



Transcript for *Titanosaur: Discovering the World's Largest Dinosaur* by Dr. José Luis Carballido and Dr. Diego Pol (Orchard Books, an imprint of Scholastic Inc.)

Introduction (approximately 0:00 – 3:55)

Hi everyone! It's Colleen from the KU Natural History Museum, and I'm so excited for today's Story Book Science. I do want to give some time for some other people to join us. So while we wait for those people to join us, I do want to talk a little bit about the book we're going to be reading.

Now we are reading a book about the world's biggest dinosaur! Now that dinosaur is a titanosaur, and its species name is *Patagotitan mayorum*. Now one of the cool things about this dinosaur, I think, is where it was discovered. So dinosaur fossils can be discovered all throughout the world. This dinosaur, in particular, was discovered in a place called Argentina. So I have a map of South America. And Argentina is located in South America, right here. Now this dinosaur, the titanosaur *Patagotitan mayorum*, it was discovered in a region of Argentina called Patagonia, and that region is in the southern part of the country. So Patagonia is in the southern part of Argentina. Now the dinosaur was first discovered by a gaucho, a skilled horseman, who was out looking for a lost sheep. And instead of finding a sheep, found some dinosaur bones! And then after telling a group of scientists, paleontologists specifically, the paleontologists came to dig up those fossils to study them. And the paleontologists that led the dig to discover the world's largest dinosaur are also the paleontologists that wrote the book! So we'll get to hear about the discovery of titanosaur from the paleontologists that led the dig.

So let's go ahead and get started with Story Book Science!

First and foremost, we're going to go over our rules for Story Book Science. Even though we're not in the museum, we are going to follow museum rules. That means if you write a question or a comment, you need to make sure that you use kind and considerate words. If you respond to a question or a comment, you also need to make sure you use kind and considerate words. We may not be in the museum, but we are going to follow those museum guidelines in order to make sure that this space is safe, inclusive, and welcoming for all.

So for today's Story Book Science, we are going to be reading *Titanosaur: Discovering the World's Largest Dinosaur*. It is written by Dr. José Luis Carballido and Dr. Diego Pol, and it's illustrated by Florencia Gigena. It is being read with permission from Orchard Books, which is an imprint of Scholastic. So thank you to them for letting us read this text! And what I like about this book is that it reminds me about all of the cool things that we still don't know yet, all the cool things that can be discovered, and the excitement from a paleontological dig! Now I do want to let you know you can ask questions about the book. You just have to write those in the comments. I will let you know I may not be able to see them until the very end, and I'll only answer them if there is time.

The last thing I want to say is if you need a partial transcript of this reading, that will be made available on the museum's website a little later today. You can find a link to the page that it can be found on the website in the video description.

So let's go ahead and get started!

Titanosaur.

Reading from *Titanosaur: Discovering the World's Largest Dinosaur* (approximately 3:56 – 15:35)

Titanosaur: Discovering the World's Largest Dinosaur includes copyrighted materials, and we do not have permission to include the written text of the book in this transcript.

Conclusion (approximately 15:36 – 25:06)

The end. What an amazing book!

So that book was about the largest dinosaur ever discovered. And the people that wrote the book, they are also the ones who led the dig to get all of the bones from where it was found into a museum to be studied. Now I think it's really cool reading that book because we learned so much about all of the things that have yet to be discovered that could be buried under rocks that we just don't know about yet. But one of the things I do want to point out is not only is it awesome that the authors of the book, José and Diego, were able to find and dig up the bones of the titanosaur, but I also think it's really cool how they named the dinosaur. So this dinosaur is named *Patagotitan mayorum*. And it's kind of a mash up of a couple different things. So first, *Patago-*, that comes from the area where it was found: Patagonia, Argentina. *-Titan* is from titanosaur because it's a very, very large dinosaur. It's one of many titanosaurs. But the last part of its name, *mayorum*, comes from the name of the ranch owner, the gaucho that first came across the bones. And I just think that's really awesome how José and Diego wanted to share credit. They wanted to acknowledge the work of the gaucho and his ranch. And I wanted to share how neat I thought that was.

Now José and Diego, they were specifically looking at dinosaur fossils. But there are so many different fossils in the world and all throughout the world! And we're going to talk about those fossils. So paleontologists, like José and Diego, they study fossils, which are the remains of living organisms from a past geological age or really, really, really long time ago. And fossils, in order for the remains to become fossils, they have to go through a special process. And the fossils, once they go through that process, they're hard, and they kind of look like rocks. They kind of feel like rocks. But they're not rocks. They're fossils. And you can have fossils of so many different things. In this story we read about dinosaurs. But you can have fossils of bacteria. So this is an example of fossilized bacteria. You can have fossils of marine invertebrates. So what that means is an animal that lived in the ocean and did not have a backbone. This is an example of a marine invertebrate, a trilobite. You can even have fossils of plants! Plants are organisms that lived a long time ago in a past geological age, and so they too can become fossils.

So there are all these different examples of fossils, and they can be found all over the world. But the thing you want to remember about fossils, is that no matter what it is of or where it was found, it can fall into one of two categories: a body fossil or a trace fossil. So let's talk about body fossils! Like the name suggests, body fossils are part of the body. So for example, a bone of a dinosaur. That would be a body fossil because bones come from the body, right? So bones are body fossils. Other examples of body fossils include teeth. Teeth come from the body, right? So teeth are body fossils. Another example of body fossils include claws. And this is an example of a claw. So it's a body fossil. And I do want to let you know that this is not the real claw. This is a cast, or a replica. And just like we learned in the book, we can study these to better understand the organism being studied without damaging the real fossil. So this is a claw, and it is a claw of a *Dryptosaurus*, so a carnivorous or meat-eating dinosaur. And that's just one example of a body fossil.

Now I do want to say one more thing about body fossils. When paleontologists look for dinosaur bones in specific areas of the world, specifically out in Dinosaur Country, USA, so out west in the United States, there

are some tricks they can use in order to better understand what they're looking at. So one of those things include licking a sample to determine if it's a rock or a bone. Now the reason why they lick the sample is because dinosaur bones in certain areas, they have these tiny, tiny holes or pores. And when a paleontologist licks a sample, if it's a bone, those tiny, tiny holes, they suck away moisture! And then the tongue will stick to the sample. Now another way to test that instead of licking the sample is you can also lick your finger, and then touch the sample. And if your finger sticks to the sample because of those tiny, tiny holes sucking away moisture, your finger will stick to the sample. And that's how some paleontologists, depending on where they study, determine rock from the body fossil of bone.

So let's talk about trace fossils. Trace fossils, they aren't from the body directly. They are something that an organism could have made using their body. It could have been something an organism made in its body. But it's not a direct body part. So a really good way to think about trace fossils are things that show activity. And one really great example of that, let me grab it, is a footprint. So this is, again, it's a cast or a replica of a footprint. And it's a trace fossil. So the organism that left this footprint, it made it using its body. It had to use its foot to make a print, but it's not exactly a part of its body. So it shows us its activity, its walking ability. And I know that the organism that left it is a theropod because it has 1, 2, 3 toes. And that's an indication of a theropod, a meat-eating dinosaur that walked on two legs. Now this is just one footprint. If I had many footprints of this organism, I would call that a trackway, but this is just one print. So that's an example of a trace fossil.

Now I have one more example of a trace fossil I want to show you. Let me bring it close to the camera. It's a little small, but this is a trace fossil. So that means it was something that was made by an organism, but it wasn't a part of its body. Now I will give you a hint. This trace fossil, this was made in an organism's body, and then the organism took it out of its body. And what remained became fossilized. Any idea what this could be? Something that was made in an organism's body and then came out of it, any ideas? This is a coprolite, which is a scientific term used to describe fossilized poo! So this trace fossil is fossilized poo, and paleontologists can study it to better understand an organism's activity including what it ate!

So I hope that you learned a lot about titanosaur, the world's biggest dinosaur, as well as fossils. We talked about body and trace fossils and what the differences are. I had such a great time reading the story with you and looking at fossils, but it is the end of Story Book Science. I will let you know that I'll be back next week, and I will be reading a book called *The Dinosaur Expert*. This is written by Margaret McNamara, and it's illustrated by G. Brian Karas. And it is being read with permission from Penguin Random House. So thank you to them!

So join me next week here on Facebook Live at 10am, and we will read *The Dinosaur Expert* together. I'll see you then! Bye!