History of Science 903/911
Early modern scientific collections / Early scientific collections
Spring 2025
1:20–3:15 pm W
5245 Humanities

Florence Hsia
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3:15 pm–5:15 pm W & by appt.
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SUMMARY

This seminar examines scientific collecting in terms of its **s**ites, spaces, and technologies of making, stabilizing, and circulating scientific objects, as well as in terms of the diverse historical actors who participated in efforts to bring together scientific materials—whether tangible or conceptual—in the course of the sixteenth, seventeenth, and eighteenth centuries.

Readings will represent a wide range of disciplinary perspectives and geographical/cultural areas. The writing requirement for this seminar will be tailored to students' particular needs in their respective programs of study. Students will gain familiarity with current scholarly trends in history of science, print culture, material culture, and archives; expand their analytical and interpretive skills; and strengthen their oral and written communication skills.

This is a three-credit course. The credit standard for this course is met by an expectation of at least 135 hours of student engagement with the course learning activities (at least 45 hours per credit), which include regularly scheduled seminar meeting times, reading, writing, and other student work as described in the syllabus.

REQUIREMENTS

(a) Take turns leading discussion of readings (the number of these will depend on the number of seminar participants). The sign-up sheet is here. Please prepare a 1-page critique/reaction of your reading. Name your 1-pager file "Authorlastname_titleword_publicationyear_yourlast name" and put a copy in this group folder.
(b) Take turns identifying and presenting a primary source exemplifying that week's readings.
(c) Prepare a preliminary prospectus & annotated bibliography for your proposed written work for the course and give a 5-minute flash talk about it on **Apr 2**. Please name your prospectus "Lastname_prospectus" and put a copy in this group folder. If you would like us to read a source in connection with your prospectus, please add it to the folder as well (name the file Lastname_Sourcename) or give us a link to it in your bibliography.
(d) Present your written work-in-process on **Apr 23** or **Apr 30**. The sign-up sheet is here.
(e) Complete 15–20 pages of prose writing in connection with this course, ideally a research paper which relates to the themes of this course, analyzes two or more primary sources, and makes use of some conceptual and/or methodological insight gained through the readings. Such a paper may involve comparison of early modern materials with materials from your own period of interest. Other possibilities include a critical discussion of some historiographical issue in the secondary literature; two or more book reviews (situating the book with respect to existing scholarship and critiquing the author's use of source material); or a bibliographic survey in preparation for a prelim field. Please meet with me early in the semester to discuss how you propose to fulfill the writing requirement.
(f) Grading will be based on class participation (~25%), in-class presentations (~25%), and your written work (~50%). All of your written work is due on **Wednesday, May 7** at 5:00 pm.

SCHEDULE
Most readings are available via the library catalog. Those marked with asterisks are on the Canvas course site.

Jan 22 **introductions**

Jan 29 **approaches**
- *Latour, Bruno. *Science in action: How to follow scientists and engineers through society*. Cambridge, Mass.: Harvard University Press, 1987, chap. 6: "Centres of calculation" (215–57).
- Harris, Steven J. "Long-distance corporations, big sciences, and the geography of knowledge." *Configurations* 6, no. 2 (1998): 269–304.
- *Daston, Lorraine. "Introduction: The coming into being of scientific objects." In *Biographies of scientific objects*, edited by Lorraine Daston, 1–14. Chicago: University of Chicago Press, 2000.
- Hünniger, Dominik. "Nets, labels and boards: Materiality and natural history practices in continental European manuals on insect collecting 1688–1776." In *Naturalists in the field. Collecting, recording and preserving the natural world from the fifteenth to the twenty-first century*, edited by Arthur MacGregor, 686–705. Leiden: Brill, 2018.
- Jardine, Boris. "State of the field: Paper tools." *Studies in history and philosophy of science Part A* 64, (2017): 53–63.

Feb 5 **rethinking collections**
- Findlen, Paula. "The museum: its classical etymology and Renaissance genealogy." *Journal of the history of collections* 1, no. 1 (1989): 59–78.
- Daston, Lorraine. "The factual sensibility." *Isis* 79, no. 3 (1988): 452–67.
- Goldgar, Anne, and Miles Ogborn. "Introduction: Early modern collections in use." *Journal of the history of collections* 33, no. 3 (2021): 403–08.

  Bleichmar, Daniela. "The cabinet and the world: Non-European objects in early modern European collections." *Journal of the history of collections* 33, no. 3 (2021): 435–45.

  te Heesen, Anke. "Boxes in nature." *Studies in history and philosophy of science Part A* 31, no. 3 (2000): 381–403.
- *Roos, Anna Marie, and Vera Keller. "Introduction." In *Collective wisdom: Collecting in the early modern academy*, edited by Anna Marie Roos and Vera Keller, 13–37. Turnhout: Brepols, 2022.
- *Keller, Vera. "Vernacular knowledge, learned medicine, and social technologies in the Leopoldina, 1670–1700, or, how to publish on sirens, dragons, and basilisks." In *Collective wisdom: Collecting in the early modern academy*, edited by Anna Marie Roos, and Vera Keller, 127–54. Turnhout, Belgium: Brepols Publishers, 2022.
- *Margócsy, Daniel. "A museum of wonders or a cemetery of corpses? The commercial exchange of anatomical collections in early modern Netherlands." In *Silent messengers: The circulation of material objects of knowledge in the early modern Low Countries*, edited by Sven Dupré and Christoph Lüthy, 185–215. Berlin: LIT Verlag GmbH & Co. KG, 2011.
- Hsia, Florence. "Astronomy after the deluge." In *Science in the archives: Pasts, presents, futures*, edited by Lorraine Daston, 17–52. Chicago: The University of Chicago Press, 2017.

Feb 12 **queries**
- Jarvis, Charles E. ""Take with you a small spudd or trowell": James Petiver's directions for collecting natural curiosities." In *Naturalists in the field. Collecting, recording and preserving the natural world from the fifteenth to the twenty-first century*, edited by Arthur MacGregor, 212–39. Leiden: Brill, 2018.
- *Yale, Elizabeth. "Making lists: Social and material technologies in the making of seventeenth-century British natural history." In *Ways of making and knowing: The material culture of empirical knowledge*, edited by Pamela H. Smith, Amy R. W. Meyers, and Harold J. Cook, 280–301. Ann Arbor: University of Michigan Press, 2014.

- Komel, Svit. “Petty’s instruments: The Down survey, territorial natural history and the birth of statistics.” *British journal for the history of science* 57, no. 1 (2024): 43–64.
- Olesko, Kathryn M. “The *Indaganda* survey of the Prussian frontier: The built world, logistical power, and bureaucratic knowledge in the Polish partitions, 1772–1806.” *Journal for the history of knowledge* 1, no. 1 (2020): article 16, 1–17. https://doi.org/10.5334/jhk.12
- Portuondo, María M. *Secret science: Spanish cosmography and the new world*. Chicago: University of Chicago Press, 2009, chap. 6: “Constructing a cosmographical epistemology” (210–56); introduction (1–12, 16–18) useful for context.
- Schotte, Margaret. “Distilling water, distilling data: Questionnaires in Dutch East India Company record-keeping.” *Intellectual history review* 32, no. 3 (2022): 531–51.

Feb 19 **listing**

- Delbourgo, James, and Staffan Müller-Wille. “Introduction: Listmania.” *Isis* 103, no. 4 (2012): 710–15.
  Pugliano, Valentina. “Specimen lists: Artisanal writing or natural historical paperwork?” *Isis* 103, no. 4 (2012): 716–26.
  Delbourgo, James. “Listing people.” *Isis* 103, no. 4 (2012): 735–42.
- Keating, Jessica, and Lia Markey. “Introduction: Captured objects: Inventories of early modern collections.” *Journal of the history of collections* 23, no. 2 (2011): 209–13.
  Russo, Alessandra. “Cortés’s objects and the idea of New Spain: Inventories as spatial narratives.” *Journal of the history of collections* 23, no. 2 (2011): 229–52.
- Cooper, Alix. “Placing plants on paper: Lists, herbaria, and tables as experiments with territorial inventory at the mid-seventeenth-century Gotha court.” *History of science* 56, no. 3 (2018): 257–77.
- *Mosley, Adam. “Past portents predict: Cometary historiae and catalogues in the sixteenth and seventeenth centuries.” In *Celestial novelties on the eve of the scientific revolution: 1540-1630*, edited by Dario Tessicini, and Patrick Boner, 1–32. Firenze: L.S. Olschki, 2013.
- Marcacci, Flavia. “Seeing at a glance: The world-system debate and the role of the comparative tables in Giovanni Battista Riccioli’s *Almagestum novum*.” *Nuncius* 36, no. 1 (2021): 119–42.
- Daston, Lorraine. “Super-vision: Weather watching and table reading in the early modern Royal Society and Académie royale des sciences.” *Huntington library quarterly* 78, no. 2 (2015): 187–215.

Feb 26 **circulating**

- James, K. A. “‘Humbly dedicated’: Petiver and the audience for natural history in early eighteenth-century Britain.” *Archives of natural history* 31, no. 2 (2004): 318–29.
- Yoo, Genie. “Wars and wonders: The inter-island information networks of Georg Everhard Rumphius.” *British journal for the history of science* 51, no. 4 (2018): 559–84.
- *Raj, Kapil. “Networks of knowledge, or spaces of circulation? The birth of British cartography in colonial South Asia in the late eighteenth century.” *Global intellectual history* 2, no. 1 (2017): 49–66.
- *Sargent, Matthew. “Recentering centers of calculation: Reconfiguring knowledge networks within global empires of trade.” In *Empires of knowledge: Scientific networks in the early modern world*, edited by Paula Findlen, 297–316. New York, NY: Routledge, 2019.
- Schaffer, Simon. “Newton on the beach: The information order of *Principia mathematica*.” *History of science* 47, no. 3 (2009): 243–76.
- *Bleichmar, Daniela. “Translation, mobility, and mediation: The case of the *Codex Mendoza*.” In *Sites of mediation: connected histories of places, processes, and objects in Europe and beyond, 1450–1650*, edited by Susanna Burghartz, Lucas Burkart, and Christine Göttler, 240–69. Leiden; Boston: Brill, 2016.

Mar 5 **standardizing**

- Ogilvie, Brian W. “The many books of nature: Renaissance naturalists and information overload.” *Journal of the history of ideas* 64, no. 1 (2003): 29–40.

- *Dew, Nicholas. "The hive and the pendulum: Universal metrology and baroque science." In *Science in the age of baroque*, edited by Ofer Gal, and Raz Chen-Morris, 239–55. Dordrecht: Springer, 2013.
- *Gorman, Michael. "The angel and the compass: Athanasius Kircher's geographical project." In *Athanasius Kircher: The last man who knew everything*, edited by Paula Findlen, 239–59. New York: Routledge, 2004.
- Spary, E. C. "Scientific symmetries." *History of science* 42, no. 1 (2004): 1–46.
- Hanson, Marta, and Gianna Pomata. "Medicinal formulas and experiential knowledge in the seventeenth-century epistemic exchange between China and Europe." *Isis* 108, no. 1 (2017): 1–25.

Mar 12 **third nature**
- Daston, Lorraine. "Introduction: Third nature." In *Science in the archives: Pasts, presents, futures*, edited by Lorraine Daston, 1–16. Chicago: The University of Chicago Press, 2017.
- *Fleischer, Alette. "Leaves on the loose: The changing nature of archiving plants and botanical knowledge." *Journal of early modern studies* 6, no. 1 (2017): 117 –35.
- *Hunt, Arnold. "Under Sloane's shadow: The archive of James Petiver." In *Archival afterlives: Life, death, and knowledge-making in early modern British scientific and medical archives*, edited by Vera Keller, Anna Marie Roos, and Elizabeth Yale, 194–221. Leiden; Boston: Koninklijke Brill NV, 2018.
- Pomata, Gianna. "The medical case narrative: Distant reading of an epistemic genre." *Literature and medicine* 32, no. 1 (2014): 1–23.
- Hess, Volker, and J. Andrew Mendelsohn. "Case and series: Medical knowledge and paper technology, 1600–1900." *History of science* 48, no. 3–4 (2010): 287–314.

Mar 19 **consulting**
- Rankin, Alisha. "New world drugs and the archive of practice: Translating Nicolás Monardes in early modern Europe." *Osiris* 37 (2022): 67–88.
- Winterbottom, Anna. "Producing and using the *Historical relation of Ceylon*: Robert Knox, the East India Company and the Royal Society." *British journal for the history of science* 42, no. 4 (2009): 515–38.
- Leong, Elaine. "When the Tallamys met John French: Translating, printing, and reading *The art of distillation*." *Osiris* 37 (2022): 89–112.
- *Heideklang, Julia. "Leaf: The materiality of early modern herbals." In *Natural things in early modern worlds*, edited by Mackenzie Cooley, Anna Toledano, and Duygu Yıldırım, 264–90. London; New York, NY: Routledge, Taylor & Francis Group, 2023.
- Dietz, Bettina. "Networked names: Synonyms in eighteenth-century botany." *History and philosophy of the life sciences* 41, article no. 46 (2019): 1–20.
- Mendelsohn, J. Andrew. "The world on a page: Making a general observation in the eighteenth century." In *Histories of scientific observation*, edited by Lorraine Daston, and Elizabeth Lunbeck, 396–420. Chicago: University of Chicago Press, 2011.

Mar 26 **spring break**

Apr 2 **flash talks** (5 minutes): preliminary prospectus & bibliography.
Name your file "Yourlastname_prospectus" and add your prospectus & bibliography to this group folder.
If you would like us to read a source in connection with your presentation, please add it as well (name the file Yourlastname_Sourceauthorname) or give us a link to it in your bibliography.

Apr 9 **reconstructing Sloane**
Apr 16 **individual meetings** (no class meeting) Please sign up here for a meeting time.
Apr 23 **presentations** Please sign up here for a presentation time.
Apr 30 **presentations**

May 7 **final written work due at 5:00 pm**