

LISA CAMPBELL
WILLIAM R. BRYANT CHAIR IN OCEANOGRAPHY

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EDUCATION

1985 Ph.D. Oceanography, Stony Brook University, New York
1983 M.S. Marine Environmental Science, Stony Brook University, New York
1976 B.A. Biology, with Honors. University of California at Santa Cruz

PROFESSIONAL TRAINING AND POSITIONS HELD

Professor, Department of Oceanography, Texas A&M University, 2006- current
Joint-Appointment in Department of Biology, 2002- current
Guest Investigator, Woods Hole Oceanographic Institution, 2008- current
Associate Professor, Department of Oceanography, Texas A&M University, 1996-2006
Associate Researcher, Department of Oceanography, University of Hawaii, 1995-1996
Assistant Researcher, Department of Oceanography, University of Hawaii, 1988- 1995
Postdoctoral Fellow, Bigelow Laboratory for Ocean Sciences, Maine, 1986-1987
Postdoctoral Fellow, Oceanic Institute, Waimanalo, Hawaii, 1985-1986
Graduate Assistant, Marine Sciences Research Center, Stony Brook University, 1979-1985
Staff Research Associate, Scripps Institution of Oceanography, 1976-1979

REFEREED PUBLICATIONS IN THE PAST 10 YEARS:

Researcher ID E-6587-2011; Google Scholar citations: 6772; h-index: 47; i10-index: 84
[HTTP://ORCID.ORG/0000-0003-2756-2743](http://ORCID.ORG/0000-0003-2756-2743)

1. Anglès, S., A. Jordi, D.W. Henrichs, and L. Campbell. 2018. Influence of coastal upwelling and river discharge on the phytoplankton community in the northwestern Gulf of Mexico. **Limnology & Oceanography**, *in review*
2. Campbell, L., D.W. Henrichs, E.E. Peacock, J. Futrelle and H.M. Sosik. 2017. Imaging FlowCytobot provides novel insights on phytoplankton community dynamics. In: Proenca, L. A. O. and Hallegraeff, G. (eds). Proceedings of the 17th International Conference on Harmful Algae. International Society for the Study of Harmful Algae and Intergovernmental Oceanographic Commission of UNESCO 2017. ISBN 978-87-990827-6-6.
3. Ryan, D. E. and L. Campbell. 2016. Identification and phylogeny of putative PEPC genes in three toxin-producing *Karenia* (DINOPHYTA) species. **Journal of Phycology** 52: 618–625. doi: 10.1111/jpy.12423
4. Henrichs, D.W., R.D. Hetland and L. Campbell. 2015. A spatially explicit individual-based model to identify origins of blooms of the toxic dinoflagellate *Karenia brevis* in the western Gulf of Mexico. **Ecological Modelling** 313:251-258 doi: 10.1016/j.ecolmodel.2015.06.038
5. Anglès, S., A. Jordi and L. Campbell. 2015. Responses of the coastal phytoplankton community to hurricanes revealed by high-frequency imaging flow cytometry. **Limnology & Oceanography** 60(5): 1562-1576 doi: 10.1002/lno.10117
6. Fowler, N., C. Tomas, D. Baden, L. Campbell and A. Bourdelais. 2015. Chemical analysis of *Karenia papilionacea*. **Toxicon** 101:85-91. doi:10.1016/j.toxicon.2015.05.007
7. Ryan, D.E. and L. Campbell. 2015. Comparative transcriptomic analysis of three toxin-producing *Karenia* species. In: MacKenzie, A. (ed.) Marine and Freshwater Harmful Algae 2014. **Proceedings 16th International Conference on Harmful Algae**. pp. 229-232.

8. Berube, P.M., S.J. Biller, A.G. Kent, J.W. Thompson, S.E. Roggensack, K.H. Roache-Johnson, M. Ackerman, L.R. Moore, J.D. Meisel, D. Sher, L.R. Thompson, L. Campbell, A.C. Martiny and S.W. Chisholm. 2014. Physiology and evolution of nitrogen acquisition in *Prochlorococcus*. **ISME Journal** 9:1195-207 doi:10.1038/ismej.2014.211
9. Ryan, D.E., A. Pepper and L. Campbell. 2014. De novo assembly and characterization of the transcriptome of the toxic dinoflagellate *Karenia brevis*. **BMC Genomics** 15:888 doi:10.1186/1471-2164-15-888
10. Harred, L.B. and L. Campbell. 2014. Predicting harmful algal blooms: A case study with *Dinophysis ovum* in the Gulf of Mexico. **Journal of Plankton Research** 36(6): 1434–1445 doi:10.1093/plankt/fbu070.
11. Keeling, P. J., F. Burki, H.M. Wilcox, B. Allam, E.E. Allen, L.A. Amaral-Zettler, E.V. Armbrust, J.M. Archibald, A.K. Bharti, C.J. Bell, B. Beszteri, K.D. Bidle, C.T. Cameron, L. Campbell, D.A. Caron, R.A. Cattolico, J.L. Collier, K. Coyne, S.K. Davy, P. Deschamps, S.T. Dyhrman, B. Edvardsen, R.D. Gates, C.J. Gobler, S. J. Greenwood, S.M. Guida, J.L. Jacobi, K.S. Jakobsen, E.R. James, B. Jenkins, U. John, M.D. Johnson, A.R. Juhl, A. Kamp, L.A. Katz, R. Kiene, A. Kudryavtsev, B.S. Leander, S. Lin, C. Lovejoy, D. Lynn, A. Marchetti, G. McManus, A.M. Nedelcu, S. Menden-Deuer, C. Miceli, T. Mock, M. Montresor, M.A. Moran, S. Murray, G. Nadathur, S. Nagai, P.B. Ngam, B. Palenik, J. Pawlowski, G. Petroni, G. Piganeau, M.C. Posewitz, K. Rengefors, G. Romano, M.E. Rumpho, T. Rynearson, K.B. Schilling, D.C. Schroeder, A.G.B. Simpson, C.H. Slamovits, D.R. Smith, G.J. Smith, S.R. Smith, H.M. Sosik, P. Stief, E. Theriot, S. Twary, P.E. Umale, D. Vaultot, B. Warwrik, G.L. Wheeler, W.H. Wilson, Y. Xu, A. Zingone and A.Z. Worden. 2014. The Marine Microbial Eukaryote Transcriptome Sequencing Project (MMETSP): Illuminating the functional diversity of eukaryotic life in the oceans through transcriptome sequencing. **PLoS Biology** 12(6): e1001889. doi: 10.1371/journal.pbio.1001889
12. Errera, R.M., S. Yvon-Lewis, J.D Kessler and L. Campbell. 2014. Responses of the dinoflagellate *Karenia brevis* to climate change: pCO₂ and sea surface temperatures. **Harmful Algae** 37: 110-116.
13. Thyng, K.M., R.D. Hetland, M.T. Ogle, X. Zhang, F. Chen and L. Campbell. 2013. Origins of harmful algal blooms along the Texas coast. **Limnology & Oceanography: Fluids and Environments** 3: 269-278 <http://lofe.dukejournals.org/content/3/269.full>
14. Campbell, L., D.W. Henrichs, R.J. Olson and H.M. Sosik. 2013. Continuous automated imaging-in-flow cytometry for detection and early warning of *Karenia brevis* blooms in the Gulf of Mexico. **Environmental Science and Pollution Research** 20:6896-902 doi 10.1007/s11356-012-1437-4.
15. Henrichs, D.W., M.A. Renshaw, J.R. Gold and L. Campbell. 2013. Genetic diversity among clonal isolates of *Karenia brevis* as measured with microsatellite markers. **Harmful Algae** 21-22:30-35 doi 10.1016/j.hal.2012.11.003.
16. Liu, Y., S.A. Yvon-Lewis, L. Hu, D.C.O. Thornton, T.S. Bianchi, L. Campbell and R. Smith. 2013. Spatial and temporal distributions of bromoform and dibromomethane in the Atlantic Ocean and their relationship with photosynthetic biomass. **Journal of Geophysical Research-Oceans** 118:3950–3965 doi 10.1002/jgrc.20299
17. Liu, Y., S.A. Yvon-Lewis, D. Thornton, L. Campbell and T. Bianchi. 2013. Spatial distribution of brominated very short-lived substances in the eastern Pacific. **Journal of Geophysical Research-Oceans**. 118: 1-11 doi 10.1002/jgrc.20183.
18. Henrichs, D.W., P.S. Scott, K.A. Steidinger, R.M. Errera, A. Abraham and L. Campbell. 2013. Morphology and phylogeny of *Prorocentrum texanum* sp. nov. (Dinophyceae): a new dinoflagellate from Gulf of Mexico coastal waters exhibiting two distinct morphologies. **Journal of Phycology**. 49:143-55 doi 10.1111/jpy.12030.
19. Henrichs, D.W., M.A. Renshaw, J.R. Gold and L. Campbell. 2013. Population-genetic structure of the toxic dinoflagellate *Karenia brevis* from the Gulf of Mexico. **J. Plankton Res.** 35:427-32. doi 10.1093/plankt/fbs103.
20. Jochens, A.E., M.K. Howard, L. Campbell, R. Mullins-Perry, G. Kirkpatrick, B. Kirkpatrick, C. Simoniello, C. Hu, R.H. Weisberg and C. Lembke. 2012. Integrating Observing Systems to benefit stakeholders: A case study in the Gulf of Mexico. **Oceans, 2012**. IEEE, pp. 1-4.
21. Buitenhuis, E.T., W.K.W. Li, , D. Vaultot, M.W. Lomas, M.R. Landry, F. Partensky, D.M. Karl, O. Ulloa, L. Campbell, S. Jacquet, F. Lantoine, F. Chavez, D. Macias, M. Gosselin and G.B. McManus.

2012. Picophytoplankton biomass distribution in the global ocean. **Earth System Science Data** 4: 37-46
22. Brand, L.E., L. Campbell and E. Bresnan. 2012. *Karenia*: the biology and ecology of a toxic genus. **Harmful Algae** 14:156-78. doi 10.1016/j.hal.2011.10.020
 23. Errera, R.M. and L. Campbell. 2011. Osmotic stress triggers toxin production by the dinoflagellate *Karenia brevis*. **Proceedings of the National Academy of Sciences** 108(26): 10597-10601. doi 10.1073/pnas.1104247108; correction (2012) 109(43):17723-17724.
 24. Henrichs, D.W., H. M. Sosik, R. J. Olson and L. Campbell. 2011. Phylogenetic analysis of *Brachidinium capitatum* (Dinophyceae) from the Gulf of Mexico indicates membership in the Kareniaceae. **Journal of Phycology** 47(2): 366-374. doi 10.1111/j.1529-8817.2011.00960.x
 25. Bradley, P.B., M.P. Sanderson, J.C. Nejstgaard, A.F. Sazhin, M.E. Frischer, L. M. Killberg-Thoreson, P. G. Verity, L. Campbell and D. A. Bronk. 2010. Nitrogen uptake by phytoplankton and bacteria during an induced *Phaeocystis pouchetii* bloom, measured using size fractionation and flow cytometric sorting. **Aquatic Microbial Ecology** 61: 89-104.
 26. Ulrich, R.M., E.T. Caster, L. Campbell, B. Richardson, C. Heil and J.H. Paul. 2010. Detection and quantification of *Karenia mikimotoi* using real-time nucleic acid sequence-based amplification with internal control RNA (IC-NASBA). **Harmful Algae** 9: 16-122
 27. Campbell, L., R.J. Olson, H.M. Sosik, A. Abraham, D.W. Henrichs, C.J. Hyatt and E.J. Buskey. 2010. First harmful *Dinophysis* (DINOPHYCEAE, DINOPHYSALES) bloom in the US is revealed by automated imaging flow cytometry. **Journal of Phycology** 46(1): 66-75. doi 10.1111/j.1529-8817.2009.00791.x
 28. Errera, R.M., A. Bourdelais, M.A. Drennan, E.B. Dodd, D.W. Henrichs and L. Campbell. 2010. Variation in brevetoxin and brevenal content among clonal cultures of *Karenia brevis* may influence bloom toxicity. **Toxicon** 55: 195–203. doi 10.1016/j.toxicon.2009.07.013
 29. Van Dolah, F., K.B. Lidie, M.A. Monroe, D. Bhattacharya, D., L. Campbell, G.J. Doucette and D. Kamykowski. 2009. The Florida Red Tide Dinoflagellate *Karenia brevis*: New Insights into Cellular and Molecular Processes Underlying Bloom Dynamics. **Harmful Algae** 8: 562-572.
 30. Campbell, L., J.N. Walpert and N.L. Guinasso, Jr. 2008. A new buoy-based in situ optical early warning system for harmful algal blooms in the Gulf of Mexico. **Nova Hedwigia**, Suppl. 133: 161-170.
 31. Henrichs, D.W., M.A. Renshaw, C.A. Santamaria, B. Richardson, J.R. Gold and L. Campbell. 2008. PCR amplification of microsatellites from single cells of *Karenia brevis* preserved in Lugol's iodine solution. **Marine Biotechnology** 10(2): 122-127 doi 10.1007/s10126-007-9044-y
 32. Hetland, R.D. and L. Campbell. 2007. Convergent blooms of *Karenia brevis* along the Texas coast, **Geophysical Research Letters**, 34 (19): Art. No. L19604 doi 10.1029/2007GL030474.

MENTORING in the past 10 years

Postdoctoral Advisees (current position)

Reagan Errera (Research Faculty, LSU)
 Darren Henrichs (Asst. Research Scientist, TAMU)
 Sílvia Angles (Reserach Scientist)

Ph.D. Students (chair)

Darren Henrichs	PhD 2012
Reagan Errera	PhD 2013
Darcie Ryan	PhD 2016
Jim Fiorendino	2016-current

M.S. Students (chair)

Mckensie Daugherty	MS 2017
Laura Harred	MS 2014
Natalie Thompson	MS 2011

PhD/MS committee member

Angela Hawkins (BIOL)	PhD 2018
Sarah Flanagan (BIOL)	PhD 2016
Yina Liu (OCNG)	PhD 2013
Paul Bradley (VIMS)	PhD 2008
Elissa Garza (BIOL)	PhD candidate 2014- current
Kecen Zhou (OCNG)	MS 2018
Dana Shultz (UC Santa Cruz)	MS 2017
Nicholas Fowler (UNC-W)	MS 2016
Steven Bardin (WFS)	MS 2013
Jena Campbell (UTMSI)	PhD 2012
Marcus Ogle (OCNG)	MS 2012

PROJECTS: GRANT AWARDS FOR LISA CAMPBELL IN THE PAST 10 YEARS

Title: *ECOHAB 2017: Life and Death of a Karenia bloom*

Agency: National Oceanic and Atmospheric Administration

Award Period: 9/1/2018- 8/31/2021

Title: *TPWD: Establishing a Harmful Algal Bloom and Plankton Community Composition Observing Time-series in the Lower Laguna Madre at Brazos Santiago Pass*

Agency: DOI/Fish and Wildlife Service

Award Period: 9/1/2017- 8/31/2019

Title: *ECOHAB: Cross-regional comparison of Dinophysis bloom dynamics, drivers, and toxicity*

Agency: National Oceanic and Atmospheric Administration (NOAA)

Award Period: 9/1/2017- 8/31/2020

Title: *RAPID: Hurricane Impact on Phytoplankton Community Dynamics and Metabolic Response*

Agency: National Science Foundation

Award Period: 9/14/2017- 8/31/2018

Title: *Continued Development of the Gulf of Mexico Coastal Ocean Observing System*

Agency: NOAA-NOS-IOOS

Award Period: 6/1/2016 to 5/31/2021

Title: *A new early warning tool to mitigate the impacts of Dinophysis, an emerging threat in coastal ecosystems*

Agency: Texas Sea Grant

Award Period: 2/1/2016- 1/31/2018

Title: *PCMHAB: Expanding Harmful Algal Bloom Mitigation in the Gulf of Mexico with Operational Support and Training for the IFCB Network*

Agency: National Oceanic and Atmospheric Administration

Award Period: 9/2015- 8/ 2018

Title: *Transition of Imaging FlowCytobot to Operational support for harmful algal bloom mitigation and research*

Agency: National Oceanic and Atmospheric Administration (subcontract- WHOI; PI: H. Sosik)
Award Period: 8/1/2015-7/31/2018

Title: *REU Site: Ocean Observing Technology for Emerging Ocean Scientists*

Agency: National Science Foundation
Award Period: 4/2015-3/2019

Title: *Student Engagement and Ways to Experience Research (SEAWATER)*

Agency: College of Geosciences, TAMU
Award Period: 9/1/2015-8/30/2018

Title: *Integrating the Imaging Flow Cytobot into a 40-year Time Series for San Francisco Bay*

Agency: National Oceanic and Atmospheric Administration (subcontract- UCSC; PI: R. Kudela)
Award Period: 9/2014- 8/2017

Title: *Osmoregulation in Marine Dinoflagellates*

Agency: National Science Foundation/IOS
Award Period: 3/1/2012 – 2/29/2016 (no-cost extension)

Title: *Continued development of GCOOS*

Agency: NOAA (subcontract from Gulf of Mexico Coastal Ocean Observing System)
Award Period: 1/2013- 5/2016

Title: *ECOHAB: Mechanism of harmful algal bloom initiation in the western Gulf of Mexico*

Agency: National Oceanic and Atmospheric Administration
Award Period: 9/1/2009- 2/28/2015

Title: *Role of microzooplankton in coastal ecosystems: Viewing windows of opportunity*

Agency: Sea Grant, Texas A&M University
Award Period: 2/1/2010- 12/31/2013

Title: *Evaluation of the Imaging FlowCytobot for detection of K. brevis blooms in the Gulf of Mexico*

Agency: Environmental Protection Agency
Award Period: 6/1/2009- 5/31/2011

Title: *ECOHAB: Intraspecific Variation in a Toxin-producing Dinoflagellate*

Agency: National Oceanic and Atmospheric Administration (NOAA)
Award Period: 9/1/2006- 8/31/2010