

**ENVIRONMENTAL RESTORATION:
AS.420.615 (51)
Summer, 2017**

**Wednesday evenings 6/28/2017 to 8/9/2017, 6:00 pm to 8:45 pm,
Location: DC Center – 1717 Massachusetts Ave.**

**Saturday Field Sites 7/1/2017 to 8/5/2017, 10:00 am to 1:00 pm at site, (not including travel time)
Location: See syllabus for specific site locations and times**

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C A L E N D A R: SYLLABUS

Classroom 1: Wednesday 6/28: DC 6:00-8:45 pm: 1. Introductions, review of syllabus. 2. Understanding historical ecology and paleoecology, and relevance to modern environmental issues, restoration and impact on biodiversity. 3. Overview of Soldiers Delight and field site visit on Saturday. 4. Discussion of what's involved with your independent studies. 5. Introduction to plant identification techniques. *Collect 5-5 plant samples of common plants from around your home that you would like to identify or confirm identification. Place samples in a plastic trash bag and store in the refrigerator until next Wednesday's class.*

Chapters 3 (pg 40), & 12 (pg 249) in Curtin, Brush and Fisher 2001.

Field Site Visit: Saturday 7/1 (10:00 am to 1:00 pm): Soldiers Delight Natural Environmental Area, Baltimore Co. Plant identification and geology. Chromium mining history, unique flora, conservation of rare plant species through controlled burns, paleoecology and historical background. Bird observations.. *Assignment: Summary Report of Observations - The report should include notes and observations made during the field experience plus background information about restoration, plant and bird species observed.*

Classroom 2: Wednesday 7/5: DC 6:00-8:45 pm: Recap of Soldiers Delight; Background on Gettysburg restoration; Paleoecology and recent history of North America and Great Britain. Deforestation, fire ecology, grasslands and historical background. Identification of student's plants. Intro to birds. *Background Reading: Chapters 5 (pg 83) and 15 (pg 322). Readings on Soldiers Delight to be handed out or attached online.*

Field Site Visit: Saturday July 8th: Gettysburg National Park (10:00-1:00): Gettysburg restoration - fields, grassland, forest restoration and controlled burns. Use of photography to document vegetation of the past. Plant and bird identification. *Background Reading: Chapters 8 (pg 149) & 9 (pg 167) in Curtin, Brush and Fisher 2001*

Classroom 3: Wednesday 7/12: DC 6:00-8:45 pm: Follow-up on Gettysburg. Little Falls Paleoecology and First Mine Run restoration. Riparian wetland vegetation, past and present. Buried pre-settlement wetland and post-settlement legacy sediment; history, geology, vegetation, sedimentation and paleoecology. *Background Reading: Chapter 13 (pg 279) in Curtin, Brush and Fisher 2001. Reading: Merritts and Walter*

Field Site Visit: Saturday 7/15 (10:00 am to 1:00 pm) - Little Falls, Baltimore Co. *Report of observations - The report should include notes and observations made during the field experience plus background information about restoration, plant and bird species observed, etc.*

Classroom 4: Wednesday 7/19: DC 6:00-8:45 pm : Background and paleoecology of Big Spring Run, Lancaster, PA. Stream and wetland restoration models..Macrofossil identification. *Background Reading:Handouts/online attachments.*

Field Site Visit: Saturday 7/22 (11:00 am to 2:00 pm at location) – Big Spring Run Restoration, Lancaser, PA. Travel time 1.5 hours from Baltimore, (Total time roughly 9:00 – 3:00). Observations of plants and this important restoration that began in September 2011. *Report of observations - The report should include notes and observations made during the field experience plus background information about restoration, plant and bird species observed, etc.*

Classroom 5: Wednesday 7/26: DC 6:00-8:45 pm: Background on prehistory and history of Otter Point Creek and Severn River. Herbaceous plant identification continued. Discussion of independent reports and applications. *Background Reading: Chapters 1 (pg 1) & 10 (pg 191) in Curtin, Brush and Fisher 2001.Handouts on Freshwater Tidal Wetlands.*

Field Site Visit: Saturday 7/29 (10:00 am to 1:00 pm) – Severn Run, Anne Arundel County. Freshwater tidal wetland vegetation; Sweetbay Magnolia swamp; Pitch Pine forest on Cretaceous soils. *Report of observations - The report should include notes and observations made during the field experience plus background information about restoration, plant and bird species observed*

Classroom 6: Wednesday 8/2: DC 6:00-8:45 pm. Final PowerPoint Presentations of Independent Projects. Some background on Kenilworth Marsh.

Field Site Visit: Saturday 8/5 (10:00 to 1:00) – Kenilworth Marsh, Washington, DC. Examination of the largest freshwater tidal wetland reconstruction and restoration in the eastern US. *No assignment.*

Classroom 7: Wednesday 8/9: DC 6:00-8:45 pm: Power Point Presentations. Wrap up

Grading for the Course:

The three primary sources of grades are 1) five summary reports on field sites, 2) the independent report, and 3) attendance on the field trips. Summary reports and field work calculations are usually 2-3 pages summarizing history, prehistory, current vegetation observed, restoration impacts and other points emphasized during the weekend field work, along with any other background researched by the student. Reports are usually due at the following class.

The field experiences are the heart of the course since what we observe and methods performed in the field cannot be duplicated in any other way. The field work attendance grade therefore applies to the field work dates. If a student has a conflict with a particular field trip date he or she should notify the instructor as soon as possible. There may be an opportunity to change a field trip date to a later time, if agreeable with other class members; otherwise a missed field trip will count as a zero for that date, or discussion with the instructor on how to make it up may be possible.

The independent report is a research topic to be presented/summarized as a PowerPoint presentation on August 2nd. It requires the student to pick a restored or conservation field site of his or her choosing to visit and research the historical and prehistorical changes on the site, applying approaches gained in the course. More details about this assignment will be given in the first week of class.

The relative weight of each of these three assignment/grades is:

Summary reports =	30%
Field Work Attendance =	40%
Independent Report =	30%

References/Textbooks: Required: 1. Discovering the Chesapeake, Curtin, Brush and Fisher, 2001.

Recommended : Changes in the Land by William Cronon, 2003.

Suggested: 1. Peterson Field Guide to Eastern Trees, by George Petrides and Janet Wehr, 1998.

2. Newcomb's Wildflower Guide, L. Newcomb.

3. Sibley Guide to Birds of Eastern North America, by David Sibley, 2003 (other bird guides will work as well).

Materials Needed: Knee-high boots – highly recommended; Field notebook; warm field clothes