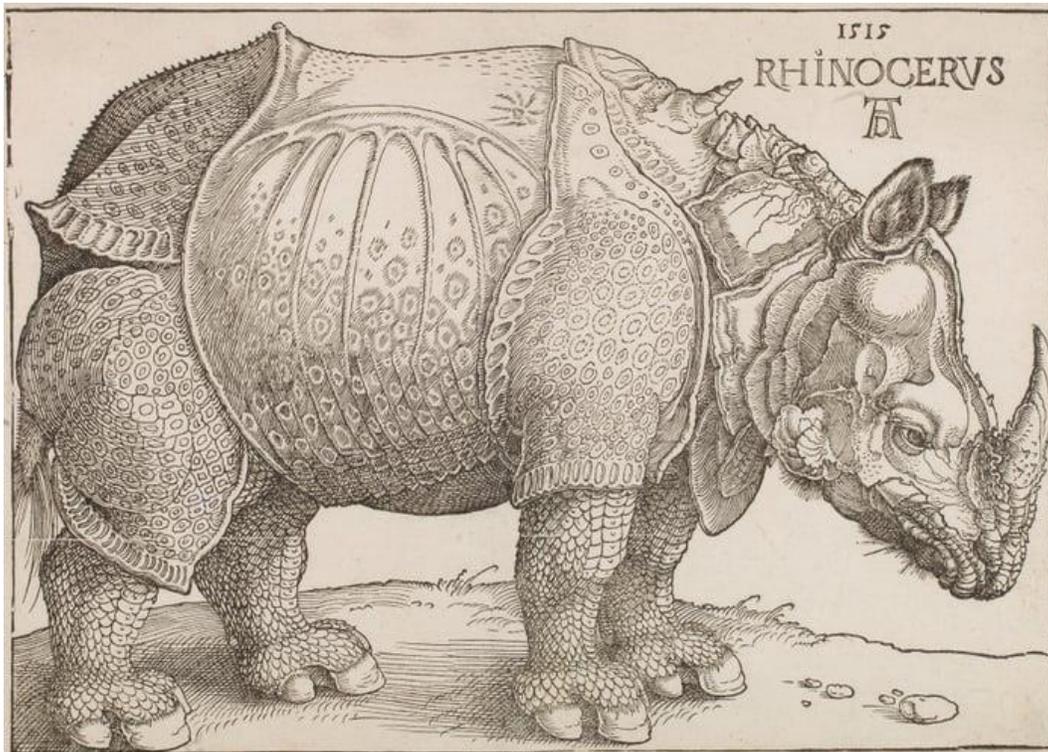


HISTORY 207: GLOBAL NATURAL HISTORIES

Dr. Jerry Jessee
Office: CCC 467
Office Hours: T-Th 10:00-11:00
jjessee@uwsp.edu

Location/Time
Monday & Wednesday
9:30-10:45
SCI A107



Albrecht Durer's Rhinoceros (1515)

Course Description:

Today, we tend to associate natural science and scientists with laboratories, sophisticated instruments, and lab coats. But before there was “science,” the primary means by which people created a formalized knowledge of the natural world was through “natural history”—the observational study of natural objects like animals, plants, and minerals situated within their environmental milieu.

The science and knowledge of natural history, however, was not created in a vacuum. Rather, natural history has been molded and fashioned by human beings—humans who envisioned the natural world through the cultural lenses of their particular times and places. Natural history, in other words, is a product of human culture and historical context, not just a way of knowing

nature. In this course, we will take a historical and cultural perspective on natural history that asks:

How does the historical and cultural contexts of scientific activities shape science and how does science, in turn, shape history and culture?

By putting natural history in its historical and cultural context in this way you will gain a firmer understanding of science as a cultural activity and appreciate how it has molded the ways in which societies have come to think about the natural world, their place in it, and their obligation to protect it as well as the ways those societies shaped the science that was being made.

At the same time, this course delves into the ways that the objects of science and their display shape science and the communication of scientific ideas (primarily through museums). In this course, then, we will also take a material culture perspective on natural history that asks:

What do the material objects of natural history (natural objects, instruments, illustrations, etc.) tell us about the history of natural history?

We will tackle both of these questions by taking a long and global historical point of view from ancient times to the present day. Although focused on the past, engaging in these questions will enable you to better understand science today; focusing on past scientific development, in other words, will provide you with tools for understanding contemporary science. That is why this course fulfills the “Historical Perspectives” category of UWSP’s General Education Program. This course, with its focus on material culture, also stands as one of the foundational courses in the new Museum Studies minor. By focusing on the history of science and the relationship of material objects of natural history and the historical past, this course introduces you the ways that historians, museum curators, and other professionals utilize the objects of science to tell stories about the past. Please see me for more information on the Museum Studies minor if you would like to know more about this exciting opportunity at UWSP.

Our method for investigating these two essential questions involves a mix of lecture, small/whole-group discussion of readings, and analytical, problems-based workshops. **This is not a lecture course that simply requires you to sit passively and listen.** I have structured the course around critical readings, questions, and learning opportunities that facilitate your ability to make meaning out of issues related to society and science. I am a guide, not a knowledge faucet. You are a seeker, not a vessel waiting to be filled with knowledge. Your success in this course thus requires that you not only attend class, but also complete the readings and come prepared to discuss and work through them with me and your peers. Your active engagement in your own learning will make this a much more rewarding experience.

Note that each lecture listed in the schedule below contains a question that the readings and or/lecture material is designed to answer. Use this question to give you purpose as you read. You should be able to address the question by the time we are through with that day’s class.

Learning Objectives:

Essential Questions:

How does the historical and cultural contexts of scientific activities shape science and how does science, in turn, shape history and culture?

What do the material objects of natural history (natural objects, instruments, illustrations, etc.) tell us about the history of natural history?

Enduring Understandings:

Students will understand that:

Science is a decidedly human activity that has shaped and been shaped by human culture and history.

The material objects of natural history (not just the ideas of natural history) provide historians with valuable sources through which to tell stories about science and society in the past.

Course Learning Skills:

Students who diligently complete this course in good faith will be able to:

- 1) *Analyze* through primary and secondary sources how natural history (its practices, theories, and content) has shaped and been shaped by historical forces.
- 2) *Analyze* different interpretations of the history of natural history and their role in shaping understandings the past.
- 3) *Analyze* how natural history has shaped understandings of the natural environment in the past and *interpret* how these concepts have been employed to justify both the exploitation and protection of nature.
- 4) *Create* an object biography that analyzes an artifact of natural history and explains in narrative form how it informs our understanding about science and society in the past.

Required Reading:

Books

Paul Farber, *Finding Order in Nature: The Naturalist Tradition from Linnaeus to E.O. Wilson*, The Johns Hopkins University Press, 2000. Available for text rental at the UWSP Bookstore.

Patricia Fara, *Sex, Botany, and Empire: The Story of Carl Linnaeus and Joseph Banks*, Columbia University Press, 2003. Available for text rental at the UWSP Bookstore.

Juan Pimentel, *The Rhinoceros and the Megatherium: An Essay in Natural History*, Harvard University Press, 2017. Available for text rental at the UWSP Bookstore.

Andrea Wulf, *The Invention of Nature: Alexander von Humboldt's New World*, Vintage, Reprint Edition, 2016. Available for purchase at the UWSP Bookstore or online.

Articles on Canvas: In addition to the books above, you will also be required read articles and bring them to class to discuss. These will be available on Canvas. They are noted in the schedule below with an asterisk (*).

You must read and bring these readings to class on the days we discuss them. Students who regularly fail to bring their readings to class for discussion will be docked attendance.

A really important note about the reading materials in this course: You have one of two choices for accessing the readings in this course: You can 1) print out the articles in hard copy and physically purchase the books, or 2) obtain and read electronic versions of the articles and books. If you choose option number 2 there are caveats. First, the only electronic devices permissible for the readings are laptops or ipad-type readers. No cell phones! I am strict of this. Second, you must bring your device with you on the day that we discuss those readings. This is the price you pay for going electronic. Understand? Good.



Abraham Ortelius's Iceland Map (1591)

Assignments:

Midterm Exam: There will be a midterm exam that will consist of identifications, short answer prompts, essays, and multiple-choice questions. I will provide a study guide.

Final Exam: The final will be in the same format as the midterm and will be cumulative.

Quizzes: There will be a series of quizzes on lecture and readings throughout the semester. The format will be short answer. There will be a quiz for each day we discuss a book. Questions will require you to answer something that is important from the text, either specific content or an idea/argument. **You cannot make up quizzes unless your absence has been excused.** I will enable CANVAS to drop your lowest quiz grade in case you have to miss a class in which a quiz is given. Because this is a large class, I will not be returning your quizzes back to you. For the first couple quizzes I will provide feedback on how the class is performing, expectations on answers, etc. If you would like more substantial and individual feedback on your personal performance, you are encouraged to see me during my office hours or make an appointment with me.

In-Class Activities and Assignments: We will be engaging in various writing and group exercises throughout the semester. I will be collecting the products of these exercises and giving you credit for them on CANVAS. They will not be heavily graded or returned to you. Instead, I will be evaluating them on the + √ - system. These marks will be recorded in CANVAS as 3-2-1 respectively. If you complete the work and put forth good effort, you will receive a +. Varying degrees of completeness or effort will result in either a √ or a -. You will be in serious danger of **not** passing this class if you do not complete these assignments. See scale below.

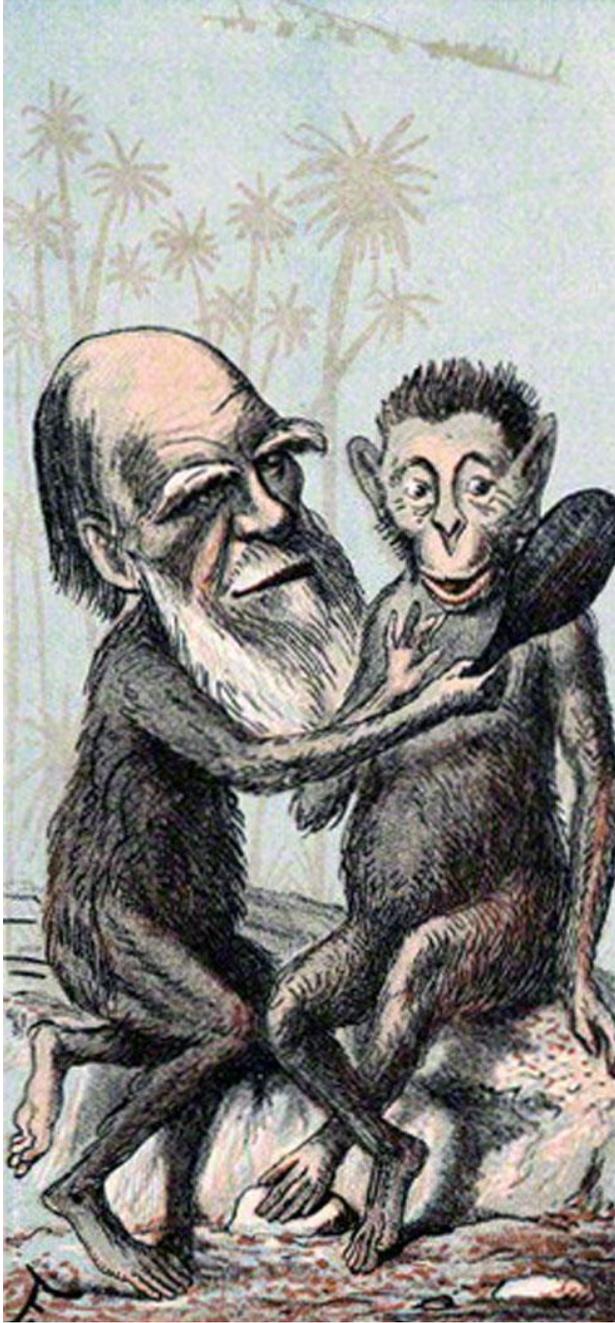
Telling History through Natural Objects Project: You will select an object of natural history (e.g. taxidermized animal, plant, map, scientific instrument, drawing, book, etc.) and write a 3-4 page history describing how your object contributes to an understanding of human history. The project has three different components, each with its own due date during the semester: 1) an object proposal; 2) an annotated bibliography of sources revealing the historical context and significance of the object; 3) the final essay, which will include an image(s) of your object and an analysis of its historical significance.

UWSP Natural History Museum Collection Crawl Participation

The annual UWSP Natural History Collection Crawl is taking place Saturday April 4 from 9-1 pm. This is an annual event where folk from the community come to the museum and see all of the wonderful natural history collections that we have to offer all over campus. Your assignment here is to help out with the event. I will have more detail at a later date. If cannot make the event an alternative assignment will be provided.

* Late assignments will be docked a third of a grade for every day late.

** Attendance policy: See below.



Charles Darwin and Monkey with Mirror, The London Sketchbook (1874)

Grades (Weighted)

Midterm: 15 %

Final Exam: 20 %

Quizzes: 20%

In-Class Activities and Assignments: 20%

Telling History through Natural Objects

Project: 20%

Museum Collection Crawl Participation: 5%

Total: 100%

Other Stuff:

Attendance: I will record attendance.

Students who miss 3 classes will be docked a 1/3 of a grade from their final grade.

Students who miss 4-5, 2/3rds of a grade, 6+ a full grade (and so on). For example, if you were to earn a B in this class, but missed 3 classes, your final grade would be a B-.

Absences will be unexcused except in extraordinary circumstances, which will require a note from an authority explaining the absence. If you miss an assignment for a class in which you have an excused absence, you must make every effort to make up any missed assignments within a reasonable amount of time.

Related to absences: I find it incredibly rude for students to leave in the middle of class. If, for some legitimate reason, you need to leave class early, I would appreciate the common courtesy of letting me know before class begins. Students who leave class without permission will be docked attendance for that class.

Electronics: All electronics must be turned off during class unless instructed to use them by me. These include cell phones, laptops, and tablets. In some cases, laptop use may be permitted if the student has an accommodation approved by the Disability Services Office (see below). **Please do not be surprised to hear me shout “turn off your cell phone” if I catch you peeking at it in class.**

Notes should be taken by hand on paper.



Breadfruit Scientific Drawing. (c. 1800s)

Late Work: Stuff happens. Sometimes life takes priority over schoolwork. If something comes up and you need to miss a class or cannot turn in an assignment let me know immediately. I do not always grant extensions on assignments, but I do try to be flexible. It is imperative, therefore, that when incidents arise you do your diligent best to keep me informed. I cannot, in fairness to the class, accommodate a student for missed work and/or absences when I am notified toward the end of the semester.

Early Finals/Midterms: I do not allow students to take early/late exams except in extremely rare occasions (like you are going to have brain surgery on the scheduled exam day).

Plagiarism: For information on plagiarism, consult

<http://www.uwsp.edu/centers/rights>. See Chapter 14, **Student Academic Standards and Disciplinary Procedures**. I will vigorously pursue all incidents of plagiarism. Also I use turnitin.com for the essays.

Equal Educational Opportunities: If you have a learning or physical challenge which requires classroom accommodation, please contact the UWSP Disability and Assistive Technology Center (6th Floor of the Learning Resources Center) with your documentation as early as possible in the semester. They will then notify me, in a confidential memo, of the accommodations that will facilitate your success in the course. Voice: (715) 346-3365, TTY: (715) 346-3362, <http://www.uwsp.edu/special/disability/studentinfo.htm>.

Writing/Reading Help: This is a reading and writing intensive course. If you need help you can visit the Tutoring and Learning Center in the basement of the Library. They are there to help you with papers etc. This is totally free! Their webpage is <http://www.uwsp.edu/tlc/Pages/writingReadingTutorials.aspx>. You can also call them to make an appointment at (715) 346-3568.

Notice on Copyright of Course Material: As the instructor, I retain all copyright on lectures, slides, assignments, and other course materials. I do not allow anybody to photograph, film, or otherwise record lectures without my express permission. I do not allow anybody to distribute course materials or otherwise send audio or visual recordings of lectures to people not currently enrolled in this class without my express permission. Posting course material that I have created onto course-sharing websites directly violates my copyright on my materials.

***Note: I reserve the right to alter this syllabus for any reason.**

Class Schedule:

Week 1

WEDNESDAY -- Course Introduction

Unit 1: Recognizing Nature: The Birth of Natural Philosophy (Human Origins to the Ancient World, c 300 bce)

Week 2

MONDAY-- Heroic Men of Science? The History of Science, a Historical Debate

(How should we understand the history of science? What is the relationship between science and its broader social and cultural contexts? How do these two readings take very different historical views on science?)

Readings:

- * Hall, "Introduction" to *The Scientific Revolution*.
- * Appleby et al., selections from "The Heroic Model of Science" in *Telling the Truth about History*.

Due: Syllabus Assignment on Canvas (part of in-class activities and assignments)

WEDNESDAY -- Classical Greek Natural Philosophy

(What is natural history? What are the limits to understanding the world according to Plato?)

Readings:

- * Browne, "Natural History" from *The Oxford Companion to The History of Modern Science*.
 - * Primary Source: Plato, 'Allegory of the Cave' from *The Republic*.
-

Week 3

MONDAY—Classical to Medieval Natural Philosophy

(How did Medieval Societies in Europe and the Islamic World deal with the classical learning from Greece? What is the relationship between science and religion in the medieval world?)

**Unit 2: Ordering Nature: The Origins of Natural History
(The Renaissance and Early Modern Era 1400 to 1750 ce)**

WEDNESDAY -- Renaissance Natural History I: The Rhino
(What contexts shaped European understandings of the Rhino during the Renaissance?)

Readings:

Pimentel, *The Rhinoceros and the Megatherium*, "Prologue" & chs. 1-2.

Week 4

MONDAY—Renaissance Natural History II: Commercial Expansion, Cabinets of Curiosity, and Printing
(How did printing and visual representation of nature, like the rhino, shape the ways that Europeans understood natural history?)

Readings:

Pimentel, *The Rhinoceros and the Megatherium*, ch. 3

WEDNESDAY – Early Modern Classification of Nature: Linnaeus’s “Natural” System
(How natural was Linnaeus’s natural system? What social contexts shaped his system?)

Readings:

Fara, *Sex, Botany, & Empire*, chs. 1-2.

* Primary Source: Columbus, “On World Geography.”

Optional: Farber, *Finding Order in Nature*, ch. 1.

Week 5

MONDAY—Early Modern Imperial Science: The Cook Voyages, Exploration, and Mapping
(How was science and scientific exploration shaped by the needs of the early modern state?)

Readings:

Fara, *Sex, Botany, & Empire*, ch. 4.

WEDNESDAY – Early Modern Botany and Empire: Joseph Banks
(How was botany an imperial science?)

Readings:

Fara, *Sex, Botany, & Empire*, chs. 3 & 6.

Week 6

MONDAY—The Enlightenment: Mechanistic Philosophy
(What does it mean to view nature as a machine?)

Readings:

Primary Source: Descartes, Selection from *Discourse on Method*.

Unit 3 Interconnecting Nature: Humboldtian Science
(Modern Era 1750-1850 ce)

WEDNESDAY -- Humboldt, Chimborazo, and the Geography of Plants
(How did Humboldt's view of nature and geographical space shape views of the natural world?)

Readings:

Wulf, *The Invention of Nature*, "Prologue," & chs. 1; 3-7; 10 (skim chs. 8-9).

Week 7

MONDAY-- Humboldt's Iso-Maps, Global Knowledge, and Environmental Control
(What was Humboldt's scientific practice and how did it enable scholars to make global knowledge?)

Readings:

Wulf, *The Invention of Nature*, chs. 13-14; 16 (skim chs 11-12; 15).

WEDNESDAY -- Humboldt's Cosmos
(What is Humboldt's *Cosmos*?)

Readings:

Wulf, *The Invention of Nature*, ch. 18.

**Unit 4: Witnessing Nature: Museums and the Public
(Thinking about Natural Objects and their Display)**

Week 8

MONDAY-- Museum Displays and Telling Stories about Natural History
(How do museums tell stories? Do the stories that museums tell have power?)

Readings:

* Parker, "Coming to Terms with Cook."

WEDNESDAY -- Workshop: Biographies of Objects in Natural History
(How do the material artifacts of natural history help us tell stories about natural history's past?)

Readings:

* "Introduction" and "Natural History" from Ulrich, et al., *Tangible Things*.

Week 9

MONDAY -- Midterm

WEDNESDAY -- UWSP Natural History Museum Tour (We will meet at the museum, first floor library)

**Unit 5: Evolving Nature: The Darwinian Revolution and the Modern Environmental Sciences
(Modern Era 1850 – 1950 ce)**

Week 10

MONDAY-- Darwin and the Voyage of the Beagle: Deep Time

(What is deep time and how did scientists of Darwin's time come to understand the nature of deep time?)

Readings:

* Bowler, "Nature and Society, 1800-1859," from *Evolution: The History of an Idea* (focus on pages 96-100; 102-106; 108-120; 129-134)

WEDNESDAY – Darwin's Delay: Pre-evolutionary Theories and Natural Theology

(How did scientists before Darwin understand the organization and design of organisms? What kinds of evolutionary theory existed before Darwin?)

Readings:

* Primary Source: Paley, selections from *Natural Theology*.

Due: Object Biography Proposal.

Week 11

MONDAY-- The Origin of Species

(What are the main features of Darwin's theory and how did he make his argument?)

Readings:

Farber, *Finding Order in Nature*, chapter 5.

WEDNESDAY -- Reception of Darwin's Theory

(Was Darwin's theory accepted or not? Why or why not?)

Week 12

MONDAY -- Evolution and the Natural History of Humanity

(What effects did Darwin's theory have on how human's thought of themselves and their societies?)

Readings:

* Primary source: Selections from Darwin's *The Decent of Man* and Huxley's *Man's Place in Nature* & "Evolution and Ethics."

WEDNESDAY -- Natural History of "Race": Anthropology, Human Zoos, and the Hierarchies of Human Societies
(How did the idea of classification in natural history influence ideas about the classification of humans and human society?)

Readings:

Newkirk, "The Man Who was Caged in a Zoo, *The Guardian*, June 3, 2015. URL Link:
<https://www.theguardian.com/world/2015/jun/03/the-man-who-was-caged-in-a-zoo>

Due: Annotated Object Biography Assignment

Week 13

MONDAY-- The Experimental Method and the History of Ecology: Divergence of Environmental Science and Natural History
(How was the science of natural history shaped by the rise of experimental biology? How did changes in biological practice challenge natural history?)

Readings:

Farber, *Finding Order in Nature*, chapter 6 & 8.

Unit 6: Saving Nature: Natural History and Nature Protection (Modern Era to the Anthropocene, 1850 to Present)

WEDNESDAY -- Conservation Movement
(How did natural history influence the rise of environmental conservation?)

Readings:

* Henry Lockwood, "Scientific Forestry Management in Germany."

Week 14

MONDAY-- Natural History in Person and Film

(What new kinds of meaning did people ascribe to nature in the late 1800s and early 1900s and why? What is wilderness?)

Readings:

Farber, *Finding Order in Nature*, ch. 7.

Read the article from “Wild Things: The Blog of the Wildlife Conservation Society Archives.” URL Link:

<http://www.wcsarchivesblog.org/the-african-plains-a-new-vista-to-the-wonders-of-nature/>

* Primary Source: Osborne, “The Opening of the African Plains.”

WEDNESDAY -- Discussion: Grizzly Man

Week 15

MONDAY – Setting Up the Display (We will meet at the UWSP Natural History Museum)

Due: Object Biography Paper and Object Label

WEDNESDAY – The Anthropocene: EO Wilson, Biodiversity, and The Sixth Extinction

(How is the natural history of the planet now, in the Anthropocene, being driven by human history?)

Readings:

Farber, *Finding Order in Nature*, chapter 9.

Read the article Kolbert, “The Sixth Extinction,” *The New Yorker*, May 25, 2009. URL Link:

<https://www.newyorker.com/magazine/2009/05/25/the-sixth-extinction>

Final: Wednesday, May 13, 8:00-10:00 am.