

Ecology: Week 1

Schedule Sunday, Aug 24- Monday, Sept 1, 2008

Mary O'Brien

Grand Canyon Trust

Sunday, Aug 24

- **Before Sunday evening** read:
 - U.S. Government Accountability Office. Aug 2007. *Climate Change. Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources*. GAO-07-863; pp. 10-49 and 159-167.
 - Parmesan, Camille. 1996. Climate and species' range. *Nature* 382:765-766.
- Evening discussion: Science as Interview, Ecology as the Science of Living in a Neighborhood, Advocacy as Actively Taking Sides (as opposed to Passively Taking Sides), Climate Change as....

Monday, Aug 25

- Meet Angela Sondena, to field-test a bighorn habitat model (day 1)
- Evening discussion: Observing and Wondering

Tuesday, Aug 26

- Field-test a bighorn habitat model (day 2)
- **Before Tuesday evening** read and write 3 or more questions you have re:
 - Pp. 13-21 (or, if you're interested in the law around this issue all the other pages) of First Amended Complaint for Violations of the Fiscal Year 2005 Consolidated Appropriations Act, National Environmental Policy Act, and Appeals Reform Act: VI. Factual Background
- Evening discussion: Science and Litigation

Wednesday, Aug 27

- Morning: Compile bighorn habitat field-testing data
- Afternoon: Move to beaver habitat assessment site
- **Before Wednesday evening**, read and write one question you have re: each article
 - Naiman, Robert, Carol Johnston, and James Kelley. 1988. Alteration of North American streams by beaver. *Bioscience* 38(11): 753-762
 - Hood, GA, and SE Bayley. 2008. Beaver (*Castor canadensis*) mitigate the effects of climate on the area of open water in boreal wetlands in western Canada. *Biological Conservation* (in press).
 - Pollock, Michael, Timothy Beechie, and Chris Jordan. 2007. Geomorphic changes upstream of beaver dams in Bridge Creek, an incised stream channel in the interior Columbia River Basin, eastern Oregon. *Earth Surface Processes and Landforms* 32:1174-1185.
 - Fouty, Suzanne. 2008 (Spring). Climate change and beaver activity: how restoring nature's engineers can alleviate problems. *BeaverSprite* 23(1):4-5, and 13.
- Evening discussion: the four beaver articles

Thursday, Aug. 28

- Meet Suzanne Fouty at 8 a.m. for beaver habitat assessment (day 1)
- Evening discussion: Observations in light of the four articles discussed
Wednesday

Friday, Aug. 29

- Assess beaver habitat (day 2)
- **Before Friday evening**, read and write 3 or more questions re:
 - Annotation of Brookshire, Jack; Boone Kauffman, Danna Lytjen and Nick Otting. 2002. Cumulative effects of wild ungulate and livestock herbivory on riparian willows. *Oecologia* 132:559-566.
 - Annotation of Hammerson, Geoffrey. 1994. Beaver (*Castor canadensis*): Ecosystem alterations, management, and monitoring. *Natural Areas Journal* 14(1)44-57
 - Annotation of Belsky, AJ, A Matzke, and S Uselman. 1999. Survey of livestock influences on stream and riparian ecosystems in the western United States. *Journal of Soil and Water Conservation* 54:419-431. [MINUS the LAST TWO SECTIONS, “Questions Raised,” and “Relevance to forest Management”
 - Mack, RN, and JN Thompson. 1982. Evolution in steppe with few large, hooved mammals. *The American Naturalist*, 119(6): 757-772.
 - Choi, Charles. 2008. Tierra del Fuego: the beavers must die. *Nature* 453:968.
- Evening discussion: Species out of their neighborhood

Saturday, Aug. 30

- Morning: Compile beaver habitat data
- Afternoon: Travel to location near Enterprise.
- **Before Saturday evening**, read:
 - Colinvaux, Paul. 1979. The nation states of trees. Chapter 5 in *Why Big Fierce Animals Are Rare*. Princeton, NJ: Princeton University Press.
 - Martin, Season. 2007. Chapter on beaver for a book on Hells Canyon native species

Sunday, Aug. 31

- Morning: Small field exercise; trip up Mt. Howard
- Decide on method for investigating a small field question (2-person teams)

Monday, Sept. 1

- Investigate a small field question (3 hours)
- **Due Sept. 28**
 - Write-up of field question (team of two)
 - Write annotation for a beaver- or willow/aspens/cottonwood-browse related article (you will be provided with an article to annotate; individual)