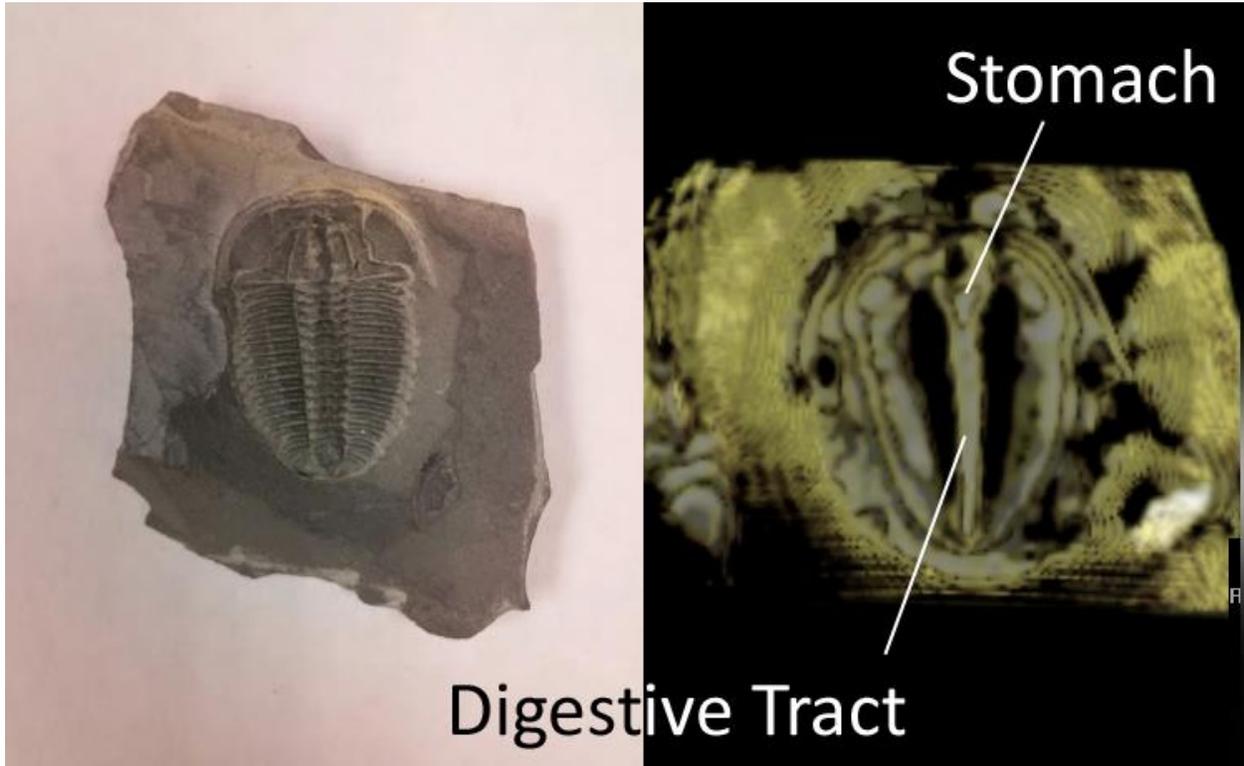


Fossils

Kenston Invitational

January 17, 2015



Name(s): _____ Key _____

School and Team #: _____ Key _____

Score: ____/80

Station #1

1) What is the Genus of this specimen?

_____ ***Gryphaea*** _____

2) In what marine environment did this specimen live?

a) Pelagic

b) Photic

c) Benthic

d) Demersal

3) What is the common name of this specimen?

_____ **Devil's Toenail** _____

4) Which valve of this specimen is preserved in this specimen?

a) Left

b) Right

5) What is the stratigraphic age range of this specimen?

a) Triassic-Oligocene

b) Triassic-Present

c) Triassic-Paleocene

d) Triassic-Eocene

Station #2

1) What is the Genus of this specimen?

_____ ***Favosites*** _____

2) What is the common name of this specimen?

_____ **Honeycomb Coral** _____

3) The long columns making up this sample are known as

a) tabulae

b) corallum

c) septa

d) corallite

4) What is the stratigraphic age range of this specimen?

a) Ordovician-Permian

b) Cambrian-Devonian

c) Devonian-Pennsylvanian

d) Devonian-Permian

5) What mineral is the outer skeleton of this specimen composed of?

_____ **Calcite** _____

Station #3

1) What is the Genus of this specimen?

_____ *Leptaena* _____

2) This specimen shares a Family with what other specimen on the Fossil List?

_____ *Rafesquina* _____

3) What is the stratigraphic age range of this specimen?

a) Cambrian-Permian

b) Ordovician-Carboniferous

c) Ordovician-Permian

d) Cambrian-Carboniferous

4) What is the shell form of this specimen?

a) Convexi-concave

b) Plano-convex

c) Biconvex

d) Concavo-convex

5) Does this specimen possess a spondylium? Yes **No**

Station #4

1) What is the Class of this specimen?

_____ **Malacostraca** _____

2) This Class first appeared during what Era?

- a) Triassic
- b) Ordovician
- c) Cambrian**
- d) Devonian

3) What is the assumed phylogeny of this Class?

- a) Paraphyletic
- b) Monophyletic**
- c) Polyphyletic
- d) None of the above

4) Which of the following is a monophyletic group?

- a) Kingdom Protista
- b) Phylum Porifera
- c) Class Reptilia
- d) Superclass Osteichthyes
- e) None of the above**

5) What sedimentary structure is this specimen encased in?

_____ **Concretion** _____

Station #5

1) What is the Genus of this specimen?

_____ ***Juresania*** _____

2) What is the shell form of this specimen?

- a) Plano-convex
- b) Convexi-concave
- c) Concavo-convex**
- e) Convexi-plane

3) This specimen first appeared during what geologic age?

- a) Mississippian
- b) Permian
- c) Devonian
- d) Pennsylvanian**

4) The spinose structure on this specimen is indicative of what Order?

- a) Productida**
- b) Orthida
- c) Strophomenida
- d) Spiriferida

5) What filter-feeding mechanism, possessed by both Brachiopoda and Bryozoa, incorporates both phyla into the group Lophophorata?

_____ **Lophophore** _____

Station #6

1) Identify this specimen.

_____ **Coprolite** _____

2) What is this specimen's mode of preservation?

a) Actual remains

b) Permineralization

c) Petrification

d) Mold

3) This specimen is rich in what two elements? (2 pts)

_____ **Iron and Phosphorus** _____

4) In what environment was this specimen deposited?

_____ **Terrestrial** _____

Station #7

1) What is the Genus of this specimen?

_____ ***Cryptolithus*** _____

2) What kind of rock is this specimen preserved in?

_____ **Slate** _____

3) What is the stratigraphic age range of this specimen?

a) Cambrian-Ordovician

b) Ordovician-Devonian

c) Ordovician

d) Ordovician-Silurian

4) What is the common name of this specimen?

_____ **Lace Collar Trilobite** _____

5) The long protrusions off of the sides of the specimens are what anatomical feature?

_____ **Genal Spines** _____

Station #8

1) Identify the Family of this specimen.

_____ **Mosasauridae** _____

2) What is this specimen's mode of preservation?

a) Mold

b) Permineralization

c) Carbonization

d) Actual remains

3) What is the stratigraphic age range of this specimen?

_____ **Cretaceous** _____

4) This specimen's Family became the dominant predator of its environment after the decline of what Order?

_____ **Plesiosauria** _____

5) Could this specimen be found in Ohio? Yes **No**

Station #9

1) Identify the Genus of this specimen.

_____ ***Annularia*** _____

2) What is the stratigraphic age range of this specimen?

_____ **Carboniferous** _____

3) This specimen is classified based on _____, making it a _____ taxon.

a) Biological affinity, form

b) Morphology, biological

c) Biological affinity, biological

d) Morphology, form

4) What anatomic structure is preserved in this specimen?

_____ **Leaves** _____

5) What kind of sedimentary structure is this specimen preserved in?

_____ **Concretion** _____

Station #10

1) What is the Phylum of this specimen?

_____ **Pinophyta** _____

2) What is the Genus of this specimen?

_____ ***Metasequoia*** _____

3) What is the common name of this specimen?

_____ **Dawn Redwood** _____

4) What is the stratigraphic range of this specimen?

a) Cretaceous

b) Jurassic-Cretaceous

c) Cretaceous-Present

d) Cretaceous-Eocene

5) This specimen's body plan _____ over time.

a) Radically changed

b) Remained conservative

Station #11

1) What is the Genus of this specimen?

_____ *Mucrospirifer* _____

2) What is the stratigraphic age range of this specimen?

_____ **Devonian** _____

3) What kind of rock is this specimen preserved in?

_____ **Limestone** _____

4) What is the shell form of this specimen?

a) Convexi-concave

b) Biconvex

c) Concavo-convex

d) Plano-convex

5) Every major animal phylum emerged in the Cambrian EXCEPT _____.

a) Chordata

b) Hemichordata

c) Echinodermata

d) Bryozoa

Station #12

1) What is the Class of this specimen?

_____ **Scyphozoa** _____

2) This Class first appeared during what geologic period?

- a) **Ediacaran**
- b) Cambrian
- c) Cryogenian
- d) Tonian

3) What is this specimen's mode of preservation?

- a) Authigenic mineralization
- b) **Compression-Impression**
- c) Carbonaceous Film
- d) Replacement

4) What sedimentary structure is this specimen encased in?

_____ **Concretion** _____

5) Many fossils such as this specimen have been found at what famous locale in Grundy Co., Illinois?

_____ **Mazon Creek** _____

Station #13

1) What is the Genus of this specimen?

_____ ***Lepidodendron*** _____

2) What kind of rock is this specimen preserved in?

_____ **Shale** _____

3) What is the stratigraphic age range of this specimen?

a) Carboniferous

b) Permian

c) Carboniferous-Permian

d) Pennsylvanian

4) What is the closest extant relative to this specimen?

_____ **Quillworts** _____

5) This specimen was part of what fauna, which covered much of the terrestrial world during its stratigraphic range?

_____ **Coal Forest** _____

Station #14

1) Identify the Genus of the specimen marked "A".

_____ *Isotelus* _____

2) Identify the Class of the specimen marked "B".

_____ **Gastropoda** _____

3) What is the mode of preservation of specimen "B"?

- a) Mold
- b) Replacement
- c) Steinkern**
- d) Recrystallization

4) What kind of rock is this specimen preserved in?

_____ **Fossiliferous Limestone** _____

5) What kind of environment does this rock represent?

- a) Shallow marine, low energy
- b) Shallow marine, high energy**
- c) Deep marine, low energy
- d) Tidal zone

Station #15

1) What behavior is seen in the trace labelled "A"?

_____ **Burrowing** _____

2) What behavior is seen in the trace labelled "B"?

_____ **Burrowing** _____

3) Trace "B" was produced by what kind of organism?

_____ **Trilobite** _____

4) Is the side labelled "X" the top or bottom of the bed?

a) Top

b) Bottom

5) This rock was collected from the Chagrin Shale Member of the Ohio Shale.
What is the geologic age of this rock?

_____ **Devonian** _____

Station #16

1) Identify this specimen.

_____ **Stromatolite** _____

2) This specimen first appeared in the fossil record during what eon?

_____ **Archean** _____

3) Which organism(s) produced this specimen?

_____ **Cyanobacteria** _____

4) This specimen was collected in Sanpete County, Utah, and is Eocene in age. What is the environment in which this specimen thrived?

- a) **Lacustrine**
- b) Epicontinental marine
- c) Shallow marine
- d) Deltaic

5) Ancestors of this specimen were responsible for what great event in Earth's history?

_____ **Great Oxygenation Event (GOE)** _____