markov Chain Monte Carlo sampling. PLOS ONE 13(6): e0199123. doi: 10.1371/journal.pone.0199123

Ducklow, H. W., **M. R. Stukel**, R. Eveleth, T. Jickells, O. Schofield, S. Doney, A. Baker, J. Brindle, R. Chance, N. Cassar (2018). Spring-summer net community production, new production, particle export and related water column biogeochemical processes in the marginal sea ice zone of the Western Antarctic Peninsula 2012-2014. Philosophical Transactions of the Royal Society of London A. 376: 20170177 doi: 10.1098/rsta.2017.0177

Stukel, M. R., H. Song, R. Goericke, A. J. Miller (2018). The role of subduction and gravitational sinking in particle export, carbon sequestration, and the remineralization length scale in the California Current Ecosystem. Limnology and Oceanography. 63: 363-383. doi: 10.1002/lno.10636

2017

Coles, V. J., **M. R. Stukel**, M. T. Brooks, A. Burd, B. Crump, M. A. Moran, J. H. Paul, B. M. Satinsky, P. L. Yager, B. L. Zielinski, R. R. Hood (2017). Ocean biogeochemistry modeled with emergent trait-based genomics. Science. 358(6367): 1149-1154. doi: 10.1126/science.aan5712

Stukel, M. R., H. W. Ducklow (2017). Stirring up the biological pump: Vertical mixing and carbon export in the Southern Ocean. Global Biogeochemical Cycles. 31(9): 1420-1434. doi: 10.1002/2017GB005652

Stukel, M. R., L. I. Aluwihare, K. A. Barbeau, A. M. Chekalyuk, R. Goericke, A. J. Miller, M. D. Ohman, A. Ruacho, H. Song, B. Stephens, M. R. Landry (2017). Mesoscale ocean fronts enhance carbon export due to gravitational sinking and subduction. Proceedings of the National Academy of Sciences. 114(6): 1252-1257. doi: 10.1073/pnas.1609435114

Asher, E. C., J. W. H. Dacey, **M. R. Stukel**, M. C. Long, P. D. Tortell (2017). Processes driving seasonal variability in DMS, DMSP, and DMSO concentrations and turnover in coastal Antarctic Waters. Limnology and Oceanography. 62: 104-124. doi: 10.1002/lno.10379

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Stukel, M. R., C. R. Benitez-Nelson, M. Décima, A. G. Taylor, C. Buchwald, M. R. Landry (2016). The biological pump in the Costa Rica Dome: An open ocean upwelling system with high new production and low export. Journal of Plankton Research. 38(2): 348-365. doi:10.1093/plankt/fbv097

Décima, M., M. R. Landry, **M. R. Stukel**, J. W. Krause, L. Lopez-Lopez (2016). Costa Rica Dome mesozooplankton biomass and grazing: Amplifying variability through the plankton food web. Journal of Plankton Research. 38(2): 317-330. doi: 10.1093/plankt/fbv091

Landry, M. R., K. E. Selph, M. Décima, A. Gutierrez-Rodriquez, **M. R. Stukel**, A. G. Taylor, A. L. Pasulka (2016). Phytoplankton production and grazing balances in the Costa Rica Dome. Journal of Plankton Research. 38(2): 366-379. doi: 10.1093/plankt/fbv089

Krause, J. W., **M. R. Stukel**, A. G. Taylor, D. A. Taniguchi, A. De Verneil, M. R. Landry (2016). Net biogenic silica production and the contribution of diatoms to new production and organic matter export in the Costa Rica Dome ecosystem. Journal of Plankton Research. 38(2): 216-229. doi: 10.1093/plankt/fbv077

Selph, K. E., M. R. Landry, A. G. Taylor, A. Gutierrez-Rodriguez, **M. R. Stukel**, J. Wokuluk, A. Pasulka (2016). Phytoplankton production and taxon-specific growth rates in the Costa Rica Dome. Journal of Plankton Research. 38(2) 199-215. doi: 10.1093/plankt/fbv063

Conroy, B. J., D. K. Steinberg, **M. R. Stukel**, J. Goes, V. Coles (2016). Meso- and microzooplankton grazing in the Amazon River plume and western tropical North Atlantic. Limnology and Oceanography. 61(3): 825-840. doi: 10.1002/lno.10261

2015

Stukel, M. R., M. Kahru, C. R. Benitez-Nelson, M. Décima, R. Goericke, M. R. Landry, M. D. Ohman (2015). Using Lagrangian-based process studies to test satellite algorithms of carbon flux in the eastern North Pacific Ocean. Journal of Geophysical Research: Oceans. doi: 10.1002/2015JC011264

Stukel, M. R., E. Asher, N. Couto, O. Schofield, S. Strebel, P. Tortell, H. W. Ducklow. (2015). The imbalance of new and export production in the Western Antarctic Peninsula, a potentially "leaky" ecosystem. Global Biogeochemical Cycles. 29: 1400-1420 doi: 10.1002/2015GB005211

Brzezinski, M. A., J. W. Krause, R. M. Bundy, K. A. Barbeau, P. Franks, R. Goericke, M. R. Landry, **M. R. Stukel**. (2015). Enhanced silica ballasting from iron stress sustains carbon export in a frontal zone within the California Current. Journal of Geophysical Research: Oceans. 120(7): 4654-4669 doi: 10.1002/2015JC010829

Krause, J. W., M. A. Brzezinski, R. Goericke, M. R. Landry, M. D. Ohman, **M. R. Stukel**, A. G. Taylor. (2015). Variability in diatom contributions to biomass, organic matter production and export across a frontal gradient in the California Current Ecosystem. Journal of Geophysical Research: Oceans. 120: 1032-1047. doi: 10.1002/2014jc010472

2014

Stukel, M. R., V. J. Coles, M. T. Brooks, R. R. Hood. (2014). Top-down, bottom-up, and physical controls on diatom-diazotroph assemblage growth in the Amazon River Plume. Biogeosciences. 11: 3259-3278. doi:10.5194/bgd-10-13931-2013

Stukel, M. R., K. A. S. Mislan, M. Décima, L. Hmelo. (2014). Detritus in the pelagic ocean. Eco- DAS IX Symposium Proceedings, ASLO. doi: 10.4319/ecodas.2014.978-0-9845591-3-8.49

Brum, J. R., J. Morris, M. Décima, **M. R. Stukel**. (2014). Mortality in the oceans: Causes and consequences. Eco-DAS IX Symposium Proceedings, ASLO. doi: 10.4319/ecodas.2014.978-0-9845591-3-8.16

2013

Coles, V. J., M. T. Brooks, J. H. Hopkins, **M. R. Stukel**, P. L. Yager, R. R. Hood. (2013). The pathways and properties of the Amazon River Plume in the tropical North Atlantic Ocean. Journal of Geophysical Research: Oceans. 118, 1–20, doi:10.1002/2013JC008981

Stukel, M. R., M. D. Ohman, C. R. Benitez-Nelson, M. R. Landry. 2013. Contributions of mesozooplankton to vertical carbon export in a coastal upwelling system. Mar. Ecol. Prog. Ser. 491: 47-65 doi: 10.3354/meps10453

Stukel, M. R., M. Décima, K. E. Selph, D. A. Taniguchi, M. R. Landry. 2013. The role of *Synechococcus* in vertical flux in the Costa Rica upwelling dome. Prog. Oceanogr. 112-113: 49-59

http://dx.doi.org/10.1016/j.pocean.2013.04.003

2009-2012

Stukel, M. R., M. R. Landry, M. D. Ohman, R. Goericke, T. Samo, C. R. Benitez-Nelson. 2012. Do inverse ecosystem models accurately reconstruct plankton trophic flows? Comparing two solution methods using field data from the California Current. Journal of Marine Systems 91:20-33 doi:10.1016/j.jmarsys.2011.09.004

Landry, M. R., M. D. Ohman, R. Goericke, **M. R. Stukel**, K. A. Barbeau, R. Bundy, M. Kahru. 2012. Pelagic Community responses to a deep-water front in the California Current Ecosystem: Overview of the A-front study. Journal of Plankton Research. doi: 10.1093/plankt/fbs006

Stukel, M. R., M. R. Landry, C. Benitez-Nelson, R. Goericke. 2011. Trophic cycling and carbon export relationships in the California Current Ecosystem. Limnol. Oceanogr. 56:1866-1878

Stukel, M. R., M. R. Landry, and K. E. Selph. 2011. Nanoplankton mixotrophy in the eastern equatorial Pacific. Deep-Sea Res. II 58:378-386

Selph, K. E., M. R. Landry, A. G. Taylor, E. J. Yang, C. I. Measures, J. J. Yang, **M. R. Stukel**, S. Christenson, and R. R. Bidigare. 2011. Spatially-resolved taxon-specific phytoplankton production and grazing dynamics in relation to iron distributions in the equatorial Pacific between 110 and 140°W. Deep-Sea Res. II 58: 358-377

Stukel, M. R., M. R. Landry. 2010. Contribution of picophytoplankton to carbon export in the equatorial Pacific: A reassessment of food web flux inferences from inverse models. Limnol. Oceanogr. 55:2669-2685

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Projects Funded

LTER: Ecosystem controls and multiple stressors in a coastal upwelling system - CCE IV. 8/1/22 – 7/31/2028. $7,650,000 total, $385,533 to FSU. National Science Foundation. Lead PI: Katherine Barbeau.(UCSD), **Co-lead PI: Michael Stukel (FSU)**, co-PIs: Lihini Aluwihare (UCSD), Andrew Allen (UCSD), Arthur Miller (UCSD).

NNA Research: Collaborative Research: Rapid Arctic change and its implications for fisheries and fishing communities of the western North Atlantic. 1/1/23 – 12/31/25. $293,977 to FSU. National Science Foundation. PI: Eric Chassignet (FSU), Co-PIs: Xiaobiao Xu (FSU), **Michael Stukel (FSU)**, Olmo Zavala-Romero (FSU),

Quantifying processes driving interannual variability in the biological carbon pump in the Western Antarctic Peninsula. 3/1/2020 – 2/28/2023. $163,549 to FSU. National Science Foundation. **PI: Michael Stukel (FSU)**

Collaborative research: Assessing the control by multiple micropredators on bacterial communities in estuarine environments and characterization of prey lysis products resulting fr. 3/1/2020 – 2/28/2023. $940,000 ($50,000 to FSU). PI: Henry Williams (FAMU). Co-PIs: Ahkinyala Abdulla (VUU), Huan Chen (MagLab), Sven Kranz (FSU), Michael Stukel (FSU).

Collaborative Research: Mesoscale variability in nitrogen sources and food-web dynamics supporting larval southern bluefin tuna in the eastern Indian Ocean. 8/1/2019 – 7/30/2022. $527,785 to FSU. National Science Foundation. PI: Michael Landry (UCSD), Co-PIs: Karen Selph (UH), **Michael Stukel (FSU)**, Sven Kranz (FSU), Angela Knapp (FSU), David Die (RSMAS).

Collaborative Research: Quantifying trophic roles and food web ecology of salp blooms of the Chatham Rise: 5/1/2018 – 4/30/2021. $345,985 to FSU. National Science Foundation. **PI: Michael Stukel (FSU)**. Co-PI: Karen Selph (U Hawaii)

Development of Environmentally-Driven Larval Mortality and Age-0 Abundance Indices for a Suite of Coastal Pelagic Species in the Gulf of Mexico. 4/1/2018 – 3/31/2020. $117,715. National Oceanic and Atmospheric Administration. PI: Steve Morey (FSU), Co-PIs: **Michael Stukel (FSU)**, Taylor Shropshire (FSU)

Consortium for Simulation of Oil-Microbial Interactions in the Ocean: 1/1/2019-12/31/2019. $2,769,179 to FSU. Gulf of Mexico Research Initiative. PI: Eric Chassignet (FSU). Co-PIs: Steve Morey (FSU), **Michael Stukel (FSU)**, Olivia Mason (FSU), Dmitry Dukhovskoy (FSU), Victoria Coles (UMCES), Rob Hetland (TAMU), Courtney Harris (VIMS), Tian-Jian Hsu (U Del), Andrew Manning (H R Wallinford)

Predicting, Validating, and Understanding Zooplankton Distributions from Space in an Eddy Rich Ocean: 1/1/2017 – 12/31/2019. Award Amount: $1,038,803 ($229,965 to FSU). National Aeronautics and Space

Administration. PI: Victoria Coles (UMCES). Co-PIs: Kenneth Rose (UMCES), Jamie Pierson (UMCES), Greg Silsbe (UMCES), Klaus Huebert (UMCES), **Michael Stukel (FSU)**

Atlantic Bluefin Tuna: Nitrogen Sources and Food-Web Effects on Larval Habitat Quality in the Gulf of Mexico: June 2017 – May 2020. Award Amount: $1,590,476 ($487,515 to FSU). Funding Source: National Oceanic and Atmospheric Administration. PI: John Lamkin (NOAA SEFSC). Co-PIs: Michael Landry (UCSD), Karen Selph (U Hawaii), **Michael Stukel (FSU),** Angela Knapp (FSU).

LTER: CCE-LTER Phase III: Ecological Transitions in an Eastern Boundary Current Upwelling Ecosystem Duration: August 2016 - July 2022. Award Amount: $6,762,000 ($228,663 to FSU). Funding Source: National Science Foundation. PI: Mark Ohman (UCSD). Co-PIs: Kathy Barbeau (UCSD), Lihini Aluwihare (UCSD), James Conners (UCSD), Peter Franks (UCSD), Michael Landry (UCSD), Arthur Miller (UCSD), **Michael Stukel (FSU)**

Analysis of Th-234 Samples from TAN1604 Cruise: January 2017 - December 2017, Award Amount: $4,560. Funding Source: National Institute of Water and Atmosphere Research (NewZealand). PI: **Michael Stukel (FSU)**

FYAP: Assessing Spatial Patterns of Carbon and Nitrogen Fluxes in the Gulf of Mexico: May 2015 – August 2015. Award Amount: $20,000. Funding Source: Florida State University

Teaching

2023	Taught EVR1001 - Intro to Env. Sci. for 385 undergraduate non-science major students
2023	Taught OCB5930 – Designing Scientific Presentations for graduate students
2022	Taught OCB505 – Biological Oceanography for graduate students
2021	Taught OCB5930 – Zooplankton Ecology for graduate students
2020	Taught EVR1001 - Intro to Env. Sci. for 482 undergraduate non-science major students
2020	Taught OCB5050 - Biological Oceanography for graduate students
2020	Taught OCC5930 – Biogeochemical and ecological modeling for graduate students
2020	Taught OCE4906 – Applied Math for Environmental Scientists for undergraduate major students
2019	Taught OCB5930 – Zooplankton Ecology for graduate students
2019	Taught EVR1001 - Intro to Env. Sci. for 496 undergraduate non-science major students
2019	Invited lecturer at Croucher Summer Course – Hong Kong University of Science and Technology
2019	Taught OCB5050 - Biological Oceanography for graduate students
2018	Taught EVR1001 - Intro to Env. Sci. for 496 undergraduate non-science major students
2018	Taught OCB5930 – Zooplankton Ecology for graduate students
2017	Taught EVR1001 - Intro to Env. Sci. for 496 undergraduate non-science major students
2016	Taught EVR1001 - Intro to Env. Sci. for 496 undergraduate non-science major students
2016	Taught OCB5050 – Biological Oceanography for graduate students
2016	Taught OCB5930 – Zooplankton Ecology for graduate students
2016	Helped develop EVR1001L online laboratory course for non-science major students
2015	Taught EVR1001 – Intro to Env. Sci. for ~150 undergraduate non-science major students

Advising: Ph.D. Students

Taylor Shropshire (FSU - Ph.D. conferred June, 2020)
Tom Kelly (FSU - Ph.D. expected Oct., 2020)
Natalie Yingling (FSU - Ph.D. expected 2024)
Christian Fender (FSU - Ph.D. expected 2024)
Heather Forrer (FSU – Ph.D. expected 2024)
Tz-Chian Chen (FSU - Ph.D. expected 2026)

Advising: Masters Students

Kehinde Opeyemi (FSU – M.Sc. conferred 2022)
Christian Fender (FSU – M.Sc. conferred 2022)
John Irving (FSU – M. Sc. conferred 2022)
Taylor Shropshire (FSU – M.Sc. conferred 2020)
Tom Kelly (FSU - M.Sc. conferred 2018).

Advising: Undergraduate Students

Gabriela Vega (FSU undergraduate, 2016-2017)
Rebecca Morrow (FSU undergraduate, 2016-2017)
Linda Wong (FSU undergraduate, 2017-2018)

Matthew Smith (FSU undergraduate, 2018-2020)
Mallory McLean (FSU undergraduate, 2021 – 2022)
Maggie Johnson (FSU undergraduate, 2022 – present)

Journal Editor

Associate editor, Limnology and Oceanography (2020 – present)
Associate editor, Global Biogeochemical Cycles (2019 – present)

Outreach

2018	Invited speaker: Tallahassee March for Science
2016	Collaboration with M. Helman and R. Daniel on Short Dance Film ("Erlenmeyer Waltz")
2016	COAPS Open House presentation ("Plankton Do the Strangest Things")
2015	Participated in a panel about climate change for FSU undergraduates at Strozier Library
2012	Mentored undergraduate REU student (Michael Macon) at Horn Point Laboratory
2012	Led session on reading scientific manuscripts for undergraduate students
2009	Reality Changers (http://realitychangers.org/) – Tutored under-privileged high school students
2006-2008	Academic Connections (UCSD, http://academicconnections.ucsd.edu/) – Co-designed and co-taught a three-week biological oceanography course for advanced high school students each summer
Summer 2005	Aquatic Adventures (http://oceandiscoveryinstitute.org/) – Helped teach 2-week marine biology course for underprivileged youth in San Diego

Sessions chaired at conferences

Pelagic Tunicates: Interactions with the Lower Food Web, Higher Trophic Levels, and Effects on Biogeochemistry. Decima, M., Stukel, M. R., Gutierrez-Rodriguez, A., & Nodder, S. (2020, February). Ocean Sciences Meeting, San Diego, CA.

Cross-shore fluxes in ocean boundary currents: Biogeochemical and ecological consequences. Ohman, M. D., d'Ovidio, F., Stukel, M. R., & Keister, J.. (2020, February). Ocean Sciences Meeting, San Diego, CA.

Surface currents in the coupled ocean-atmosphere system workshop. Patterson, M., Zhu, J., Bourassa, M., Drushka, K., Elipot, S., Farrar, T., Gaube, P., Geille, S., Seo, H., Stukel, M., & Subramanian, A. (2020, February). Symposium conducted at the meeting of US CLIVAR, La Jolla, CA.

Circulation, Biogeochemistry, and carbon cycling in ocean margins. Conveners: Zhiqiang Liu, Igor Semiletov, Michael Stukel, Ye Liu, Xin Liu, Wei-Jun Cai. Fourth Xiamen Symposium on Marine Environmental Sciences (XMAS-IV). Xiamen, China (2019)

From Plankton Food Webs to Global Biogeochemical Cycles: Using Mechanistic Understanding to Scale Up Microbial and Planktonic Processes. Moderators: M. R. Stukel; M. Decima; C. Robinson; P. Serret. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. New Orleans, LA (2016)

Abstracts and non-peer reviewed publications

Stukel, M. R., ***T. B. Kelly*****.** Biological and physical processes driving the biological pump in the California Current Ecosystem. Fourth Xiamen Symposium on Marine Environmental Sciences (XMAS-IV). Xiamen, China (2019)

Kelly, T. B., R. M. Morrow, H. Song, M. D. Ohman, R. Goericke, B. M. Stephens, **M. R. Stukel**. California Current Ecosystem: Are there inter-annual changes in primary production, mesozooplankton grazing & export efficiency? Ocean Carbon and Biogeochemistry Workshop. Woods Hole, MA (2018).

Stukel, M., T. Biard, J. Krause, M. Ohman. Large Phaeodaria in the Twilight Zone: Their Roles in the Carbon and Silica Cycles. Ocean Carbon and Biogeochemistry Workshop. Woods Hole, MA (2018).

Coles, V. J., **M. R. Stukel**, M. A. Moran, R. R. Hood. Metabolic function not microbial taxonomy determines ocean biogeochemical gradients in a gene based ecosystem model. Ocean Sciences Meeting. Association for the Sciences of Limnology and Oceanography. Portland, OR (2018)

Krause, J. W., T. Biard, **M. R. Stukel**, M. D. Ohman. Unravelling the contribution of large Phaeodaria (Rhizaria) to silicon fluxes: Insights from the California Current Ecosystem Long Term Ecological Research Site. Ocean Sciences Meeting. Association for the Sciences of Limnology and Oceanography. Portland, OR (2018)

Stukel, M. R., H. W. Ducklow. Stirring up the biological pump: Vertical mixing and carbon export in the Southern Ocean. Ocean Sciences Meeting. Association for the Sciences of Limnology and Oceanography. Portland, OR (2018)

Stukel, M. R., M. Decima, ***T. B., Kelly***, M. R. Landry, K. E. Selph. Carbon, nitrogen, and isotope flows through

the planktonic ecosystem of the Costa Rica Dome: Primary production to export. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. Honolulu, HI (2017)

Gutierrez-Rodriguez, A., **M. R. Stukel**, A. Lopes dos Santos, T. Biard, D. Vaulot, M. R. Landry, F. Not. Protistan plankton diversity and species-specific contribution to oceanic carbon export in the California Current Ecosyste revealed by DNA metabarcoding. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. Honolulu, HI (2017)

Kelly, T. B., **M. R. Stukel**. Impacts of El Niño on export production in the California Current Ecosystem. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. Honolulu, HI (2017)

Ohman, M. D., L. Aluwihare, K. A. Barbeau, R. Goericke, M. Kahru, M. R. Landry, D. L. Rudnick, U. Send, **M. R. Stukel**. Response of the California Current pelagic ecosystem to El Niño 2015-16. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. Honolulu, HI (2017)

Connell, P. E., **M. R. Stukel**, T. B. Kelly, J. A. Fuhrman, D. E. Hammond, D. A. Caron. Microbial carbon fluxes at a coastal ocean site: An inverse ecosystem modeling analysis. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. Honolulu, HI (2017)

Stukel, M. R.; H. Song; R. Goericke; A. J. Miller. The role of subduction and gravitational sinking in particle export, carbon sequestration, and the remineralization length scale in the California Current Ecosystem. Ocean Carbon and Biogeochemistry Meeting. Woods Hole, MA. 2016

Kelly, T. B.; P. C. Davison; M. R. Landry; M. D. Ohman; R. Goericke; **M. R. Stukel**. The importance of diel vertical migrations of mesozooplankton for supporting a mesopelagic ecosystem: an Inverse Modeling Approach in the California Current. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. New Orleans, LA (2016)

Coles, V. J.; **M. R. Stukel**; R. R. Hood; M. A. Moran; J. H. Paul; B. Satinsky; B. Zielinski; P. L. Yager. Modeling the nitrogen cycle one gene at a time. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. New Orleans, LA (2016)

Stukel, M. R.; M. R. Landry; R. Goericke; H. Song, A. J. Miller; M. D. Ohman; K. Barbeau. Enhanced gravitational and advective particulate carbon export at a frontal region in the southern California Current Ecosystem. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. New Orleans, LA (2016)

Landry, M. R.; **Stukel, M. R.**; Décima, M. Indirect fluxes through the microbial food web support high respiration and growth rates of mesozooplankton in the Equatorial Pacific. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting, Grenada, Spain, 2015

Stukel, M. R., V. J. Coles, M. T. Brooks, R. R. Hood. Top-down, bottom-up and physical controls on diatom-diazotroph assemblage growth in the Amazon River plume. Ocean Carbon and Biogeochemistry Meeting. Woods Hole, MA. 2014

Stukel, M. R.; Ducklow, H. W.; Schofield, O.; Erickson, M. E.; Strebel, S.; The balance of new and export production in the Bismarck Strait, Western Antarctic Peninsula. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Honolulu, HI. 2014

Pedulli, M.; Ducklow, H. W.; Bisagni, J. J.; **Stukel, M. R.**; Pilskaln, C. H.; Export production for the waters off the Western Antarctic Peninsula (WAP) Region. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Honolulu, HI. 2014

Landry, M. R.; **Stukel, M. R.**; Décima, M.; Selph, K. E.; Taylor, A. G.; Grazer regulation of carbon export in the Costa Rica Dome. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Honolulu, HI. 2014

Coles, V. J.; Hood, R. H.; **Stukel, M. R.**; Yager, P. L.; Modeling metagenomes and metatranscriptomes along the Amazon River Plume gradient. Association for the Sciences of Limnology and Oceanogrpahy (ASLO) Ocean Sciences Meeting, Honolulu, HI. 2014

Stukel, M. R., M. R. Landry. ^{234}Thorium and Carbon Export associated with a Frontal Region in the California Current System. Ocean Carbon and Biogeochemistry Meeting. Woods Hole, MA. 2013

Krause, J.W., M. A. Brzezinski, **M. R. Stukel**, M.R., Landry, M.D. Ohman. Biogenic silica cycling across frontal gradients in the California Current Ecosystem. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. New Orleans, LA, USA. 2013.

Brzezinski, M. A., J. W. Krause, K. A. Barbeau, R. Bundy, **M. R. Stukel**, M. R. Landry, M. D. Ohman. Variable influence of iron on siliceous biomass and production in a frontal zone within the California Current.

Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. New Orleans, LA. 2013

Alin, S. S. Siedlecki, B. Hales, J. Mathis, W. Evans, **M. Stukel**, G. Gaxiola-Castro, J. M. Hernandex-Ayon, L. Juranek, M. Goni, G. Turi, J. Needoba, E. Mayorga, Z. Lachkar, N. Gruber, J. Hartmann, N. Moosdorf, R. Feely, F. Chavez. Coastal carbon synthesis for the continental shelf of the North American Pacific Coast (NAPC): Preliminary results. Ocean Carbon and Biogeochemistry News. 5(1).

Stukel, M. R., M. R. Landry, K. E. Selph, M. Décima, D. A. Taniguchi. The role of *Synechococcus* in carbon export in the Costa Rica Dome: Vertical transport within mesozooplankton fecal pellets. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Salt Lake City, UT. 2012

Coles, V. J., M. T. Brooks, R. R. Hood, J. P. Montoya, **M. R. Stukel**, P. L. Yager. The role of the Amazon River Plume in structuring upper ocean stratification, biochemistry, and biological communities in the Western Tropical North Atlantic. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Salt Lake City, UT. 2012

Brooks, M. T., V. J. Coles, **M. R. Stukel**, R. R. Hood. Modeling the Amazon River Plume. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Salt Lake City, UT. 2012

Hood, R. R., V. J. Coles, M. T. Brooks, **M. R. Stukel**. Modeling emergent microbial community structure and biochemical cycling in the Amazon River and Plume. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Salt Lake City, UT. 2012

Stukel, M. R. 2011. Biological control of vertical carbon flux in the California Current and equatorial Pacific. Ph.D. Dissertation. University of California, San Diego

Stukel, M. R., M. R. Landry. Carbon cycling in the equatorial Pacific: Export driven by large phytoplankton. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Portland, OR. 2010

Selph, K. E., M. R. Landry, C. I. Measures, A. G. Taylor, E. Yang, **M. R. Stukel**, J. Yang, S. Christensen, R. Bidigare. Eastern Equatorial Pacific phytoplankton: the relative importance of Fe, light, and grazing in community structure. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Portland, OR. 2010

Stukel, M. R. Cruise Report. CCE-P0904 Cruise. R/V New Horizon: Apr. 22 – May 3. CCE-LTER Datazoo.

Stukel, M. R., M. R. Landry, C. R. Benitez-Nelson, R. Goericke. Trophic cycling and vertical carbon flux in the CCE. Long-Term Ecological Research, All Scientists Meeting. Estes Park, CO. 2009.

Stukel, M. R., M. R. Landry, C. R. Benitez-Nelson, R. Goericke. Carbon export and the fate of primary productivity in the California Current Ecosystem. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Orlando, FL. 2008

Stukel, M. R., M. R. Landry, C. R. Benitez-Nelson. Thorium export in the California Current Ecosystem. Long-Term Ecological Research, All Scientists Meeting. Estes Park, CO. 2006.

Stukel, M. R., M. R. Landry, K. E. Selph. Mixotrophs are major grazers in the equatorial Pacific. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Honolulu, HI. 2006.

Scientific Service (Peer-Reviewer and panelist):

Journals: Aquatic Microbial Ecology, Biogeosciences, Communications Earth & Environment, Continental Shelf Research, Deep-Sea Research I, Deep-Sea Research II, Earth Systems Science Data, Ecological Modelling, Elementa: Science of the Anthropocene, Estuarine Coastal and Shelf Science, Frontiers in Marine Science, Global Biogeochemical Cycles, Global Change Biology, Journal of Geophysical Research: Oceans, Journal of Oceanography, Journal of Plankton Research, Limnology and Oceanography, Marine Chemistry, Nature Communications, PLOS One, Proceedings of the Royal Society B, Progress in Oceanography, Scientific Reports

Proposals: NSF Biological Oceanography, NSF Chemical Oceanography, NSF Polar Programs, National Environment Research Council (UK), Czech Science Foundation, Deutsche Forschungsgemeinschaft (German Research Foundation), Natural Sciences and Engineering Research Council of Canada, Israeli Science Foundation

Panelist: NSF Biological Oceanography (2x), NSF Office of Polar Program

Fellowships

2009-2010 NASA NESSF Graduate Fellowship
2008 Wyers Fellowship
2005-2008 NSF Graduate Fellowship
2004-2005 Henry L. & Grace Doherty Fellowship

Cruise Experience (ship-time: 593 days)

BLOOFINZ-IO Thorium, sediment traps, mixotrophy, ^{15}N and ^{13}C uptake measurements in the Indian Ocean
CCE-P2107 – Chief scientist of this cruise investigating plankton dynamics in a coastal filament in the CCE
CCE-P1908 - Measured carbon export and new production in a coastal jet in the CCE
SalpPOOP - Salp grazing incubations, thorium, sediment traps in the Chatham Rise, New Zealand
NF18 - Thorium, sediment traps, N_2 fixation, ^{15}N and ^{13}C uptake measurement in the Gulf of Mexico
CCE-P1706 - Measured carbon export and new production in a coastal jet in the CCE
NF17 - Thorium, sediment traps, ^{15}N and ^{13}C uptake measurement in the oligotrophic Gulf of Mexico
C-SNOW - Deployed sediment traps and zooplankton net tows in support of Carbon Flux Explorer calibration
CCE-P1604 - Measured carbon export and new production during El Nino conditions in the CCE
CCE-P1408 – Measured carbon export and new production during "Warm Blob" conditions in the CCE
PAL2013 – Measured carbon export and new production off the Western Antarctica Peninsula
CCE-P1208 – Measured carbon export and new production in a frontal region in the CCE
PAL2012 – Measured carbon export and new production off the Western Antarctica Peninsula
ANACONDAS – Measured phytoplankton growth and protozoan grazing in the Amazon River Plume
CCE-P1106 – Measured carbon export and new production in a frontal region in the CCE
CRD-2010 – Measured carbon export, new production, and mesozooplankton gut phycoerythrin
CCE-P0904 – Chief Scientist on a cruise addressing the ecological and biogeochemical role of fronts in the CCE
CCE-P0810 – Continued ^{234}Th & sediment trap measurements and added new production measurements
CCE-P0704 – Continued ^{234}Th measurements and added sediment trap deployments as independent confirmation
CCE-P0605 – Measured carbon export in the CCE using ^{234}Th disequilibrium measurements
EB-05 – Investigated mixotrophic nano- and microflagellates in the eastern equatorial Pacific