

## Utahraptor ostrommaysorum



Scientific Name: *Utahraptor ostrommaysorum*

Pronounced: YOU-tah-WRAP-tore ah-STROM-ay-SORE-um

Name Meaning: Utah's predator

Time Period: Early Cretaceous about 100 MYA

Length: 16-23 feet (6-7 meters)

Height: 6 feet (1.6 meters)

Weight: 1-2 tons

Diet: Carnivore (meat eater)

Places Found: All known Utahraptor fossils have been found in and near Arches National Park in Utah

Discoverer: James I. Kirkland, Ph.D (1975)

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What do you get when you combine a mega-blockbuster science fiction movie and the scientific proof to back it up? You find out that reality is more shocking than fiction. Utahraptor is the largest of all raptor dinosaurs. It is also the oldest of this family, living approximately 125 million years ago.

*Utahraptor* gained fame by starring in Jurassic Park. No you say, it was *Velociraptor*. Indeed, movie-maker Steven Spielberg used the name, *Velociraptor* in his movies, however, in reality, *Velociraptor* is less than half the size of the dinosaurs depicted in Jurassic Park. *Utahraptor* was found the year that Jurassic Park came out and gave scientific credence to the large-sized raptors in the movies. It's just that they are really utahraptors not velociraptors!

A very large, deep, thin, blade-like claw core bone was uncovered in October, 1991, by Carl Limone, Preparator at the CEU Prehistoric Museum. The new claw's similarity to the slashing claw on the foot of *Deinonychus* and *Velociraptor* of the dromaeosaurid family of dinosaurs was immediately recognized by the quarry personnel. The dromaeosaurid dinosaurs were the most savage predators, pound for pound, ever to have walked the earth. At 9 inches long, the bony core supported a claw which in life would have been 15 inches long, indicating an animal twice the size of *Deinonychus*. Additional finds, including bones of the skull and upper jaw, support this conclusion.

It is thought that with the super-slashing claw on each hind foot, the *Utahraptor* could deliver a death sentence to a dinosaur with one kick. Based

on its size, by rotating its limbs and extending its claw, it could make a cut 5 to 6 feet long with one slice. It is thought that Utahraptors moved in packs, where they were able to choose dinosaurs much larger than themselves as prey.



A critical piece of evidence further confirming the identification of the new "super slasher" was found by Kirkland in the collections at the Brigham Young University (BYU) Earth Science Museum in Provo, Utah. Fossils from the exact same age had been collected from a site discovered by Lin Ottinger of Moab, Utah. The site which is about 25 miles from the Gaston Quarry was worked by a field crew led by BYU's Jim Jensen in 1975. These fossils included leg bones, hand claws, and the diagnostic tail bones with indicated that several different-sized animals (including animals as big as those at the Gaston Quarry) had been preserved at the BYU site. Special features found only in the tail bones of dromaeosaurid dinosaurs helped confirm the relationship of this giant killer. *Deinonychus*, the best known of the dromaeosaurids, was discovered by Dr. John Ostrom of Yale University.

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This dinosaur provided a major piece of evidence in the theory that dinosaurs were warm-blooded, active animals, and more closely related to birds than reptiles. *Deinonychus* was a fast, highly specialized, wolf-sized predator that attacked dinosaurs much larger than itself. Its powerful jaws bore sharp, serrated teeth, its arms were strong with large recurved claws, and, on each of its feet, was a huge, sickle-shaped claw powered by its entire calf muscle. *Deinonychus* maintained the sharp tip of its claw by holding it up off the ground when it walked or ran. It would use these claws to attack its prey much like the modern cat used its claws on its hind feet. All of this weaponry was controlled by a sophisticated nervous system, which simultaneously flicked the creature's specially stiffened tail side to side and up and down to keep the animal's balance, while controlling its powerful hind legs.



This new creature is known to have co-existed with a number of large, plant-eating dinosaurs including the heavily-spined and armored nodosaur, the two-legged, spike-thumbed iguanodonts, and massive, long-necked Sauropod. *Utahraptor* was the most intelligent animal in its world and information about *Deinonychus* suggests it may have been a pack hunter. As it is thought that packs of *Deinonychus* hunted 30-foot-long relatives of the iguanodonts, it is easy to envision a pack of Utahraptors taking on a 50-foot elephantine sauropod.

In addition to being the largest, *Utahraptor* is also the oldest known dromaeosaurid. It closely resembles *Deinonychus* except for the large, much more blade-like claws on its hand. Such claws suggest that besides piercing and holding, the Utahraptor's hand claws may have been nearly as important in cutting the hide of its victim as the sickle-claw on its foot. This specialization alone suggests there must be both an older and smaller common ancestor to both *Utahraptor* and the rest of the known dromaeosaurids that is closer to the origin of birds. *Utahraptor* would have been an extraordinary killing machine. It is estimated that it reached 20 feet in length and weighed close to a ton. Two inch serrated "steak knife" teeth in a skull a foot and a half long, blade-like claws up to 10 inches long on its hands combined with 15-inch killing sickle-claws on its feet, and a fast, highly agile body would make a Polar Bear or Siberian Tiger lucky to survive five seconds in the ring with this creature.

