



## Crinoids

The name "crinoid" comes from two Greek words that mean "lily form" because crinoids look like flowers with "roots," a long "stem" and a "flower" on top. Don't be fooled, though: a crinoid is NOT a flower, it is an animal. Modern crinoids can live in shallow water, but have also been found at depths of 6,000 meters. The earliest known crinoids come from the Ordovician Period (over 450 million years ago).

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## Ammonites

Ammonites are part of a class of organisms called "cephalopods" which means "head-foot." They are extremely common and are one of the best-known groups of fossils. Ammonites are extinct, but they are related to the modern octopus and chambered nautilus. They first appear in rocks that are 400 million years old, a geologic time called the Permian Period. They became extinct and disappeared from the rock record 65 million years ago in the Cretaceous Period.

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## Brachiopods

Brachiopods are bivalves which means that they have two shells or "valves" that fit together. They were marine organisms. We say "were" because most brachiopods became extinct during the great Permian-Triassic Extinction that took place over 250 million years ago. It is estimated that over 90% of all marine organisms and nearly 70% of all land-dwelling vertebrates became extinct during this event.

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## Trilobites

One of the best known - and most popular - of the marine fossils are the trilobites. The name "trilobite" means "three lobes." Look at a trilobite and you can see three sections: one lobe is the head (called the cephalon), one lobe is the body (called the thorax) and the third lobe is the tail (called the pygidium). When a trilobite needed to protect itself, it would roll up in a ball, like an armadillo does today. There are approximately 17,000 known trilobite species!

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## Rugose Coral

The Rugosa Coral (also simply called "Rugose Coral") is an order of extinct coral. They lived in warm, shallow seas in the Middle Ordovician through the Late Permian Periods. Their common name is "Horn Coral" because rugosa fossils look like horns. They first appear in the fossil record in rocks over 540 million years old, in the Cambrian Period. Just like modern coral, they formed extensive reefs.

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## Gastropods

Gastropods include snails and slugs (think of a slug as a snail without a shell). They live both in the sea and on the land. Gastropods have coiled shells. The coils are called "whorls." Gastropod literally means "stomach foot." They are named this because it looks like the move around on their bellies. It is estimated that there are over 15,000 different species of gastropods! The earliest gastropods lived in the oceans.

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## Tyrannosaurus

The fossil record shows that dinosaurs were the most important 4-legged animal on Earth for over 150 million years! They were the "Kings" of the land throughout the Mesozoic Era. The name "dinosaur" was created by the British scientist, Sir Richard Owen, in 1842. It means "Terrible Lizard." Tyrannosaurus Rex was a carnivore. This means that it ate meat, most likely other dinosaurs.

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## Coprolites

Coprolites look like something your dog would leave in the backyard. Yes, coprolites are fossilized dinosaur dung. Surprisingly, there is a lot of fossilized dinosaur droppings in the rock record. They turn out to be very important fossils. Paleontologists have discovered that when the dung was fossilized, much of what was trapped inside was also fossilized. When coprolites are studied under a microscope, a paleontologist can discover what a dinosaur ate.

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## Archaeopteryx

Archaeopteryx is one of the most important fossils ever discovered anywhere in the world. The name comes from two Greek words that mean "ancient wing." It has feathers and wings like a bird. However, the skeleton is much more like a dinosaur. This fossil is believed to be a step in the evolution of dinosaurs into birds. That is why paleontologists call this a "transitional fossil."

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