NOTES FOSSILS

Earth History

I. Fossils and the Past

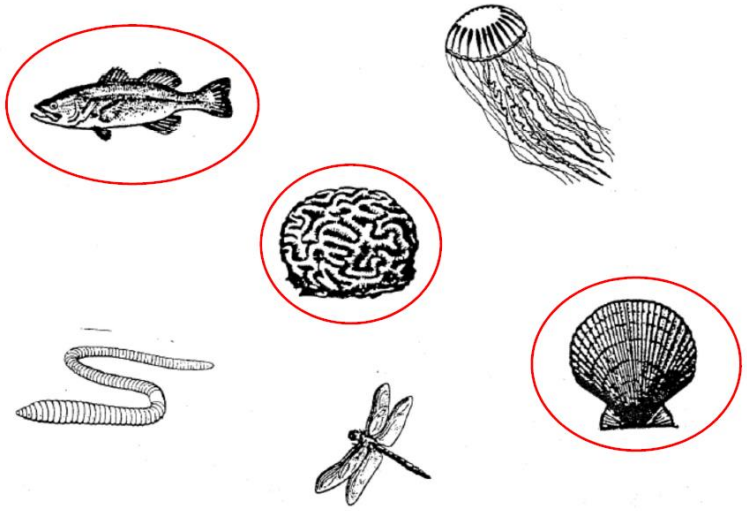
A. A fossil is the remains or the evidence of a living thing

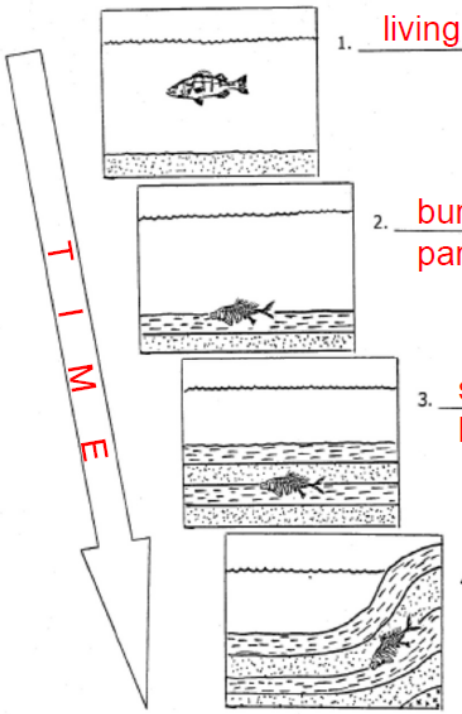
B. Formation of Fossils:

1. a. Most fossils are incomplete because usually only the hard parts of a plant or animal become fossils.
   b. The soft flesh of dead organisms was usually eaten by animals or decayed before it could form into a fossil.

   c. Circle the organisms below that would most likely become a fossil.

Page 2





1. living organism

2. burial of hard parts by sediments

3. sediment becomes rock

4. uplifting, weathering & erosion expose fossil

a. Most fossils form when organisms are buried in sediments.

b. Sediments often harden and change into rock. When this happens, organisms may be trapped in the rock. Most fossils are found in sedimentary rock

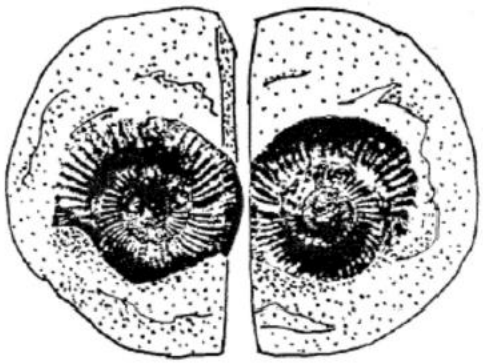
c. Fossils are almost never found in igneous rocks because magma is found deep within the Earth where no living things exist, and lava at the surface of Earth burn organism before fossils form.

d. Fossils are rarely found in metamorphic rocks because the heat, pressure and/or chemical activity that causes a rock to change, also destroys or damages the fossils.

C. Types of Fossils

1. Casts and Molds

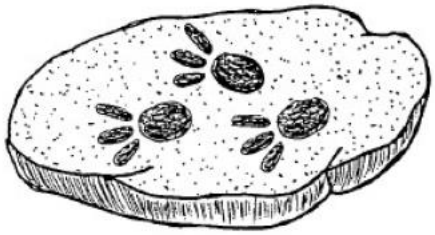
Casts and Molds



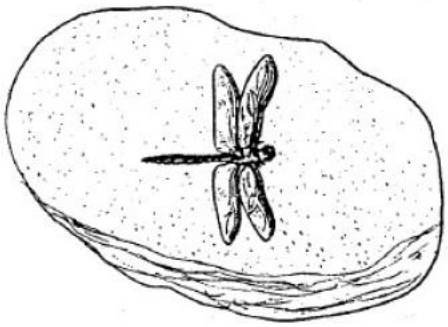
a. Cast an empty space in the shape of the organism. This occurs when the soft parts of the organism decay and/or the hard parts are dissolved by chemicals.

b. Mold occurs when minerals fill a mold and harden into the shape of the original organism.

2. Imprints - occurs when leaves and feathers leave an impression in soft sediment (mud) that later hardens into rock.



3. Amber - occurs when insects are trapped and become embedded in resin (tree sap) that hardens.

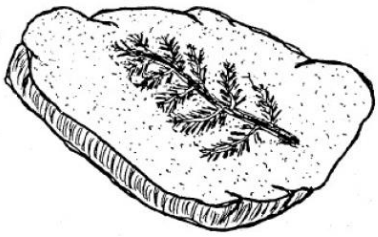


4. Ice - occurs when an organisms is preserved in ice.

5. Tar - occurs when animals are trapped in tar pits as at the LaBrea Tar Pits of California.

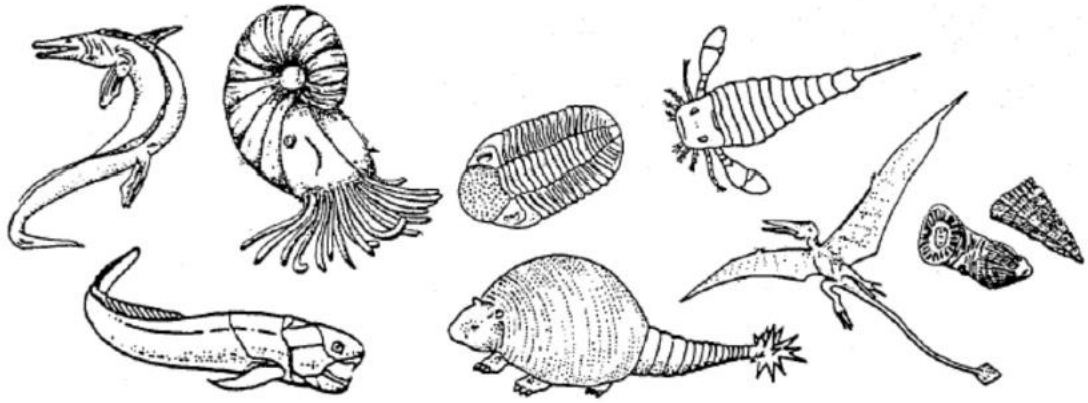
6. Petrified - occurs when minerals dissolved in ground water gradually replace the original tissues of plants and animals.

7. Carbonaceous film occurs when the carbon in the tissues of organisms leave a residue/thin film of carbon on sediment which then hardens into rock.



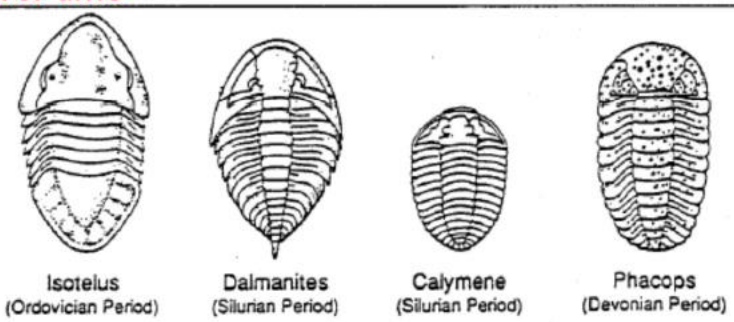
D. Interpreting Fossils

1. Fossils indicate that many different kinds of life forms existed at different times in Earth's history.



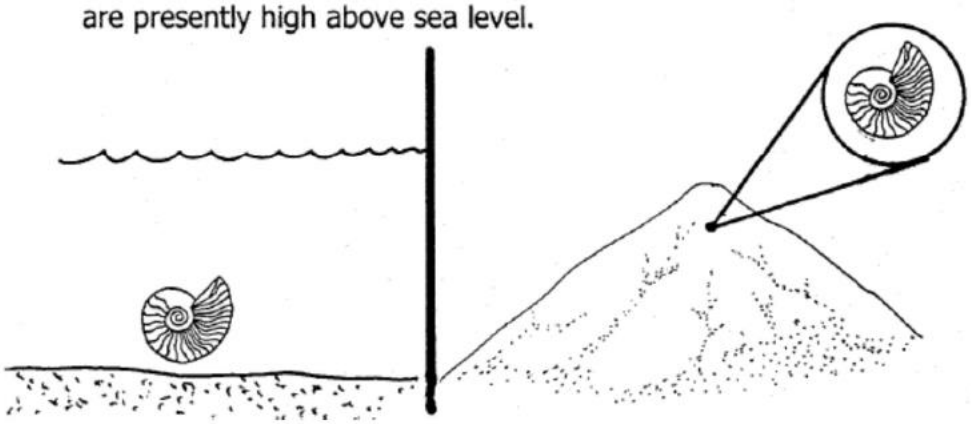
2. When fossils are arranged according to age, they show that _____

certain living things have changed or evolved over time.

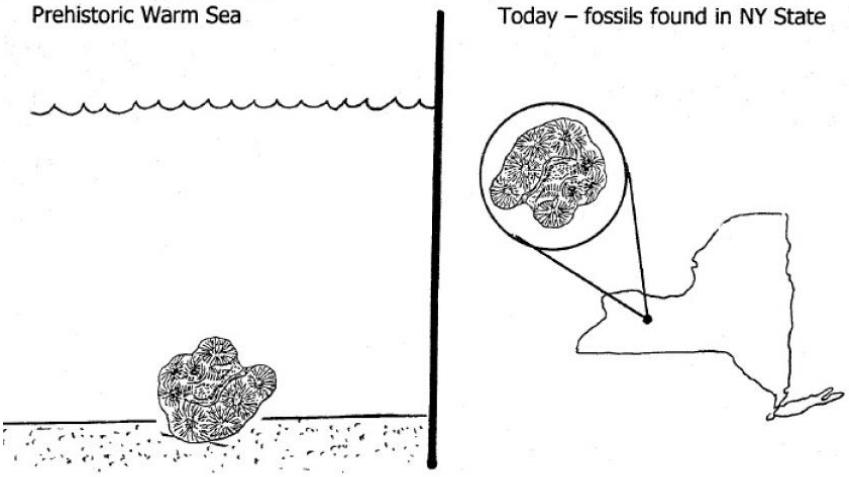


3. Fossils indicate how the Earth's surface has changed.

For example, fossils of marine organisms can be found in rocks that are presently high above sea level.



4. Fossils give clues to Earth's past climate Pag



Since coral today live in the warm waters of equatorial regions, between 30°N and 30°S latitude, we can infer that N.Y.S. has a warmer climate.

5. Fossils tell about the appearance and activities of past life

For example, fossil teeth give clues about the kind of food the animal ate.