

Geological Sciences 303
Professor McGhee
Fall Semester

PALEONTOLOGY

The course is subequally divided into two parts: (1) An introduction to invertebrate paleozoology and evolution and (2) the uses of paleontological data in evolutionary paleobiology and paleoecology.

LECTURE	TOPIC	READINGS
1	Introduction	pp 116-121
2	Classification: evolutionary systematics	(none)
3	Classification: numerical taxonomy	(none)
4	Classification: phylogenetic systematics	pp 128-135
5	Sample bias and the fossil record	pp 70-77, 61, 95
6	Evolution of the prokaryotes	Chapter 8
7	Evolution of the Protista	Chapters 9, 10
8	The Porifera, the Cnidaria	Chapter 11
9	The Lophophorata, I	Chapter 12
10	EXAMINATION I	
11	The Lophophorata, II	Chapter 12
12	Introduction to the Mollusca	Chapter 13
13	The Gastropoda	Chapter 13
14	The Bivalvia	Chapter 13
15	The Cephalopoda	Chapter 13
16	The Arthropoda, I	Chapter 14
17	The Arthropoda, II	Chapter 14
18	The Echinodermata	Chapter 15
19	The origin of chordates	Chapter 15
20	EXAMINATION II	
21	The analysis of growth (ontogeny)	pp 138-147
22	Paleopopulation dynamics	pp 83-85
23	Models of the evolutionary process	pp 121-129
24	The evolution of species in nature	pp 121-129
25	The concept of adaptation in evolution	pp 252, 541-552
26	Analytic schools of morphologic evolution	pp 150-159, 252, 213, 332-333
27	Ecosystem evolution	pp 534-541, 102-107
28	Mass extinction theory	pp 162-181, 102-107
29	FINAL EXAMINATION	

