

# Pincelli M. Hull

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## CURRENT PROFESSIONAL APPOINTMENTS

<b>Associate Professor, Department of Earth &amp; Planetary Sciences, Yale University</b>	since July 2022
<b>Director of Undergraduate Studies, Department of Earth &amp; Planetary Sciences</b>	since July 2021
<b>Associate Curator, Invertebrate Paleontology, Yale Peabody Museum</b>	since July 2022

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## PAST PROFESSIONAL APPOINTMENTS

<b>Assistant Professor, Yale University, Department of Earth &amp; Planetary Sciences</b>	2013 – 2022
<b>Assistant Curator, Invertebrate Paleontology, Yale Peabody Museum</b>	2015 – 2022

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## EDUCATION

<b>Yale University, Department of Geology &amp; Geophysics</b> <ul style="list-style-type: none"><li>Post Doctoral Associate [mentor: Derek E. G. Briggs]</li></ul>	April 2010 – June 2013
<b>Universität Konstanz, Department of Biology</b> <ul style="list-style-type: none"><li>Visiting Postdoctoral Researcher [mentor: Axel Meyer]</li></ul>	Oct 2010 – Aug 2011
<b>Scripps Institution of Oceanography, UCSD</b> <ul style="list-style-type: none"><li>PhD Oceanography [advisors: Richard D. Norris and Mark D. Ohman]</li><li>Committee: Peter J.S. Franks, Jeremy B.C. Jackson, Lawrence Saul, George Sugihara; Curriculum: Biological Oceanography and Center for Marine Biodiversity and Conservation [IGERT Associate, Interdisciplinary Graduate Education Research and Training, NSF]</li></ul>	June 2004 – April 2010
<b>Duke University</b> <ul style="list-style-type: none"><li>B.S. Biology, B.S. Earth and Ocean Sciences, German Minor</li></ul>	Sept 1999 – June 2003
<b>Sea Education Association</b> <ul style="list-style-type: none"><li>College semester at sea: oceanography, nautical science, maritime history [C-163]</li></ul>	Spring 1999

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## RESEARCH INTERESTS

### **Evolution of Oceans and Life [Paleontology, Paleoceanography, and Global Change]**

- (Paleo-)ecology and earth system dynamics
- Ecological and evolutionary response of species, communities, and ecosystems to past global change
- Paleoceanographic and planktonic foraminiferal evolution in the Cenozoic

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## PROFESSIONAL RECOGNITION

### **Advisory Boards**

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|---|------------|
| Board Member, EarthLife Consortium (consortium to bring together paleobiological databases to enable data and scientific synthesis) | since 2018 |
| Scientific Advisory Board Member, MARUM- Center for Marine Environmental Sciences, University of Bremen, Germany                    | since 2017 |
| Yale Institute for Biospheric Studies Steering Committee, Yale University   | since 2017 |

### **Fellowships**

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|---|-------------|
| WSL Fellowship for Visiting Researchers (Swiss Federal Institute for Forest, Snow and Landscape Research) | 2023 – 2024 |
| Stanford Blaustein Fellowship for Visiting Faculty  | Spring 2016 |
| DAAD 6-Month Research Grant   | 2010        |
| NSF Pre-doctoral Fellowship   | 2005 – 2008 |

- Chancellor’s Fellowship, University of California San Diego 2004 – 2008
- Regents Fellowship, University of California San Diego 2004 – 2005
- NSF REU: Woods Hole Oceanographic Institution 2003
- NSF REU: Marine Biological Laboratory, Woods Hole 2000

## Awards

- Sloan Research Fellow, Ocean Sciences 2017
- Poster Award: International Biogeography Society Meeting 2007
- UC-MEXUS Grant Award: Mildred Mathias Award for best natural sciences proposal 2005
- Biology Award, Duke University: Maggie Schneider Award in Marine Biology [awarded to top graduating student with a Marine Biology concentration in Biology] 2003
- Earth and Ocean Sciences Award, Duke University: Thomas V. Laska Memorial Award [awarded to top graduating student with an Earth and Ocean Sciences major] 2003

## Research Appointments

- Research Collaborator, National Museum of Natural History, Smithsonian Institution 2011 – 2014
- Shipboard Scientist, Integrated Ocean Drilling Program Expedition 342 June – Aug 2012

## Research Consortia

- Co-Lead and Founder of the BioDeepTime project since 2020  
[An international working group devoted to assembling records of biodiversity dynamics across time scales, and understand their drivers and dynamics; co-leads include S. Finnegan, M. Rillo, A. Kocsis, E. Saupe, and J. Smith]
- Member of the NSF RCN on the Ecological and Evolutionary Effects of Extinction and Ecosystem Engineers since 2021
- Member of the El Kef Coring Program since 2013  
[An international program to explore the mass extinction at the Cretaceous-Paleogene Boundary in the classic El Kef Section in Tunisia: <http://www.ktboundary.org>]
- Co-Lead of the Eocene Stable Isotope Consortium [with P. Sexton] 2012  
[Aim: to generate a resolved, astronomically tuned benthic stable isotope record for the Eocene. Consortium included 12-laboratory groups in five-countries]

## Conference Planning

- Scientific Committee for the International Conference on Paleoceanography 13 Sydney, Australia 2017 – 2019
- Scientific Committee for the Climatic and Biotic Events of the Paleocene, 2020 now planned for 2022) to be held in Bremen, Germany 2019 – 2022
- Scientific Committee for CBEP 2017 to be held in Snowbird, Utah (Sept 3<sup>rd</sup>-7<sup>th</sup>) 2016– 2017

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## GRANTS

- *Collaborative Research: NSFGE0-NERC: Community and structural collapse during Mass Extinctions* (NSF Award #2334455), Co-PI: P.M. Hull & J. Dunne Lead PI (NERC): A. Dunhill, Co-PIs NERC: C. Little, A. Beckerman 8/15/23-7/31/26, NSF Total: \$108,759, Yale Portion: \$73,288 2023 – 2026
- sDiv SynFlex Program: sTime, Co-Lead PIs: P.M. Hull, E. Saupe, M. Rillo, Supports three ~one week workshops for 4-20 scientists (including travel) to Leipzig, Germany, and provides for administrative support, Yale Portion: \$0 2024 – 2026
- Paleosynthesis Center Workshop: *BioDeepTime*, Lead PI: P.M. Hull, Collaborative PIs: M. Costa Rillo, S. Finnegan, 2020-2022, supports two one-week workshops (including travel) for 15-scientists in Erlangen, Germany, and provides for administrative, postdoctoral, and infrastructural support, Yale Portion: \$0 2020 – 2022
- Sloan Research Fellowship, Ocean Sciences (also listed above in ‘Awards’) 2017 – 2021

- PI: P.M. Hull, 6/17/17-9/14/21 (with no-cost extensions), Total: \$60,000
- NSF P2C2: *Collaborative Research: The role of pCO<sub>2</sub> in the astronomically-paced climatic cycles of the Miocene* (NSF Award #1702851), Lead PI: P.M. Hull, Collaborative PIs: H. Scher, A. Ridgwell, S. Kirtland Turner (proposal lead And named post-doctoral researcher: D. Penman), 6/15/17-8/31/21 (with no-cost extensions), Grant Total: \$545,668, Yale Portion: \$337,319 2017 – 2020
  - NSF P2C2: *Collaborative Research: P2C2: Re-assessing Pliocene & Miocene warm climates and identifying the missing physics to explain them* (NSF Award #1602557), Lead PI: M. Huber, Collaborative PIs: M. Komurcu, E. Tziperman, P.M. Hull (PI transfer to P.M. Hull from former colleague M. Pagani), 9/15/2016-8/31/2019, Grant Total: \$744,715, Yale Portion: \$300,000 2016 – 2019
  - BIOS Mini Grant: *Constraining the physiological influences on boron isotope ratios in foraminifera*, Co-PIs: M.J. Hennehan and P.M. Hull, BIOS fee relief equal to ~\$2,750 in station fees for October 2016 fieldwork 2016
  - ACS PRF Grant: *Using shape to track open ocean community structure since the late Cretaceous* (PRF #55837-DNI8), PI: P.M. Hull, 7/1/2015-8/31/2017, Grant Total (Yale): \$110,000 2015 – 2017
  - NSF: *Collaborative Research: Evaluating deep-sea ventilation and the global carbon cycle during early Paleogene hyperthermals* (NSF Award #1536604), Lead PI: A. Winguth, Collaborative PIs: C. Winguth, E. Griffith, E. Thomas, P.M. Hull, 8/14/2015 -7/31/2018, Grant Total: \$619,132, Yale Portion: \$110,974 2015 – 2018
  - Paleontological Society Outreach and Educational Grant, Lead PI: E. Thomas, Co-PIs: P.M. Hull, A. Motto, 2014-2015, Grant Total (Yale): \$2500 2014 – 2015
  - Yale Endowed Postdoctoral Fellowship (to support A. Hsiang) 2014 – 2016
  - NSF EOR: *Collaborative Research: Eocene orbital-scale oceanographic variability in the North Atlantic: Inferences from Expedition 342 Cores* (NSF Award # 1335261), Lead PI: P.M. Hull, Collaborative PIs: R.D. Norris, J.C. Zachos, 8/31/2013-7/31/2016, Grant Total: \$414,000, Yale Portion: \$141,000 2013 – 2016
  - U.S. Science Support, Integrated Ocean Drilling Program (IODP): IODP Expedition 342, Post Cruise Activities, PI: P.M. Hull, 6/2/2012-1/30/2014, Grant Total (Yale): \$14,998 2013 – 2016
  - UNOLS Early Career Investigator Training Cruise Participant [9-days cruise time + \$1000 budget] 2011
  - International Conference of Paleoceanography [ICP] travel grant for ICP Meeting [\$500] 2010
  - International Biogeography Society [IBS] travel grant for IBS Meeting [\$1,330] 2009
  - PAGES funding for International Biogeography Society Meeting [\$1,805] 2007
  - UC-MEXUS Grant: *An ecological and economic baseline for the Revillagigedo Archipelago, Biosphere Reserve, Mexico*, Proposal and Project Leaders: P. M. Hull, O. Aburto-Oropeza, J. Murray; PI: E. Sala [\$17,500] 2005
  - Supplementary Grants for Revillagigedo Project: Pacific Rim Mini-Grant, Earth Friends, NSF/IGERT, Scripps Institution of Oceanography Internal Grant [\$12,500 total] 2005

### IODP Proposal Proponent

- Proponent on IODP Proposal: *Newfoundland Neogene sediment drifts: transition from the Paleogene greenhouse to the modern icehouse* [Proposal Leaders: O. Friedrich, R. Norris, P. Wilson, B. Opdyke with 24-additional coauthors including P.M. Hull]

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### TEACHING

#### Teaching

- Fall 2022: EPS 490, 491, 492, Senior Thesis and Essay Classes [7 students], Instructor P.M. Hull, met students bi-weekly in lab meeting type format to ensure progress
- Fall 2022: EPS 625, Oceanography [12 students], Instructor P.M. Hull (course design and organization, lectures, and exams), 3.75 hours/week
- Spring 2022: EPS 125/E&EB 125, History of Life [61 students], Lead-Instructor D.E.G. Briggs, Co-Instructor P.M. Hull (11-lectures, co-designed writing assignment, wrote final exam)
- Spring 2022: EPS 126L-01, Lab for the History of Life [10 students], Lead-Instructors P.M. Hull & D.E.G. Briggs (6xs 3-hour labs, co-wrote final)
- Spring 2022: EPS 756, Earth Systems Seminar [8 students], Lead-Instructor P.M. Hull (course design and organization), Co-Instructors J. Lora and N. Planavsky, 1.5 hours/week, student-led seminar (guided design & content)
- Fall 2021: EPS 345/645, Paleoecology [12 students], Instructor P.M. Hull (class content mixed lectures, seminar style discussion, and coding-based assignments)
- Fall 2021: EPS 755, Earth Systems Seminar [10 students, 7 guest students, 2 auditors], Lead-Instructor P.M. Hull (course design and organization), Co-Instructors A. Rooney, L. Tarhan, N. Planavsky, and M. Brandon, 1.5 hours/week, student-led seminar (guided design & content)
- Spring 2021: EPS 125/E&EB 125, History of Life [68 students], Lead-Instructor D.E.G. Briggs, Co-Instructors P.M. Hull (8-lectures, co-designed writing assignment, wrote third exam) & B.-A. Bhullar
- Spring 2021: EPS 756, Earth Systems Seminar [6 students, 10 guest students, 1 auditor], Lead-Instructor P.M. Hull (course design and organization), Co-Instructors A. Rooney, L. Tarhan, J. Lora, N. Planavsky, and M. Brandon, 1.5 hours/week, student-led seminar (guided design & content)
- Fall 2020: EPS 755, Earth Systems Seminar [9 students, 13 guest students, 3 auditors], Lead-Instructor P.M. Hull (course design and organization, 2-session lead), Co-Instructors A. Rooney, L. Tarhan, J. Lora, N. Planavsky, 1.5 hours/week
- Fall 2020: EPS 625, Oceanography [13 students], Lead-Instructor P.M. Hull (course design and organization, Biological Oceanography & Paleoceanography lectures, directly led 12 1.25 hour sessions], co-examiner on all oral exams), Co-Instructor N. Planavsky (Chemical Oceanography lectures), 3.75 hours/week
- Spring 2019: G&G 840, Tutorial in Computational Methods for Geochemistry [5 students], guided independent study in Python for geochemical applications, with capstone project
- Spring 2019: G&G 645, Ecology of the Past [5 students], weekly graduate seminar with 4 additional mini-labs (2-hour sessions) focused on quantitative methods in paleoecology
- Spring 2019: G&G 125/E&EB 125, History of Life [33 students], Lead-Instructor D.E.G. Briggs, Co-Instructors P.M. Hull (6-lectures, co-designed writing assignment, co-wrote final) & B.-A. Bhullar
- Spring 2019: G&G 126L-01, Lab for the History of Life [4 students], Lead-Instructors P.M. Hull & D.E.G. Briggs (4xs 3-hour labs, co-wrote final) and Co-Instructor B.-A. Bhullar
- Fall 2018: G&G 625, Oceanography [6 students], Lead-Instructor P.M. Hull (course design, teaching half of all lectures [Biological Oceanography; Paleoceanography], co-examiner on all oral exams), Co-Instructors N. Planavsky (Chemical Oceanography lectures) & R. Smith (Physical Oceanography lectures)
- Spring 2018: G&G 125/E&EB 125, History of Life [56 students], Lead-Instructor D.E.G. Briggs, Co-Instructor P.M. Hull (13-lectures, designed writing assignment, wrote final)
- Spring 2018: G&G 126L-01, Lab for the History of Life [12 students], Lead-Instructors P.M. Hull & D.E.G. Briggs (6xs 3-hour labs, co-wrote final)
- Spring 2017: G&G 125/E&EB 125, History of Life [43 students], Lead-Instructor D.E.G. Briggs, Co-Instructors P.M. Hull (5-lectures, designed writing assignment, co-wrote final) & B.-A. Bhullar
- Spring 2017: G&G 126L-01, Lab for the History of Life [8 students], Lead-Instructors P.M. Hull & D.E.G. Briggs (4xs 3-hour labs, co-wrote final), Instructor, B.-A. Bhullar
- Spring 2017: G&G 800-01, Tutorial in Paleobiology (*Oceanography*) [1 student]

- Fall 2016: G&G 625-01, Hutchinson, Ecology, and the Earth System [8 students], Lead-Instructor P.M. Hull (course design, co-led twice weekly seminars), Co-Instructors N.J. Planavsky & D. Skelly
- Spring 2015: G&G 125/E&EB 125, History of Life [50 students], Lead-Instructor P.M. Hull (11-lectures, designed writing assignment, wrote midterm and final), Co-Instructor L. Tarhan
- Fall 2014: G&G 625-01, Topics in Geobiology (*Biotic feedbacks on marine productivity & nutrient cycling*)[6 students], Lead-Instructors P.M. Hull (co-designed course & co-led once weekly seminars) & N.J. Planavsky
- Spring 2014: G&G 125/E&EB 125, History of Life [37 students], Lead-Instructor D.E.G. Briggs, Co-Instructor P.M. Hull (9-lectures, co-wrote final)
- Spring 2014: G&G 126L-01, Lab for the History of Life [8 students], Lead-Instructor D.E.G. Briggs, Co-Instructor P.M. Hull (1xs 3-hour lab)
- Spring 2014: G&G 800-01/02, Tutorial in Paleobiology (*Boundaries of the Paleocene*) [8 students], designed course & led twice weekly seminar
- Fall 2013: EVST 496-01/02, Senior Research Proj. Colloquium [21 students], Lead-Instructor A. Doolittle, Co-Instructors P.M. Hull (co-led weekly seminar, provided detailed feedback on numerous theses), J. Park, G. Brewer
- Spring 2012: G&G 725-01, Paleo Problem Solving with R, [5 students], Lead-Instructor D.E.G. Briggs, Instructor P.M. Hull (designed course, 13-lectures, & led practical)

### Additional Teaching Contributions

- GS 224A Paleoecology of the Open Sea, Stanford University 2016
- Yearly guest lecture in Evans/Timmermans Freshman Seminar 2013 – 2017
- Guest Lecturer, Yale: I contributed guest lectures on zooplankton, planktonic foraminiferal functional morphology, and deep sea carbonate preservation 2011 – 2012
- Teaching Assistant, UCSD: Paleoecology, an upper division/graduate level course 2007  
[Primary responsibilities: designing laboratory exercises and exams (4 hrs/week) to accompany the lecture and field trip based course taught by R. Norris and J. Jackson]
- Guest Lecturer, UCSD: I contributed guest lectures and laboratories in four graduate courses at UCSD and to the general public on pelagic evolution and biogeography, marine micropaleontology, and zooplankton diversity 2006 – 2010

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### MENTORING

#### Postdoctoral Mentoring (12)

*All postdoctoral scholars listed are (or were) trainees under my direct supervision.*

- **Kat Schroeder**, YIBS Donnelly Fellow 2023 – present
- **Zachery Miller**, Postdoctoral Associate 2023 – present
- **Anieke Brombacher**, YPM Invertebrate Paleontology Postdoc 2023 – present
- **Jennifer Kasbohm**, NSF EAR Postdoctoral Fellowship 2020 – present
- **Elizabeth Sibert**, YIBS Hutchinson Fellow 2020 – 2023  
*former visiting postdoc*: Junior Fellow, Harvard Society of Fellows (2019 – 2020)  
*current position*: Assistant Scientist, Geology & Geophysics, Woods Hole Oceanographic Institution
- **Catherine Davis**, YIBS Donnelly Fellow 2019 – 2021  
*current position*: Assistant Professor, North Carolina State University
- **Charlotte O'Brien**, YIBS Donnelly Fellow & former Pagani lab member 2016 – 2018  
*current position*: Research Fellow, University College London
- **Leanne Elder**, Hull Lab funds & ACS Postdoc (PI Hull) 2016 – 2017  
*current position*: Science Technician, The New Zealand Arthropod Collection at

- Manaaki Whenua-Landcare Research

▪ **Luke Strotz**, Australian Endeavour Fellowship 2016  
current position: Professor, Northwest University, China
- **Donald Penman**, Flint Postdoctoral Fellow & NSF funded (PI Hull) 2015 – present  
current position: Assistant Professor, Utah State University
- **David Evans**, Postdoctoral Associate with Hagit Affek 2015 – 2016  
current position: Royal Society University Research Fellow, University of Southampton
- **Simon D’haenens**, Fulbright & BAEF Fellowship; NSF funded (PI Hull) 2014 – 2016  
current position: Staff in Research Data Management, Universiteit Hasselt
- **Allison Hsiang**, Yale Endowed Postdoc (PI: Hull) & ACS Postdoc (PI Hull) 2014 – 2016  
awards: Early Career Starting Grant, Swedish Research Council (building on work from Yale postdoc)  
current position: Researcher, Dept. of Geological Sciences, Stockholm University
- **Michael Henehan**, Hull Lab & YPM Invertebrate Paleontology Postdoc 2014 – 2017  
current position: Lecturer, School of Earth Sciences, University of Bristol

### Graduate Students (11 primary and/or co-advised)

*All graduate students listed are (or were) trainees under my direct supervision. Five graduate students were either co-advised and/or joined my lab part way through their PhD training.*

- **Wyatt Petryshen**, focus: extinction dynamics 2023 – present
- **Eleanor Goetz**, focus: evolution and physiology of foraminifera 2021 – present
- **Maoli Vizcaino**, focus: oxygen minimum zones conditions and dynamics 2021 – present
- **Elizabeth Brabson**, focus: CCD dynamics 2020 – present
- **Wayne Strojje**, focus: Oligocene CO<sub>2</sub> evolution via boron isotopes 2018 – 2020  
co-advised: co-advisor N. Planavsky  
current position: Analytical Chemist, Physis Environmental Laboratories, Inc
- **Jack Shaw**, focus: evolution of foodwebs & community ecology 2017 – 2022  
co-advised: co-advisor D. Briggs  
awards and grants (during PhD): Best Student Talk, GSA Geobiology & Geomicrobiology Division (2017, 2020); National Association of Geoscience Teachers, Student Career Prep Award (2020); Santa Fe Institute Grad Student Fellowship (2021), Yale Franke Program Fellow (2019-2021); Palaeontological Association Sylvester-Bradley Award (small grant, 2020); Yale Teaching Innovation Project Grant (2020)  
current position: Postdoc, Santa Fe Institute
- **Daniel Gaskell**, focus: modeling of foraminiferal geochemistry 2016 – 2022  
awards (during PhD): Yale G&G Karl Turekian Prize; Yale G&G Bateman Fellowship  
current position: Postdoc, UC Santa Cruz University
- **Sophie Westacott**, focus: radiolarians and silica cycle evolution 2016 – 2022  
awards and grants (during PhD): Excellence in Teaching Prize; Garry Jones & Brian O’Neill Memorial Grant (N. Am. Micropaleontological Society), Micropaleontological Society Small Research Grant, YIBS Doctoral Pilot Grant  
current position: Postdoc, Bristol University
- **Robin Dawson** (nee Canavan), focus: clumped isotope therm. in greenhouse climates 2016 – 2019  
co-advised: co-advisor H. Affek and former Pagani student  
current position: Postdoc, University of Massachusetts Amherst
- **James Super**, focus: Miocene paleoclimatology and organic geochemistry 2016 – 2018  
co-advised: former Pagani student  
current position: Senior Editor, Nature Geoscience
- **Shuang Zhang**, focus: Long-term carbon and oxygen cycle 2015 – 2017  
co-advised: co-advisor N. Planavsky; former Wang student  
awards (during PhD): Yale G&G Karl Turekian Prize

current position: Assistant Professor, Texas A&M University

- **Janet Burke**, focus: foraminiferal functional morphology 2014 – 2020  
awards and grants (during PhD): NSF GFRP; Yale G&G Hammer Prize; Climate Day Poster Award (2018); Naturalis Biodiversity Center Martin Fellowship; Paleontological Society Mid-Atlantic Sector Outstanding Student Research Award, YIBS Dissertation Improvement Grant (2017) and Pilot Grant (2016); Grant-in-Aid of Research, BIOS; Cushman Foundation William V Sliter Research Award  
current position: Postdoc, Michigan State University

### **Graduate Student Doctoral and/or First Year Committee Member (26)**

*Graduate student committee advising includes advising includes providing advice on class selection and research (First Year and Doctoral), participation in committee meetings (Doctoral only; i.e., pre-qualifying, qualifying, 3<sup>rd</sup> & 4<sup>th</sup> year, and ad hoc) and dissertation defense (Doctoral only), and dissertation evaluation (Doctoral only). Mentoring can also include letter writing and career advice as requested.*

- Isabella Chiaravalloti, Doctoral Committee Member 2020 – present
- Kate Pippenger, Doctoral Committee Member 2020 – present
- Roxanne Armfield, Doctoral Committee Member 2020 – present
- Alexie Millikin, First Year Committee Member 2018 – 2020
- Erica Evans, First Year and Doctoral Committee Member 2018 – 2020
- Joachim Katchinoff, First Year and Doctoral Committee Member 2018 – 2022
- Kelsey Jenkins, First Year and Doctoral Committee Member 2018 – present
- Dalton Meyer, First Year and Doctoral Committee Member 2018 – present
- Caleb Gordon, First Year Committee Member 2018 – 2019
- Boriana Kalderon-Asael, First Year and Doctoral Committee Member 2016 – 2022
- Michael Hanson, Doctoral Committee Member 2016 – 2018
- Daniel Smith Paredes, First Year Committee Member 2016 – 2017
- Jasmira Wiemann, First Year and Doctoral Committee Member 2016 – 2021
- Courtney Warren, Doctoral Committee Member 2016 – 2017
- Katelyn Grey; Doctoral Committee Member 2016 – 2017
- Matthew Davis, Doctoral Committee Member during dissertation defense only 2016
- Nicolas Mongiardino Koch, First Year and Doctoral Committee Member 2015 – 2021
- Juri Miyamae, First Year and Doctoral Committee Member 2015 – 2022
- Matteo Fabbri, First Year and Doctoral Committee Member 2015 – 2021
- Jessica Glass, Doctoral Committee Member 2015 – 2019
- Christopher Whalen, First Year and Doctoral Committee Member 2014 – 2020
- Elizabeth Clark, First Year and Doctoral Committee Member 2013 – 2018
- Holger Petermann, Doctoral Committee Member 2013 – 2018
- Victoria McCoy, Doctoral Committee Member, defended Spring 2015 2013 – 2015
- Allison Hsiang, Doctoral Committee Member, defended Fall 2014 2013 – 2014
- Rachel Racicot, Doctoral Committee Member, defended Spring 2014 2013 – 2014

### **Undergraduate Mentoring (29)**

*Undergraduate mentoring includes advising and support (letters of recommendations and grant funding) on classes, research projects, and careers. Mentoring varies by student and is detailed below. I am the primary mentor unless otherwise listed. Co-mentors and mentoring teams are listed as well. Undergraduate mentoring typically involves extensive letter writing for opportunities inside, outside, and after Yale. I have not listed the grants and awards received by students under my supervision.*

- Karinne Tennenbaum, Yale Uni. Undergrad, focus: ancient fish 2022 – present  
capacity: YPM class research (primary mentor: Elizabeth Sibert)

- Immanuel Bissell, Yale Uni. Undergrad, focus: ancient fish communities 2022 – present  
*capacity*: Independent Research (primary mentor: Elizabeth Sibert)
- Iszac Henig, Yale Uni. undergraduate, *focus*: ancient fish communities 2022 – present  
*capacity*: Senior Thesis (primary mentor: Elizabeth Sibert)
- Miranda Margulis-Ohnuma, Yale Uni. undergraduate, *focus*: BioDeepTime 2021 – 2022  
*capacity*: Independent Research
- Daniel Havlat, Yale Uni. undergraduate, *focus*: radiolarians 2021 – 2022  
*capacity*: YPM Seminar Student (primary mentor: Sophie Westacott)
- Andrew Coli Yale Uni. undergraduate, *focus*: silica cycle Fall 2020  
*capacity*: intern (co-mentor: Sophie Westacott)
- Nadia Irwanto, Yale Uni. undergraduate, *focus*: object segmentation via machine learning 2021  
*capacity*: Senior Thesis (computer science; primary mentor: Dr. Allison Hsiang)
- Sherry Xu, Yale Uni. undergraduate, *focus*: Earth System state dependence of 2019 – 2022  
mass extinction probability  
*capacity*: Yale Freshman Research Fellowship (co-mentored w/ Prof. Andy Ridgwell, UCR); Independent Research (supported via Von Damm Fellowships)
- Mahima Kumera, Yale Uni. undergraduate, *focus*: silica & MECO 2017  
*capacity*: Research Assistant (Spring 2017; co-mentor: Dr. Donald Penman), Yale Freshman Research Fellowship & Yale Science and Engineering Assoc. Undergrad Research Grant (Summer 2017; mentoring team: Penman, Zhang, and Henehan), Independent Study (Fall 2017)
- Romy Carpenter, Yale Uni. undergraduate, *focus*: Long Island Invert. Physiology 2016  
*capacity*: Yale Peabody Museum Summer Internship (Summer 2016; primary mentor: Dr. Leanne Elder)
- Jack Shaw, Lafayette College undergraduate, *focus*: foraminiferal symbiont bleaching 2016  
*capacity*: Summer Internship, NSF outreach funded (Summer 2016; co-mentors Dr. Simon D’haenens & Dr. Ellen Thomas) learning
- Georgienna Driver, Southern Connecticut State Univ. undergraduate, EVOLUTIONS 2016  
*capacity*: Yale Peabody Museum EVOLUTIONS mentor (Summer 2016; primary mentor: Janet Burke)
- Matthew Goldklang, Yale Uni. undergraduate, *focus*: clumped isotopes 2016  
*capacity*: basic foraminiferal identification, Second Thesis Reader (Spring 2016)
- Tess Maggio, Yale Uni. undergraduate, *focus*: foraminiferal isotope ecology 2015 – 2016  
*capacity*: Independent Study (Fall 2015; co-mentor Jana Burke), Senior Essay (Spring 2016; co-mentor Jana Burke)
- Rain Tsong, Yale Uni. undergraduate, *focus*: Eocene silica; lithium isotopes 2015 – 2016  
*capacity*: Summer Internship, Yale Richter Fellowship & Yale College Dean’s Summer Research Fellowship (Summer 2015; primary mentor: Dr. Simon D’haenens), Senior Thesis (Fall 2015-2016; primary co-mentors: Dr. Noah Planavsky, Dr. Michael Henehan)
- Christopher Bowman, Yale Uni. undergraduate, *focus*: Eocene pelagic dynamics 2015 – 2016  
*capacity*: Independent Study (Spring 2015; co-mentor: Dr. Simon D’haenens), Senior Thesis (Fall 2015 – Spring 2016; co-mentor: Dr. Simon D’haenens)
- Paige Breen, Yale Uni. undergraduate, *focus*: Eocene foraminiferal ecology 2014 – 2016  
*capacity*: Independent Research & Summer Research, Tetelman Fellowship (2014-2015; co-mentors: Dr. Simon D’haenens and Dr. Kirsty Edgar) & Senior Thesis (2015-2016; co-mentors: Dr. Simon D’haenens and Dr. Kirsty Edgar)
- Sara Kahanomoku-Snelling, Yale Uni. undergraduate, *focus*: morphology 2014 – 2016  
*capacity*: Independent Study (2014-2015), Summer Research & Senior Thesis Stars II Fellow (2015-2016; co-mentor: Dr. Seth Finnegan, UC Berkeley)

- Madison Shankle, Yale Uni. undergraduate, *focus: shell density; glass  $\delta D$  capacity*: Independent Study (2014-2016; primary mentor: Dr. Michael Henehan), Independent Study (2016-2017; primary mentor: David Auerbach); post-graduate research technician and trainee (2018-2019; co-mentors: N. Planavsky & D. Penman) 2014 – 2019
- Jennifer Messervy, Three Rivers Community College undergraduate, *EVOLUTIONS capacity*: Yale Peabody Museum *EVOLUTIONS* mentor (Summer 2015; primary mentor: Dr. Leanne Elder) 2015
- Megan Mikenas, Yale Uni. undergraduate, *focus: K-Pg foraminifera dynamics capacity*: Summer Internship, Von Damm Fellowship (Summer 2014; primary mentor: Dr. Michael Henehan), Independent Research (Fall 2014-Spring 2015; primary mentor: Dr. Michael Henehan) 2014 – 2015
- Yusu Liu, Yale Uni. undergraduate, *focus: Automated morphometric analysis capacity*: Independent Study (Fall 2014) 2014
- Wells Thorne, Yale Uni. undergraduate, *focus: nodules and phosphatization capacity*: Second Thesis Reader (Spring 2014) 2014
- Samantha Lichtin, Yale Uni. undergraduate, *focus: microfossils; geochemistry capacity*: Yale Freshman Research Fellowship (Summer 2013), Sophomore Advisor (Fall 2013-Spring 2014), informal mentor (2013-2016), Second Thesis Reader (2016) 2013 – 2016
- Maya Midzik, Yale Uni. undergraduate, *focus: remote sensing of algal blooms capacity*: Sophomore Advisor (Fall 2013-Spring 2014), informal mentor (2013-2016), Second Thesis Reader (2016) 2013 – 2016
- Juan Aragon, Yale Uni. undergraduate, *focus: Eocene/Oligocene Isotopes capacity*: Summer research project (Summer 2013) 2013
- Matt Ormrod, Southern CT State University undergraduate, *EVOLUTIONS capacity*: Yale Peabody Museum *EVOLUTIONS* mentor (Summer 2013 & 2014) 2013 – 2014
- Liana Epstein, Yale Uni. undergraduate, *focus: K-Pg preservation capacity*: Senior Thesis (Fall 2013 – Spring 2014) 2013 – 2014
- Jennifer Kasbohm, Yale Uni. undergraduate, *focus: K-Pg preservation capacity*: class project and follow-up research (Fall 2012 – Spring 2013) 2012 – 2013
- Elizabeth Sibert, UCSD undergraduate, *focus: K-Pg fish teeth capacity*: Independent Study (2009 – 2010) 2009 – 2010
- Peter Bloxsom, visiting UCSD undergraduate, *focus: K-Pg stable isotopes capacity*: Independent Study (2007 – 2008) 2007 – 2008

### **Undergraduate Research Assistants (28)**

*Undergraduate Research Assistants provide key support for paleoceanographic research in my group. Many students use research in my group as a 'first lab research' stepping stone to work in labs in their primary field. Others use these positions as a way of exploring research opportunities in paleoceanography or paleobiology, and still others are simply looking for work-study jobs. Long-term research assistants are often informally advised as well, including letters of recommendation for other research and career opportunities. Some research assistants are masters students at Yale and are noted as such.*

- Immanuel Bissell (2021 – 2022), Iszac Henig (2021), Evie Sackett (2021), Brian Chang (2019 – 2020), Francine Rois-Fetchko (2016 – 2017), Christiana Hart (2016 – 2018), Corrin Laposki (Masters Student; 2014 – 2016), Sergio Lopez-Valdez (2015), Than Minh Tran (2014 – 2016), Rachelle Graham (2014 – 2016), Saad Syed (2014 – 2016), Katherine Bradley (2014), Kevin Ennis (2014), Jason Entgelmeier (2014), Ivy Nyayieka (2014), Susan Rundell (2014), Adam Sokol (2014), Nicholas Shintaro Ten (2014), Sophia Kecskes (2013 – 2014), Yumi Koga (2013 – 2014), Emma Speer (2013 – 2014), Molly Mullen (2013 – 2016), Emma Tipton (2013 – 2016), Rebecca Dendy (2013 – 2015), Joanne Zhenheng Li (2013 – 2015), Juan Aragon (2013), Sofia Carrera (2013), Shalila de Bourmont (2013), Mina Himwich (2013), XinXin Xu (2013), Sarah Gilbert (2012 – 2013)

## High School Student Mentoring (15)

*High school mentoring in my group is led by students and post-doctoral researchers (with the exception of 2013) with senior advising from me and Dr. Ellen Thomas. In all cases except one (noted below) students join my group through the Yale Peabody Museum's EVOLUTIONS program for summer research internships supported by NSF grants to my group and to the Yale Peabody Museum. High school students are listed by year group, along with their primary lab mentor.*

- Corrine Evans (primary mentor: Wayne Strojje) 2019
- Carina Andrea and Kyndall Hailey (primary mentor: Dr. Leanne Elder) 2017
- Gabriela Villanueva and Aaliyah Shabazz (primary mentor: Janet Burke) 2016
- Summer Intern and Independent Study Student: Casey Culligan, Amity High School and Tufts University (primary mentor: Dr. Leanne Elder) 2015 – 2016
- Ahmad Keita, Janae McMillan, Juhi Nath, and Diego Ospina (primary mentor: Dr. Leanne Elder) 2015
- Zariah Altman, Sywia Zambrycka (primary mentor: Dr. Leanne Elder) 2014
- Jenna LaFontaine, Kurt LoPresto, Amanda Plaza (primary mentor: Dr. Pincelli Hull) 2013

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## UNIVERSITY AND DEPARTMENT SERVICE

### Department of Earth & Planetary Sciences, Yale University

- Director of Undergraduate Studies, Dept. of EPS 2021 – present
- Finance Committee, Dept of EPS 2022 – present
- Safety Committee, Dept. of EPS 2021 – present
- Curriculum Committee, Dept. of EPS 2021 – present
- Committee on Teaching Fellows, Dept. of EPS 2021 – present
- Naming Committee, Dept. of G&G 2018 – 2019
- Computer & HPC Committees, Dept. of EPS 2018 – 2021
- Colloquium Committee, Dept. of G&G 2018 – 2019
- Flint Visitors Committee, Dept. of G&G 2016 – 2017
- Curriculum Committee, Dept. of G&G/EPS 2014 – 2015, 2020 – 2021
- Department Diversity Recruitment Coordinator, Dept. of G&G 2014 – 2015
- Graduate Admissions and Recruiting, Dept. of G&G 2014 – 2015
- Program Review and Exam Committee, Dept. of G&G/EPS 2014, Fall 2018, Fall 2020

### University Committees, Yale University

- Yale Peabody Museum Renovation Committees for History of Life Halls 2016 – present
- Working Group on Student Programs, Yale Peabody Museum 2016 – 2017
- Simpson Award Committee, Yale Peabody Museum 2018 – present
- Yale Institute for Biospheric Studies Steering Committee (also listed under advisory boards on pg. 1) 2017 – present
- Yale Institute for Biospheric Studies, Gaylord Donnelly Postdoctoral Fellowship Committee 2016, 2018
- Science Council, Yale University 2016 – 2017
- Advisory Committee on Library Policy, Yale University 2015

### University of California San Diego

- *Chair, Teaching Award Committee, Scripps Institution of Oceanography* 2006 – 2007
- *Chaired committee to recognize excellence in graduate and undergraduate instruction by professors at the Scripps Institution of Oceanography*
- *Student Representative, Scripps Institution of Oceanography* 2005 – 2007

- Student representative for Biological Oceanography
- Student representative for the Center for Marine Biodiversity and Conservation

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## SERVICE TO SOCIETIES AND AGENCIES

- NSF GEO Panelist** 2016
- Proposal Review Panelist
- Integrated Ocean Drilling Program [IODP]**
- Workshop participant for ‘North Atlantic drilling for climate dynamics’, a proposal planning meeting for targeted Oligocene and Miocene drilling in the N. Atlantic Oct 2014
  - Editor for the Proceedings of IODP Exp 342 2013
- Paleontology Society**
- Nominations Committee 2020 – present
  - Reviewer for student grant proposals 2013
- Ad-Hoc Proposal Reviewer**
- Austrian Science Fund (FWF; Austria); National Science Foundation (USA); Petroleum Research Fund (American Chemical Society)
- Graduate Student Development, International Biogeography Society**
- Reviewer for student travel grant proposals 2012
  - Organized peer-review of student travel applications; awarded > 60 grants 2009
  - Committee member, help organize IBS student development activities 2007 – 2009

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## SOCIETY MEMBERSHIP

- American Association for the Advancement of Science [2009-2017], American Geophysical Union [2007 – present, with breaks], American Society of Limnology and Oceanography [2010], Cushman Foundation for Foraminiferal Research [2015 – 2018], International Biogeography Society [2006 – 2016, with breaks], The Society for the Study of Evolution [2007 – 2010], The Geological Society of America [2008 – present, with breaks], The Palaeontological Association [2010-2013], Paleontology Society [2014 – 2017]

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## JOURNAL REFEREE ACTIVITY

- Biology Letters; Current Biology; Climate of the Past; Earth Science Review; Earth and Planetary Science Letters; Earth Science Review; Geology; Global Ecology and Biogeography; Journal of Systematic Palaeontology; Journal of Micropaleontology; Nature; Nature Geoscience; Palaeogeography, Palaeoclimatology, Palaeoecology; Paleobiology; Paleoceanography; PLOS One; Philosophical Transactions B; Proceedings of the National Academy of Sciences USA; Science; Scientific Advances; The Sedimentary Record

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## PUBLICATIONS

*Publications are listed with trainees under my direct supervision noted with bold text and a symbol (**postdoc**<sup>‡</sup>, **graduate student**<sup>§</sup>, **undergrad/post-grad**<sup>+</sup>). Symbols denote the primary status of trainees when the work was being carried out. Only very late stage in-prep manuscripts listed. My google scholar page is hyperlinked [here](#).*

### In Review or Revision

- 75r. Kirtland Turner S., Keller A., Vahlenkamp M., Aleksinski A., Sexton P.F., Penman D., Hull P.M., Ridgwell A., Norris R.D. (submitted) Sensitivity of ocean circulation to warming during the Early Eocene. *PNAS*
- 74r. **Shaw J.**<sup>§</sup>, Dunhill A.M., Beckerman A.P., Dunne J.A., **Hull P.M.** (in revision for second review) A framework for reconstructing ancient food webs using functional trait data. In revision for second review at *Methods in Ecology and Evolution*

- 73r. **Burke J.E.**<sup>§</sup>, **Elder L.E.**<sup>‡</sup>, Maas A.E., **Gaskell D.E.**<sup>§</sup>, Clark E.G., **Hsiang A.Y.**<sup>‡</sup>, Foster G.L., **Hull P.M.** (in revision for second review) Low allometric scaling of respiration rates may explain gigantism in pelagic protists. In review at *Limnology & Oceanography*

#### Published and In-Press

72. Smith J., Rillo M.C., Kocsis Á.T., Dornelas M., Fastovich D., Huang H.-H. M., Jonkers L., Kiessling W., Li Q., Liow L.H., **Margulis-Onnuma M.**<sup>+</sup>, Meyers S., Na L., Penny A.M., **Pippenger K.**<sup>§</sup>, Renaudie J., Saupe E.E., Steinbauer M.J., Sugawara M., Tomašových A., Williams J.W., Yasuhara M., Finnegan S., **Hull P.M.** 2023. BioDeepTime: a database of biodiversity time series for modern and fossil assemblages. *Global Ecology and Biogeography*. doi: [10.1111/geb.13735](https://doi.org/10.1111/geb.13735)
71. **Gaskell D.E.**<sup>§</sup> and **Hull P.M.** 2023. Technical note: a new online tool for d18O-temperature conversions. In review as *Climate of the Past* 19: 1265-1274. <https://doi.org/10.5194/cp-19-1265-2023>
70. Jones H., Westerhold T., Birch H., **Hull P.M.**, Negra M., Roehl U., Sepulveda J., Vellekoop J., Whiteside J., Alegret L., Henehan M., Robinson L., van Dijk J., Bralower T. 2023. Stratigraphy of the Cretaceous/Paleogene (K/Pg) boundary at the Global Stratotype Section and Point (GSSP) in El Kef, Tunisia: New insights from the El Kef Coring Project. *GSA Bulletin*. <https://doi.org/10.1130/B36487.1>
69. Van der Ploeg R., Cramwinckel M.J., Kocken I.J., Leutert T.J., Bohaty S.M., Fokkema C.D., **Hull P.M.**, Meckler A.N., Middelburg J.J., Müller I.A., **Penman D.E.**<sup>‡</sup>, Peterse F., Reichart G.-J., Sexton P.F., Vahlenkamp M., De Vleeschouwer D., Wilson P.A., Ziegler M., Sluijs A. 2023. North Atlantic surface ocean warming and salinization in response to middle Eocene greenhouse warming. *Science Advances* 9 (4): eabq0110. <https://doi.org/10.1126/sciadv.abq0110>
68. De Vleeschouwer D., **Penman D.E.**<sup>‡</sup>, **D'haenens S.**<sup>‡</sup>, Wu F., Westerhold T., Vahlenkamp M., Cappelli C., Agnini C., Kordesch W.E.C., King D.J., van der Ploeg R., Pälike H., Kirtland Turner S., Wilson P.A., Norris R.D., Zachos J.C., Bohaty S.M., **Hull P.M.** 2023. North Atlantic drift sediments constrain Eocene tidal dissipation and the evolution of the Earth-Moon system. *Paleoceanography and Paleoclimatology* 38:e2022PA004555. <https://doi.org/10.1029/2022PA004555>
67. **Westacott S.**<sup>§</sup>, Hollis C.J., Pascher K.M., Dickens G.R., **Hull P.M.** 2023. Radiolarian size and silicification across the Paleocene-Eocene Boundary and into the early Eocene. *Palaeogeography, Palaeoclimatology, Palaeoecology* 609: 111287. <https://doi.org/10.1016/j.palaeo.2022.111287>
66. **Davis C.V.**<sup>‡</sup>, **Sibert E.C.**<sup>‡</sup>, Jacobs P.H., Burls N., **Hull P.M.** 2023. Intermediate water circulation drives distribution of Pliocene Oxygen Minimum Zones. *Nature Communications* 14: 40. <https://doi.org/10.1038/s41467-022-35083-x>
65. **Davis C.V.**<sup>‡</sup>, **Shaw J.O.**<sup>§</sup>, **D'haenens S.**<sup>‡</sup>, Thomas E., **Hull P.M.** 2022. Photosymbiont associations persisted in planktic foraminifera during Early Eocene hyperthermals at Shatsky Rise (Pacific Ocean). *PLoS One* 17 (9): e0267636. <https://doi.org/10.1371/journal.pone.0267636>
64. Wiemann J., Menendez I., Crawford J.M., Fabbri M., Gauthier J.A., **Hull P.M.**, Norell M.A., Briggs D.E.G. 2022. Fossil biomolecules reveal an avian metabolism in the ancestral dinosaur. *Nature* 606: 522-526. <https://doi.org/10.1038/s41586-022-04770-6>
63. **Gaskell D.E.**<sup>§</sup>, Huber M., **O'Brien C.L.**<sup>‡</sup>, Inglis G.N., Acosta R.P., Poulsen C.J., **Hull P.M.** 2022. The latitudinal temperature gradient and its state-dependence as inferred from foraminiferal  $\delta^{18}\text{O}$  over the past 95 Ma. *Proceedings of the National Academy of Sciences USA* 119 (11) e2111332119. <https://doi.org/10.1073/pnas.2111332119>
62. **Shankle M.**<sup>+</sup>, Burls N.J., Fedorov A.V., Thomas M.D., Lui W., **Penman D.E.**<sup>‡</sup>, Ford H.L., Jacobs P.H., Planavsky N.J., **Hull P.M.** 2021. Pliocene decoupling of equatorial Pacific temperature and pH gradients. *Nature* 598: 457-461. <https://doi.org/10.1038/s41586-021-03884-7>
61. Spalding C. and **Hull P.M.** 2021. Towards quantifying the mass extinction debt of the Anthropocene. *Proceedings of the Royal Society B* 288: 20202332. <http://doi.org/10.1098/rspb.2020.2332>

60. **Westacott S.**<sup>§</sup>, Planavsky N.J., Zhao M.-Y., **Hull P.M.** 2021. Revisiting the sedimentary record of the rise of diatoms. *Proceedings of the National Academy of Sciences USA* 118 (27): e2103517118 <https://doi.org/10.1073/pnas.2103517118>
59. **Shaw J.O.**<sup>§</sup>, **D’haenens S.**<sup>‡</sup>, Thomas E., Norris R.D., Lyman J.A., Bornemann A., **Hull P.M.** 2021. Photosymbiosis in planktonic foraminifera across the Paleocene-Eocene Thermal Maximum. *Paleobiology*: 1-16. [doi:10.1017/pab.2021.7](https://doi.org/10.1017/pab.2021.7)
58. **Davis C.V.**<sup>‡</sup>, Wishner K., Renema W., **Hull P.M.** 2021. Vertical distribution of planktic foraminifera through an Oxygen Minimum Zone: how assemblages and shell morphology reflect oxygen concentrations. *Biogeoscience* 18: 977-992. <https://doi.org/10.5194/bg-18-977-2021>
57. **Shaw J.O.**<sup>§</sup>, Briggs D.E.G., **Hull P.M.** 2021. Fossilization potential of marine assemblages and environments. *Geology* 49 (3): 258-262. <https://doi.org/10.1130/G47907.1>
56. Yasuhara M., Huang H.-H.M., **Hull P.M.**, Rillo M.C., Condamine F.L., Tittensor D.P., Kučera M., Costello M.J., Finnegan S., O’Dea A., Hong Y., Bonebrake T.C., McKenzie N.R., Doi H., Wei C.-L., Kubota Y., and E.E. Saupe. 2020. Time machine biology: cross-time-scale integration of ecology, evolution, and oceanography. *Oceanography* 33 (2): 17-28. <https://doi.org/10.5670/oceanog.2020.225>
55. **O’Brien C.L.**<sup>‡</sup>, Thomas E., Huber M., Pagani M., **Super J.R.**<sup>‡</sup>, **Elder L.E.**<sup>‡</sup>, **Hull P.M.** 2020. The enigma of Oligocene climate and global surface temperature. *Proceedings of the National Academy of Sciences USA* 117 (41) 25302-25309. <https://doi.org/10.1073/pnas.2003914117>
54. Whalen C.D., **Hull P.M.**, Briggs D.E.G. 2020. Paleozoic ammonoid ecomorphometrics test ecospace availability as a driver of morphological diversification. *Science Advances* 6 (37): eabc2365. [doi: 10.1126/sciadv.abc2365](https://doi.org/10.1126/sciadv.abc2365)
53. **Davis C.V.**<sup>‡</sup>, Livsey C.M., Palmer H.M., **Hull P.M.**, Thomas E., Hill T.M., Benitez-Nelson C. 2020. Extensive morphological variability in asexually produced planktic foraminifera. *Science Advances* 6: eabb8930. [doi: 10.1126/sciadv.abb8930](https://doi.org/10.1126/sciadv.abb8930)
52. Payne J.L., Bachan A., Heim N.A., **Hull P.M.**, Knope M.L. 2020. The evolution of complex life and the stabilization of the Earth system. *Interface Focus* 10: 20190106. <http://dx.doi.org/10.1098/rsfs.2019.0106>
51. **Super J.R.**<sup>§</sup>, Thomas E., Huber M., **O’Brien C.L.**<sup>‡</sup>, Pagani M., **Hull P.M.** 2020. Miocene evolution of North Atlantic sea surface temperature. *Paleoceanography and Paleoclimatology* 35: e2019PA003748. <https://doi.org/10.1029/2019PA003748>
50. **Henehan M.J.**<sup>‡</sup>, Edgar K.M., Foster G.L., **Penman D.E.**<sup>‡</sup>, **Hull P.M.**, Greenop R., Anagnostou E., Pearson P.N. 2020. Revisiting the Middle Eocene Climatic Optimum ‘Carbon Cycle Conundrum’ with new estimates of atmospheric pCO<sub>2</sub> from boron isotopes. *Paleoceanography and Paleoclimatology* 35: e2019PA003713. <https://doi.org/10.1029/2019PA003713>
49. **Dawson R.R.**<sup>§</sup>, Field D.J., **Hull P.M.**, Zelenitsky D.K., Therrien F., Affek H.P. 2020. Eggshell geochemistry reveals ancestral metabolic thermal regulation in Dinosauria. *Science Advances* 6: eaax9361. <https://advances.sciencemag.org/content/6/7/eaax9361>
48. Lowery C.M., Bown P., Fraass A.J., **Hull P.M.** 2020. Ecological response of plankton to environmental change and thresholds for extinction. *Annual Review of Earth and Planetary Sciences* 48: 403-429. <https://doi.org/10.1146/annurev-earth-081619-052818>
47. **Hull P.M.**, Bornemann A., **Penman D.E.**<sup>‡</sup>, **Henehan M.J.**<sup>‡</sup>, Norris R.D., Wilson P.A., Blum P., Alegret L., Batenburg S.J., Bown P.R., Bralower T.J., Cournede C., Deutsch A., Donner B., Friedrich O., Jehle S., Kim H., Kroon D., Lippert P., Loroche D., Möbius I., Moriya K., Peppe D.J., Ravizza G.E., Röhl U., Schueth J.D., Sepulveda J., Sexton P.F., **Sibert E.C.**<sup>‡</sup>, Sliwinski K.K., Summons R.E., Thomas E., Westerhold T., Whiteside J.H., Yamguchi T., Zachos J.C. 2020. On impact and volcanism across the Cretaceous-Paleogene boundary. *Science* 367 (6475): 266-272. <https://doi.org/10.1126/science.aay5055>
46. **Burke J.E.**<sup>§</sup>, Renema W., Schiebel R., **Hull P.M.** 2020. Three-dimensional analysis of inter- and intraspecific variation in ontogenetic growth trajectories in planktonic foraminifera. *Marine Micropaleontology*. 155: 101794. <https://doi.org/10.1016/j.marmicro.2019.101794>

45. **Henehan M.J.**<sup>‡</sup>, Ridgwell A., Thomas E., **Zhang S.**<sup>‡</sup>, Alegret L., Schmidt D.N., Rae J.W.B., Witts J.D., Landman N.H., Greene S.E., Huber B.T., **Super J.R.**<sup>§</sup>, Planavsky N.J., **Hull P.M.** 2019. Rapid ocean acidification and protracted Earth System recovery following the end-Cretaceous Chicxulub impact. *Proceedings of the National Academy of Sciences USA* 116 (45): 22500-22504. <https://doi.org/10.1073/pnas.1905989116>
44. **Gaskell D.E.**<sup>§</sup>, Ohman M.D., and **Hull P.M.** 2019. Zooglider-based measurements of planktonic foraminifera in the California Current System. *Journal of Foraminiferal Research* 49 (4): 390-404. <https://doi.org/10.2113/gsjfr.49.4.390>
43. **Gaskell D.E.**<sup>§</sup> and **Hull P.M.** 2019. Symbiont arrangement and metabolism can explain high  $\delta^{13}\text{C}$  in Eocene planktonic foraminifera. *Geology* 47 (12): 1156-1160. <https://doi.org/10.1130/G46304.1>
42. **Hsiang A.Y.**<sup>‡</sup>, Brombacher A., Rillo M.C., Mleneck-Vautravers M.J., Conn S., Lordsmith S., Jentzen A., **Henehan M.J.**<sup>‡</sup>, Metcalfe B., Fenton I.S., Wade B.S., Fox L., Meilland J., Davis C.V., Baranowski U., Groeneveld J., Edgar K.M., Movellan A., Aze T., Dowsett H.J., Miller C.G., Rios N., **Hull P.M.** 2019. Endless Forams: >34,000 modern planktonic foraminiferal images for taxonomic training and automated species recognition using convolutional neural networks. *Paleoceanography and Paleoclimatology* 34: 1157-1177. <https://doi.org/10.1029/2019PA003612>
41. **Penman D.E.**<sup>‡</sup>, Keller A., **D'haenens S.**<sup>‡</sup>, Kirtland Turner S., **Hull P.M.** 2019. Atlantic deep-sea cherts associated with Eocene hyperthermal events. *Paleoceanography and Paleoclimatology* 34: 287-299 <https://doi.org/10.1029/2018PA003503>
40. Boag T.H., Stockey R.G., **Elder L.E.**<sup>‡</sup>, **Hull P.M.**, Sperling E. 2018. Oxygen, temperature and the cold stenothermal cradle of Ediacaran evolution. *Proceedings of the Royal Society B* 285: 20181724 <https://doi.org/10.1098/rspb.2018.1724>
39. Schiebel R., Smart S.M., Jentzen A., Jonkers L., Morard R., Meilland J., Michel E., Coxall H.K., **Hull P.M.**, de Garidel-Thoron T., Aze T., Quillévéré F., Ren H., Sigman D., Vonhof H.B., Martinez-Garcia A., Kucera M., Bijma J., Spero H., Haug G.H. 2018. Advances in planktonic foraminifer research: New perspectives for paleoceanography. *Revue de Micropaleontologie* 61 (3-4): 113-138. <https://doi.org/10.1016/j.revmic.2018.10.001>
38. Sibert E.C., Friedman M., **Hull P.M.**, Hunt G., Norris R.D. 2018. Two pulses of origination in Pacific pelagic fish following the Cretaceous-Paleogene Mass Extinction. *Proceedings of the Royal Society B* 258: 20181194. <http://dx.doi.org/10.1098/rspb.1194>
37. Foster G, **Hull P.M.**, Lunt D., Zachos J.C. 2018. Placing our current 'hyperthermal' in context of rapid climate change in our geological past. *Philosophical Transactions of the Royal Society A* 376: 20170086. <http://dx.doi.org/10.1098/rsta.2017.0086>
36. **Burke J.E.**<sup>§</sup>, Renema W., **Henehan M.J.**<sup>‡</sup>, **Elder L.E.**<sup>‡</sup>, Davis C.V., Maas A.E., Foster G.L., Schiebel R., **Hull P.M.** 2018. Factors influencing porosity in planktonic foraminifera. *Biogeosciences* 15: 6607-6619. <https://doi.org/10.5194/bg-2018-222>
35. **Super J.R.**<sup>§</sup>, Thomas E., Pagani M., Huber M., **O'Brien C.**<sup>‡</sup>, **Hull P.M.** 2018. North Atlantic temperature and  $p\text{CO}_2$  coupling in the early-middle Miocene. *Geology* 46 (6): 519-522. <https://doi.org/10.1130/G40228.1>
34. **Super J.R.**<sup>§</sup>, Chin K., Pagani M., Li H., Tabor C., **Hull P.M.** 2018. Late Cretaceous climate in the Canadian Arctic: multi-proxy constraints from Devon Island. *Palaeogeography, Palaeoclimatology, Palaeoecology* 504: 1-22. <https://doi.org/10.1016/j.palaeo.2018.03.004>
33. Brombacher A., **Elder L.E.**<sup>‡</sup>, **Hull P.M.**, Wilson P.A., Ezard T.H.G. 2018. Calibration of test diameter and area as proxies for body size in the planktonic foraminifer *Globoconella puncticulata*. *Journal of Foraminiferal Research* 48 (3): 241-245. <https://doi.org/10.2113/gsjfr.48.3.241>
32. **Elder L.E.**<sup>‡</sup>, **Hsiang A.Y.**<sup>‡</sup>, Nealson K., **Strotz L.C.**<sup>‡</sup>, **Kahanamoku S.S.**<sup>+</sup>, **Hull P.M.** 2018. Sixty-one thousand Recent planktonic foraminifera from the Atlantic Ocean. *Scientific Data* 5: 180109. [doi: 10.1038/sdata.2018.109](https://doi.org/10.1038/sdata.2018.109)

31. **Kahanamoku S.S.<sup>+</sup>, Hull P.M.**, Lindberg D.R., **Hsiang A.Y.<sup>‡</sup>**, Clites E.C., Finnegan S. 2018. Twelve thousand Recent limpets (Mollusca, Patellogastropoda) from a northeastern Pacific latitudinal gradient. *Scientific Data* 5: 170197. doi: 10.1038/sdata.2017.197
30. **Hsiang A.Y.<sup>‡</sup>**, Nealson K., **Elder L.E.<sup>‡</sup>**, Sibert E.C., **Kahanamoku S.S.<sup>+</sup>**, **Burke J.E.<sup>§</sup>**, Kelly A., **Liu Y.<sup>+</sup>**, **Hull P.M.** 2018. *Automorph*: accelerating morphometrics with automated 2D and 3D image processing and shape extractions. *Methods in Ecology & Evolution* 9: 605-612. doi:10.1111/2041-210X.12915
29. Edgar K.M., **Hull P.M.**, Ezard T.H.G. 2017. Evolutionary history biases inferences of ecology and environment from  $\delta^{13}\text{C}$  but not  $\delta^{18}\text{O}$  values. *Nature Communications* 8: 1106. doi: 10.1038/s41467-017-01154-7.
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15. **Sibert E.C.**<sup>§</sup>, **Hull, P.M.**, Norris R.D. 2014. Resilience of Pacific pelagic fish across the Cretaceous/Palaeogene mass extinction. *Nature Geoscience* 7: 667-670. [doi:10.1038/ngeo2227](https://doi.org/10.1038/ngeo2227)
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13. **Hull P.M.** and Darroch S.A.F. 2013. Mass extinctions and the structure and function of ecosystems. In *Ecosystems Paleobiology and Geobiology*. [eds] A.M. Bush, S.B. Pruss, J.L. Payne. The Paleontological Society Short Course. *The Paleontological Society Papers*, v. 19.
12. Norris R.D., Kirtland Turner S., **Hull P.M.**, Ridgwell, A. 2013. Marine ecosystem responses to Cenozoic global change. *Science* 341 (6145): 492-498. [doi: 10.1126/science.1240543](https://doi.org/10.1126/science.1240543)
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9. Norris R.D. and **Hull P.M.** 2012. The temporal dimension of marine speciation. *Evolutionary Ecology* 26 (2): 393-415. [doi: 10.1007/s10682-011-9488-4](https://doi.org/10.1007/s10682-011-9488-4)
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7. **Hull P.M.**, Norris R.D., Bralower T., Schueth J.D. 2011. A role for chance in marine recovery from the end-Cretaceous extinction. *Nature Geoscience* 4: 856-860. [doi:10.1038/ngeo1302](https://doi.org/10.1038/ngeo1302)
6. **Hull P.M.** and Norris R.D. 2011. Diverse patterns of ocean export productivity change across the Cretaceous-Paleogene boundary: new insights from biogenic barium. *Paleoceanography* 26 (PA3205). [doi:10.1029/2010PA002082](https://doi.org/10.1029/2010PA002082)
5. **Hull P.M.**, Osborn K.J., Norris R.D., Robison B.H. 2011. Seasonality and depth distribution of a mesopelagic planktonic foraminifer, *Hastigerinella digitata*, in Monterey Bay, California. *Limnology and Oceanography* 56 (2): 562-576. [doi:10.4319/lo.2011.56.2.0562](https://doi.org/10.4319/lo.2011.56.2.0562)
4. **Hull P.M.**, Franks P.J.S., Norris R.D. 2011. Mechanisms and models of iridium anomaly shape across the Cretaceous-Paleogene boundary. *Earth and Planetary Science Letters* 301: 98-106. [doi:10.1016/j.epsl.2010.10.031](https://doi.org/10.1016/j.epsl.2010.10.031)
3. **Hull P.M.** and Norris R.D. 2009. Evidence for abrupt speciation in a classic case of gradual evolution. *Proceedings of the National Academy of Sciences USA* 106 (50): 21224-21229. [doi:10.1073/pnas.0902887106](https://doi.org/10.1073/pnas.0902887106)
2. Lewis J.M., **Hull P.M.**, Weinberger K., Saul L. 2008. Mapping Uncharted Waters: Exploratory Analysis, Visualization and Clustering of Oceanographic Data. *Proceedings of the 7th International Conference on Machine Learning and Applications (ICMLA-08)*, pages 388-395. San Diego, California. [doi:10.1109/ICMLA.2008.125](https://doi.org/10.1109/ICMLA.2008.125)
1. Aburto-Oropeza O. and **Hull P.M.** 2008. A probable spawning aggregation of leather bass, *Dermatolepis dermatolepis*, in the Revillagigedo Archipelago, Mexico. *Journal of Fish Biology* 73 (1): 288-295. [doi:10.1111/j.1095-8649.2008.01909.x](https://doi.org/10.1111/j.1095-8649.2008.01909.x)

#### Other Publications (not peer reviewed)

- **Hull P.M.** 2017. Emergence of modern of marine ecosystems. *Current Biology* 27 (11): R466-469. [doi: 10.1016/j.cub.2017.04.041](https://doi.org/10.1016/j.cub.2017.04.041)

- **Hull P.M.** 2015. Billions and billions of bad tomorrows. *Current Biology* 25: R1151. doi: <http://dx.doi.org/10.1016/j.cub.2015.10.032> [Book Review]

## Dissertation

- **Hull P.M.** 2010. Macroevolutionary patterns in planktonic foraminifera and the recovery of pelagic ecosystems from the Cretaceous-Paleogene mass extinction. PhD Dissertation. Scripps Institution of Oceanography, University of California San Diego

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## PRESENTATIONS

### Departmental & Research Group Lectures

- Earth & Planet. Science Institute, School of GeoSciences, Univ. of Edinburgh [Oct. 28, 2021]
- Guest Lecturer, Lamont-Doherty Earth Observatory Colloquium [October 25<sup>th</sup>, 2021]
- Dept. Environ., Geo., and Natural Resources Colloquium Series, Ball State University [Feb. 17<sup>th</sup>, 2021]
- GeoZentrum Nordbayern Seminar, Friedrich-Alexander-Universität, Erlangen-Nürnberg [Feb 8<sup>th</sup>, 2021]
- Dept. Geosciences Colloquium, Williams College, [March 1st, 2019]
- Dept. Biological Sciences Colloquium, Smith College [February 25<sup>th</sup>, 2019]
- Dept Earth, Environmental and Planetary Sciences Colloquium, Brown University [September 27<sup>th</sup>, 2018]
- Lamont-Doherty Earth Observatory Colloquium [October 27<sup>th</sup>, 2017]
- University of Texas at Arlington, Earth and Environmental Sciences [February 2017]
- Evolutionary Morphology Seminar Series, Committee on Evolutionary Biology (CEB), University of Chicago [20<sup>th</sup> October, 2016]
- Paleo-Seminar, NOCS, University of Southampton [13<sup>th</sup> June, 2016]
- Max Planck for Chemistry, Division of Climate Geochemistry Seminar [June 30<sup>th</sup>, 2016]
- Earth and Planetary Science Seminar, UC Berkeley [April 28<sup>th</sup>, 2016]
- Geological Sciences Seminar, Stanford University [April 12<sup>th</sup>, 2016]
- Fossil Coffee, University of California Museum of Paleontology, UC Berkeley [Mar 1<sup>st</sup>, 2016]
- Weeks Lecture, Department of Geosciences, University of Wisconsin-Madison [Feb 25<sup>th</sup>, 2016]
- Palaeobiology Group Seminar, Bristol University [May 21<sup>st</sup>, 2015]
- Earth Science Department, University of Southern California [March 9<sup>th</sup>, 2015]
- PaleoTalk, Smithsonian Tropical Research Institute, Panama [February 25<sup>th</sup>, 2015]
- Comparative Biology, American Museum of Natural History [February 9<sup>th</sup>, 2015]
- Department of Geosciences, Penn State University [October 28<sup>th</sup>, 2014]
- Paleo-Seminar, NOCS, University of Southampton [20<sup>th</sup> May, 2014]
- Department of Earth and Planetary Sciences, Rutgers University [February 26<sup>th</sup>, 2014]
- Department of Geosciences Lecture Series, Princeton University [February 12<sup>th</sup>, 2013]
- Department Colloquium, Earth and Planetary Sciences, Harvard University [November 19<sup>th</sup>, 2012]
- Ocean & Earth Sciences, NOCS, University of Southampton [November 15<sup>th</sup>, 2012]
- School of Earth Sciences, Stanford University [February 27-28<sup>th</sup>, 2012]
- Paleo Seminar, Smithsonian National Museum of Natural History [February 7<sup>th</sup>, 2012]
- MIT Oceanography & Climate Sack Lunch Seminar [January 25<sup>th</sup>, 2012]
- Biology Department Seminar, Woods Hole Oceanographic Institute [January 19<sup>th</sup>, 2012]
- Yale Institute for Biospheric Studies, Yale University [November 11<sup>th</sup>, 2011]
- Paleo-Coffee Seminar, Paleoclimate Group, Cardiff University [October 14<sup>th</sup>, 2011]
- MARUM Seminar, Universität Bremen [March 31<sup>st</sup>, 2011]
- Biogeology Seminar, Eberhard Karls Universität Tübingen [Nov 15<sup>th</sup>, 2010]

### Invited Contributions [Conferences, Workshops & Meetings]

*Only invited conference presentations listed (comprehensive list of conference abstracts available on request).*

- **Hull P.M.** 2022. Invited Speaker in the ‘Geobiology of Critical Intervals’ session of the Gordon Research Conference in Geobiology (*The Processes of Geobiological Evolution on a Living Planet*) in Ventura, CA [6 Nov-11 Nov, 2022]
- **Hull P.M.** 2022. Invited Speaker in the ‘Extreme Events’ session of Ocean Carbon & Biogeochemistry workshop in Woods Hole, MA [June 20-23, 2022]
- **Hull P.M.**, Shaw J.O., Kong. Q.Q., O’Brien C., Gaskell D.E., Inglis G.N., Huber M. 2021. *Surviving heat waves on a hotter planet: reconstructing heat stress, and its affects, using wet bulb temperatures from the hot house to today* Invited speaker in the ‘Phanerozoic Climate through Space and Time’ session of the AGU Annual Meeting in New Orleans, Louisiana [Dec 2021]
- **Hull P.M** and Henehan M.J. 2021. *A remarkably resilient latest Cretaceous marine carbon cycle*. Invited speaker in the ‘Foraminiferal Signals of Major Events in Mesozoic-Cenozoic Earth History’ session the GSA Annual Meeting in Portland, Oregon [October 2021]
- **Hull P.M** 2021. *Waiting-out the Cretaceous-Paleogene mass extinction event*. Invited speaker in the ‘Cretaceous-Paleogene Boundary: From Impact Cratering Processes to Mass Extinction Mechanisms’ session the GSA Annual Meeting in Portland, Oregon [October 2021]
- **Hull P.M.**, O’Brien C., Inglis G.N., Gaskell D.E., Shaw J.O., Huber M. 2020. *Quantifying heat stress, and testing upper thermal limits, in fossils*. Invited speaker in the Methods in Ecology & Evolution session at the Festival of Ecology (the British Ecological Society Annual Meeting) [Dec 2020]
- **Hull P.M.** 2020. *Protists in Protean Seas*. Keynote Speaker at the Micropalaeontological Society 50<sup>th</sup> Anniversary Conference [Nov 2020]
- **Hull P.M.** 2019. Invited participant in the workshop ‘Paleobiology as the Synthetic ecological, Evolutionary and Diversity Science (P-SEEDS)’ at the University of Ryukyu, Okinawa, Japan [November 2019]
- **Hull P.M.** 2018. *On productivity through time*. Invited speaker at the Wolf Berger Memorial Symposium [April 2018]
- **Hull P.M.** 2017. *Humboldt interrupted: detecting mass extinctions in the disciplinary gap*. Invited plenary speaker to the Geobiodiversity conference and workshop at the Senckenberg Muesum, Frankfurt, Germany [October 2017]
- **Hull P.M.** 2017. *Climate change and the importance of plankton dynamics*. Invited speaker and paper contributor to the Royal Society discussions meeting on ‘Hyperthermals: rapid and extreme global warming in our geological past’, London, UK. [September 2017]
- **Hull P.M.** 2017. *Why not? Exploring the variable effects of environmental disturbance on the survival of species*. Invited keynote speaker to Goldschmidt 2017 Session on Marine Redox Evolution and Mass Extinctions (Session 14d) organized by F. Zhang, J. Payne, and S. Finnegan. Paris, France.
- **Hull P.M.** 2017. *A marine perspective on the K/Pg*. Invited speaker and participant at the UC Berkeley Symposium on the Cretaceous-Paleogene Mass Extinction [March 2017]
- **Hull P. M.** 2016. Invited workshop participant and speaker at the CESM Deep Time workshop in Santa Cruz, CA.
- **Hull P.M.** 2016. Invited speaker to the International Conference on Paleoceanography. Utrecht, Netherlands. *Planktonic foraminifera, evolution, and making sense of Cenozoic paleoceanography*.
- **Hull P.M.** 2016. Invited speaker, workshop participant, and summer school lecturer at workshop on ‘Global co-evolution of the ocean environment and its ecology’, University of Bristol, UK.
- **Hull P.M.** 2016. Closing keynote speaker to the Northeast Geobiology Symposium. Harvard University
- **Hull P.M.** and 20 co-authors. 2015. *Disentangling impact and volcanism in marine extinctions across the Cretaceous-Paleogene boundary*. Integrated Ocean Drilling Program Expedition 342 Paleogene Newfoundland Sediment Drifts Post-Cruise Science Meeting. Snowbird, Utah [invited speaker]
- **Hull P.M.** and 16 co-authors. 2015. *A single-locale benthic isotope record for the Eocene: a preview of coarse fraction and benthic isotope records from the ESIC*. Integrated Ocean Drilling Program Expedition 342 Paleogene Newfoundland Sediment Drifts Post-Cruise Science Meeting. Snowbird, Utah [invited speaker]

- **Hull P.M.** 2015. *Contrasting environmental and biotic effects of Deccan volcanism and bolide impact in open ocean sediments* for the STEPPE Workshop ‘Tracking biotic change across the K/Pg of India’. Seattle, Washington [invited speaker and workshop participant]
- **Hull P.M.** 2015. *You can’t get there from here: the problem of scaling from ‘minor’ to ‘mass’ extinctions* for the ASU Origins Project ‘Origins of Extinctions Workshop’ preceding the *Great Debate on Extinctions: Tragedy to Opportunity*. Tempe, Arizona [invited speaker and workshop participant]
- **Hull P.M.** 2014. *Rapidly quantifying the regulators of biodiversity in deep time*. FAPESP/UoS Workshop on ‘Identifying the regulators of biodiversity in deep time’. NOCS, University of Southampton, UK [invited speaker and invited contributor to related issue for *Philosophical Transactions B*]
- **Hull P.M.** 2014. *Evolution of (Oligocene to) Miocene Ecosystems*. Workshop on ‘North Atlantic drilling for climate dynamics –Filling the Oligo-Mio-Pliocene Gap in the North Atlantic’. University of Heidelberg, Germany [invited speaker and workshop participant]
- **Hull P.M.** 2014. *Endless Forms: big data in measuring the shape of life*. Yale Day of Data [invited speaker]
- **Hull P.M.**, Sexton P.F., Norris R.D., Wilson P.A., Blum P., Agnini C., Boulila S., Bown P.R., Coxall H., Friedrich O., Greenop R., Kirtland Turner S., Kordesch W.E.C., Liebrand D., Matsui H., Moriya K., Nishi H., Opdyke B.N.; Pälike H.; Penman D., Röhl U., Smith R., Westerhold T., Yamamoto Y., Zachos J.C. 2014. *Resolving Eocene time and palaeoceanography in exceptional detail: an update from IODP Expedition 342 (Newfoundland) consortia*. Climatic and Biotic Events of the Paleogene, Ferrara, Italy. [invited speaker]
- **Hull P.M.** 2013. *Ecosystem structure and mass extinctions*. Paleontological Society Short Course ‘Ecosystem Paleobiology and Geobiology’, GSA Annual Meeting, Denver, CO. [invited speaker and contributor to accompanying volume]
- **Hull P.M.**, Norris R.D., Sexton P.F. 2012. *All together now? sensitivity, dynamics, and predictability of planktonic foraminiferal species abundance vs community structure across the Plio-Pleistocene glacial-interglacial cycles*. AGU Fall Meeting, San Francisco, CA [invited speaker]
- Norris R.D., **Hull P.M.** 2012. *Geochemical consequences of mass extinction: the K/Pg compensation depth excursion*. AGU Fall Meeting, San Francisco, CA [invited contribution, presented by P.M. Hull]
- **Hull P.M.** 2012. *Geography, timing, and mechanisms of recovery from the KT mass extinction*. Agouron Institute ‘The comings and goings of animal life on earth’, Washington D.C. [invited speaker]

### Public Communication Of Science

- 14<sup>th</sup> Annual Darwin Day Celebration, Keynote, Sponsored and hosted by Humanists and Freethinkers of Fairfield County in collaboration with the Southern Connecticut Darwin Day Committee, January 23<sup>rd</sup>, 2022
- Yale Alumni Association of Greenwich, invited lecturer, May 1<sup>st</sup>, 2019
- Chancellor’s Day Professional Learning for NYC Teachers, American Museum of Natural History, keynote speaker, June 6<sup>th</sup>, 2019
- Supported development and provided funding for interactive display and activity on geological time and past climates for the Yale Peabody Museum in collaboration with EVOLUTIONS (lead PI: Andrea Motto) and Dr. Ellen Thomas, 2014-2015
- Happy Hour for the Mind, invited lecturer, Yale Club Library, New York, April 18<sup>th</sup>, 2016
- Tilde Science Café invited lecturer, Branford, CT, February 20<sup>th</sup>, 2016
- O.C. Marsh Fellows Program invited lecturer, Yale Peabody Museum of Natural History, New Haven, CT. February 18<sup>th</sup>, 2016
- Featured scientist in the in-progress children’s book:
  - Kurtz K. (in prep) Ruth wants to be a scientist.
- Speaker at a JOIDES Resolution Outreach Event. New Rochelle, New York. April 6, 2013
- Interviewed in IODP Expedition 342 Outreach Videos, Summer 2012:
  - Brinkhuis D. 2012. IODP Expedition 342, Episode 3: Time Machine

- <https://www.youtube.com/watch?v=qtvK35YhNE>  
Brinkhuis D. 2012. IODP Expedition 342, The Documentary!  
<https://www.youtube.com/watch?v=A3ot11rBYXM>