



The World's Most Fascinating **ROCK COLLECTION**

www.TheWorldsMostFascinatingRockCollection.com



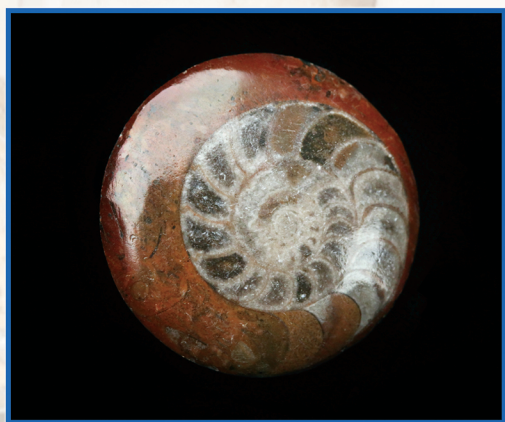
Klara Viskova/Shutterstock



uh-Oh....
What's that
doing here?
I thought
dinosaurs
were extinct!

FOSSILS

The Past in Your Hand



Polished ammonite fossil

Of course we know that dinosaurs stopped roaming the planet millions of years ago! Then why is it that we can still sometimes see their footprints in the earth? And why do we find shells, leaves, bones, and other prehistoric things that help us understand the past? Those awesome artifacts are brought to you by....



A fossil is the evidence of a prehistoric living thing. Fossils come in many forms. Some are *trace fossils*, like footprints or tracks made by prehistoric animals that walked through mud which later hardened into rock. The animals died millions of years ago, but the tracks are still here.



— Phew! You
had me
worried
for a
minute!



Fossil of a plant



Fossil of a fish



Fossilized mosasaur teeth

Other fossils are impressions of a plant or animal that died and was buried under layers of sand and dirt. As that living thing decayed, it left behind a hole, called a *mold*, in its shape. Sometimes a mold was later filled with other minerals which hardened in the shape of the mold. Those fossils are called *cast fossils*.

A fossil can be just a small part of a body, such as a bone or tooth, or it can be the entire body of an insect or animal if it is completely covered and protected.

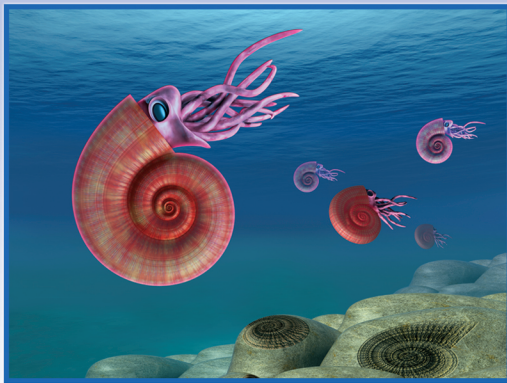


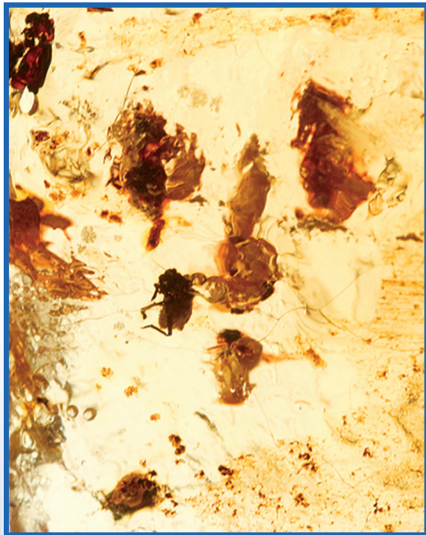
Illustration of a prehistoric ammonite



Fossilized ammonite shell

The pictures above show an *ammonite*. It was a prehistoric sea creature that lived 65-240 million years ago. Way (way way way) back then they were all over the place, but they became extinct around the same time as the dinosaurs. Fossils of their shells tell us ammonites existed and that their living relatives are the modern day octopus, squid, and nautilus.

Although ammonites have long been extinct, we have a pretty good idea what they looked like because of the fossils they left behind. Over time the actual remains of living things break down and are replaced with minerals. If you look closely at the picture of the fossilized shell, you can see that the minerals have left crystals in the hollow parts of the shell.



Prehistoric insects trapped in amber

You know the sticky golden stuff that oozes from trees? That's called *resin*. Well, prehistoric resin trapped bugs as it oozed down ancient trees. Then it hardened into a plastic-like rock called *amber*. We can find fossils of whole insects that have been perfectly preserved this way. The resin protected the entire body of the insect for thousands or even millions of years.



Fossils tell us the fascinating story of our world before we were in it! By studying fossils, we can learn about life on earth millions of years ago. Fossils

teach us about different species of life, including those that are now extinct, like dinosaurs!

Because paleontologists study dinosaur fossils, we know how they lived, where they moved, and even what they ate! Now, you are probably thinking, “But, if they are extinct, how can we actually know what dinosaurs ate?” The answer is found in dinosaur coprolite, which is actually a nice way to say fossilized dinosaur poop!

Don’t worry, it doesn’t stink; the actual poop has been replaced by minerals. In fact when it is polished, it looks like ordinary rock! But, when studied carefully it tells scientists what certain dinosaurs ate!



Dinosaur coprolite



Polished dinosaur coprolite

It kind of makes you wonder... what fossils are yet to be discovered? And what types of fossils will *we* leave behind?



— Don’t look at me...
! flushed!

Not only are fossils fascinating because of what they teach us, they are also fascinating for what they help us to imagine. When you hold one in your hand, you can feel connected to the prehistoric past while you wonder what the future holds!