



## Dr. Diane M. Thompson

Department of Geosciences  
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### Chronology of Education

- 2008 – 2013      **Doctor of Philosophy in Geoscience**, Global Change minor (Awarded 12/2013).  
University of Arizona (*Tucson, AZ, USA*)  
*Advisor:* Julia Cole. *Dissertation:* Variability and trends in the tropical Pacific and the El Niño-Southern Oscillation inferred from coral and lake archives
- 2006 – 2008      **Master of Science in Marine Biology** (Awarded 5/2008). Florida Institute of  
Technology (*Melbourne, FL, USA*)  
*Advisor:* Robert van Woesik. *Thesis:* Return periods of anomalous sea-surface  
temperature events inferred from a meta-analysis of thermal proxy records in  
corals: implications for bleaching
- 2002 – 2006      **Bachelor of Science in Marine Biology**, *summa cum laude* (GPA: 4.0). Florida  
Institute of Technology (*Melbourne, FL, USA*)

### Chronology of Employment

- 2018 – present      **Director of Marine Research**, Biosphere 2, University of Arizona
- 2018 – present      **Assistant Professor**, Department of Geosciences, University of Arizona
- 2016 – 2018      **Assistant Professor**, Department of Earth & Environment, Boston University
- 2014 – 2015      **Advanced Study Program Postdoctoral Fellow**, National Center for Atmospheric  
Research (*Boulder, CO, USA*)

### Honors and Awards

- 2020      Outstanding Faculty Award, Department of Geosciences
- 2013      Department of Geosciences Research Award
- 2013      Runner-up Best Oral Presentation in the EarthWeek Plenary Session
- 2012      PEO Scholar Award
- 2011      GPSC Travel Grant
- 2011      Paul S. Martin Scholarship
- 2011      GC-GIDP Dissertation Improvement Grant
- 2010 & 2011      Institute of the Environment Travel Grant
- 2011      Susan G. Earl Galileo Circle Endowed Scholar
- 2010      Wilson Thompson Scholarship
- 2010      Runner-up Best Overall GeoDaze Talk
- 2008 – present      Sigma Gamma Epsilon (SGE) National Honors Society for Earth Sciences
- 2008      Institute for the Study of Planet Earth (ISPE) Scholarship
- 2006      Marine Resource Management Fellowship
- 2006      Faculty's Honor Award

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2006	FIT's Outstanding Senior of the year
2006	American Association of University Women Award for Academic Excellence
2005 & 2006	Distinguished Student Scholar
2006	Outstanding Senior in Marine Biology
2005	Outstanding Junior in Marine Biology
2004 – 2006	Beta Beta Beta Biological Honors Society
2004 – 2006	Phi Eta Sigma National Honors Society
2003 & 2004	Florida Tech Panthers Scholar Athlete Award
2003 & 2004	National Fastpitch Coaches' Association (NFCA) All-American Scholar Athlete
2002 – 2004	Softball scholarship
2002 – 2006	FL Tech Trustee scholarship

## Awarded Grants and Contracts

### Federal

2022	<p><b>Title of Grant:</b> Collaborative Research: Tracing Pacific Ocean circulation and ventilation during the warm Pliocene Epoch</p> <p><b>Commitment</b> (person-month) (Y1/Y2/Y3): 1/1/1</p> <p><b>Role:</b> co-PI</p> <p><b>Other PIs/co-PIs:</b> PI Mariano Remírez, co-PI Linda Hinnov, co-PI Natalie Burls, co-PI Geoffrey Gilleaudeau, co-PI Jordan Abell, co-PI Kaustubh Thirumalai</p> <p><b>Source of support:</b> NSF-OCE-MG&amp;G</p> <p><b>Period covered:</b> 01/01/2023 – 12/31/2025</p> <p><b>Total Award Amount:</b> \$636,106 (UA: \$544,815)</p>
2020	<p><b>Title of Grant:</b> CAREER: Climate-change vulnerability in the Marshall Islands: learning from the past &amp; inspiring a new future</p> <p><b>Commitment</b> (person-month) (Y1/Y2/Y3/Y4/Y5): 1/1/1/0.5/0.5</p> <p><b>Role:</b> PI</p> <p><b>Other PIs/co-PIs:</b> none</p> <p><b>Source of support:</b> NSF-OCE (CAREER)</p> <p><b>Period covered:</b> 6/1/2020 – 5/30/2025</p> <p><b>Total Award Amount:</b> \$1,015,000 (Thompson: \$1,015,000)</p>
2020	<p><b>Title of Grant:</b> Unravelling the Signals in Tropical Pacific Lake Archives: Towards Improved Holocene Hydroclimate Reconstructions</p> <p><b>Commitment</b> (person-month) (Y1/Y2/Y3): 0.25/0.25/0.25</p> <p><b>Role:</b> co-PI</p> <p><b>Other PIs/co-PIs:</b> Marcus Lofverstrom (PI); Mark Bush (co-PI); Donald Rodbell (co-PI)</p> <p><b>Source of support:</b> NSF-AGS-P2C2</p> <p><b>Period covered:</b> 7/1/2020 – 6/30/2023</p>

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**Total Award Amount:** \$751,462 (Lofverstrom/Thompson: \$547,191)

2017-2020

**Title of Grant:** Reconstructing Pacific Trade Wind Variability: Extending and Replicating a Promising New Coral Proxy

**Commitment** (person-month) (Y1/Y2/Y3): 0.25/0.25/0.25

**Role:** PI

**Other PIs/co-PIs:** Jessica Carilli (co-PI)

**Source of support:** NSF-OCE-P2C2

**Period covered:** 7/15/2017 – 12/31/20

**Total Award Amount:** \$344,923 (Thompson: \$300,018 + \$44,905 supplement)

2015-2016

**Title of Grant:** RAPID: Capturing the Signature of a Strong El Nino Event in Galapagos Lake Sediment Records: the 2015/16 El Nino Opportunity

**Commitment** (person-month) (Y1): 1

**Role:** PI

**Other PIs/co-PIs:** none

**Source of support:** NSF-AGS

**Period covered:** 7/15/2015 – 10/31/2016

**Total Award Amount:** \$68,758 (Thompson: \$68,758)

2010-2013

**Title of Grant:** Maximizing the potential of tropical climate proxies through integrated climate-proxy forward modeling

**Commitment** (person-month) (Y1/Y2/Y3): 9

**Role:** co-PI

**Other PIs/co-PIs:** Michael Evans (PI), Julien Emile-Geay (co-PI)

**Source of support:** NOAA Climate Change Data and Detection (CCDD)

**Period covered:** 8/1/2010 – 7/31/2013

**Total Award Amount:** \$410,800 (Thompson: \$23,500)

## Internal

2021

Co-PI, Research, Innovation & Impact 2021 Research Advancement Grants - Production Grants, "Science in Motion: Scaling Broader Impacts of UArizona Resilience Science Through Student-Engaged Filmmaking, Animation, Data Visualization, and Motion Arts Science Pedagogy" (\$15,000)

2018-2019

PI, Assessment Mini Grant, Office of the Provost, Boston University, "Assessing AGREED, a bprogram to cultivate allies and facilitate diversity and inclusion in STEM" (\$3500)

2018-2019

co-PI, Assessment Mini Grant, Office of the Provost, Boston University, "Evaluation of best practices for in-class electronic assessments in introductory Earth and Environment course(s)" (\$4162)

2017-2018

PI, NCAR ASP Faculty Fellowship Program, "The impact of changing temperature and circulation on coral connectivity in the Coral Triangle" (\$5000)

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## Facilitated philanthropy

2023	Private donation to the Biosphere 2 Ocean project ( <u>\$10,789</u> )
2022	Private donation to the Biosphere 2 Ocean project ( <u>\$20,000</u> )
2022	Private donation to the Biosphere 2 Ocean project ( <u>\$30,000</u> )
2020	Private donation to Biosphere 2 Ocean project ( <u>\$20,600</u> )
2020	Private donation to Biosphere 2 Ocean project ( <u>\$20,000</u> )
2019	Private donation to Biosphere 2 Ocean project ( <u>\$24,900</u> )
2019	Biosphere 2 Board, Funding Drive for Biosphere 2 Ocean ( <u>\$17,500</u> )
2018	Private donation to Biosphere 2 Ocean project ( <u>\$22,000</u> )
2018	Donor sponsored, "Biosphere 2 Ocean Independent and Modular Experimental Reef Systems" ( <u>\$23,594</u> )

## Publications / Creative Activity

**Peer-reviewed Manuscripts** § Post-doctoral researcher advisee, † Graduate student advisee, ‡ Undergraduate student advisee, \* Substantially based on work done as a graduate student

Citations: 1621; H-index: 16 (as of March 12, 2023)

<https://scholar.google.com/citations?user=4nzKhncAAAAJ&hl=en>

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### In review

1. Konecky, B., N. McKay, G. Falster, S. Stevenson, M. Fischer, A. Atwood, **D.M. Thompson**, M. Jones, K. DeLong, J. Tyler, B. Martrat, E. Thomas, J. Conroy, S. Dee, L. Jonkers, O. Churakova, Z. Kern, T. Opel, T. Porter, H. Sayani, G. Skrzypek, Iso2k Project Members. (submitted) Temperature-driven changes in the global water cycle during the past two millennia. *PNAS*
  2. †Kojima, A.C., G. Farfan, **D.M. Thompson**, J.E. Carilli. (submitted) Beyond bleaching: thermal stress changes the atomic structure of a shallow-water coral skeleton. *Nature Communications*
  3. D.M. Thompson, J.P. D'Olivo, M. Lofverstrom, E.V. Reed, J.E. Cole, G.L. Foster, M. McColloch, N. Cantin, K. Dyez, and J. Lough. (submitted) Metabolic processes dictate corals' capacity to upregulate their internal growth medium. *Nature Climate Change*
- 

### 2022

33. §Killam, D., **D.M. Thompson**, K. Morgan, M. Russell. (2023) Giant clams as open-source, scalable reef environmental biomonitors. *PLOS ONE*
32. †Fitz, K., H. Montes Jr., **D.M. Thompson**, M. Pinsky (2022) Isolation-by-distance and isolation-by-oceanography in Maroon Anemonefish (*Premnas biaculeatus*). *Evolutionary Applications*
31. †Reed, E.V., **D.M. Thompson**, K. Anchukaitis (2022) Coral-based Sea Surface Salinity Reconstructions and the Role of Observational Uncertainties in Inferred Variability and Trends. *Paleoceanography and Paleoclimatology*, 37(6), e2021PA004371.

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30. **Thompson, D.M.**, J.L. Conroy, B.L. Konecky, S. Stevenson, S., K.L. DeLong, K.L., N. McKay, N., Reed, E.V., L. Jonkers, M. Carré (2022), Identifying hydro-sensitive coral  $\delta^{18}\text{O}$  records for improved high-resolution temperature and salinity reconstructions, *GRL*, doi: 10.1029/2021GL096153.
  29. Bush, M.B., S. Conrad, A. Restrepo, **D.M. Thompson**, M. Lofverstrom, J.L. Conroy (2022) Human-induced ecological cascades and extinction in the Galápagos highlands, *PNAS*, 119 (24) e2203752119
  28. Lofverstrom, M., **Thompson, D.M.**, B.L. Otto-Bliesner, E.C. Brady (2022). The importance of Canadian Arctic Gateways for glacial expansion in Scandinavia. *Nature Geoscience*, 15, 482–488
  27. <sup>†</sup>Chapman, A.U., D.M. Thompson, S.R. Hlohowskyj, J.E. Carilli, G. Gordon, T. Goepfert, <sup>§</sup>H.R. Sayani, T. Marchitto, and K.M. Cobb (2022) A Mechanistic Investigation of the Coral Mn/Ca-based Trade-wind Proxy at Kiritimati. *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2022.04.030.
  26. **Thompson, D.M.**, M. McCulloch, J.E. Cole, <sup>†</sup>E.V. Reed, J. D'Olivo, K. Dyez, M. Lofverstrom, J. Lough, N. Cantin, A.W. Tudhope, <sup>†</sup>A.H. Cheung, L. Vetter, R.L. Edwards (2022). Marginal reefs under stress: physiological limits render Galápagos corals susceptible to warming and acidification. *AGU Advances*. [selected for Editor's highlight]
- 

2021

25. Cheung, A., J.E. Cole, **D.M. Thompson**, L. Vetter, G. Jimenez, A. Tudhope. (2021) Fidelity of the coral Sr/Ca paleothermometer following heat stress in the northern Galápagos. *Paleoceanography and Paleoclimatology*, 36(12), e2021PA004323, doi: 10.1029/2021PA004323
  24. **Thompson, D.M.** (2021) Climate records from corals: a decade of novel insights and innovation, *WIREs Climate Change*, doi: 10.1002/wcc.745 (*Invited*)
  23. Meehl, G.A., J.H. Richter, H. Teng, A. Capotondi, K. Cobb, F. Doblas-Reyes, M.G. Donat, M.H. England, J.C. Fyfe, W. Han, H. Kim, B.P. Kirtman, Y. Kushnir, N.S. Lovenduski, M.E. Mann, W.J. Merryfield, V. Nieves, K. Pegion, S. Sanchez, A. Scaife, D. Smith, A.C. Subramanian, L. Sun, **D.M. Thompson**, C. Ummenhofer, S.-P. Xie (2021), Initialized Earth system prediction from subseasonal to decadal timescales. *Nature Reviews Earth and Environment* (*Invited*)
  22. <sup>†</sup>Reed, E.V., **D.M. Thompson**, J. E. Cole, J. M. Lough, N. E. Cantin, <sup>†</sup>A. Cheung, A. Tudhope, L. Vetter, G. Jimenez, R.L. Edwards (2021) Impacts of Coral Growth on Geochemistry: Lessons from the Galapagos Islands. *Paleoceanography and Paleoclimatology*
  21. <sup>§</sup>Sayani, H.R., **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, <sup>†</sup>A. Chapman, K.M. Cobb (2021). Reproducibility of coral Mn/Ca-based wind reconstructions at Kiritimati Island and Butaritari Atoll. *Geochemistry, Geophysics, Geosystems*
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2020

20. †Loope, G., **D.M. Thompson**, J.E. Cole, J. Overpeck (2020), Is there a low-frequency bias in multiproxy reconstructions of Pacific SST variability? *Quaternary Science Reviews*
  19. †Loope, G., **D.M. Thompson**, J. Overpeck (2020), The spectrum of Asian Monsoon variability: a proxy system model approach to the hydroclimate scaling mismatch, *Quaternary Science Reviews*
  18. Konecky, B.L., N.P. McKay, O. Churakova (Sidorova), L. Comas-Bru, E. Dassié, K. DeLong, G. Falster, M. Fischer, M. D Jones, L. Jonkers, D.S. Kaufman, G. Leduc, S.R. Managave, B. Martrat, T. Opel, A.J. Orsi, J.W. Partin, H.R. Sayani, E.K. Thomas, **D.M. Thompson**, J.J. Tyler, N.J. Abram, A.R. Atwood, J.L. Conroy, Z. Kern, T.J. Porter, S.L. Stevenson, L. von Gunten, and the Iso2k Project Members (2020), The Iso2k Database: A global compilation of paleo- $\delta^{18}\text{O}$  and  $\delta^2\text{H}$  records to aid understanding of Common Era climate. *Earth Syst. Sci. Data*
- 

2019

17. †McManus, L.C., V.V. Vasconcelos, S.A. Levin, **D.M. Thompson**, J.A. Kleypas, F.S. Castruccio, E.N. Curchitser and J.R. Watson (2019). Extreme temperature events will drive coral decline in the Coral Triangle, *Global Change Biology*, 00, 1-14, doi: 10.1111/gcb.14972
  16. Grothe, P.R., K.M. Cobb, G. Liguori, E. Di Lorenzo, A. Capotondi, Y. Lu, H. Cheng, R.L. Edwards, J.R. Southon, G.M. Santos, D.M. Deocampo, J. Lynch-Stieglitz, T. Chen, H.R. Sayani, K. Townsend, M. Hagos, G. O'Connor, **D.M. Thompson**, L.T. Toth, A.L. Moore (2019) Enhanced El Niño-Southern Oscillation variability in recent decades. *Geophysical Research Letters*, doi: 10.1029/2019GL083906
  15. †Reed, E.V., J.E. Cole, J.M. Lough, **D.M. Thompson** and N.E. Cantin (2019) Linking Climate Variability and Growth in Coral Skeletal Records from the Great Barrier Reef, *Coral Reefs*, 1-15, doi: 10.1007/s00338-018-01755-8
- 

2018

14. **Thompson, D.M.**, J. Kleypas, F. Castruccio, E. Curchitser, M. Pinsky, B. Jönsson and J. Watson (2018) Variability in oceanographic barriers to coral larval dispersal: Do currents shape biodiversity?, *Progress in Oceanography*, 165, 110-122, doi: 10.1016/j.pocean.2018.05.007
  13. Jimenez, G., J.E. Cole, **D.M. Thompson**, and A.W. Tudhope (2018) Northern Galápagos corals reveal twentieth century warming in the Eastern Pacific. *Geophysical Research Letters*. doi: 10.1002/2017GL075323
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2017

12. \***Thompson D.M.**, J.L. Conroy, A. Collins, S. Hlohowskyj, J.T. Overpeck, M. Riedinger-Whitmore, J.E. Cole, M.B. Bush, H. Whitney, T.L. Corley, and M. Steinitz Kannan (2017) Tropical Pacific climate variability over the last 6000 years as recorded in Bainbridge Crater Lake, Galápagos. *Paleoceanography*. doi: 10.1002/2017PA003089
  11. Conroy, J.L., **D.M. Thompson**, K.M. Cobb, D. Noone, S. Rea, A.N. LeGrande (2017) Spatiotemporal variability in the  $\delta^{18}\text{O}$ -salinity relationship of seawater across the tropical Pacific Ocean. *Paleoceanography*, doi: 10.1002/2016PA003073
- 

2016

10. \*Ng, J.Y., B. Williams, **D.M. Thompson**, C. Mayne, J. Halfar, E. Edinger, and K. Johnson (2016) Assessing multi-site  $\delta^{18}\text{O}$ -climate calibrations of the coralline alga *Clathromorphum* across the high-latitude Northern Hemisphere, *Geochimica et Cosmochimica Acta*, 194, 279-290, doi: 10.1016/j.gca.2016.08.023.
  9. Kleypas, J. A., **Thompson, D. M.**, Castruccio, F. S., Curchitser, E. N., Pinsky, M. and Watson, J. R. (2016), Larval connectivity across temperature gradients and its potential effect on heat tolerance in coral populations. *Glob Change Biol*, 22: 3539–3549. doi:10.1111/gcb.13347
- 

2015

8. Dee, S., Emile-Geay, J., Evans, M. N., Allam, A., Steig, E. J., & **Thompson, D. M.** (2015). PRYSM: An open-source framework for proxy system modeling, with applications to oxygen-isotope systems. *Journal of Advances in Modeling Earth Systems*, doi: 10.1002/2015MS000447
  7. \***Thompson, D.M.**, J.E. Cole, G. Shen, A. Tudhope, and G. Meehl (2015) Early twentieth-century warming linked to tropical Pacific wind strength. *Nature Geoscience*, doi:10.1038/ngeo2321
- 

2014

6. Conroy, J.L., \***D.M. Thompson**, A. Collins J.T. Overpeck, M.B. Bush, and J.E. Cole (2014) Climate influences on water and sediment properties of Genovesa Crater Lake, Galápagos. *J. of Paleolimnology* 52(4), 331-347, doi: 10.1007/s10933-014-9797-z.
- 

2013

5. Comboul, M., J. Emile-Geay, M.N. Evans, N. Mirnateghi, K.M. Cobb, and **D.M. Thompson** (2013) A probabilistic model of chronological errors in layer-counted climate proxies:

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- applications to annually-banded coral archives, *Clim. Past*, 9, 6077-6123, doi:10.5194/cpd-9-6077-2013.
- Schmidt, G. A., Annan, J. D., Bartlein, P. J., Cook, B. I., Guilyardi, E., Hargreaves, J. C., Harrison, S. P., Kageyama, M., LeGrande, A. N., Konecky, B., Lovejoy, S., Mann, M. E., Masson-Delmotte, V., Risi, C., **Thompson, D.**, Timmermann, A., Tremblay, L.-B., and Yiou, P. (2013) Using paleo-climate comparisons to constrain future projections in CMIP5, *Clim. Past*, 9, 775-835, doi:10.5194/cpd-9-775-2013.
  - Evans, M. N., S.E. Tolwinski-Ward, **D.M. Thompson**, and K.J. Anchukaitis (2013). Applications of proxy system modeling in high resolution paleoclimatology. *Quaternary Science Reviews*, 76, 16-28, doi: 10.1016/j.quascirev.2013.05.024
- 

## 2012 & earlier

- \*Thompson, D.M.**, T.R. Ault, M.N. Evans, J.E. Cole, and J. Emile-Geay, (2011). Comparison of observed and simulated tropical climate trends using a forward model of coral  $\delta^{18}\text{O}$ . *Geophys. Res. Lett.*, 38, L14706, doi:10.1029/2011GL048224.
- Thompson, D.M.** and R. van Woesik (2009). Corals escape bleaching in regions that recently and historically experienced frequent thermal stress. *Proc. R. Soc. B*, 276(1669), 2893-2901, doi: 10.1098/rspb.2009.0591.

## Other publications

- Thompson, D.M.**, Cole, J.E., and K. Morgan (2020). Building Resilient Reefs: Biosphere 2 & Beyond. *Reef Encounter*, pp 66-68. [http://coralreefs.org/wpcontent/uploads/2020/02/REEF\\_ENCOUNTER\\_Dec\\_2019\\_hi-res\\_3.pdf](http://coralreefs.org/wpcontent/uploads/2020/02/REEF_ENCOUNTER_Dec_2019_hi-res_3.pdf)
- Evans, M., **DAPS workshop participants** (2019). Toward community resources for paleoclimate data assimilation, reanalysis, and proxy system modeling. *Past Global Changes Magazine*, 27(2), 88
- Konecky, B., L. Comas-Bru, E. Dassié, K. DeLong, J. Partin, and **Iso2k Project Members** (2018). "Iso2k is investigating Common Era hydroclimate with a new water isotope compilation." *Eos, Transactions, American Geophysical Union*.
- Dassié, E., K. DeLong, H. Kilbourne, B. Williams, N. Abram, L. Brenner, C. Brahmi, K. Cobb, T. Corrège, D. Dissard, J. Emile-Geay, H. Evangelista, M. Evans, J. Farmer, T. Felis, M. Gagan, D. Gillikin, N. Goodkin, M. Khodri, A.C. Lavagnino, M. LaVigne, C. Lazareth, B. Linsley, J. Lough, H. McGregor, I. Nurhati, G. Ouellette, L. Perrin, M. Raymo, B. Rosenheim, M. Sanstrom, B. Schöne, A. Sifeddine, S. Stevenson, **D. Thompson**, A. Waite, A. Wanamaker, H. Wu (2017) Save our Marine Annually-Resolved Proxy Archives (MARPA)! *Eos, Transactions, American Geophysical Union*
- Lofverstrom, M., Thompson, D.M. (2022) Closed ocean gateways in the Canadian archipelago are key to glaciation in Scandinavia, *Nature Research Briefing*, s41561-022-00959-6.
- McGregor, H.V., B. Martrat, M.N. Evans, **D. Thompson**, D. Reynolds, J. Addison and Workshop Participants (2016) Data, age uncertainties and ocean  $\delta^{18}\text{O}$  under the spotlight for Ocean2k Phase 2. *Past Global Changes Magazine*, 24(1), 44, 10.22498/pages.24.1.44



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- Thompson, D.M.**, F. Castruccio, J. Kleypas, E. Curchitser, M. Pinsky, and J. Watson (2014) Variability in reef connectivity in the Coral Triangle. *Reef Encounter*, 29(2), 46-51
- Thompson, D. M.**, T. R. Ault, M. N. Evans, J. E. Cole, J. Emile-Geay, and A. N. LeGrande (2013), Coral-CGCM comparison highlights role of salinity in long-term trends. P. Braconnot, C. Brierley, S.P. Harrison, L. von Gunten (eds) El Niño Southern Oscillation: observation and modeling, PAGES news, 21(2), 60-61.
- Thompson, D.M.**, (2011). Are More Frequent or Intense La Niñas in Our Future? Southwest Climate Blog, Climate Assessment for the Southwest (CLIMAS). <http://www.southwestclimatechange.org/blog/12601>

## Work in Progress

- Black, B.A., et al. (in prep.) Multiproxy perspectives of northeastern Pacific climate variability and extremes, TBD
- Cole, J.E., **D.M. Thompson**, A. Tudhope, K. Dyez, C. Tripp, J. Okun, A. Lawman, J. Conroy, G. Jimenez, L. Edwards (in prep.) Galápagos corals reveal unusually strong modern ENSO compared to the last millennium, *Science*
- Collins, A.F., M.B. Bush, J.L. Conroy, **D.M. Thompson**, J.T. Overpeck (in prep.) Droughts, finches, and the Galápagos Islands: a paleoecological perspective. *PNAS*
- †Edge, D., D.M. Meko, **D.M. Thompson**, V.M. Trouet, B.A. Black (in prep.) Estimating Uncertainties in Climate Reconstructions Derived from Crossdated Archives, *Journal of Tree-Ring Research*
- †Hlohowskyj, S. R., **D.M. Thompson**, A. Chappaz (in revision) A promising new El Niño proxy: molybdenum sedimentary record in Genovesa Lake, Galápagos, *Geophysics, Geochemistry, Geosystems*
- †Hughes, H.P., **D.M. Thompson**, J. Lees, G.L. Foster, and D. Surge (in prep.) SMITE: Reconstructing Sea Surface Temperature from Noisy Multiproxy Coral Records, *Frontiers in Marine Science*
- †Kojima, A.C., **D.M. Thompson**, J. Carilli, T. Marchitto, H. Sayani, K. Cobb (in prep.), A robust 20-century trade-wind reconstruction from coral Mn/Ca, *Frontiers in Marine Science*
- †Kojima, A.C., **D.M. Thompson**, M. Lofverstrom, J. Carilli (in prep.) Tracking Westerly Wind Events via Observed, Modeled, and Reconstructed Wind Records, *TBD*
- †Loope, G., **D.M. Thompson**, J. Overpeck (in revision). South Asian monsoon precipitation over the last 2600 years recorded in Pale Daha sediment, western Nepal, *Palaeogeography, Palaeoclimatology, Palaeoecology*
- †Reed, E.V., **D.M. Thompson** (in prep.) Reconstructing the Pacific Intertropical Convergence Zone during the 20th Century, *Geophysical Research Letters*
- §Roach T.N.F., E. Santoro, K. Morgan, F. Lane, K. Lachapelle, R. Peixoto, D.M. Thompson (in prep.) Multi-scale microbial dynamics across time and space in the Biosphere 2 Ocean. *Ecological Engineering*
- \***Thompson, D.M.**, J.E. Cole, and A.W. Tudhope (in prep.) E-W temperature gradient across the date line reconstructed from a network of Pacific coral records. *Paleoceanography*
- Thompson, D.M.**, J.E. Cole, and K.L. DeLong (in prep.) Impact of calibration methodology on temperature and  $\delta^{18}\text{O}_{\text{sw}}$  trends inferred from coral Sr/Ca and  $\delta^{18}\text{O}$ : towards a unified calibration. *Paleoceanography*

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**Thompson, D.M.**, B. Williams (in prep). Proxy System Model Intercomparison Project: A test of  $\delta^{18}\text{O}$  across latitudes & kingdoms of marine calcifying organisms ( $\delta^{18}\text{O}_{\text{carb}}$ -PSM-MIP). *Journal of Advances in Modeling Earth Systems*.

**Thompson, D.M.**, M.N. Evans, DAPS Working Group (in prep.) A framework for assessing the utility of proxy system models. *Climate of the Past*

**Thompson, D.M.**, J. Kleypas, R. van Woesik (in prep.) The “calm before the spawn”: the ultimate cue of coral spawning across the Coral Triangle? *Coral Reefs*

<sup>‡</sup>Trzybinski, J., **D.M. Thompson**, K. Morgan, D. Dettman, <sup>‡</sup>L. Crocker, T. Roach, F. Lane, E. Santoro (in prep.) Trophic Dynamics on Degraded Coral Reefs: Analyses of Nutrients and Isotope Fractionation in the Biosphere 2 Ocean. *Ecological Engineering*.

<sup>†</sup>Weerabaddana, M.M., **D.M. Thompson**, E.V. Reed, J. Kirk, G. Farfan, A. Kojima, and L. Romero (in prep.). Impact of intraskeletal trace-calcite on the preservation of coral proxy paleoclimate signals, *Paleoceanography and Paleoclimatology*

## Conferences/Scholarly Presentations

<b>Invited</b>	AGU Ocean Visions Conference, Atlanta, GA	2023
<b>Keynote</b>	Cornell Earth and Atmospheric Sciences, Ithaca, NY	2023
<b>Seminars &amp; Colloquia</b>	University of Minnesota Geography, Minneapolis, MN	2023
	ECORD Summer School, MARUM, University of Bremen	2022
	International Conference on Paleoceanography, Norway (Keynote)	2022
	AMQUA Biennial Meeting, Madison, WI (Keynote)	2022
	Yale Department of Earth and Planetary Sciences, New Haven, CT	2022
	Yale Department of Earth and Planetary Sciences, New Haven, CT	2022
	American Geophysical Union, New Orleans, USA (Solicited Oral)	2022
	Geoscience Advisory Board, Tucson, USA	2020
	University of Arizona Geosciences, Tucson, USA	2019
	Geoscience Advisory Board, Tucson, USA	2019
	College of Science Advisory Board, Tucson, USA	2019
	PaleoENSO workshop, Belitung, Indonesia (Keynote)	2019
	European Geophysical Union, Vienna, Austria (Solicited Oral)	2019
	Vanderbilt University, TN, USA	2018
	University of Illinois Urbana-Champaign, IL, USA	2017
	Colby College, Maine, USA	2017
	Speleothem Isotopes Synthesis & Analysis (SISAL) meeting, Stockholm, Sweden	2017
	Australian Institute of Marine Science, Townsville, Australia	2016
	Department of Meteorology, Stockholm University	2016
	Baltic Seminar Series, Baltic Sea Centre, Stockholm University	2016
	Junior Faculty Colloquium, Boston University	2016

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## Conference Presentations:

- § Post-doctoral researcher advisee, † Graduate student advisee, ‡ Undergraduate advisee
- Farfan, G.A., A.C Kojima<sup>2</sup>, **D.M. Thompson**, J. Carilli (2023) A crystal structure perspective on coral skeleton trace element environmental proxies and their reliability under stress conditions, Goldschmidt, Lyon, France
- <sup>†</sup>Weerabaddana, M., **D.M. Thompson**, J. Kirk, E.V. Reed, L. Romero (2022) Impact of Intra-Skeletal Trace Calcite on the Preservation of Coral Paleoclimate Signals, **Poster presentation**, American Geophysical Union Fall Meeting.
- <sup>‡</sup>Benson, Z., A.U. Chapman, **D.M. Thompson**, J. Carilli, T. Marchitto, <sup>§</sup>H. Sayani, K. Cobb (2022) Reconstructing Westerly Wind Bursts and Climate over Abaiang Atoll using Coral Mn/Ca and  $\delta^{18}\text{O}$  Records, **Poster presentation**, American Geophysical Union Fall Meeting.
- Schwartz, D., **D.M. Thompson**, J.E. Cole, L. Romero, J. Lough, C. Langdon, Impact of Induced Stress on the Skeletal Geochemistry of Corals Grown in the Biosphere 2 Ocean, **Poster presentation**, American Geophysical Union Fall Meeting.
- Cole, J.E., D.M. Thompson, A.W. Tudhope, K. Dyez, J. Okun, C. Tripp, J.L. Conroy, R.L. Edwards (2022) Galápagos corals reveal unusually strong modern ENSO compared to the last millennium, **Oral presentation**, American Geophysical Union Fall Meeting.
- Tripp, C.J., J.E. Cole, A.W. Tudhope, K. Dyez, D.M. Thompson, R.L. Edwards (2022) Multiproxy records from Eastern Pacific corals suggest no weakening of ENSO at 4,000 years BP, **Oral presentation**, American Geophysical Union Fall Meeting.
- Abella-Gutiérrez, J. L., M. Lofverstrom, D. Thompson, V. Trouet, and B. A. Black (2022) Three centuries of multidecadal covariance between North Pacific sea surface temperature and western North American hydroclimate, Virtual International Sclerochronology Conference
- Farfan G., <sup>†</sup>A. Chapman, C. Hansel, D. Thompson, J. Post (2022) Applying full-pattern Rietveld refinement analyses to understand the biomineralization mechanism of coral skeletons and how they respond to environmental stress, Invited Keynote, Geological Society of America
- <sup>†</sup>Chapman, A., **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, <sup>§</sup>H.R. Sayani, K.M. Cobb (2022), Coral Mn/Ca: A Window into Pacific Trade-wind Behavior, **Oral presentation**, International Coral Reef Symposium.
- Thompson, D.M.**, J. Cole, K. Morgan, <sup>§</sup>D. Killam, <sup>§</sup>T. Roach, <sup>†</sup>E. Santoro, M. Duhaime, J. Watkins, <sup>†</sup>S. King, R. Peixoto, <sup>‡</sup>J. Trzybinski, J.D. Hackett, C. Sullivan, S. Sandin, E. Muller (2022), “Scaling up” solutions for reef remediation and restoration in the Biosphere 2 Ocean mesocosm. **Oral presentation**, International Coral Reef Symposium.
- <sup>†</sup>King, S., **D.M. Thompson**, J.D. Hackett, J. Cole, K. Morgan, <sup>§</sup>D. Killam, <sup>§</sup>T. Roach, <sup>†</sup>E. Santoro, M. Duhaime, J. Watkins, R. Peixoto, <sup>‡</sup>J. Trzybinski, C. Sullivan, S. Sandin, E. Muller (2022), Using the Biosphere 2 Ocean mesocosm to understand ecosystem processes and restoration, **Oral presentation**, Reef Futures 2022.
- <sup>†</sup>Chapman, A., G.A. Farfan, **D.M. Thompson**, J. Carilli, H. Sayani, T. Marchitto (2022), Mineralogical insights into coral trace element incorporation and stress response, **Oral presentation**, Goldschmidt 2022.
- <sup>†</sup>Hughes, H.P., D. Surge, **D.M. Thompson**, J. Lees, G. Foster (2022), SMITE: A Novel Method for Estimating Sea Surface Temperatures using Scleractinian Corals, **Oral presentation**, Geological Society of America Meeting.

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- <sup>†</sup>Hughes, H.P., D. Surge, **D.M. Thompson**, J. Lees, G. Foster (2022), SMITE: A Novel Method for Estimating Sea Surface Temperatures using Scleractinian Corals, **Oral presentation**, *AGU Ocean Sciences Meeting*.
- <sup>†</sup>Chapman, A.U., G.A. Farfan, **D.M. Thompson**, J.E. Carilli, <sup>§</sup>H.R. Sayani, T.M. Marchitto (2022) Mineralogical insights into coral trace element incorporation and stress. **Oral presentation**, *GeoDaze Symposium, University of Arizona*.
- <sup>†</sup>Weerabaddana, M., **D.M. Thompson**, E.V. Reed, J. Kirk (2022) Quantification of calcite diagenesis in fossil corals using X-ray diffraction. **Poster presentation**, *GeoDaze Symposium, University of Arizona*.
- <sup>‡</sup>Schwartz, D., **D.M. Thompson** (2022) Analysis of the impact of induced stress on the skeletal geochemistry of corals grown in the Biosphere 2 ocean. **Poster presentation**, *GeoDaze Symposium, University of Arizona*.
- <sup>‡</sup>Benson, Z., A.U. Chapman, **D.M. Thompson**, J. Carilli, T. Marchitto, <sup>§</sup>H. Sayani, K. Cobb (2022) Reconstructing Tropical Pacific zonal winds using a coral Mn/Ca proxy. **Poster presentation**, *GeoDaze Symposium, University of Arizona*.
- <sup>‡</sup>Hoegler, B., **D.M. Thompson**, S. Hlohowskyj, J. Bateman, X. Zhang, R. Michener, A. Collins (2022) Reconstructing primary to secondary paleo-productivity using nitrogen isotopes: a case study from Bainbridge Lake, Galápagos, **Oral presentation**, *GeoDaze Symposium, University of Arizona*.
- Chapman, A.U., G.A. Farfan, **D.M. Thompson**, E.S. Bullock, J.E. Carilli, <sup>§</sup>H.R. Sayani, T.M. Marchitto (2022). Mineralogical insights into the coral Mn/Ca-based trade-wind proxy. **Virtual oral presentation**, *Ocean Sciences Meeting*.
- Thompson, **D.M.**, J.L. Conroy, B. Williams, B.L. Konecky, S. Stevenson, K.L DeLong, N. McKay, E.P. Dassie, M. Fischer, L. Jonkers, B. Martrat, Pages Iso2K Project Members. (2021) Salinity information from hydro-sensitive, biogenic marine carbonate  $\delta^{18}\text{O}$  records. **Invited oral presentation**, *AGU Fall Meeting*.
- Williams, B. D. Thompson, A. Cohen, H. Mandell (2021). Evaluating the proxy system modeling approach to high-resolution marine calcifiers across Phyla and environments. **Poster presentation**, *AGU Fall Meeting*
- <sup>†</sup>Reed, E.V., D.M. Thompson, K. Anchukaitis (2021). Coral-based Sea Surface Salinity Reconstructions and the Role of Observational Uncertainties in Inferred Variability and Trends. **Poster presentation**, *AGU Fall Meeting*
- <sup>†</sup>Chapman, A., G. Farfan, D.M Thompson, E. Bullock (2021). Mineralogical insights into the coral Mn/Ca-based trade-wind proxy. **Oral presentation**, *AGU Fall Meeting*.
- <sup>‡</sup>Hoegler, B., D.M. Thompson, S. Hlohowskyj, <sup>‡</sup>J. Bateman, X. Zhang, R. Michener, A. Collins. (2021) Reconstructing primary to secondary paleo-productivity using nitrogen isotopes: a case study from Bainbridge Lake, Galápagos. **Poster presentation**, *AGU Fall Meeting*.
- <sup>‡</sup>Hoegler, B., D.M. Thompson, S. Hlohowskyj, <sup>‡</sup>J. Bateman, X. Zhang, R. Michener, A. Collins (2021). Reconstructing primary to secondary paleo-productivity using nitrogen isotopes: a case study from Bainbridge Lake, Galápagos. **Virtual oral presentation**, *GeoDaze Symposium, University of Arizona*.

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- <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Marchitto, T.M., <sup>§</sup>Sayani, H.R., Cobb, K.M. (2021) Behind-the-scenes of the Coral Mn/Ca-based Trade-wind Proxy: Interpreting the Mn Signal Lag. **Virtual oral presentation at the 14<sup>th</sup> International Coral Reef Symposium.**
- <sup>‡</sup>Bautista, S.R., <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Marchitto, T.M., <sup>§</sup>Sayani, H.R., Cobb, K.M. (2021) Diving Deeper: Replication of Mn/Ca Anomalies Across Abaiang Atoll. **Virtual poster presentation at UA Geosciences GeoDaze Symposium.**
- <sup>‡</sup>Benson, Z.E., <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Marchitto, T.M., <sup>§</sup>Sayani, H.R., Cobb, K.M. (2021) Reconstructing Westerly Wind Bursts From Abaiang Coral Using a Mn/Ca Proxy. **Virtual poster presentation at UA Geosciences GeoDaze Symposium.**
- <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Marchitto, T.M., <sup>§</sup>Sayani, H.R., Cobb, K.M. (2021) Lagoon Morphology: A Key Component of the Coral Mn/Ca-based Trade-wind Proxy. **Virtual oral presentation at UA Geosciences GeoDaze Symposium.**
- <sup>‡</sup>Hoegler, B., Diane Thompson, S. Hlohowskyj, <sup>‡</sup>J. Bateman, X. Zhang, R. Michener, A. Collins (2020). Nitrogen Isotopic Variability of Bainbridge Crater Lake: a Record of Paleo-Productivity? **Virtual poster presentation, oSTEM Annual Conference.**
- <sup>‡</sup>Hoegler, B., Diane Thompson, S. Hlohowskyj, <sup>‡</sup>J. Bateman, X. Zhang, R. Michener, A. Collins (2020) Reconstructing primary to secondary paleo-productivity using nitrogen isotopes: a case study from Bainbridge Lake, Galápagos. **Poster presentation, AGU Fall Meeting.**
- <sup>‡</sup>Hoegler, B., Diane Thompson, S. Hlohowskyj, <sup>‡</sup>J. Bateman, X. Zhang, R. Michener, A. Collins (2020) Replication and dating of nitrogen isotopic record from Bainbridge Lake, Galápagos. Poster presentation, GeoDaze Symposium, University of Arizona, 2020.
- <sup>‡</sup>Bautista, S.R., <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Hlohowskyj, S. R., Gordon, G., Goepfert, T. (2020) Reinforcing the Mn/Ca Trade-wind Proxy: A Closer Look at Manganese Redox in Kiritimati's Lagoon. **Virtual poster at AGU Fall Meeting.**
- <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Hlohowskyj, S. R., Gordon, G., Goepfert, T. (2020) Lagoon Morphology: A Key Component of the Coral Mn/Ca-based Trade-wind Proxy. **Invited virtual poster and lightning talk at AGU Fall Meeting.**
- <sup>†</sup>Chapman A.U., Thompson, D.M., Carilli, J. E., Marchitto, T.M., <sup>§</sup>Sayani, H.R., Cobb, K.M. (2020) Assessing the Reliability of the Coral Mn/Ca-based Trade-wind Proxy: Interpreting the Mn Signal Lag. **Virtual poster at AGU Fall Meeting.**
- <sup>†</sup>Reed E.V., D.M. Thompson, J.E. Cole, L. Vetter, D. Dettman, D. McGee, <sup>‡</sup>M. Snyder, <sup>§</sup>H. Sayani, A. Tudhope (2020) Shifts in the Pacific rain belt recorded in a network of coral paleoclimate records. **Virtual Talk, UArizona GeoDaze Symposium.**
- <sup>‡</sup>Snyder, M., D.M. Thompson, <sup>†</sup>E.V. Reed, L. Vetter, D.L. Dettman, D. McGee, <sup>§</sup>H. Sayani (2020), Western Pacific Fossil Coral Records Reveal Change in Tropical Climate During the Past Millennium, **Poster Presentation, UArizona GeoDaze Symposium, University of Arizona**
- Thompson, D.M.,** J.E. Cole, M.T. McCulloch, J.P. D'Olivo, G. Jimenez, <sup>†</sup>E.V. Reed, N.E. Cantin, J. Lough (2019), Changing coral pH regulation & calcification in marginal environments: new insights from the Galapagos Islands, **Oral Presentation, American Geophysical Union Fall Meeting**
- <sup>‡</sup>Snyder, M., **D.M. Thompson,** <sup>†</sup>E.V. Reed, L. Vetter, D.L. Dettman, D. McGee, <sup>§</sup>H. Sayani (2019), Western Pacific Fossil Coral Records Reveal Change in Tropical Climate During the Past Millennium, **Poster Presentation, American Geophysical Union Fall Meeting**

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- <sup>‡</sup>Trzybinski, J.B., **D.M. Thompson**, K. Morgan, D.L. Dettman, <sup>‡</sup>L. Crocker, <sup>§</sup>T.N.F. Roach, F. Lane, and <sup>†</sup>E. Santoro (2019), Trophic Dynamics on Degraded Coral Reefs: Analyses of Nutrients and Isotope Fractionation in the Biosphere 2 Ocean, **Poster Presentation, American Geophysical Union Fall Meeting**
- <sup>†</sup>Chapman, A., **D.M. Thompson**, S. Hlohowskyj, J. Carilli, T.M. Marchitto, <sup>§</sup>H. Sayani, K.M. Cobb (2019), From Wind to Coral: Assessing the Mechanism Behind the Coral Mn/Ca-based Trade-wind Proxy, **Poster Presentation, American Geophysical Union Fall Meeting**
- <sup>†</sup>Reed, E.V., **D.M. Thompson**, J.E. Cole, L. Vetter, D.L. Dettman, D. McGee, <sup>‡</sup>M. Snyder, <sup>§</sup>H. Sayani, A.W. Tudhope (2019), ENSO's Impact on the Pacific Intertropical Convergence Zone: New Insights from a Network of Pacific Coral Records, **Poster Presentation, American Geophysical Union Fall Meeting**
- <sup>†</sup>Reed E.V., **D.M. Thompson**, J.E. Cole, L. Vetter, D. Dettman, D. McGee, <sup>‡</sup>M. Snyder, <sup>§</sup>H. Sayani, A. Tudhope. The Pacific Intertropical Convergence Zone reconstructed from coral paleoclimate records. US CLIVAR Workshop on Water Isotopes and Climate, October 2019. Poster.
- Falster, G., B.L. Konecky, N. McKay, A.R. Atwood, J.L. Conroy, M. Fischer, M. Jones, L. Jonkers, S. Stevenson, **D.M. Thompson**, J.J. Tyler, and Pages Iso2K Project Members (2019), New insights into spatial and temporal dynamics of the global water cycle from the Iso2k database, **Oral Presentation, American Geophysical Union Fall Meeting**
- D.M. Thompson, et al.** (2018) The “calm before the spawn”: the ultimate cue of coral spawning across the Coral Triangle?, **Oral Presentation, Ocean Sciences Meeting**
- <sup>§</sup>Sayani, H.R., **D.M. Thompson, et al.** (2018) Constraining 20<sup>th</sup> Century Pacific Trade-Wind Variability Using Coral Mn/Ca, **Oral Presentation, American Geophysical Union Fall Meeting**
- <sup>†</sup>Reed, E.V., **D.M. Thompson**, J.E. Cole, J. Lough, L. Vetter, M. Snyder, G. Jimenez, A.W. Tudhope, R.L. Edwards, N.E. Cantin (2018) Paired Density and Geochemistry Records Demonstrate the Combined Impact of Skeletal Density and Architecture on the Geochemistry of Modern and Sub-Fossil Corals from the Galápagos Islands, **Poster Presentation, American Geophysical Union Fall Meeting**
- Thompson, D.M., J. Conroy, B. Konecky, N. McKay, S. Stevenson, Iso2k Project Members (2018) Indo-Pacific hydroclimate change over the past 200 years: new insights from the Iso2k synthesis, **Oral Presentation, Goldschmidt**
- <sup>†</sup>Reed, E.V., **D.M. Thompson**, J.E. Cole, J. Lough, L. Vetter, M. Snyder, G. Jimenez, N.E. Cantin (2018) Paired Geochemistry and Density Records from Fossil Corals: A Case Study from the Galápagos Islands, **Oral Presentation, Goldschmidt**
- <sup>†</sup>Cheung, A.H., J.E. Cole, L. Vetter, G. Jimenez, **D.M. Thompson**, A.W. Tudhope (2018) Multi-proxy reconstructions of the Eastern Equatorial Pacific: measuring Sr/Ca, Ba/Ca, and Li/Mg in modern corals using ICP-OES, **Oral Presentation, Goldschmidt**
- Thompson, D.M.**, Jessica L. Conroy, A. Wyman, and D. Read (2017). Spatial  $\delta^{18}\text{O}_{\text{sw}}$ -SSS relationship across the western tropical Pacific Ocean, **Poster Presentation, American Geophysical Union Fall Meeting**
- Conroy, J.L., **D.M. Thompson, et al.** (2017) Salinity information in coral  $\delta^{18}\text{O}$  records, **Poster Presentation, American Geophysical Union Fall Meeting**

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- Konecky, B.L., *et al.* Global Synthesis of Common Era Hydroclimate using Water Isotope Proxies from Multiple Archives: First Results from the PAGES Iso2k Project, **Oral Presentation**, *American Geophysical Union Fall Meeting*
- Jimenez, G., J.E. Cole, L. Vetter, **D.M. Thompson**, A. Tudhope (2017) A preindustrial to present record of ENSO from Darwin Island, Galápagos: constraining Eastern Pacific decadal variability, **Oral Presentation**, *American Geophysical Union Fall Meeting*
- †Cheung, A., J. Cole, L. Vetter, G. Jimenez, **D.M. Thompson**, A. Tudhope (2017). Multi-proxy Reconstructions of the Eastern Equatorial Pacific: Measuring Sr/Ca, Ba/Ca, and Li/Mg in Modern Corals Using ICP-OES, **Poster Presentation**, *American Geophysical Union Fall Meeting*
- Konecky, B., **D.M. Thompson**, *et al.* (2017). Iso2k: A global synthesis of Common Era hydroclimate using water isotope proxies from multiple archives, **Poster Presentation**, Paleoclimate Modeling Intercomparison Project (PMIP) meeting, Stockholm, Sweden.
- Thompson, D.M.**, H. Goosse, M. Evans, S. Khatiwala (2017). Proxy System modelling and data assimilation in paleoclimatology, **Oral Presentation**, Paleoclimate Modeling Intercomparison Project (PMIP) meeting, Stockholm, Sweden.
- Thompson, D.M.** (2017) Towards improved coral proxy system models (PSMs), **Oral Presentation**, *Proxy System modelling and data assimilation in paleosciences*, Louvain-la-Neuve, Belgium.
- Williams, B., **D.M. Thompson**, \*M. Crowley, \*M. Moulton, \*J. Ng, J. Halfar (2016) A Simple Proxy System Model of High-Latitude Encrusting Algal Oxygen Isotope Composition ( $\delta^{18}O$ ), **Poster Presentation**, *American Geophysical Union Fall Meeting*
- Curchitser, E., Kleypas, J.A., F.S. Castruccio, E. Drenkard, **D.M. Thompson**, and M.L. Pinsky (2016), Climate, bleaching and connectivity in the Coral Triangle, **Invited Presentation**, *American Geophysical Union Fall Meeting*
- Sayani, H.R., *et al.* (2016) Coral Ensemble Estimates of Central Pacific Mean Climate During the Little Ice Age, **Poster Presentation**, *American Geophysical Union Fall Meeting*
- Grothe, P.R., *et al.* (2016) Robust evidence for forced changes in ENSO: from the mid-Holocene to the 21st century, **Oral Presentation**, *American Geophysical Union Fall Meeting*
- Hitt, N.T., *et al.* (2016) An ensemble approach to reconstructing 20th century climate trends in data-sparse regions of the tropical Pacific using young fossil corals, **Oral Presentation**, *American Geophysical Union Fall Meeting*
- Thompson, D.M.**, J. Kleypas, F. Castruccio, J. Watson, E. Curchitser and M. Pinsky (2016) Variability in reef connectivity in the Coral Triangle. **Oral Presentation**, *International Coral Reef Symposium*
- Kleypas, J., D.M. Thompson, F.S. Castruccio, E. Curchitser, M. Pinsky, and J. Watson (2016) Potential Role of Larval Connectivity in Coral Temperature Thresholds. **Oral Presentation**, *International Coral Reef Symposium*

## Teaching and mentoring

Ocean Sciences (GS412A, GS412B)

Allies for Gender/Sexuality, Racial & Ethnic Equity and Diversity

Climate Model—Paleoclimate “Proxy” Synthesis

Spring 2020 & 2022

Spring 2021 & Fall 2021 & Fall 2022

Fall 2020

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Trace Elements in Biogenic Carbonates (GS596C) Fall 2019  
Modes of Climate Variability (BU ES520 / GEOS 483/583) Spring 2018; 2018; 2021; 2023  
Climate & Earth System Science (ES107) Fall 2017; Spring 2017  
Guest lectures in:  
Teaching and Learning Seminar (ES699)  
Paleoclimatology (ES351)

## Doctoral or Masters Advisees (\*Primary advisor, † Co-advisor)

Mudith Weerabaddanage\*, PhD, University of Arizona 2021-  
Alice Chapman\*, PhD, University of Arizona 2018-  
Garrison Loope\*, PhD, University of Arizona 2018-2019  
Emma Reed\*, PhD, Boston University / University of Arizona 2016-2021

## Doctoral or Masters Exam Committees :

Tumaini Kamulali, PhD, University of Arizona 2021-  
Hailey Bowers, MS, Ecology and Evolutionary Biology, University of Arizona 2021-2022  
Asiya Badarunnisa Sainudeen, PhD, University of Arizona 2021-  
Samantha King, PhD, Ecology and Evolutionary Biology, University of Arizona 2021-  
Maya Prabhakar, MS, University of Arizona 2020-2022  
Valerie Rubalcava, MS, University of Arizona 2020-2021  
Hunter Hughes, University of North Carolina 2020-  
Tumaini Kamulali, MS, University of Arizona 2019-2021  
Pablo Martinez Sosa, PhD, University of Arizona 2019-2022  
David Edge, PhD, University of Arizona 2019-2022  
Derek Hoffman, MS, University of Arizona 2019  
Sara Cannon, PhD, University of British Columbia 2018-2022  
Erika Santoro, PhD, Federal University of Rio de Janeiro, Brazil 2018-2019  
Alexey Shiklomanov, PhD, Boston University 2016-2018

## Undergraduate mentoring (\*Primary advisor, † Co-advisor)

Caitlin Salanga, Undergraduate Internship, University of Arizona 2022-  
Jeffrey Carvalho, Undergraduate Research, University of Arizona 2022-  
Abigael Jordan, REU Intern, Biosphere 2, University of Arizona 2022  
Aiden Kavanagh, Undergraduate Research, Biosphere 2, University of Arizona 2022-  
Anacarolina Espinosa, Undergraduate Intern, Biosphere 2 University of Arizona 2022-  
Danielle Schwartz, Undergraduate Research & Honors Thesis,  
University of Arizona 2021-  
Tanner Johnson, Undergraduate Research, University of Arizona 2022-  
Ash Wiscovitch, Undergraduate Intern, University of Arizona 2021-  
Jeri Wilcox\*, Undergraduate Research, Biosphere 2, University of Arizona 2021  
Cat McNamara\*, Undergraduate Research, Biosphere 2, University of Arizona 2021-2022  
Brianna Hoegler\*, Undergraduate Research & Honors Thesis,  
University of Arizona 2019-2022  
Sophia Bautista\*, Undergraduate Research, University of Arizona 2019-2021  
Zoe Benson\*, Undergraduate Research, University of Arizona 2019-



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Hannah Mandell†, Undergraduate Research, Pomona College	2019-
Anne Cohen†, Undergraduate Research, Scripps College	2019-2021
Jake Trzybinski*, REU Intern, Biosphere 2, University of Arizona	2019
Ashlyn Bauman*, Honors Internship, Biosphere 2, University of Arizona	2019
Maria Snyder*, Undergraduate Research, University of Arizona	2018-2020
Amber Petrie*, ASEMS program, University of Arizona	2018
Juliette Bateman*, Undergraduate Research, Boston University	2017-2018
Rachel Jiang*, Undergraduate Research, Boston University	2017-2018
Michael Crowley†, Undergraduate Research, Claremont-McKenna	2016
Madeline Moulton†, Undergraduate Research, Claremont-McKenna	2015-2016
Jessica Ng†, Undergraduate Research, Claremont-McKenna	2014-2016
Postdoctoral mentoring	
Dr. Emma Reed*, Postdoctoral Fellow, University of Arizona	2021-2022
Dr. Daniel Killam*, Postdoctoral Fellow, Biosphere 2, University of Arizona	2020-
Dr. Ty Roach*, Postdoctoral Fellow, Biosphere 2, University of Arizona	2018-2019
Research technicians, supervising and mentoring (*Primary supervisor, †Co-supervisor)	
Luz Romero, Research Technician, University of Arizona	2021-
Renee Grambihler†, Research Technician, University of Arizona	2022-
Lia Crocker, Research Technician†, University of Arizona	2022-
Brandon Widener†, Research Technician, University of Arizona	2020-2021
Dr. Lael Vetter†, Research Technician, University of Arizona	2020-
Megan Russell, Research Specialist, Biosphere 2, University of Arizona	2020-2021
Katie Morgan†, Manager of Marine Systems, Biosphere 2, University of Arizona	2018-2021
Franklin Lane†, Research Technician, Biosphere 2, University of Arizona	2018-2020
Kara Lachapelle†, Research Technician, Biosphere 2, University of Arizona	2019-2020

## Service and Outreach

### Local/State Outreach

College of Science Lecture Series, Invited Keynote

Biosphere 2 Virtual Reality Experiences

Biosystems Engineering Club, University of Arizona (Faculty mentor)

Biosphere 2 Director's Tour (~1/month, on demand)

College of Science Café, Tucson Botanical Gardens

Lead Developer of a community of practice to promote diversity, equity and inclusion in STEM at Boston University and University of Arizona: UA-AGREED and BU-AGREED (Allies for Gender/Sexuality, Racial & Ethnic Equity and Diversity)

### National/International Outreach

Biosphere 2 World Ocean Day 2020

Biosphere 2 Virtual EarthFest 2020

New England Aquarium Dive Club Presentation

Taste of Science, Boston

# Dr. Diane M. Thompson

Department of Geosciences

<https://uathompsonlab.com/>

## Departmental Committees

Research Technician Search Committee	2022
Mineralogy Search Committee	2020-2021
Geodaze, Poster Judge	2019, 2020
Diversity, Equity, and Inclusion Committee, Chair	2019-present
Geoscience Board Field Trip, Planning Committee	2019
Geoscience Advisory Board Meeting, presentation	March 2019
Geodaze, Field Trip at the Biosphere 2	2019
Code of Conduct Committee	2019
Vision Committee	2018-2020
Earth & Environment Diversity & Inclusion Communications Committee	2017-2018
Dive Control Board, Boston University	2017-2018

## College Committees

College of Science Lecture Series Planning Committee	Fall 2020
College of Science Diversity, Equity, and Inclusion Committee	Summer 2020
College of Science Advisory Board Meeting, presentation	January 2019

## University Committees

UA-UWA Partnerships, Strategic Planning Leadership Team	2021-present
UA-CNRS Partnerships, Strategic Planning Workshop	2022
COP26: UArizona representative at the UN Conference of the Parties 26	2021
Honors College, Faculty Mentor for Flinn Scholars Program	2019-present
Brown Foundation, Bi-Annual Report	2018-present
Biosphere 2 Board, Bi-Annual Meeting Reports & Presentations	2018-present
Director of Marine Research, Biosphere 2	2018-present

## Other Committees

American Quaternary Association, Awards Committee	2019, 2022
American Quaternary Association Diversity, Equity, and Inclusion Committee	2020-present
American Quaternary Association Marine Geoprocesses Councilor	2018-2022
Session Co-chair, American Geophysical Union Fall Conference	2018
Contributor to the PAGES Ocean2k and Iso2k synthesis of Paleoclimate data spanning the past two millennia ( <a href="http://www.pages-igbp.org/workinggroups/2knetwork/intro">http://www.pages-igbp.org/workinggroups/2knetwork/intro</a> ). Leader of the coral archive Iso2k synthesis team	2015-present

## Referee

*Biogeoscience; Climate of the Past; Coral Reefs; Deutsche Forschungsgemeinschaft (German Funding Agency); Earth-Science Reviews; Ecography; French National Research Agency; Geology; Geophysical Research Letters; Global Change Biology; GSA Today; Journal of Biogeography; Marine Chemistry; Nature; Natural Environment Research Council; Nature Geoscience; Nature Communications; Nature Scientific*

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*Reports; NSF/P2C2; Paleoceanography and Paleoclimatology; Palaeogeography, Palaeoclimatology, Palaeoecology; Progress in Oceanography; Quaternary International; Reef Encounter; Science; Nature Scientific Reports; Science of the Total Environment; Geochimica et Cosmochimica Acta*

## **Media (selected recent)**

UA News ([link](#))

Conversation with Cantwell, Panel Discussion

Fox News, Interview

NPR AZPM, Interview

One World Network, Interview

Interview for Documentary Film “An Inupiaq Life”

Bill Buckmaster Radio Show, Interview

Chris DeSimone Live Radio, Interview

Biosphere 2 Podcast, episode 006: “*Ocean in a bottle*”

National Public Radio, Filming / Interview

BBC Media Works, Filming / Interview

*Nature*, Interview

Al Roker Discovery Show, Filming / Interview

Podcast guest: “*Plucky Ladies: Exploring female curiosity, perseverance, and feats of excellence*”