

Rachel N. Mason Dentinger

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Education

- 2009 **Ph.D., History of Science and Technology**; University of Minnesota, Program in the History of Science & Technology. Dissertation: [“The Nature of Defense: Coevolutionary studies, ecological interaction, and the evolution of 'natural insecticides,' 1959-1983.”](#)
- 2000 **B.S., Ecology, Evolution, and Behavior, Honors**; University of Minnesota, College of Biological Sciences.

Academic Positions

- 2019- **Assistant Professor (Lecturer)**, Department of Philosophy, University of Utah.
- 2016-2019 **Scholar-in-Residence and Associate Lecturer**, University of Utah.
- 2012-2016 **Wellcome Trust Research Fellow**, [“One Medicine? Investigating human and animal disease.”](#) Department of History, King’s College London.
- 2001-2002 **Biology laboratory instructor trainer**, General Biology Program, University of Minnesota.

Grants

- 2019 **National Science Foundation, Collaborating Historian**, NSF-DEB 1927224, [“Integrating phylogeny, genetics, and chemical ecology to unravel the tangled bank of the multipartite fungus-farming ant symbiosis.”](#)
- 2007 **National Science Foundation**, Doctoral Dissertation Improvement Grant
- 2007 **Doctoral Dissertation Fellowship**, UMN Graduate School
- 2006 **Thesis Research Grant**, University of Minnesota Graduate School
- 2006 **Summer Research Fellowship**, Program in the History of Science and Technology
- 2003 **Graduate School Fellowship**, University of Minnesota Graduate School

Recognition

- 2017 **Everett Mendelsohn Prize**, *Journal of the History of Biology*, for “Patterns of Infection and Patterns of Evolution: How a Malaria Parasite Brought “Monkeys and Man” Closer Together in the 1960s” 49 (2016), 359–395.
- 2012 **Garden Media Guild New Talent Award**, based on articles written for *Kew Magazine*, of the Royal Botanic Gardens, Kew.
- 2009 **Nathan Reingold Prize**, History of Science Society.
- 2007 **Edwin T. Layton Teaching Award**, History of Science & Technology Program

Publications

Monographs

- 2018 Abigail Woods, Angela Cassidy, Michael Bresalier, and Rachel Mason Dentinger. [One Health and its Histories: Animals and the shaping of modern medicine](#) (Palgrave). Science, Technology and Medicine in Modern History series. Open access and available for free download.

Peer-reviewed Papers

- 2017 ["From 'Actual Forces' to 'Token Stimuli': Gottfried S. Fraenkel and the Evolutionary 'Raison D'Être' of Plant Molecules, 1930s-1960s,"](#) *Historical Studies in the Natural Sciences* 47(2): 127-163, April 2017.
- 2017 ["Animal Roles and Traces in the History of Medicine, c.1880–1980"](#) Angela Cassidy, Rachel Mason Dentinger, Kathryn Schoefert, and Abigail Woods, *BJHS Themes*, "Animal Agents," edited by Amanda Rees, 2: 11-33.
- 2016 ["Patterns of Infection and Patterns of Evolution: How a Malaria Parasite Brought 'Monkeys and Man' Closer Together in the 1960s,"](#) *Journal of the History of Biology* 49(2):359-95, April 2016.

Journal Special Issues

- 2018 "Working Across Species: Comparative Practices in Modern Medical, Biological and Behavioural Sciences," a topical collection in *History and Philosophy of the Life Sciences*, April 2018, composed of papers from the "Working Across Species" workshop (King's College London, 7-8 January 2016). Co-edited and introduced with Abigail Woods. ["Introduction to 'Working Across species'"](#) is open access and free to download.
- 2016 Introduction to the special section, ["Ecology and Infection: Studying Host-Parasite Interactions at the Interface of Biology and Medicine,"](#) co-authored with Pierre-Olivier Méthot, *Journal of the History of Biology*, Volume 49 (2): 231-240, April 2016.

Book Reviews

- 2019 [Review of: Nicole C. Nelson, Model Behavior: Animal Experiments, Complexity, and the Genetics of Psychiatric Disorders.](#) *Journal of the History of Medicine and the Allied Sciences*, 17 June 2019.
- 2014 ["Evolving Without Darwin,"](#) Book review of Peter J. Bowler, *Darwin Deleted: Imagining a World without Darwin*, for BooksAndIdeas.net. ([Translated and published](#) in the French version of magazine, May 2014.)
- 2007 Review of: Michael Ashburner, *Won for all: How the Drosophila Genome was Sequenced*. *Journal of the History of Biology*, Volume 40 (2).

Nonacademic Publications

- 2013 ["The Magic of Mushrooms,"](#) *Kew Magazine*, Autumn 2013, pp 36-41.
- 2012 ["Underground Connections,"](#) *Kew Magazine*, Autumn 2012, pp 50-52.
- 2012 ["Seeing the Wood for the Trees,"](#) *Kew Magazine*, Summer 2012, pp 30-35. [Syndicated and republished as "Smartphones, Smart Maps" in *Geographical* (magazine of the Royal Geographical Society).]

- 2012 ["The Allure of Dracula,"](#) *Kew Magazine*, Spring 2012, pp 58-59.
- 2012 ["Men of Letters,"](#) *Kew Magazine*, Spring 2012, pp 52-55.
- 2012 ["Reconsidering Non-Native Species,"](#) *The Naked Scientists*, January 2012.
- Since 2009 Personal blog, Entangled Bank, <http://www.entangledbank.com/>

Teaching

Courses Taught

- 2019/20 ["Honors Integrated Intellectual Traditions, Part III: Science and Human Rights,"](#) co-taught with Dr. Ann Engar; ["Medical Humanities: What is Normal?";](#) and ["Behaving Like Animals,"](#) co-taught with Dr. Marco Bortolato; University of Utah.
- 2018/9 ["Honors Integrated Intellectual Traditions, Part I"](#) and Part II, co-taught with Dr. Ann Engar, and ["Medical Humanities";](#) University of Utah.
- 2017/8 Honors College Praxis Lab, ["The Beginning of Life,"](#) co-taught with OB/GYN Dr. Kirtly Parker Jones, University of Utah, and "Medical Humanities"; University of Utah
- 2016/7 "Medical Humanities," ["From Cholera to Kuru: Disease & Medicine in History from the 19th Century to Today,"](#) and ["Honors Core in Intellectual Traditions: The Rise of Modernity";](#) University of Utah.
- 2015 Co-designed and taught with Angela Cassidy, ["Sex, Death & Evolution: Darwin and Darwinism since the 18th Century";](#) King's College London, Department of History.
- 2014 & 2016 "Approaches to the History of Science"; King's College London, Department of History.
- 1998-2002 Laboratory courses for "Introductory Biology" and "Evolutionary and Ecological Perspectives," General Biology Program, University of Minnesota.

Guest Lectures

- 2018 "Parasites in Human History," for "Ecology and Evolution of Parasites and Pathogens," University of Utah, BIO 5555, Instructor: Sarah Bush.
- 2015 & 2016 "Darwin and Darwinism" for "Science, Technology and Medicine in History: Master's Core Course," King's College London (KCL).
- 2012 "Exploring the Human-Animal Boundary," for "Animals and their Humans," KCL.
- 2007 "Darwinian Revolution: From Jane Austen's Parlor to the Mean Streets of Dickens," for "Evolution," Macalester College.
- 2006 "Balancing Risks and Benefits when Biology Becomes Biotechnology," for "Ethics in Science and Technology," University of Minnesota.
- 2005 "On the Origin of Species," for "Introduction to the History of Science: Modern Science," University of Minnesota.

Teaching Assistantships

- 2007 "The Darwinian Revolution," Program in the History of Science and Technology, University of Minnesota (UMN).
- 2006 Writing-intensive course: "Life on Earth: Perspectives on Biology," Program in the History of Science and Technology, UMN.

- 2006 "Ethics in Science and Technology," Program in the History of Science and Technology, UMN.
- 2005 "Biology and Culture in the 19th and 20th Centuries," Program in the History of Science and Technology, UMN.
- 2005 "Introduction to the History of Science: Modern Science," Program in the History of Science and Technology, UMN.
- 2004 Honors Course: "Issues in Twentieth Century American Science," Program in the History of Science and Technology, UMN.

Presentations

Invited Papers

- 2019 "Pests, Parasites, Partners & Poisons: The Metaphors and Molecules that Frame Interspecies Interactions," 3 May, Annual Alumni Talk, History of Science, Technology & Medicine, University of Minnesota.
- 2018 "Pursuing Gottfried Fraenkel's *"Raison d'Être"*: Plant compounds, ultimate causation, and the uses of practical research," 26 February, Department of Entomology Colloquium, University of Illinois at Urbana-Champaign.

Conference Papers

- 2017 "'Parasites, moochers, looters': Comparative narratives of adaptation in mid-20th-century parasitology." History of Science Society (HSS); Toronto, ON.
*Panel organizer, "What's the Difference? Comparative Approaches in the Life Sciences"
- 2016 "The 'Host-Parasite Method': Infection as a phylogenetic character in early 20th-century parasitology," American Association of the History of Medicine; Minneapolis, MN.
*Panel chair and organizer, "Entangled, Global, and Comparative Disease Histories: New Perspectives on Evolution and Disease."
- 2014 "Partners Through Evolution: Linking Humans, Animals, and Parasites in the Early 20th Century," American Association of the History of Medicine; Chicago, IL.
*Panel co-organizer (with Michael Bresalier), "Global Ecologies of One Health."
- 2013 "Patterns of Infection and Patterns of Evolution: How a Malaria Parasite Brought 'Monkeys and Man' Closer Together in the 1960s," HSS; Boston, MA.
*Panel co-organizer (with Pierre-Olivier Méthot), "Infection as Host-Parasite Interaction: Studying Parasites at the Interface of Biology and Medicine."
- 2013 "'Natural' and 'Artificial' Infection: Host-Specificity in Mid-20th-Century Parasitology and its Implications for Evolutionary and Disease Biology," International Society for the History, Philosophy, and Social Studies of Biology meeting; Montpellier, France.
*Panel co-organizer (with Katherine Liu), "Historical and Philosophical Perspectives on Disease Biology."
- 2010 "Recasting 'Chemical Warfare' from the 1950s through the 1970s: Coevolutionary Studies and the Evolution of 'Natural Insecticides,'" HSS; Montréal, Quebec.

- *Panel co-organizer (with Nathan Crowe), "Controlling Life in 20th-Century Biology: A Session Inspired by the Work of Philip J. Pauly."
- 2007 "Plant Passivity or Animal Activity?: Contesting the Chemical Geography of Plant-Herbivore Communities in 1960s Ecology," HSS; Washington, D.C.
- 2006 "'The world is not green. It is colored lectin, tannin, cyanide, caffeine...': Evolutionary Debates over Plant Secondary Compounds in the 1960s," Midwest Junto of the History of Science Society; Madison, Wisconsin.
- 2006 "'The Ultimate Weapon in an Ancient War': Carroll Williams, Juvenile Hormone and the Defensive Chemistry of Plants," Columbia History of Science Group Meeting; Friday Harbor, Washington

Conference Organization

- 2016 **Workshop organizer**, "Working Across Species: Comparative Practices in Modern Medical, Biological and Behavioural Sciences," King's College London, 7-8 January 2016.

Public Engagement Presentations

- 2015 "'Big fleas have little fleas': Tracking parasites from the macroscopic to the microscopic," Hunterian Museum, as part of "Being Human: A Festival of the Humanities," November 2015.
- 2014 "Turning the Tables: Who's the Food Now?" For "Feeding & Disease: Some 20th Century Connections," 2014 Feed Your Mind Festival, King's College London.
- 2013 "The Animal Inside the Animal: A Parasite's View of the Human-Animal Boundary." For "Being Human/Being Animal," 2013 Arts & Humanities Festival, King's College London.

Further Professional and Research Experience

- 2008-2012 **Researcher, Transcriber, Website Designer**, John Tyndall Correspondence Project, York University, Toronto.
- 2009 & 2010 **Biology exam author**, University of Toronto, [National Biology Competition](#).
- 2008 **Curriculum Map Author** for the University of Toronto's First-Year Science and Math Curriculum Revision. Supervisor: Corey Goldman, EEB, U of Toronto.
- Jan-Feb 2008 **Field Assistant** in Ecuador for "Fungal mimicry in the deceptive pollination of *Dracula* orchids" and "Coevolution of *Apterostigma* Ants and *Pterulaceae* Fungi," PIs: Bryn Dentinger (Royal Ontario Museum), Bitty A. Roy (University of Oregon).
- 2006-2007 **Interviewer**, Oral history interviews conducted with:
 May Berenbaum, University of Illinois, Urbana-Champaign
 Paul Ehrlich, Stanford University
 Daniel H. Janzen, University of Pennsylvania
 Paul P. Feeny, Cornell University
 Peter R. Raven, Missouri Botanical Garden.

- 2005 **Author and designer**, online assignment on forensic DNA fingerprinting for the course "Biology and Culture in the 19th and 20th Centuries."
- 2002-2003 **Research Technician**, Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, New York. I performed HIV replication experiments with a unique murine model. PI: Dr. Harris Goldstein.
- June-August 2001 **Research Specialist**, Hutchison Entomology Lab, University of Minnesota. Treatment preparation, data collection, and analysis of data on agricultural pests. PI: Dr. William Hutchison

Affiliations and Service

- 2014-2016 American Association of the History of Medicine
- 2013-2015 British Society for the History of Science
- 2003- History of Science Society
- ***Chair** of the 2015 Reingold Prize committee (served on committee 2013-2015)
 - ***Co-Chair** of the HSS Graduate and Early Career Caucus (2013-2015)
 - ***Mentorship Program Chair**, HSS Graduate and Early Career Caucus (2010-2012)

References

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| Mark Borrello | University of Minnesota, HSTM | borrello@umn.edu |
| Susan Jones | University of Minnesota, HSTM | jone0996@umn.edu |
| Sally Gregory Kohlstedt | University of Minnesota, HSTM | sgk@umn.edu |
| Abigail Woods | Kings College London, Dept of History | abigail.woods@kcl.ac.uk |