

Mount Holyoke College, Fall 2012  
Environmental Studies 222  
**Evolution of North American Landscapes**

Lauret E. Savoy

Class Hours: Tu & Th 8:35–9:50 in Clapp 300

Office Hours: M 10–11:00, Tu 10–11:45, W 10:30–noon, or by appointment

Office: Clapp 326, x2125 (e-mail: lsavoy@mtholyoke.edu)

### Course Description

Do you like to learn about the environmental, geological, or social histories of places that matter to you? Do you get excited when you zoom in with Google Earth? Do you feel grounded when you know what's under your feet?

Earth's landscapes have changed dramatically over the planet's long history. In this course we tour North America and explore the origin and anatomy of its most distinctive landscapes, including many national parks and monuments. We "visit" spectacular locales, from Acadia to Yosemite, Yellowstone to the Grand Canyon. We also consider how the continent's geologic character has influenced human exploration and settlement. By "reading" the land we can recognize the complex layering of natural and cultural histories that creates what is experienced as "sense of place." Reading the land can also provide a clearer sense of how various peoples have used and shaped Earth's surface differently, and how these differences have contributed to a spectrum of environmental impacts.

### Reading Materials

Class handouts and e-reserve readings on ella

Michael Conzen, ed., *The Making of the American Landscape* (required)

Barry Lopez, ed., *Home Ground: Language for an American Landscape* (recommended)

John McPhee, *Annals of the Former World* (required)

Erwin Raisz, *Landforms of the United States* (large map)

Lauret Savoy, Eldridge Moores, and Judy Moores, eds., *Bedrock: Writers on the Wonders of Geology* (recommended)

### Also Recommended:

Reserve texts in library, including Ann Harris and Esther Tuttle, *Geology of National Parks* (6th edition)

### Key Websites of Interest

**Geology of the national parks** - <http://geomaps.wr.usgs.gov/parks/index.html>

Geology of parks by province - <http://geomaps.wr.usgs.gov/parks/province/list.html>

Geologic provinces - <http://geomaps.wr.usgs.gov/parks/province/index.html>

Photo tours of parks - <http://3dparks.wr.usgs.gov/index.html>

**Explore nature in national parks** - <http://www2.nature.nps.gov/>

Tour of national park geology - <http://www2.nature.nps.gov/geology/tour/index.cfm>

*A Tapestry of Time and Terrain* (geol & landforms maps) - <http://pubs.usgs.gov/imap/i2781/>

*This Dynamic Earth: The Story of Plate Tectonics* -

<http://pubs.usgs.gov/gip/dynamic/dynamic.html>

## **National parks history and timeline -**

<http://www.nps.gov/history/history/hisnps/NPSHistory/timeline.htm> &  
[http://www.nps.gov/history/history/hisnps/NPSHistory/timeline\\_annotated.htm](http://www.nps.gov/history/history/hisnps/NPSHistory/timeline_annotated.htm)

**Geologic Map of North America** - <http://esp.cr.usgs.gov/info/gmna/> &  
<http://ngmdb.usgs.gov/gmna/> (with Google Earth links)

## **Online Primers/Tutorials**

**Background on topographic maps** - <http://egsc.usgs.gov/isb/pubs/booklets/topo/topo.html> &  
<http://egsc.usgs.gov/isb/pubs/booklets/symbols/>

**Primer on reading geologic maps** - <http://geomaps.wr.usgs.gov/parks/gmap/index.html>

**Primer on rocks and minerals** - <http://geomaps.wr.usgs.gov/parks/rxmin/rock.html>

**Primer on geologic time** - <http://geomaps.wr.usgs.gov/parks/gtime/index.html>

**Primers on plate tectonics** -

1) *This Dynamic Earth: The Story of Plate Tectonics* - <http://pubs.usgs.gov/gip/dynamic/dynamic.html>  
&

2) <http://geomaps.wr.usgs.gov/parks/pltec/index.html>

**Background on weather and climate** - <http://www.eo.ucar.edu/basics/> &

[http://oceanservice.noaa.gov/education/pd/oceans\\_weather\\_climate/weather\\_and\\_climate\\_basics.html](http://oceanservice.noaa.gov/education/pd/oceans_weather_climate/weather_and_climate_basics.html)

## **Dictionaries or Glossaries of Geologic Terms**

<http://geomaps.wr.usgs.gov/parks/misc/glossarya.html>

<http://geology.com/geology-dictionary.shtml>

<http://www.nature.nps.gov/geology/usgsnps/misc/glossaryAtoC.html>

## **Course Requirements and Policy**

For this course to work well, everyone must read the materials carefully in advance, and come to class prepared to discuss the topics. *Active, informed participation and regular attendance are essential!* You will be responsible for leading class and small-group discussions, on occasion teaching colleagues, and giving presentations. Short papers, guided studies, assignments based on readings, and one longer research project must be submitted in class on the specified due dates. Above all, I ask that you bring creativity, imagination, and commitment to the course.

Evaluations will be determined in the following manner:

class participation (including group discussions and peer teaching)	30%
short papers, assignments, and guided studies	40%
research project and presentation	30%

## **Field Trips**

\*Class trip in late October or early November with Professor Tom Wessels, ecologist and author of *Reading the Forested Landscape: A Natural History of New England*

\*Possible optional day-trip to Lowell, Massachusetts, or shorter trip to Holyoke in November.

## Outline of Topics

### I. Introduction - Features and Processes in a Continental Recipe

9/6            **Welcome – Reading the American Land  
Personal Maps**

9/11            **Considering Landscape - What Do We Need to Know?**

Readings for today (9/11, on ella in Resources folder) -

Donald Meinig, “The Beholding Eye” (from *The Interpretation of Ordinary Landscapes*, Meinig ed.)

Dale Ritter, “Geological Perception of Landscapes” (in *Landscape in America*)

Erwin Raisz, *Landforms of the United States* (large map)

(Please refer to reading guides/questions that will be handed out each week)

9/13-9/20      **North America: Portrait of a Continent  
Anatomy and Tectonic Setting of North America - Rock Record and History  
Reading and Interpreting Geologic Maps**

Readings, including the following -

Begin reading John McPhee, “Book 1: Basin and Range” in *Annals of the Former World*

Trimble, “Recognizing Nature’s Bequest” in Conzen, *The Making of the American Landscape*

W. Jacqueline Kious and R. Tilling, *This Dynamic Earth: The Story of Plate Tectonics* - <http://pubs.usgs.gov/gip/dynamic/dynamic.html>

\*If needed for background, please review online primers on reading geologic and topographic maps, and on rocks & minerals

\*Paper # 1 “Where Are You From” due in class on 9/13

9/20-9/25      **Skin of the Continent - Landforms, Surficial Processes, and Climate**

Readings, including the following -

Continue reading John McPhee, “Book 2: In Suspect Terrain” in *Annals of the Former World*

\*If needed for background, please review online primers on climate, and on reading topographic & geologic maps

If you haven’t yet explored Barry Lopez’s *Home Ground*, please dig in for fun and return to it each week.

\*Guided Study: Geologic Maps & Structural Geology Part 1 due on 9/20

## II. Natural Regions from East to West

9/25-10/2 **Sunrise on the Continent - Coastal Plain and Appalachian Mountain System**

Readings, including the following -

Continue reading John McPhee, "Book 2: In Suspect Terrain" in *Annals of the Former World*

\*Guided Study: Geologic Maps & Structural Geology Part 2 due 9/27

10/2-10-4 **Nucleus and Stable Interior of the Continent - Craton and Shield Plains, Plateaus, Lowlands, and Great Lakes**

Reading,

Continue reading John McPhee, "Book 3: Rising from the Plains" in *Annals of the Former World*

\*Review of "Book 1: Basin and Range" in *Annals of the Former World* due 10/2

### Fall Break!

10/11-10/18 **Looking West to the Cordillera - Rocky Mountains, Colorado Plateau, Basin and Range, Columbia and Snake River Plateaus, Sierra Nevada, Cascade Volcanoes, and Coast Ranges**

Readings, including the following -

Continue reading John McPhee, "Book 4: Assembling California" in *Annals of the Former World*

Kerr, "Why the West Stands Tall"

Kerr, "Scoping Out Unseen Forces Shaping North America"

Atkinson and Leeder, "Canyon Cutting on a Grand Time Scale"

Mary Austin and G.K. Gilbert on the 1906 earthquake in *Bedrock*

Stephen J. Gould on the "Great Scablands Debate" in *Bedrock*

Just fyi - If you'd like to dive into geology a bit more deeply -

Levander et al., "Continuing Colorado Plateau Uplift by Delamination-Style Convective Lithospheric Downwelling"

Scharer, "Changing Views of the San Andreas Fault"

Colpron et al., "Northern Cordilleran Terranes and their Interactions through Time"

\*Review of "Book 2: In Suspect Terrain" in *Annals of the Former World* due 10/16

\*Guided Study: Geologic Maps & Structural Geology Part 3 due by 10/18

10/23-10/25 **Oceanic Realms - Hawai'i and the Caribbean**

Readings, including the following -

James Houston, "Fire in the Night" in *Bedrock*

Finish reading John McPhee, "Book 5: Crossing the Craton" in *Annals of the Former World*

\*Review of "Book 3: Rising from the Plains" in *Annals of the Former World* due 10/25

**III. A Closer Look - Selected Examples of the Influence of the Physical Landscape on the Cultural Landscape in North America**

10/25-11/1 **Cultural Landscapes - What Makes Them Distinct?**

Readings, including the following -

Anne Spirn, excerpts from *The Language of Landscape*

Michael Conzen, "Introduction" to *The Making of the American Landscape*

\*Review of "Book 4: Assembling California" in *Annals of the Former World* due 11/1

(10/26) **Tom Wessels Field Trip - Reading the Forested New England Landscape**

Readings, including the following -

Tom Wessels, "Reading the Landscape's History"

David Foster and John O'Keefe, "New England Forests through Time"

11/6 **General Thoughts: European Settlement on Indigenous Land**

Readings, excerpts from Conzen -

Butzer, "Retrieving American Indian Landscapes"

Hornbeck, "Refashioning Hispanic Landscapes"

Harris, "Retracing French Landscapes in North America"

Lewis, "Americanizing English Landscape Habits"

\*Synopsis of Reading Cultural Landscapes due 11/6

\*Place paper description, working title, and preliminary references due on 11/6

11/8 **Encountering the Unknown - Exploration, Mapping, & Landscape Perception  
The Way West**

Readings, including the following -  
Handouts: "Geographic Images of the Continent: Two Examples" and "Euro-Americans and the Confrontation with an Unknown Geography"  
Paul Shepard, excerpt from *Man in the Landscape* in *Bedrock*

11/13-11/15 **Changing the Face of the Land -  
Clearing Grasslands & Forests, Transforming Deserts, Cultivating the South**

Readings, excerpts from Conzen -  
Williams, "Clearing the Forests"  
Hudson, "Remaking the Prairies"  
Wescoast, "Watering the Deserts"  
Aitken, "The Plantation Regime"

\*Extra Credit Review of "Book 5: Crossing the Craton" in *Annals of the Former World* due by 11/17 (at latest)

\*Physiographic Provinces and the Way West due 11/15

11/27-11/29 **American Cityscapes  
Why Are They Where They Are? Why Do They Look the Way They Do?**

Readings, including the following -  
Eschman and Marcus, "The Geologic and Topographic Setting of Cities"  
Reps, "The Towns the Companies Built" (excerpt)  
Muller, "Building American Cityscapes" (skim, in Conzen)

11/29-12/4 **Landscapes Redesigned by (and for) the Automobile & Tourism**

Readings, including the following -  
Wilson, "The View from the Road: Recreation and Tourism"  
Jakle, "Paving America for the Automobile" (in Conzen)

\*Place research paper rough draft due on 11/29 for peer review

\*Your Ideas: Planning and Siting a Settlement

12/6-12/11 **Project Presentations**

\*Peer reviewed place paper returned to author by 12/6

\*Revised place paper due by noon 12/18 (end of exams)

## **\*\*A Few Important Events Beyond Class Hours\*\***

**Exhibition Opening Panel Discussion, *Kara Walker: Harper's Pictorial History of the Civil War (Annotated)***, on Thursday, September 13, 4:30 p.m., Gamble Auditorium

Elizabeth Young, Carl M. and Elsie A. Small Professor of English, Mount Holyoke College

Patricia A. Banks, Associate Professor of Sociology, Mount Holyoke College

John Stomberg, Florence Finch Abbott Director, Mount Holyoke College Art Museum

Throughout her career, Kara Walker has combined exquisite technique with biting social commentary. Her large-scale print suite *Harper's Pictorial History of the Civil War (Annotated)* is considered by many to be her quintessential work in a multiple format and among the most important works in her oeuvre to date. In it she juxtaposes *Harper's* version of the Civil War with images of her own that question the notion that slavery ended with the war. Her works insist that we reconsider the semi-official narrative and the true plight of both African Americans and omen during the conflict and beyond—an insistence that asserts the continuing centrality of race in our nation.

Beautifully drawn, and printed with rare skill, her prints vacillate between sumptuousness and fury. Images originally published as wood engravings are enlarged through lithography and become backdrops for Walker's signature silhouettes executed in silkscreen. The works were printed at the renowned LeRoy Neiman Center for Print Studies in New York. The exhibition celebrates the Museum's recent acquisition of the complete 15-image suite of prints.

The original two-volume anthology, *Harper's Pictorial History of the Civil War*, is a collection of images and essays intended by the editors to illustrate the history of that great struggle. It was first published by Alfred H. Guernsey and Henry Mills Alden in 1866 after the war had ended.

**"Arctic Voices: Resistance at the Tipping Point," by Subhankar Banerjee**, on Thursday, September 20, 7:30 p.m., Hooker Auditorium, Clapp Laboratory

As Big Oil advocates for increased access to the oil reserves located underneath and offshore one of the most ecologically rich areas of the world, this important collection of voices and images brings together renowned environmental activists and writers who tackle the various issues facing the people, animals, land, and culture of this unique place.

World-renowned photographer, writer, and activist Subhankar Banerjee brings together first-person narratives from more than thirty prominent activists, writers, and researchers who address issues of climate change, resource war, and human rights with stunning urgency and groundbreaking research.

**"Peril in the Ponds" by Judy Helgen '61**, on Thursday, October 4, 7:00 p.m., New York Room, Mary Woolley Hall

Peril in the Ponds tells the story of a government biologist's investigation into the mystery of deformed frogs, an epidemic that grew during the 1990s and continues today. It provides an inside view of a highly charged environmental issue that aroused the attention of the public and the media and sparked controversies among scientists, politicians, and government agencies.

Judy Helgen writes with passionate concern about vulnerable frogs and wetlands as she navigates through a maze of inquisitive media and a reluctant government agency. She reports on the complexity of a growing catastrophe for frogs and broadens the issue as she researches and meets with scientists from around the world. She affirms the importance of examining aquatic life to understand pollution and the need to rescue our remaining wetlands. Ultimately, this is a story about the biological beauty of wetlands and our need to pay attention to the environment around us.

**"Language and Character" by Francine Prose**, on Wednesday, October 10, 7:00 p.m., Hooker Auditorium, Clapp Building

Acclaimed author **Francine Prose**, Distinguished Writer in Residence at Bard College, is this year's Leading Woman in the Arts guest speaker who will discuss the unique ways in which writers use

language to create characters in literature. Her works include *Blue Angel* (2000), a finalist for the National Book Award, and *Reading Like a Writer* (2006), a nonfiction *New York Times* bestseller. A prolific writer, she is most recently the author of *My New American Life* (2012).

**“Rebuild the Dream” by environmental activist Van Jones**, on Thursday, October 18, 7:30 p.m., Mahar Auditorium, UMass campus

Van Jones is widely known for his work as an environmental advocate and civil rights activist in the United States. A former Obama appointee to the White House Council on Environmental Quality, Mr. Jones is currently a senior fellow at the Center for American Progress and policy advisor to Green for All, a national NGO that he founded for remediating both environmental degradation and growing inequality through supporting the development of a greener economy. Jones also holds visiting appointments at Princeton University’s Center for African American Studies and in the Science, Technology and Environmental Policy Program at the Woodrow Wilson School of Public and International Affairs.

**Miller-Worley Environmental Leadership Lecture, by Robin Mann '73**, on Thursday October 25, 7:30 p.m., Gamble Auditorium, Art Building

Robin Mann is a long-time environmentalist who most recently served as the Sierra Club's national president. Before assuming that role, she served for three years as vice president for conservation, the lead volunteer overseeing development of the Club's Climate Recovery Partnership and conservation policy development and implementation. She has extensive experience in water issues, having chaired the Sierra Club's national water campaigns for several years. Under her direction the Sierra Club helped strengthen protections for wetlands and clean water in the 1990's and early 2000's, fighting back assaults on the Clean Water Act. In her home state of Pennsylvania, Mann led clean water advocacy efforts for over 15 years, helping secure improved wetlands protections in the state. As a grassroots activist, Mann helped organize community initiatives around environmental cleanups and household hazardous waste collection.

**“How a Grassroots Campaign Humbled the Army Corps of Engineers” by Sandy Rosenthal '79**, on Monday, October 29, 4:30 p.m., Kendade Hall, Room 305

Sandy Rosenthal is the founder of Levees.org, an environmental organization inspired by the flooding of New Orleans after hurricane Katrina with a mission of education on why the New Orleans region flooded so catastrophically. With nearly 25,000 supporters, and chapters in five states, the group's goal is an independent federal investigation of the flood protection failures, and the decision making that caused them. The group has been pushing for the 8/29 Investigation, named for the date of the flooding disaster, since Feb 2007. Sandy will visit classes and then speak about her experience as the executive director of her advocacy non-profit.

### Other Noteworthy Events

**Sixth Annual MHC Student Garden Harvest Festival Harvest Party**, Wednesday September 19<sup>th</sup> (Rain date Sept. 21st). MHC Student Garden at the top of Mandelle Hill!

Join us and learn more about the student garden and how you can get involved. There will be music, food, pumpkin carving, and of course... **HARVESTING!!**

**Second Saturday Walking Tour of Florence Abolition Era Sites** – Visit the homes of Sojourner Truth, Samuel Hill and fugitive slave Basil Dorsey. See the Mill River dam where David Lee and Lydia Maria Child processed sugar beets as an alternative to slave-grown sugar cane. Stand in the Pine Grove where William Lloyd Garrison and Wendell Phillips spoke before members of the Northampton Association "utopian" community. Hear about David Ruggles’s Water Cure and the visits of Frederick Douglass. Donations benefit the David Ruggles Center.

These tours are offered the second Saturday of the month from June through November. All tours meet at the Sojourner Truth Memorial Statue, 10:00 am, corner of Park and Pine Streets, Florence. The dates for the 2010 Second Saturday Tours are as follows: September 8, October 13, and November 10.

**Check out the fall readings at the Smith College Poetry Center!!**

<http://www.smith.edu/poetrycenter/readings/spring11.html>

**North Quabbin Garlic & Arts Festival**, Saturday & Sunday, September 29th & 30th 10:00 a.m. ~ 5:00 p.m., Rain or Shine, Forster's Farm, 60 Chestnut Hill Road, Orange, Massachusetts

The North Quabbin Garlic and Arts Festival is a celebration of the artistic, agricultural and cultural bounty of the region. The purpose of the festival is to unite North Quabbin people whose livelihoods are connected to the land and the arts, and to invite both local residents and those who do not live in the region to experience the richness of an area that is often overlooked.

The festival emphasizes what is homegrown, handmade and high quality, as well as what helps preserve and support the environment and the community. Everyone involved – organizers, exhibitors, volunteers, performers, attendees, a supportive community – makes the festival what it is: an engaging, fun and educational celebration for all ages.

<http://garlicandarts.org/>