**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.”](https://conservancy.umn.edu/handle/11299/58622)

2000 **B.S., Ecology, Evolution, and Behavior, Honors**; University of Minnesota, College of Biological Sciences.

**Academic Positions**

July 2021- **Assistant Professor**, Department of History, University of Utah

July 2021- **Adjunct Assistant Professor**, Department of Philosophy, University of Utah.

2019-2021 **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.

**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.”](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1927224&HistoricalAwards=false)

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**

2022/2023 **Tanner Humanities Center Fellow**

2022 **Taft-Nicholson Center Faculty Fellow**

2021/2022 **Environmental Humanities Professorship**, Environmental Humanities Graduate Program, University of Utah.

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.

**Publications**

**Monographs**

*In prep Waging Nature’s Wars: How the Coevolutionary Theory of Natural Insecticides Made Allies and Combatants of Us All.*

2018 Abigail Woods, Angela Cassidy, Michael Bresalier, and **Rachel Mason Dentinger**.

[*One Health and its Histories: Animals and the shaping of modern medicine*](https://link.springer.com/book/10.1007%2F978-3-319-64337-3) (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,”](http://hsns.ucpress.edu/content/47/2/127) *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”](https://www.cambridge.org/core/journals/bjhs-themes/article/div-classtitleanimal-roles-and-traces-in-the-history-of-medicine-span-classitaliccspan18801980div/C988416768BA334B73A708F2B4189F4E) 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,"](https://link.springer.com/article/10.1007%2Fs10739-015-9421-8) *Journal of the History of Biology* 49(2):359-95, April 2016.

**Journal Special Issues**

2018 Co-edited and introduced with Abigail Woods, “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). [“Introduction to ‘Working Across species’”](https://link.springer.com/journal/40656/topicalCollection/AC_2610776283b42fcb78d53f9d4673fa34/page/1) is open access and free to download.

2016 Co-authored introduction with Pierre-Olivier Méthot, **“**[Ecology and Infection: Studying Host-Parasite Interactions at the Interface of Biology and Medicine](https://link.springer.com/article/10.1007/s10739-016-9440-0),”, *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*.](https://academic.oup.com/jhmas/advance-article/doi/10.1093/jhmas/jrz039/5519565?guestAccessKey=c2c04e63-53d8-4d3a-b437-15351183ac5e) *Journal of the History of Medicine and the Allied Sciences*, 17 June 2019.

2014 [“Evolving Without Darwin,”](http://www.booksandideas.net/Evolving-Without-Darwin.html) Book review of Peter J. Bowler, *Darwin Deleted: Imagining a World without Darwin*, for BooksAndIdeas.net. ([Translated and published](http://www.laviedesidees.fr/L-evolution-sans-Darwin.html) 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,”](https://drive.google.com/file/d/13aaMpt6Zff6kKnMnOWqbUXzxprr-x-vS/view?usp=sharing) *Kew Magazine*, Autumn 2013, pp 36-41.

2012 ["Underground Connections,"](https://drive.google.com/file/d/176E0-DAjYy55CKPDOYElHxjr0rrK8kkz/view?usp=sharing) *Kew Magazine*, Autumn 2012, pp 50-52.

2012 ["Seeing the Wood for the Trees,"](https://drive.google.com/file/d/14tQ26RepovL96teEJkdkTynpeoEOr_oF/view?usp=sharing) *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*,"](https://drive.google.com/file/d/11XAkTLoZt9Poy9zKhdJXhTNt0Q6i90cT/view?usp=sharing) *Kew Magazine*, Spring 2012, pp 58-59.

2012 ["Men of Letters,"](https://drive.google.com/file/d/10O-BtH406kDooV06wwPuSS-r37MR3oow/view?usp=sharing) *Kew Magazine*, Spring 2012, pp 52-55.

2012 ["Reconsidering Non-Native Species,"](http://www.thenakedscientists.com/HTML/articles/article/reconsidering-non-native-species/) The Naked Scientists, January 2012.

Since 2009 Personal blog, Entangled Bank, <http://www.entangledbank.com/>

**Presentations**

**Invited Papers**

2023 “Wastes or Weapons? Conflicting narratives of plant molecules in 1960s biology,” Tanner Humanities Fellow Work-in-Progress Presentations, 9 Feb 2023.

2022 “’The Most Coevolutionary Animal of Them All’: Turning ‘esoteric’ biological theory into lessons for humanity’s survival in the 1970s & 1980s,” Environmental Humanities Research Professor Lecture, 22 November 2022.

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 Presentations**

2023 “Wastes or Weapons? Conflicting narratives of plant molecules in 1960s biology,” International Society for the History, Philosophy, and Social Studies of Biology, 14 July 2023; Toronto, ON.

2021 Organizer, Chair, and Panelist for “Narrative as Practice in the Life Sciences,” History of Science Society Annual Meeting, 20 November 2021.

2021 “COVID-19 and Oral Histories.” Matt Basso, **Rachel Mason Dentinger**, Anna Neatrour, and Anita Pascoe. University of Utah Health Sciences COVID-19 Symposium, 4 June 2021.

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.”](https://sites.google.com/hssonline.org/abstracts-hss-2017/friday/900-1145-am/whats-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**

2023 “’The Most Coevolutionary Animal of Them All’: Turning ‘esoteric’ biological theory into lessons for humanity’s survival in the 1970s & 1980s,” Salt Lake Oasis Secular Community, October 2023.

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.

**Media Appearance**

2023 Interviewed and quoted by Maryn McKenna for “[History Says the 1918 Flu Killed the Young and Healthy. These Bones Say Otherwise](https://www.wired.com/story/history-says-the-1918-flu-killed-the-young-and-healthy-these-bones-say-otherwise/),” 23 October 2023, *Wired*

**Teaching**

**Courses Taught**

Spring 2024 HIST 4080, History of Medicine Western Society; HIST 1110, European History Since 1300.

Fall 2023 HONOR 2103, Intellectual Traditions in the Modern Era; HUM 1500, Great Books in the Humanities.

Spring 2022 HIST 4990, [Senior Seminar: Nonhuman Historical Agency](https://drive.google.com/file/d/1NvKzfCAK57yiqk80tJDQnPVUN-kD4QUR/view?usp=sharing)

Fall 2021 HIST 4700/HONOR 4471, [“The Darwinian Revolution,”](https://drive.google.com/file/d/1cwPolSw2h6AScCD6PZkPSq_KdzHNAeYe/view?usp=sharing) and HONOR 2113, “Honors Integrated Intellectual Traditions, Part III: Science and Human Rights,” co-taught with Dr. Ann Engar.

2020/2021 [“History of Women in Science, Technology, and Medicine”](https://drive.google.com/file/d/1eQKyPY4Ar8TXXWfWTCHgVpcSmDKYTUpu/view?usp=sharing); [“Introduction to Medical Humanities”](https://drive.google.com/file/d/18w8MJfAt2C2x30Mvtv9QqO6HwjmFmtXb/view?usp=sharing); “Honors Integrated Intellectual Traditions, Part I” and Part II, co-taught with Dr. Ann Engar; ; [“BlockU: Medical Humanities (What is Normal?)”](https://drive.google.com/file/d/1_-7P7tRaI6XdpQNaM0jdv9gp1UQEZLxO/view?usp=sharing)

2019/20 “Honors Integrated Intellectual Traditions, Part III: Science and Human Rights,” co-taught with Dr. Ann Engar; “BlockU: Medical Humanities (What is Normal?)”; [“Behaving Like Animals,”](https://drive.google.com/file/d/1Yryesiqb-xULL946yrc7VyHswLmZroq0/view?usp=sharing) co-taught with Dr. Marco Bortolato; “Introduction to Medical Humanities.”

2018/9 “Honors Integrated Intellectual Traditions, Part I” and Part II, co-taught with Dr. Ann Engar, and “Medical Humanities: What is Normal.”

2017/8 Honors College Praxis Lab, [“The Beginning of Life,”](https://honors.utah.edu/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,”](https://drive.google.com/file/d/0B_ptfUskg9QWV0JqeUNfNXMxWjg/view?usp=sharing) and [“Honors Core in Intellectual Traditions: The Rise of Modernity”](https://drive.google.com/file/d/0B_ptfUskg9QWYTVJcmRTMk90cms/view?usp=sharing); 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.

**Mentorship and Graduate Committees**

Mark Angelos, Department of History, Ph.D. Committee

Maggie Scholle, Environmental Humanities, M.A. Committee

John Flynn, Department of History, Ph.D. Committee

Ashleigh Albrechtson, Environmental Humanities, M.A. Committee (grad. 2022)

Cynthia Checketts, UROP and Honors Thesis Project (grad. 2021)

**Professional Service and Affiliations**

2023 Panel Chair, “Evolution’s Afterlives,” History of Science Society Meeting, Portland, OR, November 2023.

2023- International Society for the History, Philosophy, and Social Studies of Biology,

Grene and Callebaut Prize Committees, Member

2003- History of Science Society, Member

\***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)

2023 Panel Chair/Discussant, “War and Medical History,” Phi Alpha Theta Practicing

History Conference, University of Utah, March 2023.

2022-23 Fellowship Review Committee, Linda Hall Library

2021 Commentator for “Inclusivity IS the Common Good,” Utah State Historical Society, Annual History Conference, 21 September 2021.

2018 Panel Chair, “Speculative Biology,” History of Science Society Meeting, Seattle, WA; November 2018.

2014-2016 American Association of the History of Medicine, Member

2013-2015 British Society for the History of Science, Member

**Manuscript Review**

Archives of Natural History, Feb 2023

Bulletin of the History of Medicine, Feb 2022

Studies in History and Philosophy of Science, May 2021

**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](http://www.biocomp.utoronto.ca/).

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.