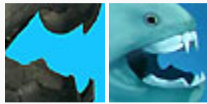


Scientists: 400 Million-Year-Old Fish Had Incredibly Powerful Bite

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By Robert Roy Britt



A *Dunkleosteus terrelli* fossil skull on display at the Field Museum in Chicago.

It was big. It was mean. And it could bite a shark in two.

Scientists say ***Dunkleosteus terrelli*** might have been "the first king of the beasts."

The prehistoric fish was 33 feet long and weighed up to four tons. It had bladed jaws, a flesh-tearing feature that the primitive sharks it preyed upon had not yet developed.

Now scientists have learned *Dunkleosteus* had the most powerful jaws of any fish ever, its bite rivaling those of *T. rex* and modern alligators.

The creature lived about 400 million years ago, toward the end of the **Devonian period**.

"*Dunkleosteus* was able to devour anything in its environment," said study leader Philip Anderson, at the Department of Geophysical Sciences at the University of Chicago.

Fast and powerful

Scientists already knew *Dunkleosteus* was the dominant predator of its time.

But Anderson and Mark Westneat, curator of fishes at the Field Museum in Chicago, used a fossil of the creature to make a computer model of its muscles and its bite.

They conclude that it could chomp with 1,100 pounds of force, which would have been focused to 8,000 pounds per square inch at the tip of a fang.

And it was quick, opening its jaws in just one-fiftieth of a second. That action would have created suction to draw prey into its mouth.

Fish typically have a powerful bite or a fast bite, but not both, the researchers said.

Fish vs. shark

Dunkleosteus was one of many species of **placoderms**, a diverse group of armored fishes that dominated aquatic ecosystems during the Devonian period, from 415 million to 360 million years ago.

The beast's powerful bite would have allowed it to feed on other armored aquatic creatures of the time, including sharks and arthropods such as **trilobites**.

Had Dunkleosteus managed to survive, it would still be counted as a fearsome predator today.

"If one could stage a battle between a [20-foot] great white shark ... and a maximum-size Dunk, I would bet on the Dunk," Westneat told LiveScience.

The research is detailed in the Nov. 29 issue of the Royal Society journal **Biology Letters**.