FOSSILS PRACTICE TEST – SSSS 2015

By: doublelift

Suggested timing: 1:30 for each page; 5 mins at end to check work

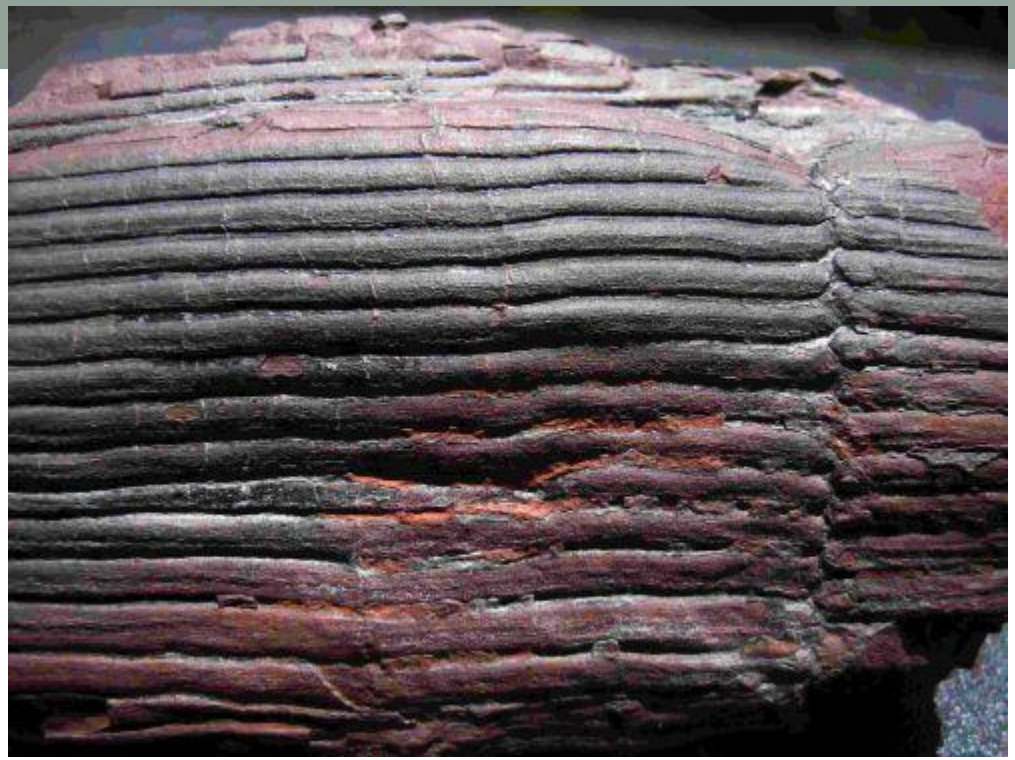
1. Identify the class and genus of the fossil shown.
2. What is one way to differentiate between this and other similar genera?
3. What compound would have been found in relatively high concentrations in this organism?
4. What are the walls between the “cells” called?
5. What 5 environmental requirements do modern members of this class need to grow?

FOSSIL A

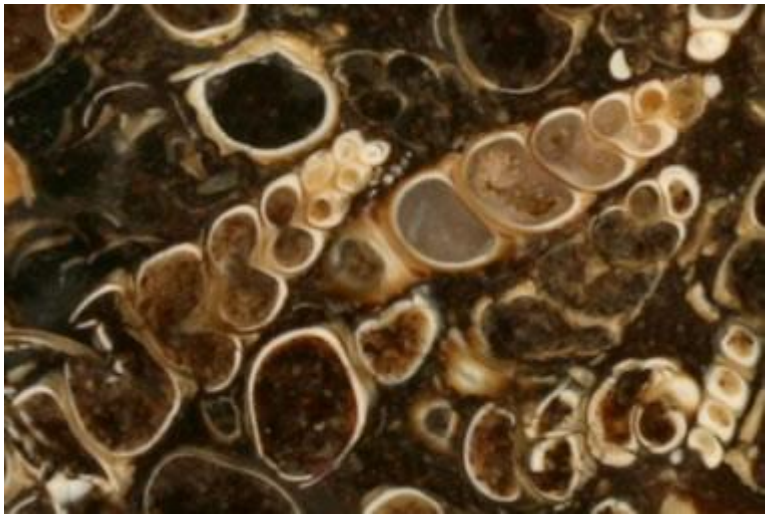
FOSSIL B

1. Identify the genus of fossil A.
2. In what type of environment would fossil A have lived? (be specific)
3. From what time period and where is fossil A found?
4. Identify the genus of fossil B.
5. What is a common name for the phylum of fossil B?
6. What does the name of the phylum of fossil B mean?

1. Identify the class and genus of this specimen.
2. Name the two things that its head shield is almost completely covered by.
3. Name one characteristic of this organisms eyes.
4. In what orientation are these fossils often found?
5. What species of this class is considered the most recognizable and prolific?

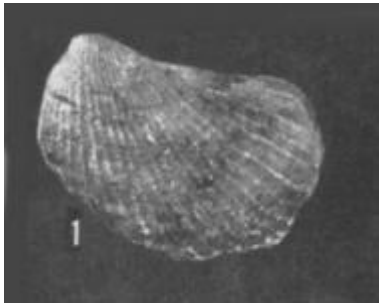


1. Identify the phylum and genus of this specimen.
2. What are its immature leaves known as?
3. What is the diploid stage of its life cycle known as?
4. What is required for its spores to germinate?
5. Besides spores, how else could this genus reproduce?
6. Why was it so easy for fossils of this genus to form?



1. Identify the class and genus of this specimen.
2. When, if at all, did it go extinct?
3. What type of rock is the fossil set it?
4. In what environment would this organism have lived?
5. How can this genus be distinguished from the similarly shaped family known as auger shells?

1. Identify the phylum and class of all the specimens shown.
2. What is the genus of the specimen labeled “1”?
3. What could have affected near-shore forms of specimen 1?
4. Where are living specimens of this genus found today?
5. Identify the genus of specimen 2.
6. T/F: this genus existed on sandy seafloors and in deltas



1. Identify the genus of this specimen.
2. What must have occurred for this specimen to have been fossilized?
3. This specimen most likely had how many toes?
4. What were two important implications made by the discovery of this genus?
5. It has been discovered that some juvenile specimens of this genus have greater claw curvature. What is one theory explaining this?

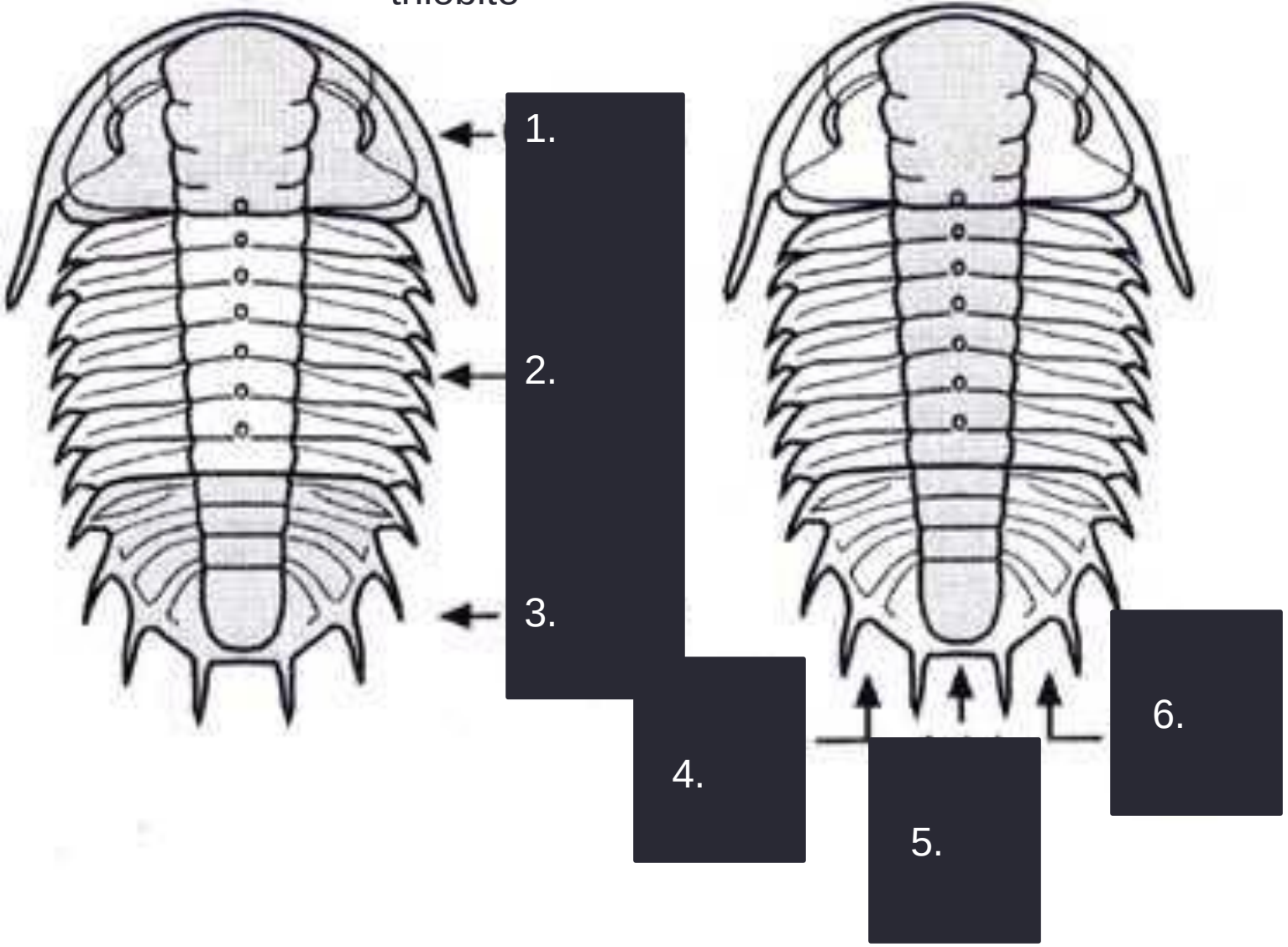
1. Identify the family of this specimen.
2. What two purposes might the spines on its back have served?
3. Were these spines essential to the survival of members of this family?
4. During what time period did this organism live?

1. What structures are depicted in the image?
2. Why are they important to the field of paleontology?
3. How did they form?
4. Name three morphologies of this structure.
5. In what sorts of environments can these be found today?
6. What geographic locations have stromatolites?

1. Identify the order of this specimen.
2. What would its diet consist of?
3. Name two modern species of this order.
4. How can they be distinguished from sharks?

1. Define “endocast”.
2. Describe the process of bioimmuration.
3. How are the above two related?

Label the parts of the trilobite



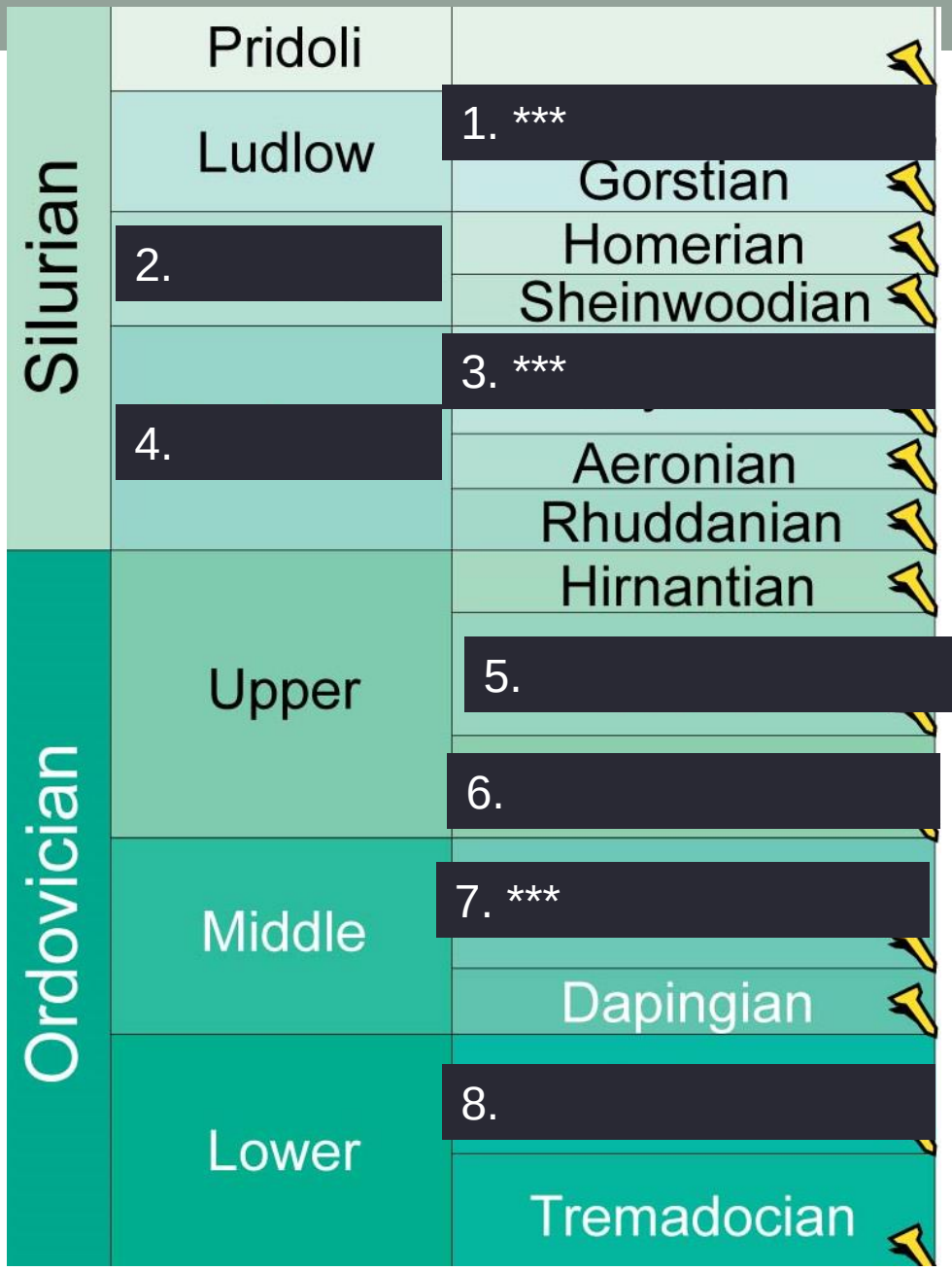
1. Identify the phylum and genus of this specimen.
2. What chemical has been proposed for dating specimens of this phylum?
3. After which glaciation event did these chemicals first appear?
4. What is the closest single-celled relative to this phylum?
5. Modern members of this phylum have channels leading to the inside of its body. What are these channels called?

1. Identify the genus of this specimen.
2. What were its feeding habits like?
3. Why do many paleontologists believe that they were anadromous?
4. T/F: this specimen had lungs in addition to gills

1. What might have been the wingspan of this specimen, and why?
2. What period would most of these fossils be from?
3. What was the largest land arthropod of all time?
4. Where have many of these specimens been found?

Fill in the missing names in the geologic time scale.

Give the approximate days in mya of the numbers with asterisks next to them.

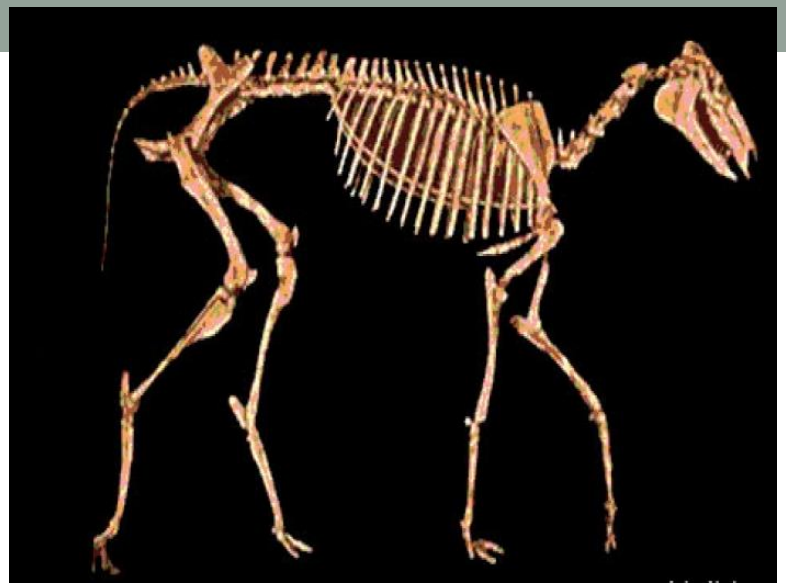


1. Identify the class and genus of the specimen.
2. Approximately how many millions of years ago did they live?
3. How did they feed?
4. Why is it important to paleontology?

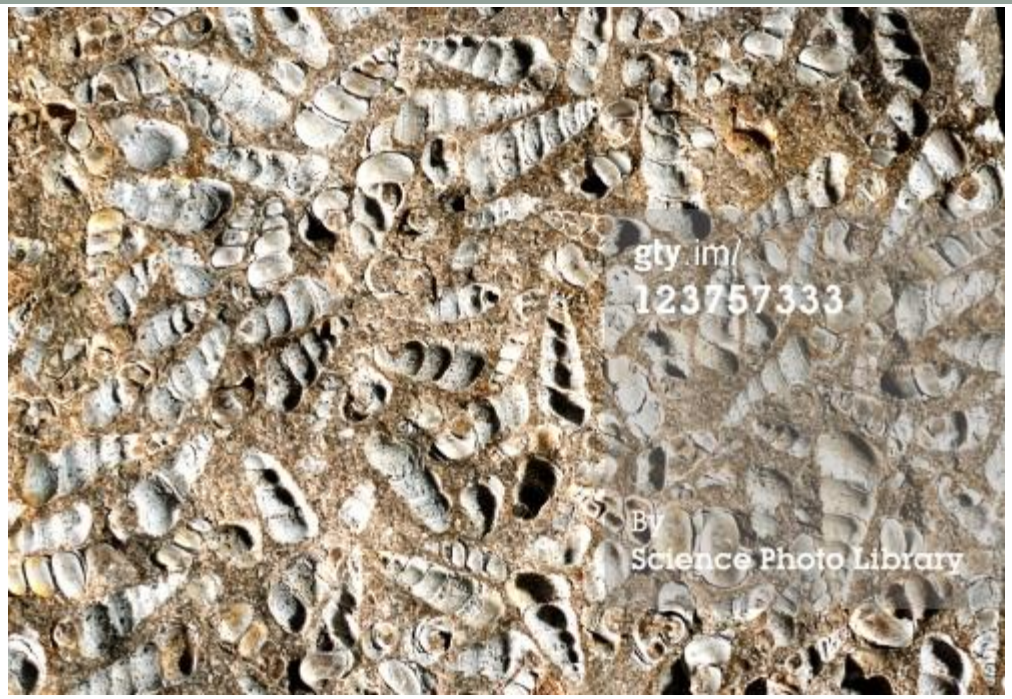
1. Name the 3 major suture patterns that ammonites exhibit, a short description of their morphologies, as well as the time period they are associated with.

2. Define siphuncle, as well as the subclass it distinguishes ammonites from.

1. What superclass does this specimen represent?
2. What is the common name of this superclass?
3. Name the species of the earliest known bony fish, as well as when it lived.
4. What are the two classes that this superclass is divided into?
5. Most members of this superclass are ectothermic, however there are some members that exhibit a certain degree of endothermy. What makes their endothermy possible?



1. Identify the genus of the specimen.
2. What is considered a living relative of this genus?
3. How many toes do members of its order posses?
4. What was it considered the earliest known member of?
5. What is it now classified as?



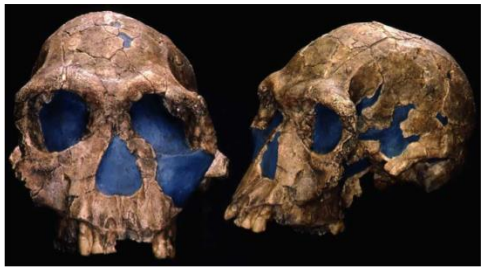
1. Identify the genus of the specimens shown.
2. What type of rock is this? (be specific)
3. In what environments does this rocks usually occur?
4. Carbonate stones made from shells of these organisms are commonly referred to as what?

1. Identify the genus of this specimen.
2. Name two proposed functions of its cranial crest.
3. T/F: A complete specimen of this genus has been discovered.
4. Name two genera that could have preyed on it.

1. Name the genus this skull belongs to.
2. What is a defining characteristic of this genus?
3. What is another name for its tail?
4. Where are most fossils of this genus found?
5. How can juveniles of this genus be identified?

1. Order the following from earliest time of appearance to most recent time of appearance:

1



2

3

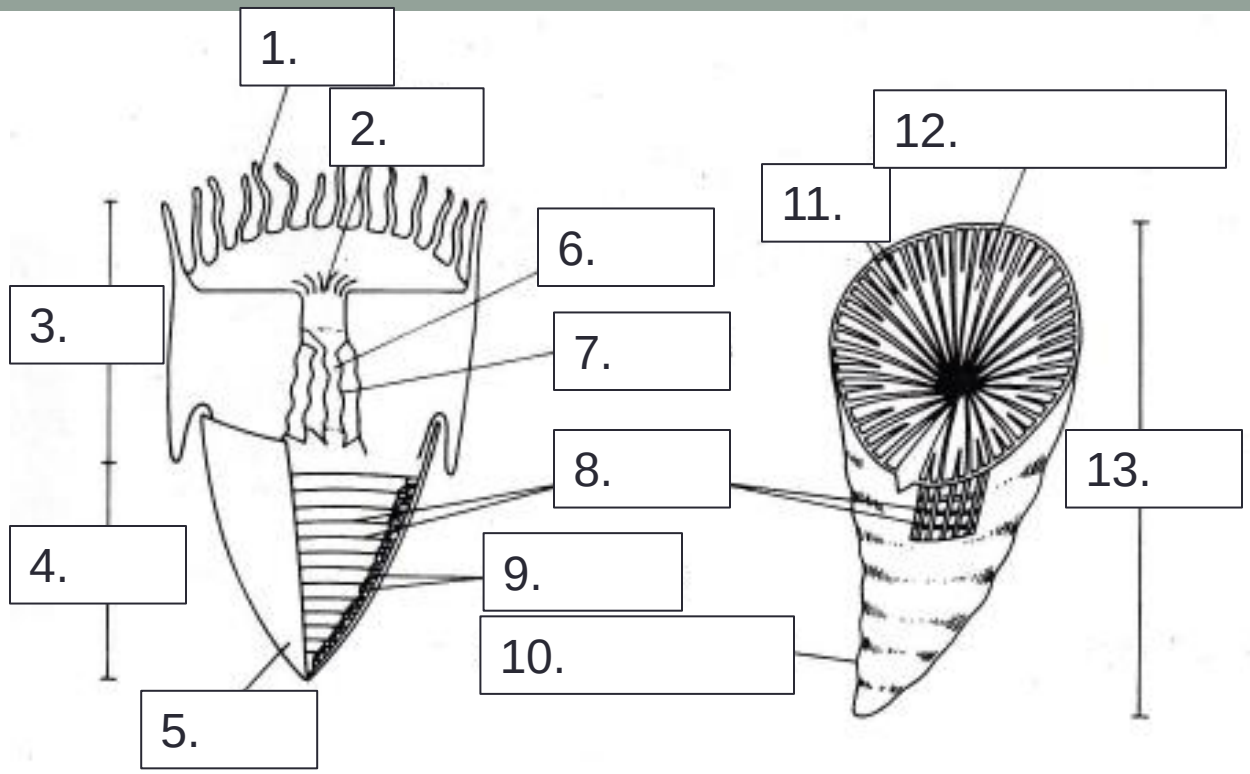
4

5

6

Foot length: 50cm
Stride length: 420cm
(not to scale)
Use g=10 m/s^2

1. What form of locomotion did this dinosaur most likely employ?
2. What was the approximate leg length of this dinosaur?
3. Was this dinosaur walking, trotting, or running?
4. To the nearest whole number in meters per second, how fast was this dinosaur moving?
5. If many parallel trackways like those above were found close to each other, what might that indicate?



Label the above parts of a fossilized coral polyp.

A

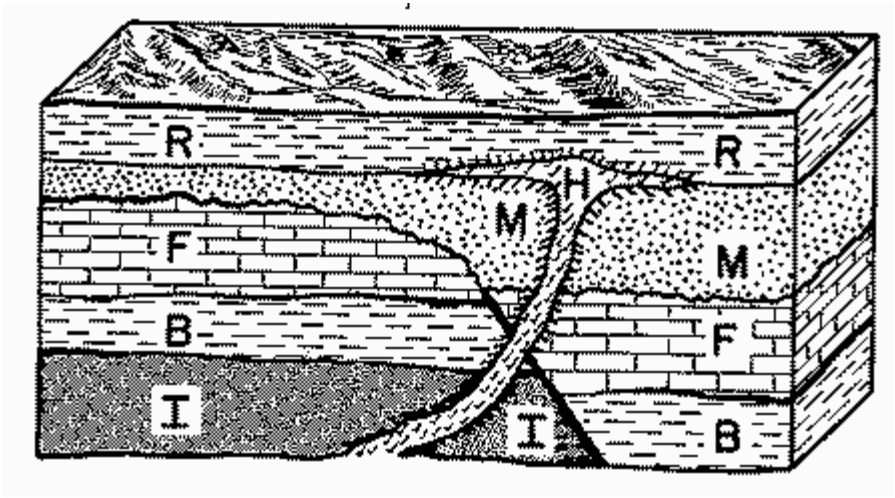
B

C

1. Identify the phylum and genus of specimen A.
2. Identify the phylum and genus of specimen B.
3. Identify the phylum and genus of specimen C.
4. When did land plants first appear?
5. Name 4 adaptations that allowed plants to live on land.
6. What is the major difference between modern descendants of specimens B & C?

Some questions about Lagerstätte

1. Define Lagerstätte.
2. Name 4 locations that are considered Lagerstätte.
3. There are multiple taphonomic pathways that result in Lagerstätte. Name and define 3.
4. Which Lagerstätte is associated with the discovery of the earliest bird?



1. Fossils were found at locations R, M, B, F, and I. Based on your knowledge of relative dating, order them from oldest to youngest.
2. One of the fossils was found to have 23% of its original amount of carbon-14. To the nearest year, how long ago did this fossil live?