



DINOSAURS IN THEIR TIMESM

Carnegie Museum of Natural History

What separates the really great dinosaur exhibits from all the rest? Real dinosaur skeletons.

Of the 19 free-standing dinosaur skeletons roaming the halls of Dinosaurs in Their Time, 15 are the real deal (except for occasional filler bones, made from casts or sculpted pieces, here and there)—putting Carnegie Museum of Natural History in a very exclusive category.

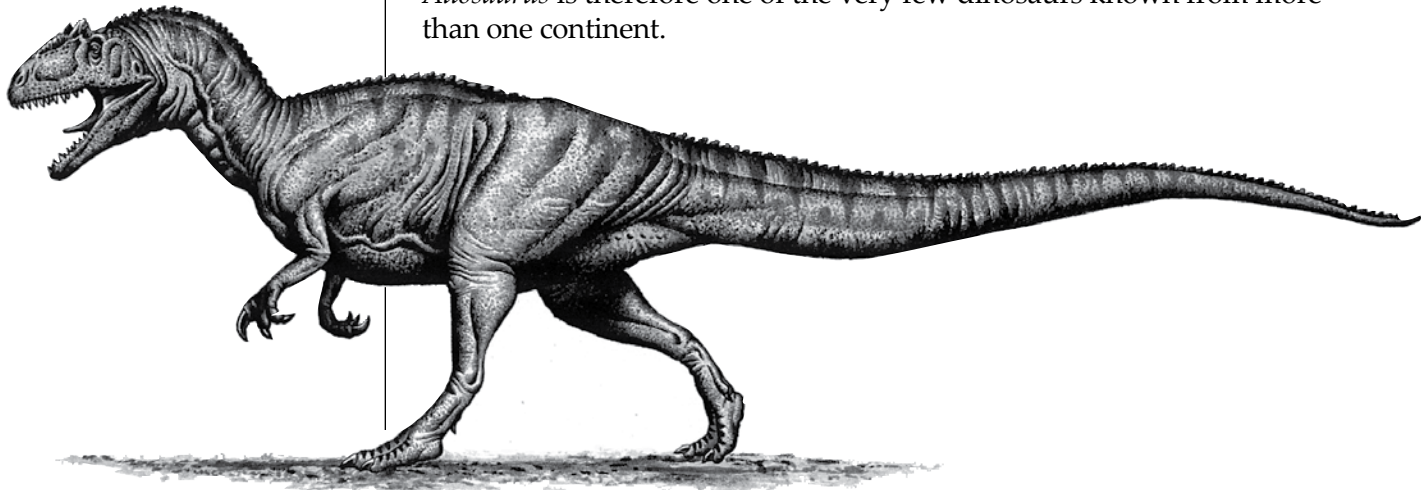
Allosaurus

Allosaurus lived during the Late Jurassic Period, over 145 million years ago. With its sharp teeth and claws, the meat-eating *Allosaurus* was surely a ferocious enemy of other dinosaurs that lived at that time, especially plant-eating dinosaurs like *Dryosaurus*, *Camptosaurus*, *Stegosaurus*, and gigantic, long-necked sauropods like *Apatosaurus*, *Diplodocus*, and *Camarasaurus*.

Allosaurus had knife-like teeth, powerful forelimbs, sharp claws, and long hind legs. It would have put all of these weapons to good use in killing and eating dinosaurs and other animals. Research on the structure of *Allosaurus*' jaws, however, suggests that its bite was relatively weak—weaker than that of modern lions, tigers, and alligators. Nevertheless, *Allosaurus*' skull seems designed to withstand tremendous forces. So, some paleontologists think that this dinosaur may have hunted by ambushing prey and using its upper jaw to deliver crippling, hatchet-like blows.

At a maximum weight of around four tons, *Allosaurus* was less than one-quarter the size of *Apatosaurus* and many other long-necked dinosaurs. So, how was this predator able to kill such giant prey? Recent evidence indicates that *Allosaurus* did not always do it alone—this and other similar dinosaurs may have hunted in packs, with many individuals working together to bring down large animals.

Nearly all fossils of *Allosaurus* that have been discovered have been found in the Upper Jurassic Morrison Formation of the western United States (Montana, South Dakota, Wyoming, Utah, Colorado, New Mexico, and Oklahoma). However, in 1999, paleontologists identified a new partial skeleton of *Allosaurus*—not from the Morrison Formation, but from similarly-aged rocks thousands of miles away—in Portugal! *Allosaurus* is therefore one of the very few dinosaurs known from more than one continent.



About CMNH's *Allosaurus*

The museum's *Allosaurus* skeleton, first put on exhibit in the museum in 1938, is among the more complete skeletons known of *Allosaurus*. The fossils were collected at Dinosaur National Monument between 1913 and 1915 by renowned CMNH field paleontologist Earl Douglass and his crew. (Dinosaur National Monument, located in northeastern Utah, was the site of many dinosaur discoveries sponsored by Andrew Carnegie beginning in 1909. *Allosaurus* was the largest meat-eating dinosaur found in the quarry.)

CMNH's *Allosaurus* specimen includes much of a skull and lower jaw; however, because these bones are extremely fragile, they were not incorporated into our mounted skeleton. Instead, the museum mounted detailed replicas of the skull and jaw of another *Allosaurus* individual that is almost identical in size to CMNH's specimen and comes from the same quarry.

The tip-of-tail vertebrae for our *Allosaurus* mount are also casts, generously donated by the Utah Museum of Natural History, while the forelimbs were cast from a National Museum of Natural History specimen.

