

History of Science 909
Fall 2015: The New History of Natural History

Lynn Nyhart and Tom Broman
Thursdays 3:45-6:15, in 2339 Sterling Hall

In the past twenty years, the history of natural history has flourished as an area of scholarly inquiry across many disciplines—history of science, art and visual culture history, museum and material culture studies, and literary studies. This graduate seminar provides an introduction to many of the themes of this new wave of scholarship, especially investigating natural history's intersections with travel, empire, and commerce; visual and material culture; and scientific practice.

Learning Goals: The goals of the seminar are for you to learn the leading themes and approaches to the history of natural history; to gain practice in analytical and comparative reading, and thereby to develop your critical understanding of history of science as a scholarly discipline; and to become comfortable with seminar-style discussions at the graduate level.

Requirements:

Reading and Discussion: This is primarily a reading seminar. We will be reading a book or 4-5 articles or book sections per week; you should come to each week's meeting prepared to talk about them.

Discussion-launchers and Think-pieces: Students will be assigned as discussion-launcher (or co-launcher) for one week. To facilitate this, each discussion-launcher is asked to produce a think-piece of 500 words or less, due by 7 a.m. the day of your discussion. Co-launchers will write independent think-pieces. The aim of a think-piece is to raise questions and points for analysis by the group as a whole. You may raise questions, for example, about the cogency of an author's argument, the kinds and adequacy of evidence used, or broader issues that an author suggests but doesn't fully address. In weeks when we have multiple readings (which are most of them), you should address broader issues that go beyond a single reading, but you aren't required to synthesize all the readings.

Writing: Students may choose a writing assignment of approximately 15 pages that is suited to their interests and stage of graduate career: a) a historiographic essay of a leading seminar theme, expanding the list from the common readings; b) a historiographic essay that develops your own theme, covering an equivalent number of books (including some from the core readings, some from outside); or c) a detailed proposal for a research project using primary and secondary sources related to the history of natural history. Students who wish instead to write a primary-source based research paper (e.g. to fulfill a requirement) should consult Lynn or Tom.

Access to readings: individual articles and chapters will be posted on the Learn@UW course website, by week. We will be reading the following whole books, which you should purchase or get from a library:

Brian Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006).

Mary Terrall, *Catching Nature in the Act: Réaumur and the Practice of Natural History in the Eighteenth Century* (Chicago: University of Chicago Press, 2014).

Jim Endersby, *Imperial Nature: Joseph Hooker and the Practices of Victorian Science* (Chicago: University of Chicago Press, 2008).

Robert E. Kohler, *All Creatures: Naturalists, Collectors, and Biodiversity, 1850-1950* (Princeton: Princeton University Press, 2006).

Fa-ti Fan, *British Naturalists in Qing China: Science, Empire, and Cultural Encounter* (Cambridge, MA: Harvard University Press, 2004).

I. Historiographic introduction: What is/was natural history, and how should we understand it?

Sept. 3: Three Kinds of Historical Projects

Phillip R. Sloan, "Natural History, 1670-1802," in *Companion to the History of Modern Science*, edited by R. C. Olby, G. N. Cantor, J. R. R. Christie, and M. J. S. Hodge (London and New York: Routledge, 1990), 295-313.

Bruno Strasser, "Collecting Nature: Practices, Styles, and Narratives." In *Osiris 27: Clio Meets Science* (2012), edited by Kathryn Olesko and Robert E. Kohler, 303-340.

Lynn K. Nyhart, "Introduction: The Biological Perspective and the Problem of a Modern Nature," in idem, *Modern Nature: The Rise of the Biological Perspective in Germany* (Chicago: University of Chicago Press, 2009), 1-34.

Supplementary:

Kristin Johnson, "Essay on Sources," in idem, *Ordering Life: Karl Jordan and the Naturalist Tradition* (Johns Hopkins University Press, 2012), 357-365.

Sept. 10: Classic Articles, Ongoing Themes

Martin J. S. Rudwick, "The Emergence of a Visual Language for Geological Science, 1760-1840" *History of Science* 1976, 14: 149-195.

Dorinda Outram, "New Spaces in Natural History" in *Cultures of Natural History*, edited by Nicholas Jardine, James A. Secord, and Emma C. Spary (Cambridge University Press, 1996), 249-265.

Anne Secord, "Artisan Botany, in N. Jardine, J. A. Secord, and E. Spary, eds, *Cultures of Natural History*, Cambridge University Press, 1996, 378-393

Lorraine Daston, "The Sciences of the Archive" in *Osiris 27: Clio Meets Science* (2012), edited by Kathryn Olesko and Robert E. Kohler, 156-187.

Staffan Müller-Wille and Isabelle Charmantier, "Natural History and Information Overload: The Case of Linnaeus." *Studies in History and Philosophy of Biological and Biomedical Sciences* 2012, 43:4-15.

II. Practicing Natural History: A Survey through Book-Length Arguments

- Sept. 17: Brian Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006).
- Sept. 24: Mary Terrall, *Catching Nature in the Act: Réaumur and the Practice of Natural History in the Eighteenth Century* (Chicago: University of Chicago Press, 2014).
- Oct. 1: Jim Endersby, *Imperial Nature: Joseph Hooker and the Practices of Victorian Science* (Chicago: University of Chicago Press, 2008).
- Oct. 8: Robert E. Kohler, *All Creatures: Naturalists, Collectors, and Biodiversity, 1850-1950* (Princeton: Princeton University Press, 2006).

III. Culture Shaping Natural History

Oct. 15: Natural History and Commerce

- Paula de Vos, "The Science of Spices: Empiricism and Economic Botany in the Early Spanish Empire." *Journal of World History* 2006, 17: 399-427.
- Harold Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007), chapters 1, 2 and 5.
- Daniel Margocsy, "Chapter 2: Shipping Costs, the Exchange of Specimens, and the Development of Taxonomy," in idem, *Commercial Visions: Science, Trade, and Visual Culture in the Dutch Golden Age* (Chicago: University of Chicago Press, 2014), 29-73.
- Fredrik Albritton Jonsson, "Rival Ecologies of Global Commerce: Adam Smith and the Natural Historians," *American Historical Review*, 2010, 115(5): 1342-1363.
- Fa-ti Fan, Chapters 1 and 2 in idem, *British Naturalists in Qing China: Science, Empire, and Cultural Encounter* (Cambridge, MA: Harvard University Press, 2004), 1-57.

Oct. 22: Multimedia Natural History before 1800: Images, Collections, Texts. With special guest Meghan Doherty

- Meghan Doherty, "'Nearly Resembling the Live Birds': Approximating Life in Willughby's *Ornithology*," chapter ms.
- Angela Fischel, "Collections, Images and Form in Sixteenth-Century Natural History: The Case of Conrad Gessner," *Intellectual History Review*, 2010, 20(1): 147-164
- Daniela Bleichmar, "Peruvian Nature Up Close, Seen from Afar," *Res*, Spring/Autumn 2011 59/60: 60-73
- Luis Thiebaut, *Quadro del Perú*, 1797 [color image]
- José Ramón Marcaida and Juan Pimentel, "Dead Natures or Still Lives? Science, Art, and Collecting in the Spanish Baroque" in Daniela Bleichmar and Peter Mancall (eds), *Collecting Across Cultures* (Philadelphia: University of Pennsylvania Press, 2011), 99-115.

Oct. 29: Natural History, Empire, and Cultural Encounter

- Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006), 1-76.
- Neil Safier, "Spies, Dyes and Leaves: Agro-intermediaries, Luso-Brazilian Couriers, and the Worlds They Sowed, in Siman Schaffer et al., eds., *The Brokered World: Go-Betweens and Global Intelligence* (Uppsala: Science History Publications, 2009), 239-265.
- Jorge Cañizares-Esguerra, "How Derivative was Humboldt? Microcosmic Nature Narratives in Early Modern Spanish America and the (Other) Origins of Humboldt's Ecological Sensibilities," in Londa Schiebinger and Claudia Swan (eds), *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005), 148-165.
- Fa-ti Fan, chapters 3 and 4 in *British Naturalists in Qing China*, 61-121.

Nov. 5: Travel, Fieldwork, and "Field Science"

- Michael T. Bravo, "Mission Gardens: Natural History and Global Expansion, 1720-1820" in Schiebinger and Swan, *Colonial Botany*, pp. 49-65.
- Fa-ti Fan, Chapter 5 and Epilogue in *British Naturalists in Qing China*, 122-160.
- Henrika Kuklick and Robert E. Kohler, "Introduction" to *Osiris* 11 (1996): *Science in the Field*, 1-14.
- Introduction and Chapter 1 from Raf De Bont, *Stations in the Field: A History of Place-Based Animal Research, 1870-1930* (Chicago: University of Chicago Press, 2015), pp. 1-50.
- Mark V. Barrow, Jr., "On the Trail of the Ivory-Bill: Field Science, Local Knowledge, and the Struggle to Save Endangered Species," in *Knowing Global Environments: New Historical Perspectives on the Field Sciences*, edited by Jeremy Vetter (New Brunswick: Rutgers University Press, 2010), pp. 135-161.
- [recall/review relevant chapters from Endersby and Kohler]

IV. Natural History as "Culture"

Nov. 12: Popular Natural History: Doing, Reading, Writing

- Denise Phillips, "Friends of Nature: Urban Sociability and Regional Natural History in Dresden, 1800-1850." *Osiris* 18 (2003): 43-59.
- Victoria Carroll, "Natural History on Display: The Collection of Charles Waterton," in Aileen Fyfe and Bernard Lightman, eds., *Science in the Marketplace: Nineteenth-Century Sites and Experiences* (Chicago: University of Chicago Press, 2007), 271-300
- Aileen Fyfe, "Natural History and the Victorian Tourist: From Landscapes to Rock-Pools," in *Geographies of Nineteenth-Century Science*, edited by David N. Livingstone and Charles W. J. Withers (Chicago: University of Chicago Press, 2011), 371-398.

Bernard Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago: University of Chicago Press, 2007), Chapters 1 and 3, 1-38 and 95-166.

Mark V. Barrow, Jr., "Chapter 2: Desiderata: Bird Collecting and Community," in idem, *A Passion for Birds: American Ornithology after Audubon* (Princeton: Princeton University Press, 1998), pp. 20-45.

Nov. 19: Museums I: Early Modern Collections to Modern Natural History Museum

Krzysztof Pomian, "The Age of Curiosity." In Pomian, *Collectors and Curiosities: Paris and Venice, 1500-1800*, trans. Elizabeth Wiles-Portier (Cambridge: Polity Press, 1990), pp. 45-65.

Giuseppe Olmi, "From the Marvellous to the Commonplace: Notes on Natural History Museums (16th-18th Centuries)." In Renato G. Mazzolini (ed), *Non-Verbal Communication in Science Prior to 1900* (Florence: Leo S. Olschki, 1993), pp. 235-278.

Rebecca Messbarger, "The Re-Birth of Venus in Florence's Royal Museum of Physics and Natural History." *Journal of the History of Collections* 2013, 25:195-215.

Anna Maerker, "The Tale of the Hermaphrodite Monkey: Classification, State Interests and Natural Historical Expertise between Museum and Court, 1791-4." *British Journal for the History of Science* 2006, 39:29-47.

Nov. 26: Thanksgiving. Read books!

Dec. 3: Museums II: 19th and 20th centuries

Samuel J. M. M. Alberti, "The Status of Museums: Authority, Identity, and Material Culture," in *Geographies of Nineteenth-Century Science*, edited by David N. Livingstone and Charles W. J. Withers (Chicago: University of Chicago Press, 2011), 51-72.

Sally Gregory Kohlstedt, "Place and Museum Space: The Smithsonian Institution, National Identity, and the American West, 1846—1896," in *Geographies of Nineteenth-Century Science*, edited by David N. Livingstone and Charles W. J. Withers (Chicago: University of Chicago Press, 2011), 399-438.

Lynn K. Nyhart, "Chapter 6: Reforming the Natural History Museum, 1880-1900," in idem, *Modern Nature*, 198-250.

Karen A. Rader and Victoria E. M. Cain, "From Natural History to Science: Display and the Transformation of American Museums of Science and Nature." *Museum and Society*, 2008, 6(2): 152-171.

Dec. 10: Last class: TBA

Paper due date TBA.