

Botany 455 – Vegetation of Wisconsin – Fall 2014

Professor **Thomas Givnish** (306 Birge Hall). Physiological and community ecology; biogeography; adaptation; molecular systematics; • 262-5718 • givnish@wisc.edu • www.botany.wisc.edu/givnish/
Office hours W 1-3

Teaching Assistant **Rachel Brunner** (347 Birge Hall). Community ecology of montane forests; cloud forest vegetation on Maui • rlbrunner@wisc.edu • Office hours Tu 8-10

- Readings:** 1. Curtis, J. T. (2002). *The Vegetation of Wisconsin*. University of Wisconsin Press, Madison
2. Barnes, B. V., and W. H. Wagner, Jr. 2004. *Michigan Trees, revised and updated: a Guide to the Trees of the Great Lakes Region*. University of Michigan Press, Ann Arbor.
3. Auxiliary readings available via our course page at Learn@UW

Recommended: Cochrane, T. S., K. Elliot, and C. S. Lipke (2007) *Prairie Plants of the University of Wisconsin-Madison Arboretum*. University of Wisconsin Press, Madison.

Date	Topic	Assignment*
Sept. 2	Introduction	Chap. 1
4	Nature of communities; climate	Research topics/methodologies
5	Field Trip: Madison School Forest	Summary of field techniques
9	Tension zone; geology	Chaps. 2, 3
11	Southern forests: methods of study	Givnish 1995
12	Field Trip: Second Point Woods	
16	Nature of communities; climate	Chaps. 4, 5
18	Southern dry forests ***RESEARCH TOPIC SELECTED AND ABSTRACT SUBMITTED***	Peet & Loucks 1977
19	Field Trip: Abraham's Woods, Muralt Bluff Prairie	
23	Southern mesic forests	Chaps. 6, 7
25	Phenology and adaptation in understory herbs	McCune & Cottam 1985
26	Field Trip: Arena (Floodplain forest and sand barrens)	
30	Southern lowland forests	Chap. 8
Oct. 2	Southern forest succession	Rogers et al. 2008
3	Field Trip: Hemlock Draw	
7	Northern forests: introduction	Chaps. 9, 10
9	Northern mesic forests ***FIELD TRIP REPORT DUE***	Givnish 1994 Rooney & Waller 2003
10-12	Field Trip: NORTHERN WISCONSIN (Fri-Sun)	
14	Northern xeric forests	Chaps. 11, 12
16	Northern lowland forests 1ST MIDTERM EXAM – Thursday 7:15 pm	Clark 1988 Wiegmann & Waller 2006
17	Field Trip: Avoca Wetland Complex	
21	Patterned peatlands	Chap. 13, 18 (pp. 378-384)
23	Bogs	Amatangelo et al. 2011
24	Field trip: Cherokee Marsh, Westport Drumlin Prairie	Coyle et al. 2013

Oct. 28	Boreal forests	Chap. 14
30	North forest succession	Pastor et al. 1993
31	Dry, mesic, wet prairies; prairie dynamics [NB: lecture 1:20 – 4:20 in field trip slot]	Howe & Lane 2004
Nov. 4	Savannas	Chap. 15
6	Sand barrens	Leach & Givnish 1999
7	Beaches and dunes; cliffs and algific talus slopes [NB: lecture 1:20 – 4:20 in field trip slot]	
11	Sedge meadows; fens; calcareous shores 2ND MIDTERM EXAM - Tuesday (7:15 pm)	Chaps. 16, 20 Chaps. 18 (pp. 365-377)
13	Shrub cars and cattail marshes	Peterson & Reich 2008
18	Emergent and floating aquatic plant communities	Chap. 19
20	Submersed aquatic plant communities	Leach & Givnish 1996
25	THANKSGIVING RECESS	Chaps. 21, 22
27	THANKSGIVING RECESS http://dnr.wi.gov/topic/EndangeredResources/Communities.asp	Natural communities of WI –
Dec. 2	Weeds and secondary succession RESEARCH REPORTS DUE by 4 pm	Chaps. 23, 24 Ellwood et al. 2013
4	Paleoecology	Dornbursh and Hahn 2013
5	<i>Graduate student oral presentations</i> [NB: 1:20 – 3:20 in field trip slot]	
9	Human impacts on terrestrial ecosystems	Schulte et al. 2007
11	Human impacts on aquatic ecosystems	
14	FINAL EXAM 12:25 – 12:25 PM	

*Unless otherwise indicated, reading assignments refer to chapters in Curtis (2002); this classic book was first published in 1959 and is frequently reprinted. Other readings are drawn from collection of reprints that will be available through the website noted above.

Friday field trips will depart the loading dock area behind the southwest wing of Birge Hall at 1:20 SHARP, and return at roughly 6:15 pm. Please try to arrive around 1:10 pm, so that we can load the bus, depart on time, and return as close to our planned time as possible. Bring a notepad!

On October 13-15, we will have a wonderful weekend trip to Kemp Station in northern Wisconsin, taking in a wide range of communities, species, adaptations, and ecological processes. More information about this trip will be provided later; we'll depart on Friday @ 1:20 pm as usual, and return at roughly 6 pm on Sunday. A course lab fee of \$60 is due in the Botany Office (135 Birge) by September 13. This includes lodging at Kemp Station and a contribution toward transportation costs throughout the semester. In addition, we will all contribute \$15 in class toward food costs for the weekend field trip, due by October 1.

GRADES will be assigned using the following weights for undergraduates: 20% each for the first midterm, second midterm, and final exams; 15% for the field trip report; and 25% for the independent project. For graduate students, the weights will be the same, except that 15% will be assigned to the independent project and 10% to the oral presentation thereon. Oral presentations (15 minutes plus questions) will be made on Friday, December 5, in the field trip slot.

IT IS VITAL to begin your independent project AS SOON AS POSSIBLE. Please make an appointment to discuss project ideas with Ray or Tom at your earliest convenience. The first week of classes is the best time to start!!!