

Professor Erik E Cordes
Department of Biology, Temple University
Philadelphia PA, USA

History of Employment

- 2019-present: Full Professor, Department of Biology, Temple University.
- 2017-present: Vice Chair, Biology Department, Temple University.
- 2014-2019: Associate Professor, Biology Department, Temple University.
- 2008-2014: Assistant Professor, Biology Department, Temple University.
- 2005-2008: Postdoctoral Fellow, Harvard University.
- 2005-2008: Postdoctoral Researcher, Penn State University.
- 1999-2000: Research Associate, Moss Landing Marine Laboratories.
- 1998-2000 Adjunct Faculty, Hartnell College, Salinas CA
- 1998-1999 Museum Curator, Moss Landing Marine Labs

Degrees

- Southampton College, Southampton NY, Marine Science / Biology, B.S. 1993
- Moss Landing Marine Laboratories, Moss Landing CA, Marine Science, M.S. 1999
- Penn State University, University Park PA, Biology, Ph.D. 2004

Narrative of Research Experience

Erik Cordes has worked on the ecology and oceanography of the deep sea for over 25 years on 33 research expeditions (14 as Chief Scientist) consisting of 83 weeks at sea, and has made 46 dives in manned submersibles. He is a self-described ocean explorer whose work is centered around the ability of organisms to shape their environment and increase habitat heterogeneity, but has increasingly become focused on the ability for humans to impact these processes in the deep sea. The research in his lab is focused on understanding the areas of the deep sea that support the highest biomass communities: deep-water coral reefs, natural hydrocarbon seeps, and hydrothermal vents. He studies these ecosystems at all levels of organization, from energy flow in ecosystems and patterns of community assembly, down to organismal physiology and gene expression.

Key Publications (* indicates undergraduate co-author)

- Gomez CE, Gori A, Weinnig AM, Hallaj A*, Chung HJ*, **Cordes EE**. (2022) Natural variability in seawater temperature compromises the metabolic performance of a reef-forming cold-water coral with implications for vulnerability to ongoing global change. *Coral Reefs*. doi: 10.1007/s00338-022-02267-2
- Cordes EE**, Clark MR, Evans K, Hennige S, Kazanidis G. (2021) Chapter 7E: Cold water corals, In: *The Second World Ocean Assessment*. Eds: Renison Ruwa and Alan Simcock, under the auspices of the United Nations General Assembly.
- Cordes EE**, Levin LA. (2018) Exploration before exploitation (editorial). *Science* 359: 719.

- DeLeo DM, Lengyel SD, Quattrini AM, Kulathinal RJ, Cordes EE. (2018) Gene expression profiling reveals deep-sea coral response to the *Deepwater Horizon* oil spill. *Mol Ecol* 27: 4066-4077.
- Cordes EE, et al. (2016) Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Front Environ Sci* 4: 58.
- Cordes EE, Cunha MM, Galeron J, Mora C, Olu-Le Roy K, Sibuet M, Van Gaever S, Vanreusel A, Levin L. (2010) The influence of geological, geochemical, and biogenic habitat heterogeneity on seep biodiversity. *Mar Ecol* 31: 51-65.
- Cordes EE, Bergquist DC, Fisher CR (2009) Macro-ecology of Gulf of Mexico cold seeps. *Ann Rev Mar Sci* 1: 143-168.
- Cordes EE, McGinley M*, Podowski EL*, Becker, EL, Lessard-Pilon S, Viada S, Fisher CR (2008) Coral communities of the deep Gulf of Mexico. *Deep-Sea Res I* 55: 777-787.
- Cordes EE, Carney SL, Hourdez S, Carney RS, Brooks, JM, Fisher CR (2007) Cold seeps of the deep Gulf of Mexico: Community structure and biogeographic comparisons to Atlantic equatorial belt seep communities. *Deep-Sea Res I* 54: 637-653.
- Cordes EE, Arthur MA, Shea K, Fisher CR (2005) Modeling the mutualistic interactions between tubeworms and microbial consortia. *PLoS Biol* 3: 497-506.

Honors

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| Presidential Award for Research and Discovery
Office of the President, Temple University | 2020 |
| Discovery and Innovation Leadership Award
College of Science and Technology, Temple University | 2018 |
| Paper of the Year Award (Quattrini et al. 2017, <i>Oecologia</i> 183: 221-236)
Deep-Sea Biology Society | 2017 |
| Dean's Distinguished Award for Excellence in Research
College of Science and Technology, Temple University | 2015 |
| Outstanding Reviewer
Deep-Sea Research I | 2015 |
| William Caldwell Memorial Distinguished Mentoring Award
College of Science and Technology, Temple University | 2014 |
| Excellence in Partnering Award
NOPP (for the BOEM/NOAA/USGS Lophelia II Deepwater Program) | 2011 |
| Cooperative Conservation Service Award
Department of the Interior | 2007 |
| Best Student Poster Award
ASLO Aquatic Sciences Meeting, Salt Lake City, UT | 2003 |

Professional Society Memberships: AAAS, AGU, ASLO, Deep-Sea Biology Society