Extraordinary eggs!

Scientists have been lucky enough to find lots of fossilized dinosaur eggs, and even nests. There is a huge variety of sizes and shapes – from small, circular eggs that would fit into the palm of your hand, to eggs the size of cannonballs.

Large scale

This massive egg was found in China and is thought to have been laid by a *Therizinosaurus*. There were larger eggs – the largest was laid by a dinosaur called *Macroelongatoolithus*.

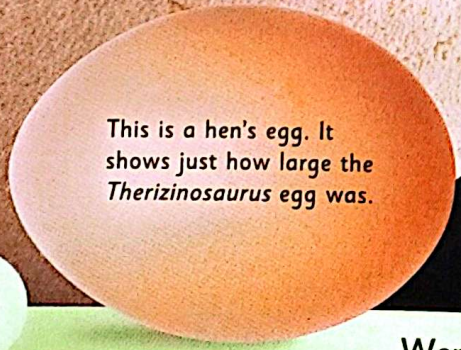
This dinosaur egg fossil is from Mongolia.

A muddy home

Some eggs were laid in mud, which proved a perfect base for fossilization. These are *Maiasaura* eggs from Montana, USA.

Many shapes

Some dinosaur eggs were round, but others were elongated, rather like a loaf of bread.



This is a hen's egg. It shows just how large the *Therizinosaurus* egg was.

Oviraptor nest from China, showing the eggs laid in a spiral pattern. Each egg is approximately 16 cm (6 in) long.

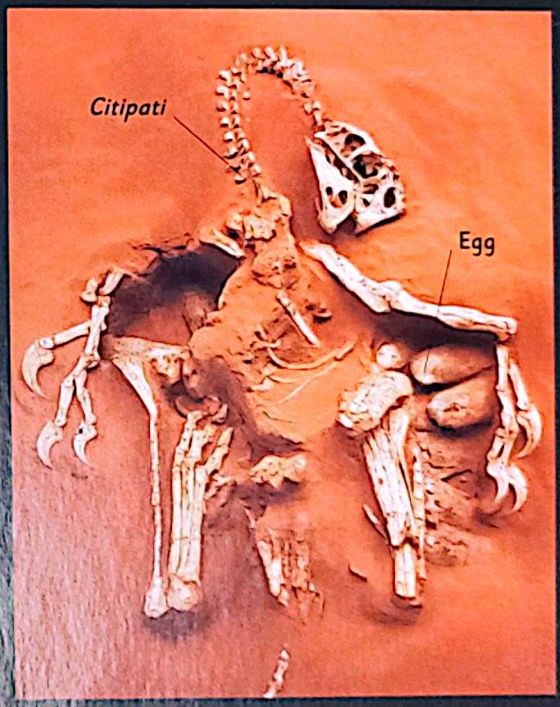
Were dinosaur egg shells soft and leathery like those of snakes?

I'm making a break for it!

A tiny dinosaur hatchling would break out of its egg casing. While some dinosaurs were probably ready to look after themselves after hatching, others would have depended on parental help for food and protection.

Fossilized dinosaur egg

Model of *Parasaurolophus* hatchling



Egg care?

Did dinosaurs sit on their eggs, like birds today? Some did; this *Citipati* died and was fossilized sitting on her eggs some 80 million years ago.

Turn and learn
Parental care of young dinosaurs: **pp. 24-25**

Nest is dug out of sand or earth.

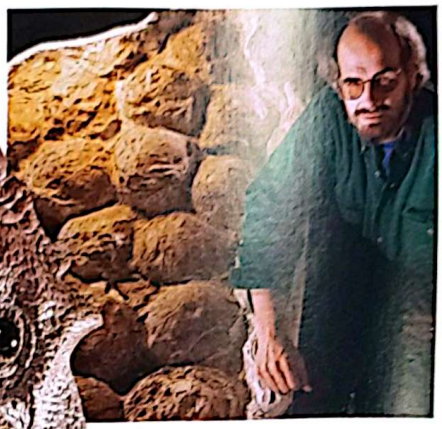
Bringing it back to life

This model recreates the fossilized scene above, showing the *Citipati* shielding her eggs. These dinosaurs had odd-looking beaked snouts. They may have raided other nests for food for themselves and their young.

No. They had hard, brittle shells, like the eggs of birds.

Birth and care of you

We know that some dinosaurs lived in colo
thanks to finds of fossilized mud nests in
Montana, USA. These belonged to *Maia*
The name means "good mother lizard



What a discover

Jack Horne
of the palae
who discov
nests in Mo
He's shown
a fossilized

Maiasaura

Turn and learn

Dinosaurs that lived in groups:
pp. 30-31

Let's look at the nests

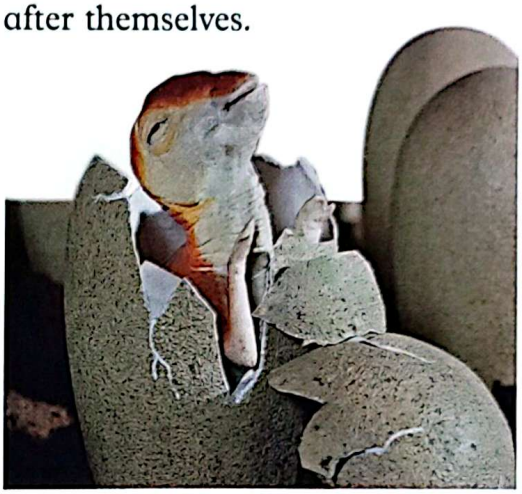
The round nests were as wide as a car, 1 m (3 ft) high, and could hold 25 eggs. *Maiasaura* made their nests carefully, each creature forming a large mound with a hollow in it.

What sort of dinosaur was *Maiasaura*?

Model of *Maiasaura* nest

It's safer in the nest!

The nests contained trampled eggshells and some had bones of hatchlings, which suggests the young had remained in the nest after hatching. Similarly, many of today's birds remain in their nest until they can look after themselves.



Some hatchling fossils had worn teeth, suggesting they had been fed in the nest or had foraged and returned.

I'm gonna grow!

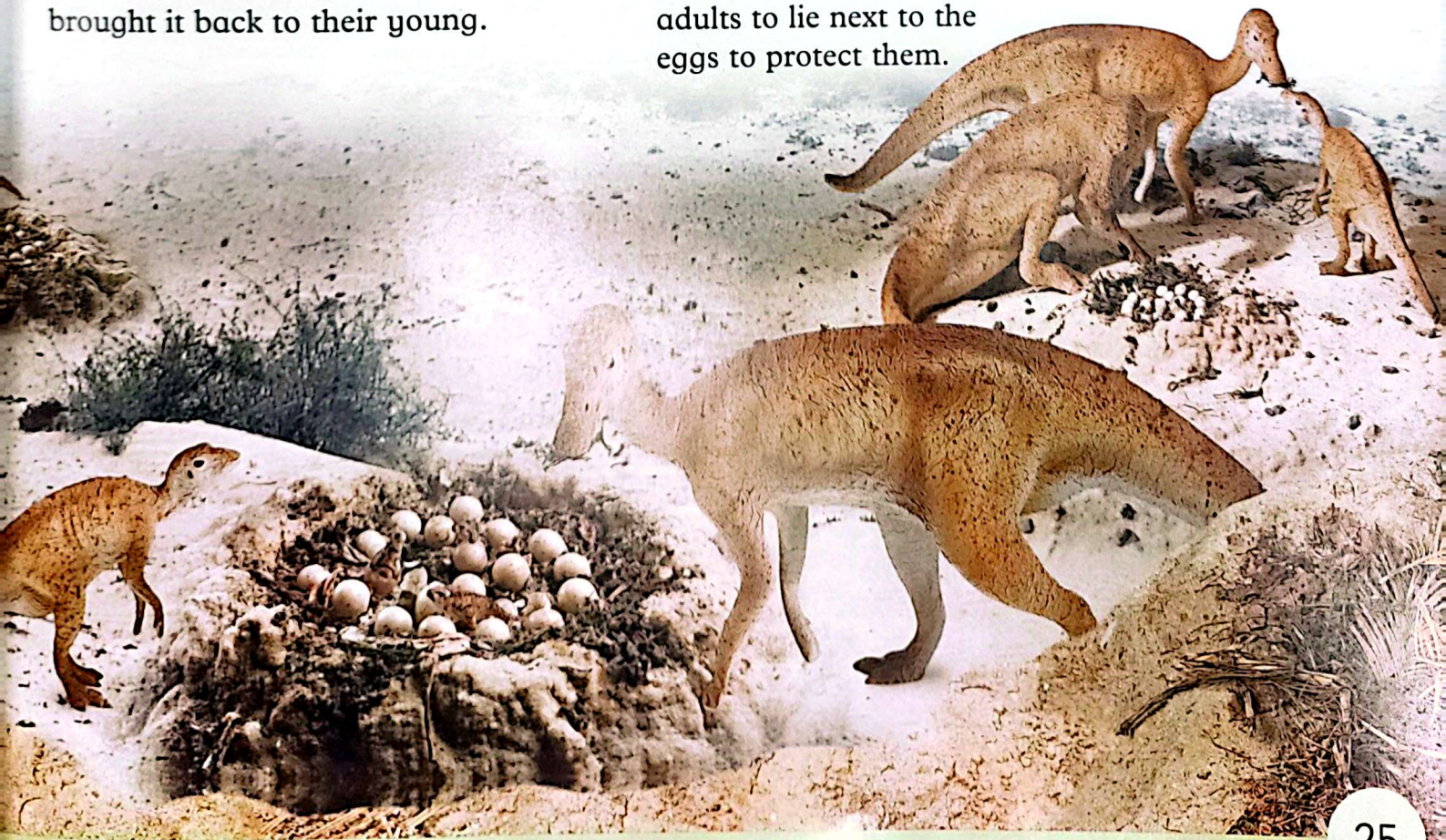
The hatched babies weighed about as much as a big, heavy book, and were about 30 cm (1 ft) long. The adult dinosaurs weighed as much as a small car and were as long as a bus.

We're hungry!

Experts don't think there were many plants around the nests, so the mothers probably found food elsewhere and brought it back to their young.

Colony life

The nests in Montana were spaced out, suggesting they were part of a colony. The spaces acted as pathways between nests, and allowed the adults to lie next to the eggs to protect them.



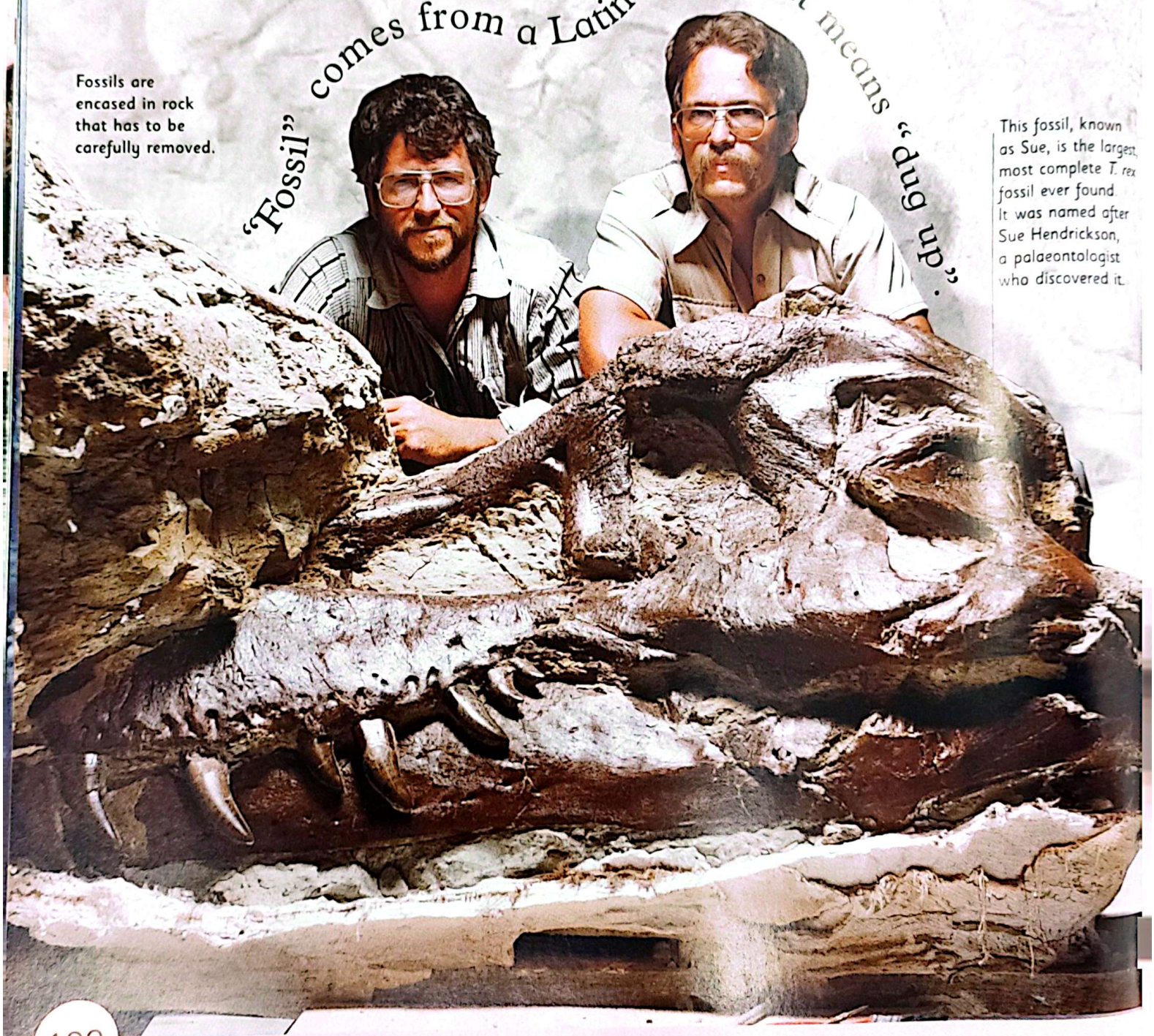
It was a hadrosaur. Learn more about them on pages 70–71.

Fossils

Fossils have been found all over the world, but they are not easy to recognize and have often been discovered by accident, perhaps following building work.

The right conditions?
Lots of fossils have been found, but for every fossilized dinosaur, hundreds and thousands died, decayed, and left no trace.

"Fossil" comes from a Latin word that means "dug up".



Fossils are encased in rock that has to be carefully removed.

This fossil, known as Sue, is the largest, most complete *T. rex* fossil ever found. It was named after Sue Hendrickson, a palaeontologist who discovered it.

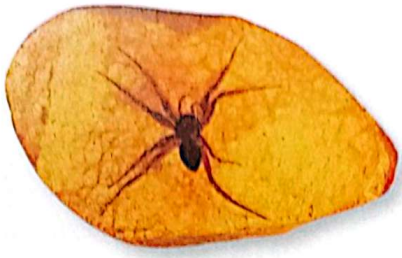
Name one difference between fossilization and mummification.

What sort of fossil is that?

There are different types of fossils. Classification depends on how they were created.

Total preservation

This is when the whole animal is preserved, such as an insect in amber.



Semi-preservation

This results when just the hard parts of an object are preserved unaltered.

Petrified

Wood is sometimes petrified. It means the hard parts are preserved, but are chemically altered.

Natural mould

This occurs when the animal or plant decays away, leaving a hole in the rock. The palaeontologist fills this with latex rubber.

Natural cast

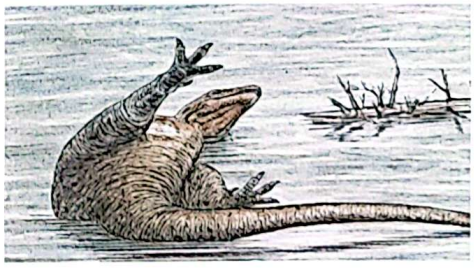
This forms as a mould, but the hole is filled by natural substances. For example, a fossil may be cast in a stone called flint.

Trace fossils

These are fossils that show where an animal has been, such as footprints, nests, or coprolites (animal poo).

Picture detective

Look through the Fossils pages to identify each of the picture clues below.



Turn and learn

How a dinosaur may turn into a fossil: **pp. 102–103**

Fossils are preserved in the Earth's rocks. Mummification is usually done by people.