

# Chelsea Korpanty

Associate Scientist  
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## EDUCATION

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### University of Queensland

Ph.D. Biological Sciences 2017  
Dissertation: *Ecological dynamics of Pleistocene reef corals*

### University of North Carolina Wilmington

M.S. Geology 2013  
Thesis: *Live-dead fidelity of molluscan assemblages in anthropogenically-impacted seagrass habitats: siliciclastic versus carbonate environments*

### Cornell College

B.A. Geology 2011  
Honors Thesis: *Efficacy of the Curaçao Marine Park*  
B.A. Studio Art 2011

## RESEARCH INTERESTS & CAREER GOALS

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Temporal, spatial, and biogeographic trends in biodiversity and ecological assembly  
(Paleo)climate – (paleo)ecology relationships  
Taphonomy and time-averaging of marine faunal assemblages  
Assessing the impact of anthropogenic stresses on marine environments and invertebrates

Unite my interests of research, teaching, and public outreach  
Be active in science communication by connecting science, society, and policy

## RESEARCH EXPERIENCE

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### University of Bremen

Taxonomy, ecological assessment of Pleistocene deep-water corals from the Australian NW Shelf  
Specimens from International Ocean Discovery Program (IODP) Expedition 356 2018

## University of Queensland

Dissertation-related research: Pleistocene coral identification/ecology/biology	
University of Miami, Rosenthal School of Marine and Atmospheric Science	2016
United States Geological Survey, Tallahassee, FL	2016
United States Geological Survey Core Research Center, Denver, CO	2016
United States Geological Survey, Menlo Park, CA	2016
Natural History Museum, Mineralogy Collection, London	2015
Goethe University, Department of Geology, Frankfurt, Germany	2015
Institute of Research for Development, Nouméa, New Caledonia	2015
University of Hawaii, Marine Center and Department of Geology and Geophysics, Honolulu	2015
International Ocean Discovery Program (IODP): Sedimentology/Core Description	
Expedition 356: Indonesian Throughflow, Northwest Shelf Australia	2015
Non-dissertation research: Pleistocene reef zonation	
Pleistocene fossil outcrops, Cebu and Panglao, Philippines	2014

## University of North Carolina Wilmington

Thesis-related research: Live-dead molluscan identification/ecology	
Seagrass ecosystems, coastal North Carolina and northern Florida Keys	2011 – 2013
Non-thesis research: Pleistocene, Modern molluscan community ecology/taphonomy	
Tidal flats, UNCW REU project (team leader), North Carolina	2011 – 2013
Pleistocene fossil outcrops, paleoecology course project (team leader), North Carolina	2013

## Cornell College

Honors-related research: Pleistocene, Modern coral identification/ecology	
CARMABI Marine Research Station, Curaçao, Lesser Antilles	2010, 2011
Non-honors research: Pleistocene, Modern reef ecology/succession	
Pleistocene fossil outcrops, Curaçao, Lesser Antilles	2010, 2011
Literature-derived Caribbean coral dataset for meta-analysis (research assistant)	2009 – 2011
Geology field course: Geologic mapping	
South Island, New Zealand	2010

## TEACHING & PROFESSIONAL EXPERIENCE

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### University of Bremen

Associate Scientist Seminar Organizer/Presenter	
<u>Thesis Pitch Workshop</u> , how to effectively, succinctly discuss your research	October 2018
<u>Time Management</u> , strategies for efficiency and balance	2018
<u>Promoting (Your) Science</u> , why and how to communicate science	2018
<u>Editorial Workshop</u> , strategies and exercises in peer-editing	2018
<u>The Publishing Process</u> , navigating scientific publishing from authorship to reviews	2018
<u>Right Writing</u> , strategies for efficient, effective writing in the sciences	2018
<u>Thesis Workshop: Lifting Off</u> , introduction to postgraduate research and study	2018
<u>Sediment Archives</u> , overview of sediment core research and methodologies	2018

## **University of Queensland**

### Graduate Teaching Assistant/Tutor

<u>Marine Geoscience and Palaeoceanography</u> , lab and marking assistant	2017
<u>Australia's Marine Environments</u> , field course instructor and group project advisor	2016, 2017
<u>Marine Ecology and Conservation</u> , field, lab instructor and group project advisor	2016, 2017
<u>Applied Ecology</u> , discussion teaching assistant	2015
<u>Coastal Forest &amp; Marine Ecosystems</u> , field course instructor and group project advisor	2015, 2017
<u>Ecology</u> , journal discussion and lab teaching assistant	2015 – 2017
<u>Marine Science</u> , field instructor and group project advisor	2015

## **University of North Carolina Wilmington**

### Graduate Teaching Assistant/Tutor

<u>Environmental Geology</u> , lecture and lab instructor	2011 – 2013
<u>Weather and Climate</u> , lecture and marking assistant	2013
<u>Life through Time</u> , lecture and marking assistant	2011

## **Marine Quest**

### University of North Carolina Wilmington marine science outreach program

<u>Paleontology Field Guide</u> , primary – high school student field instructor	2012
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## **Cornell College**

### Undergraduate Teaching Assistant/Tutor

<u>Physical Geology</u> , lecture, lab and field assistant	2010
<u>Invertebrate Paleontology</u> , lab assistant	2010

### Department of Geology

<u>USGS Map Repository Manager</u> , archived topographic map collection	2008 – 2011
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### Writing Studio

<u>Peer Writing Consultant</u> , writing tutor for all academic subjects	2010, 2011
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## **Field Museum of Natural History, Chicago**

<u>Collections Management Internship, Paleobotany Collection</u>	2010
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Experience with digitizing records, preparing/returning loan specimens, designing a new exhibit, and general operations, organization and goals of a large renowned collection

Supervisor: Dr. Ian Glasspool, Paleobotany Collection

## **Tall Grass Historians, L.C., Iowa City, IA**

<u>Archaeology Research Assistant</u>	2008 – 2011
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Worked independently and collaboratively on field, lab, and literature based projects

Supervisor: Leah Rodgers

## RESEARCH GRANTS

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International Ocean Discovery Program Post-Cruise Funding Award: \$22,200 AUD	2016
Paleontological Society Graduate Student Research Grant: \$800 USD, each	2012, 2016
International Ocean Discovery Program - Expedition 356: Indonesian Throughflow	2015
International Postgraduate Research Scholarship, University of Queensland	2014 – 2017
Australian Postgraduate Award, University of Queensland	2014 – 2017
Geological Society of America Graduate Research Grant: \$2,800 USD	2012
Berry Center for Economics, Business, and Public Policy Grant: \$1,500 USD	2010
R.J. McElroy Student/Faculty Research Grant: \$3,000 USD	2010
Geological Society of America Undergraduate Research Grant: \$300 USD	2010
Paleontological Society Undergraduate Research Grant: \$800 USD	2010

## HONORS & AWARDS

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Conference Travel Award, Geological Society of Australia	2016
International Conference Travel Award, University of Queensland	2016
Conference Travel Awards, Geological Society of America	2011, 2012, 2013
Conference Travel Awards, University of North Carolina Wilmington	2012, 2013
Victor A. Zullo Award for Research, University of North Carolina Wilmington	2012
Gene Hinman Geology Award for Outstanding Geology Fieldwork, Cornell College	2011
Phi Beta Kappa	2011
Outstanding Undergraduate Student Poster Award, Geological Society of America	2011
William H. Norton Award for Outstanding Junior Geology Student, Cornell College	2010
Mortar Board Honor Society, Cornell College	2010
Sigma Gamma Epsilon, Geosciences Honor Society	2009

## PROFESSIONAL DEVELOPMENT

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<b>GIS Specialization Course</b>	(in progress) 2018
5-course online training program, University of California Davis	
<b>Fiction Meets Science: Writing Non-Fiction for Children and Adults</b>	2018
Short course, Hanse-Wissenschaftskolleg, Institute for Advanced Study, University of Bremen	
<b>Climate Reality Leadership Corp training, Berlin</b>	2018
Conference/workshop on science communication, Climate Reality Leadership Corp, USA	
<b>Good Scientific Practice</b>	2018
Short course, MARUM Center for Marine Environmental Sciences, University of Bremen	
<b>Palaeoceanographic Proxies from Foraminifera</b>	2018
Short course, MARUM Center for Marine Environmental Sciences, University of Bremen	
<b>Adobe Illustrator Workshop</b>	2017
Centre for Marine Science, University of Queensland	
<b>Teaching Controversial Issues: The Anthropocene</b>	2016
Short course, Geological Society of America 2016 Conference	
<b>Facilitating Effective STEM Learning and Public Engagement in Paleontology</b>	2016
Short course, Geological Society of America 2016 Conference	

<b>Introduction to Scanning Electron Microscopy</b>	2016
Short course, Centre for Microscopy and Microanalysis, University of Queensland	
<b>Career Strategy Workshop</b>	2016
UQ Graduate School, University of Queensland	
<b>“Getting Published: a workshop on publishing research in peer-review”</b>	2015
ARC Centre of Excellence for Coral Reef Studies Symposium, Hobart, Australia	
<b>Introduction to R Workshop</b>	2015
School of Mathematics and Physics, University of Queensland	
<b>Coral Identification Workshop</b>	2015
Coral Identification Capacity Building Program, University of Queensland	
<b>Tutor Professional Development Workshop</b>	2015
School of Biological Sciences, University of Queensland	

### **SYNERGISTIC, LEADERSHIP, & OUTREACH ACTIVITIES**

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<b>“Once Upon a Time... a Scientific Fairy Tale”</b>	2018
Marine science outreach, writing, editing and illustrating, University of Bremen	
<b>Mentor for On to the Future Mentor Program</b>	2016
Geological Society of America Conference, Denver, CO	
<b>Mentor for Women in Geology Career Pathways Reception</b>	2016
Geological Society of America Conference, Denver, CO	
<b>Guest Speaker, Department of Geology, Cornell College</b>	2016
<b>Journal Reviewer, <i>Ecography, Marine Progress Series, Marine Geology</i></b>	2016 – present
<b>International Ocean Discovery Program: Expedition 356</b>	2015
International collaborative research and outreach (ship-to-shore broadcasts)	
<b>Engagement Committee, Centre for Marine Sciences, U. of Queensland</b>	2014 – present
Organize monthly seminars, social media team, Biodiversity Roadshow outreach event	
<b>Commissioned Scientific Artist, U. of North Carolina Wilmington</b>	2013
Designed, developed, and implemented geologic timeline mural	
<b>National Fossil Day/Earth Science Week Outreach, U. of North Carolina Wilmington</b>	2012, 2013
Paleontology/geology activities with local primary schools	
<b>Women in Science and Engineering, U. of North Carolina Wilmington</b>	2012, 2013
Outreach: Regional Science Fair, Science Olympiad, museum education events	
<b>Guest Speaker, Cedar Valley Rock and Mineral Society, IA</b>	2010, 2011
<i>Efficacy of the Curaçao Marine Park; Geology of South Island, New Zealand</i>	
<b>Art Interest Group, Cornell College</b>	2008 – 2011
President, Secretary; organized student art shows, public engagement events	
<b>Geology Club, Cornell College</b>	2007 – 2011
Vice President, Secretary; outreach, public engagement events, museum tours	

## PUBLICATIONS

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- Christensen, B., et al. and **Expedition 356 Scientists**. 2017. Indonesian Throughflow drove Australian climate from humid Pliocene to arid Pleistocene. *Geophysical Research Letters* 44: 6914–6925. doi: 10.1002/2017GL072977.
- Groeneveld, J., et al. and **Expedition 356 Scientists**. 2017. Australian shelf sediments reveal shifts in Miocene Southern Hemisphere Westerlies. *Science Advances* 3 (5): e1602567.
- Mihaljević, M., **Korpanty, C.**, Renema, W., Welsh, K., Pandolfi, J.M. 2017. Identifying patterns and drivers of coral diversity in the Central Indo-Pacific marine biodiversity hotspot. *Paleobiology*. doi: 10.1017/pab.2017.1
- DeVleeschouwer, D., et al., and **Expedition 356 Scientists**. 2017. Quantifying K, U, and Th contents of marine sediments using shipboard natural gamma radiation spectra measured on DV *JOIDES Resolution*. *Geochemistry, Geophysics, Geosystems*. doi: 10.1002/2016GC006715.
- Gallagher, S.J., Fulthorpe, C.S., Bogus, K., and **Expedition 356 Scientists**. 2017. Expedition 356 Preliminary Report: Indonesian Throughflow. International Ocean Discovery Program. <http://dx.doi.org/10.14379/iodp.pr.356.2017>
- Renema, W., Pandolfi, J.M., Kiessling, W., Bosellini, F.R., Klaus, J.S., **Korpanty, C.**, Rosen, B.R., Santodomingo, N., Wallace, C.C., Webster, J.M., Johnson, K.G., 2016. Are coral reefs victims of their own past success? *Science Advances* 2: e1500850.
- Korpanty, C.**, Kelley, P., 2014. Molluscan live-dead agreement in anthropogenically stressed seagrass habitats: siliciclastic versus carbonate environments. *Palaeogeography, Palaeoclimatology, Palaeoecology* 410, 113 – 125.

Press Release published with: UQ News, Scimex, EurekAlert! (AAAS), and Australian news outlets e.g.: <http://www.uq.edu.au/news/article/2017/05/shelf-sediments-reveal-climate-shifts-through-eons>

## ORAL PRESENTATIONS & PUBLISHED ABSTRACTS

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- Korpanty, C.** 2017. Pleistocene azooxanthellate corals of the Northwest Shelf of Australia, collected during IODP Expedition 356. International Ocean Discovery Program Expedition 356 Post-Cruise Meeting, Bremen.
- Korpanty, C.**, Gischler, E., Pelletier, B., Welsh, K., Pandolfi, J.M., 2016, Biogeographic variability and ecological dynamics of Middle – Late Pleistocene reef corals. Geological Society of America *Abstracts with Programs* 48 (7), doi: 10.1130/abs/2016AM-282430.
- Korpanty, C.**, Potts, D., Pandolfi, J. and Expedition 356 Scientists, 2016, Ecological assessment of a Late Miocene coral assemblage near Rowley Shoals, Roebuck Basin, Western Australia. *Australian Earth Sciences Convention* 2016. Abstract ID: 492.
- Korpanty, C.**, Gischler, E., Cabioch, G., Pelletier, B., Payri, C., Butscher, J., Pandolfi, J., 2016, Ecological dynamics of reef corals across the Middle Pleistocene Climate Transition. *International Coral Reef Symposium* 2016. Abstract ID: 28287.
- Renema, W., Pandolfi, J., Kiessling, W., **Korpanty, C.**, Santodomingo, N., Wallace, C., Webster, J., Johnson, K., 2016, Are coral reefs victims of their own past success? *International Coral Reef Symposium* 2016. Abstract ID: 29241.
- Cronin, K., Kelley, P., Dietl, G., **Korpanty, C.**, Visaggi, C., Parnell, B., 2014. Comparing quantitative

techniques for evaluating live-dead agreement in an intertidal habitat in North Carolina. Geological Society of America *Abstracts with Program* 46 (6), 137.

**Korpanty, C.,** Kelley, P., 2013. Live-dead fidelity of molluscan assemblages in anthropogenically impacted seagrass environments, North Carolina. Geological Society of America *Abstract with Program* 45(2).

**Korpanty, C.,** Kerr, J., Stanford, S., Tedick, A., Kelley, P., Dietl, G., 2013. Fidelity of molluscan life and death assemblages: a five-year study to assess the impact of anthropogenic pressures on a North Carolina tidal flat. Geological Society of America *Abstracts with Program* 45 (2).

Kelley, P., Albritton, C., Kerr, J., **Korpanty, C.,** Tedick, A., Umling, N., Dietl, G., 2013. Diversity and ecological structure of the Canepatch Formation, Upper Pleistocene, Horry County, South Carolina. Geological Society of America *Abstracts with Program* 45 (2).

Greenstein, B., Pandolfi, J., **Korpanty, C.,** 2012. Historical context for the decline of Caribbean coral reefs. *International Coral Reef Symposium 2012*.

**Korpanty, C.,** Visaggi C., Parnell, B., Kelley, P., Dietl, G., 2012. Fidelity of molluscan life and death assemblages: a four-year study to assess the impact of anthropogenic pressures on a North Carolina tidal flat. Geological Society of America *Abstracts with Program* 44 (4), 16.

**Korpanty, C.,** Greenstein, B., 2011. Efficacy of the Curaçao Marine Park: A Pleistocene Perspective. Geological Society of America *Abstracts with Program* 43 (1), 68 and 43 (5), 501.

**Korpanty, C.,** Greenstein, B., 2011. Efficacy of the Curaçao Marine Park: A Pleistocene Perspective. *Cornell College Student Research Symposium*.

## PROFESSIONAL AFFILIATIONS

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Association for Women Geoscientists  
Australian Coral Reef Society  
Australian Research Council Centre of  
Excellence for Coral Reef Studies  
Geological Society of America

Geological Society of Australia  
Paleontological Society  
Phi Beta Kappa  
Sigma Xi  
Women in Science & Engineering

## REFERENCES

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Professor John Pandolfi – PhD supervisor  
School of Biological Sciences  
University of Queensland  
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j.pandolfi@uq.edu.au

Professor Patricia Kelley – MSc supervisor  
Department of Earth and Ocean Sciences  
University of North Carolina Wilmington  
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kelleyp@uncw.edu

Dr. Kevin Welsh – PhD co-supervisor  
School of Earth and Environmental Sciences  
University of Queensland  
T: +61 7 3365 8379  
k.welsh1@uq.edu.au

Professor Donald Potts – IODP colleague, mentor  
Institute of Marine Sciences  
University of California Santa Cruz  
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potts@ucsc.edu