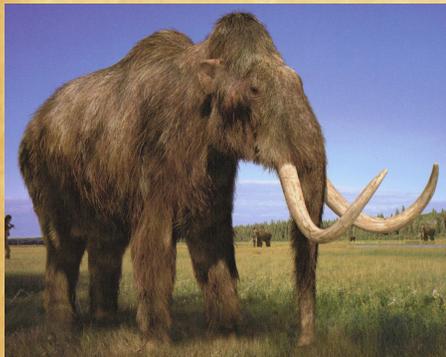


What Do Fossils Tell about Extinction?

Chapter 10 Lesson 3
Part 2

ByDesign Science, 6th Grade

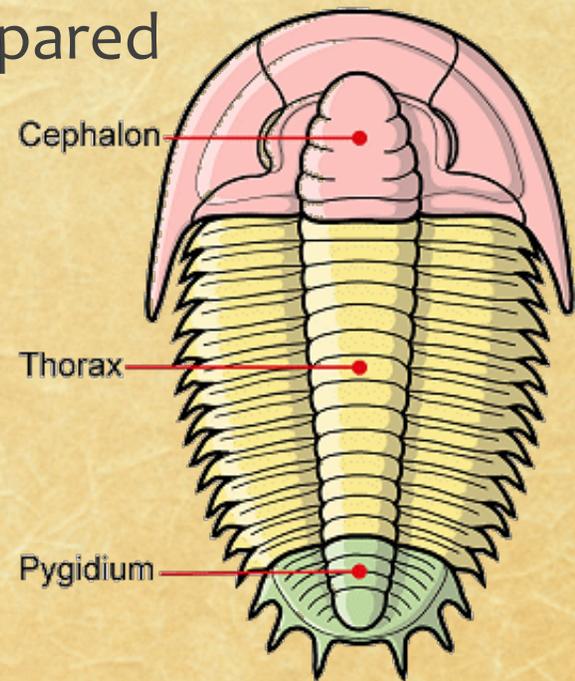
Extinct Animals



- ◆ Although thousands of species have become extinct throughout Earth's history, you will talk about only a few groups of them in this lesson.
- ◆ The first group, the trilobites, consisted of small organisms that lived in shallow seas long ago.
- ◆ The other two groups included some of the largest organisms that ever lived on land, such as the dinosaurs and woolly mammoths.

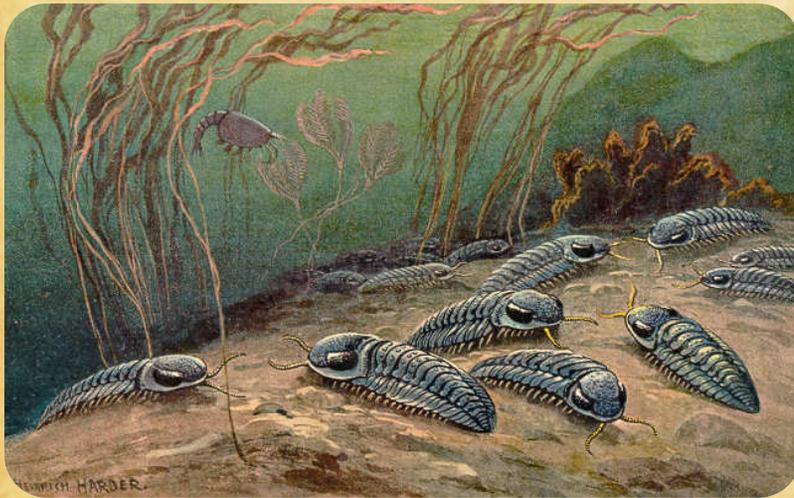
Extinct Animals: Trilobites

- ◆ Trilobites were marine arthropods that were found preserved throughout the Paleozoic layers of the geologic column.
- ◆ Although they are sometimes compared to the horseshoe crab, trilobites are unlike any creature alive on Earth today.
- ◆ The word *trilobite* means three lobes, which accurately describes the bodies of these arthropods.



Extinct Animals: Trilobites

- ◆ The existence of trilobites in the fossil record provides evidence that is consistent with the biblical view of Earth's history.



- ◆ Their complexity, their appearance early in the fossil record without evidence of evolutionary ancestors, and their amazing preservation are compatible with the biblical accounts of Creation and the Flood.

Extinct Animals: Dinosaurs

- ◆ Dinosaurs have fascinated people for many years.
- ◆ In the nineteenth century, scientific attention turned to new discoveries made in along the coast of England.
- ◆ A 10-year-old named Mary Anne Mantell found a large reptile tooth in 1822.
- ◆ Her find was named *Iguanodon* because the teeth resemble the an iguana lizard.



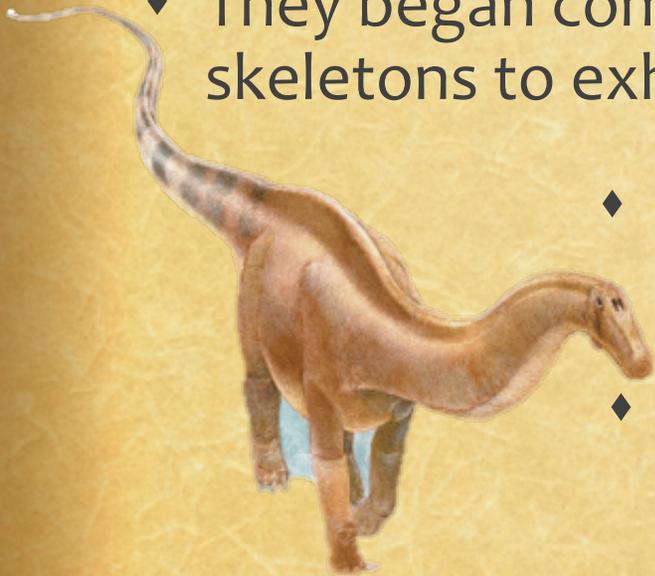
Extinct Animals: Dinosaurs



- ◆ Sir Richard Owen studied the fossils found by Mantell and by others.
- ◆ He made models for the Crystal Palace exhibition and first coined the name “dinosaur.”

Extinct Animals: Dinosaurs

- ◆ While scientists were studying these new finds, North America had its own dinosaur rush!
- ◆ Two important early dinosaur hunters were O. C. Marsh and Edward Drinker Cope.
- ◆ They began competing to find the biggest and best skeletons to exhibit.
- ◆ Often in their zeal, the same dinosaur was named twice.
- ◆ For example, Apatosaurus and Brontosaurus were two names for the same animal.

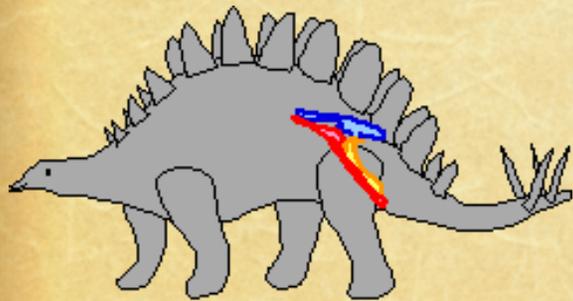


Extinct Animals: Dinosaurs

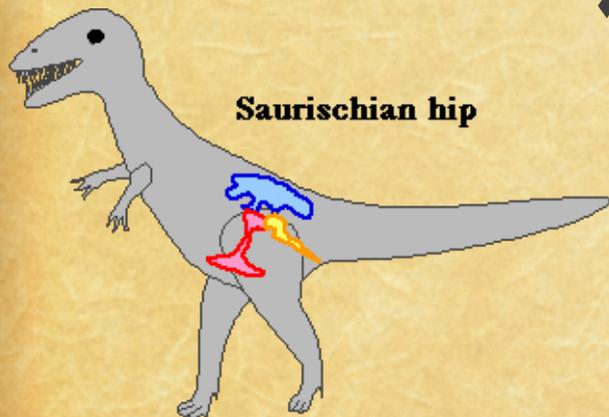
- ◆ Since these early discoveries, many dinosaur fossils have been found in every region and continent, even on Antarctica.
- ◆ Many more remain buried, waiting to be found.



Extinct Animals: Dinosaurs



Ornithischian hip



Saurischian hip

- ◆ These reptiles probably varied greatly in size and in appearance.
- ◆ The fossil bones can provide solid data about the size and body plan of these animals.
- ◆ Scientists generally classify dinosaurs into two main groups based on the shape of their hip bones:
 - ◆ The *Ornithischian* (bird-hipped)
 - ◆ The *Saurischian* (lizard-hipped)
- ◆ Both groups stood erect with their legs held under their bodies.

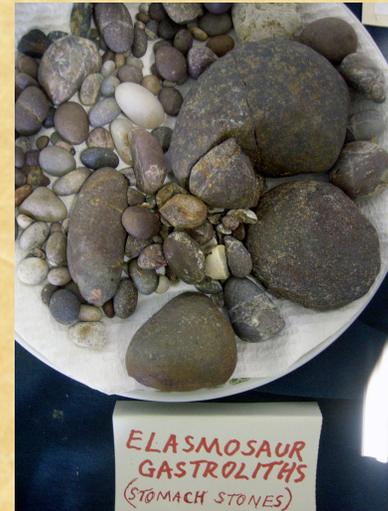
Extinct Animals: Dinosaurs



- ◆ However, as far as their appearance and behavior are concerned, there is a lot of interpretation involved in what you see in museums or in reconstructions.
- ◆ For example, skin prints can provide clues about skin texture, but scientists must use their imaginations and knowledge about living organism to fill in missing details like coloring, striping, or camouflage patterns.

Extinct Animals: Dinosaurs

- ◆ Footprints can help us figure out how they might have moved.
- ◆ Fossilized stomach contents can suggest what foods they ate.



Extinct Animals: Ornithischians Dinosaurs

- ◆ Recall that scientists generally classify dinosaurs into two groups based on skeletal features.
- ◆ The Ornithischians or bird-hipped dinosaurs, as their name suggests, had a hip structure like birds
- ◆ Most of these dinosaurs ate plants and many had bony plates on their skin.



Extinct Animals: Ornithischian Dinosaurs

- ◆ Stegosaurus were one group of bird-hipped dinosaurs.
- ◆ Stegosaurus walked on four legs, had small heads, and short necks.



- ◆ Bony plates on their backs or heads are thought to have been used for defense or to perhaps regulate body temperature.

Extinct Animals:

Ornithischians Dinosaurs

- ◆ Hadrosaurs were another group of bird-hipped dinosaurs common in western North America.
- ◆ These animals had duck-like beaks and hundreds of teeth in their mouths.
- ◆ Fossils evidence indicates that Hadrosaurs called Maiasaura took care of their young.

