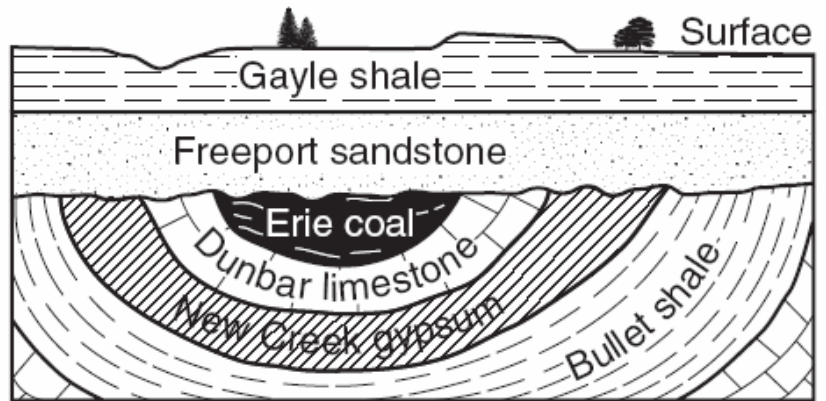


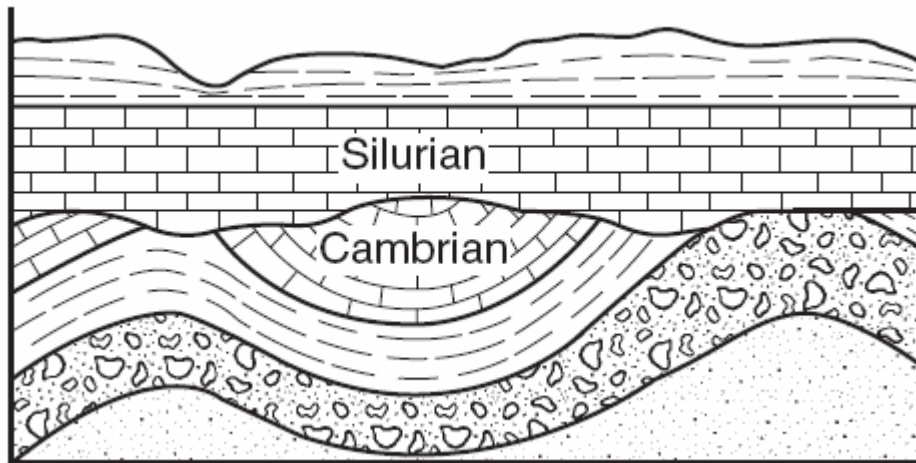
Geologic History Review

Use the picture below to answer questions 1-3.

1. Label the unconformity.
2. Where did the Erie coal come from?
3. What is the grain size of the Bullet and the Gayle shale?



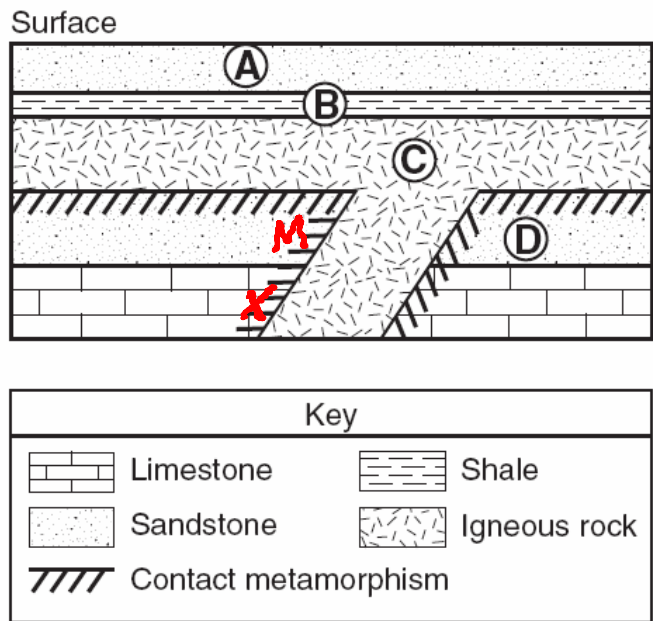
Use the diagram below to answer questions 4-9.



4. Approximately how many million years ago did the unconformity form?
5. Name one fossil that could be found in the limestone layer.
6. How can you tell from the picture that the conglomerate layer could be from the Precambrian?
7. Label the sandstone layer with an S.
8. What could have caused the bottom four layers to be folded?
9. Label the layer with the largest range in particle size with a C.

Use the diagram below to answer questions 10-15.

10. How can you tell layer C is an extrusion?
11. What is the crystal size of layer C?
12. What is the grain size of layer A?
13. What is the composition of the limestone layer?
14. Name the metamorphic rock at location X.
15. Name the metamorphic rock at location M.



Use the reading passage below to answer questions 16-18.

Fossil With Signs of Feathers Is Cited as Bird-Dinosaur Link

Paleontologists have discovered in China a fossil dinosaur with what are reported to be clear traces of feathers from head to tail, the most persuasive evidence so far, scientists say, that feathers predated the origin of birds and that modern birds are descendants of dinosaurs.

Entombed in fine-grained rock, the unusually well-preserved skeleton resembles that of a duck with a reptilian tail, altogether about three feet in length. Its head and tail are edged with the imprint of downy fibers. The rest of the body, except for bare lower legs, shows distinct traces of tufts and filaments that appear to have been primitive feathers. On the backs of its short forelimbs are patterns of what look like modern bird feathers.

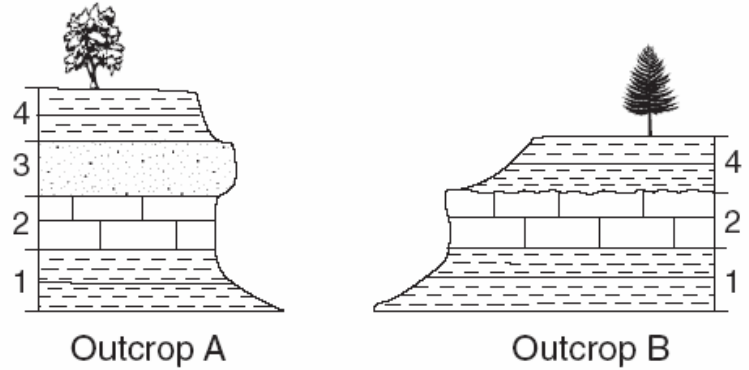
Other dinosaur remains with what appear to be featherlike traces have been unearthed in recent years, but nothing as complete as this specimen, paleontologists said. Etched in the rock like a filigree decoration surrounding the skeleton are imprints of where the down and feathers appear to have been.

The 130-million-year-old fossils were found a year ago by farmers in Liaoning Province in northeastern China. After an analysis by Chinese and American researchers, the fossil animal was identified as a dromaeosaur, a small fast-running dinosaur related to velociraptor. The dinosaurs belonged to a group of two-legged predators known as advanced theropods . . .

excerpted from "Fossil With Signs of Feathers Is Cited as Bird-Dinosaur Link"
John Noble Wilford
New York Times, April 26, 2001

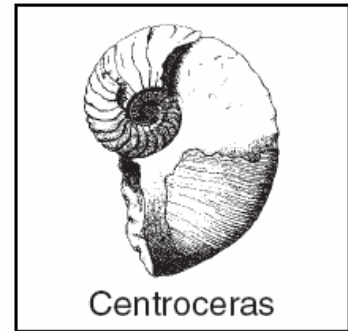
16. What period is the fossil the farmers found from?
17. What type of rocks were these fossils probable found in?
18. Why is the feathered dinosaur NOT considered an index fossil?

19. Explain why layer three is missing from outcrop 2.



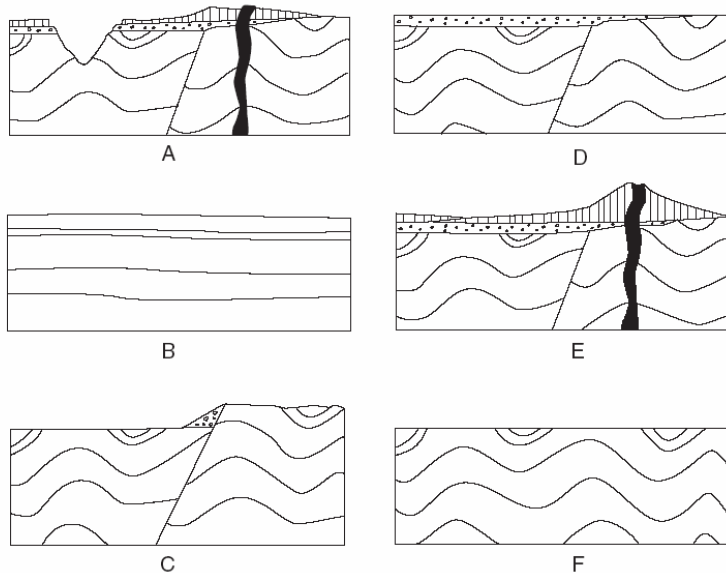
Use the picture of the fossil to answer questions 20-22.

20. What geologic period is this fossil from?
21. Name another fossil found in the same bedrock.
22. Where do you think this animal lived when it was alive?



23. Put the following pictures in the correct order.

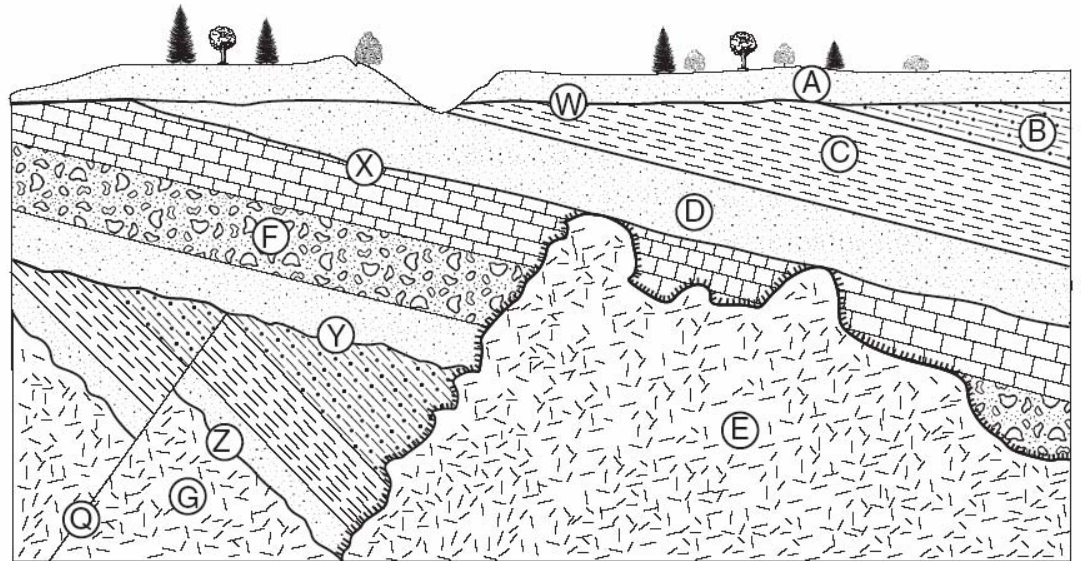
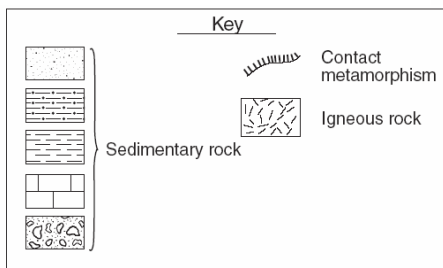
First _____



24. Fill in the following chart.

Half-life	Mass of Original Carbon-14 Remaining (grams)	Number of Years
0	1	0
1	$\frac{1}{2}$	5,700
2	$\frac{1}{4}$	11,400
3	$\frac{1}{8}$	17,100
4	$\frac{1}{16}$	
5		
6		
7		

Use the following picture to answer questions 25-30.



25. What caused Q to occur?

26. What caused Y, Z and W?

27. Describe rock E.

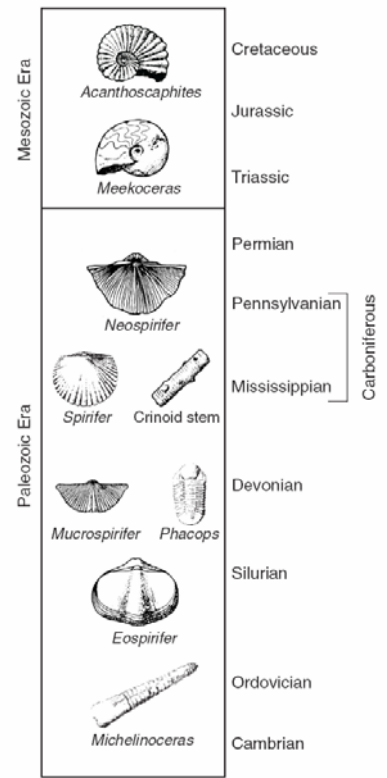
28. Which letter has the greatest range in particle size?

29. Label with a star the layer of rock that is composed of shells?

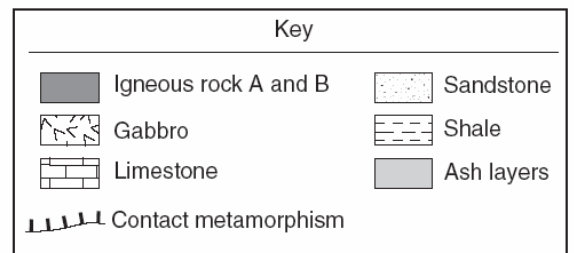
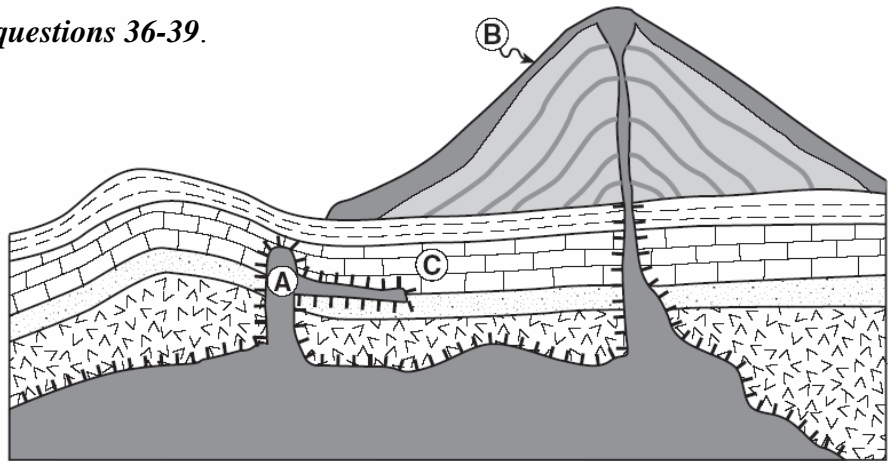
30. Describe another way you can determine this layer is limestone.

Use the picture to the right to answer questions 31-35.

31. Put a ▲ on the right side of the diagram to show when the dinosaurs were abundant.
32. Put a ■ on the right side of the diagram to show when *Platyceras* lived.
33. Put a ● on the right side of the diagram to show when PANGEA broke up.
34. Label where the PRECAMBRIAN would be.
35. Circle the period when you would have seen *Elliptocephala*.

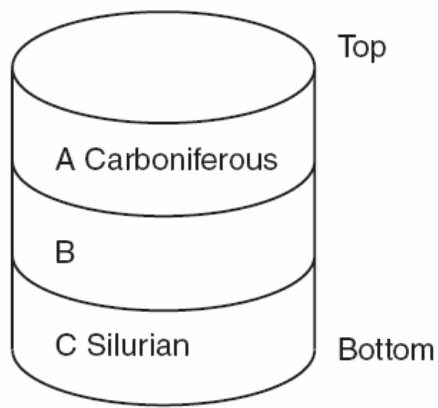


Use the picture below to answer questions 36-39.

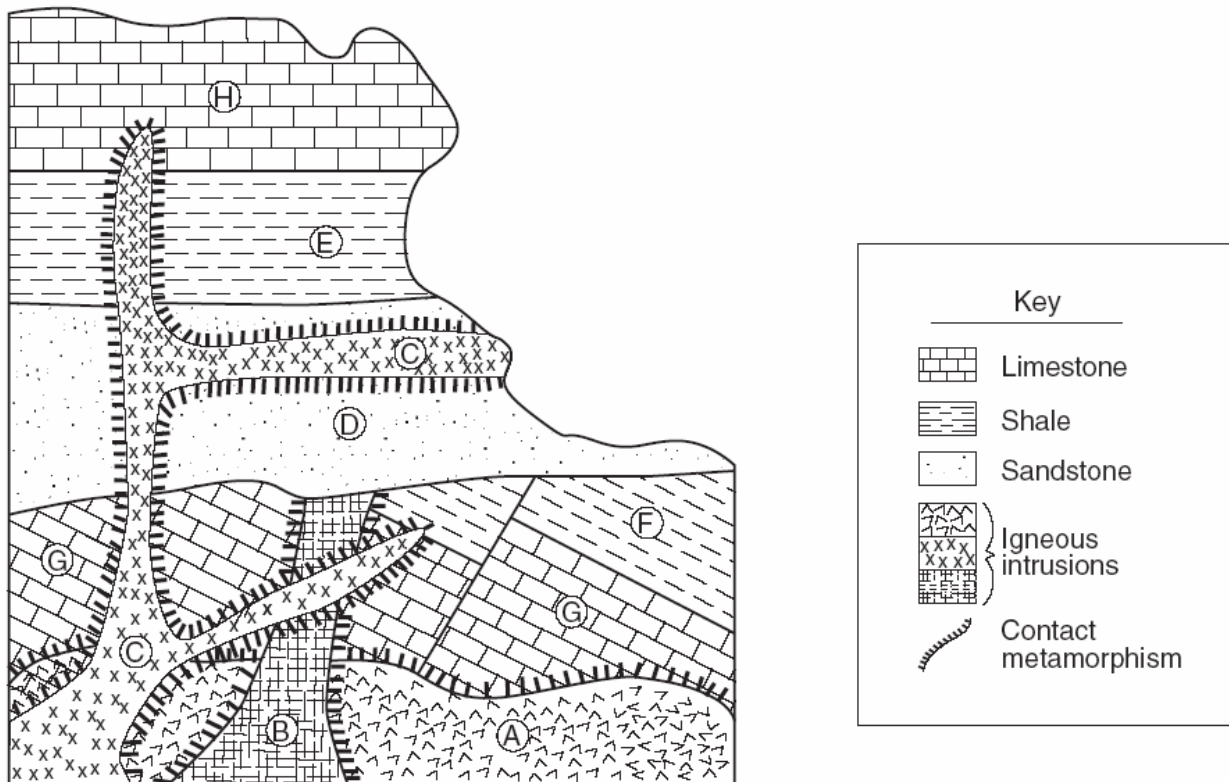


36. How does the crystal size of rock B compare to the size of rock A?
37. Which igneous rock will B probably be?
38. How can you tell this volcano erupted more than once?
39. How can you tell there was an unconformity in this diagram?

40. Label the following diagram.



Use the picture below to answer questions 41-45.



I will give you two letters and you need to tell me which occurred first and why.

41. B and C...

42. A and G...

43. F and D...

44. C and E...

45. C and A...