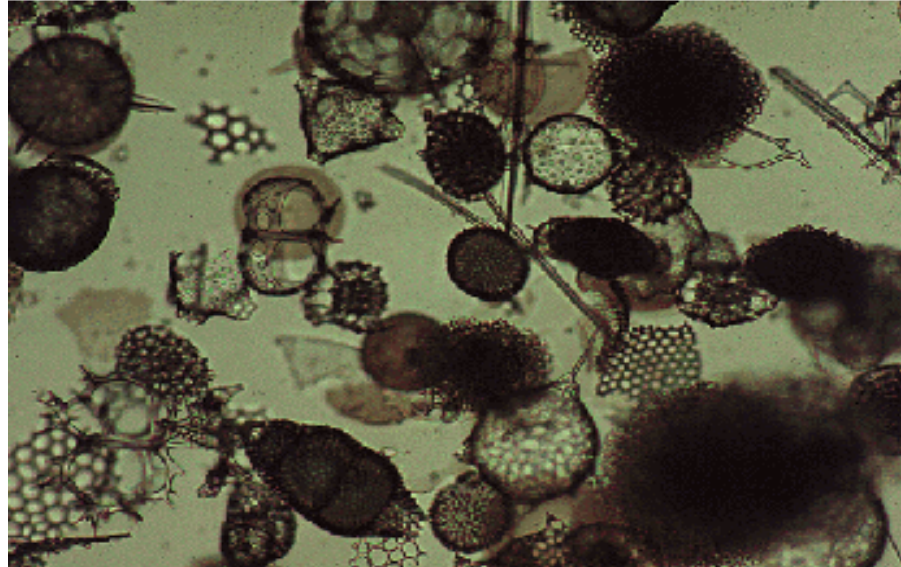


FOSSILS



***Present is the
Key to the Past***

Microfossils
Radiolarians



Macrofossils
Mollusca

Vertebrate Fossils

***Sloth
from La Brea***



Trace Fossils



footprints

coprolites

imprints

borings

burrows



dinosaur "dung"

How most fossils become

Preservation of part of an organism

- 1. hard part (carbonate, siliceous, bone)***
- 2. rapid burial (fine grained sediments)***
- 3. preservation factor (chemical and physical)***

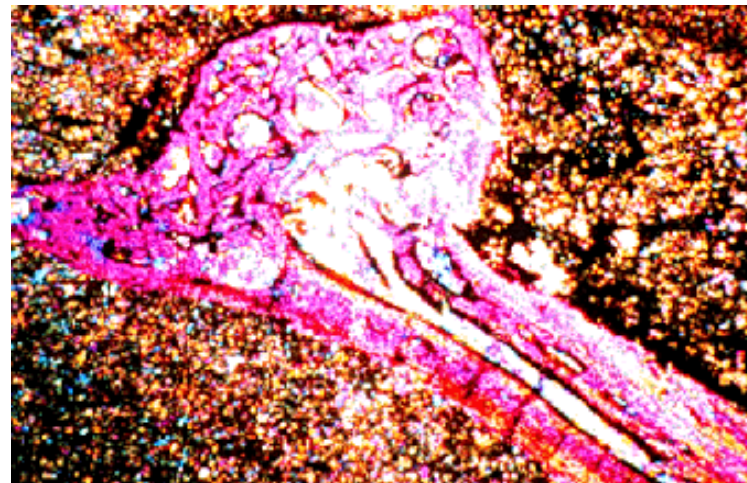
Preservation of organisms activity

- 1. mold and cast***
- 2. burial and then replacement***

Types of preservation



Fish



Dinosaur bone



Fly in Amber

With alteration

- Carbonization
- Permineralization
- Recrystallization
- Replacement

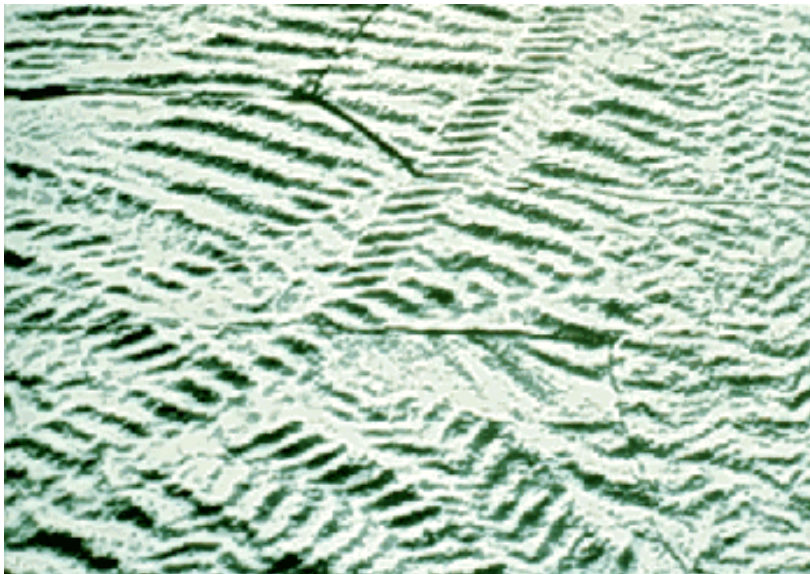
Without alteration

- Frozen
- Mummification
- Original shell or bone

Data Derived from Fossils

Direct Evidence

Indirect Evidence

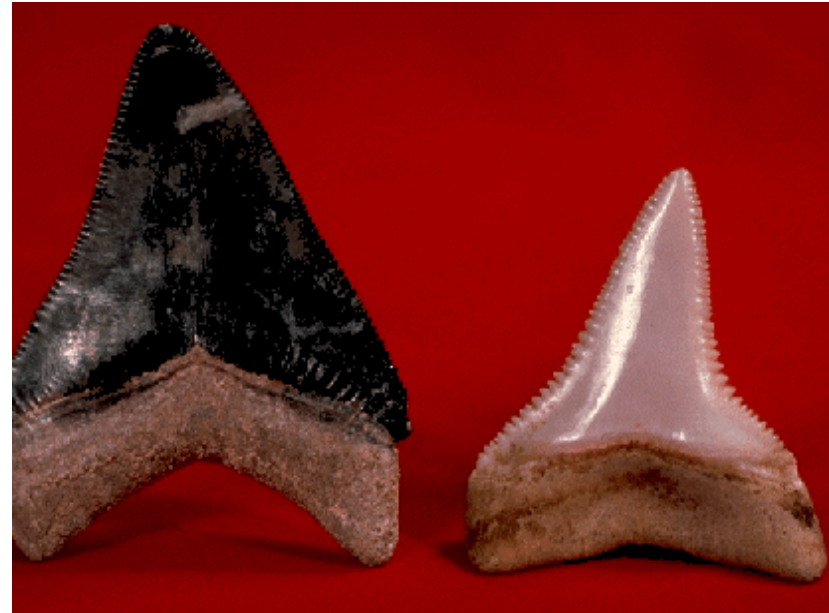


Tracks



Dinosaur Nest

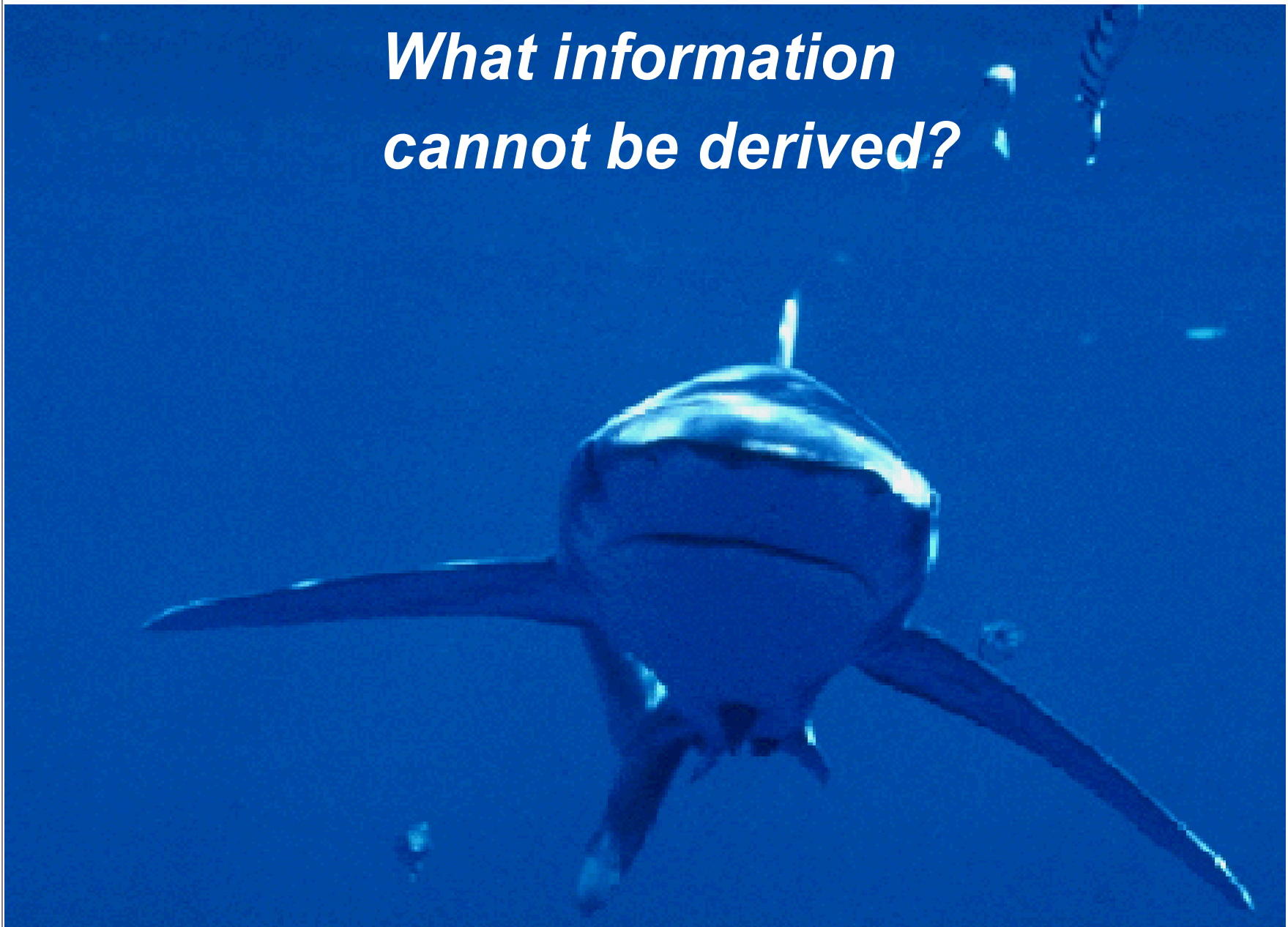
***Clues about the
organism***

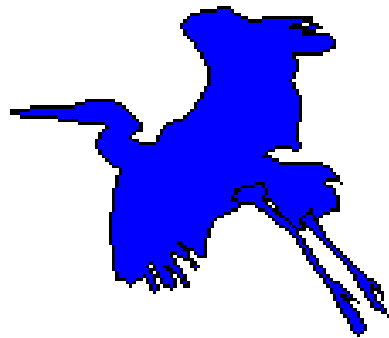


***Shark teeth
size***

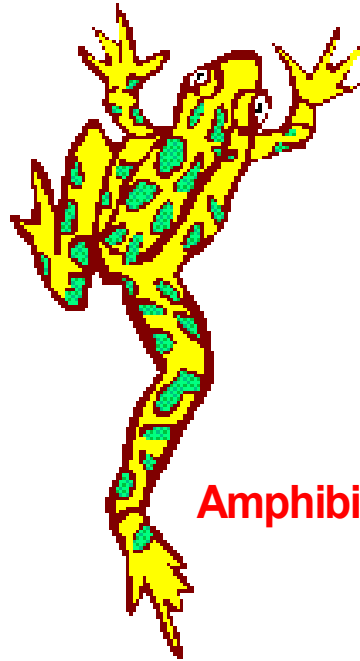


***What information
cannot be derived?***





Aves



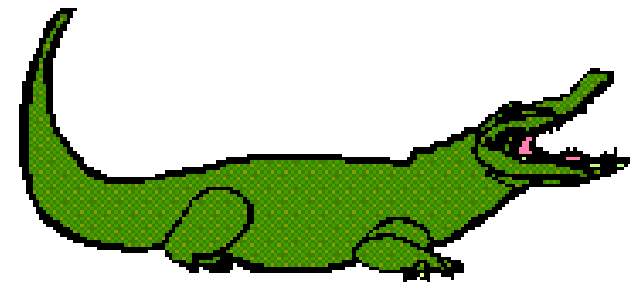
Amphibian



Pisces



Mammal

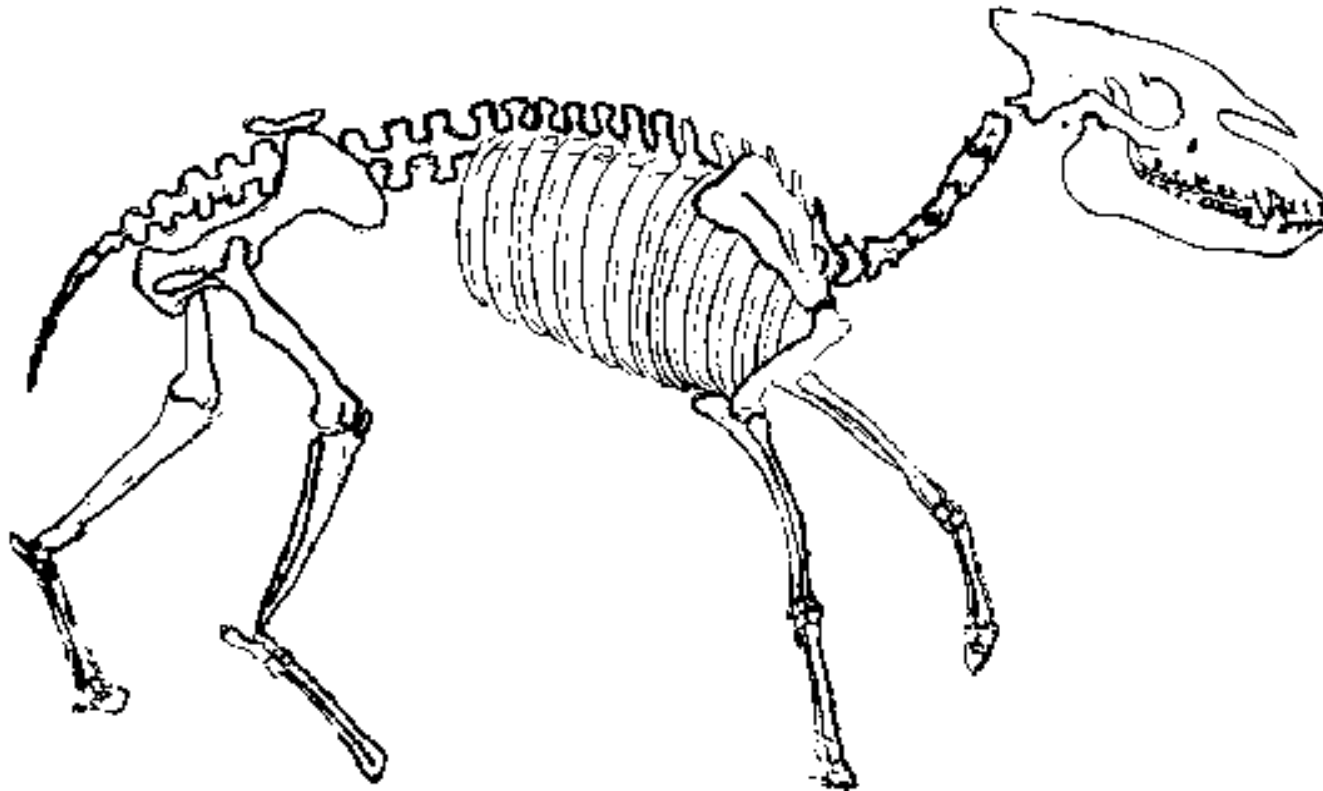


Reptile



Where does the dinosaur belong?

Reconstruction



DEATH CONDITIONS



Environmental evidence



***Capitola, California
storm layers versus living conditions***

Paleogeography

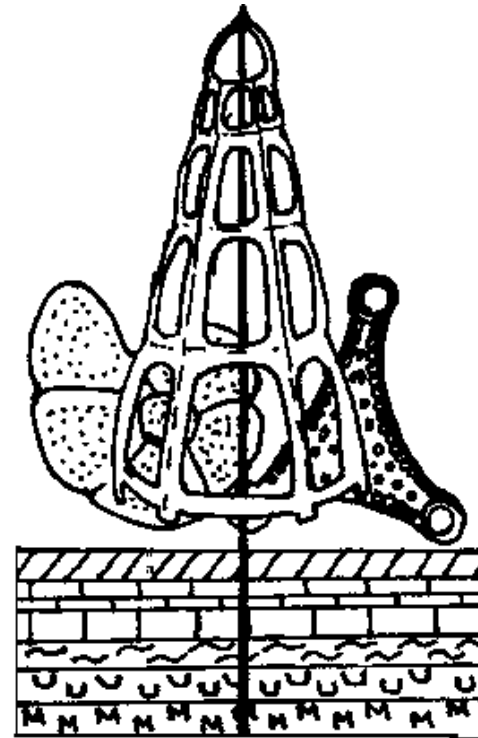


Pangea



***movement of
the Earth's Crust
through time***

Significance of Past Life



***coal, oil,
stratigraphy
relative time***