

Etienne S. Benson

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Academic Positions

2022-present	Director, Department II, Max Planck Institute for the History of Science, Berlin
2013-2022	Assistant/Associate Professor, Department of History and Sociology of Science, University of Pennsylvania (Assistant Professor, 2013-2017; Janice and Julian Bers Assistant Professor in the Social Sciences, 2017-2019; Associate Professor, 2019-2022)
Fall 2014	Visiting Scholar, Rachel Carson Center for Environment and Society, Ludwig-Maximilians-Universität, Munich
2012-2013	Lecturer, New York University–Berlin
2011	Visiting Lecturer, Committee on Conceptual and Historical Studies of Science, University of Chicago
2010-2013	Research Scholar, Department II (Director: Lorraine Daston), Max Planck Institute for the History of Science, Berlin
2008-2010	Postdoctoral Fellow, Center for the Environment and Department of the History of Science, Harvard University

Education

2008	PhD, Massachusetts Institute of Technology, History, Anthropology, and Science, Technology, & Society
2001	MA, Stanford University, Psychology
1999	AB, Harvard University, Cognitive Neuroscience

Grants and Fellowships

2020	Conference Grant: What is a Field? School of Arts and Sciences, University of Pennsylvania, \$5,000
2019	Dissertation Grant: Temporal Ice: Deciphering Deep Time in the Cryosphere, advisor/co-PI (with Alexis Rider), Science, Technology, and Society Program, National Science Foundation, Award #1849495, \$15,639

2018 Scholars Award: A History of Data Practices in the Water Sciences, Science, Technology, and Society Program, National Science Foundation, Award #1827876, \$279,194

2018-2019 Penn Faculty Fellow, Wolf Humanities Center, Theme: Stuff

2018 Undergraduate Research Grant: Integrating Sustainability Across the Curriculum, University of Pennsylvania

2018 Penn Undergraduate Research Mentoring Grant, University of Pennsylvania

2016-2017 Faculty Working Group Grant (with Bethany Wiggin): Environmental Humanities, School of Arts and Sciences, University of Pennsylvania, \$5,000

2016 Andrew W. Mellon Faculty Fellowship, Price Lab for Digital Humanities, University of Pennsylvania

2016 Conference Grant: Animals in the Archives, School of Arts and Sciences, University of Pennsylvania, \$5,000

2014 Research Opportunity Grant, School of Arts and Sciences, University of Pennsylvania, \$5,000

2007-2008 Dissertation Research: Tracking the Wild: Surveillance Technology, Conservation Biology, and Human-Animal Relations, 1950-2000," Co-PI/Advisor: Harriet Ritvo, Science and Society Program, National Science Foundation, Award #0646249, \$8,000

2007 Melvin Kranzberg Dissertation Fellowship, Society for the History of Technology

2007 Joseph L. Fisher Dissertation Fellowship, Resources for the Future

2007 Summer Study Award, Center for International Studies, MIT

2006 Martin Family Fellowship for Sustainability, MIT

2001 Mass Media Science and Engineering Fellowship, American Association for the Advancement of Science

Prizes

2019 David Edge Prize from the Society for the Social Study of Science for an outstanding peer-reviewed article or book chapter in Science and Technology Studies for "A Centrifuge of Calculation"

2016 Joel A. Tarr Prize from the Envirotech Special Interest Group of the Society for the History of Technology for best article on the relationship between technology and the environment in history for "Generating Infrastructural Invisibility"

2016 Bernard S. Finn IEEE History Prize from the Society for the History of Technology for the best published paper in the history of electrotechnology for “Generating Infrastructural Invisibility”

Editorial Positions

2022-present Advisory board member, *Journal of the History of Biology*
2021-present Advisory board member, Book series: *Tiere in der Geschichte / Animals in History*, Böhlau Verlag

Publications

Books

2020 *Surroundings: A History of Environments and Environmentalisms* (Chicago: University of Chicago Press, 2020).
2010 *Wired Wilderness: Technologies of Tracking and the Making of Modern Wildlife* (Baltimore: Johns Hopkins University Press, 2010).

Edited Issues and Themed Sections

2022 “Fields” (with Cameron Brinitzer). *Isis* 113, no. 1.
2020-2021 “Ways of Water” (with Christy Spackman). *Items* [Social Science Research Council], <https://items.ssrc.org/category/ways-of-water/>
2020 “Estimated Truths: Water, Science, and the Politics of Approximation” (with Giacomo Parrinello and Wilko Graf von Hardenberg). *Journal of Historical Geography*.
2017 “Troubling Species: Care and Belonging in a Relational World” (with the Multispecies Editing Collective), *RCC Perspectives: Transformations in Environment and Society* 2017, no. 1.

Peer-Reviewed Journal Articles and Book Chapters

2022 “What is a Field? Transformations in Fields, Fieldwork, and Field Sciences Since the Mid-Twentieth Century” (with Cameron Brinitzer), *Isis* 113, no. 1: 108-133.
“The Post-Heroic Field,” *Isis* 113, no. 1: 114-120.
2021 “Post-Domestication: The Posthuman,” in *Handbook of Historical Animal Studies*, edited by Mieke Roscher, André Krebber, and Brett Mizelle (Berlin: De Gruyter), 53-66.

- 2020 "The Mirror Trap," in *Boxes in Action: A Field Guide*, edited by Susanne Bauer, Martina Schlünder, and Maria Rentetzi (Manchester: Mattering Press), pp. 493-504.
- "Estimated Truths: Water, Science, and the Politics of Approximation" (with Giacomo Parrinello and Wilko Graf von Hardenberg), *Journal of Historical Geography* 68: 3-10.
- "Random River: Luna Leopold and the Promise of Chance in Fluvial Geomorphology," *Journal of Historical Geography* 67: 14-23.
- 2019 "The Wolf Around the Bend," in *Surprise: 107 Variations on the Unexpected*, edited by Mechthild Fend, Anke Te Heesen, Christine von Oertzen, and Fernando Vidal (Berlin: Max Planck Institute for the History of Science), 33-35.
- 2018 "Fieldwork Out of Place," in *Worlds of Natural History*, edited by Helen Curry, Nicholas Jardine, James Secord, and Emma Spary (Cambridge: Cambridge University Press), 504-417.
- "Re-situating Fieldwork and Re-narrating Disciplinary History in Global Mega-Geomorphology," *Studies in History and Philosophy of Science Part A 70: Experiencing the Global Environment*, edited by Lino Camprubí and Philipp Lehmann: 28-37.
- 2017 "Ecosystem Simulations as Practices of Emplacement: The Desert Biome, 1970-1974," in *Spatializing the History of Ecology: Sites, Journeys, Mappings*, edited by Jens Lachmund and Raf de Bont (London: Routledge), 121-140.
- "A Centrifuge of Calculation: Managing Data and Enthusiasm in Early Twentieth-Century Bird Banding," *Osiris* 32: Data Histories, edited by Elena Aronova, Christine von Oertzen, and David Sepkoski: 286-306.
- "The Cattle Guard," in *RCC Perspectives: Transformations in Environment and Society* 2017, no. 1: *Troubling Species: Care and Belonging in a Relational World*, edited by the Multispecies Editing Collective: 49-55.
- "Introduction" (with Veit Braun, Jean M. Langford, Daniel Münster, Ursula Münster, and Susanne Schmitt), *RCC Perspectives: Transformations in Environment and Society* 2017, no. 1: *Troubling Species: Care and Belonging in a Relational World*: 5-8.
- 2016 "Trackable Life: Data, Sequence, and Organism in Movement Ecology," *Studies in History and Philosophy of Biological and Biomedical Sciences* 57: *Entanglements of Instruments and Media in Investigating Organic Life*, edited by Joan Steigerwald: 137-147.

- “Naming the Ethological Subject,” *Science in Context* 29, no. 1: *Animal-Man Relations*, edited by Alexandre Métraux: 107-128.
- 2015 “Generating Infrastructural Invisibility: Insulation, Interconnection, and Avian Excrement in the Southern California Power Grid,” *Environmental Humanities* 6: 103-130.
- “Territorial Claims: Experts, Antelopes, and the Biology of Land Use in Uganda, 1956-1975,” *Comparative Studies of South Asia, Africa and the Middle East* 35, no. 1: *Nonhuman Empires*, edited by Rohan Deb-Roy: 137-155.
- “Endangered Birds and Epistemic Concerns: The California Condor,” in *Endangerment, Biodiversity, and Culture*, edited by Fernando Vidal and Nélia Dias (New York: Routledge), pp. 175-194.
- 2014 “Minimal Animal: Surveillance, Simulation, and Stochasticity in Wildlife Biology,” *Antennae: The Journal of Nature in Visual Culture* 30, Winter: *Virtual Animal*: 39-53.
- “Environment between System and Nature: Alan Sonfist and the Art of the Cybernetic Environment,” *communication +1 3: Afterlives of Systems*, edited by Christina Vagt and Florian Sprenger (2014): Article 2, 26pp. [Also published as: “Umwelt zwischen System und Natur. Alan Sonfists Army Ants: Patterns and Structures (1972) und die Grenzen des System-Denkens in der environmental art,” translated by Gabriele Wurmitzer and Daniela Hahn, in *Ökologie und die Künste*, edited by Erika Fischer-Lichte and Daniela Hahn (Paderborn: Wilhelm Fink Verlag, 2015), pp. 51-70.]
- 2013 “The Urbanization of the Eastern Gray Squirrel in the United States,” *Journal of American History* 100, no. 3: 691-710.
- 2012 “One Infrastructure, Many Global Visions: The Commercialization and Diversification of Argos, a Satellite-Based Environmental Surveillance System,” *Social Studies of Science* 42, no. 6: 846-871.
- “Endangered Science: The Regulation of Research by the U.S. Marine Mammal Protection Act and Endangered Species Act, 1971-1978,” *Historical Studies in the Natural Sciences* 42, no. 1: 30-61.
- “Demarcating Wilderness and Disciplining Wildlife: Radiotracking Large Carnivores in Yellowstone and Chitwan National Parks,” in *Civilizing Nature: National Parks in Transnational Perspective*, edited by Bernhard Gißibl, Sabine Höhler, and Patrick Kupper (Oxford: Berghahn), pp. 173-188.

- 2011 “From Wild Lives to Wildlife and Back,” *Environmental History* 16, no. 3: *Fifty Years of Wildlife in America*, edited by Peter Alagona (2011): 418-422.
- “Animal Writes: Historiography, Disciplinarity, and the Animal Trace,” in *Making Animal Meaning*, edited by Linda Kalof and Georgina Montgomery (East Lansing: Michigan State University Press), pp. 3-16.
- “A Difficult Time with the Permit Process,” *Journal of the History of Biology* 44, no. 1: *Environmental History and the History of Biology*, edited by Libby Robin and Jane Carruthers (2011): 103-123.

Book Reviews

- 2022 *Technology and the Environment in History* by Carl Zimring and Sara Pritchard. Forthcoming in *Isis*.
- 2021 *Politics and the Anthropocene* by Duncan Kelly *H-Diplo Roundtable Review*, July 5, 2021. <https://hdiplo.org/to/RT22-48>.
- 2020 *Animals and the Shaping of Modern Medicine: One Health and its Histories* by A. Woods, M. Bresalier, A. Cassidy, and R.M. Dentinger, *Isis* 111, no. 2: 410-411.
- 2018 *Birders of Africa: History of a Network* by Nancy Jacobs, *Journal of the History of Biology* 51: 391-394
- 2017 *Field Life: Science in the American West During the Railroad Era* by Jeremy Vetter, *Technology and Culture* 58, no. 4: 1083–1084.
- Feral Animals in the American South* by Abraham Gibson, *Journal of American History* 104, no. 3: 747–748.
- Program Earth: Environmental Sensing Technology and the Making of a Computational Planet* by Jennifer Gabrys, *American Journal of Sociology* 122, no. 5 (2017): 1582-1584.
- 2016 *Stations in the Field: A History of Place-Based Animal Research, 1870-1930* by Raf de Bont, *Environmental History* 21, no. 2: 383-385.
- Resettling the Range: Animals, Ecologies, and Human Communities in British Columbia* by John Thistle, *Agricultural History* 90, no. 1: 145-147.
- 2015 *An Environmental History of Wildlife in England, 1650-1950* by Tom Williamson, *Environment and History* 21, no. 3: 447-449.
- 2014 “Shepherding Wild Life,” review of *Zooland: The Institution of Captivity* by Irus Braverman and *Cloning Wild Life: Zoos, Captivity*,

- and the Future of Endangered Animals* by Carrie Friese, *BioSocieties* 9, no. 4: 489-492.
- 2013 *Greening Berlin: The Co-Production of Science, Politics, and Urban Nature* by Jens Lachmund, *H-Soz-und-Kult*, Nov. 8, 2013, <http://hsozkult.geschichte.hu-berlin.de/rezensionen/2013-4-112>.
Animals and Society: An Introduction to Human-Animal Studies by Margo DeMello and *Animal Encounters: Human and Animal Interactions in Britain from the Norman Conquest to World War One* by Arthur MacGregor, *Environmental History* 18, no. 4: 802-805.
Considering Animals: Contemporary Studies in Human–Animal Relations, edited by Carol Freeman, Elizabeth Leane, and Yvette Watt, *Annals of Science* 70, no. 4: 588-590.
- 2012 *The Afterlives of Animals: A Museum Menagerie* edited by Samuel J. M. M. Alberti, *Environmental History* 17, no. 4: 889-891.
CIFERAE: A Bestiary in Five Fingers by Tom Tyler, *Configurations* 20, no. 3: 327-329.
- 2011 *Beastly Natures: Animals, Humans, and the Study of History*, edited by Dorothee Brantz, *Environmental History* 16, no. 2: 336-337.
- 2010 *Animal Encounters*, edited by Tom Tyler and Manuela Rossini, *JAC* 30: 825-834.
The Game of Conservation: International Treaties to Protect the World’s Migratory Animals by Mark Cioc, *Environment and History* 16, no. 4: 509-511.
- Other Publications
- 2021 “Environment,” *Encyclopedia of the History of Science*, July 8, 2021, <https://lps.library.cmu.edu/ETHOS/article/id/481/>
- 2020 “Ways of Water” (with Christy Spackman), *Items* [Social Science Research Council], Sept. 29, <https://items.ssrc.org/category/ways-of-water/>
“Swimming in Data,” *Items* [Social Science Research Council], October 13, <https://items.ssrc.org/ways-of-water/swimming-in-data-luna-leopold-and-the-turn-to-quantification-in-river-science/>
- 2018 “The Crisis of Public Lands and the Promise of Bears Ears,” *OMNIA* [University of Pennsylvania], Spring/Summer, 14-15, <https://omnia.sas.upenn.edu/story/crisis-public-lands-and-promise-bears-ears>.

- 2017 "Circulating Significance in Civic Hacking," Blog Post, Penn Program in Environmental Humanities, March 23, <http://www.ppehlab.org/blogposts/2017/3/23/ecologies-of-data-part-iii-circulating-significance-in-civic-hacking>. 3pp.
- 2016 "Movement Ecology and the Minimal Animal," *LA+ Fall: Simulation*, edited by Karen M'Closkey and Keith VanDerSys: 30-33.
- "The Virtual Field," *Technosphere Magazine*, November, http://technosphere-magazine.hkw.de/#/p/f86f17b0-8a6c-11e6-8b42-2ff16d371dbf?_k=dg5goi.
- 2015 "The Urban Upwelling," *The American Historian*, no. 6: *History and Animals* (Nov.): 40-44.
- 2014 "The Biopolitics of the Border," in *The Edges of Environmental History: Honouring Jane Carruthers*, edited by Christof Mauch and Libby Robin, *RCC Perspectives* 2014, no. 1, pp. 81-86.
- 2013 Author's response to reviews of *Wired Wilderness*, *H-Environment Roundtable Reviews* 3, no. 1 (Jan. 10), <https://networks.h-net.org/system/files/contributed-files/env-roundtable-3-1.pdf>.
- 2013 "Unbearable Future," *Limn* 3: *Sentinel Devices*, edited by Frédéric Keck and Andrew Lakoff (June): 56-59.
- 2011 "Autonomous Biological Sensor Platforms," *Cabinet* 41: *Infrastructure* (Spring): 74-78.
- 2013 "New Media and New Publics: An Example with Polar Bears," Blog Post, *Ant Spider Bee: Exploring the Digital Humanities*, Sept. 12, , <http://www.antspiderbee.net/2013/09/polar-bears/>.
- 2008 "Paparazzi in the Woods," *Slate.com*, Aug. 14, http://www.slate.com/articles/health_and_science/green_room/2008/08/paparazzi_in_the_woods.html.

Websites and interactive digital projects

- 2019 *Rivers of Data*: Website related to a book-length project on the history of the mid-twentieth-century quantitative revolution in fluvial geomorphology. <https://www.riversofdata.org/>
- 2013 *TrophySource*: Interactive map of imports of polar bear trophies to the United States. Based on federal regulatory records, the map allows viewers to explore links between sites where polar bears were hunted in Canada and sites in the United States to which trophies were imported. <http://etiennebenson.com/trophysource/>

SIMPLOT: Browser-based re-creation of the late-1960s-era simulation of animal movements discussed in my 2016 article on “Movement Ecology and the Minimal Animal.”
<http://etiennebenson.com/simplot/>

Conferences, Workshops, and Symposia

- 2021 Workshop: “What is a Field?” (with Cameron Brinitzer), University of Pennsylvania, Apr. 9-10 (virtual)
- 2020 Roundtable: “Beyond the Boundary: Reflections on the Past, Present, and Future of Envirotech,” Society for the History of Technology, New Orleans, Oct. 7-11 (cancelled due to pandemic)
Panel: “A Science in Flux: Critical Histories of Geomorphology,” History of Science Society, New Orleans, Oct. 7-11 (cancelled due to pandemic)
- 2019 Workshop: “Bodies of Water” (with Christy Spackman), Scottsdale, AZ, Apr. 11-13
- 2018 Roundtable: “Environmental Humanities and the History of Technology” (with James Fleming), Society for the History of Technology, St. Louis, MO, Oct. 11-14
Panel: “Technology, Modernity, and Human-Animal Relations” (with Peter Soppelsa), Society for the History of Technology, St. Louis, MO, Oct. 11-14
Workshop: “Bodies of Water” (with Christy Spackman), Social Science Research Council, Brooklyn, NY, Apr. 27
- 2017 Seminar: “Environing Technologies” (with Johan Gärdebo, Sabine Höhler, Karina Kalmbach, and Nina Wormbs), Anthropocene Campus Philadelphia, Drexel University, Philadelphia, PA, Oct. 22
Panel: “Technical Environments and Environmental Techniques,” Society for the History of Technology, Philadelphia, PA, Oct. 28
Workshop: “Estimated Truths: Water, Science, and the Politics of Approximation” (with Wilko Graf von Hardenberg and Giacomo Parrinello), Max Planck Institute for the History of Science, Berlin, Aug. 16-17
- 2016 Symposium: “Animals in the Archives” (with Zeb Tortorici and Carolyn Fornoff), University of Pennsylvania, Philadelphia, PA, Oct. 27-28
Symposium: “Infrastructures of Knowledge/The Future Is _____” (with Bethany Wiggin), Penn Program in Environmental Humanities, University of Pennsylvania, Philadelphia, PA, Mar. 29-30

- 2013 Panel: "Life in Transit: Histories, Ecologies, Infrastructures," European Society for Environmental History, Munich, Aug. 23, 2013.
- 2011 Panel: "Ethics in Conservation Biology," Society for Social Studies of Science, Cleveland, OH, Nov. 4
- 2012 Workshop: "Regulating Research," Department II, Max Planck Institute for the History of Science, Berlin, Mar. 16-17

Teaching

- 2013-2022 University of Pennsylvania: *Technology and Society, The Information Age, Environment and Society, Engineering Planet Earth, Cyberculture, Data Dreams, The Anthropocene, Seminar in History and Sociology of Science, Environmental History, Humanities Beyond the Human*
- 2012-2013 New York University–Berlin: *Environment and Society*
- 2011 University of Chicago: *Tracking Nature*

Professional Society Memberships

- American Society for Environmental History
- European Society for Environmental History
- History of Science Society
- Society for the History of Technology
- Society for Social Studies of Science