

Fall, 2010

## PALEONTOLOGY GEOLOGY 309

J. Peterson (Harrington rm 211; 920-424-4463; email: petersoj@uwosh.edu)  
Office hrs. 10:30- 3:00 MWF

**Text:** *Bringing Fossils to Life*, by D. R. Prothero (required), assigned readings.

**Class Time:** 9:10-10:10 MW (lecture)  
10:20-12:30 R (lab)

**Exams (60%):** A total of three exams will be administered throughout the semester. Tests will be a combination of short-answer/essay format with multiple choice, true/false, and critical thinking questions.

**Term paper & class seminar (20%):** Research a topic in theoretical or applied invertebrate paleontology (could be library research or a field or laboratory research project). Write a manuscript formatted for publication in the *Journal of Paleontology*\*. Library research may be a general summary of a well-established topic, but I would prefer an analysis of an ongoing debate or other “hot topic” (details to be discussed in class). \*(<http://www.journalofpaleontology.org/instruct.html>).

**Lecture schedule:** (subject to modification)

Sept.	Wed	8	Intro: A discussion about fossils	Chap. 1
	Mon	13	Taphonomy: the making of a fossil.	
	Wed	15	Ontogeny, ecophenotypic variation, dimorphism	Chap. 2
	Mon	20	Taxonomy , Systematics and Phylogenies	Chap. 3, 4
	Wed	22	Evolution: Macroevolution and Microevolution	Chap. 5
	Mon	27	<i>Assigned Readings &amp; Discussion</i>	
	Wed	29	Taxonomic overturn and Mass Extinction	Chap. 6
Oct.	Mon	4	Functional Morphology	Chap. 7
	Wed	6	Paleoecology	Chap. 8
	Mon	11	Biogeography	Chap. 9
	Wed	13	Biostratigraphy	Chap. 10
	Mon	18	<b>Exam 1</b> Deadline for INITIAL submission of papers –individual consultation	
	Wed	20	Micropaleontology and the origin of life	Chap. 11

	Mon	25	Archeocyatha, Porifera, Cnidaria	Chap. 12
	Wed	27	Brachiopoda & Bryozoa	Chap. 13
Nov.	Mon	1	Vendian animals, Edacara and the Cambrian Explosion	Chap. 14
	Wed	3	<i>Assigned Readings &amp; Discussion</i>	
	Mon	8	Trilobites	
	Wed	10	Crustaceans and other arthropods	
	Mon	15	Mollusca: Gastropods & Bivalves	Chap. 15
	Wed	17	<b>Exam 2</b> Submission deadline for revised papers	
	Mon	22	<i>Thanksgiving Break</i>	
	Wed	24	<i>Thanksgiving Break</i>	
	Mon	29	Mollusca: Cephalopoda	
Dec.	Wed	1	Echinoderms	Chap. 16
	Mon	6	Chordata: Graptolites, conodonts, & other weirdoes	Chap. 17
	Wed	8	Ichnofossils & Plantae	Chap. 18
	Mon	13	Student presentations and discussion	
	Wed	15	<b>Exam 3</b>	

**Laboratory (20%):** A weekly 2-hr lab will meet on Thursdays. In lab, we will examine fossils and identify key structures. Lab projects (30 points), fossil descriptions (10 points) and 3 schedule lab quizzes (20 pts each) will be worth a total of 100 points.

**Lab schedule:** (subject to modification)

Sept.	9	<i>No Lab</i>
	16	Cladistics
	23	Evolution
	30	Biostratigraphy
Oct.	7	<b>Lab Quiz 1</b>
	14	Micropaleontology
	21	Archeocyatha, Porifera, Cnidaria
	28	Brachiopoda & Bryozoa
Nov.	4	Arthropoda
	11	Mollusca
	18	<b>Lab Quiz 2</b>
	25	<i>No Lab; Thanksgiving Break</i>
Dec.	2	Echinodermata
	9	Chordates, microvertebrates, plants, & ichnofossils
	16	<b>Lab Quiz 3</b>