

**HISTORY OF THE WORLD  
IN COMICS**

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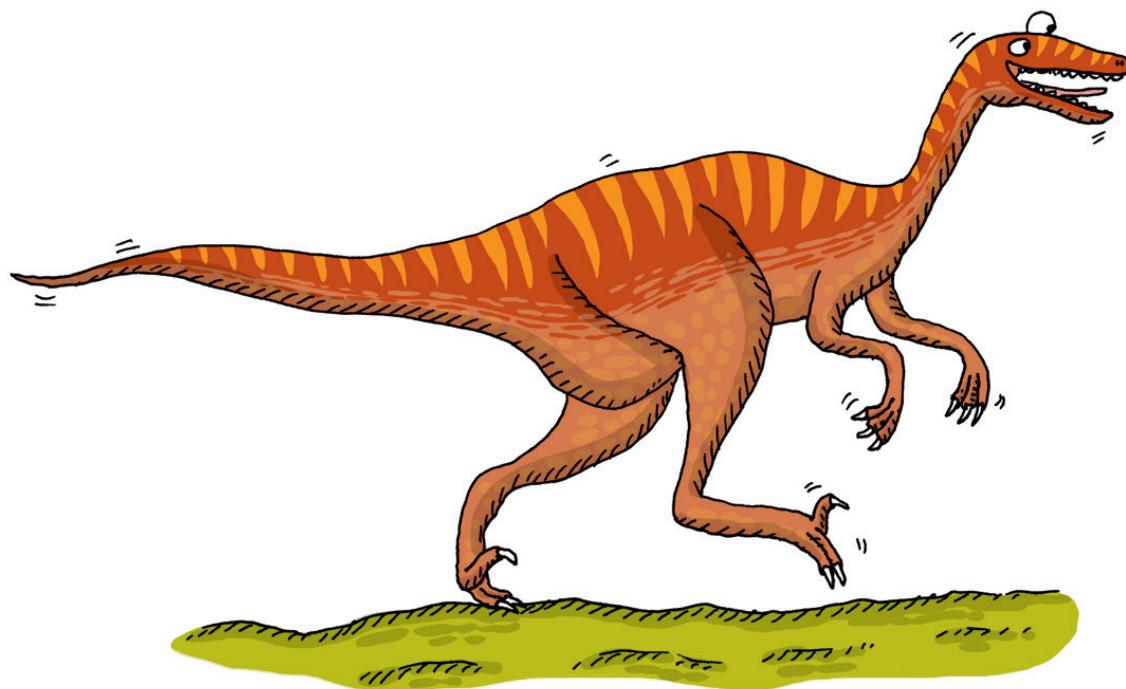


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by **Jean-Baptiste de Panafieu** • illustrated by **Adrienne Barman**



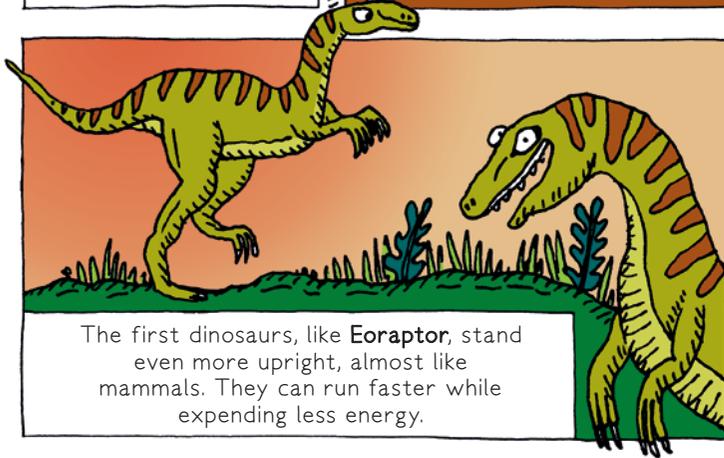


Some of the archosaurs are smaller, and more and more bipedal.

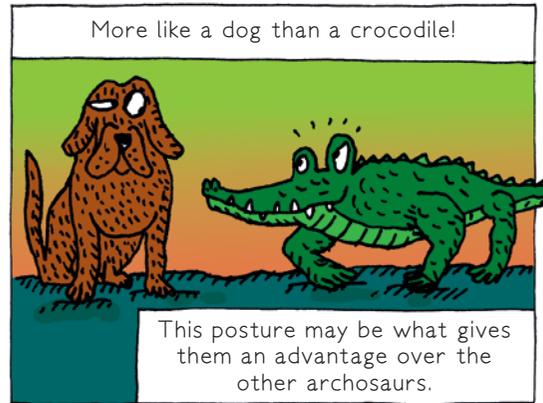


Marasuchus (20 in / 50 cm)

Marasuchus feeds on insects and small animals. Its forefeet may be able to grasp its prey!



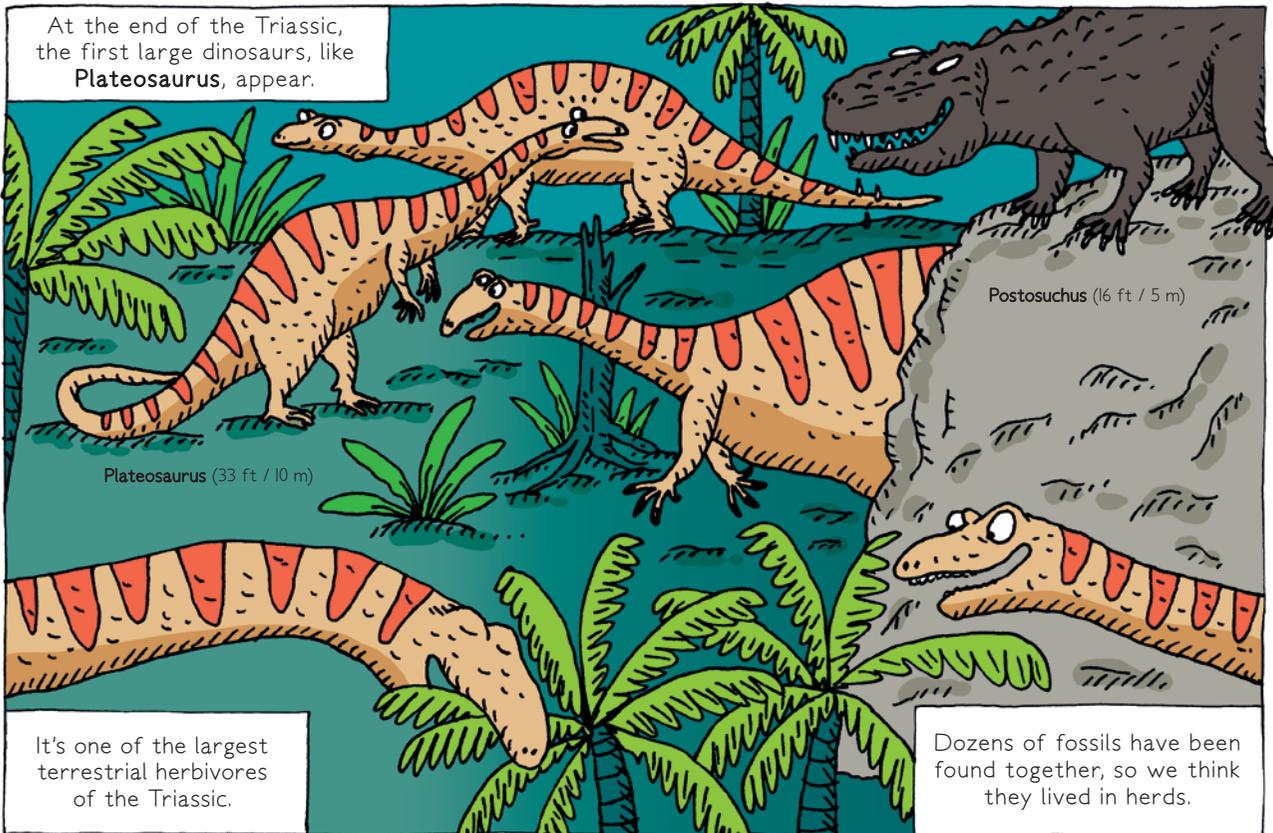
The first dinosaurs, like Eoraptor, stand even more upright, almost like mammals. They can run faster while expending less energy.



More like a dog than a crocodile!

This posture may be what gives them an advantage over the other archosaurs.

At the end of the Triassic, the first large dinosaurs, like Plateosaurus, appear.



Plateosaurus (33 ft / 10 m)

Postosuchus (16 ft / 5 m)

It's one of the largest terrestrial herbivores of the Triassic.

Dozens of fossils have been found together, so we think they lived in herds.

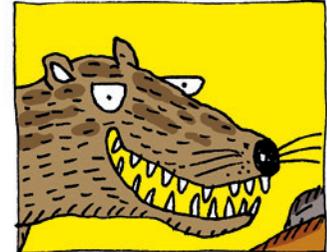
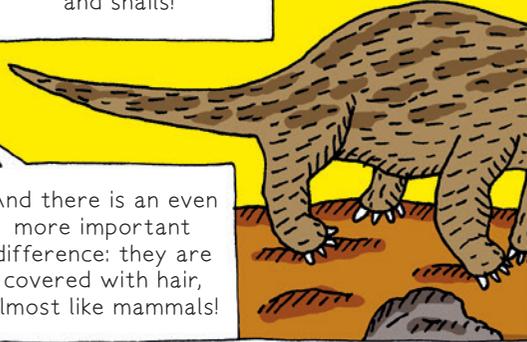


During the Triassic, the **archosaurs** face competition from the **cynodonts**. They are carnivores too, but much smaller.

Yes, they eat insects and snails!

And there is an even more important difference: they are covered with hair, almost like mammals!

**Cynognathus**  
(33 ft / 1 m)

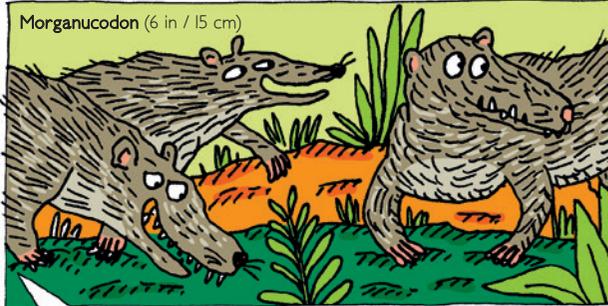


**Cynognathus** has a large head and the teeth of a predator. Its name means "dog jaw."

That's a funny-looking head for a dog!

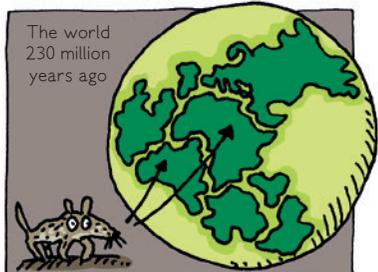


**Morganucodon** (6 in / 15 cm)



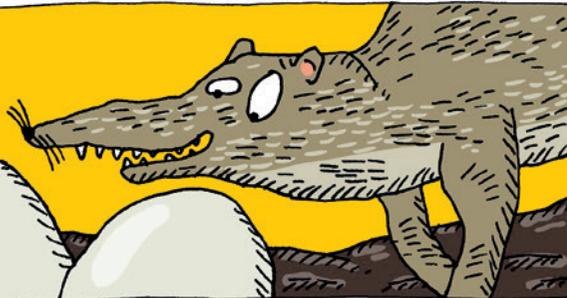
It's not a dog! It's not even a mammal. Its feet are splayed wide apart, more like those of a reptile.

The world 230 million years ago



It has been found in the Americas and in Africa, which shows that those continents were joined at the time.

Toward the end of the Triassic, some cynodonts evolve and give rise to the first true mammals.



**Morganucodon** was covered with hair. We think it nursed its young. But it still laid eggs, like its ancestors.

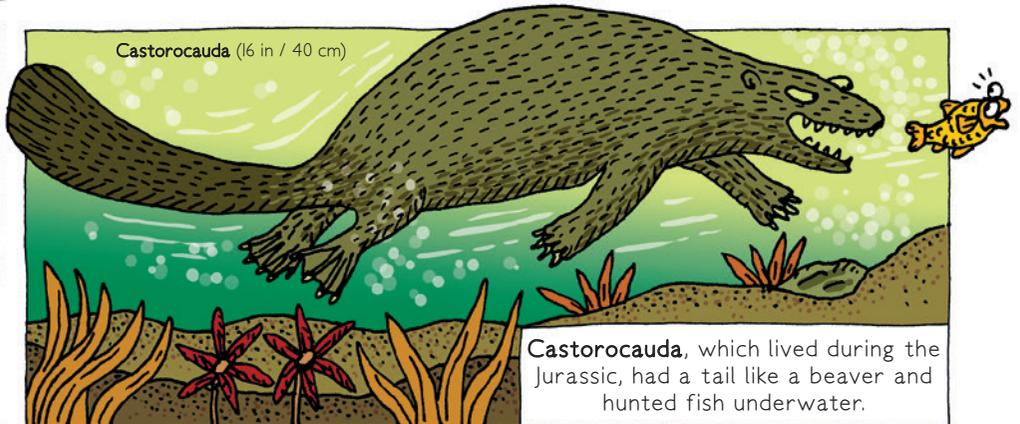


And like platypuses!

Most of the first mammals were small carnivores that ate insects or worms, but they would soon diversify.



**Castorocauda** (16 in / 40 cm)



**Castorocauda**, which lived during the Jurassic, had a tail like a beaver and hunted fish underwater.



The pterosaurs make their appearance. The air is filled with their raucous cries, and soon flying reptiles the size of airplanes darken the skies of the Mesozoic Era.



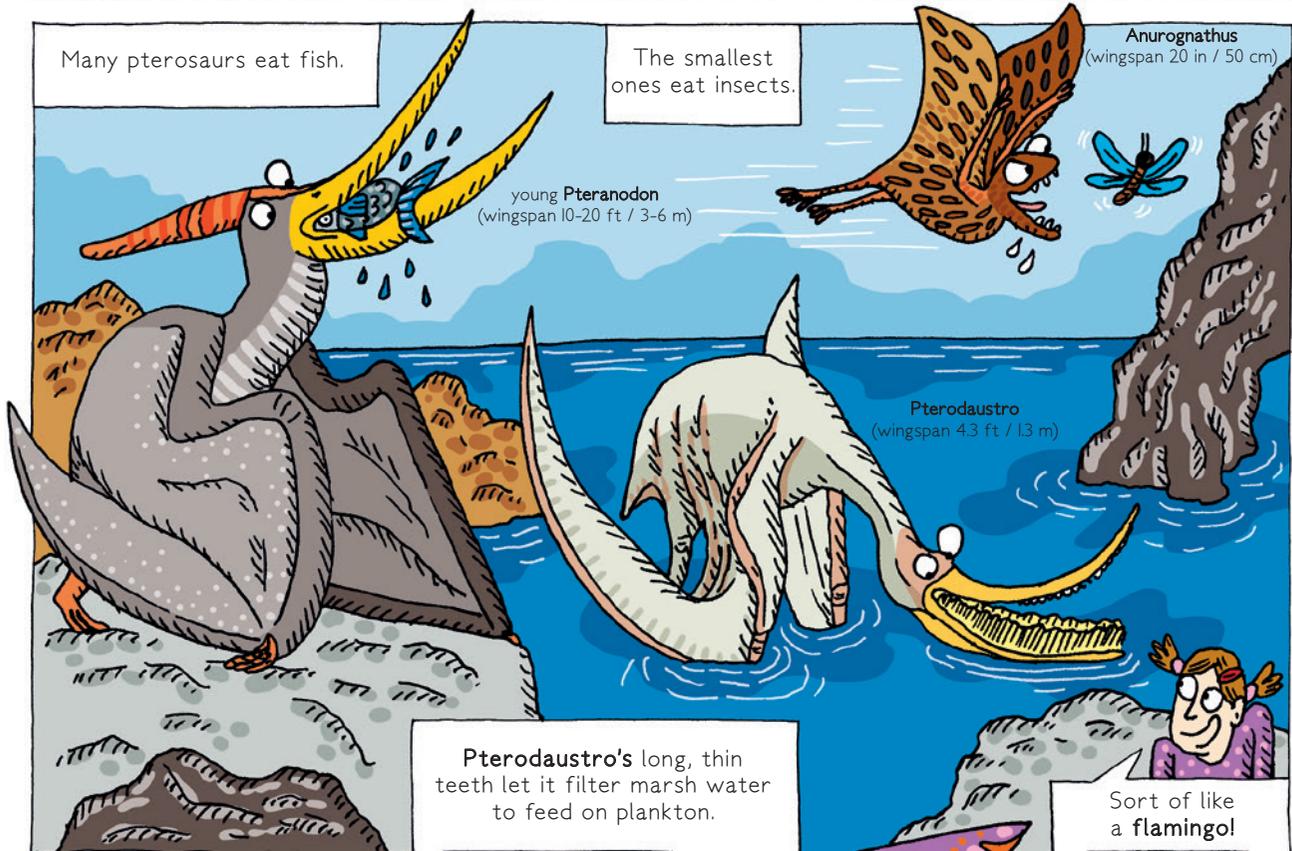
Eudimorphodon (3.3 ft / 1 m)

Yes, but we'll have to wait a while! During the Triassic, their wingspan doesn't exceed 6.5 feet (2 meters).

And we have no idea whether they made raucous cries!

Many pterosaurs eat fish.

The smallest ones eat insects.



young Pteranodon (wingspan 10-20 ft / 3-6 m)

Anurognathus (wingspan 20 in / 50 cm)

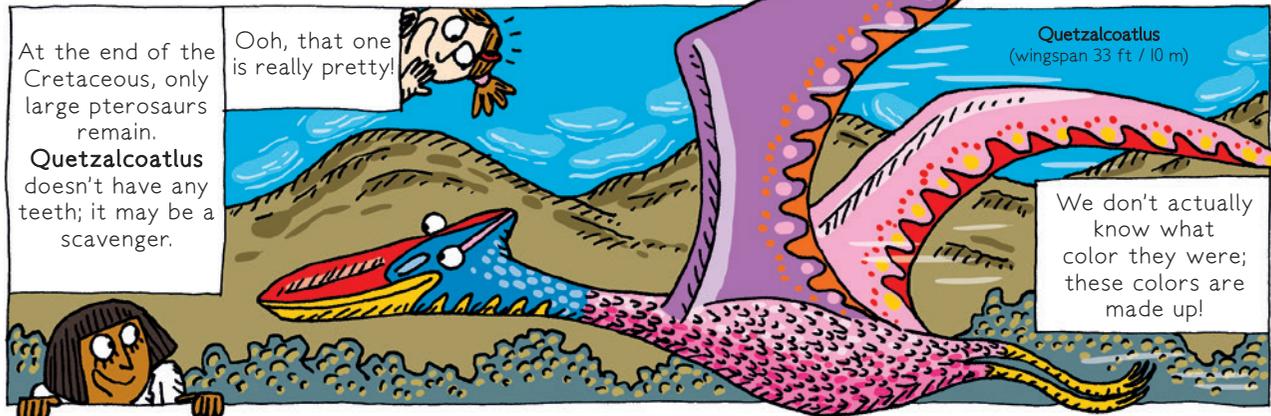
Pterodaustro (wingspan 4.3 ft / 1.3 m)

Pterodaustro's long, thin teeth let it filter marsh water to feed on plankton.

Sort of like a flamingo!

At the end of the Cretaceous, only large pterosaurs remain. Quetzalcoatlus doesn't have any teeth; it may be a scavenger.

Ooh, that one is really pretty!



Quetzalcoatlus (wingspan 33 ft / 10 m)

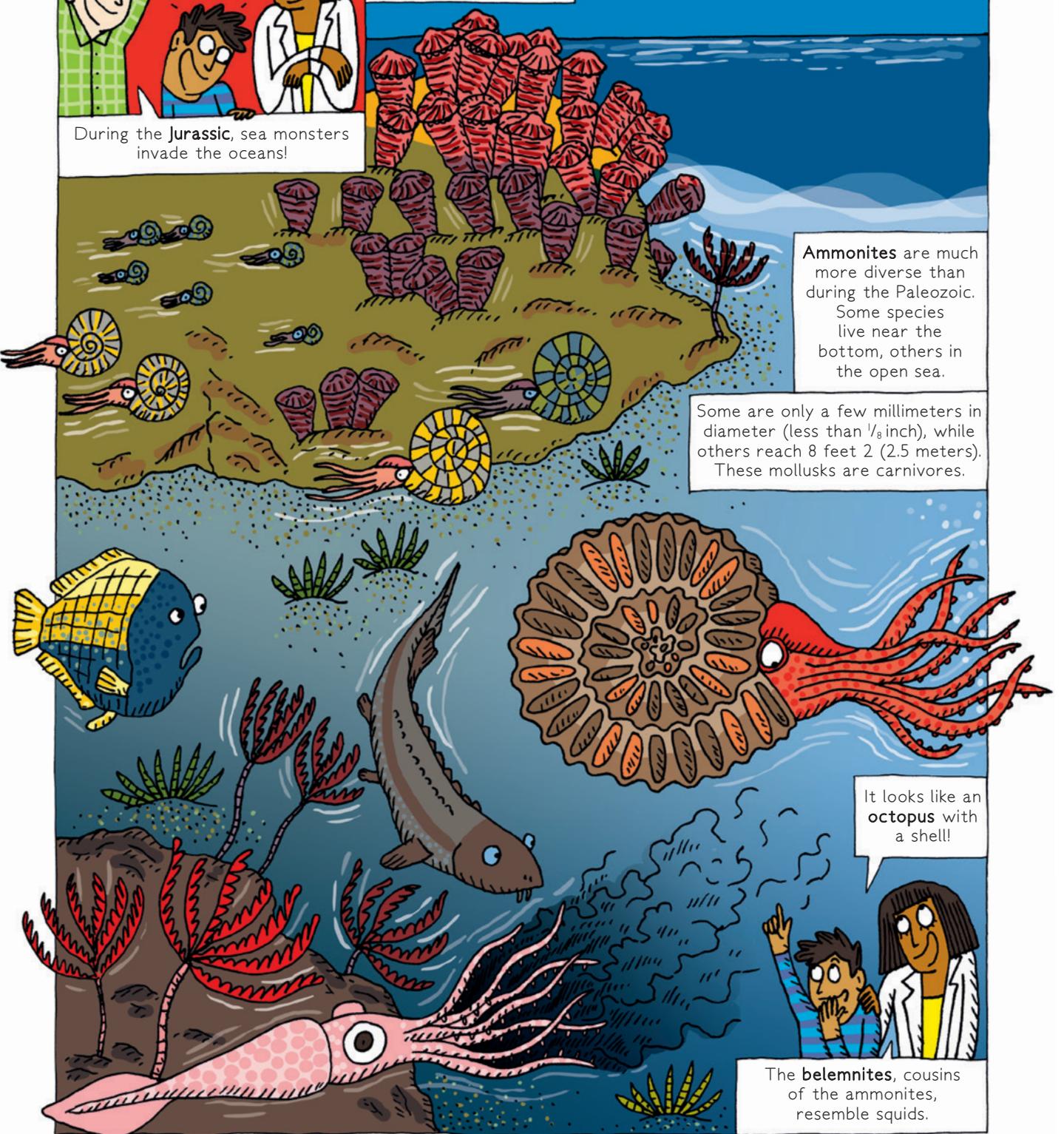
We don't actually know what color they were; these colors are made up!



There are, in fact, giant reptiles, but the marine fauna also includes lots of small animals!

Reefs form along the coastlines. They're not created by corals, but by large mollusks called **rudists**.

During the **Jurassic**, sea monsters invade the oceans!



**Ammonites** are much more diverse than during the Paleozoic. Some species live near the bottom, others in the open sea.

Some are only a few millimeters in diameter (less than  $\frac{1}{8}$  inch), while others reach 8 feet 2 (2.5 meters). These mollusks are carnivores.

It looks like an **octopus** with a shell!

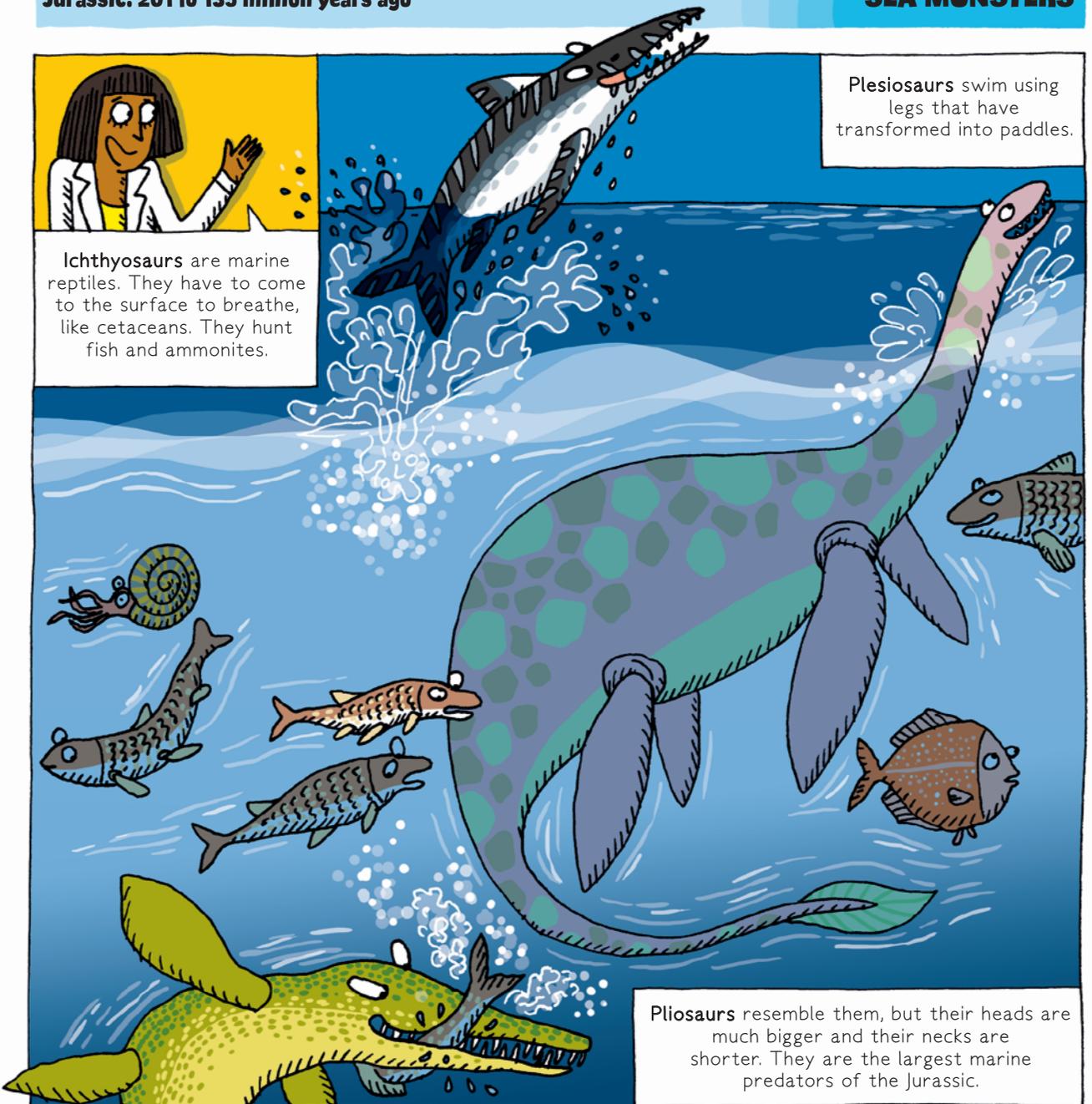


The **belemnites**, cousins of the ammonites, resemble squids.

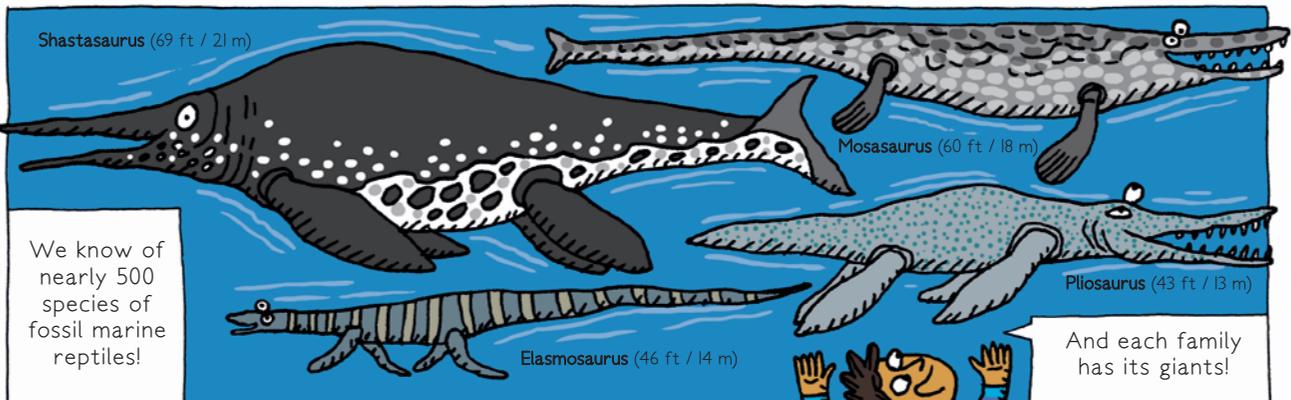


**Ichthyosaurs** are marine reptiles. They have to come to the surface to breathe, like cetaceans. They hunt fish and ammonites.

Plesiosaurs swim using legs that have transformed into paddles.



**Pliosaurus** resemble them, but their heads are much bigger and their necks are shorter. They are the largest marine predators of the Jurassic.



Shastasaurus (69 ft / 21 m)

Mosasaurus (60 ft / 18 m)

Pliosaurus (43 ft / 13 m)

Elasmosaurus (46 ft / 14 m)

We know of nearly 500 species of fossil marine reptiles!

And each family has its giants!

# THE ORNITHISCHIANS

Jurassic: 201 to 135 million years ago

The dinosaurs diversify more and more. We know of more than 1,000 different species.

Iguanodon (33 ft / 10 m)

One of the most diverse groups is that of the ornithischians.

And there were many that didn't leave fossils.

Or maybe we haven't found them yet!

Uh . . . birds?

No, it means "bird-hipped," because of the shape of their pelvic bones.

The **iguanodons** are quadrupeds, but they can easily stand on their hind legs. Their front legs are much shorter than the rear ones.

The **pachycephalosaurs** are bipeds. Their skull bones are extremely thick. We think the males fought by butting heads.



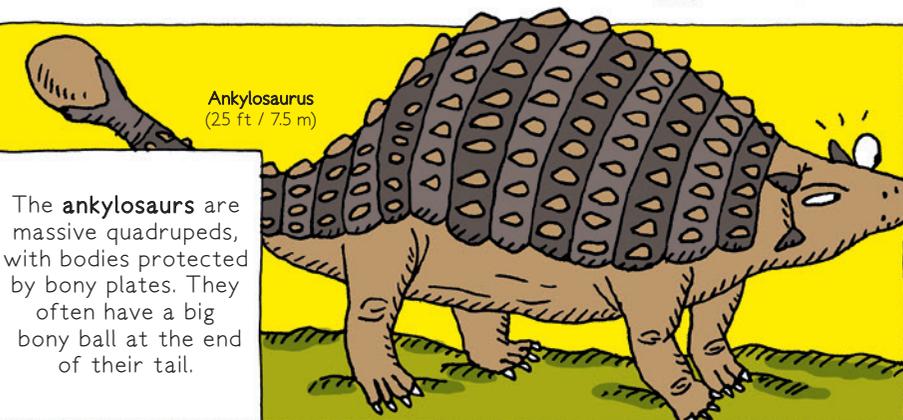
Like rams!

Pachycephalosaur (16 ft / 5 m)

The **ceratopsians** have one or more horns, and a crest. We think it serves as a display, either to frighten competitors or to attract a mate.

Triceratops (26 ft / 8 m)

All of these dinosaurs lay eggs.



Ankylosaurus (25 ft / 7.5 m)

The **ankylosaurs** are massive quadrupeds, with bodies protected by bony plates. They often have a big bony ball at the end of their tail.

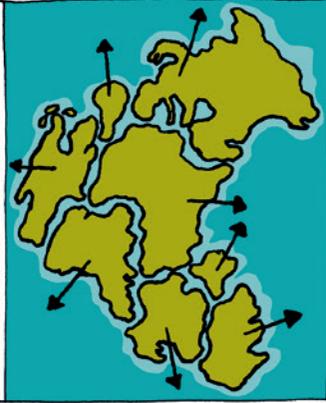


Like a knight's mace!



At the beginning of the Jurassic, **Pangaea**, the single continent, begins to break up.

Earth's crust is dragged apart by the movement of the molten rock several miles beneath our feet! The dinosaurs are carried along as if they're on rafts!

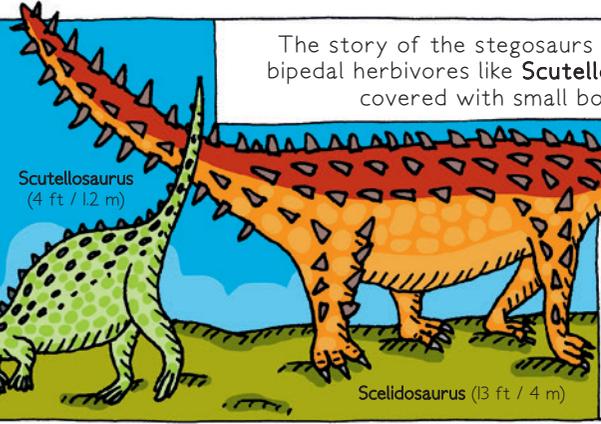


These rafts are huge, and very slow. They move an inch or so a year for millions of years.



So what happens to the dinosaurs?

They don't realize it, of course, but their evolution is going to be influenced by these movements.



Scutellosaurus (4 ft / 1.2 m)

Scelidosaurus (13 ft / 4 m)

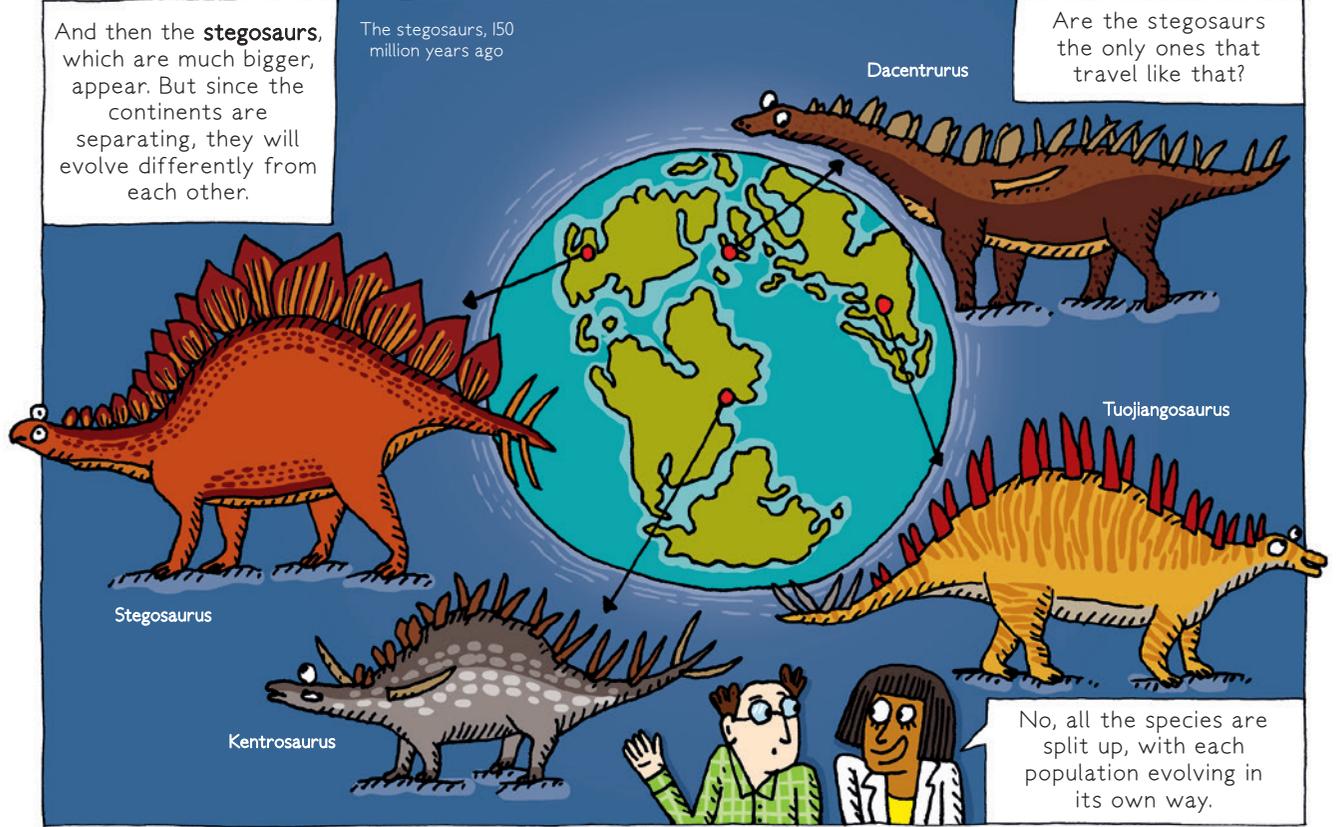
The story of the stegosaurs begins with small bipedal herbivores like **Scutellosaurus**. Its skin is covered with small bony plates.

They evolve into bigger animals, quadrupeds with large protective plates, like **Scelidosaurus**.

And then the **stegosaurs**, which are much bigger, appear. But since the continents are separating, they will evolve differently from each other.

The stegosaurs, 150 million years ago

Are the stegosaurs the only ones that travel like that?



Stegosaurus

Kentrosaurus

Dacentrurus

Tuojiangosaurus



No, all the species are split up, with each population evolving in its own way.

# THE SAUROPODS

Jurassic-Cretaceous: 165 to 66 million years ago

During the Jurassic, animals appear that are the largest and heaviest to ever tread the soil of our planet! They are up to 130 feet (40 meters) long!

They all belong to the same group of dinosaurs, the sauropods.

They're quadrupeds, herbivores, with massive bodies ...

... and long necks!

Yes, *Diplodocus*'s neck lets it eat without moving around too much.

With its peg-shaped teeth it tears the leaves off of trees.

Then they are ground up by pebbles it has swallowed.

*Brachiosaurus* holds its head high.

It reaches a height of 39 feet (12 m) ...

... the fifth floor of a building!

Its front legs are longer than its back legs, which is very rare among dinosaurs.

It weighs more than 50 tons.

More than ten elephants!

Some sauropods were probably even bigger, but we only have a few bones from them—like femurs more than 6.5 feet (2 meters) long.