

Dino Might! Carnegie Museum's new exhibit has more dinosaurs, more action

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By Timothy McNulty, Pittsburgh Post-Gazette



Bill Wade / Post-Gazette

The Jurassic atrium showcases Diplodocus, foreground, and Apatosaurus. The Carnegie's Jurassic period dinosaurs are the best in its collection and perhaps the world.

Carnegie Natural History Museum takes its stab at the impossible this week: bringing back to life bones that are many million years old.

"In essence what's happening here is a moment in time, a life and death struggle 150 million years ago," Dr. Matt Lamanna, the museum's chief dinosaur researcher, said in the hall's main room. "Where this Allosaurus is trying to get some lunch -- and all the other dinosaurs are trying to avoid becoming lunch."

The \$36 million exhibit -- called "Dinosaurs in Their Time" -- also breathes life into the aging dinosaur wing industrialist Andrew Carnegie built for his Oakland museum 100 years ago. After 2 1/2 years of work, Carnegie Museums has converted a former outdoor atrium into the enclosed space for the new hall, tripling the former exhibition space and creating room for 19 dinosaurs, nearly double the previous 10.

It has also brought to life a fun, energetic showcase that should keep visitors educated -- and entertained -- for years to come, starting with the public opening Wednesday.

"Dinosaurs in Their Time" greets visitors starts with a tiny dinosaur called Herrerasaurus. Like the other skeletons inside, it is placed in an active, running pose, like it is about to run into the Paleolab next door; there are period plants at its feet; and it may evolve into a more famous dinosaur that comes along millions of years later.

Right from the start, things look different. The museum's former dinosaur hall was built in 1907, mainly to house the world-famous, 85-foot-long *Diplodocus carnegii*. But over time, the museum added more and more skeletons to the same room, side by side with other species that lived many millions of years apart.

Skeletons were posed with their necks and tails drooping, reflecting scientific thought at the time that the animals were plodding, lumbering leviathans. Current thinking now says they were nimble and quick, so the poses in the new hall -- mounted by Phil Fraley Productions in New Jersey -- show the skeletons in active poses.

If you go ...

"Dinosaurs In Their Time" opens to the public 10 a.m. Wednesday. Holiday hours are: Nov. 21-30, 10 a.m.-8 p.m. (closed Thanksgiving); Dec. 26-28, 10 a.m.-8 p.m. (closed Christmas Eve and Day); Dec. 31, 10 a.m.-5 p.m. (closed New Year's Day). Regular hours are: Tues.-Sat., 10 a.m.-5 p.m.; Thurs., 10 a.m.-8 p.m.; Sun., noon-5 p.m.

The museum recommends

They are placed by reproductions of plant species scientists think were present at the time, and are designed to look bug-eaten and decayed. (The museum also gets dead ferns from Phipps Conservatory for a realistic look.)

Since the hall is laid out chronologically, starting with the Triassic period and ending with the Cretaceous, the plant species change and evolve over time. So do the dinosaurs, which brings visitors to the next big theme of the exhibition: evolution.

Evolution made clearer

The tiny, 230 million-year-old *Herrerasaurus* at the beginning of the hall was an early carnivore that may have led millions of years later into the mighty *Tyrannosaurus rex*.

That gradual, evolutionary change is taught in the hall's first room -- focusing on the Triassic -- and repeated throughout. Science, said Dr. Zhe-Xi Luo, the museum's curator of vertebrate paleontology and acting co-director, shows dinosaurs clearly evolved over time and that some animal species surviving today, including birds, are ancestors of the very animal bones in these museum rooms.

"It's very important that we have woven the thread of evolution throughout this exhibit, because dinosaurs are one of the most persuasive examples of evolution," said Dr. Luo, also the museum's associate director for research and collections.

The exhibit features more than 230 specimens of plants and animals, of which 75 percent are real fossils and 50 percent have not been exhibited in Pittsburgh before.

Close to the entrance is a *Camarasaurus* skeleton, left intact in rock, the same way Andrew Carnegie's paleontologists found it in 1910. Many of the dinosaur skeletons coming up in the rest of the hall will come from the same land in Carnegie Quarry in Utah, later renamed Dinosaur National Monument by President Woodrow Wilson.

Most were extricated from the rock and posed by scientists, but this one shows their state upon discovery.

A following exhibit is an appetizer for the action coming ahead, with the lizard *Ceratosaurus* trying to eat the bird-like *Dryosaurus*. The latter had been left frozen in the rock matrix like *Camarasaurus* and the former is a new cast, so both skeletons will look new to longtime Carnegie dinosaur hall fans.

From here, visitors walk into an amazing sight: the full, three-story-tall exhibit hall for the museum's prized Jurassic period dinosaurs. Award-winning murals showing dinosaur life line the walls and structural columns in the hall are disguised as giant trees. On the far wall, windows look down from the stacks at Carnegie Library, underlining the steel titan's belief in interdisciplinary education.

Balconies peer down from the second and third floors, showing the heart of the \$36 million space: giant dinosaur skeletons posed in attack mode.

This is the part when visitors, especially those used to the old dinosaur hall, will really feel transported. They are in an entirely new place, after all, in what was once an outdoor courtyard used to hold garbage.

Plans to upgrade the old dinosaur hall, which became derisively known as "The Hall of Marching Dinosaurs," go back decades. The challenge was not only finding room to expand, but paying for the work.

Room was scarce at the 19th century museum and library campus in Oakland, plus museum officials were not sure they would get city approvals to change the exterior of the historic structure. So they focused on expanding inside the museum footprint, in the atrium at the rear of the facility.

Then they had to sell the idea to funders. Like so many of the cultural riches left from Pittsburgh's past, the dinosaur hall was in danger of becoming irrelevant, museum leaders warned, unless major investments were made.

"When I graduated from law school in 1979, Pittsburgh was the third-largest corporate headquarters [city] in the country. Now we're not even close," said Jack Barbour, the museum's board chairman. "And in 1979, we had one of top five natural history museums in the country and we still do -- this was an effort to keep us at the top."

reservations and timed ticketing for the exhibition, available at its [Web site](#). Adults, \$15, children/students \$11, seniors \$12. Member admission is free but reservations still required.

Museum leaders, said Bill DeWalt, who ran the museum from 2001 through early this year, repeated two key messages when fundraising for the upgrade.

"They were 'world-class collection of dinosaurs and the exhibits were not up to the quality of the collection.' That was the mantra we had to keep repeating over and over to people, and convincing them that this would be a really great thing for Pittsburgh and the state of Pennsylvania. "

The Carnegie Museums received a \$15 million grant from the state and other major gifts from Eden Hall Foundation, Heinz Endowments and Richard King Mellon foundation. About \$34 million of the overall cost has been raised, Mr. Barbour said, and the museum has launched an "Adopt-A-Bone" program for the public to sponsor bones and help raise additional funds.

The Carnegie's Jurassic period dinosaurs are the best in its collection and perhaps the world, holding three holotypes (original fossil finds that define a species) of Diplodocus, Apatosaurus and Tyrannosaurus. The first two are the stars of this big room.

In the back of the hall, a predatory, 25-foot-long Allosaurus is "charging into this scene hoping to make a snack out of a baby Apatosaurus that's in front of it," said Dr. Lamanna, the chief researcher. "Fortunately for the baby Apatosaurus, its mother is here as well [swinging her tail at the attacking dinosaur] ... hopefully to kill him off and prevent her baby from becoming lunch."

The herbivore known as Dippy, despite weighing 15 tons, is trying to sneak out of there. So is a juvenile Camptosaurus, another timid plant-eater hiding in the bushes in a far corner. Only the well-armored Stegosaurus is holding its ground.

"He's got four deadly spikes on the end of its tail, and he's basically saying to Allosaurus: 'Bring it on, because I can take ya,' " said Dr. Lamanna, a vertebrate paleontologist and the museum's lead dinosaur adviser.

Around the corner is a glass wall showing another attack scene, this time underwater, as a Xiphactinus goes after Pachyrhizodus. Both predatory fish lived in the Western Interior Seaway, a shallow ocean that covered the American Midwest and western Canada.

This leads past a re-creation of a marsh environment, with animals such as turtles and fish that look similar to those today, to the beginning of the Cretaceous wing. The bulk of this wing, featuring two fighting Tyrannosaurus skeletons, a Triceratops and others, will not open until the spring. (This final construction phase is in the former dinosaur hall space and was delayed while the museum purchased its second T. rex.)

The final room explores the Cretaceous Seaway, with the giant swimming lizard Tylosaurus, and on the last wall, another giant swimming predator, Dolichorhynchop. A stairwell in this room leads to the second and third floors, and the exit door leads to a small gift shop.

Since the new hall is expected to be visited -- like the last one -- by generations of schoolchildren, it is also connected to a new educational wing with four classrooms in the museum basement, which includes a new school bus drop-off zone in the museum's rear.

It is a long way from 1898, when Andrew Carnegie ripped a dinosaur illustration from a New York newspaper and wrote to his museum director, saying "Buy this for Pittsburgh."

"For our museum, this is the most important event since the founding of our museum," said Dr. Luo, the acting co-director.

"This will give you an entirely different experience, from both the scientific or educational perspective, or if you're simply just here to enjoy the beauty of the exhibition. We are really very happy about how the exhibition has come along, and the way our museum together with the whole Pittsburgh community is embracing a very exciting future."

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