# Curriculum Vitae for Kristine L. DeLong, Associate Professor enartment of Geography and Anthropology, College of Humani

# Department of Geography and Anthropology, College of Humanities and Social Sciences Louisiana State University

Appointments	
Coastal Studies Institute Fellow, Louisiana State University	February 2018–Present
Associate Professor	August 2015–Present
Department of Geography and Anthropology, Louisiana State Universit	•
Assistant Professor	August 2009–August 2015
Department of Geography and Anthropology, Louisiana State Universit	y, Baton Rouge, LA
Geologist	May 2008–August 2009
U.S. Geological Survey, Center for Coastal Studies, St. Petersburg FL	
Honors: Special Thanks for Achieving Results (STAR) award, U.S. Ge	ological Survey 2009
Education	
University of South Florida, College of Marine Science, St. Petersburg FL	2006–2008
Ph.D. in Marine Science with a concentration in Geological Oceanograp Advisor: Terrence M. Quinn.	ohy December 2008
Dissertation titled "Sub-Centennial Climate Variability in Tropical Sour	th Pacific and Southwest
USA in the Late Holocene."	
Honors: Gulf Oceanographic Trust Fellowship, College of Marine Scient	
Outstanding Student Presenter, 1st International Sclerochronology Conf	
Dendroclimatology Summer course, The Laboratory of Tree-Ring Rese	
Arizona, Instructors: Malcolm Hughes and Ramzi Touchan	May 2007
University of South Florida, College of Marine Science, St. Petersburg FL	2003–2006
M.S. in Marine Science with a concentration in Geological Oceanograp Advisor: Dr. Terrence M. Quinn	hy December 2006
Thesis titled "Reconstructing 20th Century SST Variability in the South	west Pacific: A
Replication Study Using Multiple Coral Sr/Ca Records fr	om New Caledonia"
Honors: Carl Riggs Endowed Fellowship, College of Marine Science	2006
Exxon Scholarship for summer course on Coral Reefs and Global Clima	•
Biological Station for Research, Instructor: Fred T. Mackenzie	July 2004
University of South Florida, Tampa FL	
B.S. in Mechanical Engineering	1991
Associate of Arts	1988
University of Tampa, Tampa, FL	1985–1986
Honors: Honors Summer Scholarship to study in United Kingdom	1986

Florida Scholar Award, University of Tampa

Tampa Tribune Scholarship, University of Tampa

Honors Student, University of Tampa

1985

1985

1985

#### Research

Publications Summary	First author	Co-author	Student	in review	Total
Journal Articles	10	17	8	8	43
Book Chapters	2	2			4
Government Publications	1	2			3
Conference Proceedings		1			1
Recordings	2	1			3
Technical Reports	23				23
Magazine/Trades	1	2	1		4
Online Essays		1			1
Miscellaneous	1	2	1		4
Original Data Sets	6	6	6	1	19
Totals	46*	34	16	9	105

<sup>\*</sup> Includes 2 single first author papers

Note: Summary includes teaching publications in the teaching section of the CV.

## Journal Articles Peer Reviewed (student authors are underlined)

Rohli, Robert V., Gregg A. Snedden, Elinor R. Martin, & **Kristine L. DeLong**, (2022) Impacts of Ocean-Atmosphere Teleconnections Patterns on the South-Central United States, *Frontiers in Earth Science section Atmospheric Science*, accepted July 15, 2022, in press, doi:10.3389/feart.2022.934654.

Williams, Mark, Reinhold Leinfelder, Anthony D. Barnosky, Martin J. Head, Francine M. G. McCarthy, Alejandro Cearreta, Stephen Himson, Rachael Holmes, Colin N. Waters, Jan Zalasiewicz, Simon Turner, Mary McGann, Elizabeth A. Hadly, M Allison Stegner, Paul M. Pilkington, Jerome Kaiser, Juan Carlos Berrio, Ian P. Wilkinson, Jens Zinke, and **Kristine L. DeLong** (2022), Planetary-scale change to the biosphere signalled by global species translocations can be used to identify the Anthropocene, *Palaeontology*, accepted 4/19/2022, in press, doi:10.1111/pala.12618.

Thompson, Diane M., Jessica L. Conroy, Bronwen L. Konecky, Samatha Stevenson, **Kristine L**. **DeLong**, Nicholas P. McKay, Lucas Jonkers, Matthieu Carré (2022) Salinity information from hydrosensitive coral δ<sup>18</sup>O records, *Geophysical Research Letters*, 49(9), e2021GL096153, doi:10.1029/2021GL096153.

Warner, Jacob P., Kristine L. DeLong, David Chicoine, Kaustubh Thirumalai, Fred Andrus (2022), Investigating the influence of temperature and seawater  $\delta^{18}$ O on *Donax obesulus* (Reeve, 1854) shell  $\delta^{18}$ O, *Chemical Geology*, 588, 120638, doi:10.1016/j.chemgeo.2021.120638.

**DeLong, Kristine L.,** <u>Suyapa Gonzalez, Jeffrey B. Obelcz, Jonathan T. Truong</u>, Samuel J. Bentley Sr., Kehui Xu, Carl Andy Reese, Grant L. Harley, Alicia Caporaso, Zhixiong Shen, and Beth A. Middleton (2021), Late Pleistocene baldcypress (*Taxodium distichum*) forest deposit on the continental shelf of the northern Gulf of Mexico, *Boreas*, 50(3), 871–892, <u>doi:10.1111/bor.12524</u>.

Lin, Huei-Ting, Hong-Wei Chiang, Tsai-Luen Yu, Marcus Christl, Juan Liu, **Kristine DeLong**, Chuan-Chou Shen (2021), <sup>236</sup>U/<sup>238</sup>U analysis of femtogram <sup>236</sup>U by MC-ICPMS, *Analytical Chemistry*, 93 (24) 8442–8449, doi:10.1021/acs.analchem.1c00409.

Weerabaddana, Mudith M., Kristine L. DeLong, Amy J. Wagner, Deborah W.Y. Loke, Kelly H. Kilbourne, Niall Slowey, Hsun-Ming Hu, and Chuan-Chou Shen (2021), Insights from barium variability in a *Siderastrea siderea* coral in the northwestern Gulf of Mexico, *Marine Pollution Bulletin*, 173(A), 112930, doi:10.1016/j.marpolbul.2021.112930.

Trofimova, Tamara, Stella J. Alexandroff, Madelyn Mette, Elizabeth Tray, Paul G. Butler, Steven Campana, Elizabeth Harper, Andrew L.A. Johnson, John R. Morrongiello, Melita Peharda, Bernd R. Schöne, Carin Andersson, Fred T. Andrus, Bryan A. Black, Meghan Burchell, Michael L. Carroll, **Kristine L. DeLong**, Bronwyn M. Gillanders, Peter Grønkjær, Daniel Killam, Amy L. Prendergast, David J. Reynolds, James D. Scourse, Kotaro Shirait, Julien Thébault, Clive Truemanv, Niels de Winter (2020), Fundamental questions and applications of sclerochronology: Community-defined research priorities. *Estuarine*, *Coastal and Shelf Science*, 245, 106977, doi:10.1016/j.ecss.2020.106977.

Konecky, Bronwen L., Nicholas P. McKay, Olga V. Churakova (Sidorova), Laia Comas-Bru, Emilie P. Dassié, **Kristine L. DeLong**, Georgina M. Falster, Matt J. Fischer, Matthew D. Jones, Lukas Jonkers, Darrell S. Kaufman, Guillaume Leduc, Shreyas R. Managave, Belen Martrat, Thomas Opel, Anais J. Orsi, Judson W. Partin, Hussein R. Sayani, Elizabeth K. Thomas, Diane M. Thompson, Jonathan J. Tyler, Nerilie J. Abram, Alyssa R. Atwood, Jessica L. Conroy, Zoltán Kern, Trevor J. Porter, Samantha L. Stevenson, Lucien von Gunten, Kerstin Braun, Matthieu Carré, Sylvia G. Dee, Alessandro Incarbona, Nikita Kaushal, Robert M. Klaebe, Hannah R. Kolus, P. Graham Mortyn, Andrew D. Moy, Heidi A. Roop, Marie-Alexandrine Sicre (2020), The Iso2k database: A global compilation of paleo-δ<sup>18</sup>O and δ<sup>2</sup>H records to aid understanding of Common Era climate, *Earth System Science Data*, 12 (3), 2261-2288, https://doi.org/10.5194/essd-12-2261-2020.

Dee, Sylvia, Mark Torres, Rowan Martindale, Anna Weiss, **Kristine DeLong** (2019), The future of reef ecosystems in the Gulf of Mexico: Insights from coupled climate model simulations and ancient hot-house reefs. *Frontiers in Marine Science*, 6(691), doi:10.3389/fmars.2019.00691.

<u>Sayani, Hussein R.</u>, Kim M. Cobb, **Kristine L. DeLong**, Nicholas T. Hitt, and Ellen R. M. Druffel (2019), Intercolony  $\delta^{18}$ O and Sr/Ca variability among *Porites* spp. corals at Palmyra Atoll: Towards more robust coral-based estimates of climate, *Geochemistry, Geophysics, Geosystems*, 20(11), 5270–5284, <u>doi:10.1029/2019GC008420</u>.

Black, Bryan A., Carin Andersson, Paul G. Butler Michael Carroll, **Kristine L. DeLong**, David J. Reynolds, Bernd R. Schöne, James Scourse, Peter van der Sleen, Alan D. Wanamaker, and Rob Witbaard (2019), The revolution of crossdating in marine paleoecology and paleoclimatology, *Biology Letters* 15(1), 20180665, doi:10.1098/rsbl.2018.0665.

Khider, Deborah, Julien Emile-Geay, Nicholas P. McKay, Yolanda Gil, Daniel Garijo, V. Ratnakar, Montserrat Alonso-Garcia, Sebastian Bertrand, Oliver Bothe, Peter Brewer, A. Bunn, Manual Chevalier, Adam Csank, Emilie Dassié, **Kristine L. DeLong**, Thomas Felis, Pierre Francus Amy Frappier, William Gray, S. Goring, Lukas Jonkers, Michael Kahle, Darrell Kaufman, Natalie Kehrwald, Belen Martrat, Helen McGregor, Julie Richey, Andreas Schmittner, Nick Scroxton, Eliane K. Sutherland, Kaustubh Thirumalai, Kathryn Allen, Fabien Arnaud, Yarrow Axford, Timothy T. Barrows, Lucie Bazin, Suzanne E. Pilaar Birch, Elizabeth Bradley, Joshua Bregy, Emilie Capron,

Olivier Cartapanis, Hong-Wei Chiang, Kim M. Cobb, Maxime Debret, Rene Dommain, Jianghui Du, Kelsey Dyez, Suellyn Emerick, Michael P. Erb, Georgina M. Falster, Walter Finsinger, Daniel Fortier, Nicolas Gauthier, Steve George, E. Grimm, Jennifer Hertzberg, Fiona Hibbert, A. Hillman, Will Hobbs, Matthew Huber, Anna L.C. Hughes, Samuel Jaccard, Jiaoyang Ruan, M. Kienast, Bronwen L. Konecky, G. Le Roux, Vyacheslav Lyubchich, Valdir F. Novello, L. Olaka, Judson W. Partin, Christof Pearce, Steven Phipps, Cecile Pigno, Natalia Piotrowska, Maria Serena Poli, A. Prokopenko, Franciele Schwanck, Christian Stepanek, George Swann, Richard Telford, E. Thomas, Zoë A. Thomas, Sarah A. Truebe, Lucien von Gunten, Amanda Waite, Nicholas Weitzel, B. Wilhelm, Joseph J. Williams, Mai Winstrup, Ning Zhao, Yuxin Zhou (2019), PaCTS 1.0: A crowdsourced reporting standard for paleoclimate data. *Paleoceanography and Paleoclimatology*, 34(10), 1570–1596, doi:10.1029/2019pa003632.

Reese, Carl A., Grant L. Harley, **Kristine L. DeLong**, Samuel J. Bentley Sr., Kehui Xu, <u>Suyapa Gonzalez</u>, <u>Jonathan T. Truong</u>, <u>Jeffrey Obelcz</u>, and Alicia Caporaso (2018), Stratigraphic pollen analysis performed on a Late-Pleistocene cypress forest preserved on the northern Gulf of Mexico continental shelf, *Journal of Quaternary Science*, 33(8), 865–870, <u>doi:10.1002/jqs.3074</u>.

Gonzalez, Suyapa, Samuel J. Bentley Sr., **Kristine L. DeLong**, Kehui Xu, <u>Jeffrey Obelcz</u>, <u>Jonathan Truong</u>, Grant L. Harley, Carl A. Reese, Alicia Caporaso (2017), Facies Reconstruction of a late Pleistocene cypress forest discovered on the northern Gulf of Mexico continental shelf, *Gulf Coast Association of Geological Societies Transactions*, 67, 133–146, https://www.gcags.org/exploreanddiscover/2017/00196 gonzalez et al.pdf.

<u>Tucker, Clay S.</u>, Jill C. Trepanier, Grant L. Harley, and **Kristine L. DeLong** (2017), Maritime slash pine trees (*Pinus elliottii* var. *elliottii* Engelm.) recording tropical cyclone activity along the northern Gulf of Mexico from 1909–2014, *Journal of Coastal Research*, 34(2), 328-340, doi:10.2112/JCOASTRES-D-16-00177.1.

Williams, Branwen, Jochen Halfar, **Kristine L. DeLong**, Ellie Smith, Robert S. Steneck, P. Lebednik, Dorrit E. Jacob, J. Fietzke, and G.W.K. Morre (2017), North Pacific twentieth century decadal-scale variability is unique for the past 342 years, *Geophysical Research Letters*, 44(8), 3761–3769, doi:10.1002/2017GL073138.

<u>Pollack, Anna L.</u>, Philipp van Beyan, **Kristine L. DeLong**, Victor Polyak and Yemane Asmerom (2017), A speleothem-based mid-Holocene precipitation record for west-central Florida, *The Holocene*, 27(7), 987–996, doi:10.1177/0959683616678463.

Flannery, Jennifer A., Julie N. Richey, Kaustubh Thirumalai, Richard Z. Poore, and **Kristine L. DeLong** (2017), Multi-species coral Sr/Ca based sea-surface temperature reconstruction using *Orbicella faveolata* and *Siderastrea siderea* from the Florida Straits, *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*, 466, 100–109, doi:10.1016/j.palaeo.2016.10.022.

PAGES2K Consortium, Julien Emile-Geay, Nicholas McKay, Darrell Kaufman, Lucien von Gunten, Jianghao Wang, Kevin Anchukaitis, Nerilie Abram, Jason Addison, Mark Curran, Michael Evans, Benjamin Henley, Hao Zhixin, Belen Martrat, Helen McGregor, Raphael Neukom, Gregory Pederson, Barbara Stenni, Kaustubh Thirumalai, Johannes Werner, Chenxi Xu, Dmitry Divine, Bronwyn Dixon,

Joelle Gergis, Ignacio Mundo, Takeshi Nakatsuka, Steven Phipps, Cody Routson, Eric Steig, Jessica Tierney, Jonathan Tyler, Kathryn Allen, Nancy Bertler, Jesper Björklund, Brian Chase, Min-Te Chen, Edward Cook, Rixt de Jong, **Kristine L. DeLong**, Daniel Dixon, Alexey Ekaykin, Vasile Ersek, Helena Filipsson, Pierre Francus, Mandy Freund, Massimo Frezzotti, Narayan Gaire, Konrad Gajewski, Quansheng Ge, Hugues Goosse, Anastasia Gornostaeva, Martin Grosjean, Kazuho Horiuchi, Anne Hormes, Katrine Husum, Elisabeth Isaksson, Selvaraj Kandasamy, Kenji Kawamura, Hali Kilbourne, Koc Nalan, Guillaume Leduc, Hans Linderholm, Andrew Lorrey, Vladimir Mikhalenko, P. Mortyn, Hideaki Motoyama, Andrew Moy, Robert Mulvaney, Philipp Munz, David Nash, Hans Oerter, Thomas Opel, Anais Orsi, Dmitriy Ovchinnikov, Trevor Porter, Heidi Roop, Casey Saenger, Masaki Sano, David Sauchyn, Krystyna Saunders, Marit-Solveig Seidenkrantz, Mirko Severi, Xuemei Shao, Marie-Alexandrine Sicre, Michael Sigl, Kate Sinclair, Scott St George, Jeannine St. Jacques, Meloth Thamban, Udya Thapa, Elizabeth Thomas, Chris Turney, Ryu Uemura, Andre Viau, Diana Vladimirova, Eugene Wahl, James White, Zicheng Yu, and Jens Zinke (2017), A global multiproxy database for temperature reconstructions of the common era, *Scientific Data*, 4, 170088, doi:10.1038/sdata.2017.88, A Web of Science Highly Cited Paper.

**DeLong, Kristine L.**, Jennifer A. Flannery, Richard Z. Poore, Terrence M. Quinn, Christopher R. Maupin, Ke Lin, and Chuan-Chou Shen (2016), Refining temperature reconstructions with the Atlantic coral *Siderastrea siderea*, *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*, 462, 1–15, doi:10.1016/j.palaeo.2016.08.028.

<u>Pino, Jordan V.</u>, Robert V. Rohli, **Kristine L. DeLong**, Grant L. Harley, Jill C. Trepanier (2016), Using proxy records to document Gulf of Mexico tropical cyclones from 1820–1915, *PLoS ONE* 11(11): e0167482, <u>doi:10.1371/journal.pone.0167482</u>.

<u>Pollack, Anna L.</u>, Philipp E. van Beyan, **Kristine L. DeLong**, Victor Polyak, Yemane Asmerom, and Philip P. Reeder, A mid-Holocene paleoprecipitation record from Belize (2016), *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*, 463, 103–111, <u>doi:10.1016/j.palaeo.2016.09.021</u>.

Liu, Yi, Li Lo, Zhengguo Shi, Kuo-Yen Wei, Chien-Ju Chou, Yi-Chi Chen, Chih-Kai Chuang, Chung-Che Wu, Horng-Sheng Mii, Zicheng Peng, Hiroshi Amakawa, George S. Burr, Shih-Yu Lee, **Kristine L. DeLong**, Henry Elderfield, and Chuan-Chou Shen (2015), Obliquity pacing of western Pacific Intertropical Convergence Zone over the past 282,000 years, *Nature Communications*, 6, 10018, doi:10.1038/ncomms10018.

**DeLong, Kristine L.**, Jennifer A. Flannery, Richard Z. Poore, Terrence M. Quinn, Christopher R. Maupin, Ke Lin, and Chuan-Chou Shen (2014), A reconstruction of sea surface temperature variability in the southeastern Gulf of Mexico from 1734–2008 CE using cross-dated Sr/Ca records from the coral *Siderastrea siderea, Paleoceanography*, 29(5), 403–422, doi:10.1002/2013PA002524.

Williams, Branwen, Jochen Halfar, **Kristine L. DeLong**, Steffen Hetzinger, Robert S. Steneck, and Dorrit E. Jacob (2014), Multi-specimen and multi-site calibration of Aleutian coralline algal Mg/Ca to sea surface temperature, *Geochimica et Cosmochimica Acta*, 139, 190–204, doi:10.1016/j.gca.2014.04.006.

**DeLong, Kristine L.**, Terrence M. Quinn, Frederick W. Taylor, Ke Lin, and Chuan-Chou Shen (2013), Improving coral-base paleoclimate reconstructions by replicating 350 years of coral Sr/Ca variations, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 373, 6–24, doi:10.1016/j.palaeo.2012.08.019. Appears in special issue on "Unraveling environmental histories from skeletal diaries - advances in sclerochronology," guest editors Bernd R. Schöne and David P. Gillikin. **Paper highlighted in first virtual issue of Palaeogeography, Palaeoclimatology, Palaeoecology, August 25, 2014.** 

Liu, Yi, Zicheng Peng, Chuan-Chou Shen, Renjun Zhou, Shaohua Song, Zhengguo Shi, Tegu Chen, Gangjian Wei, **Kristine L. DeLong** (2013), Recent 121-year variability of western boundary upwelling in the northern South China Sea, *Geophysical Research Letters*, 40(12), 3180–3183, doi:10.1002/grl.50381.

**DeLong, Kristine L.,** Terrence M. Quinn, Frederick W. Taylor, Ke Lin, and Chuan-Chou Shen (2012), Sea surface temperature variability in the southwest tropical Pacific since AD 1649, *Nature Climate Change*, 2, 799–804, <u>doi:10.1038/nclimate1583</u>.

**DeLong, Kristine L.,** Jennifer A. Flannery, Christopher R. Maupin, Richard Z. Poore, and Terrence M. Quinn (2011), A coral Sr/Ca calibration and replication study of two massive corals from the Gulf of Mexico, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 307, 117–128, doi:10.1016/j.palaeo.2011.05.005.

**DeLong, Kristine L.**, Terrence M. Quinn, Chuan-Chou Shen, and Ke Lin (2011), Reply to comment on "A snapshot of climate variability at Tahiti 9.5 ka using a fossil coral from IODP expedition 310," *Geochemistry, Geophysics, Geosystems*, 12, Q03013, doi:10.1029/2010GC003461.

**DeLong, Kristine L.,** Terrence M. Quinn, Chuan-Chou Shen, and Ke Lin (2010), A snapshot of climate variability at Tahiti 9.5 ka using a fossil coral from IODP expedition 310, *Geochemistry*, *Geophysics*, *Geosystems*, 11, Q06005, doi:10.1029/2009GC002758.

**DeLong, Kristine L.,** Terrence M. Quinn, Gary T. Mitchum, and Richard Z. Poore (2009), Evaluating highly resolved paleoclimate records in the frequency domain for multidecadal-scale climate variability, *Geophysical Research Letters*, 36, L20702, <a href="doi:10.1029/2009GL039742">doi:10.1029/2009GL039742</a>.

Poore, Richard, **Kristine DeLong**, Julie Richey, and Terrence Quinn (2009), Evidence of multidecadal climate variability and the Atlantic Multidecadal Oscillation from a Gulf of Mexico sea-surface temperature-proxy record, *Geo-Marine Letters*, 29(6), 477–484, doi:10.1007/s00367-009-0154-6.

**DeLong, Kristine L.**, Terrence M. Quinn, and Frederick W. Taylor (2007), Reconstructing twentieth-century sea surface variability in the southwest Pacific: A replication study using multiple coral Sr/Ca records from New Caledonia, *Paleoceanography*, 22, PA4212, <a href="https://doi.org/10.1029/2007PA001444">doi:10.1029/2007PA001444</a>.

#### **Book Chapters Peer Reviewed**

Dee, Sylvia, Mark Torres, Rowan Martindale, Anna Weiss, **Kristine DeLong** (2021), The future of reef ecosystems in the Gulf of Mexico: Insights from coupled climate model simulations and ancient hot-house reefs, in *Gulf of Mexico Reefs: Past, Present and Future*. Correa, Andrea M. S., Nancy

Knowlton, Josua D. Voss, Daniel M. Holstein, Rowan C. Martindale, editors, Lausanne: Frontiers Media SA, https://www.frontiersin.org/research-topics/9437/gulfofmexicoreefspastpresentandfuture.

**DeLong, Kristine L.** (2015), Corals - Sclerochronology, in *Encyclopedia of Scientific Dating Methods*, Rink, W. Jack, Jeroen W. Thompson, editors, Springer, Netherlands, Chapter 154-3, pp 187-191, doi:10.1007/978-94-007-6304-3 154. **2016 winner of the GSIS\* Mary B. Ansari Best Geoscience Reference Work Award.** 

**DeLong**, **Kristine L.** (2015) "Imperiled Coral Reefs", a short focus box for the textbook *McKnight's Physical Geography: A Landscape Appreciation*, 12<sup>th</sup> Edition, by Darrel Hess.

Hopkinson, Charles S., Alan P. Covich, Chris B. Craft, **Kristine L. DeLong**, T. W. Doyle, Neal Flanagan, Mary C. Freeman, Ellen R. Herbert, Andrew Mehring, Jacqueline E. Mohan, Catherine M. Pringle, and Curtis J. Richardson (2013), The effects of climate change on natural ecosystems of the southeast USA, in *Climate of the Southeast United States: Variability, Change, Impacts, and Vulnerability*, Ingram, Keith T., Kirstin Dow, Lynne Carter, and Julie Anderson, editors, Island Press, Washington, D.C., pp. 237–270.

#### Government Publications Peer Reviewed

**DeLong, Kristine L.,** Samuel J. Bentley Sr., Kevin Xu, Grant L. Harley, Carl Andy Reese, Jeffery B. Obelcz, <u>Suyapa Gonzalez</u>, and <u>Jonathan T. Truong</u> (2020), Investigation of an Ancient Bald Cypress Forest in the Northern Gulf of Mexico Final Report, U.S. Department of the Interior, Bureau of Ocean Energy Management, OCS Study BOEM M15AC00016. 108 pp., <a href="https://marinecadastre.gov/espis/#/search/study/100147">https://marinecadastre.gov/espis/#/search/study/100147</a>.

Hickey, Todd D., Christopher D. Reich, **Kristine L. DeLong**, Richard Z. Poore, and John C. Brock (2013), Holocene Core Logs and Site Methods for Modern Reef and Head-Coral Cores: Dry Tortugas National Park, Florida, *U.S. Geological Survey Open-File Report* 2012–1095, 27 p., <a href="http://pubs.usgs.gov/of/2012/1095/">http://pubs.usgs.gov/of/2012/1095/</a>.

Reich, Christopher D., T. Don Hickey, **Kristine L. DeLong**, Richard Z. Poore, and John Brock (2009), Holocene Core Logs and Site Statistics for Modern Patch-Reef Cores—Biscayne National Park, Florida: *U.S. Geological Survey Open-File Report* 2009–1246, 26 p. <a href="http://pubs.usgs.gov/of/2009/1246/">http://pubs.usgs.gov/of/2009/1246/</a>.

## Conference Proceedings Peer Reviewed

Ourbak, Timothée, **Kristine L. DeLong**, Thierry Corrège, B. Malaizé, Kelly H. Kilbourne, S. Caquineau, and David J. Hollander (2009), The significance of geochemical proxies in corals, does size (age) matter? *Proceedings of the 11th International Coral Reef Symposium*, Ft. Lauderdale, Florida, July 2008, 82–86.

## Recordings

The Underwater Forest, a documentary of the baldcypress forest offshore of Alabama by the Ben Raines where DeLong participated with interviews and consulted on scientific content. Shown on PBS Alabama on July 21, 2017, and released June 26, 2017, on YouTube <a href="https://www.youtube.com/watch?v=PKm0eRfFFf">www.youtube.com/watch?v=PKm0eRfFFf</a> and has over 1 million views. The documentary was

screened at the 2017 American Geophysical Union meeting December 14, 2017, with a panel session following. DeLong has given several talks at universities and multiple public talks on this project. She has been interviewed by CBS, NBC, Washington Post, BBC, and NPR on this project and participated in an "Ask Me Anything" on Reddit, see section 1.4.3.

## **Technical Reports for Projects**

**DeLong, Kristine L.**, Kehui Xu, Grant L. Harley, Carl Andy Reese, and Jeffery Obelcz, Investigation of an Ancient Bald Cypress Forest in the Northern Gulf of Mexico Phase 2, US Department of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, LA 70123-2394. OCS Study BOEM 2020-xxx.

- June 2022 Quarterly Report 7, 47 pp.
- March 2022 Quarterly Report 6, 38 pp.
- December 2021 Quarterly Report 5, 40 pp.
- September 2021 Quarterly Report 4, 58 pp.
- June 2021 Quarterly Report 3, 36 pp.
- March 2021 Quarterly Report 2, 23 pp.
- December 2020 Quarterly Report 1, 23 pp.

**DeLong, Kristine L.**, Samuel J. Bentley Sr., Kehui Xu, Grant L. Harley, and Carl Andy Reese, Investigation of an Ancient Bald Cypress Forest in the Northern Gulf of Mexico, US Department of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, LA 70123-2394. OCS Study BOEM 2016-xxx.

- July 2019 Quarterly Report 15, 34 pp.
- April 2019 Quarterly Report 14, 31 pp.
- January 2019 Quarterly Report 13, 31 pp.
- October 2018 Quarterly Report 12, 31 pp.
- July 2018 Quarterly Report 11, 35 pp.
- April 2018 Quarterly Report 10, 36 pp.
- January 2018 Quarterly Report 9, 35 pp.
- October 2017 Quarterly Report 8, 33 pp.
- July 2017 Quarterly Report 7, 30 pp.
- April 2017 Quarterly Report 6, 20 pp.
- January 2017 Quarterly Report 5, 24 pp.
- December 2016 Annual Report for Year 1 September 1, 2015 –2016, 34 pp.
- October 2016 Quarterly Report 4, 25 pp.
- July 2016 Quarterly Report 3, 27 pp.
- April 2016 Quarterly Report 2, 15 pp.
- January 2016 Quarterly Report 1, 21 pp.

## Magazine/Trade Publications

**DeLong, Kristine L.,** Alyssa Atwood, <u>Andrea Moore</u>, and Sara Sanchez, Clues from the sea paint a picture of Earth's water cycle, *EOS*, 103, <u>doi.org/10.1029/2022EO220231</u>. Reviewed by science advisors.

<u>Hargreaves</u>, <u>Jessica</u>, <u>Kristine DeLong</u>, Thomas Felis, Nerilie Abram, Kim Cobb, Hussein Sayani (2020), Tropical ocean hydroclimate and temperature from coral archives in *Past Global Changes Magazine*, titled "Past Plant Diversity and Conservation," Editors, Cheddadi R, Báez S, Normand S, Payne D, Taberlet P and Eggleston S, 28(1), 1–32, 2020, <u>doi.org/10.22498/pages.28.1</u>.

Konecky, Bronwen, Laia Comas-Bru, Emilie P. Dassié, **Kristine L. DeLong**, and Judson W. Partin (2018), Piecing together the big picture on water and climate, *Eos*, 99, doi:10.1029/2018EO095283. Reviewed by science advisors.

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**DeLong, Kristine L.**, Terrence M. Quinn, Frederick W. Taylor, Ke Lin, and Chuan-Chou Shen (2012), Amédée Island, New Caledonia 350 year coral Sr/Ca SST reconstruction. NOAA National Centers for Environmental Information Paleoclimatology contribution #13035, www.ncei.noaa.gov/access/paleo-search/study/13035, doi.org/10.25921/f93r-0r11.

**DeLong, Kristine L.,** Terrence M. Quinn, and Frederick W. Taylor (2007), New Caledonia coral proxy data sampling resolution comparison, NOAA National Centers for Environmental Information Paleoclimatology contribution # 12973, <a href="https://www.ncei.noaa.gov/access/paleo-search/study/12973">https://www.ncei.noaa.gov/access/paleo-search/study/12973</a>, <a href="https://www.ncei.noaa.gov/access/paleo-search/study/12973">https://www.ncei.noaa.gov/access/paleo-search/study/12973</a>, <a href="https://doi.org/10.25921/y8fz-8j47">doi.org/10.25921/y8fz-8j47</a>.

PAGES (Past Global Changes) Ocean2K Data Compilation Project. The Ocean2K group built a database of marine-based reconstructions for the past 2000 years that passed quality control, which I was involved in. Paleoceanographic records were compiled from high-resolution archives, mostly sediment cores and corals. This database has and will be used to analyze the sea surface conditions and marine climate of the last two millennia and to produce a reconstruction for publication and the next IPCC report. Database is available to the general public at <a href="www.ncdc.noaa.gov/paleo/study/17955">www.ncdc.noaa.gov/paleo/study/17955</a>, <a href="doi.org/10.25921/tkrf-f151">doi.org/10.25921/tkrf-f151</a>.

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**DeLong, Kristine L.**, Terrence M. Quinn, Chuan-Chou Shen, and Ke Lin (2010), Tahiti 9.5ka fossil coral geochemical data, NOAA National Centers for Environmental Information Paleoclimatology contribution #noaa-coral-10424, <a href="https://www.ncdc.noaa.gov/paleo/study/10424">www.ncdc.noaa.gov/paleo/study/10424</a>.

#### Miscellaneous

**DeLong**, **Kristine**, Gilman Ouellette, and Carrie Manfrino (2018) Little Cayman fossil and historic corals as recorders of climate variability, Field Report for Department of Energy, Cayman Islands, August 2018.

Fragua, Roger, **Kristine L. DeLong**, Micha Rahder, <u>Jacob Warner</u>, and Kim Merryman (2016), Water & Climate Change, Workshop Report and Executive Summary, October 5–7, 2016, Pueblo of Jemez Community Resource Center, Jemez Pueblo, NM.

<u>Ouellette, Gilman</u>, Scarlette Hsia, Kristine DeLong, and Carrie Manfrino (2016) Karst and diagenetic processes in Little Cayman carbonates & fossil and historic corals as recorders of climate variability, Field Report for Department of Energy, Cayman Islands, August 2016.

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## Other Publications in Review for Publication but not yet Published

**DeLong**, **Kristine L.**, Amy J. Wagner, <u>Kylie Palmer</u>, <u>Mudith M. Weerabaddana</u>, Niall C. Slowey, Nicolas Dupree, Irka Hajdas, Alfredo Martinez-Garcia, Neil L. Rose, Sarah Roberts, Handong Yang, Andy Cundy, Achim Herrman, Chuan-Chou Shen, and Jens Zinke, The Flower Garden Banks *Siderastrea siderea* coral as a candidate Global Boundary Stratotype Section and Point for the Anthropocene Series, submitted to *Anthropocene Review* July 1, 2022.

Zinke, Jens, Neal E. Cantin, **Kristine L. DeLong**, <u>Kylie Palmer</u>, Arnoud Boom, Irka Hajdas, Nicolas Duprey, Jonathan Jung, Alfredo Martinez-Garcia, Neil L. Rose, Sarah Roberts, Handong Yang, Andy Cundy, Grace Frank, Adam Cox, Sue Sampson, Genevieve Tyrell, Molly Agg and Simon Turner, North Flinders Reef (Coral Sea, Australia) *Porites* sp. corals as a candidate Global Boundary Stratotype Section and Point for the Anthropocene Series, submitted to *Anthropocene Review* July 1, 2022.

Lawman, Allison, Sylvia Dee, **Kristine L. DeLong**, Adrienne Correa, Rates of Future Climate Change in the Gulf of Mexico, and the Caribbean Sea: Implications for Coral Reef Ecosystems, submitted to *Journal of Geophysical Research-Biogeosciences*, May 10, 2022, archived at Earth and Space Science Open Archive (ESSOAr), revised and resubmitted August 7, 2022.

Konecky, Bronwen L., Nicholas P. McKay, Georgina M. Falster, Samantha L. Stevenson, Matt J. Fischer, Alyssa R. Atwood, Diane M. Thompson, Matthew D. Jones, **Kristine L. DeLong**, Jonathan J. Tyler, Belen Martrat, Elizabeth K. Thomas, Jessica L. Conroy, Sylvia G. Dee, Lukas Jonkers, Olga V. Churakova (Sidorova), Zoltán Kern, Thomas Opel, Trevor J. Porter, Hussein R. Sayani, Grzegorz Skrzypek, and Iso2k Project Members, in review, Temperature-driven changes in the global water cycle during the past two millennia, submitted to *Science* August 9, 2022.

Walter, Rachel M., Hussein R. Sayani, Thomas Felis, Kim M. Cobb, Nerilie J. Abram, Ariella K. Arzey, Alyssa R. Atwood, Logan D. Brenner, Émilie P. Dassié, **Kristine L. DeLong**, Bethany Ellis, Matt J. Fischer, Nathalie F. Goodkin, Jessica A. Hargreaves, K. Halimeda Kilbourne, Hedwig Krawczyk, Nicholas P. McKay, Sujata A. Murty, Riovie D. Ramos, Emma V. Reed, Dhrubajyoti Samanta, Sara C. Sanchez, and Jens Zinke, The CoralHydro2k Database: a global, actively curated compilation of coral  $\delta^{18}$ O and Sr/Ca proxy records of tropical ocean hydrology and temperature for the Common Era, submitted to *Earth System Science Data*, May 19, 2022, doi:10.5194/essd-2022-172.

Kettle, Nathan P., Sarah F. Trainor, Renee Edwards, Donald Antrobus, Curt Baranowski, Tina Buxbaum, Kevin Berry, Michael Brubaker, **Kristine L. DeLong**, Steve Fries, Davin Holen, Barry Keim, Danielle Meeker, Harry Penn, Cheryl Rosa, Rick Thoman, John Walsh, Jian Zhang. Building resilience to extreme weather and climate events in the rural water and wastewater sectors," submitted to the *Journal of the American Water Resources Association* in November 2021.

<u>Warner, Jacob P.</u>, **Kristine L. DeLong**, David Chicoine, Kaustubh Thirumalai, C. Fred T. Andrus, Alan D. Wanamaker, Jr., Short-lived bivalve analysis provides new perspective on El Niño-Southern Oscillation (ENSO) variability 400–200 BCE, to be submitted to *Nature Communication* July 30, 2022.

Harley, Grant L., **Kristine L. DeLong,** Carl Andy Reese, Samuel J. Bentley Sr., Kehui Xu, Suyapa Gonzalez, Jonathan T. Truong, and Alicia Caporaso (in review), Rapid decline and mortality of a Pleistocene-aged submerged *Taxodium distichum* forest in the northern Gulf of Mexico, to be submitted to *Scientific Reports* July 2022.

#### **Other Creative Activities**

The Anthropocene Exhibit for the Haus der Kulturen der Welt (HKW) is being developed in collaboration with the Anthropocene Working Group (AWG) and Global Boundary Stratotype Section and Points (GSSP) site leaders, which DeLong is leading the Tropical Atlantic site. They are developing an inhouse museum exhibit to completed in December 2022 featuring photos, recording, videos, and written documents of the scientific process of each site project, see <a href="https://www.anthropocene-curriculum.org/the-geological-anthropocene/site/west-flower-garden-bank-reef">https://www.anthropocene-curriculum.org/the-geological-anthropocene/site/west-flower-garden-bank-reef</a>. HKW is also the central publication platform for documenting the investigations of the AWG. During 2020 to 2022, they are documenting AWG events taking place at HKW and publishing various online materials. One of these publications is an online guide to each of the potential Anthropocene

GSSP sites that will provide a portal for readers to dive deeper into the GSSP research <a href="https://www.hkw.de/en/programm/projekte/2022/evidenz\_experiment/start.php">www.hkw.de/en/programm/projekte/2022/evidenz\_experiment/start.php</a> and anthropocene-curriculum.org. The guides will provide a clear, accessible, and engaging introduction to each of the sites, with scientific terms defined in a glossary, and illustrated with photographs and diagrams. They will be open-access and will represent to the general public the logic, practicalities and findings of the AWG research teams. DeLong worked with the editorial teams and artists for the past two years on developing the site, exhibits, and other displays and has provided audio recordings, documents, pictures, and videos for the Flower Garden Banks potential GSSP site as well as several interviews with artists and reporters.

## **Research Support/Grant Activities**

Total	\$1,119,724	\$4,301,323	\$2,299,814
Travel Grants		\$14,800	
University Grants		\$61,727	
Private Foundations		\$69,838	
Government Agencies	\$1,119,724	\$4,154,958	\$2,299,814
Summary	Pending	Funded	Active in 2022

Note: This summary includes grants from Research Support/Grant Activities Aimed at Advancing One's Ability to Teach

### Government Funding Agencies - Pending

National Science Foundation, Major Research Instrumentation 2022, titled "MRI: Acquisition of a Multi-collector ICP-MS with Laser Ablation for Bio-geochemical and Geochronological Applications," PIs Achim Herrmann, Jonathan Snow, Adam Forte, Maheshi Dassanayake, and **Kristine L. DeLong**. Request for funding of \$1,075,601 submitted January 19, 2022.

#### Government Funding Agencies - Awarded

Past Global Changes (PAGES), Data Stewardship Scholarship, submitted March 31, 2022, a proposal titled "CoralHydro2k Seawater  $\delta^{18}$ O Database Phase 2," PIs Allyssa Atwood (Florida State University, FSU) and Kristine DeLong. Request for funding of \$15,000 to FSU. DeLong served as an unpaid PI since she is fully funded for the summer 2022 and she is mentoring an early career female professor on the project.

U.S. Geological Survey, National Climate Adaptation Science Center and Regional Climate Adaptation Science Centers, Climate Adaptation Scientists of Tomorrow Program Undergraduate Research Experience proposal titled, "Developing a Diverse Research Workforce with Expertise in Hydrological Climate Events in the Upland Watersheds of the Northern Gulf of Mexico," Christopher F. D'Elia, Victor Rivera-Monroy, Kristine DeLong, and Cheryl Harrison. Submitted July 26, 2021. Start date 1 January 2022 for 24 months, \$180,000, **Funded.** 

National Science Foundation, NSF 13-576 Paleo Perspectives on Climate Change (P2C2) Program. Submitted October 20, 2020, a proposal title, "Collaborative Research: Coral Proxy and Climate Model Comparison to understand Climate Variability in the Intra-Americas Sea Region," PI **DeLong,** co-PI Elinor Martin of the University of Oklahoma. Request for funding of \$417,928 for LSU, **funded for July 2021–June 2024**, Award Number (FAIN): 2102931

Traditional and Undergraduate Enhancement, Louisiana State Board of Regents for Fiscal Year 2020–2021. Submitted October 24, 2020, a proposal titled "Investigating cloud and hurricane water isotopic processes for research and student education," PIs **Kristine L. DeLong**, Jill Trepanier, and Barry Kiem. **Funded for \$110,126 for June 1, 2021–June 30, 2022.** 

Past Global Changes (PAGES), Data Stewardship Scholarship, submitted March 31, 2021, a proposal titled "CoralHydro2k Seawater  $\delta^{18}$ O Database," PIs Allyssa Atwood (Florida State University, FSU) and Kristine DeLong. Request for funding of \$25,000 (US) to FSU. DeLong served as an unpaid PI since she is fully funded for the summer 2021 and she is mentoring an early career female professor on the project. **Funded \$15,000 to FSU for June 1, 2021–May 30, 2022**.

Bureau of Ocean Energy Management, Coastal Marine Institute FY 2019, project titled "Investigation of an Ancient Bald Cypress Forest in the Northern Gulf of Mexico: Phase 2," **Lead PI Kristine DeLong** and co-PIs Kehui Xu of the Department of Oceanography, Grant Harley of University of Idaho, and Andy Reese of the Department of Geography and Geology at University of Southern Mississippi, and Jeff Oblecz of the US Naval Research Laboratory. **Funded for** \$538,235 **for September 1, 2020–August 31, 2023.** 

NOAA RISA program, "Building Resilience to Extreme Events and Water Hazard Planning in Remote, Rural Communities," Barry Keim, **Kristine DeLong**, and Jean Renee Edwards, **funded for \$55,907 for August 14, 2017, to June 30, 2020**.

U.S. Department of the Interior, U.S. Geological Survey, "A Proposal to Host the Department of the Interior's South Central Climate Adaptation Science Center," lead PI Renee A. McPherson, University of Oklahoma, LSU co-PIs, Chris D'Elia, **Kristine DeLong**, and Victor Rivera-Monroy. **Funded** \$642,032 for five years for LSU, September 2019–August 2024.

National Science Foundation, NSF 13-576 Paleo Perspectives on Climate Change (P2C2) Program. Submitted October 20, 2017, a proposal title, "New Perspectives on Paleo-ENSO Conditions in Coastal Peru as Seen Through Short-Lived Bivalves," PIs **Kristine DeLong** and David Chicoine. **Funded for \$411,493 funded for July 2018 to June 2022.** 

U.S. Department of the Interior, U.S. Geological Survey, Climate Science Centers, and the National Climate Change and Wildlife Science Center, Annual Funding Opportunity Fiscal Year 2017. Submitted proposal titled "Regional Graduate Student, Post-Doc, and Early Career Researcher Training III," PI Derek Rosendahl, co-PIs **Kristine DeLong**, and Victor H. Rivera-Monroy. **Funded for \$61,783, for 2017–2018.** 

Traditional and Undergraduate Enhancement, Louisiana State Board of Regents. Submitted October 26, 2016, a proposal titled "High-Resolution Raman System for Multidisciplinary Research at LSU." PI Manas Ranjan Gartia, co-PIs **Kristine L. DeLong,** Kerry M. Dooley, Martin Feldman, Louis H. Haber, Kevin Michael McPeak, Devireddy, Ramachandra, Earl Ward Plummer, Isiah M Warner, and Phillip Sprunger. **Funded for \$232,609 from 2017–2018**.

Traditional and Undergraduate Enhancement, Louisiana State Board of Regents, for Fiscal Year 2015–2016. Submitted October 26, 2015, a proposal titled "Inductively Coupled Plasma Optical Emission

Spectrometer for Research in Geography and Anthropology," PI **Kristine L. DeLong,** Heather McKillop, David Chicoine, Ginesse Listi, and Rebecca Saunders. Request for funding of \$116,227, **Funded for \$101,227 starting July 1, 2016–June 30, 2018, one year extension**.

Bureau of Ocean Energy Management FY 2015 Louisiana Coastal Marine Institute, Submitted March 30, 2015, titled "Investigation of an Ancient Bald Cypress Forest in the Northern Gulf of Mexico, U.S.A.," **Lead PI Kristine DeLong** and co-PIs Sam Bentley of the LSU Department of Geology and Geophysics, Kehui Xu of the College of the Coast and the Environment, Grant Harley and Andy Reese of the Department of Geography and Geology at University of Southern Mississippi. Request for funding of \$261,077 from BOEM for three years with \$261,075 non-federal match for a total project cost of \$522,152, **Fully funded, September 2015–August 2018.** 

U.S. Department of the Interior, U.S. Geological Survey, Climate Science Centers, and the National Climate Change and Wildlife Science Center, Annual Funding Opportunity Fiscal Year 2015. Submitted a proposal on September 29, 2014, titled "Training for Native Tribes of Louisiana and New Mexico on Understanding Climate in a Changing World," Lead PI **Kristine L. DeLong** and co-PI Micha Rahder. **Funded for \$86,180** for two years.

Department of the Interior, U.S. Geological Survey, South Central Climate Science Center, awarded to University of Oklahoma with a subcontract to Louisiana State University 2014—August 2019, co-PIs Chris D'Elia and Kevin Robbins, and **Kristine DeLong** was added as a co-PI for her efforts in coordinating the Geography & Anthropology portion of the grant statement of work, in participating in conference calls and meetings, and coordinating summer STEM workshop with Victor H Rivera-Monroy in July 2014. **Original grant was \$494,647 with a 2.5 year extension for a total of \$814,664.** 

Pilot Funding for New Research, Louisiana Experimental Program to Stimulate Competitive Research, National Science Foundation, and the Louisiana Board of Regents. Submitted September 25, 2013, a proposal titled "Development of Coral Microatolls for Environmental Reconstructions," Lead PI Kristine DeLong, funded for \$10,000 for February 1, 2014, to June 2015.

Pilot Funding for New Research, Louisiana Experimental Program to Stimulate Competitive Research, National Science Foundation, and the Louisiana Board of Regents. Submitted December 2010 a proposal titled "Reconstructions of Past Climate from Modern and Fossil Corals," **PI Kristine DeLong, Funded \$10,000 for 2011**.

Research Competitiveness Subprogram, Louisiana State Board of Regents, for Fiscal Year 2012–2013. Submitted November 7, 2012, a proposal titled "Assessment of the Geochemical Signals in Corals from Veracruz Mexico for Reconstructing Environmental Conditions in the Southwest Gulf of Mexico," PI Kristine DeLong, a request for funding of \$190,080. Funded for \$136,827 for June 1, 2013, to June 30, 2016. Ranked #1 out of 124 proposals.

#### Private Foundations - Funded

Haus der Kulturen der Welt Museum, and Anthropocene Working Group, co-PI Kristine DeLong with Jens Zinke and Colin Waters of the University of Leicester, 2019, "Cayman Corals as an Anthropocene Marker for the Tropical Atlantic Project with the Anthropocene Working Group,"

subproject of the Anthropocene Working Group project from April 1, 2020, to December 31, 2021. Funded 39,840 Euros or ~\$44,838 US for April 1, 2020 to December 31, 2021.

Wallace Research Foundation, December 2012, submitted a proposal "Recovery of Wood Samples from Ancient Cypress Forest in the Gulf of Mexico," Kristine DeLong is a co-PI with Grant Harley of University of Southern Mississippi. **Funded \$25,000** in 2013 through University of Southern Mississippi.

#### University Grants - Funded

Sabbatical Request for Fall 2022 to Spring 2023, I will travel to Germany to work on the Anthropocene project and with the Haus der Kulturen der Welt Museum on the museum display of the project, **Approved.** 

Faculty Research Grant, "Development of Long-Lived Massive Corals in Haiti for Environmental Reconstructions," **Kristine DeLong. Funded for \$10,000** for July 2016–June 2018.

Sabbatical Request for Spring 2016, traveled to Singapore in Spring of 2016 as a visiting scholar at the Earth Observatory of Singapore at the Nanyang Technological University. Dr. Nathalie Goodkin and Dr. Xianfeng Wang are colleagues and they have a world-class laboratory facility for marine geochemical research. **Approved.** 

Manship Summer Research Award, College of Humanities and Social Sciences, summer 2012. Proposal titled "Investigations of Climate Variability from the Little Ice Age to Present from Corals in the Gulf of Mexico" **Funded \$7500**.

Non-tenured Teaching Release for Research Activities, College of Humanities and Social Sciences. Proposal titled "Investigation of the Climate Dynamics of the South Pacific Decadal Oscillation" **Awarded for Spring 2013.** 

Assistant Professor Summer Research Award for the summer of 2011, College of Humanities and Social Sciences. Proposal titled "Southwest Tropical Pacific Temperature Variability Since 1648 Derived from Coral Sr/Ca" **Funded \$5000**.

Council on Research Summer Stipend Program, Louisiana State University, 2010. Proposal titled "Reconstructing Sea Surface Temperature in the Gulf of Mexico back to AD1750" **Funded \$5000**.

#### Travel Grants - Funded

Faculty Travel Grant, Office of Research and Economic Development, Louisiana State University.

- American Meteorological Society meeting in January 2019, Phoenix, AZ, Funded \$750.
- American Geophysical Union Fall Meeting, December 14–18, 2015, San Francisco, CA, **Funded \$750.**
- American Geophysical Union Fall Meeting, December 15–19, 2014, San Francisco, CA, **Funded** \$750
- Ocean Sciences Meeting February 23–28, 2014, Honolulu Hawaii, Funded \$750.

College of Humanities and Social Sciences Faculty International Travel Grant, Louisiana State University, Four awards.

- 5th PAGES Open Science Meeting, May 9–13, 2017, Zaragoza, Spain, Funded \$1000.
- Taiwan Geosciences Assembly, May 16–20, 2016, Nangang Exhibition Center, Taipei, Taiwan, Funded \$800.
- Ocean Sciences Meeting February 23–28, 2014, Honolulu Hawaii, Funded \$800.
- PAGES Open Science Meeting February 11–18, 2013, Goa, India, Funded \$800.

Travel Grants for Emerging Faculty, Louisiana Experimental Program to Stimulate Competitive Research, The National Science Foundation, and the Louisiana Board of Regents. Two awards.

- American Association of Geographers Annual Meeting, April 23, 2015, Chicago, IL for **Invited speaker** for the Physical Geography Symposium on "Environmental Reconstruction A Nexus of Biogeography, Climatology and Geomorphology." **Funded for \$1200.**
- 2014 Goldschmidt Conference in Sacramento, CA, June 9–13, 2014, Invited Speaker, **Funded for \$1200.**

Junior Faculty Travel Grant, Louisiana State University, Three awards.

- American Geophysical Union (AGU) Fall Meeting on December 5–9, 2011, San Francisco, CA, Funded \$500.
- AGU Fall Meeting on December 12–18, 2010, San Francisco, CA, Funded \$500.
- AGU Fall Meeting on December 13–19, 2009, San Francisco, CA, Funded \$500.

PAGES Travel Grant for PAGES Open Science Meeting February 11–18, 2013 in Goa, India. **Funded \$1750**.

ASPIRE undergraduate research program of the College of Humanities & Social Sciences, research presentation grant for Rebecca Hood. Rebecca present her APSIRE research project at the Third International Sclerochronology Meeting in Wales, UK, May 18–22, 2013. **Awarded \$2000** to cover travel and meeting expenses for Rebecca and Dr. DeLong.

#### **Awards in Recognition of Scholarly or Artistic Achievement**

LSU Alumni Association Faculty Excellence Award, 2017.

LSU Alumni Association Rising Faculty Research Award for 2014.

#### Other LSU Recognitions for Research

LSU Research Magazine, Office of Research and Development, 2021, research highlighted in article titled "Underwater Ancient Cypress Forest Offers Clues to the Past"

LSU Committed to the Coast, featured researcher, February 2016, see section 2.3 Copies of papers and evidence of other scholarly activities in Supporting Materials.

LSU Research Magazine, Office of Research and Development, November 2015, research highlighted in article titled "From the Sea to Sky: What Corals and Satellites can tell us about Climate Change." <a href="https://www.lsu.edu/research/news/research-magazine.php">https://www.lsu.edu/research/news/research-magazine.php</a>

Flagship Faculty Member for LSU Today in May 2013.

Participation in Other Professional Meetings, Symposia, Workshops, and Conferences

Summary	Convener	First Author	Co-author	Student	Total
Invited Speaker		8			8
Professional Meet	tings/Conferences	41	33	70	144
Local Conferences and Symposia		2 (2 attendee)		16	20
Workshops	6	15 (14 attendee)	4	4	43
Invited Guest Lec	etures	30			30
Faculty Developn	nent 1	8 attendee			9
Total	7	120	37	90	254

**Teaching** 

Teaching History	# of semesters	# of students
GEOG 2050 Physical Geography: The Atmosphere	25	4414
GEOG/ANTH 4083 Environmental Change of the Ice Age	7	92
GEOG/ANTH 4998 Independent Reading & Research	9	10
GEOG 7911 Sclerochronology	1	4
GEOG 7911 Scleroclimatology	1	7
GEOG 7911 Time Series Analysis for Geosciences	4	29
GEOG 7911 Advanced Laboratory Methods in Geosciences	1	2
GEOG 7911 Sclerochronology & Geochemistry	2	12
GEOG 7921/7922/7923 Research & Field Work in Geography	12	18
GEOG 7935 Advanced Quantitative Methods	2	21
GEOG/ANTH/GEOL 7943 Paleoclimatology	5	58
GEOG 8000 Thesis Research	5	6
GEOG 9000 Dissertation Research	15	17
Total		4690

Awards, Lectureships, or Prizes that Show Recognition of Teaching Achievement LSU Alumni Association Faculty Excellence Award, 2017

2016 Tiger Athletic Foundation Undergraduate Teaching Award

Research Support/Grant Activities Aimed at Advancing One's Ability to Teach - Funded
February 2017, College of Humanities & Social Sciences, Instructional Impact Grant Program,
proposal titled "Magic Planet for Enhancing Student Learning in Geography," Kory Konsoer, Jill
Trepanier, and Kristine DeLong. Funded for \$34,227 for one year.

## **Graduate Students**

Summary	Chair	Committee Member
Current Doctoral	1	6
Current Master	3	1
Graduated Doctoral	2	14
Graduated Master	3	17
<b>International Visiting Student</b>	2 Master's	1 Doctoral
Total	11	39

#### Revised 8/17/2022

Undergraduate Students Summary	# of students
President's Future Leaders in Research Award	2
Senior Thesis Committee	3
LSU Discover Program	5
Other LSU Undergraduate Research Programs	5
Work Study	25
Research Assistants	5
Independent Study	6
Research Experiences for Undergraduates	2
Total	53

## Listing of Publications Concerning Instruction (Published items only):

Textbooks - Shorter Works

**DeLong**, **Kristine L.** (2015) "Imperiled Coral Reefs", a short focus box for the textbook *McKnight's Physical Geography: A Landscape Appreciation*, 12<sup>th</sup> Edition, by Darrel Hess.

#### Recordings

Developed and recorded two 5-minute videos titled "Paleoclimate proxies" and "Natural climate variability: Milankovitch to El Niño" for University of Oklahoma's "Managing for a Changing Climate" Massive Open Online course in spring and summer 2016, see <a href="https://www.youtube.com/playlist?list=PLeQQSAEHE5PoblZ-Kfqt9FJDVX77SYBqX">www.youtube.com/playlist?list=PLeQQSAEHE5PoblZ-Kfqt9FJDVX77SYBqX</a>.

#### Instructional Material–Multimedia, Electronic, etc.

Contributed classroom activity to the Climate Literacy and Energy Awareness Network (CLEAN) as part of the CLEAN Climate Workshop, held in June 2011. Activity titled "What Happens to Ice in Water?" Sharon Browning, Cornelia Harris, Kristine DeLong, and Mellie Lewis. <a href="http://cleanet.org/clean/community/activities/oceans.html">http://cleanet.org/clean/community/activities/oceans.html</a>. Activity was accepted into our Peer-Reviewed Reviewed Teaching Activity Collection of the National Association of Geoscience Teachers on January 12, 2018.

Contributed two classroom activities to the Science Education Resource Center (SERC) as part of the Teaching About Earth's Climate Using Data and Numerical Models workshop\_held October 2010. These activities have been selected for inclusion in the CLEAN collection.

- Temperature data and climatology
- Last Glacial Maximum

#### **Professional Service**

Journals Edited, Manuscripts Refereed, Books and Proposals Reviewed - Summary Table

	Assis	stant	Profe	ssor			Asso	ciate	Profe	essor					
Reviewer for	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
<b>Editorial Board</b>						1	1	1	1	1	1	1	1		7
Journals	6	3	5	5	14	12	15	8	9	12	4	12	5	1	111
Books						1						1			2
Panel Reviewer									1						1
<b>Grant Proposals</b>		1	3	1	4	4	4	2	2	2	4		2		29
Promotions									1	1	1				3
Total	6	4	8	6	18	17	20	11	14	16	10	14	8	1	153

## **Membership in Professional Organizations**

American Geophysical Union (AGU), member from 2003 to present

American Academy of Underwater Sciences (AAUS), member from 2004 to present

Association of America Geographers (AAG), member from 2009 to present

Earth Science Woman's Network (ESWN), member from 2005 to present

National Association of Geoscience Teachers (NAGT), member from 2009 to present.

Geochemical Society, member from 2014 to present

International Society for Reef Studies (ISRS), member from 2015 to present

Sigma Xi, full member 2021 to present

#### **Certifications**

American Academy of Underwater Sciences (AAUS) Scientific Diver, 2006 to Present Diving certifications include:

NAUI: Advanced Diver, Rescue Diver, Nitrox Diver, Oxygen Provider, and Diving First Aid

PADI: Open Water Diver and Underwater Naturalist

Institutional Review Board (IRB) for Human Subjects, Louisiana State University

#### **Social Media**

Web sites:

PAST laboratory (2009–present) https://faculty.lsu.edu/pastlab/

LSU South Central Climate Adaptation Science Center www.lsu.edu/sccasc/index.php

MARPA https://marpasite.wordpress.com/

Twitter: @aquablusee https://twitter.com/aquablusee

Facebook: PAST Laboratory www.facebook.com/PASTLab

Research Gate: Kristine L. DeLong

ORCID: Kristine L. DeLong, 0000-0001-6320-421X

Goggle Scholar: Kristine L. DeLong

LinkedIn: http://www.linkedin.com/pub/kristine-delong/40/690/8a0/en

Academia.edu: <a href="https://lsu.academia.edu/kristinedelong">https://lsu.academia.edu/kristinedelong</a>
Loop: <a href="http://loop.frontiersin.org/people/290133/overview">https://loop.frontiersin.org/people/290133/overview</a>

Researcher ID Publons: B-7500-2008