

SSSS 2019 Fossils Test

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139 Points

Rules

- Do not write on any of the stations.
- Questions marked with **(TB)** are tiebreakers. They will be weighted as normal questions, and in the event of a tie, the tiebreaker goes to the team with more correct tiebreaker answers (if the same, quality of answers).
- All questions are worth 1 point unless marked otherwise.
- 3 minutes per station.
- This test is intended for the Scioly Summer Study Session, and should be used for that only. No copy/pasting the test please.



A.

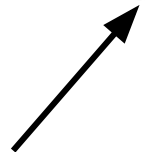


B.


Station 1

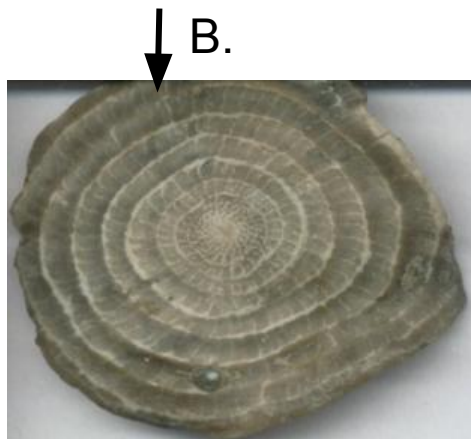
1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify Specimen B to the lowest taxonomic level on the Fossils List.
3. Specimen A is prominent on the flag of what country?
4. What is the common name of specimen B?
5. Is specimen B coniferous or deciduous?
6. During what Geologic Era did specimen A become very prevalent in?
7. In what type of environment (i.e forests) could we expect to find specimen B.
8. **(TB)** Who developed the taxonomic classification system?



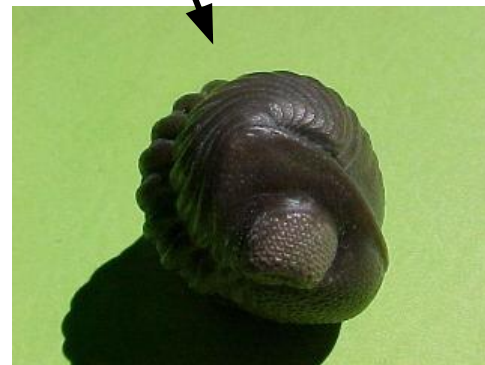
A. 




C. 



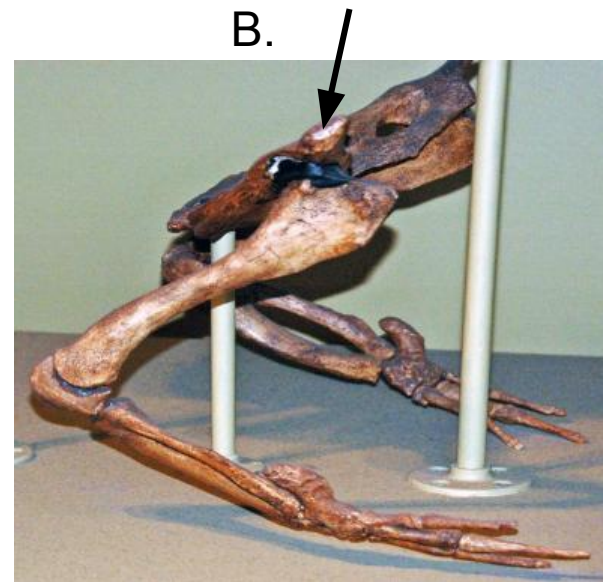
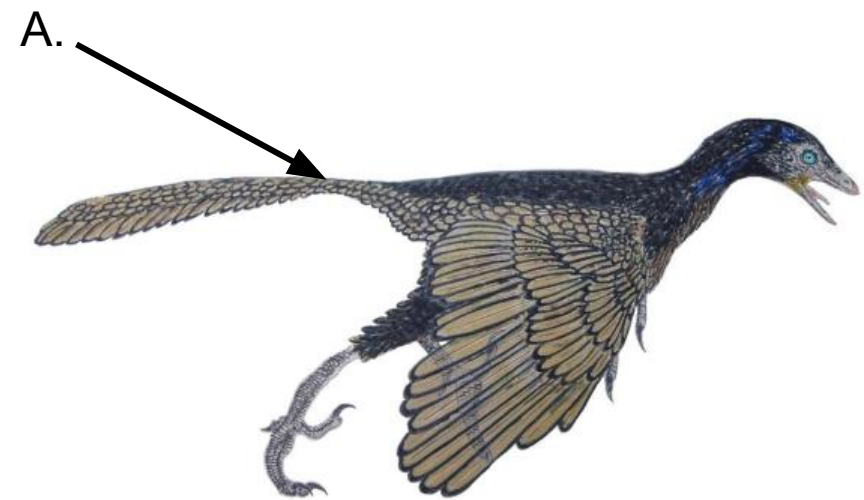
B. 



D. 

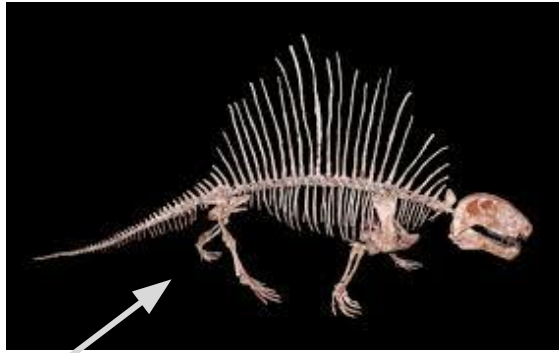
Station 2

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Identify specimen C to the lowest taxonomic level on the Fossils List.
4. Identify specimen D to the lowest taxonomic level on the Fossils List.
5. What is the common name of specimen A?
6. The largest trilobite ever found belongs to what genus?
7. What genus of trilobite is the Wisconsin state fossil?
8. Trilobites are usually preserved in what type of rock?

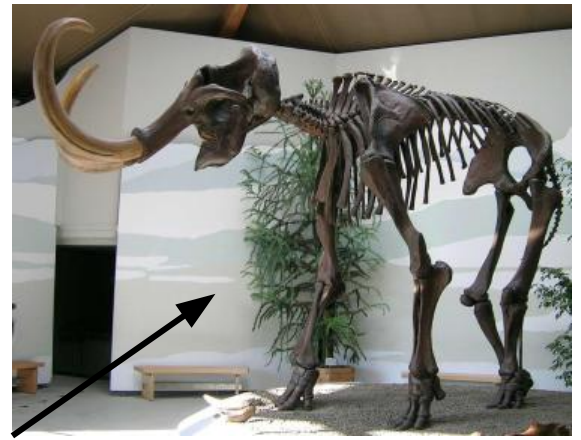


Station 3

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Specimen A was found in what Lagerstätte?
4. Specimen B mostly represents what animal today? (What does it look like?)
5. What did specimen A primarily eat?
6. **(TB)**What is the study of how animals die and become fossilized?
7. What is the nickname of specimen B?
8. Specimen B is the state fossil of which state? Please list both.
9. **(TB)**Specimen A is known as a transitional fossil between _____ and _____.

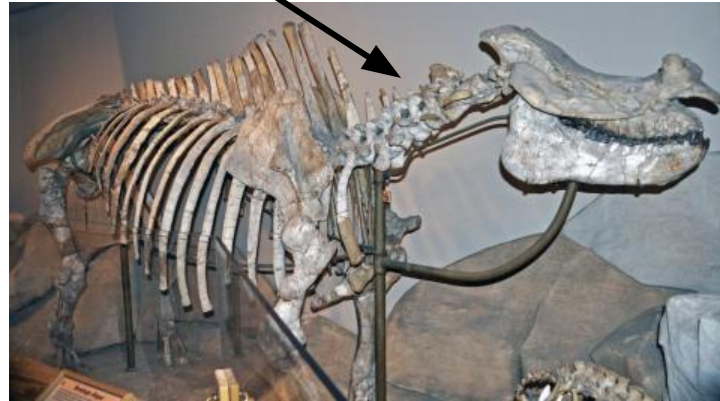


B.



D.

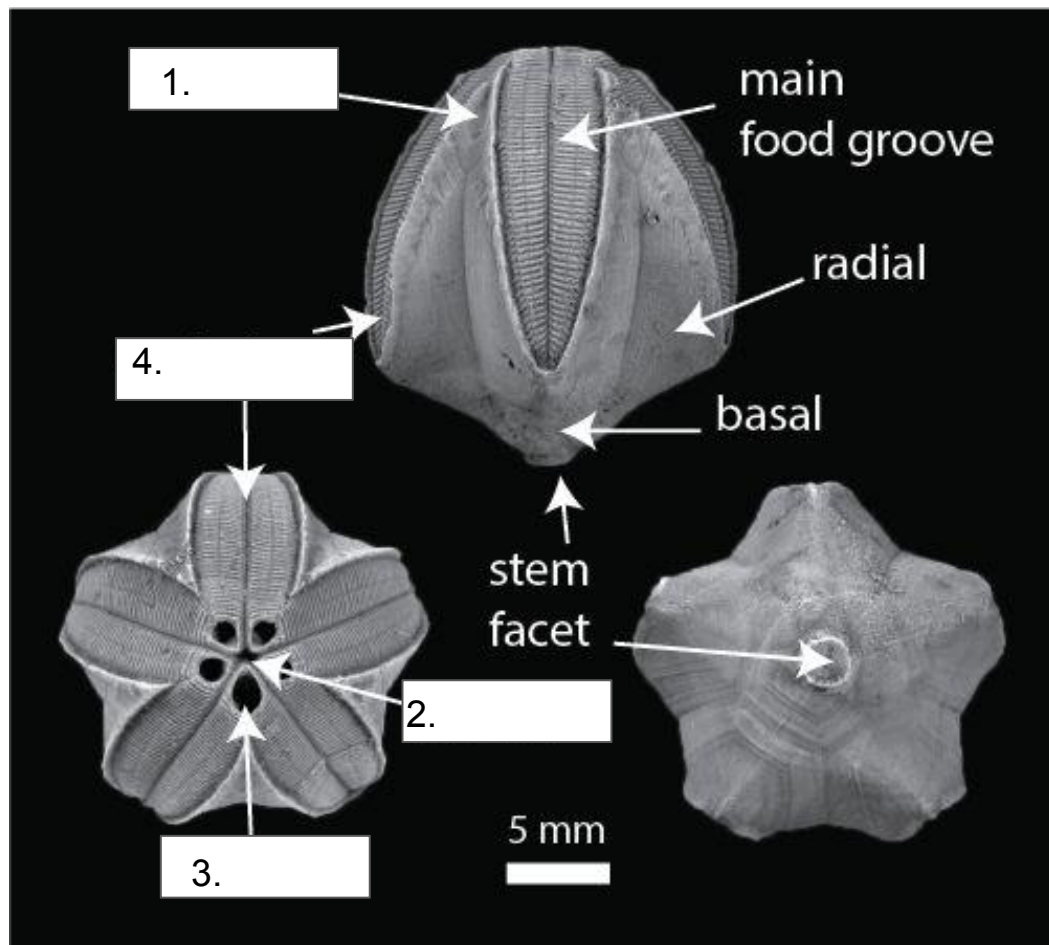
C.



A.

Station 4

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Identify specimen C to the lowest taxonomic level on the Fossils List.
4. Identify specimen D to the lowest taxonomic level on the Fossils List.
5. Which specimen is an outlier? Why?
6. What epoch was specimen C very common in?
7. What was the purpose of the sail on specimen B?
8. Specimen D was alive in what 3 continents?
9. Specimen A is under the IUCN conservation as what status?



Hey! It's not a trilobite for once!

Station 5

- 1-4: Identify the parts of the blastoid with the corresponding number.
5. What type of symmetry does a blastoid exhibit?
6. **(TB)**Blastoids have folded respiratory organs that are very unique. What are they called?
7. How many mya did the blastoid become extinct?
8. How did blastoids “eat”?



5 mm



Station 6

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Identify specimen C to the lowest taxonomic level on the Fossils List.
4. Identify specimen D to the lowest taxonomic level on the Fossils List.
5. What specimen is different from the others? Why?
6. Is specimen D articulate or inarticulate?
7. Specimen B was alive from the _____ period to the _____ period.
8. Specimen A has been alive since the _____ period.
9. The long fleshy stock of specimen C (if it were alive) is called what?



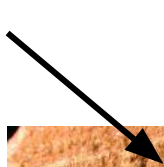
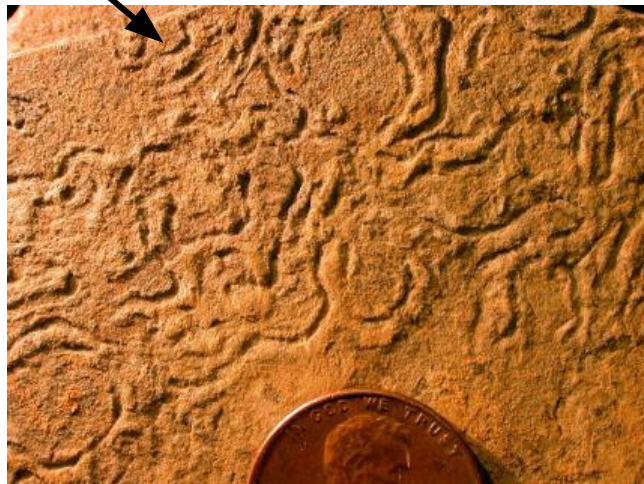
B.



C.

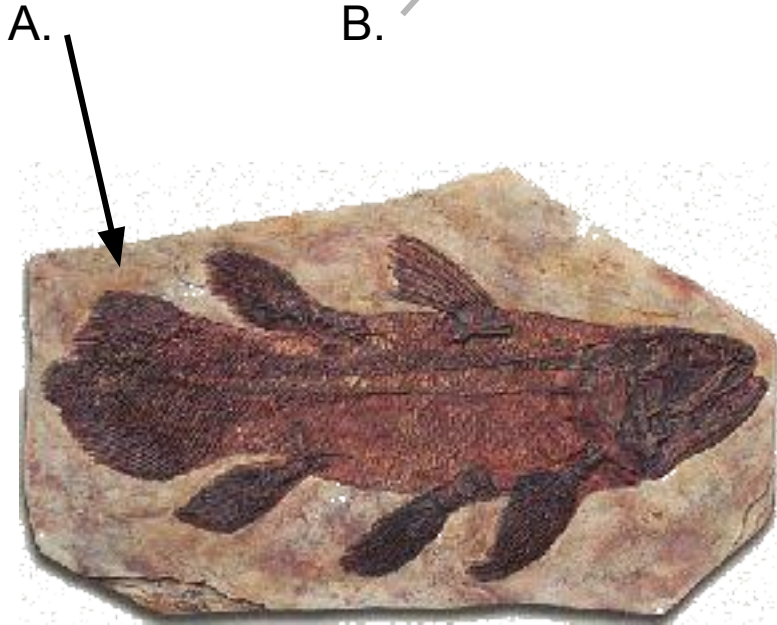
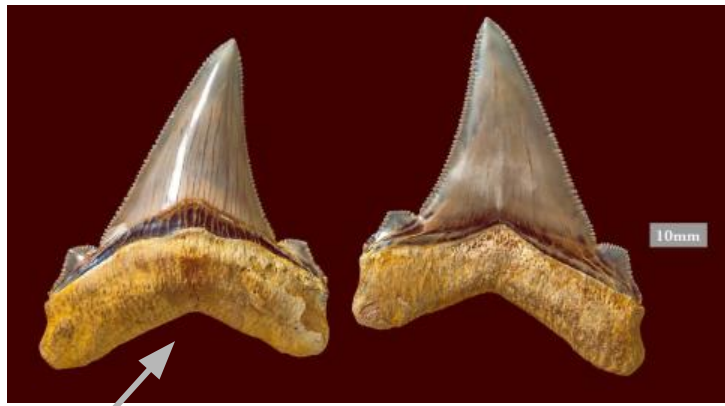


D.



Station 7

1. Identify specimen A.
2. Identify specimen B.
3. Identify specimen C.
4. Identify specimen D.
5. Which specimen (A,B,C,D) is not an ichnofossil?
6. **(TB)** The pterosaur is a fossil commonly found in the _____ Lagerstätte?
7. What is the definition of a Pseudofossil?
8. What trace fossil classification is trace fossil C?
9. **(TB)**What is the chemical composition of specimen D?



Station 8

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Identify specimen C to the lowest taxonomic level on the Fossils List.
4. Identify specimen D to the lowest taxonomic level on the Fossils List.
5. Specimen A is a very notable Lazarus Taxon. What is a Lazarus Taxon?
6. The genus from specimen B contains what very well known species of shark?
7. Is specimen D extinct or extant?
8. Specimen C is a very good index fossil. Why is that?
9. Was specimen C a herbivore, omnivore, carnivore, or detritivore.
10. **(TB)** What is a “Zombie Taxon”?



A.

B.

C.

D.

E.

F.

Station 9

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Identify specimen C to the lowest taxonomic level on the Fossils List.
4. Identify specimen D to the lowest taxonomic level on the Fossils List.
5. Identify specimen E to the lowest taxonomic level on the Fossils List.
6. Identify specimen F to the lowest taxonomic level on the Fossils List.
7. Fossils of specimen F can be found in what geologic time period?
8. Specimen C has a special type of agate named after it (it was later determined incorrectly named). What lagerstatte is this agate found in?
9. **(TB)** What is a clade in taxonomy?

A.



B.



Station 10

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Both of these organisms were critical in the transition between _____ and land tetrapods.
4. Was specimen A or B alive earlier?
5. About how long was specimen A thought to grow?
6. (3 Points) **(TB)** Explain how transitional fossils helped the Darwinian theory of evolution.



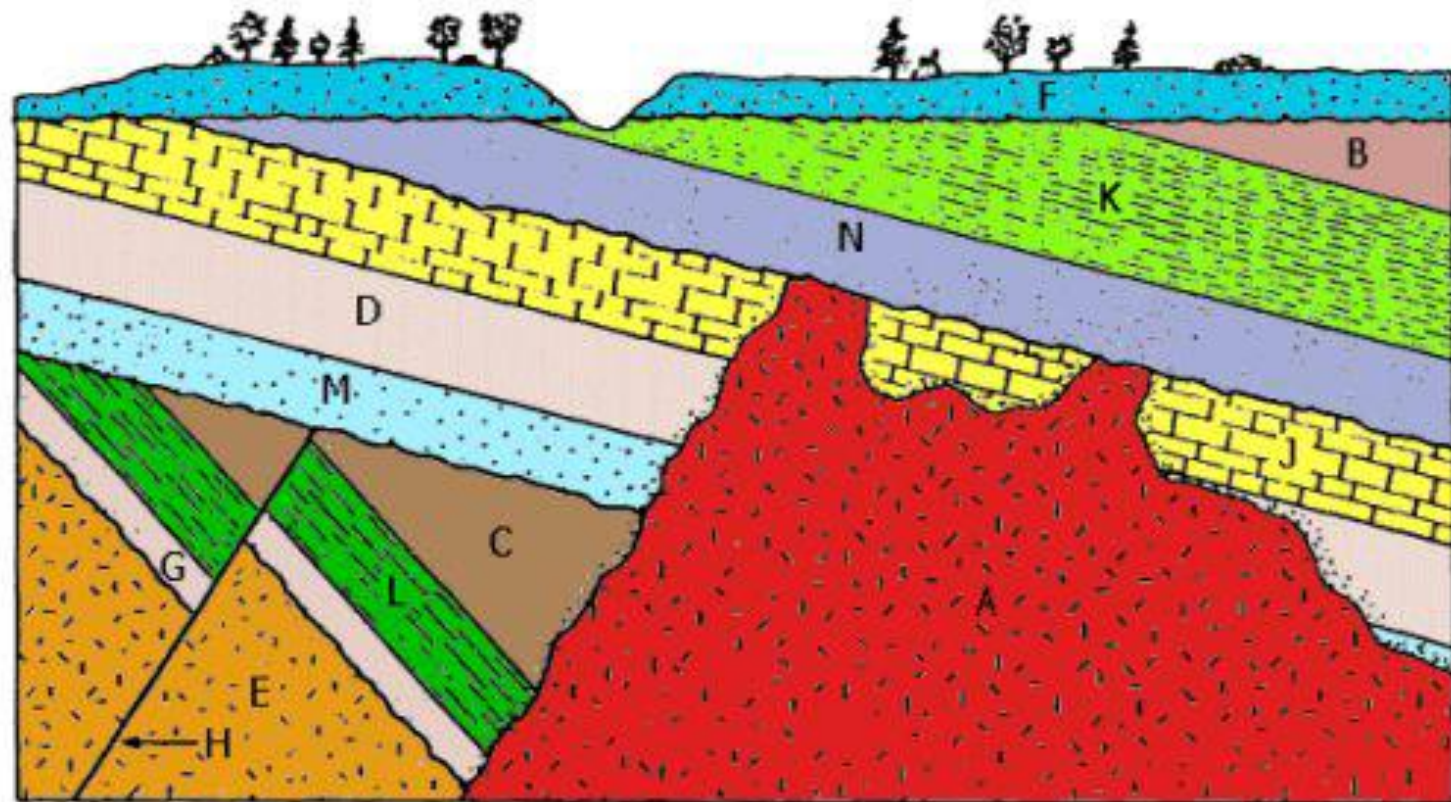
A. B.

C. D.



Station 11

1. Identify specimen A to the lowest taxonomic level on the Fossils List.
2. Identify specimen B to the lowest taxonomic level on the Fossils List.
3. Identify specimen C to the lowest taxonomic level on the Fossils List.
4. Identify specimen D to the lowest taxonomic level on the Fossils List.
5. Specimen A spanned the entire _____ period.
6. What is the common name of specimen B?
7. Specimen C was motile. How did specimen C move?
8. How many species does specimen D contain?
9. Specimen D inspired modern ship propellers because of its what?



Station 12

1-13: Relatively date the strata from oldest to youngest. All or nothing.

14. What type of rock is strata A most likely?

15. What was the depositional environment of strata J? (ie: Deep Ocean, Shallow Creek) Be specific.



No Identification

Station 13

1. Give the geologic period of the first eurypterids.
2. What criteria do scientists use to determine the transition from one geologic period to the next?
3. What percent of Earth's total history does the Precambrian make up?

A piece of stegosaurus bone was found in South Dakota, and was analyzed to determine the age of the stegosaurus. A mass spectrometer revealed that the amount of C-14 was 25% and the amount of N-14 was 75%.

4. How many half lives have passed?
5. One half life of C-14 is 5730 years. How long ago did the stegosaurus die?

A.



Station 14

1. List 2 depositional environments where most dinosaur eggs were laid.
2. Identify the genus of dinosaur in the image (specimen A).
3. Dinosaur eggs are classified into _____.
4. In that classification, the dinosaur eggs are classified based on what?
5. What are the 3 main categories of dinosaur eggs?
6. List 2 methods researchers use to study dinosaur eggs.



A.



C.

B.



D.



Station 15

1. Identify the mode of preservation of specimen A.
2. Identify the mode of preservation of specimen B.
3. Identify the mode of preservation of specimen C.
4. Identify the mode of preservation of specimen D.
5. Identify the organism encased in specimen C to the lowest taxonomic level on the fossils list.
6. **(TB)**Please list the 5 major mass extinctions of Earth's history in they order they occurred.
7. Which mass extinction made up many fossils of Beecher's Lagerstätte?



No Identification

Station 16

1. (10 points) Write a paragraph thoroughly explaining why the Cambrian Explosion was important to the evolution of animals. The more detail the better.