

The **GIANT** Tooth Mystery

A fossil is the remains of any creature or plant that lived on the Earth many, many years ago. People have been finding fossils for thousands of years in rocks and cliffs and beside lakes. We now know that some of these fossils were from dinosaurs.



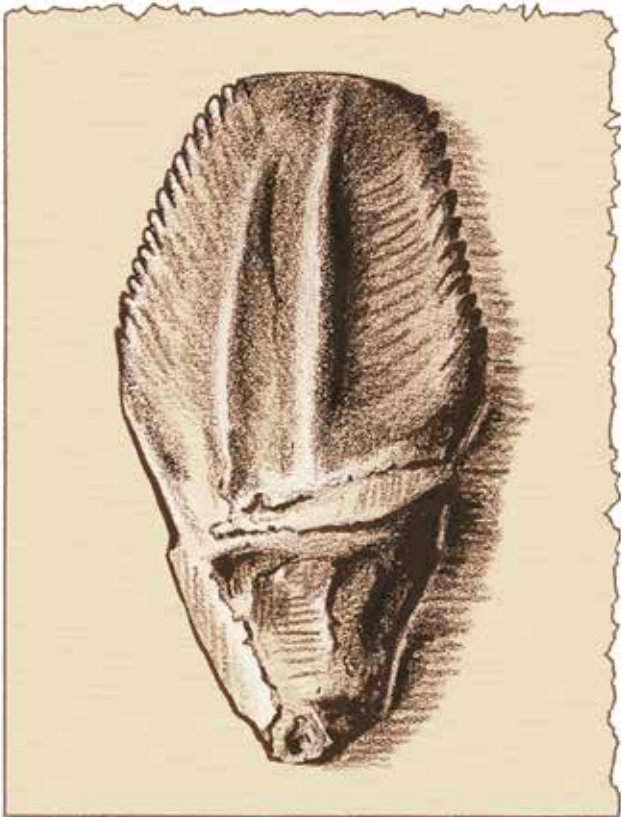
Long ago, people who found huge fossils did not know what they were. Some thought the big bones came from large animals that they had seen or read about, such as hippos or elephants. But some of the bones people found were too big to have come from even the biggest hippo or elephant. These enormous bones led some people to believe in giants.

Hundreds of years ago in France, a man named Bernard Palissy had another idea. He was a famous pottery maker. When he went to make his pots, he found many tiny fossils in the clay. He studied the fossils and wrote that they were the remains of living creatures. This was not a new idea. But Bernard Palissy also wrote that some of these creatures no longer lived on earth. They had completely disappeared. They were extinct.

Was Bernard Palissy rewarded for his discovery? No! He was put in prison for his ideas.

As time went by, some people became more open to new ideas about how the world might have been long ago.

Then, in the 1820s, a huge fossil tooth was found in England. It is thought that Mary Ann Mantell, the wife of fossil expert Gideon Mantell was out for a walk when she saw what looked like a huge stone tooth. Mary Ann Mantell knew the big tooth was a fossil, and took it home to her husband.



When Gideon Mantell first looked at the fossil tooth, he thought it had belonged to a plant eater because it was flat and had ridges. It was worn down from chewing food. It was almost as big as the tooth of an elephant. But it looked nothing like an elephant's tooth.

Fossil tooth sketched life-sized

Gideon Mantell could tell that the pieces of rock attached to the tooth were very old. He knew that it was the kind of rock where reptile fossils were found. Could the tooth have belonged to a giant, plant-eating reptile that chewed its food? A type of reptile that no longer lived on earth?

Gideon Mantell was really puzzled by the big tooth. No reptile that he knew about chewed its food. Reptiles gulped their food, and so their teeth didn't become worn down. It was a mystery.

Gideon Mantell took the tooth to a museum in London and showed it to other scientists. No one agreed with Gideon Mantell that it might be the tooth of a gigantic reptile.

Gideon Mantell tried to find a reptile that had a tooth that looked like the giant tooth. For a long time, he found nothing. Then one day he met a scientist who was studying iguanas. An iguana is a large plant-eating reptile found in Central and South America. It can grow to be more than five feet long. The scientist showed Gideon Mantell an iguana tooth. At last! Here was the tooth of a living reptile that looked like the mystery tooth. Only the fossil tooth was much, much bigger.

Iguana

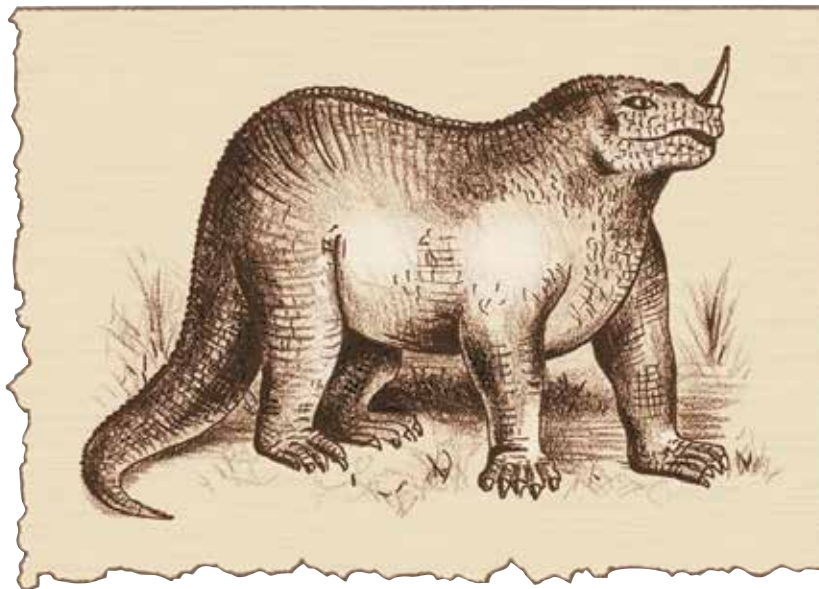


A life-sized drawing of an iguana's tooth from Gideon Mantell's notebook



Now Gideon Mantell believed the fossil tooth had belonged to an animal that looked like an iguana. Only it wasn't five feet long. Gideon Mantell believed it was a hundred feet long! He named his creature *Iguanodon*. That means "iguana tooth".

Gideon Mantell did not have a whole *Iguanodon* skeleton. But from the bones he had collected over the years, he tried to figure out what one might have looked like. He thought the bones showed that the creature had walked on all four legs. He thought a pointed bone was a horn. He drew an *Iguanodon* with a horn on its nose.

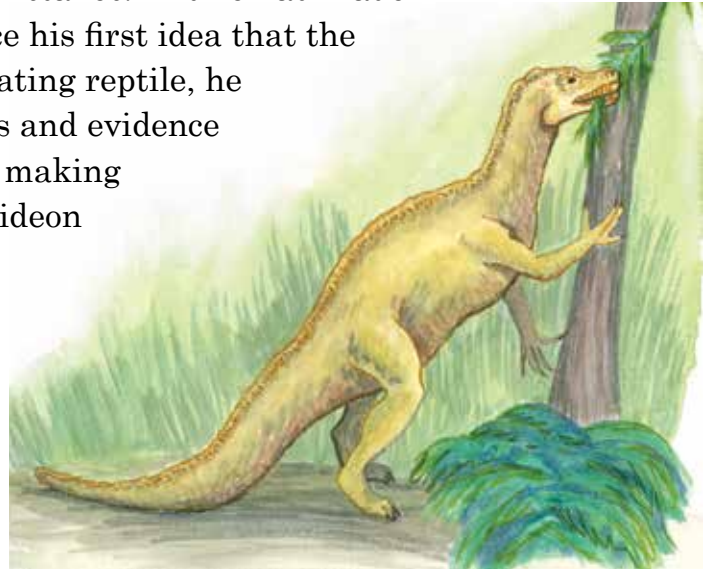


What Gideon Mantell thought an Iguanodon looked like

Years later, several complete *Iguanodon* skeletons were found. They were only about thirty feet long. The bones showed that it walked on its hind legs some of the time. And what Gideon Mantell thought was a horn on its nose was really a spike on its “thumb”! Based on these discoveries, scientists changed their ideas about what the *Iguanodon* looked like.

Gideon Mantell made some mistakes. But he had made an important discovery, too. Since his first idea that the fossil tooth belonged to a plant-eating reptile, he spent many years gathering facts and evidence to prove his ideas were right. By making careful guesses along the way, Gideon Mantell was one of the first people to show that long ago, giant reptiles lived on earth. And then they became extinct.

Hundreds of years before, Bernard Palissy had been thrown in prison for saying nearly the same thing. But Gideon Mantell became famous. His discovery made people curious to find out more about these huge reptiles.



What scientists today think the *Iguanodon* looked like

In 1842, a scientist named Richard Owen decided that these extinct reptiles needed a name of their own. He called them *Dinosauria*. This means “fearfully great lizard”. Today we call them dinosaurs.

Questions

The Giant Tooth Mystery

1. What is a fossil?

- ☐ (A) the surface of rocks and cliffs
- ☐ (B) the bones of a giant
- ☐ (C) the remains of very old living things
- ☐ (D) the teeth of elephants

2. According to the article, why did some people long ago believe in giants?



3. Where did Bernard Palissy find fossils?

- ☐ (A) on the cliffs
- ☐ (B) in the clay
- ☐ (C) by a river
- ☐ (D) on a path

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4. What was Bernard Palissy's new idea?



5. Why was Bernard Palissy put into prison?

- ☐ (A) People were not open to new ideas.
- ☐ (B) He copied his ideas from Gideon Mantell.
- ☐ (C) He left tiny fossils in his pottery.
- ☐ (D) Studying fossils was forbidden in France.



6. Who found the fossil tooth in England?

- ☐ (A) Bernard Palissy
- ☐ (B) Mary Ann Mantell
- ☐ (C) Richard Owen
- ☐ (D) Gideon Mantell

7. What did Gideon Mantell know about reptiles that made the fossil tooth puzzling?

- (A) Reptiles had no teeth.
- (B) Reptiles were found under rocks.
- (C) Reptiles lived long ago.
- (D) Reptiles gulped their food.

8. Gideon Mantell thought the tooth might have belonged to different types of animals. Complete the table to show what made him think this.

Type of animal	What made him think this
A plant eater	The tooth was flat with ridges.
 A giant creature	
 A reptile	

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9. Why did Gideon Mantell take the tooth to a museum?

- (A) to ask if the fossil belonged to the museum
- (B) to prove that he was a fossil expert
- (C) to hear what scientists thought of his idea
- (D) to compare the tooth with others in the museum

10. A scientist showed Gideon Mantell an iguana tooth. Why was this important to Gideon Mantell?



11. What did Gideon Mantell use when trying to figure out what the *Iguanodon* looked like?

- (A) bones he collected
- (B) ideas from other scientists
- (C) pictures in books
- (D) teeth from other reptiles

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12. Look at the two pictures of the *Iguanodon*. What do they help you to understand?



13. Later discoveries proved that Gideon Mantell was wrong about what the *Iguanodon* looked like. Fill in the blanks to complete the table.

	What Gideon Mantell thought the <i>Iguanodon</i> looked like	What scientists today think the <i>Iguanodon</i> looked like
	The <i>Iguanodon</i> walked on four legs.	
		The <i>Iguanodon</i> had a spike on its thumb.
	The <i>Iguanodon</i> was 100 feet long.	

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14. What were found that showed Gideon was wrong about what the *Iguanodon* looked like?
- Ⓐ more fossil teeth
 - Ⓑ scientific drawings
 - Ⓒ living *Iguanodons*
 - Ⓓ whole skeletons