

# Amelia Endicott Shevenell

## *Assistant Professor*

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## **EMPLOYMENT**

- 2011-** *Assistant Professor:* College of Marine Science, University of South Florida, St. Petersburg, Florida, USA
- 2011-** *Research Associate:* Department of Earth Science, University College London, London, United Kingdom
- 2008-2011** *Lecturer (Assistant Professor):* Department of Geography (60%) and Department of Earth Sciences (40%), University College London, London, United Kingdom.
- 2005-2007** *Postdoctoral Fellow:* Program On Climate Change, JISAO/School of Oceanography, University of Washington, Seattle, Washington.
- 1998-2004** *Research and Teaching Assistant:* Department of Geological Science, University of California Santa Barbara, Santa Barbara, California.
- 1997-1998** *Geologist/ Associate Environmental Scientist:* Montgomery Watson, Juneau, Alaska.
- 1996-1997** *Chemistry Laboratory Technician/ Health and Safety Officer:* Montgomery Watson Laboratories, Juneau, Alaska.
- 1994-1996** *Research and Teaching Assistant:* Department of Geology, Hamilton College, Clinton, New York.

## **EDUCATION**

**Associate Fellow of the Higher Education Academy, University College London (2009)**

- Postgraduate Certificate in Learning and Teaching in Higher Education

**Ph.D. Marine Science, University of California Santa Barbara (2004)**

- *Dissertation:* The role of climate feedbacks in the middle Miocene climate transition
- *Advisor:* J.P. Kennett

**M.Sc. Marine Science, University of California Santa Barbara (2001)**

- *Thesis:* Antarctic Holocene climate change: A stable isotopic record from Palmer Deep
- *Advisor:* J.P. Kennett

## **B.A. Geological Sciences, *Hamilton College*, with honors (1996)**

- *Thesis*: Record of Holocene climate change along the Antarctic Peninsula: Evidence from glacial marine sediments, Lallemand Fjord
- *Advisor*: E.W. Domack

## **HONORS AND AWARDS**

- ***GSA Storrs Cole Memorial Research Award (2006)***  
Awarded to a Geological Society of America Member or Fellow between 30 and 65 years of age who has published one or more significant papers on invertebrate micropaleontology.
- ***Postdoctoral Research Fellowship***, Institute for Marine and Coastal Sciences, Rutgers University, New Jersey (*declined, 2004*)
- ***Wendell Phillips Woodring Memorial Graduate Fellowship (2003)***  
Awarded by the UCSB Geological Sciences faculty to a graduate student working on a Ph.D. dissertation proposal of superior quality, judged capable of seeing the project to a distinguished and early completion.
- ***Marine Science Fellowship***, University of California Santa Barbara (1998-1999)
- ***Antarctic Service Medal*** (1995, 1998, 2001)
- ***Rogers Prize in Geology (1996)***  
Awarded by the Hamilton College Geological Sciences faculty to the outstanding senior geology major.
- ***L. David Hawley Prize Scholarship in Geology (1995)***  
Awarded by the Hamilton College Geological Sciences faculty to the outstanding junior geology major who exhibits promise as a scientist and intends to pursue a career in geology.

## **FUNDED RESEARCH GRANTS**

### ***Externally Funded***

- **Shevenell, A.E.** (PI), NSF OPP #1246378. Late Quaternary Evolution of the Lambert Glacier/Amery Ice Shelf System, Prydz Bay, Antarctica (\$267,712; 2013-2016).
- **Shevenell, A.E.** (PI), Wilson, K.E., Swaan, G., and M.J. Leng, NERC Isotope Geosciences Facility Award, *IP-1348-1112: A Role for the North Pacific in deglacial atmospheric CO<sub>2</sub> rise?* **£18,000** (\$28,326; 2013-2014)
- **Shevenell, A.E.** (PI) (student: T. Snow, USF CMS), Consortium for Ocean Leadership. *Schlanger Ocean Drilling Fellowship: Early Circum-Arctic glacial decay during major deglaciations of the past 500 kyr?* **\$30,000** (2012-2013).
- **Shevenell, A.E.**, Maslin, M., Davies, M., Guilderson, T., and Hendy, I., NERC, *A role for the North Pacific Ocean in deglacial atmospheric CO<sub>2</sub> rise?* **£464,904** (\$731,620; 2011-2014).
- S. Hautala (PI), **A. Shevenell** (Co-PI), L. Thompson (Co-PI), and P. Johnson (Co-PI), NSF OCE Physical Oceanography #0726519. *Ocean Circulation and climate impacts of proglacial lake outbursts into the Northeastern Pacific Ocean*, **\$605,752** (2007-2010).

- S. Emerson (PI), **A. Shevenell** (Co-PI; Primary author), and M. Brzezinski (Co-PI; UCSB), NSF OCE Marine Geology and Geophysics Award #0729954. *SGER-Collaborative Research: Paleoceanographic evidence for changes in ocean circulation and the ecological effects of iron fertilization in the Northwest Pacific (0-20 ka)*, **\$53,111** (2007-2009).
- S. Emerson, A. Ingalls, and **A. Shevenell** (Co-PI; Primary author), NSF OPP Award #0620099. *SGER: Extracting Holocene Sea Surface Temperature, Ventilation, and Productivity Records from Antarctic Continental Margin Sediments: Novel Geochemical Insights from Palmer Deep*, **\$26,953** (2006-2008).
- J.P. Kennett (PI) and **A. Shevenell** (Primary author), NSF Office of Polar Programs Award #0229898. *The middle Miocene climate transition: Investigating magnitude, phasing, and processes involving cryosphere expansion and global cooling*, **\$111,093** (2003-2005).
- J.P. Kennett (PI) and **A. Shevenell** (Primary author), JOI/USSSP Post-Cruise Funding, ODP Leg 189. *High-resolution stable isotopic and foraminifer investigations of the middle to late Middle Miocene climate transition: ODP Leg 189, South Tasman Rise*, **\$20,000** (2000-2001).

### ***Internally Funded***

- UCL Graduate School Research Project Grant, *West Antarctic Ice Sheet and global sea level variations in the Late Miocene (7-5 Ma): Insights from the oxygen isotopic composition of seawater*, **£1400** (2010).
- UCL Dean's Travel Fund, *10<sup>th</sup> International Conference on Paleoceanography*, San Diego, CA, August 29-September 3, 2010. **£750** (2010).
- M.Sc. Research Fund, *UCL ENSIS Ltd. Trust*, **£500/student** (2008-2010: 5 students; £2500)
- UCL Graduate School Staff Conference Fund, **£600/trip** (AGU 2008, AGU 2009; £1200)
- Maslin, M., McArthur, J., Robinson, S., **Shevenell, A.**, and Thurow, J., *UCL Capitol Infrastructure Funds for an Interdepartmental Environmental ICP-MS Facility*, **£350,000** (2008)
- **A. Shevenell** (PI), UW Program on Climate Change. *Trace metals in Antarctic Holocene Sediments*, **\$3500** (2005).
- J.P. Kennett (PI) and **A. Shevenell** (Primary author), UCSB Academic Senate Grant. High-resolution stable isotopic and foraminiferal investigations of the Middle Miocene climate transition: ODP Leg 189, South Tasman Rise, **\$5,000** (2002-2003)

### **RESEARCH INTERESTS**

**Overarching Research Themes:** Cenozoic ocean history (temperature, biogeochemistry, circulation), Evolution of the Southern Ocean and Antarctic cryosphere (Cenozoic through present), Role of the high-latitude oceans in glacial-interglacial CO<sub>2</sub> changes, Reconstructing past sea level change, Developing and calibrating geochemical proxies for Paleoclimatology/paleoceanography.

### **UCL Research (2008-2011)**

*Lecturer (Assistant Professor), University College London*

*Collaborators:* S. Jaccard (ETH), M. Brzezinski (UCSB), M. Maslin, D. Ostermann, S. Emerson, L. Thompson, S. Hautala, A. Ingalls (UWashington), I. Hendy (UMichigan), T. Guilderson (LLNL), G. Swann (BGS/NERC NIGL), E. Domack (Hamilton), C. John (Imperial), M. Greaves (Cambridge), J. Tain, P. Wang (Tonji University).

- Reconstructing Quaternary bottom water oxygen concentrations in the North Pacific/Southern Ocean.
- Assessing deglacial nutrient utilization/ocean circulation changes in the subarctic North Pacific.
- Climate impacts of meltwater influx to the North Pacific during deglaciation.
- Ventilation of the intermediate North Pacific during the “Mystery Interval”.
- Holocene Antarctic margin sea surface temperature history/past changes in Southern Hemisphere westerly winds.
- Neogene sea level estimates using a multiproxy approach: backstripping techniques combined with the chemical composition of biogenic carbonates.
- Late Miocene (Messinian) sea level history.
- Middle Miocene paleocirculation and geochemistry of the South China Sea.

### **Postdoctoral Research (2005-2007)**

*Program on Climate Change, School of Oceanography, University of Washington*

*Collaborators:* S. Emerson, A. Ingalls, P. Johnson, L. Thompson, S. Hautala, M. Brzezinski (UCSB), R. Murray (BU), E. Domack (Hamilton)

- Redox sensitive trace metals in Antarctic margin marine sediments: Proxies for Holocene ventilation and productivity change
- Glacial/interglacial history of late Quaternary (0-20 ka) circulation and productivity in the Subarctic Pacific
- High-resolution TEX<sub>86</sub> sea surface temperature studies of Holocene marine sediments from the western Antarctic Peninsula continental margin
- The impact of glacial Lake Missoula discharge events on NE Pacific circulation, carbon cycling, and climate

*Technology/Techniques employed:* Finnegan MAT 252 IRMS, Quadropole ICP-MS, LC-MS; Mg/Ca, bulk sediment trace element proxy development (U, Mo, Re),  $\delta^{18}\text{O}$ ,  $\delta^{13}\text{C}$ , and  $^{14}\text{C}$  dating of foraminifers, TEX<sub>86</sub>,  $\delta^{30}\text{Si}$  (diatoms), foraminifer assemblage studies.

### **Ph.D. Research (2001-2004)**

*Interdepartmental Graduate Program in Marine Science, University of California Santa Barbara*

*Advisor:* J.P. Kennett

*Committee:* D. Lea, B. Tiffney, R. Dunbar (Stanford University)

- Middle Miocene planktonic and benthic foraminifer trace element and stable isotope geochemistry, faunal analysis, and biostratigraphy
- Southern Ocean deep sea (Cenozoic) and Antarctic margin (Late Quaternary-Holocene) sedimentology

*Technology/Techniques employed:* Element2 ICP-MS, Finnegan MAT 251 IRMS; foraminifer trace elements (Mg, U, Sr, Cd, Ba),  $\delta^{18}\text{O}$  and  $\delta^{13}\text{C}$  of foraminifers, and foraminifer assemblage studies.

**M.Sc. Research** (1998-2001)

*Interdepartmental Graduate Program in Marine Science, University of California Santa Barbara*

*Advisor:* J.P. Kennett

- Stable isotope analysis of Holocene benthic foraminifers from Palmer Deep, Antarctica

**Undergraduate Research** (1995-1996)

*Hamilton College*

*Advisor:* E. Domack

- High-resolution sedimentologic and organic carbon investigations of western Antarctic Peninsula Holocene climate variability

**FIELD EXPERIENCE**

**Co-Chief Scientist**, *RV L.M. Gould*, US Antarctic Program, NSF ANT #1443981 (October 9-30, 2012)

*PI:* E.W. Domack, Hamilton College

*Cruise Objective:* To obtain deglacial grounding line sediments and install/update GPS stations to understand the deglacial history and post-glacial crustal rebound along the western Antarctic Peninsula. Undergraduate education emphasized.

**Research Assistant**, *RV T. Thompson*, Oregon Margin (Oct. 5-10, 2005)

- *PI:* H.P. Johnson, University of Washington
- *Cruise Objective:* Student teaching cruise to obtain sediment cores for Missoula Flood pilot study.

**Research Assistant**, *RV/IB N.B. Palmer*, Santa Barbara Basin (Nov. 6-10, 2002)

- *PI:* J.P. Kennett, University of California Santa Barbara
- *Cruise Objective:* An intermediate water transect of the Southern California Borderland.

**Research Scientist**, *RV/IB N.B. Palmer*, US Antarctic Program, NSF OPP #9909367 (Jan.-Mar. 2001)

- *PI:* A. Leventer, Colgate University
- *Cruise Objective:* To obtain Quaternary-Holocene sedimentary records from the remote East Antarctic Margin.

**Shipboard Sedimentologist**, *JOIDES Resolution*, ODP Leg 189: Southern Gateways (Mar.-May 2000)

- *PIs:* J.P. Kennett (University of California Santa Barbara) and N. Exon (AGSO, Canberra, Australia)
- *Leg Objective:* To test the hypothesis that Cenozoic Antarctic cryospheric evolution resulted from isolation of Antarctica by the Antarctic Circumpolar Current.

**Research Assistant** *RV L.M. Gould*, US Antarctic Program, NSF OPP-RUI #9418153 (Feb.-Apr. 1998)

- *PI*: E.W. Domack, Hamilton College
- *Cruise Objective*: To obtain Holocene sedimentary records from the western Antarctic Peninsula to better understand the region's climate and oceanographic response to decadal-millennial scale climate perturbations.

**Undergraduate Assistant**, *RV/IB N.B. Palmer*, US Antarctic Program, NSF OPP-RUI #9418153 (Oct.-Dec. 1995)

- *PIs*: L. Lawver, University of Texas, G. Klinkhammer, Oregon State University
- *Cruise Objective*: Marine geophysical investigations of the neotectonic evolution of the Drake Passage region and geochemical investigations of the Bransfield Basin, Antarctic Peninsula.

## **PROFESSIONAL ACTIVITIES**

### **1. Workshops and symposiums**

- ***Invited Participant***, SW Pacific IODP planning workshop, Sydney, Australia (October 9-11, 2012; at sea and unable to attend)
- ***Invited Participant***, Antarctic and Southern Ocean Drilling Workshop, XXXII SCAR Meetings and Open Science Conference, Portland OR (July 12-13, 2012; via skype)
- ***Invited Participant***, IODP Building US Strategies for 2013-23 Scientific Ocean Drilling, Consortium of Ocean Leadership, Denver CO (April 30-May 2, 2012).
- ***Invited Panel Member***, Mark Dion "Troubleshooting" colloquium: "Studying People, Places, and Systems: Ecology and Academic Pursuits?" USF Contemporary Art Museum and Graphicstudio, Tampa (February 10, 2012)
- ***UK IODP Invited Participant***: Forcings and Feedbacks workshop, Cardiff, Wales (NERC UK IODP Funding) (February 16-17, 2011).
- ***UK IODP Participant***: IODP INVEST, Bremen, Germany (NERC UK IODP Funding-£400 (2009))
- ***Participant***, The Leverhulme Climate Symposium 2008. Earth's Climate: Past, Present and Future. University of Cambridge and the Royal Society, London (March 2008).
- ***Invited Speaker/Participant***, *Climate Feedbacks and the Middle Miocene Climate Transition: Southern Ocean Foraminiferal geochemical and faunal investigations*, Towards an Integrated Data-Modeling Perspective of Miocene Climate Change: ECOM Workshop, Bremen, Germany (2006)
- ***Invited Participant***, *Role of climate feedbacks in the middle Miocene Climate Transition*, JOI Southern Ocean Synthesis Workshop, Boulder, CO (2005)
- ***Session Chair***, PP11B, AGU Fall Meeting, San Francisco, CA (2005)

### **2. Invited Talks**

- Weekly Science Talk, Palmer Station, Antarctica, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (October, 2012)
- Center for Coastal Physical Oceanography Seminar Series, Old Dominion University, Norfolk Virginia, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (October, 2012)

- Marine Science Seminar Series, University of South Carolina, Columbia, South Carolina, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (September, 2012)
- Antarctic and Southern Ocean Drilling Workshop, XXXII SCAR Meetings and Open Science Conference, Portland OR, Portland, Oregon, *Southern Ocean drilling during IODP 2013-2023* (July 12-13, 2012; via skype).
- Peking University, Beijing, China, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (April, 2012)
- State Key Laboratory of Earthquake Dynamics, Institute of Geology, China Earthquake Administration, Beijing, China, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (April, 2012)
- Tongji University, Shanghai, China, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (April, 2012)
- University of South Florida College of Marine Science, *Glacial-Interglacial changes in silicon cycling in the subarctic North Pacific: Insights from diatom  $\delta^{30}\text{Si}$  over Termination I* (September 2011).
- University of Rochester, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (2011).
- University of Rochester, *Middle Miocene Antarctic Ice Growth and Southern Ocean Cooling* (2011).
- University of South Florida College of Marine Science, *The Southern Ocean reveals its climate secrets: Paleotemperature insights from marine sediments* (2011)
- University of Florida, *Middle Miocene Antarctic Ice Growth and Southern Ocean Cooling* (2010)
- AGU Fall Meeting, *Glacial-Interglacial changes in silicon cycling in the subarctic North Pacific: Insights from diatom  $\delta^{30}\text{Si}$  over Termination I* (2009)
- Cambridge University, *Orbital and millennial-scale variability of Holocene climate on the Antarctic Peninsula* (2009)
- Earth Sciences Department, University College London, *Atmospheric modulation of western Antarctic Peninsula Holocene climate variability* (2008)
- Geography Department, University College London, *Antarctica and global climate: Southern Ocean paleotemperature insights* (2007)
- University of Bristol, *Antarctica and global climate: Southern Ocean paleotemperature insights* (2007)
- Rice University, *Middle Miocene Antarctic Cryosphere Expansion and Southern Ocean Cooling* (2007)
- Indiana State University, *Middle Miocene Antarctic Cryosphere Expansion and Southern Ocean Cooling* (2007)
- University of Michigan, *Middle Miocene Antarctic Cryosphere Expansion and Southern Ocean Cooling* (2007)
- AGU Fall Meeting, *Orbital and atmospheric forcing of western Antarctic Peninsula climate during the Holocene: The TEX<sub>86</sub> paleotemperature record of Palmer Deep* (2006)
- Keynote, *Is there a relationship between the middle Miocene Antarctic Ice Sheet development and the Columbia River Flood Basalts?* Northwest Geological Society November Meeting, Seattle Washington (2006)

- Hamilton College, *Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion* (2006)
- San Jose State University, *Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion* (2006)
- Southern Illinois University, *Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion* (2006)
- School of Oceanography, University of Washington, *Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion* (2005)
- UC Santa Barbara, *Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion* (2004)
- JISAO, University of Washington, *Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion* (2004)

### 3. Professional Service

- **Member**, USF CMS Eminent Scholar Lecture Series Planning Committee (2012-present)
- **Member**, USF CMS Student Recruitment Standing Committee (2012-present)
- **Search Committee Member**, USF CMS Chemical Oceanography Search (2012-present)
- **Search Committee Member**, USF CMS Paleoceanography Search (2012-present)
- **Elected Panel Member**, IODP Proposal Evaluation Panel (PEP) (2011-2014)
- **Member**, USF CMS Ad-Hoc Undergraduate Teaching Committee (2011-2012)
- **UCAS Admissions Interviewer**, UCL Department of Geography (2010-2011)
- **External PhD Examiner**: Dr. Christine Euler, *Advisors*: Dr. Ulysses Ninnemann and Dr. Helga Kikki Kleiven, *Second External PhD Examiner*: Dr. Elisabeth Michel, *Internal PhD Examiner*: Prof. Eystein Jansen, University of Bergen, Department of Earth Sciences (2010)
- **Invited Member**, UCL Earth Sciences Ad-Hoc Departmental Review Committee (2010)
- **Member**, UCL Earth Sciences Research Standing Committee (charged with admitting postgraduate students to UCL Earth Sciences; 2009-2011)
- **Founder/Convenor**, UCL Paleoclimate Working Group (2009-2011)
- **Chair**, UCL Interdepartmental Environmental ICP-MS Facility Management Committee (2009-2011)
- **Internal Ph.D. Examiner**: Dr. Alex Dickson, *Advisor*: Prof. Mark Maslin, UCL Geography, *External Examiner*: Prof. David Hodell, Cambridge University (2009)
- **Student Organizer**, Colloquium; UCSB Interdepartmental Marine Science Graduate Program (2002, 2003)
- **Student Organizer**, Colloquium; UCSB Department of Geological Sciences (2000, 2001)
- **Student Liaison**, Field Committee, UCSB Department of Geological Sciences (1999)
- **Peer Reviewer**: NSF OCE MG&G, NSF OCE Chemical Oceanography, NSF Earth Sciences, NSF IODP, NERC, Italian Antarctic Programme, Royal Society of New Zealand, University of Washington Royalty Research Fund, ETH Zurich Research Commission, *Nature*, *Nature Geoscience*, *Earth and Planetary Science Letters*, *Geophysical Research Letters*, *Geology*, *Marine Micropaleontology*, *G<sup>3</sup>*, *Paleoceanography*, *Paleo<sup>3</sup>*, *Quaternary Science Reviews*, *Climate of the Past*, *Antarctic Science*.

### 4. Outreach



- **Invited speaker**, Junior Kindergarten, Shorecrest Preparatory School, St. Petersburg, FL (January, 2013)
- **Science Blog**, [www.ameliashevenell.wordpress.com](http://www.ameliashevenell.wordpress.com), Cruise blog for Antarctic research cruise LMG12-11 (October, 2012)
- **Invited Panel Member**, Careers Conference, UCL Horizons Outreach (2010)
- **Mentor**, MentorSET, UKRC GetSET Women (2009-2011)
- **Invited Presenter**, Bright Club, UCL Public Engagement Unit (2009)
- **ADHD Coach/Writing Tutor**, Santa Barbara (2003-2004)
- **Volunteer**, UCSB Scienceline, online outreach to school children (1999-2004)
- **Volunteer**, UCSB Marine Science Institute (1999-2000)
- **Tutor**, UCSB Campus Learning Assistance Service (1999-2000)

### **PROFESSIONAL AFFILIATIONS**

- Geological Society of America
- American Geophysical Union
- European Geophysical Union
- Association for Women Geoscientists
- American Polar Society
- GetSETWoman/UK Resource Centre for Women

### **PUBLICATIONS**

**H-index:** ISI: 7; Google Scholar: 9

**Total Citations:** ISI: 359; Average Citations per item: 25.64; Google Scholar/ journal sites: 527

#### ***In preparation***

- \*Williams, C., **Shevenell, A.E.**, Lowell, T.V., Hastings, D.W., Shiller, A.M., and B.P. Flower, *in preparation*. A multi-proxy approach to reconstructing deglacial salinity and Laurentide Ice Sheet meltwater sources, *Paleoceanography or Earth and Planetary Science Letters*.
- **Shevenell, A.E.**, Jaccard, S., Brzezinski, M., Swann, G., and S. Emerson, *in preparation*, Deglacial changes in nutrient utilization and stratification in the subarctic North Pacific, *Science, Nature Geoscience, or Geology*.
- \*Gray, W., **Shevenell, A.**, Jaccard, S., and I. Hendy, *in preparation*, The deglacial ventilation history of the Subarctic North Pacific derived from stable isotopes and foraminiferal faunas, *Quaternary Science Reviews*.
- **Shevenell, A.E.**, Emerson, S.R., and S. Keever, *in preparation*. Holocene ventilation and productivity history of Palmer Deep, Antarctica. *Earth Planet. Sci. Lett.*

#### ***Submitted***

- \*Gray, W., Holmes, J. and **A.E. Shevenell**, *submitted (March 2013)*. Evaluation of the effects of foraminiferal trace element cleaning protocols on the Mg/Ca of marine ostracod genus *Krithe*. *Chemical Geology*.

- Jiang, H., **Shevenell, A.E.**, Z. Ding, J. Chen, S. Yu, H. Xu, X. Ma, N. Zhong, *submitted* (Dec. 14, 2012), Asian monsoon variability and aridification during the Medieval Climate Anomaly. *Quaternary Science Reviews*.

#### ***In revision***

- Müller, R.D., **Shevenell, A.E.**, Herold, N., and M. Huber, *submitted Dec. 23, 2012; returned March 20, 2013*. The Miocene Atlantic Ocean, *Nature Geoscience*.
- **Shevenell, A.E.** J.P. Kennett, and G. Simpson, *in revision (returned December, 2011)*. Middle Miocene evolution of high latitude Southwest Pacific vertical water column structure as revealed by planktonic foraminifer faunas and stable isotopes, *Marine Micropaleontology*.

#### **2012**

- **Shevenell, A.E.** and S.M. Bohaty, 2012. Southern exposure: New paleoclimate insights from Southern Ocean and Antarctic margin sediments. *Oceanography*: **25**(3), 106–117, <http://dx.doi.org/10.5670/oceanog.2012.82>.
- Hastings, D.W., **Shevenell, A.E.**, and J.P. Kennett, 2012. Benjamin P. Flower (1962-2012). *EOS trans. AGU*, 93(40).

#### **2011**

- Thompson, L., Perez, R.C., and **A.E. Shevenell**, 2011. Not Just Family Matters, Reply. *Nature Geoscience*: **4** (6), 346.
- **Shevenell, A.E.**, Ingalls, A.E., Domack, E.W., and C. Kelly, 2011. Holocene Southern Ocean surface temperature variability west of the Antarctic Peninsula. *Nature*: **470**, 250-254 (Featured in News and Views; Bendle, 2011).
- Thompson, L., Perez, R.C., and **A.E. Shevenell**, 2011. Closed ranks in oceanography. *Nature Geoscience*: **4** (4), 211-212.

#### **2009**

- Tian, J., **Shevenell, A.**, Wang, P., Zhao, Q., Li, Q., and X. Cheng, 2009. Reorganization of Pacific Deep Waters linked to middle Miocene Antarctic cryosphere expansion: A perspective from the South China Sea. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*: doi:10.1016/j.palaeo.2009.10.019.

#### **2008**

- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2008. Middle Miocene ice sheet dynamics, deep-sea temperatures, and carbon cycling: A Southern Ocean perspective. *Geochem. Geophys. Geosystem.*: 9, doi:10.1029/2007GC1736.

#### **2007**

- **Shevenell, A.E.** and J.P. Kennett, 2007. Cenozoic Antarctic Cryosphere Evolution: Tales from Deep-Sea Sedimentary Records. *Deep Sea Research II*: **54**, 2308-2324.
- **Shevenell, A.E.**, Ingalls, A.E., and E.W. Domack, 2007. Orbital and atmospheric forcing of western Antarctic Peninsula climate in the Holocene: The TEX<sub>86</sub> paleotemperature record of

Palmer Deep, in *Antarctica: A Keystone in a Changing World-Online Proceedings of the 10th ISAES X*, A.K. Cooper and C.R. Raymond et al., eds., USGS Open-File Report 2007-1047 Extended Abstract 131, 4p.

- Leventer, A., Domack, E., Dunbar, R., *et al.*, 2007. Marine sediment record from the East Antarctic margin reveals dynamics of ice sheet recession. *GSA Today*: 16, 4-10.

#### 2005

- Filippelli, G., Warnke, D., Flores, J.A., Marchitto, T., and the **Southern Ocean Synthesis Group**, 2005. Paleooceanography and Paleoclimatology of the Southern Ocean. *EOS*, 86: 193, 195.

#### 2004

- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2004. Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion. *Science*: **305**, 1766-1770.
- **Shevenell, A.E.** and J.P. Kennett, 2004. Paleooceanographic Change during the Middle Miocene climate revolution: An Antarctic stable isotope perspective, *Geophys. Mon. Ser. 151*, AGU, Washington DC, pp. 235-252.

#### 2002

- Exon, N.F., Kennett, J.P., Malone, M.J., and **the Leg 189 Shipboard Scientific Party**, 2002. Drilling reveals climatic consequences of Tasmanian Gateway opening. *EOS*, **83**: 253-258.
- **Shevenell, A.E.** and J.P. Kennett, 2002. Antarctic Holocene climate change: A benthic foraminifer stable isotope record from Palmer Deep. *Paleoceanography*: **17**, 10.1029/2000PA000596.

#### 2001

- Robert, C.M., Exon, N.F., Kennett, J.P., Malone, M.J., and **the Leg 189 Shipboard Scientific Party**, 2001. Paleogene ocean opening south of Tasmania, and paleooceanographic implications: preliminary results of clay mineral analyses [ODP Leg 189]. *Comptes-Rendus de l'Academie des Sciences de Paris*, **332**: 323-329.

#### 2000

- Exon, N.F., Kennett, J.P., Malone, M.J., **et al.**, 2000. *Proc. ODP, Init. Repts.*, 189 [CD-ROM]. Available from: Ocean Drilling Program, Texas A&M University, College Station, TX 77845-9547, USA.
- Exon, N., Kennett, J., Malone, M., and **the Leg 189 Shipboard Scientific Party**, 2000. The opening of the Tasmanian gateway drove global Cenozoic paleoclimatic and paleooceanographic changes: results of Leg 189, *JOIDES J.*: **26**(2). 11-17.

#### 1996

- **Shevenell, A.E.**, Domack, E.W., and G.M. Kernan, 1996. Record of Holocene climate change along the Antarctic Peninsula: Evidence from glacial marine sediments, Lallemand Fjord. *Papers and Proceedings of the Royal Soc. Tasmania*: **130**, 55-64.

## Conference Abstracts

- \*Gray, W., J. Holmes, and **A.E. Shevenell**, 2012. Evaluation of foraminiferal trace element cleaning methods on the Mg/Ca of marine ostracoda *Krithe*. *EOS Trans., AGU, 93, Fall Meet. Suppl.* Abstract B21C-0368.
- **Shevenell, A.E.**, K.E. Wilson, T.P. Guilderson, I.L. Hendy, and W.R. Gray, 2012. A deglacial ventilation history of Northeast Pacific intermediate waters. *EOS Trans., AGU, 93, Fall Meet. Suppl.* Abstract PP13B-2100.
- \*Snow, T., Alonso Garcia, M., B.P. Flower, **A.E. Shevenell**, U. Rohl, and E. Goddard, 2012. Early Circum-Arctic glacial decay following the last glacial maximum, *EOS Trans., AGU, 93, Fall Meet. Suppl.* Abstract PP23B-2042.
- \*Williams, C., E.A., Brown, D.W. Hastings, T.V. Lowell, A.M. Shiller, **A.E. Shevenell** and B.P. Flower, 2012. The deglacial retreat of the Laurentide Ice sheet's southern margin: Meltwater provenance insights from the Gulf of Mexico. *EOS Trans., AGU, 93, Fall Meet. Suppl.* Abstract PP13A-2061.
- Wilson, K.E., **A.E. Shevenell**, and W. Gray, 2012. Evidence for increased ventilation of the NE Pacific Ocean during the 'Mystery Interval'. *EOS Trans., AGU, 93, Fall Meet. Suppl.* Abstract PP13B-2099.
- \*Williams, C., B.P. Flower, D.W. Hastings, E.A. Brown, T.V. Lowell, and **A.E. Shevenell**, 2012. Deglacial meltwater input to the Gulf of Mexico: A marine-based record of Laurentide Ice Sheet retreat. *GSA Abstracts with Programs*: 44 (7), Abstract 211092.
- \*Gray, W. and **A.E. Shevenell**, 2012. Deglacial water column structure of the subarctic Pacific, UK IODP Student Research Conference 2012, Chicheley Hall Conference Centre, UK.
- **Shevenell, A.E.**, Keever, S., and E.W. Domack, 2011. Circumpolar Deep Water influence in Palmer Deep during the Holocene: New evidence from redox sensitive trace elements, *EOS Trans., AGU, 92, Fall Meet. Suppl.* Abstract PP33B-1940.
- Domack, E., Leventer, A., Brachfeld, S., Ishman, S., Crosta, X., **Shevenell, A.**, Willmott, V., Dunbar, R., Rosenheim, B., and L. Barbara, 2011. Antarctic climate variability during the Holocene: integrating different proxies and climate models, Edinburgh Scotland, 11<sup>th</sup> ISAES, July 10-15, 2011.
- \*Drury, A., John, C., **Shevenell, A.**, and T. Dunkley-Jones, 2011. Messinian  $\delta^{18}\text{O}$  and  $\delta^{13}\text{C}$  stable isotope stratigraphy from *Cibicidoides mundulus*: Potential for studying glacial eustacy (7.50-5.08 Ma; IODP Site U1338), IODP Legs 320 and 321 Post cruise meeting, Paris, April 11-14.
- \*Huck, C., John, C.M., **Shevenell, A.E.**, and the IODP Expedition 317 Shipboard Scientific Party, 2010. Identifying glacio-eustatic forcing of unconformities in the Canterbury Basin

(IODP Exp 317) based on oxygen isotope analysis of the fine fraction, *EOS Trans., AGU, 91, Fall Meet. Suppl.*

- **Shevenell, A.E.**, Emerson, S.R., Brzezinski, M.A., Swann, G., and Jaccard, S., 2010. Glacial-Interglacial changes in silicon cycling in the subarctic North Pacific: Insights from diatom  $\delta^{30}\text{Si}$  over Termination 1, *10<sup>th</sup> International Conference on Paleooceanography Program and Abstracts*, San Diego, CA.
- **Shevenell, A.E.**, Emerson, S.R., Brzezinski, M.A., Swann, G., and Jaccard, S., 2009. Glacial-Interglacial changes in silicon cycling in the subarctic North Pacific: Insights from diatom  $\delta^{30}\text{Si}$  over Termination 1. *EOS Trans., AGU, 90 (52), Fall Meet. Suppl.*, Abstract PP14B-07.
- Bart, P., DeSantis, L., Charlotte, F.F., Warney, S., Rack, F., **Shevenell, A.E.**, Domack, E.W., Florindo, F., Bartek, L., Davey, F., Barrett, P., and J. Anderson, 2008. Late Neogene history of the Ross Sea continental margin IODP proposal: The missing link between the inner shelf and the Southern Ocean, *Geophysical Research Abstracts, 10*, Abstract EGU2008-A-12063.
- **Shevenell, A.E.**, Domack, E.W., Ingalls, A.E., 2008. Atmospheric modulation of western Antarctic Peninsula Holocene climate variability: Insights from the TEX<sub>86</sub> record of Palmer Deep, *EOS Trans., AGU, 89, Fall Meet. Suppl.* Abstract PP41C-1472.
- \*Griffin, H., **Shevenell, A.E.**, Hendy, I.L., Emerson, S.R., 2008. An Extreme Expression of the California Current during the Holocene: New Evidence from the Washington Margin, *EOS Trans., AGU, 89, Fall Meet. Suppl.*, Abstract PP41B-1457.
- **Shevenell, A.E.**, Ingalls, A.E., Domack, E.W., and S.R. Emerson, 2006. Atmospheric forcing of Holocene climate variability along the western Antarctic Peninsula: Novel insights from the TEX<sub>86</sub> paleotemperature record of Palmer Deep, *EOS Trans., AGU, 87 (47), Fall Meet. Suppl.*, Abstract PP02-0648.
- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2006. Climate feedbacks and the middle Miocene climate Transition: Southern Ocean Foraminifer geochemical and faunal investigations, *Towards an Integrated Data-Modeling Perspective of Miocene Climate Change: ECOM Workshop*, Bremen Germany, June, 2006.
- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2005. Middle Miocene ice sheet dynamics, deep-sea temperatures, and carbon cycling: A Southern Ocean perspective, *EOS. Trans., AGU, 86 (47), Fall Meet. Suppl.*, Abstract PP02-5496.
- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2005. The role of climate feedbacks in the middle Miocene climate transition, *JOI Southern Ocean Synthesis Workshop*, Boulder, CO, January, 2005.
- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2004. Orbitally paced climate change across the middle Miocene climate transition, *EOS. Trans., AGU, 85 (47), Fall Meet. Suppl.*, Abstract PP11A-0542.

- **Shevenell, A.E.**, Kennett, J.P., and D.W. Lea, 2003. Estimates of Middle Miocene Ice Volume and Temperature Change from Southern Ocean Benthic Foraminiferal Mg/Ca and  $\delta^{18}\text{O}$ , *EOS Trans.*, AGU, 84 (47), *Fall Meet. Suppl.*, Abstract PP02-2761.
- **Shevenell, A.E.** Kennett, J.P., and D.W. Lea. 2002. Deconvolving Middle Miocene Antarctic ice sheet expansion from temperature change: Mg/Ca and  $\delta^{18}\text{O}$  records from the Southern Ocean, *EOS Trans.*, AGU, 83 (47), *Fall Meet. Suppl.*, Abstract PP11C-07.
- **Shevenell, A.E.** and J.P. Kennett, 2001. Antarctic Holocene Climate Change: Stable Isotopic Record from Palmer Deep. *7<sup>th</sup> International Conference on Paleoceanography Program and Abstracts*, Sapporo, Japan.
- **Shevenell, A.E.** and J.P. Kennett, 2001. Antarctic Holocene Climate Change: Benthic Foraminifer Stable Isotope Record from Palmer Deep. *EOS Trans. AGU*, 82 (47), *Fall Meet. Suppl.*, Abstract PP21A-0462.
- Leventer, A., **et al.**, 2001. Preliminary Report on Cruise NBP01-01, East Antarctic Margin. *Eos Trans.*, AGU, 82 (47), *Fall Meet. Suppl.*, Abstract PP51A-0535.
- **Shevenell, A.E.** and J.P. Kennett, 2000. The Strength of the East Australian Current through the middle Miocene Climate Reorganization: Stable isotopic and foraminifer investigations from the South Tasman Rise (ODP Site 1171). *EOS Trans.*, AGU, 81 (48), *Fall Meet. Suppl.*, Abstract OS22A-07.
- **Shevenell, A.E.** and J.P. Kennett, 1999. Late Holocene Paleoceanographic Oscillations along the Western Antarctic Peninsula: Stable Isotopic Evidence from the Palmer Deep (ODP Hole 1098B). *EOS Trans.*, AGU, 80 (49), *Fall Meet. Suppl.*, Abstract OS31B-02.
- **Shevenell, A.E.**, LoPiccolo, M.H., Straten, B.T., and E.W. Domack, 1996. Holocene Paleoenvironmental Studies within Antarctic Fjords along the Western Side of the Antarctic Peninsula: Understanding Hypsithermal and Neoglacial Fluctuations. *Geol. Soc. Am. Poster and Abstracts, Northeast Regional Meeting*, Buffalo, NY.

\*Student paper or presentation

## **TEACHING**

- **Lecturer**, *Stable Isotopes in Marine Science* (OCE6934-621; 3 credits; co-taught), USF College of Marine Science (Spring 2013)
- **Lecturer**, *Geological Oceanography* (OCG6051-616; 3 credits; co-taught), USF College of Marine Science (Spring, 2013)
- **Convenor**, *Topics in Paleoceanography: The Holocene* (OCE6934-644; 3 credits), USF College of Marine Science (Fall, 2012)
- **First Year Tutor**, UCL Geography (2008-2011)
- **Convenor**, *Environmental Systems and Processes* (GEOG1002), UCL Geography (2008 (Lecturer)-2011)
- **Lecturer**, *Past Global Environmental Change* (GEOG3007), UCL Geography/Earth Sciences (2008-2011)

- **Lecturer, *Geological and Environmental Mapping*\*** (GEOL3042), UCL Earth Sciences (2008- 2011)
- **Convenor, *Paleoclimate*** (Postgraduate), Royal Holloway/UCL Quaternary Science MSc (2008-2011)
- **Lecturer, *Paleoceanography*** (Postgraduate), UCL Earth Sciences MSci (2011)
- **Guest Lecturer, *Oceanography 450***, University of Washington (2006)
- **Teaching Assistant, *Antarctica*** (GS10), University of California Santa Barbara (2001-2003)  
*Responsibilities:* Head TA, lecture preparation, developed laboratory sections and assignments, taught four sections (~100 students), wrote exams, managed TAs, graded assignments/exams, office hours.
- **Teaching Assistant, *History of Life*** (GS 30), University of California Santa Barbara (1998)
- **Teaching Assistant, *Intro. to Oceanography*\*** (GS 4), University of California Santa Barbara (1999-2000)
- **Teaching Assistant, *Sedimentology and Stratigraphy*\*** (GS 122), University of California Santa Barbara (1998)
- **Teaching Assistant, *Earth Systems History*\***, Hamilton College (1994-1995)
- **Teaching Assistant, *Paleontology*\***, Hamilton College (1994)

\*Involved field instruction

## **STUDENTS SUPERVISED**

### **USF**

#### ***Ph.D. Students:***

- *Carlie Williams*, University of South Florida College of Marine Science, Funding: CMS Knight Fellowship (2012-2014; started 2007)
- *Tasha Snow*, University of South Florida College of Marine Science, Funding: Schlanger Ocean Drilling Fellowship (2012-2013; started 2011)

#### ***MSc Students:***

- *Michelle Guitard*, University of South Florida, College of Marine Science, Funding: Bridge to the Doctorate (2012-2014; started 2012)

### **UCL**

*UCL regulations state that that Probational Lecturers (in the first three years of employment) are not allowed to supervise Ph.D. students*

#### ***Ph.D. Students:***

- *William Gray*, University College London, awarded the only Geography Department NERC Studentship (started October, 2010)
- *Anna Drury*, Imperial College (co-supervised with Dr. Cedric John, Imperial College; Started October 2010)

#### ***MSc Students:***

***RHUL/UCL Quaternary Science MSc***

- *William Gray* (2010; Elsevier prize for best dissertation; now NERC-funded PhD student at UCL), Foraminifer stable isotopes and chronology across Termination 1 in the Subarctic Pacific (ODP Site 882).
- *Matthew Clarkson* (2010; now Ph.D. student, Edinburgh University), Plio-Pleistocene TEX<sub>86</sub> and Alkenone SST record from the Benguela region, co-supervised with Prof. M. Maslin and Prof. R. Pancost (Bristol).
- *Jon Hancock* (2010), Foraminiferal assemblage and isotope evidence for changes in the Benguela-Agulhas interaction over the Mid-Pleistocene Revolution, co-supervised with Prof. M. Maslin.
- *Emma Kahdun* (2009; now Paleooceanography PhD student, Christian Albrecht Universitat Kiel), <sup>14</sup>C dating of Missoula Flood Interval in NE Pacific Sediments.
- *Rachel Downy* (2008), Trace metals in sediments from the subarctic Pacific (ODP Site 882).

#### ***UCL Micropaleontology M.Sc./ Earth Science M.Sc.***

- *Stephanie McClennan* (2011), TEX<sub>86</sub>, δ<sup>13</sup>C and TOC% from sediment core NBP-10-01 KC-11, Hugo Island Trough, West Antarctic Peninsula, co-supervised with Dr. Stuart Robinson.
- *Mel Green* (2009; now Research Assistant in UCL Earth Sciences), Orbital scale changes in Middle Miocene foraminiferal fragmentation and CaCO<sub>3</sub>, Shatsky Rise, co-supervised with Dr. Stuart Robinson.
- *Helen Griffin* (2008; now PhD student, Southampton University), Holocene expression of the California current: <sup>14</sup>C, stable isotope, and foraminifer assemblages in Cascadia Basin.
- *Nick Harvey* (2008; now consulting geologist), NE Pacific Holocene benthic foraminifer assemblage changes.

#### ***Undergraduates***

- *Stefanie Kever*, (2005-2007; accepted to USF CMS PhD program in Marine Science in Fall, 2012), Chemical Oceanography, University of Washington.
- *Celia Kelly* (2006-2007; deceased), Chemical Oceanography, University of Washington.
- *Maureen Davies* (2006; now a Postdoctoral Fellow at Australian National University with Prof. Patrick DeDekker, Ph.D., Oregon State University (Advisors: A. Mix and J. Stoner)), Geological Oceanography, University of Washington.
- *Justine Kimball* (2002), now a Ph.D. student at Stanford University (Advisor: R. Dunbar), Geological Sciences, University of California Santa Barbara.



## **COLLABORATORS**

P. Bart, L. Bartek, M Brzezinski, R. Deconto, E. Domack, R Dunbar, S. Emerson, T. Guilderson, M. Greaves, S. Hautala, I. Hendy, A. Ingalls, S. Jaccard, C. John, P. Johnson, K. Kryc, D. Lea, J. Latimer, M.J. Leng, A. Leventer, B. Luyendyk, P. Manley, M. Maslin, R. Murray, D. Ostermann, D. Pak, F. Rack, G. Swann, J. Tain, L. Thompson, S. Wise, L. DeSantis.

## **REFERENCES**

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