

JOEL K. LLOPIZ

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EDUCATION

- 2008 University of Miami, Rosenstiel School of Marine and Atmospheric Science, Miami, FL
Ph.D. in Marine Biology and Fisheries (Advisor: Robert Cowen)
2000 Eckerd College, St. Petersburg, FL
B.S. in Marine Science, Biology Track

PROFESSIONAL APPOINTMENTS

- 2017–present Associate Scientist (tenure track faculty), Woods Hole Oceanographic Institution
2012–2017 Assistant Scientist (tenure track faculty), Woods Hole Oceanographic Institution
2011–2012 Instructor, Massachusetts Marine Studies Consortium
2010–2012 Postdoctoral Scholar, Woods Hole Oceanographic Institution (Advisors: Carin Ashjian and Simon Thorrold)
2008–2010 Postdoctoral Associate, University of Miami/RSMAS (Advisors: Su Sponaugle and Robert Cowen)
2007–2008 Graduate Research Assistant, University of Miami/RSMAS
2005–2006 Graduate Teaching Assistant, University of Miami/RSMAS
2002–5, 2007 Graduate Research Fellow, University of Miami/RSMAS
2000–2002 Fisheries Biologist, Florida Fish and Wildlife Research Institute

AWARDS

- 2020–2022 Lenfest Foundation Early Career Award
2020–2022 WHOI Early Career Award
2016–2018 Cooperative Institute for the North Atlantic Region (CINAR) Fellow in Quantitative Fisheries and Ecosystem Science
2010–2012 WHOI/CINAR institution-funded Postdoctoral Scholar
2010 Best early-career scientist award, IMBER Imbizo II, Crete, Greece
2008–2009 F.G. Walton Smith Prize for best RSMAS dissertation
2007 Harding Michel Memorial Fellowship
2004 & 2005 Capt. Harry Vernon, Jr. Memorial Scholarship Award
2004 Capt. Bob Lewis Billfish Challenge Scholarship Award
2002–2005 NOAA/LMRCSC Fellowship

PEER-REVIEWED PUBLICATIONS

(¹graduate student advisee; ²undergraduate mentee; ³postdoc advisee; ⁴senior author—resulted from work in our lab on a project or project's component I led)

In revis. Hernandez, CM¹, CB Paris, AC Vaz, BT Jones, JB Kellner, DE Richardson, S Sponaugle, RK Cowen, **JK Llopiz**⁴. Larval traits drive patterns of marine dispersal and connectivity. *Ecology*.

- In press Suca, JJ¹, R Ji, H Baumann, K Pham², TL Silva, DN Wiley, Z Feng, **JK Llopiz**⁴. Larval transport pathways from three prominent sand lance hotspots in the Gulf of Maine. *Fisheries Oceanography*.
- 2021 García-Fernández, C, JJ Suca¹, **JK Llopiz**, P Álvarez, R Dominguez-Petit, F Saborido-Rey. Spatial and temporal variability in the occurrence and abundance of European hake larvae, *Merluccius merluccius*, on the Galician Shelf (NE Atlantic). *Frontiers in Marine Science* 8: 696246
- 2021 Suca, JJ¹, JJ Deroba, DE Richardson, R Ji, **JK Llopiz**⁴. Trends in forage fish habitat suitability and occupancy on the Northeast US shelf. *ICES Journal of Marine Science* 78: 3687-3708
- 2021 Hernandez, CM¹, DE Richardson, II Rypina, K Chen, KE Marancik, K Shulzitski, **JK Llopiz**⁴. Support for the Slope Sea as a major spawning ground for Atlantic bluefin tuna: evidence from larval abundance, growth rates, and particle-tracking simulations. *Canadian Journal of Fisheries and Aquatic Sciences* <https://doi.org/10.1139/cjfas-2020-0444>
- 2021 Yoerger, DR, AF Govindarajan, JC Howland, **JK Llopiz**, PH Wiebe, M Curran, J Fujii, D Gomez-Ibanez, K Katija, BH Robison, BW Hobson, M Risi, SM Rock. Mesobot: A hybrid underwater robot for multidisciplinary investigation of the Ocean Twilight Zone. *Science Robotics* 6(55): eabe1901
- 2021 van Putten, EI, R Kelly, RD Cavanagh, EJ Murphy, A Breckwoldt, S Brodie, C Cvitanovic, M Dickey-Collas, L Maddison, J Melbourne-Thomas, H Arrizabalaga, K Azetsu-Scott, L Elizabeth Beckley, R Bellerby, A Constable, G Cowie, K Evans, M Glaser, J Hall, AJ Hobday, NM Johnston, **JK Llopiz**, F Mueter, FE Muller-Karger, K Weng, DA Wolf-Gladrow, JC Xavier. A decade of incorporating social sciences in the Integrated Marine Biosphere Research project (IMBeR): Much done, much to do? *Frontiers in Marine Science* 8: 662350
- 2021 Govindarajan, AF, R Francolini, M Jech, A Lavery, **JK Llopiz**, P Wiebe, W Zhang. Exploring the use of environmental DNA (eDNA) to detect animal taxa in the mesopelagic zone. *Frontiers in Marine Science* 9: 574877
- 2021 Rypina, II⁴, MM Dotzel, LJ Pratt, CM Hernandez¹, **JK Llopiz**⁴. Exploring interannual variability in potential spawning habitat for Atlantic bluefin tuna in the Slope Sea. *Progress in Oceanography* 192: 102514
- 2021 Suca, JJ¹, DN Wiley, TL Silva, AR Robuck, DE Richardson, S Glancy, E Clancey², T Giandonato², AR Solow, MA Thompson, P Hong, H Baumann, L Kaufman, **JK Llopiz**⁴. Sensitivity of sand lance to shifting prey and hydrography indicates forthcoming change to the Northeast US shelf forage fish complex. *ICES Journal of Marine Science* 78: 1023-1037
- 2021 Caiger, PE³, LS Lefebvre, **JK Llopiz**⁴. Growth and reproduction in mesopelagic fishes: A literature synthesis. *ICES Journal of Marine Science* 78: 765-781
- 2021 Silva, TL, D Wiley, M Thompson, P Hong, L Kaufman, J Suca¹, **JK Llopiz**, H Baumann, G Fay. High collocation of sand lance and protected top predators: Implications for conservation and management. *Conservation Science and Practice* 3: e274
- 2020 Suca, JJ¹, A Lillis, IT Jones, MB Kaplan, AR Solow, AD Earl, S Habtes, A Apprill, **JK Llopiz**, TA Mooney. Variable and spatially explicit response of fish larvae to the

- playback of local, continuous reef soundscapes. *Marine Ecology Progress Series* 653: 131-151
- 2020 Becker, CC, L Weber, JJ Suca¹, **JK Llopiz**, TA Mooney, A Apprill. Microbial and nutrient dynamics in mangrove, reef, and seagrass waters over tidal and diurnal scales. *Aquatic Microbial Ecology* 85: 101-119
- 2020 Evans, K, H Arrizabalaga, S Brodie, CT Chang, **JK Llopiz**, JS Phillips and K Weng. Comparative research on ocean top predators by CLIOTOP: Understanding shifts in oceanic biodiversity under climate change. *Deep Sea Research Part II* 175: 104822
- 2020 Staudinger, MD, H Goyert, JJ Suca¹, K Coleman, L Welch, **JK Llopiz**, D Wiley, I Altman, A Applegate, P Auster, H Baumann, J Beaty, D Boelke, L Kaufman, P Loring, J Moxley, S Paton, K Powers, D Richardson, J Robins, J Runge, B Smith, C Spiegel, H Steinmetz. The role of sand lances (*Ammodytes* sp.) in the Northwest Atlantic Ecosystem: A synthesis of current knowledge with implications for conservation and management. *Fish and Fisheries* 21: 522-556
- 2019 Hernández¹, CM, J Witting, C Willis², SR Thorrold, **JK Llopiz**^{4*}, RD Rotjan^{4*}. Evidence and patterns of tuna spawning inside a large no-take Marine Protected Area. *Scientific Reports* 9:10772 (*contributed equally)
- 2019 Rypina, II⁴, K Chen, CM Hernandez¹, LJ Pratt, **JK Llopiz**⁴. Investigating the suitability of the Slope Sea for Atlantic bluefin tuna spawning using a high-resolution ocean circulation model. *ICES Journal of Marine Science* 76: 1666-1677
- 2019 Laiz-Carrión, R, T Gerard, JJ Suca¹, E Malca, A Uriarte, JM Quintanilla, S Privoznik, **JK Llopiz**, J Lamkin, A García. Comparative early life trophic ecology of four tuna species in the Gulf of Mexico reveals different breeding strategies. *Marine Ecology Progress Series* 619: 53-68
- 2019 Uriarte, A, C Johnstone, R Laiz-Carrion, A. Garcia, **JK Llopiz**, A Shrioza, JM Quintanilla, D Lozano-Peral, P Reglero, F Alemany. Evidence of density-dependent cannibalism in the diet of wild Atlantic bluefin tuna larvae (*Thunnus thynnus*) of the Balearic Sea (NW Mediterranean). *Fisheries Research* 212: 63-71
- 2018 Lillis, A, A Apprill, JJ Suca¹, C Becker, **JK Llopiz**, TA Mooney. Soundscapes influence the settlement of the common Caribbean coral *Porites astreoides* irrespective of light conditions. *Royal Society Open Science* 5: 181358
- 2018 Dinh, JP, JJ Suca¹, A Lillis, A Apprill, **JK Llopiz**, TA Mooney. Multiscale spatio-temporal patterns of boat noise on US Virgin Islands coral reefs. *Marine Pollution Bulletin* 136: 282-290
- 2018 Suca JJ¹, JW Pringle, ZR Knorek², SL Hamilton², DR Richardson, **JK Llopiz**⁴. Feeding dynamics of Northwest Atlantic small pelagic fishes. *Progress in Oceanography* 165: 52-62
- 2018 Lillis A, F Caruso, TA Mooney, **JK Llopiz**, DR Bohnenstiehl, DB Eggleston. Drifting hydrophones as an ecologically meaningful approach to underwater soundscape measurement in coastal benthic habitats. *Journal of Ecoacoustics* 2: #STBDH1
- 2017 Suca JJ^{1,2}, **JK Llopiz**⁴. Trophic ecology of barrelfish in oceanic waters off southeast Florida. *Bulletin of Marine Science* 93: 987-996
- 2016 DeVanna Fussell KM, REH Smith, ME Fraker, L Boegman, KT Frank, TJ Miller, JT Tyson, KK Arend, D Boisclair, OP Jensen, **JK Llopiz**, CJ May, RG Najjar, LG Rudstam, CT Taggart, YR Rao, SA Ludsin. A perspective on needed research, modeling, and management approaches that can enhance Great Lakes fisheries

- management under changing conditions. *Journal of Great Lakes Research* 42: 743-752
- 2015 Braun CD*, MB Kaplan*, AZ Horodysky, **JK Llopiz**. Satellite telemetry reveals physical processes driving billfish behavior. *Animal Biotelemetry* 3: 2 (*JP students)
- 2015 Pepin P, D Robert, C Bouchard, JE Dower, M Falardeau, L Fortier, GP Jenkins, V Leclerc, K Levesque, **JK Llopiz**, MG Meekan, HM Murphy, M Ringuette, P Sirois, S Sponaugle. Once upon a larva: Revisiting the relationship between feeding success and growth in fish larvae. *ICES Journal of Marine Science* 72: 359-373
- 2015 **Llopiz JK**, AJ Hobday. A global comparative analysis of the feeding dynamics and environmental conditions of larval tunas, mackerels, and billfishes. *Deep Sea Research II* 113: 113-124
- 2015 Young JW, BPV Hunt, T Cook, **JK Llopiz**, E Hazen, H Pethybridge, D Ceccarelli, A Lorrain, RJ Olson, V Allain, C Menkes, T Patterson, S Nicol, P Lehodey, R Kloser, H Arrizabalaga, CA Choy. The trophodynamics of marine top predators: Current knowledge, recent advances, and challenges. *Deep Sea Research II* 113: 170-187
- 2014 **Llopiz JK**, RK Cowen, MJ Hauff, R Ji, PL Munday, BA Muhling, MA Peck, DE Richardson, S Sogard, S Sponaugle. Early life history and fisheries oceanography: New questions in a changing world. *Oceanography* 27(4): 26-41
- 2014 Rypina II, **JK Llopiz**, LJ Pratt, MS Lozier. Dispersal pathways of American eel larvae from the Sargasso Sea. *Limnology and Oceanography* 59: 1704-1714
- 2013 Leis JM, JE Caselle, IR Bradbury, T Kristiansen, **JK Llopiz**, MJ Miller, MI O'Connor, CB Paris, AL Shanks, SM Sogard, SE Swearer, EA Trembl, R Vetter, RR Warner. Does fish larval dispersal differ between high and low latitudes? *Proceedings of the Royal Society B* 280: 20130327
- 2013 **Llopiz JK**. Latitudinal and taxonomic patterns in the feeding dynamics of fish larvae: A literature synthesis. *Journal of Marine Systems* 109-110: 69-77
- 2012 Peck MA, KB Huebert, **JK Llopiz**. Intrinsic and extrinsic factors driving match-mismatch dynamics during the early life history of marine fishes. *Advances in Ecological Research* 47: 177-302
- 2011 D'Alessandro EK, S Sponaugle, **JK Llopiz**, RK Cowen. Larval ecology of the great barracuda, *Sphyraena barracuda*, and other sphyraenids in the Straits of Florida. *Marine Biology* 158: 2625-2638 (feature article)
- 2010 Clasen JL*, **JK Llopiz***, CEH Kissman, D Marshalonis, DL Pascual. The vulnerability of ecosystem trophic dynamics to anthropogenically induced environmental change: A comparative approach, p. 47-66. In P.F. Kemp [ed.], *Eco-DAS VIII Symposium Proceedings*, ASLO (*contributed equally)
- 2010 Keister JE, DL Pascual, JL Clasen, KN Hopfensperger, N Kelly, **JK Llopiz**, SM Moseman, L Petes. Climate and anthropogenic change in aquatic environments: A cross-ecosystem perspective, p. 1-16. In P.F. Kemp [ed.], *Eco-DAS VIII Symposium Proceedings*, ASLO
- 2010 Richardson DE, **JK Llopiz**, CM Guigand, RK Cowen. Larval assemblages of large and medium sized pelagic species. *Progress in Oceanography* 86: 8-20
- 2010 **Llopiz JK**, DE Richardson, A Shiroza, SL Smith, RK Cowen. Distinctions in the diets and distributions of larval tunas and the important role of appendicularians. *Limnology and Oceanography* 55: 983-996

- 2010 Sponaugle S, KD Walter, K Denit, **JK Llopiz**, RK Cowen. Variation in pelagic larval growth of Atlantic billfishes: The role of prey composition and selective mortality. *Marine Biology* 157: 839-849
- 2009 Lowerre-Barbieri SK, N Henderson, **JK Llopiz**, S Walters, J Bickford, R Muller. Defining a spawning population (spotted seatrout *Cynoscion nebulosus*) over temporal, spatial, and demographic scales. *Marine Ecology Progress Series* 394: 231-245
- 2009 Richardson DE, **JK Llopiz**, KD Leaman, PS Vertes, FE Muller-Karger, RK Cowen. Sailfish spawning and larval environment in a Florida Current frontal eddy. *Progress in Oceanography* 82: 252-264
- 2009 **Llopiz JK**, RK Cowen. Variability in the trophic role of coral reef fish larvae in the oceanic plankton. *Marine Ecology Progress Series* 381: 259-272
- 2009 Sponaugle S, **JK Llopiz**, L Havel, TL Rankin. Spatial variation in growth and feeding success in a coral reef fish. *Marine Ecology Progress Series* 383: 239-249
- 2008 **Llopiz JK**, RK Cowen. Precocious, selective and successful feeding of larval billfishes in the oceanic Straits of Florida. *Marine Ecology Progress Series* 358: 231-244
- 2006 Luckhurst BE, ED Prince, **JK Llopiz**, D Snodgrass, EB Brothers. Evidence of blue marlin (*Makaira nigricans*) spawning in Bermuda waters and elevated mercury levels in large specimens. *Bulletin of Marine Science* 79: 691-704
- 2005 Prince ED, RK Cowen, ES Orbesen, SA Luthy, **JK Llopiz**, DE Richardson, JE Serafy. Movements and spawning of white marlin (*Tetrapturus albidus*) and blue marlin (*Makaira nigricans*) off Punta Cana, Dominican Republic. *Fishery Bulletin* 103: 659-669
- 2005 Guigand CM, RK Cowen, **JK Llopiz**, DE Richardson. A coupled asymmetrical multiple opening closing net with environmental sensing system. *Marine Technology Society Journal* 39: 22-24

OTHER PUBLICATIONS

- 2017 Uriarte A, C Johnstone, R Laiz-Carrión, A Garcia, **JK Llopiz**, JM Quintanilla, D Lozano-Peral, P Reglero, F Alemany. First report on cannibalistic feeding behaviour in post-flexion bluefin larvae (*Thunnus thynnus*) of the Balearic Sea (NW Mediterranean). ICCAT Col. Vol. Sci. Pap. SCRS/2017/014
- 2015 **Llopiz JK**, BA Muhling, JT Lamkin. Feeding dynamics of Atlantic bluefin tuna larvae in the Gulf of Mexico. ICCAT Col. Vol. Sci. Pap. 71(4): 1710-1715
- 2015 Muhling BA, Y Liu, SK Lee, JT Lamkin, E Malca, **JK Llopiz**, GW Ingram, JM Quattro, JF Walter, K Doering, MA Roffer, F Muller-Karger. Past, ongoing and future research on climate change impacts on tuna and billfishes in the western Atlantic. ICCAT Col. Vol. Sci. Pap. 71(4): 1716-1727
- 2009 **Llopiz JK**, RK Cowen. The successful and selective feeding of larval fishes in the low-latitude open ocean: Is starvation an insignificant source of mortality? *ICES Annual Science Conference Proceedings*, T:14
- 2009 **Llopiz JK**. Book review of *Early Life History of Marine Fishes* by BS Miller and AW Kendall. *Bulletin of Marine Science* 85: 184-185
- 2008 **Llopiz JK**. The trophic ecologies of larval billfishes, tunas, and coral reef fishes in the Straits of Florida: Piscivory, selectivity, and niche separation. PhD Dissertation

GRANTS

- 2020–2021 NSF, co-PI with Heidi Sosik and Stace Beaulieu, “RAPID: Collaborative Research: Autumn Transition in Plankton Ecology During an Ocean Heatwave on the Northeast U.S. Shelf” (\$50,832)
- 2019–2022 NSF, co-PI with David Lindo and Jane Alexander (CUNY), “MARLANI: MARine and LANguage Interdisciplinary Approach to Enhancing Number, Diversity, and Professional Development of Undergraduate Students in Earth Sciences” (\$491,395)
- 2018–2023 TED Audacious Project, co-PI with Heidi Sosik, Mark Abbott, Andy Bowen, Ken Buesseler, Annette Govindarajan, Porter Hoegland, Jon Howland, Di Jin, Andone Lavery, Larry Madin, Simon Thorrold, Peter Wiebe, Dana Yoerger, “Ocean Twilight Zone” (\$35M)
- 2018–2020 Woods Hole Sea Grant, PI, with Rubao Ji, Martha Hauff (Stonehill College), Hannes Baumann (UConn), Page Valentine (USGS), and David Wiley (SBNMS), “Source-sink dynamics and habitat modeling of northern sand lance on Stellwagen Bank and Nantucket Shoals” (\$194,113)
- 2018–2021 BOEM via Stellwagen Bank National Marine Sanctuary, co-PI with David Wiley (SBNMS), Les Kaufman (Boston Univ.), Hannes Baumann (UConn), Gavin Fay (UMassD), and Page Valentine (USGS), “Productivity and ecology of sand habitats” (\$1.2M)
- 2018–2019 Adelaide and Charles Link Foundation, PI, “Larval bluefin tuna in the Slope Sea” (\$42,414)
- 2017–2022 NSF, co-PI with Heidi Sosik, Michael Neubert, Rubao Ji, Steven Lentz, et al., “LTER: Linking pelagic community structure with ecosystem dynamics and production regimes on the changing Northeast US shelf” (\$5.6M)
- 2016–2020 NSF, co-PI with Carin Ashjian, “Collaborative Research: The importance of shelf break upwelling to upper trophic level ecology in the Western Beaufort Sea” (\$2.6M)
- 2016–2020 NSF, co-PI with Dana Yoerger, Chris German, Peter Wiebe, Annette Govindarajan, et al. “Collaborative Research: Mesobot: a robot for investigating the ocean interior” (\$727,781)
- 2016–2019 NSF, co-PI with Irina Rypina, Ke Chen, and Larry Pratt, “Physical and biological exchange processes and Lagrangian pathways between deep ocean and shelf regions of the Northwestern Atlantic (\$772,970)
- 2016–2017 WHOI Catalyst Program, co-PI with Dana Yoerger, Peter Wiebe, Annette Govindarajan, Jon Howland, “A new initiative to understand the structure and dynamics of the mesopelagic ‘twilight zone’” (\$75,000)
- 2016–2018 WHOI Ocean Life Institute, co-PI with Christina Hernandez (JP student), “Atlantic bluefin tuna spawning in the Slope Sea: larval growth and retention” (\$33,000)
- 2015–2018 NSF, co-PI with Aran Mooney and Amy Apprill, “Coral Chorus: The role of soundscapes in coral reef larval recruitment and biodiversity” (\$890,180)
- 2015–2017 Phoenix Islands Protected Area Trust, co-PI with Randi Rotjan (Boston Univ.), Jan Witting (SEA), and Simon Thorrold, “Larval tuna research in the Phoenix Islands Protected Area” (\$108,128)

- 2015–2017 NOAA FATE, co-PI with David Richardson (NOAA) and Michael Palmer (NOAA), “Is Atlantic cod and haddock recruitment influenced by the planktonic environment and feeding success during the larval stage?” (\$116,021)
- 2015–2017 Davis Foundation, co-PI with Amanda Spivak, “Biogeochemical effects of anadromous herring on lake ecosystems” (\$7,500)
- 2015 WHOI IR&D, PI, “Development of the ‘Diadromcam’ for quantitatively assessing the migrations of juvenile diadromous fishes” (\$72,828)
- 2014–2016 WHOI Interdisciplinary Award, co-PI with Amanda Spivak, “Impacts of anadromous herring on lake metabolism and sediment biogeochemistry: A natural experiment afforded by dam removal” (\$97,543)
- 2014–2016 NOAA Sea Grant, PI, with John Sheppard (MA DMF) and Ben Gahagen (MA DMF), “Beyond fish passage: variability in nursery habitat and its influence on the feeding, growth, and survival of the early life stages of river herring” (\$117,214)
- 2013–2015 WHOI Ocean Life Institute, PI, “Is cannibalism really an evolved strategy of bluefin tuna larvae?” (\$53,865)
- 2013–2015 NSF, PI, “Novel approaches to better understanding the trophic role of small pelagic fishes and their critical link between the plankton and higher trophic levels” (\$99,905)
- 2013–2014 NOAA, co-PI with Barbara Muhling (RSMAS), “Accounting for the influence of feeding success on the growth and survival of bluefin tuna larvae in stock assessment efforts” (\$102,998)
- 2012–2014 Sea Grant, co-PI with Simon Thorrold, “Investigating decadal-scale changes at the base of the Georges Bank food web through the use of compound-specific stable isotope analyses of haddock scales” (\$140,000)

INVITED SEMINARS AND WORKSHOP PRESENTATIONS/PARTICIPATION

- 2019 ESSAS Arctic Gadids Workshop, Brest, France: “Shelf break upwelling in the Beaufort Sea: impacts on *Boreogadus saida* distribution and feeding”
- 2019 Decade of Ocean Science for Sustainable Development global planning meeting, Copenhagen, Denmark (invited participant)
- 2019 Northeast Climate Integrated Modeling workshop, Portland, ME (invited participant)
- 2018 LTER All Scientists Meeting, Pacific Grove, CA (attendee, workshop participant)
- 2018 WHOI Biology Department Seminar Series: “Forage fish ecology: from the Northeast US shelf to the pond over yonder”
- 2017 Sand lance in the Northeast US workshop, invited speaker and participant: “Diet and stable isotopes of sand lance in relation to other forage fish on the Northeast US continental shelf”
- 2017 Stellwagen Bank conceptual modeling workshop (invited participant)
- 2017 UMass Dartmouth, Department of Fisheries Oceanography Seminar Series: “Vignettes in fish early life history: from the Sargasso Sea to your local New England pond”
- 2016 UMass Amherst OEB Department seminar: “Larval fish ecology, from the Sargasso Sea to the pond over yonder”
- 2016 River Herring Network annual meeting: “Early life history of river herring from contrasting freshwater environments”

- 2015 Future Earth biodiversity monitoring workshop, Yale University: “An overview of IMBER: Integrated Marine Biogeochemistry and Ecosystem Research”
- 2015 Stonehill College, Biology Department Seminar Series: “The trophic ecologies of fish and fish larvae in the open ocean”
- 2014 NOAA Educational Partnership Program Conference, Univ. Maryland Eastern Shore (invited panel member)
- 2014 MIT/WHOI Joint Program Faculty Symposium, Cambridge, MA: “Vignettes in fisheries oceanography and larval fish ecology”
- 2013 Biophysical Coupling Impacts on Fisheries workshop, Sandusky, OH: “Complicated cascading effects of ecosystem change: trophic specialists vs. trophic generalists”
- 2012 WHOI, Biology Department Seminar Series: “Tangled up in blue: The role of fish larvae in the complex food webs of the oceanic plankton”
- 2012 UMass Dartmouth SMAST, Department of Fisheries Oceanography Seminar Series: “The role of fish larvae in presumed size-structured food webs”
- 2012 University of South Carolina, Marine Science Program Seminar Series: “Picky feeding by larval fish alters so-called size-structured food webs”
- 2011 CLIOTOP Working Group 1 workshop, Shimizu, Japan: “Regional and taxonomic comparisons of the feeding ecologies of larval tunas, mackerels, and billfishes”
- 2011 WHOI, Biology Department Seminar Series: “Selective feeding by larval fish alters so-called size-structured food webs”
- 2009 Rosenstiel School of Marine and Atmospheric Science, F.G Walton Smith Prize presentation: “Picky eaters at the all-you-can-eat plankton buffet: selective feeding by fish larvae in tropical oceanic waters”
- 2008 Eco-DAS VIII (formerly DIALOG), Honolulu, HI: “Trophic linkages in marine planktonic ecosystems: a comparative approach”
- 2005 SAFMC Ecosystem Research and Monitoring Workshop, Charleston, SC: “Towards elucidating the role of larval fish in the planktonic food web”

CONFERENCE PRESENTATIONS (excluding co-authored presentations)

- 2019 IMBER Open Science Conference, Brest, France: “Long-term ecosystem dynamics on the Northeast US continental shelf with a focus on forage fishes”
- 2018 ASLO/AGU/TOS Ocean Sciences Meeting, Portland, OR: “Feeding dynamics of zooplanktivorous forage fishes on the northeast US continental shelf”
- 2017 Ocean Outlook Meeting, Bergen, Norway: “A new initiative to understand the structure and dynamics of the mesopelagic ‘twilight zone’”
- 2015 CLIOTOP Third Symposium, San Sebastian, Spain: “Feeding dynamics and degree of cannibalism of Atlantic bluefin tuna larvae in the Gulf of Mexico”
- 2015 American Fisheries Society Annual Meeting, Portland, OR: “A multifaceted, highly resolved investigation into the trophic role of small pelagic fishes on the Northeast US continental shelf”
- 2015 ASLO Aquatic Sciences Meeting, Granada, Spain: “Decadal-scale changes in the Georges Bank ecosystem: evidence from bulk and compound-specific stable isotope analyses of fish scales”
- 2014 ASLO/AGU/TOS Ocean Sciences Meeting, Honolulu, HI: “Climate and regime-shift signals in the stable isotopic signatures of an upper-level consumer on Georges Bank”

- 2013 ICES Annual Science Conference, Reykjavik, Iceland: “Decadal-scale variability in the stable isotopic signatures of haddock on Georges Bank” (poster)
- 2013 Larval Fish Conference (invited speaker), Miami, FL: “The feeding of fish larvae and their role in planktonic food webs: Where have we been and where are we going?”
- 2013 CLIOTOP Second Symposium, Noumea, New Caledonia: “Regional and taxonomic comparisons of the feeding ecologies of larval tunas, mackerels, and billfishes”
- 2012 ASLO/AGU/TOS Ocean Sciences Meeting, Salt Lake City, UT: “An update on the IMBER Regional Programme CLIOTOP: Climate Impacts on Oceanic Top Predators” (poster)
- 2010 IMBER Imbizo II, Crete, Greece: “The prey environment and feeding of larval fishes in the tropical open ocean with a comparison to higher latitudes” (poster—best early-career scientist award)
- 2010 34th Annual Larval Fish Conference, Santa Fe, NM: “The complex larval fish food web of the low-latitude open ocean”
- 2009 ICES Annual Science Conference, Berlin, Germany: “The successful and selective feeding of larval fishes in the low-latitude open ocean: Is starvation an insignificant source of mortality?”
- 2009 33rd Annual Larval Fish Conference, Joint Meeting of Ichthyologists and Herpetologists, Portland, OR: “Variable trophic strategies of planktonic coral reef fish larvae: shining some light into the ‘black box’ of connectivity research”
- 2008 IMBER Imbizo, End-to-End Food Webs Workshop, Miami, FL: “Ignored no more: the role of larval fishes in the planktonic food web of the low-latitude ocean” (poster)
- 2008 ASLO/AGU/TOS Ocean Sciences Meeting, Orlando, FL: “The trophic ecologies of larval fishes in the low-latitude open ocean: predation refuge and a full tummy to boot”
- 2007 Climate Impacts on Top Predators (CLIOTOP) Symposium, La Paz, Mexico: “The trophic ecologies and prey environment of larval billfishes, tunas and mackerels: linkages and vulnerabilities for a greater predictive capacity”
- 2007 31st Annual Larval Fish Conference, St. John’s, Newfoundland: “Larval fish feeding in the low-latitude open ocean: characterizing the feeding environment and questioning the presumed constraints”
- 2007 PICES Early Career Scientists Conference, Baltimore, MD: “Trophodynamics of larval billfishes and tunas: Are the constraints of the low-latitude open ocean actually constraining?” (poster)
- 2007 University of Miami Research and Creativity Forum: “Trophodynamics of larval billfishes and tunas: Are the constraints of the low-latitude open ocean actually constraining?” (poster—1st place)
- 2006 30th Annual Larval Fish Conference, American Fisheries Society Annual Meeting, Lake Placid, NY: “Trophodynamics of larval billfishes and tunas within the Straits of Florida: gluttony, piscivory and niche separation”
- 2006 ASLO Summer Meeting, Victoria, BC: “Feeding ecology of larval billfishes and their dynamic role in the oceanic planktonic ecosystem”
- 2005 4th International Billfish Symposium, Avalon, CA: “Feeding dynamics of larval billfishes within the Straits of Florida”

ACTIVITIES AND SERVICE

At WHOI

- 2022– Member, MIT-WHOI Joint Committee for Biological Oceanography (JCBO)
- 2021– **Chair**, Biology Department Postdoc Mentoring Committee
- 2021 Faculty coordinator and Chief Scientist for Joint Program student cruise
- 2021 Search committee member for Chief Diversity, Equity, and Inclusion Officer
- 2021 Unlearning Racism in the Geosciences (URGE) pod leader
- 2019– **Co-chair**, WHOI’s Committee for Diversity, Equity, and Inclusion
- 2019 Biology Department Hiring Committee member
- 2019 Biology Department ad hoc search committee for department chair
- 2018–20 Biology Department Postdoc Mentoring Committee member
- 2018 Biology Department Hiring Committee member
- 2018 Faculty coordinator and chief scientist for Joint Program student cruise
- 2017–19 Scientific Staff Executive Committee (SciSEC), elected member
- 2017 Invited panelist for postdoc and student event on interviewing and negotiating
- 2016–17 JPBO Curriculum Committee
- 2015–17 Summer Student Fellow Committee (Biology Department representative)
- 2015–17 Conceived and organized Biology Dept. Summer Student Research Forum
- 2015 Invited scientist and speaker, R/V *Neil Armstrong* welcoming event, San Francisco
- 2015 Panelist, Independent Study Award proposals
- 2014–17 Biology Department Seminar Series coordinator
- 2011–18 Gender Equity Committee member
- 2011–15 Diversity Committee member
- 2011–12 Postdoctoral Association department representative
- 2011–12 Mentor in the Postdoc-JP Student mentoring program

Outside WHOI

- 2021– LTER Executive Board member (representing the LTER DEI Committee)
- 2021– Joint ICES/PICES Working Group on Small Pelagic Fish member
- 2021– International Small Pelagic Fish Symposium (now in 2023) Scientific Steering Committee member
- 2020– Northeast Shelf LTER project’s Justice, Equity, Diversity, and Inclusion coordinator
- 2020– East Coast Oceanographic Consortium Advisory Committee member
- 2020 Lead convener of Ocean Sciences Meeting session (*Beyond just discovery in the ocean’s midwater: novel and mechanistic approaches to understanding mesopelagic and bathypelagic ecosystems*)
- 2019 Guest Editor, Deep-Sea Research II special issue for Climate Impacts on Top Predators (CLIOTOP) symposium
- 2019– LTER Network’s Diversity, Equity, and Inclusion committee member
- 2018– **Co-chair**, Climate Impacts on Top Predators (CLIOTOP), a regional programme under IMBeR (Integrated Marine Biosphere Research)
- 2018– IMBeR Scientific Steering Committee member
- 2018 Convener and organizer, Regional Association for Research on the Gulf of Maine (RARGOM) Annual Science Meeting, Portland, ME
- 2017 Convener and co-organizer, RARGOM Annual Science Meeting, Portland, ME
- 2016 Convener and co-organizer, RARGOM Annual Science Meeting, Portsmouth, NH

- 2016–18 **Chair**, Regional Association for Research on the Gulf of Maine (RARGOM)
- 2016 NSF panelist
- 2015 Organizing Committee, CLIOTOP Third Symposium, San Sebastian, Spain
- 2014 NSF GRFP panelist
- 2014 Session and workshop co-convener, IMBER Future Oceans Open Science Conference: “Beyond Z: What modelers need and empiricists have to offer to better incorporate higher trophic levels and humans in end-to-end models”
- 2013 Organizing Committee, CLIOTOP Second Symposium, Noumea, New Caledonia
- 2012 Session convener, ASLO/AGU/TOS Ocean Sciences Meeting: “New insights into the early life stages and reproductive dynamics of large marine vertebrates”
- 2012 Invited participant of COSEE-NOW professional development workshop on deconstructing and communicating one’s research
- 2012/14 Mentor for ASLO Multicultural Program students at the Ocean Sciences Meeting
- 2008–15 Co-chair of the Early Life History Working Group for the IMBER-associated CLIOTOP program
- 2008 Invited participant of Eco-DAS VIII (Ecological Dissertations in the Aquatic Sciences, formerly DIALOG)

Reviewing

Proposals: National Science Foundation, NOAA’s Fisheries and the Environment (FATE) program, NOAA’s Marine Fisheries Initiative (MARFIN) program, North Pacific Research Board, National Academies of Science Gulf Research Program, Fondation pour la Recherche sur la Biodiversité, Israel-US Binational Science Foundation, and Austrian Science Fund

Manuscripts: *Current Biology, Ecology, Marine Ecology Progress Series, Progress in Oceanography, PLoS One, Limnology and Oceanography, Limnology and Oceanography: Methods, Journal of Marine Systems, Polar Biology, Endangered Species Research, Deep Sea Research Part II, Fisheries Oceanography, Canadian Journal of Fisheries and Aquatic Sciences, ICES Journal of Marine Science, Journal of Fish Biology, Journal of Plankton Research, Fishery Bulletin, Marine Ecology, Environmental Biology of Fishes, Hydrobiologia, Scientia Marina, Functional Ecology, Bulletin of Marine Science, Zoologia, Estuarine, Coastal and Shelf Science, Caribbean Journal of Science, Revista de Biología Marina y Oceanografía, Bulletin of the Southern California Academy of Sciences, Journal of Applied Ichthyology*

Theses: External reviewer for Canadian student’s masters thesis; external reviewer for University of Mauritius PhD student’s dissertation

FIELDWORK

Oceanographic cruises (~425 days at sea)

- 2022 Six-day LTER cruise aboard R/V *Atlantis* on the S. New England shelf
- 2021 Three-day Joint Program Student cruise aboard R/V *Neil Armstrong* off NE US (chief scientist)
- 2021 Three-week Ocean Twilight Zone cruise (in conjunction with the NASA EXPORTS project cruises) aboard R/V *Sarmiento de Gamboa* in the NE Atlantic

- 2021 Three day-cruises for Ocean Twilight Zone *Mesobot* operations off Bermuda
- 2020 Four-day LTER cruise aboard R/V *Endeavor* on the S. New England shelf
- 2020 Six-day Ocean Twilight Zone cruise aboard R/V *Neil Amrstrong* (chief scientist)
- 2020 Six-day LTER cruise aboard R/V *Endeavor* on the S. New England shelf
- 2019 Six-day LTER cruise aboard R/V *Endeavor* on the S. New England shelf
- 2019 Day cruises on R/V *Tioga* near Nantucket Shoals (chief scientist)
- 2019 One-week Ocean Twilight Zone cruise aboard M/V *Alucia* off Bahamas (chief scientist)
- 2019 Six-day LTER cruise aboard R/V *Endeavor* on the S. New England shelf
- 2018 Three-day Joint Program Student cruise aboard R/V *Neil Armstrong* off NE US (chief scientist)
- 2018 Four-week cruise aboard the R/V *Sikuliaq* in the Alaskan Beaufort Sea
- 2018 Six-day LTER cruise aboard R/V *Endeavor* on the S. New England shelf
- 2018 Day cruises on R/V *Tioga* near Nantucket Shoals (chief scientist)
- 2018 Eight-day cruise aboard R/V *Walton Smith* in St. John, USVI (co-chief scientist)
- 2018 Six-day LTER cruise aboard R/V *Endeavor* on the S. New England shelf
- 2017 Ten-day cruise aboard R/V *Walton Smith* in St. John, USVI
- 2017 Four-week cruise aboard the R/V *Sikuliaq* in the Alaskan Beaufort Sea
- 2017 Day cruises aboard the R/V *Auk* conducting sand lance research on Stellwagen Bank
- 2016 One-week science verification cruise aboard the R/V *Neil Armstrong* off NE US
- 2014 One-week science verification cruise aboard the R/V *Sikuliaq* off Puerto Rico
- 2014 Four-week cruise in the Gulf of Mexico aboard the R/V *F.G Walton Smith*
- 2011 Six-week cruise in the Chukchi and Bering Seas aboard the icebreaker USCGC *Healy*
- 2011 Three day-cruises in the Chukchi and Beaufort Seas aboard the R/V *Annika Marie*
- 2007–08 Three 2-week cruises along and offshore of the Florida Keys aboard the R/V *F.G. Walton Smith*
- 2002–05 Thirty cruises (>100 total days of ship time) in the Straits of Florida aboard the R/V *F.G. Walton Smith*
- 2001/02 Two 10-day cruises aboard the R/V *Suncoaster* in the Gulf of Mexico

Nearshore

- 2015–18 Led multiple field campaigns for NSF-funded project in US Virgin Islands conducting small-boat-based sampling of coral reef fish larvae (light traps) and SCUBA diving surveys and equipment deployments
- 2015 Led small-boat sampling of larval river herring, zooplankton, water chemistry, and sediment cores from 7 lakes in central Maine
- 2014–16 Led small-boat sampling of larval river herring, zooplankton, and water quality parameters from 4 Massachusetts lakes
- 2000–02 Led twice-weekly small-boat trips sampling spotted seatrout in Tampa Bay

TEACHING

- 2020 WHOI-MIT Joint Program: co-instructor for graduate course *Marine Metapopulations*
- 2019 WHOI-MIT Joint Program: taught graduate course *Biophysical Interactions in Pelagic Ecosystems*
- 2018 WHOI-MIT Joint Program: taught graduate course *Ecology and Systematics of Marine Fishes*

- 2016 WHOI-MIT Joint Program: taught graduate course *Biophysical Interactions in Pelagic Ecosystems*
- 2014 WHOI-MIT Joint Program: developed and taught graduate course *Ecology and Systematics of Marine Fishes*
- 2013 WHOI-MIT Joint Program: developed and taught graduate course *Biophysical Interactions in Pelagic Ecosystems*
- 2012 Marine Studies Consortium: taught undergraduate course *Biology of Fishes*
- 2011 Marine Studies Consortium: developed and taught undergraduate course *Biology of Fishes* (students from Tufts Univ, Northeastern Univ, Wellesley College, Wheaton College, UMass Boston, and others)

ADVISING, MENTORING, AND SUPERVISING

Postdocs

- 2018–20 **Advisor** for Postdoctoral Investigator Paul Caiger
- 2014–16 **Advisor** for Postdoctoral Scholar Andrew Jones

Graduate students

- 2020 Host for PhD guest student Cristina Garcia Fernandes (Univ. of Vigo, Spain)
- 2020– Committee member, Helena McMonagle (University of Washington)
- 2020– Committee member, Kayla Gardner (MIT-WHOI)
- 2019– Committee member, Meghna Marjadi (UMass Amherst)
- 2016–21 **Advisor** for MIT/WHOI PhD student Justin Suca
- 2015–20 **Advisor** for MIT/WHOI PhD student Christina Hernandez
- 2016 Host for PhD guest student and WHOI Gori Fellowship recipient Marco Torri (IAMC-CNR, Italy)
- 2016 Dissertation defense chair for Emily Moberg
- 2015 Host for PhD guest student Amaya Uriarte (IEO, Spain)

Undergraduate students

- 2021 Thesis committee member, Allie Cole (Boston University)
- 2021 Thesis committee member, Molly McCutcheon (Stonehill College)
- 2021 Thesis committee member, Joshua Zahner (University of Miami)
- 2020 WHOI Summer Student Fellow Joshua Zahner (University of Miami; co-advised)
- 2020 Summer remote intern Kate Redmond (Amherst College)
- 2019 Semester at WHOI student Kent Pham (Univ. of the Sciences)
- 2019 WHOI Summer Student Fellow Jonathan Low (Univ. of Tampa)
- 2019 Summer guest student Lucinda Quigley (Brown University)
- 2019 NOAA Hollings Scholar and guest student Emily Clancey (UNCW)
- 2018 Semester at WHOI student Matt Stefanak (Middlebury College)
- 2018 WHOI Summer Student Fellow Julia Cox (UMass Amherst)
- 2018 NOAA Hollings Scholar and guest student Teresa Giondonato (Colorado Mesa University)
- 2018 Summer guest student Laura Pino (Penn State)
- 2018 Summer guest student Agatha Freedberg (UMiami)
- 2018 Summer intern and Stonehill College SURE student Elijah Morris
- 2018 Summer intern and Stonehill College SURE student Joe Varney

2018 Summer intern and Stonehill College SURE student Kalyani Twyman
 2018 Summer intern Elizabeth Constantine
 2017 WHOI Summer Student Fellow Ciara Willis (Dalhousie University)
 2017 Thesis advisor for guest student Jacob Strock (Lafayette College)
 2016-17 Thesis co-advisor for guest student Caroline Rosinski (Stonehill College)
 2016 Summer guest student Katie Swoap (Williams College)
 2016 WHOI Winter-term Intern Katie Swoap (Williams College)
 2015 Thesis advisor for student Justin Suca (UMiami)
 2015 MBL Semester in Environmental Science student Jacob Strock (Lafayette College)
 2015 WHOI Summer Student Fellow Sara Hamilton (Bowdoin College)
 2015 NOAA Hollings Scholar and guest student Justin Suca (UMiami)
 2015 Summer guest student Miranda Starr (Pomona College)
 2014 MBL Semester in Environmental Science student Sara Reese (Colgate University)
 2014 WHOI Summer Student Fellow André Price (Elizabeth City State Univ.)
 2014 Summer guest student Sophie Knorek (Hendrix College)
 2013 WHOI Summer Student Fellow Christina Hernandez (Columbia Univ.)
 2008–09 Thesis advisor for Carie Bickson (UMiami)
 2006–07 Thesis advisor for Elizabeth Crompton (UMiami)
 2005–06 Thesis advisor for Lauren Wyatt (UMiami)

High school students

2019 Intern Courtney Frangioso (Falmouth High School)
 2019 Intern Maddie Valley (Falmouth Academy)
 2018 Science fair student Abby Neubert (Falmouth Academy)
 2018 Summer intern Spencer Lott
 2018 Science fair student Ben Schwenk (Falmouth Academy; won 2nd place overall)
 2018 Intern Sarah Kerr (Falmouth Academy)
 2018 Intern Amelia McCabe (Falmouth Academy)
 2017 Intern Martha Clark (Falmouth Academy)
 2017 Hosted Andrew Bradshaw (Dexter Southfield School) for 2-wk senior-year project
 2017 Science fair student Ben Schwenk (Falmouth Academy; won 1st place overall)
 2016 Intern Isabelle Stewart (Falmouth Academy)
 2014–16 Intern Sam Cox (Falmouth Academy)

Supervision

2020– Supervisor of Research Associate Lyndsey Lefebvre
 2020– Supervisor of Research Assistant Julia Cox
 2019 Host of Guest Investigator Caleb Blanton (Texas A&M)
 2018–19 Supervisor of Research Assistant Helena McMonagle
 2018 Supervisor of Research Assistant Jessica Randall
 2018 Supervisor of Lab Assistant Elizabeth Constantine
 2017 Host of Guest Investigator and Fulbright Scholar Raul Laiz (Spain)
 2016– Supervisor of Research Assistant Sarah Glancy

- 2015–16 Supervisor of Lab Assistant Julie Pringle
- 2014 Host of Guest Investigator Jaimie Rojas (Venezuela)
- 2014 Supervisor of part-time helper Marissa Lerner

OUTREACH

- 2021 Invited interviewee, NOAA’s Ocean Exploration Online Professional Development Mini-Series on bioluminescence
- 2021 Panelist, *Ocean Encounters* virtual event “Weirdly Wonderful: Creatures of the Twilight Zone”
- 2021 Presentation and activities with kindergartners on bioluminescence in the ocean
- 2020 Presentation for Summer Student Fellow lecture series
- 2019 Woods Hole Science Stroll participant and “forage fish” display organizer
- 2019 Lab tour and presentation for Falmouth middle school students at risk
- 2019 Lecture at the Woods Hole Children’s School of Science
- 2018 Lab tour and presentation for Falmouth Public Schools administrators
- 2018 Lab tour and presentation for WHOI Ocean Science Journalism fellows
- 2018 Presentation for Herring Ponds Watershed Association
- 2017 Scientist during Zephyr Foundation visit and boat trip for ELL high school students
- 2017 Presentation for Wellfleet’s Friends of Herring River organization
- 2017 Presentation for Cape Cod Charter Boat Captains Association
- 2016 Lab tour and presentation for WHOI Ocean Science Journalism fellows
- 2016 WHOI ‘Science Made Public’ lecture series presenter
- 2016 Lecture at the Woods Hole Children’s School of Science
- 2016 Presentation and lab tour for Chaminade High School visiting students
- 2015 Invited speaker for WHOI Professional Development Workshop
- 2015 Invited display for WHOI public event ‘Under the Waves’
- 2015 Presentation for Summer Student Fellow lecture series
- 2014 Invited presentation for 20 6th-grade girls from the Chapin School
- 2014 Presentation and lab tour for MIT Biology Department retreat
- 2014 Presentation and lab tour for Chinese Deep Sea Institute visitors
- 2013 Invited presentation to WorldBoston visitors from Russia working toward sustainable seafood
- 2013 Presentation for Summer Student Fellow lecture series
- 2013 Hosted a high school student at WHOI for the day as part of a job shadow program
- 2011 Invited presentation to NOAA/NEFSC Woods Hole high school summer interns
- 2005–10 Sixteen invited presentations to elementary, middle and high school classes on larval fish research

MEDIA COVERAGE

- 2021 PBS *Newshour* website article on *Mesobot* and Ocean Twilight Zone Project (<https://www.pbs.org/newshour/science/how-an-underwater-robot-could-help-reveal-mysteries-of-the-deep>)
- 2021 AAAS *Eurekalert* article on new *Mesobot* paper (<https://www.eurekalert.org/news-releases/554841>)

- 2021 *Newsweek* article on *Mesobot* and Ocean Twilight Zone Project
(<https://www.newsweek.com/robot-dives-3000-feet-film-creatures-mid-ocean-twilight-zone-1605593>)
- 2019 *Gothamist* article on Ocean Twilight Zone project
(http://gothamist.com/2019/02/08/the_twilight_zones_carbon_eaters.php#photo-1)
- 2019 *Atlas Obscura* article on Ocean Twilight Zone project
(<https://www.atlasobscura.com/articles/ocean-twilight-zone-fishing>)
- 2019 *Quartz* article on Ocean Twilight Zone project (<https://qz.com/1582785/scientists-explore-the-oceans-forgotten-twilight-zone/>)
- 2019 WHOI online science short: <https://www.whoi.edu/news-insights/content/fish-with-flashlights/>
- 2019 WHOI online science short: <https://www.whoi.edu/news-insights/content/bringing-light-into-darkness/> Then picked up by *Phys.org*: <https://phys.org/news/2019-05-ocean-twilight-zone-scientists-tackle.html>
- 2019 WHOI video feature:
https://www.youtube.com/watch?v=perHYCOJoME&list=PL1CGd4Scv4GJhjiTKoSbqpU_lhvAUw_W4&index=7
- 2019 WHOI video featuring postdoc Paul Caiger:
<https://www.youtube.com/watch?v=zUF4WXR12j4>
- 2019 WHOI video featuring research assistant Helena McMonagle:
https://www.youtube.com/watch?time_continue=50&v=2XpKIWD-cYI
- 2019 Articles on tuna spawning in PIPA (paper led by student Chrissy Hernandez):
- *MIT News*: <https://news.mit.edu/2019/tuna-spawn-marine-protected-sanctuaries-0724>
 - *Oceanographic Magazine*: <https://www.oceanographicmagazine.com/migratory-tuna-spawning/>
 - *Phys.org*: <https://phys.org/news/2019-07-tuna-spawning-marine-areas.html>
 - *Seafood Source*: <https://www.seafoodsource.com/news/environment-sustainability/new-paper-shows-evidence-of-tuna-spawning-in-marine-protected-areas>
- 2018 *NY Times* article on Twilight Zone project and mesopelagic fish: “Visitors from the ocean’s twilight zone” (<https://www.nytimes.com/2018/11/21/science/twilight-zone-ocean.html>)
- 2018 *Oceanus* article on larval bluefin tuna: “The secret tuna nursery: Scientists investigate a newly found bluefin tuna spawning area” (<http://www.whoi.edu/oceanus/feature/the-secret-tuna-nursery>)
- 2018 *Boston Globe* article on Ocean Twilight Zone project: “It’s ‘the last frontier on Earth that’s truly not well understood,’ and scientists are about to explore it” (<https://www.bostonglobe.com/metro/2018/08/04/into-deep-explore-twilight-zone/H1aNgtgXSla75L9zjnc70H/story.html>)
- 2018 James Cameron op-ed in *Washington Post* resulting from Ocean Twilight Zone project: “We should be exploring the ocean’s twilight zone, not exploiting it” (https://www.washingtonpost.com/news/posteverything/wp/2018/06/08/we-should-be-exploring-the-oceans-twilight-zone-not-exploiting-it/?utm_term=.419412033d3d)
- 2018 *Oceanus* article on mesopelagic research: “Mission to the Twilight Zone” (<https://www.whoi.edu/oceanus/feature/mission-to-the-ocean---s-twilight-zone>)

- 2018 *Oceanus* article on LTER research: “Long-term study focuses on New England ocean” (<https://www.whoi.edu/oceanus/feature/taking-the-long-view-of-an-ocean-ecosystem>)
- 2017 *Oceanus* article on coral reef fish larvae: “How do fish find their way?” (<http://www.whoi.edu/oceanus/feature/how-do-fish-find-their-way>)
- 2017 *Oceanus* article on river herring research: “A big decline of river herring: Tiny stones in fish hold clues to help restore populations” (<http://www.whoi.edu/oceanus/feature/a-big-decline-of-river-herring>)
- 2017 *Economist* article on mesopelagic research and initiative (<https://www.economist.com/news/science-and-technology/21720618-one-least-understood-parts-sea-also-one-most-important>)
- 2016 *Oceanus* and *Marine Technology News* article on eel research: “A slithery ocean mystery: Scientists gain grasp on the epic migration of eels” (<http://www.whoi.edu/oceanus/feature/a-slithery-ocean-mystery>, <https://www.marinetechologynews.com/news/slithery-ocean-mystery-537511>)
- 2016 WHOI-produced video: “No stone unturned” (<http://www.whoi.edu/visualWHOI/v-no-stone-unturned>)
- 2013 *Oceanus* article on research examining stable isotopes of haddock scales and evidence for ecosystem change on Georges Bank (<http://www.whoi.edu/oceanus/feature/why-hasnt-the-cod-come-back>)
- 2013 ABC (Australian television) article related to larval fish dispersal paper published in *Proc Roy Soc B* (<http://www.abc.net.au/science/articles/2013/03/20/3719773.htm>)