

Andrea D. Hawkes

Assistant Professor in the Department of Earth and Ocean Sciences

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Education

2004 - 2008:	Ph.D.	Earth and Environmental Science	University of Pennsylvania, USA
		Advisors: Benjamin P. Horton, Alan R. Nelson	
2002 – 2004:	M.S.	Earth and Environmental Science	Dalhousie University, Canada
		Advisor: David B. Scott	
1996 - 2001:	B.S.	Geology and Political Science	Dalhousie University, Canada

Ph.D. Dissertation: *The Application of Foraminifera to Characterize Tsunami Sediment and Quantify Coseismic Subsidence along the Sumatra and Cascadia Subduction Zones.*

Research Interests

The development and application of environmental modeling and quantitative palaeoenvironmental reconstruction techniques with the aim of understanding the role of coastal hazards as driving mechanisms of Quaternary relative sea-level change and coastal evolution.

Professional Experience

2012-Present	Assistant Professor	Univ. of North Carolina Wilmington
2012-Present	Adjunct Researcher	Woods Hole Oceanographic Inst.
2010-2012	Postdoctoral Investigator	Woods Hole Oceanographic Inst.
2008-2010	Postdoctoral Fellow	Woods Hole Oceanographic Inst.

Research Funding and Awards; Total funding: \$1,386,899; Total to Hawkes (in parentheses): \$620,155

- 1) National Science Foundation (EAR), "Collaborative Research: Heterogeneous rupture of great Cascadia earthquakes inferred from coastal subsidence"; Co-PI's A.D. Hawkes, B.P. Horton, and S.E. Engelhart; \$354,000 (\$102,000), 2014-2017
- 2) National Science Foundation, "MRI: Acquisition of a gas chromatograph and isotope ratio mass spectrometer interface for compound-specific isotope analyses at the University of North Carolina Wilmington". Co-PI's C.S. Lane, R. Mead, S. Emslie, N. Reber, and A.D. Hawkes; (\$149,705); 2014-2017

- 3) UNCW College of Arts and Sciences Pilot Grant, "Cascadia earthquake deformation and estuarine recovery"; (\$3500), 2016
- 4) UNCW Center for Marine Science Pilot Project, "Acquisition of a Hybrid Elemental Analyzer/Pyrolysis System for Increased Throughput and Enhanced Analytical Capabilities in the Stable Isotope Core Facility", Co-PI's: C.S. Lane and A.D. Hawkes, (\$41,740), 2016
- 5) UNCW Centre for Marine Science Pilot Project Grant, "Is the Cape Fear region really an Atlantic coast sea-level anomaly?" (\$10,000), 2014-2015.
- 6) National Science Foundation (OCE), "Tracking Sea Level Source Contributions: A Hemispheric Approach to High Resolution Sea-Level Variations over the Last Two Millennia; Co-PI's J. Donnelly and A.D. Hawkes; \$252,601 (\$110,000), 2012-2015.
- 7) UNCW College of Arts and Science – Undergraduate Enrichment Grant; \$9497; summer 2013.
- 8) UNCW College of Arts and Science Equipment Grant, "Acquisition of total station and RTK-GPS software upgrade"; (\$15,000), 2013
- 9) WHOI ARI, "Examining the Effects of Arctic Warming on Coastal Landforms and Estuarine Ecosystems"; Co-PI's J. Donnelly, J. Bernhard, L. Giosan, C. Karnauskas, A. Ashton, and A.D. Hawkes; \$393,438 (\$140,000), 2010-2012
- 10) National Science Foundation (EAR), "Microfossil-based approach to estimate hurricane intensity from the sedimentary record" Co-PI's J. Donnelly and A.D. Hawkes; \$89,299 (\$32,000), 2010-2011
- 11) WHOI COI, "Developing a microfossil-based approach to estimate paleo-hurricane intensity"; Co-PI's J. Donnelly and A.D. Hawkes; \$51,909 (\$15,000), 2010-2011
- 12) Postdoctoral Scholar, Woods Hole Oceanographic Institution, 2008-2010
- 13) Dean's Dissertation Completion Fellowship, University of Pennsylvania, 2007-2008
- 14) United States Geological Survey, "Subduction-zone paleogeodesy at Cascadia; Co-PI's A.R. Nelson, B.P. Horton, and A.D. Hawkes; \$25,039; 2006-2007
- 15) Earthquake subsidence; Society of Sedimentary Geology 2005-2007, \$(4000)
- 16) Benjamin Franklin Fellowship; University of Pennsylvania, 2004-2007
- 17) University of Pennsylvania, School of Arts and Sciences travel grant; 2006, (\$300)
- 18) Geological Society of America, annual meeting registration grant; 2006, (\$60)
- 19) Geological Society of America, northeast section travel grant; 2006, (\$50)
- 20) Society of Sedimentary Geology, Sanders student research fund; 2006, (\$1500)
- 21) University of Pennsylvania, Paleontology summer research stipend; 2006, (\$2000)
- 22) Tsunami and earthquake research in Malaysia and Thailand; UPenn 2005-2006, (\$4000)
- 23) University of Pennsylvania, School of Arts and Sciences travel grant; 2005, (\$300)
- 24) Society of Sedimentary Geology, Sanders student research fund; 2005, (\$1000)
- 25) University of Pennsylvania, Paleontology summer research stipend; 2005, (\$2000)
- 26) PANGA, travel grant; 2005, (\$500)
- 27) Cushman Foundation, Joseph A. Cushman Award for student research; 2005, (\$500)
- 28) Henry Lewis Endowment Fund; University of Pennsylvania Graduate Fellowship 2004-2005
- 29) Teaching Assistant of the year, Dalhousie University, 2003-2004
- 30) MacEachern-Ponsford Award; Dalhousie University, 1998-1999

Peer-Reviewed Publications

- 1) Brain, M., Kemp, A.C., **Hawkes, A.D.**, Vane, C., Cahill, N., Hill, T., Engelhart, S., Donnelly, J.P., Horton, B.P., (*submitted*). The contribution of mechanical compression and biodegradation to compaction of salt-marsh sediments and relative sea-level reconstructions. *Quaternary Science Reviews*.
- 2) Kemp, A.C., Wright, A., Barnett, R., **Hawkes, A.D.**, Charman, D., Sameshima, C., King, A., Mooney, H., Edwards, R., Horton, B.P., van de Plassche, O., (*submitted*). Utility of salt-marsh foraminifera, testate amoebae and bulk-sediment $\delta^{13}\text{C}$ values as sea-level indicators in Newfoundland, Canada. *Marine Micropaleontology*.
- 3) Lane, C.S., Hildebrandt, B., Kennedy, L.M., LeBlanc, A., Liu, K-B., Wagner, A.J., **Hawkes, A.D.**, (*submitted*). Verification of tropical storm deposits with oxygen isotope analyses of coeval ostracod valves. *Journal of Paleolimnology*.
- 4) **Hawkes, A.D.**, Kemp, A.C., Donnelly, J.P., Horton, B.P., Hill, D., Ashe, E., Alexander, C., 2016. 8000 years of relative sea level rise in northeast Florida. *Quaternary Science Reviews*, v. 142, 90-101.
- 5) Sawai, Y., Horton, B.P., Kemp, A.C., **Hawkes, A.D.**, Nagumo, T., Nelson, A.R., 2016. Relationships between diatoms and tidal environments in Oregon and Washington, USA. *Diatom Research*, v. 31 (1), 17-38.
- 6) Kemp, A.C., **Hawkes, A.D.**, Donnelly, J.P., Vane, C.H., Horton, B.P., Hill, T.D., Ainsfield, S.C., Parnell, A.C., Cahill, N., 2015. Relative sea-level change in Connecticut (USA) during the last 2200 yrs. *Earth and Planetary Science Letters*, v. 428, 212-229.
- 7) Kelsey, H.M., Engelhart, S.E., Pilarczyk, J., Horton, B.P., Rubin, C.M., Daryono, M.R., Ismail, N., **Hawkes, A.D.**, Bernhardt, C.E., Cahill, N., 2015. Accommodation space, relative sea level, and the archiving of paleo-earthquakes along subduction zones. *Geology*, G36706.1.
- 8) Donnelly, J., **Hawkes, A.D.**, Lane, P., MacDonald, D., Shuman, B.N., Toomey, M.R., van Hengstum, P.J., Woodruff, J.D., 2015. Climate Forcing of Unprecedented Intense-Hurricane Activity in the Last 2,000 Years. DOI:10.1002/2014EF000274; *Earth's Future*.
- 9) Kemp, A.C., Bernhardt, C.E., Horton, B.P., Kopp, R.E., Vane, C.H., Peltier, W.R., **Hawkes, A.D.**, Donnelly, J.P., Parnell, A.C., Cahill, N., 2014. Late Holocene sea- and land-level change on the U.S. southeastern Atlantic coast. *Marine Geology*, v 357, 90-100.
- 10) Donnelly, J.P., Anderson, J.B., **Hawkes, A.D.**, Otvos, E.G., Toomey, M.R., van Hengstum, P.J., Wallace, D.J., Woodruff, J.D., 2014. Comment on "The geological legacy of Hurricane Irene: Implications for the fidelity of the paleo-storm record" by Hippensteel, S.P., Eastin, M.D., Cargia, W.J. in *GSA Today*, v. 23, p. 4-10.
- 11) **Hawkes, A.D.**, Lipps, J.H., 2014. 2013 Cushman Award to Co-Recipient David B. Scott. *Journal of Foraminiferal Research*, v. 44, p. 1-2.
- 12) Wang, P-L., Engelhart, S.E., Wang, K., **Hawkes, A.D.**, Horton, B.P., Nelson, A.R., Witter, R.C., 2013. Heterogeneous rupture in the great Cascadia earthquake of 1700 inferred from

- coastal subsidence estimates. *Journal of Geophysical Research-Solid Earth*, v. 118, p. 1-14;
DOI:10.1002/jgrb.50101
- 13) Engelhart, S.E., Horton, B.P., Nelson, A.R., **Hawkes, A.D.**, Witter, R.C., Wang, K., Wang P.-L., and Vane, C.H., 2013. Testing the use of microfossils to reconstruct great earthquakes at Cascadia. *Geology*, v. 41, 1067-1070.
 - 14) Engelhart, S.E., Horton, B.P., Vane, C.H., Nelson, A.R., Witter, R.C., Brody, S.R., **Hawkes, A.D.**, 2013. Modern foraminifera, $\delta^{13}\text{C}$, and bulk geochemistry of central Oregon tidal marshes and their application in paleoseismology. *Palaeogeography, Palaeoclimatology, Palaeoecology*; DOI:10.1016/j.palaeo.2013.02.032
 - 15) **Hawkes, A.D.**, Horton, B.P., 2012. Sedimentary record of storm deposits from Hurricane Ike, Galveston and San Luis Islands, Texas. *Geomorphology*.
doi:10.1016/j.geomorph.2012.05.017
 - 16) Grand Pre, C.A., Horton, B.P., Kelsey, H.M., Rubin, C.M., **Hawkes, A.D.**, Daryono, M.R., Rosenberg, G., Culver, S.J., 2012, *Quaternary Science Reviews*. Stratigraphic evidence for an early Holocene earthquake in Aceh, Indonesia. doi:10.1016/j.quascirev.2012.03.011
 - 17) **Hawkes, A.D.**, Horton, B.P., Nelson, A.R., Sawai, Y., Vane C.H., 2011. Coastal subsidence in Oregon, USA, during the giant Cascadia earthquake of AD 1700. *Quaternary Science Reviews*, v. 30, p. 364-376.
 - 18) Horton, B.P., Sawai, Y., **Hawkes, A.D.**, Witter, R., 2011. Tsunami deposits in Pichilemu generated by the 2010 Chile Earthquakes. *Marine Micropaleontology*, v.79, p. 132-138.
 - 19) Dura, T., Rubin, C.M., Kelsey, H.M., Horton, B.P., **Hawkes, A.D.**, Grand Pre, C., Daryono, M., Ladinsky, T., Vane, C.H. and Bradley, S. 2011. Stratigraphic record of Holocene coseismic subsidence, Padang, Western Sumatra. *Journal of Geophysical Research*, 116, B11306. doi:10.1029/2011JB008205.
 - 20) Lane, P., Donnelly, J.P., Woodruff, J.D., **Hawkes, A.D.**, 2011. A decadal-resolved paleohurricane record archived in the late Holocene sediments of a Florida sinkhole. *Marine Geology*, v. 287, p. 14-30.
 - 21) **Hawkes, A.D.**, Horton, B.P., Nelson, A.R., Hill, D.F., 2010. The application of Intertidal Foraminifera to reconstruct Coastal Subsidence during the Giant Cascadia Earthquake of AD 1700 in Oregon, USA. *Quaternary International*, v. 221, p. 116-140.
 - 22) Horton, B.P., Rossi, V., and **Hawkes, A.D.**, 2009. The sedimentary record of the 2005 hurricane season from the Mississippi and Alabama coastline. *Quaternary International*, v. 195, p. 15-30.
 - 23) Horton, B. P., Bird, M., Birkland, T., Cowie, S., Grundy-Warr, C., **Hawkes, A.D.**, Tan Shau Hwai, A., Law, L., Macgregor, C., Nott, J., Eong Ong, J., Rigg, J., Robinson, R., Tan-Mullins, M., Tiong Sa, T. and Zulfigar, Y., 2008. Environmental and socio-economic dynamics of the Indian Ocean Tsunami in Penang, Malaysia. *Singapore Journal of Tropical Geography*, v. 29, p. 307-324.
 - 24) Bird, M., Cowie, S., **Hawkes, A.D.**, Horton, B.P., Macgregor, C., Eong Ong, J., Tan Shau Hwai, A., Tiong Sa, T., and Yasin, Z., 2007. Indian Ocean Tsunami - Environmental and Socio-economic Impacts in Langkawi, Malaysia. *The Geographical Journal*, v. 173.
 - 25) **Hawkes, A.D.**, Bird, M., Cowie, S., Grundy-Warr, C., Horton, B.P., Tan Shau Hwai, A., Law, L., Macgregor, C., Nott, J., Eong Ong, J., Rigg, J., Robinson, R., Tan-Mullins, M.,

- Tiong Sa, T., and Zulfigar, Y., 2007a. "The Sediments Deposited by the 2004 Indian Ocean Tsunami along the Malay-Thai Peninsula": Marine Geology Special IGCP 495 Issue 242, p. 169-190. (*Top 5 most cited articles 2008-2013*).
- 26) **Hawkes, A.D.**, Engelhart, S., and Horton, B.P., 2007b. Tsunami: a white cobra hits Pangandaran West Java. *Geology Today*, v.23, p. 12-14.
- 27) **Hawkes, A.D.**, Scott, D.B. And Lipps, J.H., Combellick, R., 2005a. Evidence for possible precursor events of mega-thrust earthquakes on the west coast of North America. *GSA Bulletin*, v. 117, no. 7/8, p. 996-1008. (*Editor's Choice, Science v.308*)

Books and edited volumes

- 1) **Hawkes, A.D.** and Scott, D.B., 2005b. Attached benthic foraminifera as indicators of past and present distribution of the deep-sea coral *Primnoa resedaeformis* on the Scotian Margin: In A. Freiwald and J. M. Roberts (eds): "Deep-water Corals and Ecosystems", Springer-Verlag, Berlin Heidelberg, p.881-894.

Other publications

- 1) **Hawkes, A.D.** The application of foraminifera to characterize tsunami sediment and quantify coseismic subsidence along the Sumatra and Cascadia subduction zones. PhD. 2008, University of Pennsylvania, Philadelphia, Pennsylvania, 214p.
- 2) **Hawkes, A.D.** A study of attached benthic foraminifera associated with the deep-sea coral *Primnoa resedaeformis* on the Scotian Margin. MSc. 2004, Dalhousie University, Halifax, Nova Scotia, 126p.
- 3) **Hawkes, A.D.** Evidence of precursor events for mega-thrust earthquakes on the west coast of North America. Honors BSc. 2001, Dalhousie University, Halifax, Nova Scotia, 86p.

Published Abstracts: *indicates student author, (intived)

- 1) Nanayakkara*, N.U., Ransinghe, P.N., **Hawkes, A.D.**, Van Hangstum, P., Donnelly, J. Foraminiferal evidence for paleocoastal environmental changes influenced by Holocene transgression and varying storminess in Choctawhatchee Bay, Florida, USA. AGU 2016.
- 2) Kemp, A.C., Wright, A.J., van de Plassche, O., Horton, B.P., Edwards, R.J., Barnett, R., Charman, D., Cahill, N., **Hawkes, A.D.** 2016. Late Holocene sea-level change in Newfoundland – A new reconstruction for investigating the role of ocean dynamics and fingerprints as drivers of regional change. PALSEA 2016, Oregon, USA.
- 3) **Hawkes, A.D.**, Kemp, A.C., Horton, B.P., Donnelly, J.P., 2015. 8000 year relative sea-level record from Connecticut and Florida, USA. PALSEA 2015, Tokyo, Japan.
- 4) **Hawkes, A.D.**, Engelhart, S.E., Horton, B.P., Wang, P-L., Wang, K., 2015. Reconstructing the rupture of the A.D. 1700 great Cascadia earthquake: New insight from precise coastal subsidence estimates. INQUA 2015, Nagoya, Japan.

- 5) Over*, J-S.R., **Hawkes, A.D.**, Donnelly, J.P., 2015. Assessing the utility of foraminiferal assemblages in developing late Holocene sea-level records in Newfoundland, Canada. Paper No. 28-31 Southeastern Section GSA (March 19-20) 2015.
- 6) Stearns*, R., **Hawkes, A.D.**, Donnelly, J.P., 2015. Creating a modern foraminiferal dataset from South Africa for reconstructing high-resolution late-Holocene sea level. Paper No. 28-30 Southeastern Section GSA (March 19-20) 2015.
- 7) Capar*, P.M., **Hawkes, A.D.**, Horton, B.P., 2015. Developing high-resolution relative sea-level records and validating sea level index points in southern North Carolina. Paper No. 11-4 Southeastern Section GSA (March 19-20) 2015.
- 8) McDermott*, K., **Hawkes, A.D.**, Donnelly, J., Sullivan, R., Maio, C., Toomey, M.R., Madsen, S. reconstructing high-latitude storm events from a fjord in Newfoundland. GSA Annual Meeting 2014 Vancouver, BC. Oct. 2014.
- 9) Little*, J., **Hawkes, A.D.**, Donnelly, J., Gomez, E. Development of high resolution sea-level records for the South Atlantic Ocean. GSA Annual Meeting 2014 Vancouver, BC. Oct. 2014.
- 10) Peth*, J., **Hawkes, A.D.**, Lane, C., Donnelly, J., Pratolongo, P., Gomez, E. Investigating the utility of isotope proxies for sea-level variability in the South Atlantic Ocean. GSA Annual Meeting 2014 Vancouver, BC. Oct. 2014.
- 11) Rubin, C., Horton, B.P., Sieh, K., Pilarczyk, J., **Hawkes, A.D.**, Daly, P., Kelsey, H.M., McKinnon, E., Ismail, N., Daryono, M.R.. Millennium-long histories of Indian Ocean tsunamis recorded in a coastal cave, Aceh Province, Sumatra. SM2.1/NH4.7 EGU General Assembly 2014 (EGU2014-12326).
- 12) Pierce*, C., **Hawkes, A.D.**, Tedick, A., Donnelly, J., Evans, R., Ashton, A., and Lane, C. Development of a High Resolution Relative Sea-Level Record in the Florida Panhandle. GSA Annual Meeting 2013 Denver, CO. Oct 2013.
- 13) Kachmarik*, H., **Hawkes, A.D.**, Wagner, A., Donnelly, J., MacDonald, D. Coupling tropical cyclone frequency and climate dynamics; a 1500 year record in the Pelican Cays Belize. GSA Annual Meeting 2013 Denver, CO. Oct 2013.
- 14) Pratolongo, P., **Hawkes, A.D.**, McDermott*, K., 2013. Changes in soil organic carbon storage in salt marshes of the Bahía Blanca Estuary (Argentina), from 1967 to 2005. CERF 2013; 1745424.
- 15) Rubin, C.M., Horton, B.P., Sieh, K., Pilarczyk, J., **Hawkes, A.D.**, Daly, P., Kelsey, H.M., McKinnon, E., Ismail, N., Daryono, M.R. Recurrence or great earthquakes and tsunamis, Aceh Province, Sumatra. T22E-06. AGU Annual Meeting 2013, San Francisco, CA.
- 16) Donnelly, J.P., Lane, P., Toomey, M., Rodsysill, J.R., **Hawkes, A.D.**, van Henstrum, P.J., Wallace, D.J., MacDonald, D. Climatic Forcing of intense North Atlantic hurricane activity over the last two millennia. PP44A-06. AGU Annual Meeting 2013, San Francisco, CA.
- 17) **Hawkes, A.D.**, Delivered speech for Cushman Award recipient David Scott. GSA Cushman Award Ceremony, GSA Annual Meeting 2013, Denver, CO.
- 18) **Hawkes, A.D.**, 2012. Advantages and Limitations; A micropaleo approach to storms and tsunamis. AGU General Meeting 2012 San Francisco, California. December 2-7 (*Invited*).
- 19) **Hawkes, A.D.**, Kemp, A., Donnelly, J., Horton, B.P. 8000 year of sea-level rise in Florida. GSA Annual Meeting 2012 Charlotte, NC. Nov 4-7.

- 20) **Hawkes, A.D.**, Engelhart, S.E., Horton, B.P., Nelson, A.R., Witter, R., Wang, K., Wang, P-L., Vane, C.H., Sawai, Y. Cascadia tidal marshes archive repeated episodes of coseismic subsidence from late Holocene megathrust earthquakes. AGU General Meeting 2010 San Francisco, California. December 4-9.
- 21) **Hawkes, A.D.**, Donnelly, J., Lane, P., 2010. A Microfossil-Based Approach to Estimate Hurricane Intensity. AGU General Meeting 2010 San Francisco, California. December 13-17.
- 22) **Hawkes, A.D.**, Donnelly, J., Horton, B., 2009. Identification of abrupt coastal events: earthquakes, tsunamis and hurricanes. GSA Annual Meeting 2009 Portland, OR. October 17-21. *(Invited)*
- 23) Horton B.P., Kemp, A., **Hawkes, A.D.**, 2009. Reconstructions of relative sea-level variations over the last two millennia, North Carolina, USA. Northeast Beaches Conference, Sept 21-23, 2009. *(Invited)*
- 24) **Hawkes, A.D.**, Horton, B.P., Nelson, A.R., 2008. Late Holocene coseismic deformation at the Cascadia subduction zone, Oregon, USA. AGU Annual General Meeting 2008 San Francisco, California. December 15-19.
- 25) **Hawkes, A.D.**, Horton, B.P., Nelson, A.R., 2008. Quantifying Coseismic Subsidence during the most recent Cascadia Earthquake (AD 1700). GSA Annual Meeting 2008 Houston, Texas. October 15-19.
- 26) **Hawkes, A.D.**, Horton, B.P., Nelson, A.R., 2008. The distribution of Foraminifera in Oregon intertidal zones: Implication for estimating coseismic subsidence. AMQUA State College, Pennsylvania. June 7-9. *(Invited)*
- 27) **Hawkes, A.D.**, Horton, B.P., 2008. Tsunamis and Hurricanes: Teasing the two apart. MYRES III New Orleans, Mississippi. May 20-23. *(Invited)*
- 28) **Hawkes, A.D.**, Horton, B.P., Nelson, A., Grand Pre, C., 2007. A microfossil-based approach to constraining megathrust-induced coseismic land displacement of the 1700AD even in the Pacific Northwest (presentation). AGU Annual Meeting 2007 San Francisco, California. December 10-15.
- 29) **Hawkes, A.D.**, Horton, B.P., Nelson, Kemp, A., 2007. Foraminiferal assemblage zones of Oregon salt marshes: implications for studies of relative sea-level change (poster). AGU Annual Meeting 2007 San Francisco, California. December 10-15.
- 30) **Hawkes, A.D.**, Horton, B.P., Nelson, A., Grand Pre, C., 2007. A microfossil-based approach to constraining megathrust-induced coseismic land displacement in the Pacific Northwest. GSA Annual Meeting 2007 Denver, Colorado. October 27-31.
- 31) **Hawkes, A.D.**, Horton, B.P., Nelson, A., Grand Pre, C., 2007. A microfossil-based approach to constraining megathrust-induced coseismic land displacement in the Pacific Northwest. INQUA 2007 Cairns, Australia. July 28 - August 3.
- 32) **Hawkes, A.D.**, Horton, B.P., 2007. 2004 Indian Ocean tsunami sediment characteristics along the Malaysia-Thailand Peninsula, Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract T43B-02
- 33) **Hawkes, A.D.**, Bird, M., Cowie, S., Grundy-Warr, C., Horton, B.P., Hwai, A.T.S., Law, L., Aik, D.L.W., Macgregor, C., Nott, J., Ong, J.E., Rigg, J., Robinson, R., Tan-Mullins, M., Teh, T.S. and Yasin, Z., 2005. Microfossil analysis of sediment deposited from the Indian Ocean Tsunami

- along the west coast of the Malay-Thai Peninsula. GSA Annual Meeting, Salt Lake City, October 16--19.
- 34) Horton, B.P. **Hawkes, A.D.**, Bird, M., Cowie, S., Grundy-Warr, C., Horton, B.P., Hwai, A.T.S., Law, L., Aik, D.L.W., Macgregor, C., Nott, J., Ong, J.E., Rigg, J., Robinson, R., Tan-Mullins, M., Teh, T.S. and Yasin, Z 2005. Indian Ocean Tsunami - Environmental and Socio-economic impacts on the Malay-Thai Peninsula. GSA Annual Meeting, Salt Lake City, October 16--19.
- 35) Horton, B.P. **Hawkes, A.D.**, Bird, M., Cowie, S., Grundy-Warr, C., Horton, B.P., Hwai, A.T.S., Law, L., Aik, D.L.W., Macgregor, C., Nott, J., Ong, J.E., Rigg, J., Robinson, R., Tan-Mullins, M., Teh, T.S. and Yasin, Z., 2005. Indian Ocean Tsunami - Environmental and Socio-economic impacts on the Malay-Thai Peninsula. Tsunami Deposits and their role in hazard mitigation, Seattle, June 12-15.
- 36) Scott, D. B., **Hawkes, A.D.**, and Lipps, J. H., 2003. Evidence of possible precursor events for mega-thrust earthquakes on the west coast of North America. Abstract at Fall American Geophysical Union meeting, San Francisco, Dec. 2003.
- 37) **Hawkes, A.D.** and Scott, D. B., 2003. *Primnoa resedaeformis* habitat characterization using an associate assemblage of attached benthic foraminifera. Abstract at 2nd International Symposium on Deep-Sea Corals, Erlangen, Germany, Sept. 2003, p. 43.
- 38) **Hawkes, A.D.** and Scott, D. B., 2003. Impacts on East Coast Fish Stocks: Long-term Climate and Benthic Habitat Changes. Abstract at Northeastern GSA meeting, Halifax, March, 2003.
- 39) **Hawkes, A.D.**, 2001. Giant megathrust earthquakes on the west coast of North America: micropaleontological evidence for precursors of major earthquakes. Abstract at GSA Annual Meeting, Nov. 2001, p. A161.
- 40) **Hawkes, A.D.**, 2001. Evidence of precursor events for mega-thrust earthquakes on the west coast of North America. *Atlantic Geology*, v. 37, p.113.

Teaching Experience

2012 – Present Assistant Professor, University of North Carolina Wilmington

OCN 150: Introduction to Oceanography	Fall/Spring 2012, Fall 2013, Honors version Fall 2014-2016
OCNL 150: Introduction to Oceanography Labs	Fall 2013-Spring 2017
OCN 350: Advanced Oceanography	Fall 2012, Fall 2013
GLY 250/OCN 250: Coasts and Society	Spring 2012-2017
GLY 390: Field Methods in Geology	Spring 2014
GLY 458/558: Introduction to Coastal Management	Fall 2014, 2016
GLY 581: Micropaleontology	Fall 2013
GGY 480/592: Landscapes of Belize	Spring 2015, 2017 (study abroad)
GLY480/GEO592: Relative Sea Level	Spring 2016

2004 – 2008 Teaching Assistant, University of Pennsylvania

ENVS 200: Introduction to Environmental Analysis	Fall 2004-2005
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GEOL-103: Natural Disturbances and Disasters	Fall 2004-2007
GEOL-206: Advanced Stratigraphy	Fall 2007
Earthwatch Institute: Is sea-level rising?	Spring 2008 (field course)
Operation Wallacea: Sea Level Project Lecturer	August 2006 (field course)

2002-2004 Teaching Assistant, Dalhousie University

ERTH 3303: Stratigraphy	Spring 2002-2004
ERTH 3302: Quaternary Sedimentary Environments	Fall 2002-2004

Graduate Research Advising:

M.S. Thesis Advising

Adams, C.S. In Progress. Inter- and intra-site cosiesmic variability. Geosciences Program, University of North Carolina Wilmington, NC.

O'Donnell, R. In Progress. Modern $\delta^{13}\text{C}$ and bulk geochemistry in estuaries along the Cascadia subduction zone and their use in estimating coseismic subsidence. Marine Sciences Program, University of North Carolina Wilmington, NC.

Capar, P. 2016. Developing a modern foraminiferal dataset for relative sea-level reconstructions in southern North Carolina. Marine Sciences Program, University of North Carolina Wilmington, NC.

Peth, J. 2015. Investigating the utility of foraminiferal isotope proxies for sea-level variability in Bahia Blanca, Argentina. Marine Sciences Program, University of North Carolina Wilmington, Wilmington, NC.

Little, J. 2014. Foraminiferal-based paleoenvironmental reconstruction for central coastal Argentina. Geosciences Program, University of North Carolina Wilmington, NC.

Pierce, C. 2014. Development of a high-resolution sea-level record in the Florida Pandhandle. Geosciences Program, University of North Carolina Wilmington, NC.

M.S. Thesis Committee Member

Massol, W. In Progress. Testing models of sediment sources to an evolving forearc region: Late Triassic-Early Jurassic the Hurwal Formation, northeastern Oregon. Geosciences Program, University of North Carolina Wilmington, NC.

Nanayakkara, N.U. 2016. Holocene paleo-coastal environmental changes in Choctawhatchee Bay Florida, USA. Fisheries and Marine Sciences Program, University of Ruhuna, Sri Lanka.

Moss, T. 2015. Assessment of ground-truthed Lidar classified barrier island geomorphology

characteristics; Masonboro Island, North Carolina. Geosciences Program, University of North Carolina Wilmington, NC.

Cronin, K. 2015. Examining lifespan bias in the fossil record using two bivalve species in a seagrass bed in North Carolina. Geosciences Program, University of North Carolina Wilmington, NC.

Costin, K. 2014. Tidal creek habitat mapping: An assessment of WorldView-2 imagery for deriving bathymetry and estuarine habitats. Marine Sciences Program, University of North Carolina Wilmington, Wilmington, NC.

Tedick, A. 2014. Impacts of historic land clearance and sugarcane agriculture on soil erosion and transport in St. Croix, USVI. Marine Sciences Program, University of North Carolina Wilmington, Wilmington, NC.

Undergraduate Research Advising:

Advisor

Over, J-S. In Progress. Using foraminifera to estimate coseismic deformation from paleo-earthquakes in Washington, USA. Undergraduate Honors Research Project in Oceanography. University of North Carolina Wilmington, Wilmington, NC

Mooney, H.C. 2016. Using isotopes to determine relative sea level in Newfoundland, Canada. Undergraduate Honors Research Project in Oceanography. University of North Carolina Wilmington, Wilmington, NC

Kachmarik, H. 2014. Coupling tropical cyclone frequency and climate dynamics; a 1500 year record in the Pelican Cays, Belize. Undergraduate Honors Research Project in Oceanography. University of North Carolina Wilmington, Wilmington, NC

Honor's Thesis Committee Member

Tanaka, S. 2014. Trace metal accumulation in sediments and fish of Greenfield Lake, North Carolina. Directed Independent Study in Oceanography. University of North Carolina Wilmington, Wilmington, NC.

Hildebrandt, B. 2013. Stable isotope evidence of prehistoric tropical storm strikes in the Dominican Republic. Undergraduate Honors Research Project in Oceanography. University of North Carolina Wilmington, Wilmington, NC.

Professional Service

Peer Reviewed Journals

Geophysical Research Letters

Quaternary Research

Quaternary Science Reviews

Journal of Geophysical Research
 Geology
 Earth Science Reviews
 The Holocene
 Marine Geology
 GSA Bulletin
 Geomorphology
 Journal of Coastal Research
 Marine Micropaleontology
 Marine Ecology Progress Series
 Journal of Foraminiferal Research
 Hydrobiologia
 Wetland Ecology and Management
 Philippines Journal of Science

Peer Reviewed Grants

National Science Foundation
 Biennial Grants Program, New Zealand Earthquake Commission
 National Geographic

Meeting Session Chair

- 2015 T21. Assessing the earthquake and tsunami risks using geologic records, INQUA Meeting 2015 Nagoya, Japan. July 27-Aug 2.
- 2014 T176. Minutes to Millennia, GSA Annual Meeting 2014 Vancouver. BC. Oct 19-22.
- 2012 T118. Paleotempestology: Proxy record development and climate forcing mechanisms, GSA Annual Meeting 2012 Charlotte, NC. Nov 4-7.

Departmental, University, and Community Service

- Chair of Oceanography Curriculum Committee, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2016-present)
- University of North Carolina Wilmington Center for Marine Science Internal Outdoor Space Committee, University of North Carolina-Wilmington (2015-present)
- GEOclub Advisor, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2014-present)
- UNCW Convocation Academic Orientation Faculty Volunteer (2014-present)
- Chair of Seminar Committee, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2013-present)
- Member of Faculty Senate, University of North Carolina Wilmington (2015-2016)

- Member of Graduate Advisory Committee, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2013-present)
- Annual Picnic Organizer, Department of Geography and Geology, University of North Carolina-Wilmington (2013-present)
- Activity Organizer, Oceans-17 Summer Camp Outreach, University of North Carolina Wilmington (2013-Present)
- Member of Oceanography Curriculum Committee, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2012-present)
- Judge, Southeast North Carolina Regional Science Fair (2012-present)
- Speaker at Sister Cities Organization on the geology, geography and people of Belize, Wilmington, NC (2015)
- M.S. Geosciences Degree Assessment Committee, Department of Geography and Geology, University of North Carolina-Wilmington (2014-2015)
- Seahawk Saturday Volunteer, University of North Carolina Wilmington (2013-Present)
- Earth Science Week Volunteer, Department of Geography and Geology, University of North Carolina-Wilmington (2012-2015)
- Member of Public Relations Committee, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2012-2014)
- Oceanography Search Committee, Department of Earth and Ocean Sciences, University of North Carolina Wilmington (2012-2013)

Membership to Professional Organization

- American Geophysical Union (AGU)
- Geological Society of America (GSA)
- Cushman Foundation for Foraminiferal Research (CFFR)
- American Quaternary Research Association (AMQUA)
- International Quaternary Research Association (INQUA)
- International Geoscience Programme (IGCP)
- Society of Sedimentary Geology (SEPM)

References

- Dr. Jeff Donnelly, Senior Scientist at Woods Hole Oceanographic Institution, jdonnelly@whoi.edu, (508) 289-2994
- Dr. Benjamin Horton, Professor at Rutgers University, bphorton@marine.rutgers.edu, (848) 932-3430
- Dr. Alan Nelson, Senior Research Geologist at the United States Geological Survey, anelson@usgs.gov, (303) 273-8592