

CURRICULUM VITAE

KELLY L. ROBINSON, PHD

Hatfield Marine Science Center
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EDUCATION

Date of Degree	Degree	Major	Institution
2012	Ph.D.	Marine Sciences	University of South Alabama
2007	M.S.	Fisheries & Aquatic Sciences	University of Florida
2004	B.S.	Biology (<i>cum laude</i>)	Sweet Briar College

PROFESSIONAL APPOINTMENTS

2014-Present	Postdoctoral Scholar	Hatfield Marine Science Center, Oregon State University, Newport, Oregon, USA
2013-2014	Adjunct Faculty	Department of Marine Science, The University of Southern Mississippi, Stennis Space Center, Mississippi, USA
2012-2014	Postdoctoral Associate	Department of Marine Science, The University of Southern Mississippi, Stennis Space Center, Mississippi, USA
2009-2010	Teaching Assistant	Dauphin Island Sea Lab, Dauphin Island, Alabama, USA
2007-2012	Graduate Fellow	Dauphin Island Sea Lab/Department of Marine Science, University of South Alabama, Mobile, Alabama, USA
2005-2007	Research Assistant	Department of Fisheries & Aquatic Sciences, University of Florida, Gainesville, Florida, USA

PUBLICATIONS

Peer-reviewed

- Quiñones J, H Mianzan, S Purca, **K Robinson**, G Adams, and EM Acha,. (2015). Climate driven population size fluctuations of jellyfish off Peru. *Marine Biology*. [doi:10.1007/s00227-015-2751-4](https://doi.org/10.1007/s00227-015-2751-4)
- Robinson KL**, JJ Ruzicka, WM Graham, FJ Hernandez, MB Decker, RD Brodeur, and M Sutor. Evaluating energy flows through jellyfish and gulf menhaden (*Brevoortia patronus*) and the effects of fishing on the northern Gulf of Mexico ecosystem. (2015). *ICES Journal of Marine Science*. [doi:10.1093/icesjms/fsv088](https://doi.org/10.1093/icesjms/fsv088)
- Robinson KL**, Graham WM, Brodeur RD, Ruzicka JJ, Decker MB, Hernandez FJ, Acha M, Mianzan H, Quinones J, and Uye S-I. (2014) Jellyfish, forage fish and the world's major fisheries. *Oceanography*. 27(4):104-115 <http://dx.doi.org/10.5670/oceanog.2014.90>.
- Baustian MM, GJA Hansen, A de Kluijver, **K Robinson**, EN Henry, LB Knoll, KC Rose, and CC Carey.

- (2014) Linking the bottom to the top in aquatic ecosystems: mechanisms and stressors of benthic-pelagic coupling. p. 25-47. 38-60. In P.F. Kemp [ed.], *Eco-DAS X Symposium Proceedings*. ASLO. [doi:10.4319/ecodas.2014.978-0-9845591-4-5.25](https://doi.org/10.4319/ecodas.2014.978-0-9845591-4-5.25)
12. Stauffer B, C Patrick, **KL Robinson**, and H Peter. (2014) Scales of drivers of community dynamics: from microbes to macrofauna across the salinity gradient. p. 14-24. In: PF Kemp [Ed.], *Eco-DAS X Symposium Proceedings*. ASLO. [doi: 10.4319/ecodas.2014.978-0-9845591-4-5.14](https://doi.org/10.4319/ecodas.2014.978-0-9845591-4-5.14)
 11. Graham WM, S Gelcich, **KL Robinson**, C Duarte, R Brodeur, L Madin, H Mianzan, KR Sutherland, S-I Uye, K Pitt, C Lucas, M Bøgeberg, L Brotz, and RH Condon (2014) Linking human well-being and jellyfish: ecosystem services, impacts and societal responses. *Frontiers in Ecology and the Environment*. 12: 515-523 [doi:10.1890/130298](https://doi.org/10.1890/130298)
 10. Brodeur RD, C Barcelo, **KL Robinson**, EA Daly, and J Ruzicka (2014) Spatial overlap between forage fishes and the large medusa *Chrysaora fuscescens* in the northern California Current region. *Marine Ecology Progress Series*. 510:167-181 [doi: 10.3354/meps10810](https://doi.org/10.3354/meps10810)
 9. Lucas, CH, CJ Hollyhead, RH Condon, CM Duarte, WM Graham, **KL Robinson**, KA Pitt, M Schildhauer, and J Regetz (2014) Gelatinous biomass in the global ocean: geographic trends revealed using a new plankton database, JEDI (the Jellyfish Database Initiative). *Global Ecology and Biogeography*. [doi:10.1111/geb12169](https://doi.org/10.1111/geb12169)
 8. **Robinson KL** and WM Graham (2014) Warming of subtropical coastal waters accelerates *Mnemiopsis* growth and alters timing of spring ctenophore blooms. *Marine Ecology Progress Series*. 502:105-115. [doi:10.3354/meps10739](https://doi.org/10.3354/meps10739)
 7. Mianzan, H., J Quiñones, S Palma, A Schiariti, M Acha, **KL Robinson** and WM Graham (2014) *Chrysaora plocamia*: A poorly understood jellyfish from South American waters. In: *Jellyfish Blooms*, Springer-Link. p.219-236. KA Pitt and CH Lucas [Eds]. http://dx.doi.org/10.1007/978-94-007-7015-7_10
 6. Pitt, KA, CM Duarte, CH Lucas, KR Sutherland, RH Condon, H Mianzan, JE Purcell, **KL Robinson** and S-I Uye (2013) Jellyfish body plans provide allometric advantages beyond low carbon content. *PLoS ONE* 8(8): e72683. [doi: 10.1371/journal.pone.0072683](https://doi.org/10.1371/journal.pone.0072683)
 5. **Robinson KL** and WM Graham (2013) Long-term change in the abundances of northern Gulf of Mexico scyphomedusae *Aurelia* spp. and *Chrysaora* sp. with links to climate variability. *Limnology & Oceanography* 58(1):235-253. [doi:10.4319/lo.2013.58.1.0235](https://doi.org/10.4319/lo.2013.58.1.0235)
 4. RH Condon, CM Duarte, KA Pitt, **KL Robinson**, CH Lucas, KR Sutherland, HW Mianzan, M Bøgeberg, JE Purcell, MB Decker, S-I Uye, L Brotz, LP Madin, RD Brodeur, SHD Haddock, A Malej, G Parry, E Eriksen, J Quiñones, M Acha, M Harvey, and WM Graham (2013) Recurrent jellyfish blooms are a consequence of global oscillations. *Proceedings of the National Academy of Sciences U.S.A.* 110(3):1000-1005. [doi:10.1073/pnas.1210920110](https://doi.org/10.1073/pnas.1210920110)
 3. Duarte, CM, K Pitt, CH Lucas, JE Purcell, S-I, Uye, **KL Robinson**, L Brotz, MB Decker, KR Sutherland, A Malej, L Madin, H Mianzan, JM Gili, V Fuentes, D Atienza, F Pagés, D Breitbart, J Malek, WM Graham and RH Condon (2012) Is global ocean sprawl a cause of jellyfish blooms. *Frontiers in Ecology and the Environment*. [doi:10.1890/110246](https://doi.org/10.1890/110246)
 2. Condon, RH, WM Graham, CM Duarte, KA Pitt, CH Lucas, SHD Haddock, KR Sutherland, **KL Robinson**, M Dawson, MB Decker, CE Mills, JE Purcell, A Malej, H Mianzan, S-I, Uye and S Gelcich (2012) Questioning the rise of jellies in the world's oceans. *Bioscience* 62(2):160-169.

[doi:10.1525/bio.2012.62.2.9](https://doi.org/10.1525/bio.2012.62.2.9)

1. Fodrie, FJ, KW Heck, SP Powers, WM Graham and **KL Robinson** (2009) Thirty-year change in northern Gulf of Mexico seagrass fish communities includes addition of tropical species. *Global Change Biology*. [doi: 10.1111/j.1365-2486.2009.01889.x](https://doi.org/10.1111/j.1365-2486.2009.01889.x)

Grey Literature

Brotz L, M Lebrato, **KL Robinson**, M Sexton, A Sweetman, K Pitt and R Condon (2011) Implications of increased carbon supply for the global expansion of jellyfish blooms. *ASLO Bulletin* 20(2):38-39

Dissertation & Thesis

Robinson KL (2012) Climate drives local to global variations of coastal gelatinous zooplankton. Dissertation. University of South Alabama, Mobile, Alabama USA. 236 pgs.

Robinson KL (2007) Interactions among phytoplankton, microzooplankton, and mesozooplankton in riverine coastal systems along the west coast of peninsular Florida. M.Sc. Thesis. University of Florida, Gainesville, Florida USA. 73 pgs.

AWARDS & HONORS

- 2012 Eco-DAS Symposium X (formerly DIALOG) Participant
- 2012 Best Poster Prize, Gulf of Mexico Graduate Student Symposium
- 2011 Marine Sciences Graduate Fellowship, University of South Alabama, Mobile, Alabama, USA
- 2009 Outstanding Student Presentation Award, ASLO Aquatic Sciences Meeting, Nice, France
- 2007 Dauphin Island Sea Lab Graduate Fellowship, Dauphin Island, Alabama, USA
- 2007 Outstanding Graduate Student of the Year, University of Florida, Department of Fisheries & Aquatic Sciences, Gainesville, Florida, USA
- 2004 Dr. Judith Elkins Prize for Excellence in the Biological Sciences, Sweet Briar College, Sweet Briar, Virginia, USA

GRANTS & SCHOLARSHIPS (TOTAL AWARDED: \$693,608)

Postdoc Proposals

15. "Ecosystem modeling support for improved management of Mississippi's diverse coastal resources." In: *A comprehensive and integrated observation, monitoring, mapping and modeling plan for Mississippi* (2015-2020) A University of Southern Mississippi Marine Science Research Program Package. Co-PI. \$1,201,512 USD. Mississippi Department of Environmental Quality. *No decision*
14. "A comprehensive survey of Mississippi Bight zooplankton and ichthyoplankton." In: *A comprehensive and integrated observation, monitoring, mapping and modeling plan for Mississippi* (2015-2020) A University of Southern Mississippi Marine Science Research Program Package. Co-PI. \$9,431,892 USD. *In Review*. Mississippi Department of Environmental Quality. *No decision*
13. "Developing statistical and ecological food web models for ecosystem-based management of

marine resources and to assess coastal military installation vulnerability to jellyfish blooms in the Sea of Japan” (2014) Strategic Environmental Research Development Program, U.S. Corps of Engineers, Department of Defense. Lead PI. \$1,284,443. *Declined*.

12. “Developing ecosystem-based management metrics for forage fish using jellyfish.” Lenfest Ocean Program, Pew Charitable Trusts (2012-2015) Co-PI. \$439,938. *Awarded*.
11. “Trophic and socioeconomic impacts of jellyfish on Bering Sea and northern Californian Current fisheries” (2011) NSF Science, Engineering & Education for Sustainability Postdoctoral Fellowship. Principal Investigator. Lead PI. \$320,965. *Declined*.

Graduate Student Grants & Scholarships

10. “Application of FlowCam technology to quantify seasonal changes in the abundance and the assemblage composition of microzooplankton and mesozooplankton assemblages in Mississippi and Alabama coastal waters in relation to seasonal *Mnemiopsis* blooms” (2011) Flow CAM Student Equipment Grant. Fluid Imaging Technologies, Inc. *Declined*.
9. “The effects of climate variability on the formation of jellyfish blooms in the northern Gulf of Mexico: consequences for marine food webs in a heavily fished ecosystem.” (2011) NOAA Dr. Nancy Foster Graduate Scholarship Program. \$51,417. *Declined*.
8. Graduate Scholarship. International Women’s Fishing Association (2009-2012) \$3,500. *Awarded*.
7. Student Travel Grant, Department of Marine Science, University of South Alabama (2007-2012) \$3,000. *Awarded*.
6. Student Travel Grant, Dauphin Island Sea Lab \$750 (2007-2012). *Awarded*.
5. “Impacts of climate change on the formation of jellyfish and ctenophore blooms: magnitude and consequences for Gulf of Mexico ecosystems” Graduate Fellowship (2010) EPA Science To Achieve Results (STAR) Program. *Declined*.
4. Student Travel Grant. Association for the Sciences of Limnology & Oceanography (2009) \$250. *Awarded*.
3. “Effects of climate variability and seasonal refugia on ctenophore population dynamics” Mississippi-Alabama Sea Grant Program. \$198,603. *Declined*
2. Dauphin Island Sea Lab & University of South Alabama Graduate Fellowship (2007-2012) \$246,420. *Awarded*.
1. Student Travel Grant. University of Florida, Institute of Food & Agriculture Sciences (2006) \$500. *Awarded*.

PRESENTATIONS

Academic seminars

Robinson KL (2015) Zooplankton across the scales of ecosystem oceanography. NOAA National Marine Fisheries Service, Alaska Marine Fisheries Science Center, Seattle, WA, USA.

Robinson KL (2015) Coastal gelatinous zooplankton: risks, drivers, and food web energy transfer. Skidaway Institute of Oceanography, University of Georgia, Savannah, GA, USA.

Robinson KL (2015) Gelatinous zooplankton: risks, services, and food web energy transfer. *Hatfield Marine Science Center, Oregon State University, Newport, OR, USA.*

Robinson KL (2014) Gelatinous zooplankton: risks, drivers, and energy transfer. *Oregon Institute of Marine Biology, University of Oregon, Charleston, OR, USA.*

Robinson KL (2014) Gelatinous zooplankton: risks, drivers, and energy transfer. *Ocean Biogeochemistry Ecosystems Group, National Oceanography Centre, Southampton, UK.*

Robinson KL (2012) Gelatinous zooplankton in the Gulf of Mexico and beyond: effects of climate variability and future climate change. *Department of Marine Science, The University of Southern Mississippi, Stennis Space Center, Mississippi, USA.*

Invited Talks

Robinson, KL, WM Graham, RD Brodeur, JJ Ruzicka, FJ Hernandez, MB Decker, R Leaf, L Chiaverano, M Acha, K Aleksa, S Dorji, H Mianzan, J Quinones, and S-I Uye. (2015) Potential impact of jellyfish blooms on forage fishes from diverse ecosystems. *American Fisheries Society 145th Annual Meeting*. Portland, Oregon, USA

Condon RH, CM Duarte, KA Pitt, CH Lucas, JM Arthur, **KL Robinson**, WM Graham, NCEAS Global Jellyfish Group (2013) NCEAS Global Jellyfish Group: Assessing current paradigm, and natural and anthropogenic drivers of long-term jellyfish populations from the 19th century to present. *4th International Jellyfish Blooms Symposium*, Hiroshima, Japan

Conference Presentations (underline indicates presenter)

Robinson KL, JJ Ruzicka, RD Brodeur, FJ Hernandez, MB Decker, WM Graham (2014) Role of large coastal jellyfish and forage fish as energy transfer pathways in the northern Gulf of Mexico. Oral Presentation. *ICES 2014 Annual Meeting*, A Coruña, Spain

Robinson KL, JJ Ruzicka, MB Decker, RD Brodeur, FJ Hernandez, J Quiñones, M Acha, S-I Uye, HW Mianzan, and WM Graham (2014) Jellyfish, forage fish and the world's major fisheries. Oral Presentation. *ICES 2014 Annual Meeting*, A Coruña, Spain

CH Lucas, RH Condon, CM Duarte, WM Graham, **KL Robinson**, KA Pitt, M Schildhauer, and J Regetz (2014) JeDI (Jellyfish Database Initiative): a new open-access gelatinous plankton database. Poster Presentation. *ICES 2014 Annual Meeting*, A Coruña, Spain

Robinson KL, JJ Ruzicka, MB Decker, F Hernandez, R Brodeur and WM Graham (2013) Role of large coastal jellyfish and forage fish as energy transfer pathways in the northern Gulf of Mexico. Oral Presentation. *4th International Jellyfish Blooms Symposium*, Hiroshima, Japan

Robinson KL and WM Graham (2013) Warming of subtropical coastal waters accelerates *Mnemiopsis* growth and alters timing of spring ctenophore blooms. Poster Presentation. *4th International Jellyfish Blooms Symposium*, Hiroshima, Japan

Graham WM, **KL Robinson**, RD Brodeur, FJ Hernandez, MB Decker, H Mianzan, M Acha, J Quinones and S-I Uye (2013) Developing ecosystem-based management metrics for forage fish using jellyfish. Oral Presentation. *4th International Jellyfish Blooms Symposium*, Hiroshima, Japan

Brodeur RD, C Barcelo, **KL Robinson**, EA Daly and JJ Ruzicka (2013) Seasonal and interannual variability in the spatial overlap between forage fishes and large medusa in the northern California Current region. Oral Presentation. *4th International Jellyfish Blooms Symposium*, Hiroshima, Japan

Robinson KL and WM Graham (2012) Long-term change in the abundances of *Chrysaora* sp. and *Aurelia* spp. with links to climate variability. Oral Presentation. *PICES Annual Meeting*. Hiroshima, Japan.

Robinson KL, WM Graham, CM Duarte, RH Condon, RD Brodeur, MB Decker, J Quiñones, H Mianzan, M Acha, CH Lucas, KA Pitt, JE Purcell, the JEDI Development Team (2011) Global patterns in jelly populations: Is there evidence of synchrony and common dependency on large-scale climate signals? Poster Presentation. *ASLO Ocean Sciences Meeting*. Salt Lake City, Utah, USA

Robinson KL, LM Chiaverano, and WM Graham (2011) Linking temperature, polyp morphology, and medusa numbers: a mechanism regulating the magnitude of jellyfish blooms in the northern Gulf of Mexico. *ASLO Aquatic Sciences Meeting*. San Juan, Puerto Rico, USA

WM Graham, FJ Hernandez, Jr, AF Millett, L Carassou, G Zapfe, **KL Robinson**, J Lyczkowski-Shultz (2011) Using Zooplankton Community Distribution to Identify Large Marine Ecosystem Sub-Units within the Northern Gulf of Mexico. Poster Presentation. *Northern Gulf Institute Symposium*.

Condon RH, KA Pitt, WM Graham, CM Duarte, C Lucas, **K Robinson**, PA del Giorgio, CA Carlson, M Lebrato, M Conte and RS Lampitt (2010) Exploring the Paradigm of a Global Expansion in Jellyfish: Implications for Biogeochemical Cycles & Food Webs in a Changing Ocean. Oral Presentation. *IMBER IMBIZO II: Integrating biogeochemistry and ecosystems in a changing ocean - Regional comparisons*. Crete, Greece.

Robinson KL and WM Graham (2010) Variability in northern Gulf of Mexico *Mnemiopsis leidyi* populations in relation to seasonal refugia and physical thresholds. Poster Presentation. *3rd International Jellyfish Blooms Symposium*. Mar del Plata, Argentina

Graham WM, FJ Hernandez Jr., SP Powers, RC Collini, and **KL Robinson** (2009) Contribution of jellyfish predation to ichthyoplankton mortality: is there enough to matter to the stock? Oral Presentation. *ASLO Aquatic Sciences Meeting*. Nice, France

Robinson KL and WM Graham (2009) Long-term variability in populations of the scyphomedusae *Aurelia* sp. and *Chrysaora quinquecirrha* in the northern Gulf of Mexico, with links to climate change. Oral Presentation. *ASLO Aquatic Sciences Meeting*. Nice, France

Millett A, WM Graham, and **KL Robinson** (2009) Can jellyfish blooms alter mesozooplankton community structure? Poster Presentation. *ASLO Aquatic Sciences Meeting*. Nice, France

Graham WM, J Fodrie, and **K Robinson** (2008) From Finfish to Jellyfish: Incorporating Gelatinous Plankton into Ecosystem-Based Fisheries Management Practices. Oral Presentation. *Workshop on Mictrophic Fishes*. Honolulu, Hawaii, USA

Robinson KL, TK Frazer, CA Jacoby, and MJ Youngbluth (2007) Interactions between phytoplankton, micro- and mesozooplankton in river-dominated coastal systems along the Big Bend, Florida, USA. Oral Presentation. *ASLO Aquatic Sciences Meeting*. Santa Fe, New Mexico, USA

RESEARCH

Interests

Determining the effects of climate variability and long-term climate change on the production and distribution of marine zooplankton, with an emphasis on gelatinous zooplankton.

Understanding how climate forcing alters trophic interactions among and energy transfer between marine zooplankton groups, planktivorous fish, and their predators.

Evaluating the socioeconomic vulnerability of coastal fisheries to blooms of large gelatinous zooplankton.

Skills

Field Oceanographic: Net-based field sampling of marine plankton (e.g. ring net, MOCNESS, neuston, bongo), water quality sample collection, CTD data collection, and small vessel (<10m) operation & towing. Deploying, recovering, and operating top-side the *In Situ* Ichthyoplankton Imaging System (ISIS).

Laboratory: Enumeration & identification of macro-, meso- & microzooplankton, Microzooplankton grazing experiments using the dilution method, gelatinous zooplankton growth experiments, chlorophyll-*a* extraction, dissection, compound, and inverted microscopy.

Data analysis: Management of large data sets (>1 million records), metadata creation with Morpho software, spatial data analysis (including geostatistical modeling) using ESRI ArcGIS, geodatabase creation and mapping (including using NASA Ocean Color imagery) of fisheries and plankton data, ecosystem modeling with Ecopath and Ecotran techniques, statistical modeling (e.g., PCA, regression analysis, GLM), multi-dimensional scaling analysis with PRIMER, experience using the 'R' statistical software package, processing and visualization CTD data, and ISIS image analysis

Experience

October 2014-Present. Postdoctoral Scholar. "Spatial variability of larval fish in relation to their prey and predator fields: Patterns and interactions from cm to 10s of km in a subtropical, pelagic environment." National Science Foundation. Hatfield Marine Science Center. Oregon State University

Research: Identified plankton from digital images collected by the *In Situ Ichthyoplankton Imaging System (ISIS)*. Managed and prepared a large plankton imagery data set (160,000 images) for the [National Data Science Bowl \(NDSB\)](#), a machine learning competition sponsored by [Kaggle](#) and Booz Allen Hamilton (BAH). Constructed a Microsoft Access database and an ArcGIS geodatabase for oceanographic data collected for the *Observations on Subtropical Trophodynamics of Ichthyoplankton (OSTRICH)* project. Oversaw the transfer of ISIS imagery data and data processing algorithms from University of Miami's Center for Computer Services to OSU's Center for Genomic Research and Biocomputing. Assisted with planning, organized equipment and supply ordering, and participated in an 18-day cruise for OSTRICH 2015 on the R/V Walton Smith. Supervised four student research assistants, one volunteer, and two *Research Experiences for Undergraduate (REU)* students. Assisted with research proposal development and submission, including budget sections.

Outreach: Organized and hosted a NDSB site visit to Hatfield and OSU main campus in Corvallis for eight Kaggle and BAH executives and staff. Co-led the lab's media outreach for the NDSB in collaboration with BAH public relations firms Studio 11, Social Driver, and Fleishman Hillard. Designed the [Plankton Ecology Lab](#) and [OSTRICH](#) websites using DRUPAL 7.

2012-Present. Co-PI and Project Manager. "Developing ecosystem-based management metrics for forage fish using jellyfish." Lenfest Ocean Program. Dept. of Marine Science, U. Southern Mississippi

Constructed an ECOPATH model for the northern Gulf of Mexico. Managed and assimilated large and diverse data sets. Developed a spatial statistics-based protocol in ESRI ArcGIS Geostatistical Analyst and ArcMap to quantitatively estimate the degree of overlap between jellyfish and forage fish from trawl survey data. Co-supervised two graduate research assistants. Prepared publications and annual reports

on project results. Managed budget in concert with program coordinator. Scheduled and coordinated PI meetings. Facilitated research and education partnership between USM and the Instituto del Mar del Peru, Lima, Peru.

2012-2014. Key Personnel. “Developing Modeling Application Plan to Model Impacts of MC252 on Natural Resources of the Mississippi Sound” Mississippi Department of Environmental Quality/Natural Resource Damage Assessment (NRDA). Dept. of Marine Science, USM

Contributed and verified parameterization of zooplankton data in an AQUATOX model.

2007-2012. Dissertation Research. “Climate drives local to global variations of coastal gelatinous zooplankton.” Dept. of Marine Science, DISL/U. South Alabama

Analyzed the GSMFC/NMFS Southeastern Area Monitoring and Assessment Program groundfish trawl survey data set in relation to climate drivers. Sampled micro, meso, and macrozooplankton and hydrographic conditions with a CTD off of both small (<10 m) and large research vessels (≥10m). Performed statistical analyses with an emphasis on general linear models (e.g. regression, multiple-regression, Principle Component Analyses). Conducted an empirical study of the response of the ctenophore *Mnemiopsis* to increases in spring SST. Prepared maps and other spatial data products using ArcGIS. Processed Seabird CTD data using SeaSave and SBE Data Processing software. Performed a global-scale analysis of synchrony in and common climate drivers of gelatinous zooplankton populations.

2009-2012. PhD student representative, ‘Global Jellyfish Working Group.’ National Center for Ecological Analysis and Synthesis (NCEAS). Dept. of Marine Science, DISL/U. South Alabama

Jellyfish Database Initiative (JEDI) Development Manager & GIS expert. Collated and translated raw data sets from scientists, extracted data from literature, processed and assimilated data sets into JEDI, a global-scale data repository for gelatinous zooplankton records. Coordinated database development with NCEAS ecoinformatics specialist (J. Regetz) and project PIs. Prepared maps and other spatial data products. Supervised undergraduate intern (M. Bøgeberg). Prepared publications on project results.

2007-2012. Graduate Fellow. Dept. of Marine Science, DISL/U. South Alabama

Assisted with data management and visualization during the Deepwater Horizon oil spill. Collected hydrographic data using a Seabird CTD instrument package. Processed and prepared data visualization products in Ocean Data View.

2005-2007. Masters Research. “Interactions among phytoplankton, microzooplankton, and mesozooplankton in three nearshore systems influenced by coastal rivers.” Dept. of Fisheries & Aquatic Sciences, U. Florida

Micro- and mesozooplankton sampling (Niskin bottle, ring net) hydrographic sampling off of small (<10 m) and large research vessels (≥10m). Microzooplankton dilution experiments. Mesozooplankton grazing experiments.

2005-2007. Graduate Research Assistant. Dept. of Fisheries & Aquatic Sciences, U. Florida

Field sampling and laboratory identification and enumeration of submerged aquatic vegetation sampling in freshwater spring systems in northwestern Florida. Water quality sampling parameters (chlorophyll-*a*, nutrients, and light attenuation with Li-Cor).

TEACHING ACTIVITIES

Instructor of Record: Undergraduate Courses

<u>Semester</u>	<u>Class Title, Course Number, Credit Hours</u>
2014 Spring	<i>Marine GIS (MAR 414), 3-hrs., Dept. of Marine Science, USM</i>
2013 Fall	<i>Senior Practicum (MAR 497), 2-hrs., Dept. of Marine Science, USM</i>
2013 Fall	<i>Seminar (MAR 489), 1-hr., Dept. of Marine Science, USM</i>

Undergraduate Courses: Assisted With

<u>Semester</u>	<u>Role, Lecture Title, Class, Credit Hours, Institution</u>
2015 Spring	Guest Lecturer. "Marine Plankton." <i>Marine Biology</i> , Oregon State University
2012 Spring	Guest Field Exercise Instructor, <i>Estuaries</i> , 3-hrs, Dept. Marine Science, USM
2011 Summer	Guest Lecturer "Processing & analyzing hydrographic data using Seabird and Ocean Data View Software" <i>Introduction to Oceanography</i> , 4-hrs., DISL
2010 Summer	Teaching Assistant & Lab Instructor, <i>Introduction to Oceanography</i> , 4-hrs., DISL
2009 Summer	Teaching Assistant & Lab Instructor, <i>Introduction to Oceanography</i> , 4-hrs., DISL
2009 Summer	Guest Lecturer. "Ocean systems in a changing climate." <i>MAST Teacher Workshop Series</i> , DISL
2008 Summer	Teaching Assistant. <i>Marine Biology</i> , 4-hrs., DISL
2008 Summer	Guest Lecturer. "Marine Zooplankton." <i>Introduction to Oceanography</i> , 4-hrs., DISL
2008 Summer	Guest Lecturer. "Marine Zooplankton." <i>Marine Biology</i> , 4-hrs., DISL

Graduate Students Guided

<u>Name</u>	<u>From-To</u>	<u>University, Program</u>
Sangay Dorji (with M.B. Decker)	2013-2015	Yale, Environ. Management, RA
Katrina Aleska (with W.M. Graham)	2013-2014	USM Marine Science, Graduate RA
Elizabeth Ewings (with W.M. Graham)	2013-2014	USM Marine Science, Graduate RA
Naomi Yoder (with W.M. Graham)	2013-2014	USM Marine Science, Graduate RA

Undergraduate Students Supervised

<u>Name, University</u>	<u>From-To</u>	<u>Institution</u>
Cameron Ogden-Fung, Bowdoin College	2015	OSU Hatfield Marine Science Center, REU
Matthew Rambo, Brigham Young University	2015	OSU Hatfield Marine Science Center, REU
Alexander Hurley, Centre College	2013-2014	University of Southern Mississippi, Intern

Interns & Volunteers Supervised

<u>Name</u>	<u>From-To</u>	<u>Institution</u>
Miles McCall (with Chris Sullivan)	2015-Present	OSU Center for Genome Research & Biocomputing
Max Butensky	2015-Present	OSU Hatfield Marine Science Center

Clare Hansen	2014-Present	OSU Hatfield Marine Science Center
Meghan Atkinson	2014-2015	OSU Hatfield Marine Science Center
Mackenzie Mason	2014-2015	OSU Hatfield Marine Science Center
Molly Bøgeberg (with W.M. Graham)	2010-2011	Dauphin Island Sea Lab

ADVISORS & COLLABORATORS

Postdoctoral Advisors

Robert Cowen and Su Sponaugle, Oregon State University (2014-Present); William M. Graham, The University of Southern Mississippi (2012-2014)

Graduate Advisors

PhD: William M. Graham, The University of Southern Mississippi (major); Kyeong Park (co-chair), DISL/University of South Alabama; Ronald P. Kiene, University of South Alabama; William Patterson, DISL/University of South Alabama; Deborah K. Steinberg, Virginia Institute of Marine Science

MSc: Thomas K. Frazer (major), University of Florida; Charles A. Jacoby (co-chair), St. Johns River Water Management District; Marsh J. Youngbluth, Harbor Branch Oceanographic Institute

Collaborators and co-authors (last five years)

Richard Brodeur (NOAA NMFS, USA)	Carlos M. Duarte (UWA, Australia)
Mary B. Decker (Yale, USA)	Shin-ichi Uye (HU, Japan)
Jim Ruzicka (OSU, USA)	Hermes Mianzan (INIDEP, Argentina)
Sara Purca (IMARPE, Perú)	Caren Barcelo (OSU, USA)
Elizabeth Daly (NMFS NWFSC, USA)	Malinda Sutor (LSU, USA)
Lucas Brotz (UBC, Canada)	Marcelo Acha (INIDEP, Argentina)
Robert Condon (DISL, USA)	Javier Quiñones (IMARPE, Perú)
Jennifer Purcell (WWU, USA)	Kylie A. Pitt (GU, Australia)
Kelly Rakow Sutherland (OSU, USA)	Cathy H. Lucas (NOC/US, UK)
Steven Haddock (MBARI, USA)	Stefan Gelcich (CU, Chile)
Alenka Malej (NIB, Slovenia)	Caren Barcelo (OSU, USA)

SERVICE

Synergistic Activities

2015	Co-Host, Kaggle and Booz Allen Hamilton “National Data Science Bowl” Executive Visit. Hatfield Marine Science Center, Newport, Oregon, USA
2014	Host, Lenfest Ocean Program’s Jellyfish-Forage Fish Principal Investigators Meeting: Jellyfish, Forage Fish and the World’s Fisheries, A Coruña, Spain
2014	Co-host, Lenfest Ocean Program’s Jellyfish-Forage Fish P.I. Meeting: Jellyfish, Forage Fish and the World’s Fisheries, Stennis Space Center, Mississippi, USA
2013	Co-host, Lenfest Ocean Program’s Jellyfish-Forage Fish Principal Investigators Meeting: Gulf of Mexico Ecosystem Model, New Orleans, Louisiana, USA
2009-	PhD Student Representative, National Center for Ecological Analysis & Synthesis (NCEAS)

- 2012 Global Jellyfish Blooms Working Group, Santa Barbara, California, USA
- 2012 Ecological Dissertations in the Aquatic Science (Eco-DAS) X Symposium, Honolulu, Hawaii, USA
- 2011 “The global role of jellyfish and their increase in the ocean” Workshop, Mallorca, Spain
- 2011 Emerging Issues Seminar “Implications of Increased Carbon Supply & Artificial Habitat for the Global Expansion of Jellyfish Blooms,” ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico, USA
- 2010 Co-chair, NCEAS *Global Jellyfish Blooms Workshop*, Mar del Plata, Argentina

Service to the University and Community

- 2015 Co-led the development of a public exhibit “Jellies: the intersection of art & science” for the Guin Library at the OSU Hatfield Marine Science Center.
- 2015 Assisted with Marine Science Day public booth at Hatfield Marine Science Center
- 2015 Talk. J Luo & KL Robinson. Role of plankton in the ocean. Kaggle Executive Site Visit, Hatfield Marine Science Center, Oregon State University. 14 January.
- 2014 Question & Answer Session. Ms. Jenny Jones’ 4th Grade Class. Glenburn Elementary School, Glenburn, Maine, USA
- 2012 Student Volunteer, ASLO *Ocean Sciences Meeting*, Salt Lake City, Utah, USA
- 2012 Hosted Seminar Speaker, Dr. Richard D. Brodeur (NOAA NMFS), Dauphin Island Sea Lab (DISL), Dauphin Island, Alabama, USA
- 2011 Public Lecture “Jellyfish and climate.” DISL ‘Boardwalk Talk’ Series. Dauphin Island, Alabama, USA
- 2010-2011 Editor ‘The Tentacle Times,’ NCEAS ‘Global Jellies’ Working Group Informational Newsletter
- 2009-2010 Faculty Representative, Marine Science Graduate Student Organization, DISL
- 2008 Student Volunteer, ASLO *Ocean Sciences Meeting*, Orlando, FL, USA
- 2008-2009 Chair of Organizing Committee, *2009 Gulf of Mexico Graduate Student Symposium*, Marine Science Graduate Student Organization, DISL
- 2007-2008 Treasurer, Marine Science Graduate Student Organization, DISL
- 2006-2007 Executive Secretary, Fisheries & Aquatic Sciences (FAS) Graduate Student Organization, University of Florida
- 2005-2007 Travel Grants Committee Member & Chair, FAS Graduate Student Organization, University of Florida

Review Activities

U.S. National Science Foundation: Biological Oceanography Program
 Fisheries Research

Marine Ecology Progress Series
Bulletin of Marine Science
Journal of Sea Research
Marine and Freshwater Research
Biological Reviews
Deep Sea Research Part 1
Journal of Plankton Research

Professional Organization Memberships

2015	American Fisheries Society (AFS)
2014-Present	American Geophysical Union (AGU)
2008-Present	The Oceanography Society (TOS)
2006-Present	Association for the Sciences of Limnology & Oceanography (ASLO)
2012	Gulf Coast Estuarine Research Society (GERS)
2012	Coastal and Estuarine Research Foundation (CERF)

OCEANOGRAPHIC RESEARCH CRUISE EXPERIENCE

Day cruises ≈ 150 days at sea (2005-2012)

Approximately 810 hours of experience operating small vessels (<23ft) and leading sampling trips in a wide variety of weather and sea conditions. Experience includes operating in estuarine, coastal and offshore waters (>20 nm). Sampling trip objectives typically included deploying a CTD instrument package, collecting zooplankton with ring nets, and capturing large gelatinous plankton.

Observations on Subtropical Trophodynamics of Ichthyoplankton (OSTRICH) – 18 days (June 2015)

Duties included pre-cruise logistics (i.e. ordering supplies), operating Multiple Opening and Closing Net Environmental Sampling System (MOCNESS), *In Situ* Ichthyoplankton Sampling System (ISIS), CTD rosette, data backup and management, and conducting gelatinous plankton gut evacuation incubations. *Chief scientist*: Dr. Robert Cowen, Hatfield Marine Science Center, Oregon State U.

NOAA NMFS SEAMAP Fall Shrimp/Groundfish Survey – 14 days (October 2011)

Duties included: processing trawl catch (identifying, counting and measuring all species of invertebrates and vertebrates), assisting with CTD casts and conducting neuston and bongo net tows, and collecting tissue samples from species-of-interest for genetic analysis. *Chief Scientist*: Brittany Palm, NOAA NMFS Pascagoula Laboratory, MS

Lagrangian Transport & Transformation Experiment (LaTTE) - 7 days (May 2006)

Assisted Dr. Tom Frazer with cruise preparation and with on-ship zooplankton grazing experiments using microzooplankton and mesozooplankton collected from the Hudson River plume (Mid-Atlantic Bight). Duties included organizing and conducting plankton net tows in coordination with ship's crew and processing water samples for later analyses. *Chief Scientist*: Dr. Oscar Schofield, Rutgers University, New Brunswick, NJ

Maine Event VI - 7 days (October 2005)

Assisted Dr. Marsh Youngbluth and Dr. Charles Jacoby with respiration experiments on zooplankton collected from the Gulf of Maine, using oxygen micro-optode technology. Animal of focus was the mesopelagic siphonophore *Nanomia cara*. Member of the scientific party aboard a manned submersible dive (Johnson Sea-Link) with the objective of observing the collection of animals for experiments and photography. *Chief Scientist*: Dr. Marsh J. Youngbluth, Harbor Branch Oceanographic Institute, Ft. Pierce, FL

POPULAR MEDIA COMMUNICATIONS

- 2015 Sherman, L. "Adrift in a sea of data." *Terra*. 3 April 2015.
<http://oregonstate.edu/terra/2015/04/adrift-in-a-sea-of-data/>
- 2015 Sherman, L. "Oceanic oscillation: observing the secret lives of jellyfish." *Terra*. 13 April 2015.
<http://oregonstate.edu/terra/2015/04/oceanic-oscillation/>
- 2015 Tumbleson, A. "Data scientists vie for big cash prizes." *Newport News Times*. 21 January 2015
- 2015 Interviewee. "Hotline" radio show on KNPT AM 1310. Kiera Morgan. Subject matter: National Data Science Bowl. Aired 12 January 2015.
- 2013 Interviewee. "Jellyfish Invasion?" on *The Animal House*. WAMU 88.5 American University Radio. Produced by Steven Williams. Subject matter: Global invasion of jellyfish. Aired 12 October 2013.
- 2013 Interviewee. "Trek of the Titans." *The Nature of Things*. Documentary Film. Directed by Teresa MacInnes and Kent MacInnes. Produced for the Canadian Broadcasting Corporation. Interviewed 18-22 August 2013. Subject matter: Jellyfish and leatherback sea turtles
- 2012 Schrope, M. (2012) "Attack of the blobs." *Nature*. 482: 20-21, doi:10.1038/482020a
- 2011 Research Assistant to WM Graham, "Rise of the Jellyfish," Storyhouse Productions. Produced for the *Discovery Channel*. Aired 2 January 2011
- 2011 Raines, B. "Moon jellyfish clog Alabama and Mississippi coastal waters." *Mobile Press Registrar*. 18 September 2011