E. Mesozoic Life/Fossils (pp. 390-411, 422-433)

1. Ocean invertebrates

a. Mesozoic life very different from Paleozoic

b. Paleozoic oceans: epifaunal filter feeders dominant

c. Mesozoic oceans: infaunal filter feeders & infaunal deposit feeders dominant

d. Molluscs surpass brachiopods in abundance

e. Why go under sediment?

i. Better predators evolve (crabs, lobsters, bony fish, ammonoids, marine reptiles)

ii. Response by prey creatures?

a) Burrowing or boring

b) Protective shells (spinier & thicker)

c) Evasive mvts.

d) Enter marginal facies

e) Toxins, warnings

f) Camouflage & mimicry

iii. Predators respond again
iv. Co-evolution & escalation

f. <u>Mesozoic Marine Revolution</u> (two phases)

i. Norian Stage of the Late Triassic (increase in shell-eating predators)

ii. early Late Cretaceous (increase in drilling predators)

g. 1st scleractinians (modern calcified corals) & decent coral-calcareous algae reefs in Late Tr

h. 1st irregular echinoids in J

i. Weird clams in K (rudist clams)

2. Mesozoic land animals & ocean vertebrates

a. Adaptive radiation in <u>insects</u> (K)

b. <u>Reptiles</u> dominate land & oceans

i. Thecodonts (Tr-J)

ii. Crocodilians (Tr-Q)

iii. Turtles/Tortoises (Tr-Q)

iv. <u>Pterosaurs</u> (Tr-K)

a) Flying reptiles (<u>not</u> dinosaurs)

b) Wing morphology

c) Tail

d) Teeth

e) Warm-blooded

f) Life habits