

**Bio. 3302 Introduction to Evolution**  
**Study Guide**  
**Cenozoic Era: Age of Mammals**

**Important Terms and Concepts: Cenozoic**

Age of Mammals  
Cenozoic  
*Diatryma* (Terror Birds)  
Eocene  
Glyptodont  
Holocene  
Mammoth  
Mastodon  
Miocene  
Milankovitch Cycles  
Oligocene  
Paleocene  
Pleistocene  
Pleistocene over-kill hypothesis  
Pliocene  
*Proconsul*  
*Smilodon* (Scabre-Tooth Cat)  
Quaternary  
Tertiary  
Uinatheres  
Woolly Rhinoceros

**Discussion Questions: Cenozoic**

1. What was the general climate like in the Cenozoic? What are the two extremes, and when did they occur?
2. What was the general configuration of continents in Cenozoic? How did their positions/connections in the early Cenozoic differ from those of today?
3. Describe the general features of mammal evolution following the Cretaceous extinction event. In what ways did mammals fill "empty niches" left by the demise of the dinosaurs?
4. How is the changing climate and vegetation in the Oligocene and Miocene related to the evolution of horses and other grazing mammals?
5. What is the Great American Biotic Interchange? When did it occur? Give some examples of animals that migrated each way.
6. What was the climate, sea level, and vegetation conditions like during the Pleistocene?

7. How did the Pleistocene glaciers affect the landscape and vegetation? What was Missouri like at full glacial? What are some possible causes of the Pleistocene glaciation?
8. What kind of megafauna existed in Pleistocene America? Give some examples. What might be the reason they underwent an extinction event? Explain.
9. Some people have suggested that we may be experiencing a 6th Extinction Event, with many species going extinct in a short period of time. What is the basis for this statement? What are some possible causes of this extinction event?