

Class Hours: 6:00 - 8:40 pm, Tuesdays and Thursdays

Class Meeting Place: Room 216, Science Building

Syllabus version 1.1, August 30, 2005.

Mr. Ralph Willoughby, instructor

Daytime telephone: (803) 896-7716

Daytime email: willoughbyr@dnr.sc.gov

Office Times: 5:30 - 6:00 pm, Room 207, Science Building
immediately after class
other times by appointment

DO NOT HESITATE to contact me if you have a problem that you need to discuss regarding this class.

Required text: Michael J. Benton and David A. T. Harper (1997), Basic Palaeontology. 342 pages. Addison Wesley Longman OR Pearson Prentice Hall (reprint): Essex, England.

Required material for all laboratory drawings: unlined white 8½" x 11" paper, pencil and eraser.

Requirements:

Attendance in class and laboratory sessions is required. If an absence is unavoidable, contact the instructor. Only documented University approved excuses will be allowed. Missed material is the responsibility of the student. Handouts and overheads will supplement the class lectures. Turn in all laboratory drawings on unlined white paper. Laboratory drawings are due two lab periods after the last day of that lab assignment.

University Policy:

If you have a physical, psychological and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disability Services office will determine appropriate accommodations based on medical documentation.

Remarks:

Our understanding of fossils changes faster than new textbooks can be written. Consequently, the text will be a GUIDE ONLY to the subject matter and will be supplemented by handouts, projected images, lecture notes not in the text, readings on reserve in the library, topical assignments, and possibly other sources. The laboratory sessions allow you to become familiar with fossils. For those reasons, attendance at all class meetings is required. Laboratory sheets are due on the second meeting after the assignment. Attendance on all field trips is mandatory.

Students will write two short papers (no more than four pages double-spaced) and one longer paper (no more than ten pages double-spaced) on topics in paleontology to be assigned. Students may select topics, subject to guidance and approval by the instructor. The class will help develop good research skills.

Each class meeting has a lecture and a laboratory session. The class will include at least one local field trip during class time and one all-day trip on a weekend.

Suggestions for studying:

Reading assignments in the text WILL be tested.

Material presented in lecture and in overheads and handouts WILL be tested.

Class assignments, class exams, lab assignments, weekly lab assignments and field trips are all VERY IMPORTANT parts of the course.

Grading:		single	cumulative	
		event	points	overall
	Class Events: 750 points			
	Exam 1	150	150	
	Exam 2	150	300	
	Final Exam	230	550	
	Assignment 1	10	560	
	Assignment 2	30	600	
	Short Paper 1	40	640	
	Short Paper 2	40	680	
	Term Paper	70	750	750 points

Laboratory: 250 points			
11 Individual laboratory exercises	110	110	
Group Lab (Lab #11)	20	130	
Lab Exam 1	35	165	
Lab Exam 2	35	200	
Field Trips 1	10	210	
Field Trip 2	40	250	250 points
Sum of points:			1000 points
Grading System:			
A	90-100%		
B	80-89%		
C	70-79%		
D	60-69%		
F	<60%		

Assignment 1: Bring in one newspaper clipping or magazine article or other clipping from the popular press that relates to fossils or paleontology. Photocopies are accepted. Printouts from a RECENTLY POSTED website or internet posting are accepted. Orally present the information from the article. Due Date: August 25.

Assignment 2: Bring in one article from a peer-reviewed scientific journal on a subject in paleontology of your choosing, subject to advisement by the instructor. Orally present the information from the article. Discuss your article. State what you learned from the article. State what interests you about the article. State those points of the article that you do not fully understand. Due Date: September 13.

Short Papers 1 and 2: Write an essay about a fossil group or species, to be selected by the student and subject to my approval. Write at least one of the two Short Papers about invertebrate fossils. You may survey a species or a larger group of fossils. Type and double-space the paper. Place the references on a page (on pages) immediately following the text. Place illustrations after the text. Length of text paper: at least four and no more than six typed, double-spaced pages.

Due Date 1: October 4.

Due Date 1: November 1.

Term Paper: As for Short Papers EXCEPT: Length of text paper: at least ten and no more than twelve typed, double-spaced pages. Due Date 1: November 17.

Field Trip 1: Trace Fossils. Visit a nearby exposure with the trace fossil *Ophiomorpha nodosa* in upper Eocene sediments. We will make this informal field trip during the early part of a scheduled class meeting.

Field Trip 2: Fossils in a limestone quarry. We will make this visit on a weekend day during the semester.

Tentative Lecture Schedule				
MTG. NO.	DATE	TOPIC	CHAPTER	PAGES
1	Aug 18Th	Introduction to Paleontology	Ch. 1, Paleontology as a science	-----
2	Aug 23T	Life and Its Classifications		-----
3	Aug 25Th	Fossilization Processes. Taphonomy. Geologic Time Scale handout		pages 1-17
4	Aug 30T	Origin of Life	Ch. 3, Macroevolution	pages 46-55
5	Sep 01Th	Cladistics. Growth.	Ch. 3, Macroevolution	pages 45-61
6	Sep 06T	Phylogeny and Evolution		
7	Sep 08Th	Early Evolution of Life	Ch. 4, The origin of life	pages 67-71
8	Sep 13T	Early Evolution of Animals	Ch. 5, Early metazoans	pages 74-83
9	Sep 15Th	Archaeocyatha, Porifera Cnidaria	Ch. 5, Early metazoans Ch. 6, Radialians 1, Cnidaria	pages 83-93 pages 95-110
10	Sep 20T	EXAM 1		

11	Sep 22Th	Arthropoda	Ch. 8, Spiralian, Arthropods	page 3 of 3 pages
12	Sep 27 T	Mollusca	Ch. 8, Spiralian, Molluscs	pages 156-170
13	Sep 29Th	Biostratigraphy, Paleocology	Ch. 2, Fossils in time and space	pages 170-193
14	Oct 04T	Diversity Through Time	Ch. 13, Major events	pages 18-44
15	Oct 06Th	Mass Extinctions, major events	Ch. 13, Major events	pages 290-297
--	Oct 11T	FALL BREAK		pages 297-310
16	Oct 13Th	Brachiopods	Ch. 6, Radialians 1	pages 110-125
17	Oct 18T	Bryozoans	Ch. 6, Radialians 1	pages 125-129
18	Oct 20Th	Echinodermata, Graptolites	Ch. 7, Radialians II	pages 131-155
19	Oct 25T	EXAM 2		
20	Oct 27Th	Early Chordata	Ch. 7, Vertebrates	pages 195-204
21	Nov 01T	Early Tetrapods, Dinosaurs, Birds	Ch. 7, Vertebrates	pages 204-221
22	Nov 03Th	Mammals	Ch. 7, Vertebrates	pages 213-221
23	Nov 08T	Evolution and Humans	Ch. 7, Vertebrates	pages 219-221
24	Nov 10Th	Plants	Ch. 10, Fossil plants	pages 224-241
25	Nov 15T	Trace Fossils	Ch. 12, Trace fossils	pages 273-289
26	Nov 17Th	Microfossils	Ch. 11, Microfossils	pages 243-272
27	Nov 22T	Mass events, Mass extinctions	Ch. 13, Major events	pages 292-297
--	Nov 24Th	THANKSGIVING HOLIDAY		
28	Nov 29 T	More Microfossils	Ch. 11, Microfossils	pages 243-272
29	Dec 01 Th	Last day of Class. Class Review	-----	-----
--	Dec 09T	COMPREHENSIVE FINAL EXAM		

TENTATIVE LABORATORY SCHEDULE

MTG.

NO.	DATE	LAB NO.	TOPIC
1	Aug 18Th	Lab #1a:	Preservation and Taphonomy. (begin)
2	Aug 23T	Lab #1a:	Preservation and Taphonomy. (finish)
3	Aug 25Th	Lab #2:	Stromatolites and Trace fossils. (begin and finish)
4	Aug 30T	Lab #3a	Canepatch Formation. Group Project. (begin)
5	Sep 01Th	Lab #3b:	Canepatch Formation. Group Project. (continue)
6	Sep 06T	Lab #3c	Canepatch Formation. Group Project. (continue)
7	Sep 08Th	Lab #3d:	Canepatch Formation. Group Project. (finish)
8	Sep 13T	Lab #4a	Porifera and Cnidaria. (begin)
9	Sep 15Th	Lab #4b:	Porifera and Cnidaria. (finish)
10	Sep 20T	Lab #5a:	Arthropoda. (begin)
11	Sep 22Th	LAB EXAM	
12	Sep 27T	Lab #5b:	Arthropoda. (finish)
13	Sep 29Th	Lab #6a:	Lophophorata -- Brachiopoda and Bryozoa. (begin)
14	Oct 04T	Lab #6b:	Lophophorata -- Brachiopoda and Bryozoa. (finish)
15	Oct 06Th	Lab #7a:	Mollusca. (begin)
--	Oct 11T	FALL BREAK	
16	Oct 13Th	Lab #7b:	Mollusca. (finish)
17	Oct 18T	Lab #8a:	Echinodermata. (begin)
18	Oct 20Th	Lab #8b:	Echinodermata. (finish)
19	Oct 23Th	Lab #9a:	Chordata. (begin)
20	Oct 25T	Lab #9a:	Chordata. (finish)
21	Oct 27Th	Lab #9b:	Plantae (begin)
22	Nov 01Th	Lab #10a:	Plantae (finish)
23	Nov 03Th	Lab #10b:	Microfossils. (begin)
24	Nov 08T	Lab #11a:	Microfossils. (continue)
25	Nov 10Th	Lab #11b:	Microfossils. (finish)
26	Nov 15T	Lab #12a:	Review Assignment (begin)
27	Nov 17Th	Lab #12b:	Review Assignment (finish)
28	Nov 22T	LAB EXAM	
--	Nov 27Th	THANKSGIVING HOLIDAY	