

JACQUELYN L. GILL
Environmental Change Initiative
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RESEARCH INTERESTS

Quaternary paleoecology & biogeography, species' response to interacting biotic and abiotic drivers, megaherbivore-plant interactions, plant migration and dispersal, ecological and climatic novelty, top-down and bottom-up effects of climate change on species and communities, conservation paleobiology

EDUCATION

- 2012 PhD, Geography (Paleoecology), Minor: Ecology
University of Wisconsin Madison, WI
Dissertation: *The biogeography of biotic upheaval: Novel plant associations and the end-Pleistocene megafaunal extinction* (Advisor: Dr. John Williams)
- 2008 MS, Geography (Paleoecology)
University of Wisconsin Madison, WI
- 2005 BA, Human Ecology, Major Field: Ecology
College of the Atlantic Bar Harbor, ME
- 2005 Short Course: Palynology (Instructor: John Birks)
University College London London, UK

PROFESSIONAL APPOINTMENTS

- 2013- Assistant Professor of Paleoecology & Plant Ecology
University of Maine Orono, ME
School of Biology & Ecology, Climate Change Institute
Ecology & Environmental Science Graduate Program
- 2012- Voss Postdoctoral Fellow
Environmental Change Initiative, Brown University Providence, RI
Mentors: Dov Sax & James Russell

PUBLICATIONS

In Press

- [8] **Gill, J. L.**, K. McLauchlan, S. J. Goring, A. Skibbe, J. W. Williams. (*In Press*). Linking abundances of the dung fungus *Sporormiella* to the density of Plains bison: implications for assessing grazing by megaherbivores in the paleorecord. *Journal of Ecology*.

Peer-Reviewed Papers

- [7] Boslough, M., K. Nicoll, V. Holliday, T. Daulton, D. Meltzer, N. Pinter, A. Scott, T. Surovell, P. Claeys, **J. L. Gill**, F. Paquay, J. Marlon, P. Bartlein, C. Whitlock, D. Grayson, A. J. T. Jull. **2012**. Arguments and evidence against a Younger Dryas impact event. In *Climates, Landscapes & Civilizations*. American Geophysical Union Press, Washington, D.C.
- [6] Gill, J. L., J. L. Blois, S. Goring, J. R. Marlon, P. J. Bartlein, K. Nicoll, A. C. Scott, C. Whitlock. (2012). Paleocological changes at Lake Cuitzeo were not consistent with an extraterrestrial impact. *Proceedings of the National Academy of Sciences* 109: E2243. doi:10.1073/pnas.1206196109
- [5] Blaauw, M., V. T. Holliday, **J. L. Gill**, K. Nicoll. **2012**. Age models and the Younger Dryas Impact Hypothesis. (2012). *Proceedings of the National Academy of Sciences* 109: E2240. doi:10.1072/pnas.1206143109
- [4] Schwartz, M. W. , J. J. Hellmann, J. M. McLachlan, D. F. Sax, J. O. Borevitz, J. Brennan, A. E. Camacho, G. Ceballos, H. Doremus, R. Early, J. R. Etterson, **J. L. Gill**, P. Gonzalez, N. Green, L. Hannah, D. W. Jamieson, D. Javeline, B. A. Minter, J. Odenbaugh, S. Polasky, D. M. Richardson, T. L. Root, H. D. Safford, O. Sala, S. H. Schneider, A. R. Thompson, J. W. Williams, M. Velland, P. Vitt, S. Zellmer. (2012). Managed relocation: integrating the scientific, regulatory, and ethical challenges. *Bioscience* 62 (8): 747-743. doi:10.1525/bio.2012.62.8.6
- [3] **Gill, J. L.**, J. W. Williams, S. T. Jackson, J. P. Donnely, G. C. Schellinger. **2012**. Climatic and megaherbivory controls on late-glacial vegetation dynamics: A new, high-resolution multi-proxy record from Silver Lake, OH. *Quaternary Science Reviews* 34: 66-80. doi: 10.1016/j.quascirev.2011.12.008
- [2] **Gill, J. L.**, J. W. Williams, S. T. Jackson, K. B. Lininger, G. S. Robinson. **2009**. Pleistocene megafaunal collapse, novel plant communities, and enhanced fire regimes in North America. *Science* 326(5956): 1100-1103. doi: 10.1126/science.1179504
- *Science Podcast interview*, 11/20/09
- *Perspective by Chris Johnson in Science* doi: 10.1126/science.1182770
- [1] D. M. Richardson, J. J. Hellman, J. S. McLachlan, D. F. Sax, M. W. Schwarz, P. Gonzalez, E. J. Brennan, A. Camacho, T. L. Root, O. E. Sala, S. H. Schneider, D. M. Ashe, J. R. Clark, R. Early, J. R. Etterson, E. D. Fielder, **J. L. Gill**, B. A. Minter, S. Polasky, H. D. Safford, A. R. Thompson, & M. Vellend. **2009**. Multidimensional evaluation of managed relocation. *Proceedings of the National Academy of Sciences* 106(24): 9721-9724 doi: 10.1073/pnas.0902327106

AWARDS & HONORS

Awards

- 2011 Whitbeck Dissertator Fellowship, UW Madison Geography
2011 CollegeScholarships.org Blogging Scholarship Finalist
2011 UW Madison Graduate Peer Mentor Award
2010 ESA Cooper Award (for *Gill et al., 2009*)

- 2010 ESA Student Section Award for Excellent Women in Ecology
- 2010 UW Geography Trewartha Award for Best Student Paper (*Gill et al., 2009*)
- 2008 ESA E. Lucy Braun Award for Excellence in Ecology (best student poster)
- 2008 Geological Society of America Student Research Grant: Outstanding Mention
- 2007 UW Geography Student Symposium Outstanding Presentation

Grants

- 2008 Geological Society of America Graduate Research Grant (\$3600)
- 2008 AAG Biogeography Specialty Group Student Research Grant (\$1000)
- 2008 UW Geography Trewartha Graduate Research Award

Travel

- 2011 INQUA Young Scholar's Travel Award
- 2011 University of Wisconsin Vilas Conference Travel Award
- 2011 International Biogeography Society Meeting
- 2010 Paleochronology Building Workshop
- 2010 American Quaternary Association Meeting
- 2009 International Biogeography Society Meeting
- 2008 American Quaternary Association Meeting
- 2008 UW Geography Trewartha Travel Award (AAG)
- 2007 UW Geography Trewartha Travel Award (AAG)
- 2006 UW Geography Trewartha Travel Award (AAG)

PRESENTATIONS

Invited

- 2013 How do you conserve the stage if the actors keep changing? Lessons from the Late Quaternary Extinctions—International Congress of Conservation Biology, Baltimore, MD
- 2012 Pleistocene megafaunal collapse, novel plant associations, and enhanced fire regimes. University of Wisconsin—Stevens Point Department of Geography, Stevens Point, WI
- 2012 The biogeography of biotic upheaval: novel plant communities and the end-Pleistocene megafaunal extinctions. University of Rhode Island Department of Biological Sciences, Kingston, RI
- 2012 Ghosts of herbivores past: Conservation implications of the end-Pleistocene megafaunal extinctions. Holden Arboretum, Kirtland, Ohio.
- 2011 If a mammoth falls in the forest, what happens to the trees? Ecological implications of the late-Pleistocene megafaunal extinctions. Ecological Society of America Annual Meeting, Austin, TX.

- 2010 Reconstructing the spatiotemporal patterns of late-glacial no-analog plant communities and megafaunal collapse in the Midwestern United States. American Quaternary Association Biennial Meeting, Laramie, WY
- 2010 Linking local megafaunal collapse to the emergence of novel plant communities and enhanced fire regimes in late-glacial eastern North America. University of Chicago Department of the Geophysical Sciences.
- 2009 Is there evidence for a Younger Dryas Impact event in lake sediment records from the Great Lakes region? Climate, People & the Environment Program, University of Wisconsin-Madison.
- 2007 Investigating biotic drivers of Quaternary landscape change: late glacial no-analog communities and the North American megafaunal extinction. Climate, People & the Environment Program, University of Wisconsin-Madison.

Contributed Talks

- 2013 Prevalent known and cryptic extinctions during the last 2.5 million years have conservation lessons for the 21st century. Ecological Society of America Annual Meeting, Minneapolis, MN
- 2013 Novelty in space and time: Linking pattern and process to understand the drivers of late-glacial no-analog plant associations. International Biogeography Society Biennial Meeting, Miami, FL
- 2012 Bison grazing intensity predicts the abundance of the dung fungus proxy *Sporormiella* at Konza Prairie: Implications for the Holocene paleoecology of the Great Plains. Ecological Society of America Annual Meeting, Portland, OR.
- 2011 Assessing linkages among the late-glacial megafaunal collapse, novel plant communities, and fire in eastern North America using the dung fungus *Sporormiella*. International Quaternary Association XVIII Congress, Berne, Switzerland.
- 2009 Pleistocene megafaunal collapse in North America preceded the Younger Dryas: Evidence from the Midwest. American Geophysical Union Annual Meeting, San Francisco, CA
- 2009 Do lake sediment records show evidence of an extraterrestrial impact or its ecological results? *Ecological Society of America Annual Meeting*, Albuquerque, NM
- 2009 Is there evidence for a Younger Dryas Impact event in lake sediment records from the Great Lakes region? *Association of American Geographers Annual Meeting*, Las Vegas, NV
- 2008 Assessing the impact of changes in climate and megaherbivory on late-glacial vegetation communities in northern Indiana. Ecological Society of America Annual Meeting, Milwaukee, WI

- 2008 Were no-analog plant communities during the late Pleistocene driven in part by herbivory release following the North American megafaunal extinction? Association of American Geographers Annual Meeting, Boston, MA
- 2008 Were late-glacial no-analog communities driven in part by herbivory release following the extinction of megaherbivores? Wisconsin Ecology Spring Symposium, Madison, WI
- 2007 Investigating biotic drivers of Quaternary landscape change: Late glacial no-analog vegetation and the North American megafaunal extinction in northeastern Indiana. Geography Student Symposium, UW Madison Geography.

Posters

- 2012 A test of the dung fungus proxy *Sporormiella* as a predictor of grazing intensity. American Quaternary Association Biennial Meeting, Duluth, MN.
- 2011 Spatio-temporal patterns of late-glacial megafaunal collapse, no-analogue plant communities, and fire regimes in the Great Lakes Region of the United States. International Biogeography Meeting, Iraklion, Greece.
- 2010 Reconstructing the spatiotemporal patterns of late-glacial no-analog plant communities and megafaunal collapse in the upper Midwest, USA. Ecological Society of America Annual Meeting, Pittsburgh, PA
- 2009 Assessing the relative importance of climate and megaherbivory on late-glacial no-analog communities in eastern North America. International Biogeographic Society 4th International Conference, Mérida, Mexico.
- 2008 Did release from megafaunal herbivory contribute to the formation of late-glacial no-analog plant communities? American Quaternary Association Biennial Meeting, State College, PA.
- 2007 Investigating biotic drivers of Quaternary landscape change: Late glacial no-analog vegetation and the North American megafaunal extinction. *Ecological Society of America Annual Meeting, San Jose, CA*
- 2007 Investigating biotic drivers of Quaternary landscape change: Late glacial no-analog vegetation and the North American megafaunal extinction in northeastern Indiana. *Association of American Geographers Annual Meeting, San Francisco, CA*

SELECTED PRESS COVERAGE

- 5/2013 Ice Age Giants, Part 3, BBC Two
- 5/2/2013 *Wild Ideas...the Podcast* Episode 209
- 11/25/2012 Charlotte Observer – “She digs earth’s eco-history,” Tyler Dukes

- 7/03/2012 University of Wisconsin-Madison News – “Social media helps doctoral candidate reach out on research,” Chris Barncard
- 2/08/2012 *Science...Sort of* podcast Episode 122 – “Finding a new course”
- 10/05/2011 *Science...Sort of* podcast Episode 106– “A big pile of science”
- 11/28/2009 Quirks & Quarks, CBC Radio – “The poop on mammoths.” Bob McDonald
- 11/20/2009 Science in Action, BBC World Service – “Mammoths and Conservation”
- 11/20/2009 Morning Edition, National Public Radio – “Fungus Provides Clues to North American Extinctions.” Richard Harris
- 11/20/2009 LA Times – “Scientists Zero in on Reasons for Mammoths’ Demise,” John Johnson,
- 11/19/2009 BBC News – “Dung Helps Reveal Why Large Animals Died Out.” Victoria Gill
- 11/19/2009 New York Times – “New Data Shed Light on Large-Animal Extinction.” Nicholas Wade
- 11/19/2009 Not Exactly Rocket Science (Discover Blogs): “Tiny fungi replay the fall of the giant beasts,” Ed Yong
- 11/19/2009 The Why Files: “Death of a Mastodon,” David J. Tennenbaum

Synergistics

Science Communication

- 5/13 DoubleXScience – *Dominants, alphas, and queens: Matriarchs in the animal kingdom*
- 3/13 Scientific American – *Cloning woolly mammoths: It’s the ecology, stupid* – Invited guest post
- 8/12 Scientopia, Invited guest blogger on plants-herbivore interactions (4 posts)
- 4/12 BlogHer, *The problem with the phrase “Social Darwinism”* – Invited guest post

Outreach

- 2012 ESA SEEDS Mentor
- 2012 - 2013 Participant at the ScienceOnline un-conference on science communication in Raleigh, NC
- 2011– Blog on climate change, ecology & the culture of science at The Contemplative Mammoth (contemplativemammoth.wordpress.com), >60,000 hits annually

- 2011 UW Madison PEOPLE program scientist volunteer (presented to at-risk high school students about climate change)
- 2011 Guest scientist with the UW Madison Association of Science Writers
- 2010– Accessibility coordinator and regular panelist on science communication, diversity, and climate change issues at WisCon, a science fiction convention

Society Leadership

- 2012– INQUA Humans and the Biosphere Committee
- 2012– INQUA Early Career Researcher Committee
- 2012– ESA Paleoecology section chair
- 2011 – 2012 ESA Paleoecology section vice-chair
- 2010 – 2011 UW Madison Women in Geography
- 2008 – 2010 Wisconsin Ecology Graduate Committee Co-Chair
- 2008 – 2009 AAG Biogeography Specialty Group Graduate Student Representative
- 2006 – 2008 Wisconsin Ecology Graduate Committee Geography Representative

Department Service (UW Madison)

- 2011 – 2012 Curriculum Committee
- 2010 – 2011 Speakers Committee
- 2009 – 2010 Graduate Affairs Committee
- 2008 – 2009 Graduate Representative to the Faculty Committee
- 2007 – 2008 Biogeography Faculty Search Committee
- 2006 – 2007 Speakers Committee
- 2006 – 2010 Graduate Student Peer Mentor

Working Groups & Workshops

- 2012 Conserving the Stage
- 2012 Palaeo50: The Fifty Most Pressing Questions in Palaeoecology
- 2010 Paleochronology Workshop, CIMAT/PAGES
- 2008 – 2010 Managed Relocation Working Group

Symposia Organized

- 2013 Rapid Climate Change and Species Range Shifts: Observations, Predictions, and Management, *Ecological Society of America Annual Meeting*, Minneapolis, MN
- 2011 What is natural? A long-term view of the ecosystems of the Americas. Symposium, *Ecological Society of America Annual Meeting*, Austin, TX
- 2009 Biogeography in the field: A panel discussion for grad students and early-career biogeographers. Panel discussion, *Association of American Geographers Annual Meeting*, Las Vegas, NV

- 2007 Ancient extinctions & modern experiments: Ecological effects of adding and removing megaherbivores from the landscape. Organized oral session, *Ecological Society of America Annual Meeting*, San Jose, CA

Workshops Organized

- 2013 Social Media for Collaboration, Research, & Impact, ESA
2012 Social Media: Creating a Space for the Conversation, National Science Foundation
2012 Social Media for Collaboration, Research & Impact, ESA

Journal Editor

Journal of Natural History Education & Experience

Proposal Reviewer

National Science Foundation (Directorate for Environmental Biology)

Manuscript Reviewer

Ecology, Ecology Letters, Ecological Monographs, PLOS One, Quaternary Research, Rocky Mountain Geology

SOCIETY AFFILIATIONS

American Quaternary Association, American Geophysical Union, Ecological Society of America, Earth Science Women's Network, International Biogeographic Society, International Quaternary Association