

Fall 9-1-2000

GEOL 310.01: Invertebrate Paleontology

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The University Of Montana

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GEOLOGY 310--INVERTEBRATE PALEONTOLOGY
Fall 2000

TEXT: Clarkson, **INVERTEBRATE PALAEONTOLOGY & EVOLUTION**, 4th Ed.

INSTRUCTOR: George Stanley e-mail: fossil@selway.umt.edu

OFFICE: Science Complex 302 TELEPHONE: 243-5693

Office Hours (fill in): _____

<u>Date</u>	<u>Lecture/Subject</u>	<u>Chapter</u>	<u>Practical Exercise</u>
Sept 06	Introduction	--	
08		1	Fossil preservation
11	The principles	1	
13		1	What is the species?
15	The principles cont.	2	
18**	Evolution	2	
20		2	The species concept cont.
22	Evolution & Creationism	TBA	
25	Major events in Life	3	
27		4	Parazoans: the sponges
29	Porifera	4	
Oct 02	Cnidaria	5	
04		5	Cnidarian fossils
06**	Cnidaria cont.	5	
09	Cnidaria cont.	5	
11		6	The moss animals
13	Bryozoa	6	
16	Brachiopoda	7	
18		7	The shelled brachiopods
20	Brachiopods	7	
23	Hour Exam	--	
25		8	Mollusca I
27**	Molluscan intro	8	

	30	Molluscs cont.	8	
Nov	01		8	Mollusca II
	03	Molluscs cont.		
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	06**	Echinoderms	9	
	08		9	Echinodermata I
	10	Veterans Holiday—no class meeting		
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	13	Echinoderms cont.	9	
	15		9	Echinodermata II
	17	Graptolites	10	
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	20		10	Graptolite fossils
	22	THANKSGIVING HOLIDAY -- Turkey preparation		
	24	" " " "		
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	27**	Arthropods	11	
	29		11	Arthropoda- jointed limbs
Dec	01	Arthropoda	11	
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	04	Trace fossils	12.7	
	06		TBA	Trace fossils
	08	Exceptional faunas	12	
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	11	Exceptional faunas	12	
	13	Exceptional faunas.	12	
	15	Review of the whole course		
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Dec	19	FINAL EXAM 1-3:10pm SC 304		

BASIS OF GRADING:

Hour Exam	20%
Practical exercises	30%
Megathink** presentations	5%
Class presentation and mini-term paper	5%
Field trip	10%
Final Exam (comprehensive)	30%

The final exam is comprehensive both exams stress concepts, morphologic terms, and classification from reading, practicals, class presentations, and lectures.

Practical exercises address sets of fossils of a particular group or a particular subject, chosen to illustrate salient aspects of the groups or topics covered. They require you to examine, sketch and answer questions related to the fossils. The purpose is to reinforce the lectures, providing you with "hands on" experience with the fossils. Most of these (see syllabus) will take place on Wednesday during the longer meeting period. If you need more time outside of the meeting time, see the instructor. Each practical is due at the start of the class period, one week after it is handed out. Points deducted for late writeups (see instructor or TA if problems).

Megathink **

This is an opportunity for you to do some brief research outside your text, specifically in the UM library. Downloading from the internet is not acceptable. We are lucky to have pretty good holdings in paleontology. You are required to find a current (1999-2000) paleontology paper in our library holdings. The evolution, geology or paleobiology article must be related to the topic of that day. Read the article and write a concise one-page summary (giving at the top, the source, date and page numbers). Be prepared to share your article in class and at the same meeting, to turn in one-page summaries on the dates marked **. Current periodicals are on a special display shelf on the science floor of the Mansfield Library. Ask if you need help. Barry Brown, at the Mansfield Library, is your friendly science librarian.

Presentations/mini-term papers

Toward the end of class, you should be ready to select topics from "Exceptional faunas". Write a short paper (1000 words not including bibliography) on a pre-selected subject. You should turn in your writeup and be prepared to summarize it at the end of class (see syllabus). Some reading and research beyond your text book may be necessary.

Field trip

Unfortunately Missoula and the surrounding area is mostly Precambrian Belt rock with little opportunity to study megafossils. An overnight (weekend) field trip is planned to a Montana fossil locality (dates to be announced) where you can collect your own fossils and later, make your field report.

Office hours

When my door is always open to students and I hope you will take advantage of time outside class to ask questions on lectures, megathink assignments, or maybe some new ideas in paleontology and evolution.