Dr. Diane M. Thompson

Department of Geosciences
1040 E. 4th Street
Tucson, Arizona 85721

Gould-Simpson, Room 345
Office (520) 626-2341
Fax (520) 621-2672
thompsod@arizona.edu
https://uathompsonlab.com/

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** (Awarded 5/2006), *summa cum laude (GPA: 4.0).* Florida Institute of Technology *(Melbourne, FL, USA)*

Chronology of Employment

2023 – present	**Associate Professor**, Department of Geosciences, University of Arizona
Jan 2025	*FMLA Leave*
Fall 2025	*FMLA Leave*
Fall 2023	*FMLA Leave*
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)*

Professional Experience & Certifications

2003	**NAUI Open Water**
2003	**AAUS Scientific Diver**, Florida Institute of Technology
Summer 2004	**Field course** in Field Biology and Ecology- Coral Reefs: Abaco, Bahamas
Summer 2005	**Field courses** in Reef Ecology of Australia and Australian Ecosystems
2005	**Undergraduate Research**, advisor Dr. Robert van Woesik: "Modeling the influence of sea-surface temperature and solar insolation on coral bleaching and spawning"
Spring - Summer 2007	**Field Assistant**, World Bank-Global Environment Facility, Puerto Morelos, Mexico
Winter 2006	**Marine Resources Population Dynamics Workshop**, NOAA-NMFS
2010, 2015, 2024	**Field assistant**, sampling modern and fossil corals from Wolf Island, Galapagos. Contributed to *four* coral drilling trips, on land and underwater.

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

2009-2013	**Field assistant**, monitoring karst processes and cave dripwaters for improving speleothem-based climate reconstructions from southern Arizona. ~Weekly field work to a network of caves in Southern Arizona during this time.
2009-2024	**Field leader and coordinator**, monitoring and sediment sample collection at 3 remote crater lakes in the Galapagos Archipelago. Led *seven* remote field expeditions with diverse teams during these years.
Summer 2011	**Lab manager**, Coral and Cave Paleoclimatology Laboratory, University of Arizona. Duties included: maintaining, troubleshooting, and running samples on a Micromass Optima mass spectrometer and an inductively coupled atomic emission spectrometer (ICP-AES); ordering supplies; and coordinating duties of students, employees, and visiting scientists in the lab.
2014	**Expert Witness Training Academy**
2016	**PADI Rescue Diver**
2016-2024	**Field leader and coordinator**, sampling modern and fossil corals from the Republic of the Marshall Islands. Led *three* field expeditions during this time, funded by start-up and NSF-CAREER.
2017	**US Science Support Program (USSSP) sponsored School of Rock**- "Diversifying the Next Generation Geoscience Mentor Community Through Training Aboard the JOIDES Resolution."
2018	**Advanced Expert Witness Training Academy**
2024	**PADI Dive Master**
	Over 200 hours of diving & more than 100 hours of scientific diving (including 30+ hours of underwater drilling experience).

Honors and Awards

2022	Nominated for the Five Star Faculty Award (not selected)
2022	Nominated for the Graduate Teaching & Mentoring Award, Graduate College (not selected)
2020	Outstanding Faculty Award, Department of Geosciences
2017	US Science Support Program (USSSP) sponsored School of Rock- "Diversifying the Next Generation Geoscience Mentor Community Through Training Aboard the JOIDES Resolution." Transit between Subic Bay and Townsville on the *JOIDES Resolution* (10-27 July, 2017).
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

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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
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

2023	**Title of Grant:** Collaborative Research: Millennial-Length Histories of NE Pacific **Commitment** (person-month) (Y1/Y2/Y3): 1/1/1 **Role:** co-PI **Other PIs/co-PIs**: Bryan Black (PI), Marcus Loefverstroem (co-PI) **Source of support**: NSF-EAR **Period covered**: 6/1/2023– 5/31/2026 **Total Award Amount**: $639,466
2023	**Title of Grant:** Collaborative Research: Tracing Pacific Ocean circulation and ventilation during the warm Pliocene Epoch **Commitment** (person-month) (Y1/Y2/Y3): 0.75/0.75/0 **Role:** co-PI **Other PIs/co-PIs**: Kaustubh Thirumalai (co-PI) **Source of support**: NSF-EAR **Period covered**: 1/1/2022 – 12/31/2025 **Total Award Amount**: $544,815
2022	**Title of Grant:** REU Site: From the Clouds to the Core: A Place-Based REU for Southwestern US Community/Tribal College Students to Increase Under-Represented Group Recruitment to the Geosciences **Commitment** (person-month) (Y1/Y2/Y3): 0/0/0

Role: unfunded collaborator
Other PIs/co-PIs: Andrew Cohen, Kaustubh Thirumalai
Source of support: NSF-EAR
Period covered: 11/1/2022 – 10/31/2025
Total Award Amount: $402,893 (Thompson: $0)

2021 **Title of Grant:** REU Site: Environmental and Earth Systems Research at Biosphere 2
Commitment (person-month) (Y1/Y2/Y3): 0/0/0
Role: unfunded collaborator
Other PIs/co-PIs: Katerina Dontsova, Kevin Bonine
Source of support: NSF-EAR
Period covered: 9/1/2021 – 8/31/2026
Total Award Amount: $868,269 (Thompson: $0)

2020 **Title of Grant:** CAREER: Climate-change vulnerability in the Marshall Islands: learning from the past & inspiring a new future
Commitment (person-month) (Y1/Y2/Y3/Y4/Y5): 1/1/1/0.5/0.5
Role: PI
Other PIs/co-PIs: none
Source of support: NSF-OCE (CAREER)
Period covered: 6/1/2020 – 5/31/2025
Total Award Amount: $1,015,000 (Thompson: $1,015,000)

2020 **Title of Grant**: Unravelling the Signals in Tropical Pacific Lake Archives: Towards Improved Holocene Hydroclimate Reconstructions
Commitment (person-month) (Y1/Y2/Y3): 0.25/0.25/0.25
Role: co-PI
Other PIs/co-PIs: Marcus Lofverstrom (PI); Mark Bush (co-PI); Donald Rodbell (co-PI)
Source of support: NSF-AGS-P2C2
Period covered: 7/1/2020 – 6/30/2023
Total Award Amount: $751,462 (Lofverstrom/Thompson: $547,191)

2020 **Title of Grant:** Collaborative Research: Improving and calibrating a Tunable Infrared Laser Direct Absorption Spectroscopy (TILDAS) system for clumped isotope analysis of CO_2
Commitment (person-month) (Y1/Y2/Y3): 0/0/0
Role: unfunded collaborator
Other PIs/co-PIs: David Dettman, Jay Quade
Source of support: NSF-EAR
Period covered: 3/15/2020 – 2/28/2022
Total Award Amount: $449,322 (Thompson: $0)

2017 **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

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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)

State

2024
Title of Grant: Climate-change vulnerability in the Marshall Islands: learning from the past & inspiring a new future
Commitment (person-month): N/A
Role: PI
Other PIs/co-PIs: Aaron Bugaj
Source of support: Research, Innovation & Impact Production Grant
Period covered: July 2024 - Dec 2024
Total Award Amount: $20,000

2021
Title of Grant: Science in Motion: Scaling Broader Impacts of UArizona Resilience Science Through Student-Engaged Filmmaking, Animation, Data Visualization, and Motion Arts Science Pedagogy
Commitment (person-month): N/A
Role: co-PI
Other PIs/co-PIs: Kevin Bonine, Nicole Antebi, Scott Saleska, Greg Barron-Gafford
Source of support: Research, Innovation & Impact 2021 Research Advancement Grants
Period covered: 12/16/2021-8/31/2022
Total Award Amount: $15,000

2018
Title of Grant: Assessing AGREED, a program to cultivate allies and facilitate diversity and inclusion in STEM
Commitment (person-month): N/A
Role: PI
Other PIs/co-PIs: none
Source of support: Assessment Mini Grant, Office of the Provost, Boston University
Total Award Amount: $3500

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

2018 **Title of Grant:** Evaluation of best practices for in-class electronic assessments in introductory Earth and Environment course(s)
Commitment (person-month): N/A
Role: co-PI
Other PIs/co-PIs: Christine Regalla
Source of support: Assessment Mini Grant, Office of the Provost, Boston University
Total Award Amount: $4162

2017 **Title of Grant:** The impact of changing temperature and circulation on coral connectivity in the Coral Triangle
Commitment (person-month): N/A
Role: PI
Other PIs/co-PIs: none
Source of support: NCAR ASP Faculty Fellowship Program
Total Award Amount: $5000

Private foundation & facilitated philanthropy

2024 Private donation to the Biosphere 2 Ocean project ($66,768)
2023 Private donation to the Biosphere 2 Ocean project ($20,000 gift)
2022 Private donation to the Biosphere 2 Ocean project ($20,000 gift)
2022 Private donation to the Biosphere 2 Ocean project ($30,000 gift)
2021 Private Donation to the Biosphere 2 Ocean project ($33,000 gift)
2021 Property gift of Haury Foundation to the Biosphere 2 Ocean project ($2,000,000 gift)
2020 Private donation to Biosphere 2 Ocean project ($20,600 gift)
2020 Private donation to Biosphere 2 Ocean project ($20,000 gift)
2019 Private donation to Biosphere 2 Ocean project ($24,900 gift)
2019 Biosphere 2 Board, Funding Drive for Biosphere 2 Ocean ($17,500 gift)
2018 Private donation to Biosphere 2 Ocean project ($22,000 gift)
2018 Donor sponsored, “Biosphere 2 Ocean Independent and Modular Experimental Reef Systems” ($23,594)

Publications / Creative Activity

Refereed Journal Articles ° Post-doctoral researcher advisee, Graduate student advisee, or Undergraduate student advisee; * Substantially based on work done as a graduate student

Citations: 2869; H-index: 21; i10-index: 33 (as of May 29, 2026)
https://scholar.google.com/citations?user=4nzKhncAAAAJ&hl=en

In review / revision

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

1. °Reed, E.V., **D.M. Thompson,** M. Weerabaddana, J.E. Cole, D.L. Dettman, J.M. Lough, N.E. Cantin, G. Frank, D. McGee, E. Kabua, F. Edwards, D. DeBrum-Kattil, L. Vetter, J. Kirk, A.W. Tudhope (submitted) Coral Paleoclimate Reconstructions Reveal Shifts of the West Pacific Intertropical Convergence Zone during the 20th Century, *Geophysical Research Letters*
2. **Thompson, D.M.,** L. Crocker, R. Grambihler, S. King, D. Killam, K. Morgan, T. Roach, J. Cole, J. Hackett, E.M. Muller, S. Sandin, V. Weis (submitted) The Biosphere 2 Ocean mesocosm: (re)engineered for state-of-the-art coral reef resilience experiments, *Ecological Applications*
3. **Thompson, D.M**., J.P. D'Olivo, M. Lofverstrom, E.V. Reed, J.E. Cole, G.L. Foster, M. McColloch, N. Cantin, K. Dyez, and J. Lough. (in revision) Metabolic processes dictate corals' capacity to upregulate their internal growth medium. *AGU Advances*
4. Sanchez, S.C., F. Zhu, C. Saenger, **D.M. Thompson** (in revision) Paleo data assimilation of coral δ18O Part 2: 20th century trends and variability of the tropical Pacific, *Paleoceanography and Paleoclimatology*
5. Sanchez, S.C., F. Zhu, C. Saenger, **D.M. Thompson** (in revision) Paleo data assimilation of coral δ18O Part 1: Best practices and uncertainties, *Paleoceanography and Paleoclimatology*
6. †Kojima, A.C., G. Farfan, **D.M. Thompson**, J.E. Carilli. (in revision) Beyond bleaching: thermal stress changes the atomic structure of a shallow-water coral skeleton. *Nature Communications*
7. Cole, J.E., **D.M. Thompson**, K. Dyez, C. Tripp, A.W. Tudhope, M. Lofverstrom, S. Stevenson, J. Okun, A. Lawman, J. Conroy, J. Overpeck, G. Jimenez, R. Lawrence Edwards (in review) Recent intensification of eastern Pacific ENSO is unprecedented across the last millennium. *Science*

2026

42. Farfan, G.A, A.C. Kojima, **D.M. Thompson**, A.M. Quattrini (accepted) Global sea surface salinity impacts on trace elements, crystallography, and organics in massive Porites coral skeletons from a museum collection. *Coral Reefs*
41. Tripp, C.J., J.E. Cole, A. Tudhope, K.A. Dyez, **D.M. Thompson**, R.L. Edwards (accepted) Eastern Pacific Corals Track Robust ENSO Variability and Stronger La Niña Events 4,100 Years Before Present. *Geophysical Research Letters*
40. Thomas DeCarlo, Oliwia Jasnos, Avi Strange, Andreas Andersson, Angel Bautista VII, Sierra Bloomer, Isaiah Bolden, Maartje Bosman, Thomas Brachert, Giulia Braz, Gabriel Cardoso, Juan Carricart-Ganivet, Jessica Carilli, Karl Castillo, Leticia

Cavole, Sylvia Chan, Xuefei Chen, Ben Chomitz, Thierry Corrège, Travis Courtney, Mikayla Diegan, Juan Pablo D'Olivo, Robert Dunbar, Ian Enochs, Ludmilla Falsarella, Thomas Felis, Gabriela Estrada, Brighton Hedger, Shijian Hu, Seamus Jameson, stacy jupiter, Paul Kench, Diego Kersting, Ke Lin, Yi-Wei Liu, Carla Lorigados, Derek Manzello, Malcolm McCulloch, Miguel Mies, Rodrigo Moura, Ferdinand Oberle, Natan Pereira, Nancy Prouty, Riovie Ramos, Haojia Ren, Emma Ryan, **Diane Thompson**, Lauren Toth, Marina Vergotti, Jody Webster, and Jens Zinke (submitted) CoralCache: a virtual coral core repository for transparent and reproducible annual growth rate analyses. *Earth System Science Data*

39. °Hlohowskyj, S. R., **D.M. Thompson**, S. Gowrisankaran, M. Lofverstrom, J.L. Conroy, A. Badarunnisa Sainudeen, D.T. Rodbell, M. Bush (in press) El Niño events recorded by redox sensitive trace elements in sedimentary records from Genovesa Lake, Galápagos, *Science of the Total Environment*

38. Sainudeen, A.B., M. Lofverstrom, **D.M. Thompson,** M. Bush, D. Rodbell, M. Cook, S. Hlohowskyj (2026) Representation of South American summer precipitation characteristics in the CMIP6 pre-industrial simulations. *Journal of Climate*

2024

37. Williams, B., **D.M. Thompson**, A.L. Cohen, H. Mandell (2024) Proxy System Model Intercomparison Project: A test of d18O across latitudes & kingdoms of marine calcifying organisms ("d18Ocarb-PSM-MIP"). *Paleoceanography and Paleoclimatology*
36. Weerabaddana, M., **D.M. Thompson,** E. Reed, G. Farfan, J. Kirk, A. Kojima, D. Dettman, K. De Brum, E. Kabua, F. Edwards (2024), Impact of intra-skeletal calcite on the preservation of coral geochemistry and implications for paleoclimate reconstruction. *Paleoceanography and Paleoclimatology*
35. †Hughes, H.H., **D.M. Thompson**, G.L. Foster, J. Lees, D. Surge, C. Standish (2024). Synthetic and Practical Reconstructions of SST and seawater pH Using the Novel Multiproxy SMITE Method, *PLOS ONE*

2023

34. 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. (2023) Globally coherent water cycle response to temperature change during the past two millennia. *Nature Geosciences*

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

33. °Killam, D., **D.M. Thompson**, K. Morgan, M. Russell. (2023) Giant clams as open-source, scalable reef environmental biomonitors. *PLOS ONE*

2022

32. Fitz, K., H. Montes Jr., **D.M. Thompson**, M. Pinsky (2023) Isolation-by-distance and isolation-by-oceanography in Maroon Anemonefish (*Premnas biaculeatus*). *Evolutionary Applications*
31. 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, doi*: 10.1038/s41561-022-00956-9
30. °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, doi:* 10.1029/2021PA004371
29. Bush, M.B., S. Conrad, A. Restrepo, **D.M. Thompson**, M. Lofverstrom, J.L. Conroy (2022) Human-induced ecological cascades: Extinction, restoration and rewilding in the Galápagos highlands, *PNAS*, 119(24), *doi*: 10.1073/pnas.2203752119
28. **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 $\delta^{18}O$ records for improved high-resolution temperature and salinity reconstructions, *GRL*, 49(9), e2021GL096153, *doi:* 10.1029/2021GL096153.
27. °Chapman, A.U., D.M. Thompson, S.R. Hlohowskyj, J.E. Carilli, G. Gordon, T. Goepfert, °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, °E.V. Reed, J. D'Olivo, K. Dyez, M. Lofverstrom, J. Lough, N. Cantin, A.W. Tudhope, °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) Environmental records from corals: a decade of novel insights and innovation, *WIREs Climate Change, doi:* 10.1002/wcc.745 **[Invited review]**
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 review]**

22. °Reed, E.V., **D.M. Thompson**, J. E. Cole, J. M. Lough, N. E. Cantin, °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. °Sayani, H.R., **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, °A. Chapman, K.M. Cobb (2021). Reproducibility of coral Mn/Ca-based wind reconstructions at Kiritimati Island and Butaritari Atoll. *Geochemistry, Geophysics, Geosystems*

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-$\delta^{18}O$ and $\delta^{2}H$ 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

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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

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 δ^{18}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 δ^{18}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

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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: applications to annually-banded coral archives, *Clim. Past,* 9, 6077-6123, doi:10.5194/cpd-9-6077-2013.
4. 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.
3. 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

2. ***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 $\delta^{18}O$. *Geophys. Res. Lett.,* 38, L14706, doi:10.1029/2011GL048224.
1. ***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

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,

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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 $\delta^{18}O$ under the spotlight for Ocean2k Phase 2. *Past Global Changes Magazine*, 24(1), 44, 10.22498/pages.24.1.44

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

°Reed, E.V., **D.M. Thompson**, M. Lofverstrom (in prep.) Coral Thermal Stress Over the Last Millennium*, Geophysical Research Letters*

°King, S., °T.N.F. Roach, D.M. Thompson, J. Hackett, E. Santoro, K. Morgan, F. Lane, K. Lachapelle, R. Peixoto (in prep.) Multi-scale microbial dynamics across time and space in the Biosphere 2 Ocean. *Ecological Engineering*

***Thompson, D.M**., J.E. Cole, E.V. Reed, G. Jimenez, and A.W. Tudhope (in prep.) E-W temperature gradient reconstructed from a network of Pacific coral records. *Paleoceanography*

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*

°Trzybinski, J., **D.M. Thompson**, K. Morgan, D. Dettman, ‡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.*

Service and Outreach

Local/State Outreach

Disney+ Documentary on Climate Change in the Galapagos Archipelago	2024
Biosphere 2 Virtual Reality Experiences	2018-present
Biosphere 2 Director's Tour (~1/month, on demand)	2018-present
Dust PIRE grant workshop, Tour of the Biosphere 2	2022
GeoDaze Judge (Oral)	2022
College of Science Lecture Series, Invited Keynote	2021
Lifelong Learners in the Highlands (LLRH), Invited Lecture	2021
Virtual Field Trip, Biosphere 2	2020
Out in STEM (oSTEM) Club, Fieldwork Panel Discussion	2020

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

Biosystems Engineering Club, University of Arizona (Faculty mentor)	2018-2020
College of Science Café, Tucson Botanical Gardens	2019
GeoDaze Judge (Poster)	2019, 2021
GeoDaze Field Trip, Led Biosphere 2 Tour	2019
Marine Sciences Association, Public Lecture, Boston University	2018
New England Aquarium Dive Club Presentation	2018
Chasing Coral, Movie premiere and panel discussion, Boston University	2017
GWISE, panel participant, Boston University	2017
March for Science, Speaker, Boston University	2017
Taste of Science, Boston	2017

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

National/International Outreach

How do we best design, validate, and monitor test-beds for radical reef intervention?, Workshop Convener, International Coral Reef Symposium, Bremen, Germany,	2022
CoRE Learning Foundation, Western Australia Presentation	2020
Biosphere 2 World Ocean Day, Panelist	2020
Biosphere 2 Virtual EarthFest, Panelist	2020

Departmental Committees

Mineralogy Search Committee	2020-2021
Diversity, Equity, and Inclusion Committee, Chair	2019-present
Mélange Book Club, co-organizer and discussion lead	2021
Geoscience Advisory Board Meeting, Diversity, Equity & Inclusion presentation	Nov 2020
Geoscience Advisory Board Meeting, research presentation	Nov 2020
Vision Committee	2018-2020
Geoscience Board Field Trip, Planning Committee	2019
Geoscience Advisory Board Meeting, research presentation	March 2019
Geodaze, Field Trip at the Biosphere 2	2019
Code of Conduct Committee	2019
Performance Evaluation Committee	2019

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

Dive Control Board	2021-present
Biosphere 2 Scientific Advisory Board, Biosphere 2	2021-present
UofA-UWA Partnerships, Strategic Planning Leadership Team	2021-present

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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
UofA-CNRS Partnerships, Strategic Planning Workshop	2022
COP26: UArizona representative at the UN Conference of the Parties 26	2021
Academic Program Review, Biosphere 2	2019
UofA-UNAM Partnerships, Strategic Planning Workshop Lead	2018-2019

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 (http://www.pages-igbp.org/workinggroups/2knetwork/ intro). Leader of the coral archive Iso2k synthesis team	2015-present

Community

Workshop coordinator and lead, "How do we best design, validate, and monitor test-beds for radical reef intervention?", International Coral Reef Symposium, Bremen, Germany	2020-2022
Session chair, "Can large-scale ocean and climate reconstructions from corals improve our understanding of past, present, and future extremes?," International Coral Reef Symposium, Bremen, Germany	2020-2022
NSF GOLDEN, Interview Participant	2021
Workshop coordinator and lead, Reef Ecology Workshop, Biosphere 2	2019
Board meeting coordinator and lead, Biosphere 2 & Mote Marine Laboratory, Summerland Key, FL	2019
Women in Paleoceanography, Mentor, American Geophysical Union Fall Meeting	2019
AGU OSPA Judge, American Geophysical Union Fall Meeting	2019
Session chair, "Paleoclimatic History of El Niño–Southern Oscillation I", American Geophysical Union, Washington D.C., USA	2018

Theses directed and in progress

Maria Snyder, BS (Undergraduate Thesis), University of Arizona	2018-2020
Brianna Hoegler, BS (Honors Undergraduate Thesis), University of Arizona	2019-2022
Zoe Benson, BS (Honors Undergraduate Thesis), University of Arizona	2023-2024
Danielle Schwartz, BS (Honors Undergraduate Thesis), University of Arizona	2022-2023
Savannah Sanders, BS (Honors Undergraduate Thesis), University of Arizona	2024-2025
Noah Fleisher, BS (Honors Undergraduate Thesis), University of Arizona	2024-2025
Caitlin Salanga, BS (Honors Undergraduate Thesis), University of Arizona	2024-2025
Joaris Hernandez, MS, University of Arizona	2024-

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

Dissertations directed and in progress

Garrison Loope, PhD, University of Arizona	2018-2019
Emma Reed, PhD, Boston University / University of Arizona	2016-2021
Alice Kojima, PhD, University of Arizona	2018-2023
Mudith Weerabaddanage, PhD, University of Arizona	2021-
Samantha King, PhD, Ecology and Evolutionary Biology, University of Arizona	2021-
Mikayla Deigan, PhD, University of Arizona	2024-

Service on other dissertation and graduate committees

Trang Tran, PhD, University of Arizona	2024-
Leila Fischer, MS, University of Arizona	2024-
Alexandra O'Keefe, MS, University of Arizona	2023-
Aniket Dhar, PhD, University of Arizona	2022-
Tumaini Kamulali, PhD, University of Arizona	2021-
Asiya Badarunnisa Sainudeen, PhD, University of Arizona	2021-
Hunter Hughes, University of North Carolina	2020-
Hailey Bowers, MS, Ecology and Evolutionary Biology, University of Arizona	2021-2022
Maya Prabhakar, MS, University of Arizona	2020-2022
Valerie Rubalcava, MS, University of Arizona	2020-2022
Tumaini Kamulali, MS, University of Arizona	2019-2021
Pablo Martinez Sosa, PhD, University of Arizona	2019-2021
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

Referee

Manuscripts reviewed for: *Biogeosciences; Chemical Geology; Climate of the Past; Coral Reefs; Earth-Science Reviews*; *Geochimica et Cosmochimica Acta; Geology; Geophysical Research Letters; Global Change Biology; GSA Today; Journal of Biogeography; Nature*; *Nature Geoscience*; *Nature Communications*; *Nature Scientific Reports; Paleoceanography and Paleoclimatology; Palaeogeography, Palaeoclimatology, Palaeoecology; PLOS ONE; Progress in Oceanography; Quaternary International; Reef Encounter; Science; Science Advances; Science of the Total Environment*

Proposals reviewed for: *Deutsche Forschungsgemeinschaft* (German Funding Agency); *French National Research Agency; Natural Environment Research Council; National Science Foundation (ad hoc & P2C2 panel);*

Media (selected, in rank)

Disney+

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

One World Network, Interview
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*"
Scientific American
AGU TV
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"*
BU Today, "Winds of Change", http://www.bu.edu/today/2017/winds-of-change/

Conferences/Scholarly Presentations

Invited	Boston University, Department of Biology	Spring 2025
Keynote	Northern Arizona University, Paleoclimate seminar guest lecture	Spring 2025
Seminars &	University of Arizona, Marine Discovery guest lecture	Fall 2024
Colloquia	Cornell University, Ithaca, NY	Spring 2023
	South Dakota School of Mines & Technology, Rapid City, SD	Fall 2022
	ECORD Summer School, MARUM, University of Bremen	Fall 2022
	International Conference on Paleoceanography, Norway (Keynote)	Fall 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)	2021
	Chandler-Gilbert Community Colleges	2021
	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

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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

Conference Presentations:

§ Post-doctoral researcher advisee, † Graduate student advisee, ‡ Undergraduate advisee

‡Dugger, J., **D.M. Thompson**, †M. Weerabaddana (2024) How Do Westerly Wind Events in the Central Pacific Vary Over the late 20th Century, ***Oral Presentation***, REU C2C, University of Arizona.

‡Fenn, C., **D.M. Thompson**, Lia Crooker, Renee Grambihler (2024) How Will Supplemental Lighting Treatments Impact the Calcification and Color of Corals, ***Poster Presentation,*** REU Symposium, Desert Museum, Tucson, AZ.

‡Salanga, C., †M. Weerabaddana, **D.M. Thompson**, L. Vetter, K. Thirumali, †E.V. Reed, K. de Brum, E. Kabua, F. Edwards (2024) Identifying tropical Pacific climate and hydroclimate changes through the transition from Preindustrial to Industrial time using coral skeletal geochemistry. ***Poster Presentation***, GeoDaze Symposium, University of Arizona.

†Weerabaddana, M.M., **D.M. Thompson**, †E.V. Reed, G.A. Farfan, J.D. Kirk, †A.C. Kojima, D.L. Dettman, K. de Brum, E. Kabua, F. Edwards (2024) Tropical western Pacific hydroclimate inferred from paired coral trace elements and δ18O records from the Marshall Islands. ***Oral Presentation***, GeoDaze Symposium, University of Arizona. [Awarded Best Climate & Paleoclimate Talk]

‡Benson, Z., **D.M. Thompson**, A. Kojima, J. Carilli, T. Marchitto, H. Sayani, K. Cobb (2024) Leveraging coral Mn/Ca records from Palmyra and Tabuaeran to reconstruct Pacific El Niño events, ***Oral Presentation***, GeoDaze Symposium, University of Arizona. [Runner-up Best Undergraduate Talk]

†Badarunnisa, A., M. Lofverstrom, and **D.M. Thompson** (2024): South American summer precipitation in CMIP6 models, ***Oral Presentation***, GeoDaze, University of Arizona.

‡Carvalho, J., D. Killa, A. Chapman, **D.M. Thompson** (2023) Investigating the impact of heat stress on organic matter content and geochemistry of Wavy Turban Snails, ***Poster presentation***, *GeoDaze Symposium, University of Arizona*.

‡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. ***Oral presentation***, *GeoDaze Symposium, University of Arizona*. [Awarded best Undergraduate Talk]

‡Javier, V., D.M. Thompson, †A. Kojima, G. Farfan (2023) Impact of Calcite Diagenesis on Measurements of Coral Skeletal Geochemistry. ***Poster Presentation,*** GeoDaze, University of Arizona.

†Badarunnisa, A., M. Lofverstrom, and D. Thompson (2023): South American summer precipitation in CMIP6 models, Poster Presentation, AGU

‡Benson, Z., †A.U. Chapman, **D.M. Thompson**, J. Carilli, T. Marchitto, §H. Sayani, K. Cobb (2022) Reconstructing zonal winds over Abaiang Atoll using coral Mn/Ca ratios." ***Poster presentation,*** American Geophysical Union Conference. Chicago, IL, Dec 2022.

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

[†]**Weerabaddana, M.M.,** Thompson, D.M., Kirk, J., Reed, E.V., Romero, L., Farfan, G., and Chapman, A., (2022), Impact of intra-skeletal trace calcite on the preservation of coral paleoclimate signals, ***Poster presentation,*** American Geophysical Union Fall Meeting

[†]Chapman, A., **D.M. Thompson,** J.E. Carilli, T.M. Marchitto, [§]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, [§]D. Killam, [§]T. Roach, †E. Santoro, M. Duhaime, J. Watkins, [†]S. King, R. Peixoto, ‡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.

[†]King, S., **D.M. Thompson**, J.D. Hackett, J. Cole, K. Morgan, [§]D. Killam, [§]T. Roach, [†]E. Santoro, M. Duhaime, J. Watkins, R. Peixoto, ‡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.

[†]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.

[†]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.*

[†]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.*

[†]Chapman, A.U., G.A. Farfan, **D.M. Thompson**, J.E. Carilli, [§]H.R. Sayani, T.M. Marchitto (2022) Mineralogical insights into coral trace element incorporation and stress. ***Oral presentation***, *GeoDaze Symposium, University of Arizona*.

[†]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*.

[‡]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*.

[‡]Benson, Z., A.U. Chapman, **D.M. Thompson**, J. Carilli, T. Marchitto, [§]H. Sayani, K. Cobb (2022) Reconstructing Tropical Pacific zonal winds using a coral Mn/Ca proxy. ***Poster presentation***, *GeoDaze Symposium, University of Arizona*.

[‡]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, [§]H.R. Sayani, T.M. Marchitto (2022). Mineralogical insights into the coral Mn/Ca-based trade-wind proxy. ***Virtual oral presentation***, *Ocean Sciences Meeting*.

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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 $\delta^{18}O$ records. ***Invited oral presentation,*** *AGU Fall Meeting.*

Williams, B. **D.M. 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*

[†]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*

[†]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*.

[‡]Hoegler, B., **D.M. Thompson**, S. Hlohowskyj, [‡]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*.

[†]Chapman, A.U., **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, [§]H.R. Sayani, K.M. Cobb (2021) Behind-the-scenes of the Coral Mn/Ca-based Trade-wind Proxy: Interpreting the Mn Signal Lag. ***Virtual oral presentation****, 14th International Coral Reef Symposium*.

[‡]Hoegler, B., **D.M. Thompson**, S. Hlohowskyj, [‡]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*.

[‡]Bautista, S.R., [†]A.U. Chapman, **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, [§]H.R. Sayani, K.M. Cobb (2021) Diving Deeper: Replication of Mn/Ca Anomalies Across Abaiang Atoll. ***Virtual poster presentation****, GeoDaze Symposium, University of Arizona*.

[‡]Benson, Z.E., [†]A.U. Chapman, **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, [§]H.R. Sayani, K.M. Cobb, K.M. (2021) Reconstructing Westerly Wind Bursts From Abaiang Coral Using a Mn/Ca Proxy. ***Virtual poster presentation,*** *GeoDaze Symposium, University of Arizona*.

[†]Chapman, A.U., **D.M. Thompson**, J.E. Carilli, T.M. Marchitto, [§]H.R. Sayani, K.M. Cobb (2021) Lagoon Morphology: A Key Component of the Coral Mn/Ca-based Trade-wind Proxy. ***Virtual oral presentation****, GeoDaze Symposium, University of Arizona*.

[§]Killam, D., **D.M. Thompson**, K. Morgan, M. Russell (2021). PAGES ECN North America Show-and-Tell: Why am I growing clams in the Arizona desert? ***Oral Presentation****, Past Global Changes North America Early Career Network.* https://youtu.be/ToxouapJLVE

[§]Killam, D., **D.M. Thompson**, K. Morgan, M. Russell (2021). Why am I growing clams in the Arizona desert? ***Oral Presentation****, Bailey-Matthews Shell Museum.* https://youtu.be/joLfd8ZZNYI

[§]Killam, D., **D.M. Thompson**, K. Morgan, M. Russell (2021). Out of their element: Shell chemistry of wavy turban snails after temperature regime change in the Biosphere 2 Ocean. ***Oral Presentation****, Southern California Union of Malacologists Annual Meeting Online.*

[‡]Hoegler, B., **D.M. Thompson**, S. Hlohowskyj, [‡]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*.

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

[‡]Hoegler, B., **D.M. Thompson**, S. Hlohowskyj, [‡]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*.

[‡]Hoegler, B., **D.M. Thompson**, S. Hlohowskyj, [‡]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*.

[‡]Bautista, S.R., [†]A.U. Chapman, **D.M. Thompson**, J.E. Carilli, S.R. Hlohowskyj, G. Gordon, T. Goepfert (2020) Reinforcing the Mn/Ca Trade-wind Proxy: A Closer Look at Manganese Redox in Kiritimati's Lagoon. ***Virtual poster**, AGU Fall Meeting*.

[†]Chapman, A.U., **D.M. Thompson**, J.E. Carilli, S.R. Hlohowskyj, G. Gordon, T. Goepfert (2020) Lagoon Morphology: A Key Component of the Coral Mn/Ca-based Trade-wind Proxy. ***Invited virtual poster and lightning talk**, AGU Fall Meeting*.

[†]Chapman A.U., D.M. Thompson, J.E. Carilli, T.M. Marchitto, [§]H.R. Sayani, K.M. Cobb (2020) Assessing the Reliability of the Coral Mn/Ca-based Trade-wind Proxy: Interpreting the Mn Signal Lag. ***Virtual poster**, AGU Fall Meeting*.

[†]Chapman A.U., **D.M. Thompson**, S.R. Hlohowskyj, G. Gordon, T. Goepfert, J.E. Carilli, T.M. Marchitto, H.R. Sayani, K.M. Cobb (2020). From wind to coral: assessing the mechanism behind the coral Mn/Ca-based trade-wind proxy. ***Virtual Oral Presentation**, GeoDaze Symposium, University of Arizona*.

[†]Reed E.V., **D.M. Thompson**, J.E. Cole, L. Vetter, D. Dettman, D. McGee, [‡]M. Snyder, [§]H. Sayani, A. Tudhope (2020) Shifts in the Pacific rain belt recorded in a network of coral paleoclimate records. ***Virtual Oral Presentation**, GeoDaze Symposium, University of Arizona*.

[‡]Snyder, M., **D.M. Thompson**, [†]E.V. Reed, L. Vetter, D.L. Dettman, D. McGee, [§]H. Sayani (2020), Western Pacific Fossil Coral Records Reveal Change in Tropical Climate During the Past Millennium, ***Poster Presentation**, GeoDaze Symposium, University of Arizona.*

Thompson, D.M., J.E. Cole, M.T. McCulloch, J.P. D'Olivo, G. Jimenez, [†]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*

[‡]Snyder, M., **D.M. Thompson**, [†]E.V. Reed, L. Vetter, D.L. Dettman, D. McGee, [§]H. Sayani (2019), Western Pacific Fossil Coral Records Reveal Change in Tropical Climate During the Past Millennium, ***Poster Presentation**, American Geophysical Union Fall Meeting*

[‡]Trzybinski, J.B., **D.M. Thompson**, K. Morgan, D.L. Dettman, [‡]L. Crocker, [§]T.N.F. Roach, F. Lane, and [†]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*

[†]Chapman, A., **D.M. Thompson**, S. Hlohowskyj, J. Carilli, T.M. Marchitto, [§]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*

[†]Reed, E.V., **D.M. Thompson**, J.E. Cole, L. Vetter, D.L. Dettman, D. McGee, [‡]M. Snyder, [§]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*

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

[†]Chapman, A.U., **D.M. Thompson**, T.M. Marchitto, [§]H.R. Sayani, J.E. Carilli, S.R. Hlohowskyj (2019) Tropical Pacific Corals: Archives of Trade-wind Behavior. ***Poster Presentation**, GeoDaze Symposium, University of Arizona*.

[†]Reed E.V., **D.M. Thompson**, L. Vetter, J.M. Lough, N.E. Cantin, [‡]M. Snyder (2019) West Pacific rain belt variability recorded in corals from the Marshall Islands. ***Oral Presentation**, GeoDaze Symposium, University of Arizona*.

[†]Reed E.V., **D.M. Thompson**, J.E. Cole, L. Vetter, D. Dettman, D. McGee, [‡]M. Snyder, [§]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*

[§]Sayani, H.R., **D.M. Thompson**, *et al.* (2018) Constraining 20th Century Pacific Trade-Wind Variability Using Coral Mn/Ca, ***Oral Presentation***, *American Geophysical Union Fall Meeting*

[†]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*

[†]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*

[†]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 δ^{18}Osw-SSS relationship across the western tropical Pacific Ocean, ***Poster Presentation***, *American Geophysical Union Fall Meeting*

[§]Sayani, H.R., **D.M. Thompson**, *et al.* (2017) Constraining 20th Century Pacific Trade-Wind Variability Using Coral Mn/Ca, ***Oral Presentation***, *American Geophysical Union Fall Meeting*

Conroy, J.L., **D.M. Thompson**, *et al.* (2017) Salinity information in coral δ^{18}O records, ***Poster Presentation***, *American Geophysical Union Fall Meeting*

Konecky, B.L., *et al.* (2017) 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*

Dr. Diane M. Thompson
Department of Geosciences
https://uathompsonlab.com/

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., H. Goosse, M. Evans, S. Khatiwala (2017). Proxy System modelling and data assimilation in paleoclimatology, ***Oral Presentation***, Speleothem Isotopes Synthesis & Analysis (SISAL) 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 (δ18O), ***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*