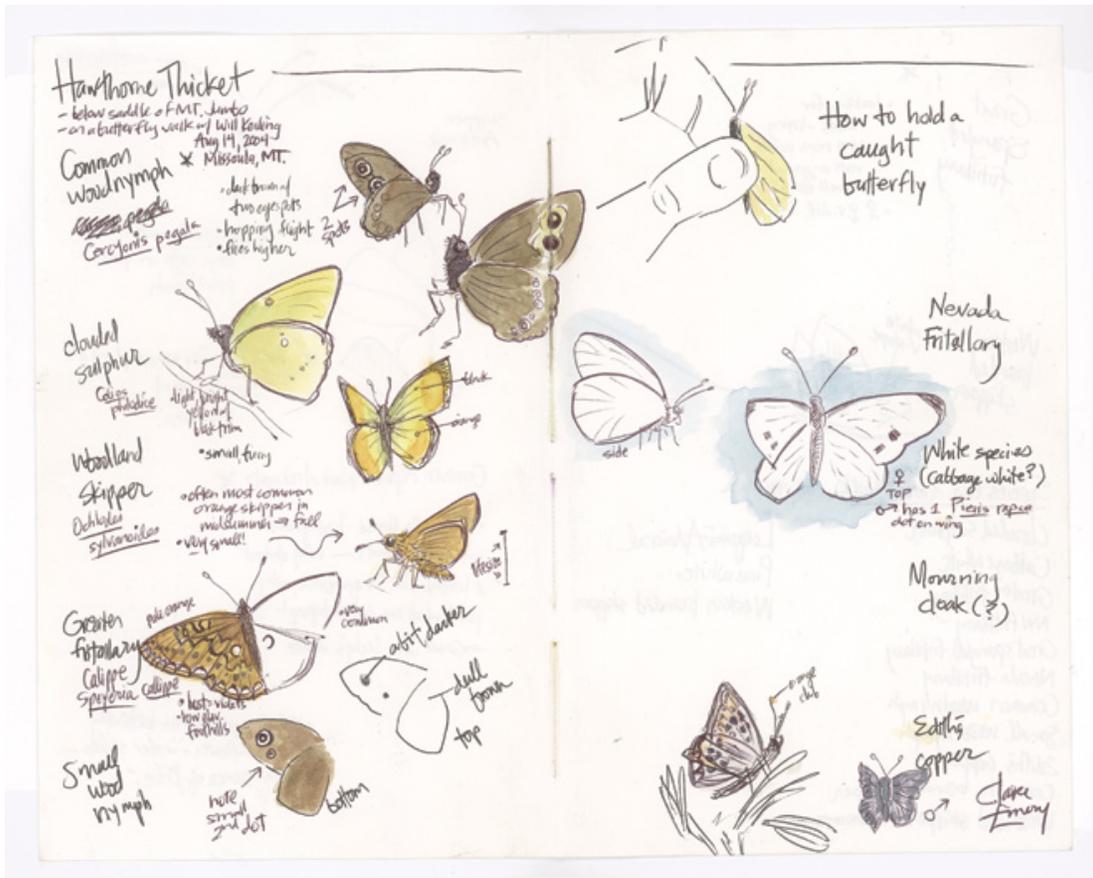


# Birds, Bats, Butterflies: The Art of Field Biology

Cornell University  
First-Year Writing Seminar  
Fall 2014

Instructor: Laura Jane Martin  
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Claire Emery, from *Field Notes on Science & Nature* (Harvard University Press, 2011)

## Course Description

In the nineteenth century, field biology was explicitly an aesthetic practice as well as a scientific one. Serious naturalists and vacationing amateurs comingle, collecting and commenting on natural objects of great beauty: feathers, fossils, stones. In the early twentieth century, field biology, and indeed most academic disciplines, underwent a period of professionalization. Field biologists moved towards the writing conventions of the Royal Society of London, which had described adjectives as “in open defiance against Reason,” poetry as “this vicious abundance of

Phrase, this trick of Metaphors, this volubility of Tongue.” Scientists were no longer expected to be essayists, and scientific writing and nature writing split.

In this first-year writing seminar we will read historical and contemporary scientific articles, essays, short stories, and poems that deal with field biology. We will challenge the popular view that environmental science involves the recitation of facts, rather than the study of competing interpretations, while writing is “subjective” and without rules. We will think about how writers seek meaning in the field. Through readings and course assignments, students will expand the possibilities of their own writing. This course is a good fit for students interested in ecology, natural resources management, environmental history, or science & technology studies.

### **Learning Outcomes**

At the end of this semester students will submit a portfolio containing selections of work for this class in both first-draft and revised forms. The portfolio will demonstrate:

- writing that appropriately uses argument, evidence, structure, and diction to engage its occasion and its genre
- writing that is based on careful analytical reading
- appropriate citation of primary and secondary sources
- effective development through drafting, revising, and responding to critique

### **Classroom Participation**

Participation in classroom discussion is required. In addition, each student will lead one or more discussions. All work for this class should be considered public. We will frequently read aloud from each other’s work and exchange work for peer review. The instructor may also share a student’s work (anonymously) with future students.

### **Grading**

In my experience, thinking and talking about grades detracts from learning. My focus is on delivering to students the most useful encouragement and critique. Consequently, the final portfolio is the only graded writing assignment. The final portfolio counts for 80% of the course grade, and classroom participation (including quizzes) counts for 20%.

### **Feedback and Conferences**

For each assignment, I will identify the most significant areas of strength and weakness in a student’s writing. I will always be happy to clarify or expand my comments in office hours. In addition, we will discuss and workshop selections of student work during class.

To pass this course, students must meet with me twice during the semester to discuss writing one-on-one.

### **University Policies and Regulations**

This instructor respects and upholds University policies and regulations pertaining to the observation of religious holidays; assistance available to students with disabilities; plagiarism and academic integrity; sexual harassment; and racial or ethnic discrimination. All students are advised to become familiar with the respective University regulations and are encouraged to bring any questions or concerns to the attention of the instructor.

Students are expected to abide by the *Cornell University Code of Academic Integrity*, available at: <http://cuinfo.cornell.edu/Academic/AIC.html>.

### **The Writing Walk-In Service**

The Writing Walk-In Service ([http://www.arts.cornell.edu/knight\\_institute/walkin/walkin.htm](http://www.arts.cornell.edu/knight_institute/walkin/walkin.htm)) provides support for individuals at any stage of the writing process. It is a free resource available for nearly any kind of writing project: applications, presentations, lab reports, essays. During the academic year, the WWIS is open Sunday through Thursday from 3:30–5:30 P.M. and from 7:00–10:00 P.M. Students can schedule appointments or they can drop in at a convenient time.

### **Other Resources**

While these texts are not required, we will refer to them often:

- *The Chicago Manual of Style*
- Virginia Tufte, *Artful Sentences: Syntax as Style* (New York: Graphics Pr., 2006)
- Citation Management: <https://www.library.cornell.edu/research/citation>
- Harvard Writes: <http://harvardwrites.com/>

## Calendar of Readings and Assignments

<b>WEEK 1: Introduction</b>	
<b>8/26</b>	No required reading
<b>8/28</b>	<ul style="list-style-type: none"> <li>• Reed Noss, “The Naturalists are Dying Off,” <i>Conservation Biology</i> 10 (1996): 1-3.</li> <li>• Stephen C. Trombulak and Thomas L. Fleischner, “Natural History Renaissance,” <i>Journal of Natural History Education</i> 1 (2007): 1-4.</li> <li>• Harry W Greene, “Organisms in nature as a central focus for biology,” <i>Trends in Ecology and Evolution</i> 20 (2005): 23-27.</li> </ul>

<b>WEEK 2: The History of Field Biology</b>	
<b>9/2</b>	<ul style="list-style-type: none"> <li>• Charles Darwin, “Galapagos Archipelago,” in <i>Voyage of the Beagle</i> (1839): 19 pgs.</li> <li>• Alexander von Humboldt, “Chapter 16,” in <i>Personal Narrative of Travels to the Equatorial Regions of America, 1799-1804</i> (1804), 10 pgs.</li> <li>• Elizabeth Kolbert, “The Lost World: The Mastodon’s Molars,” <i>The New Yorker</i> (16 December 2013), 21 pgs.</li> <li>• Elizabeth Kolbert, “The Lost World: Fossils of the Future,” <i>The New Yorker</i> (23 December 2013), 20 pgs.</li> </ul> <p><b>DUE: ESSAY 1</b></p>
<b>9/4</b>	<ul style="list-style-type: none"> <li>• Henry David Thoreau, “Sounds” and “Solitude,” in <i>Walden and Civil Disobedience</i> (orig. 1854, New York: Penguin Books, 1983), 156-173, 174-184.</li> </ul>

<b>WEEK 3: The History of Field Biology</b>	
<b>9/9</b>	<ul style="list-style-type: none"> <li>• Helen M. Rozwadowski, “A Sea Breeze,” in <i>Fathoming the Ocean: The Discovery and Exploration of the Deep Sea</i> (New York: Belknap Press: 2005), 99-132.</li> </ul>
<b>9/11</b>	<ul style="list-style-type: none"> <li>• Thomas R. Dunlap, “Birds Over America,” in <i>In the Field and Among the Feathered: A History of Birders &amp; Their Guides</i> (Oxford: Oxford University Press, 2011), 118-144.</li> <li>• William Leach, “In the Wake of Empire,” in <i>Butterfly People: An American Encounter with the Beauty of the World</i> (New York: Pantheon Books, 2012), 193-225.</li> </ul> <p><b>Class meets in Mann Library’s STONE CLASSROOM for library orientation</b></p>

<b>WEEK 4: Field Observations</b>	
<b>9/16</b>	<ul style="list-style-type: none"> <li>• E. B. White, “On a Florida Key,” in <i>Essays of E. B. White</i> (New York: Harper Perennial, 1977), 171-177.</li> <li>• Annie Dillard, “Living Like Weasels,” in <i>Teaching a Stone to Talk</i> (New York: Harper &amp; Row, 1982), 65-70.</li> <li>• Rebecca Solnit, “Seashell to Ear,” in <i>Storming the Gates of Paradise: Landscapes for Politics</i> (Berkeley: University of California Press, 2007), 379-383.</li> </ul> <p>Guest Speaker: Professor Anurag Agrawal, Ecology and Evolutionary Biology <b>DUE: ESSAY 2</b></p>
<b>9/18</b>	<ul style="list-style-type: none"> <li>• David Haskell, “The Forest Unseen: A Year’s Watch in Sewanee’s Forest,” <i>Scientific American</i> (19 April 2012), 4 pgs.</li> <li>• James Gorman, “Finding a Wild, Fearsome World Beneath Every Fallen Leaf,” in Tim Folger (ed.), <i>The Best American Science and Nature Writing 2003</i> (Boston: Houghton Mifflin Co., 2003): 67-71.</li> <li>• Ken Lamberton, “Yard Birds,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 151-154.</li> <li>• Robin Wall Kimmerer, “Witness to the Rain,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 187-195.</li> </ul>

<b>WEEK 5: Biologists in the Field</b>	
<b>9/23</b>	• Aldo Leopold, <i>A Sand County Almanac</i> (Oxford: Oxford University Press, 1949), 1-92.
<b>9/25</b>	NO CLASS – ROSH HASHANAH

<b>WEEK 6: Biologists in the Field</b>	
<b>9/30</b>	<ul style="list-style-type: none"> <li>• Harry W. Greene, “Venomous Serpents” and “Field Biology as Art,” in <i>Tracks and Shadows: Field Biology as Art</i> (Berkeley: University of California Press, 2013), 146-166, 220-240.</li> <li>• Laura Sewall, “Perceiving a World of Relations,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 42-52.</li> </ul> <p>Guest Speaker: Catherine Sun, Graduate Student, Natural Resources <b>DUE: ESSAY 3</b></p>
<b>10/2</b>	<ul style="list-style-type: none"> <li>• Thomas Lowe Fleischner, “The Mindfulness of Natural History,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 3-15.</li> <li>• Edward O. Wilson, “Storm Over the Amazon,” in <i>The Diversity of Life</i> (New York: Penguin Books, 1992), 3-13.</li> </ul>

<b>WEEK 7: Scientific Journal Articles</b>	
<b>10/7</b>	<ul style="list-style-type: none"> <li>• Craig Moritz <i>et al.</i>, “Impact of a Century of Climate Change on Small-Mammal Communities in Yosemite National Park, USA,” <i>Science</i> 322 (2008): 261-264.</li> <li>• Jens-Christian Svenning and Richard Condit, “Biodiversity in a Warmer World,” <i>Science</i> 322 (2008): 206-207.</li> </ul> <p><b>CONFERENCES 1</b></p>
<b>10/9</b>	<ul style="list-style-type: none"> <li>• Abraham J. Miller-Rushing and Richard B. Primack, “Global Warming and Flowering Times in Thoreau’s Concord: A Community Perspective,” <i>Ecology</i> 89 (2008): 332-341.</li> <li>• Josh Donlan <i>et al.</i>, “Re-wilding North America,” <i>Nature</i> 436 (2005): 913-914.</li> </ul>

<b>WEEK 8: Artists in the Field</b>	
<b>10/14</b>	NO CLASS – FALL BREAK
<b>10/16</b>	<ul style="list-style-type: none"> <li>• Kimiko Hahn, <i>Toxic Flora</i> (New York: W. W. Norton, 2011), 1-56.</li> <li>• Excerpts from Barry Lopez (ed.), <i>Home Ground: Language for an American Landscape</i> (San Antonio: Trinity University Press, 2006), xv-xxiv, 92-93, 160-161, 179, 264-265, 294, 344, 349.</li> </ul> <p><b>DUE: ESSAY 1 SECOND DRAFT</b> <b>DUE: Annotated Bibliography</b></p>

<b>WEEK 9: Artists in the Field</b>	
<b>10/21</b>	<ul style="list-style-type: none"> <li>• Kimiko Hahn, <i>Toxic Flora</i> (New York: W. W. Norton, 2011), 57-123.</li> </ul> <p>Guest speaker: Professor Clifford Kraft, Natural Resources</p>
<b>10/23</b>	<ul style="list-style-type: none"> <li>• Hugh Raffles, “A Conjoined Fate,” <i>Orion</i> (Jan/Feb 2010): 16-27.</li> </ul>

<b>WEEK 10: Studying Field Biologists</b>	
<b>10/28</b>	<ul style="list-style-type: none"> <li>• Robert Kohler, “Place and Practice in Field Biology,” <i>History of Science</i> 40 (2002): 189–210.</li> <li>• Stephen Bocking, “Situated Yet Mobile Examining the Environmental History of Arctic Ecological Science,” in Dolly Jorgensen, Finn Arne Jorgensen, and Sara Pritchard (eds.), <i>New Natures</i> (Pittsburgh: University of Pittsburgh Press, 2013), 164-178.</li> </ul>
<b>10/30</b>	<ul style="list-style-type: none"> <li>• Stefan Helmreich, “Alien Species, Native Politics” and “Abducting the Atlantic,” in <i>Alien Ocean: Anthropological Voyages in Microbial Seas</i> (Berkeley: University of California Press, 2009), 145-170, 171-211.</li> </ul> <p><b>DUE: ESSAY 4 FIRST DRAFT</b></p>

<b>WEEK 11: Journeys</b>	
<b>11/4</b>	<ul style="list-style-type: none"> <li>• Alastair Bonnett, “Far Out: Four Unconventional Journeys,” <i>Orion</i> (June/July 2014): 41-45.</li> <li>• Rebecca Solnit, “The Art of Arrival: On Movement, Stillness, and the Arc of a Life,” <i>Orion</i> (June/July 2014): 58-63.</li> </ul> <p>Guest Speaker: Taza Schaming, Graduate Student, Natural Resources</p>
<b>11/6</b>	<ul style="list-style-type: none"> <li>• Robert MacFarlane, “Noctambulism,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 29-41.</li> <li>• Cristina Eisenberg, “Lessons from 763,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 81-90.</li> <li>• Kathleen Dean Moore, “Bear Sign (On Joyous Attention),” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 144-150.</li> </ul>

<b>WEEK 12: Alternative Fields</b>	
<b>11/11</b>	<ul style="list-style-type: none"> <li>• William Cronon, “The Trouble with Wilderness; or, Getting Back to the Wrong Nature,” in William Cronon (ed.), <i>Uncommon Ground: Rethinking the Human Place in Nature</i> (New York: W.W. Norton, 1995), 69-90.</li> <li>• N. Katherine Hayles, “Simulated Nature and Natural Simulations: Rethinking the Relation between the Beholder and the World,” in William Cronon (ed.), <i>Uncommon Ground: Rethinking the Human Place in Nature</i> (New York: W.W. Norton, 1995), 409-425.</li> </ul> <p><b>DUE: PEER REVIEW NOTES</b></p>
<b>11/13</b>	<ul style="list-style-type: none"> <li>• Jennifer Price, “Looking for Nature at the Mall: A Field Guide to The Nature Company,” in <i>Flight Maps: Adventures with Nature in Modern America</i> (New York: Basic Books, 1999), 167-206.</li> </ul>

<b>WEEK 13: Fictional Fields</b>	
<b>11/18</b>	<ul style="list-style-type: none"> <li>• Barry Lopez, “Homecoming,” in <i>Field Notes: The Grace Note of the Canyon Wren</i> (New York: Random House, 1994), 103-114.</li> <li>• Ben Fountain, “Near-Extinct Birds of the Central Cordillera,” in <i>Brief Encounters with Che Guevara</i> (New York: Harper Perennial, 2007), 1-31.</li> </ul>
<b>11/20</b>	<ul style="list-style-type: none"> <li>• Italo Calvino, “The Aquatic Uncle,” in <i>Cosmicomics</i> (Boston: Houghton Mifflin Co., 1968), 71-82.</li> </ul> <p><b>DUE: ESSAY 5 FIRST DRAFT</b></p>

<b>WEEK 14: Gardens</b>	
<b>11/25</b>	<ul style="list-style-type: none"> <li>• Michael Pollan, “The Idea of a Garden,” in <i>Second Nature: A Gardener’s Education</i> (New York: Grove Press, 1991), 176-201.</li> <li>• Charles Goodrich, “The Gardener Gets Arrested,” in Thomas Lowe Fleischner (ed.), <i>The Way of Natural History</i> (San Antonio: Trinity University Press, 2011), 113-119.</li> </ul>
<b>11/27</b>	NO CLASS – THANKSGIVING BREAK

<b>WEEK 15: Concluding Thoughts</b>	
<b>12/2</b>	<ul style="list-style-type: none"> <li>• Hugh Raffles, “Yearnings,” in <i>Insectopedia</i> (New York: Random House, 2010), 343-382.</li> </ul> <b>CONFERENCES 2</b>
<b>12/4</b>	<b>LAST CLASS</b> No required reading

<b>WEEK 16</b>	
<b>12/10</b>	Final Portfolio Due