

Fossils



Introduction to Marine Science
PA Sea Grant



What is a fossil?

- Remnants or evidence of any living thing, including plants, that once lived on the Earth
- Generally 10,000 years old



How are fossils formed?

① 1. Permineralization

- Most common
- Casted or molded impression
- Minerals fill the cellular spaces and crystallize

② 2. Carbonization

- Creates an impression in the rock

③ 3. Amber

- Invertebrates are polymerized and hardens into amber

How are fossils formed?

④ 4. Asphalt

- Mammals trapped in tar pits are preserved

④ 5. Desiccation

- Mummified bodies of humans and animals

④ 6. Refrigeration

- Freezing of a specimen limited to the last ice age



Snail lives in ocean

Fossil Formation



Snail dies



Snail get buried

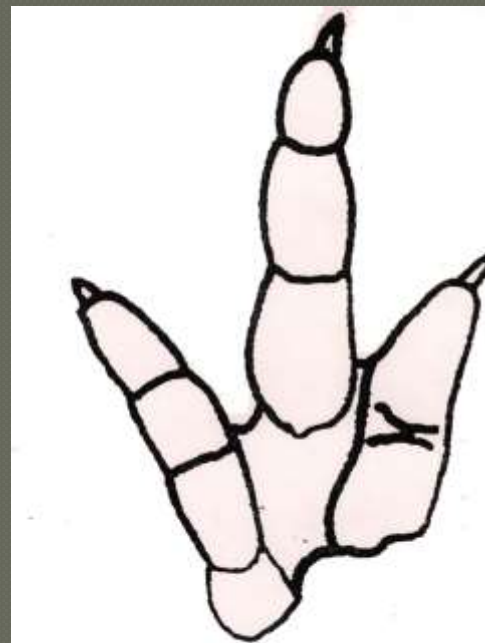


Soft parts decay



Permineralization

Impression Molds



Kayentapus left footprint
(full-size)



Dinosaur Eggs-cast fossil



Geologic Time



Youngest

Oldest

Sedimentary Layers



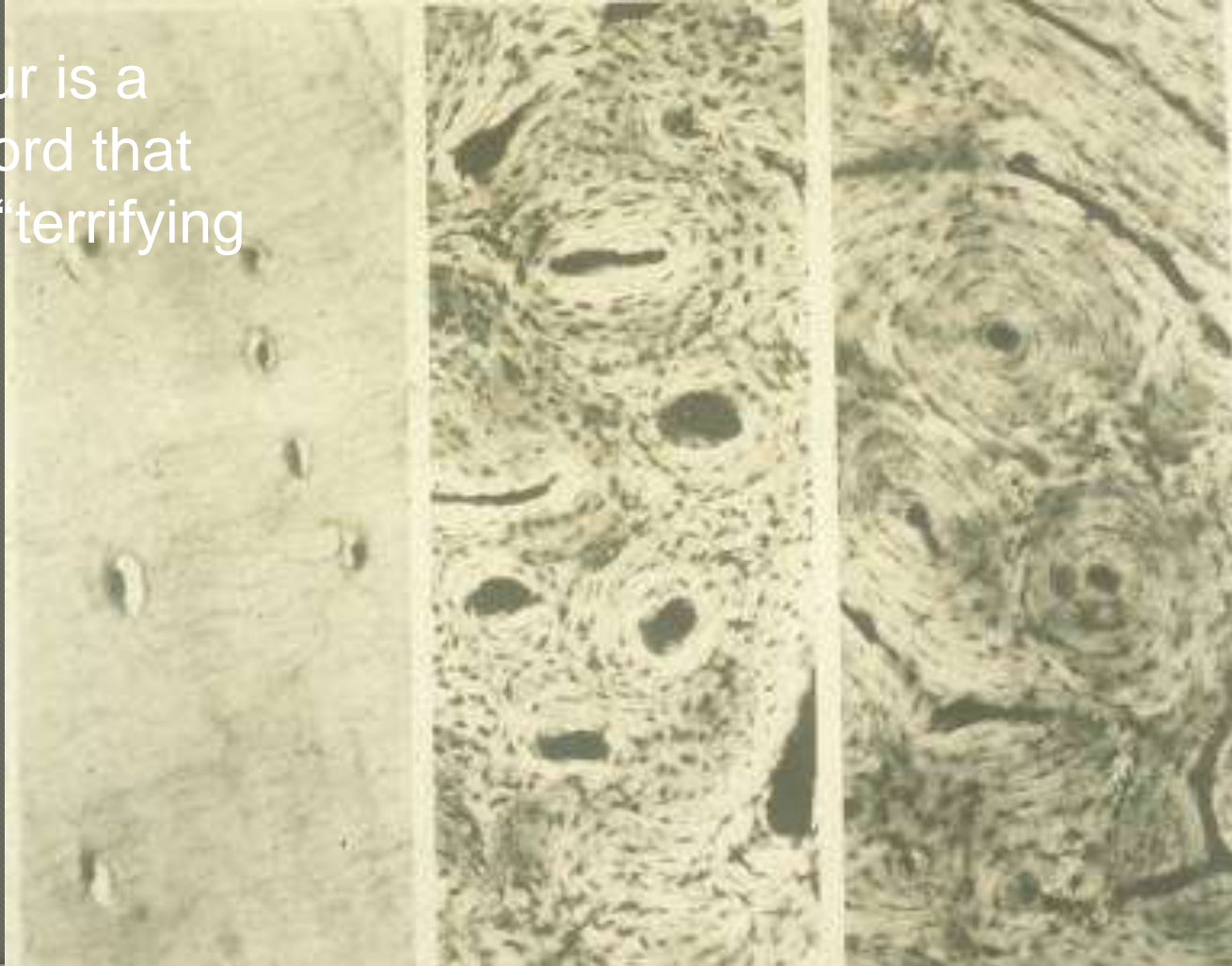
Bone slices under a microscope

lizard

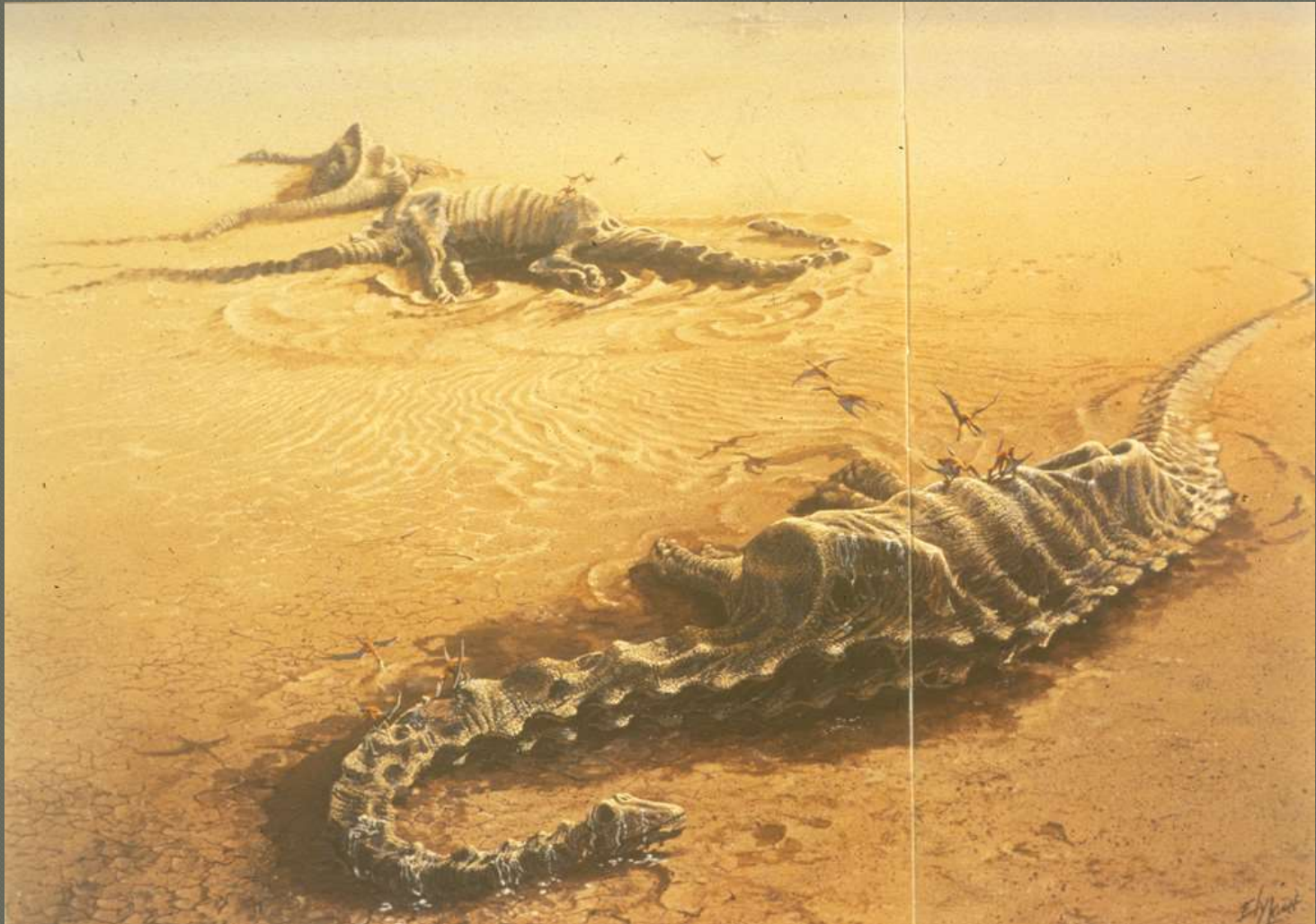
Dinosaur

mammal

Dinosaur is a Latin word that means “terrifying lizard”



Why did dinosaurs go extinct?



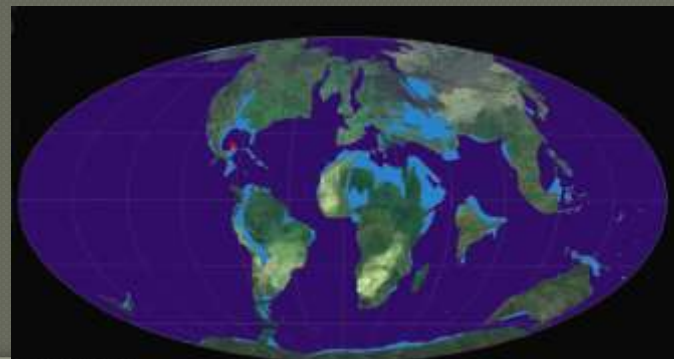
Meteorite Impact



Extinction Theory



65 million years ago impact crater in Gulf of Mexico



Paleontology

Study of ancient life
through fossil evidence



Importance of Fossils

- Fossils are among the most valuable sources of information about the Earth's history. They tell us about the organisms that lived on Earth from the time of the oldest fossils, about 3.8 billion years ago, to the present. By studying fossils we can learn not only about the creatures and plants of the distant past, but how they grew, what they ate, how they interacted, and many aspects of their behavior.

Sources

- ◉ Allegheny College

- ◉ Fossils Facts and Find

http://www.fossils-facts-and-finds.com/fossil_formation.html

http://www.gsa.state.al.us/gsa/fossil_imp.html

The End!!

