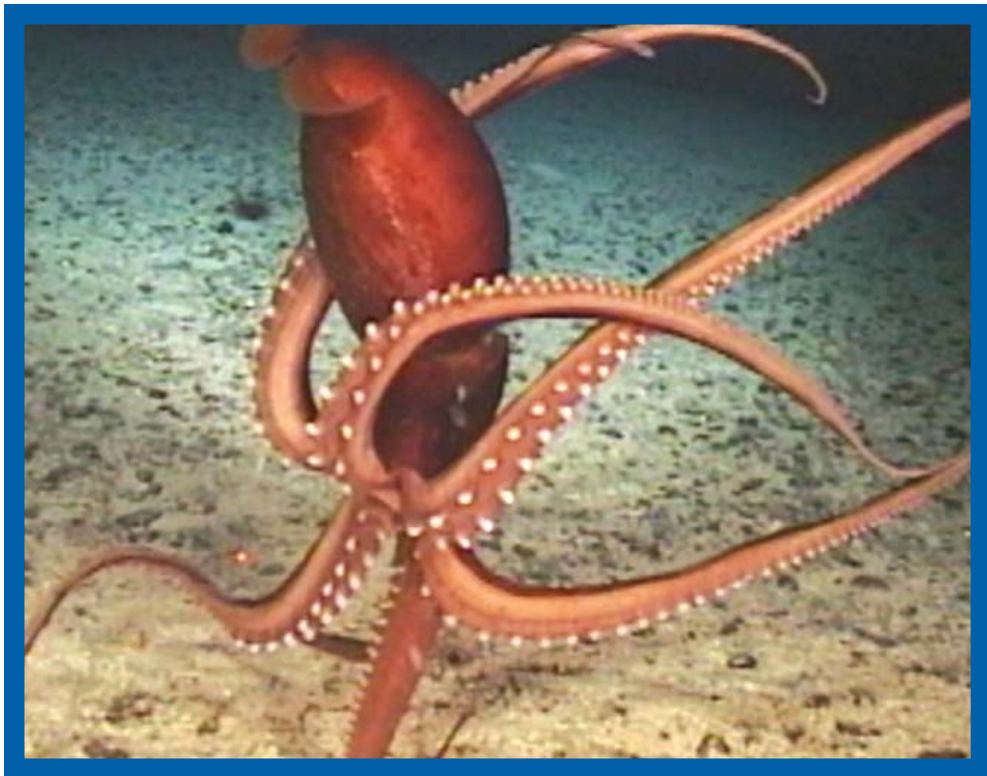




# HEADLINE DISCOVERIES

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## IT'S ALIVE!

### True Sea Monster

**T**ales of sea monsters attacking ships have been around since ancient times. One of the most common descriptions of the creatures found throughout history is that of a huge animal with many tentacles and giant eyes that could latch on to a ship and sink it. The centuries-old Norwegian legend of the Kraken is thought to have been spurred by giant squid sightings. In 1850, Japetus Steenstrup, an eminent Danish biologist, authored several papers on the giant squid. It was he that first used the term "Architeuthis," Greek for ruling squid, to refer to the creatures.

Giant squid are members of the Architeuthidae family. It is comprised of as many as eight species of the genus Architeuthis. These animals live in the deep oceans of the world and can grow to an estimated length of 34 feet for males and 44 feet for females from the caudal fin to the end of the two long feeding tentacles. The thin feeding tentacles are much longer

than the rest of the body. They can be up to 35 feet in length and broaden to clubs covered with suckers—suction cups lined with rings of sharp, serrated chitin. The suckers latch onto prey through both suction and perforation. Suckers also line the four pairs of arms that are shorter than the feeding tentacles and are used by the squid to hold onto its struggling prey and move it toward the animal's beak.

They have the largest eyes in the animal world—up to twelve inches in diameter. The squid dwell at depths that are not penetrated by light even during the day. Their eyes must be able to detect the small amounts of light that do exist, including bioluminescent light emitted by other deep-sea creatures.

## Say Cheese

Although scientists don't consider the giant squid endangered or even rare, the only evidence that such creatures really exist were the dead carcasses that washed up on shore or the dying specimens caught in fishermen's nets. But that changed on September 30, 2004 when two Japanese scientists captured the first images ever taken of a live giant squid in the wild.

They concentrated their search in areas that were known to be hunting grounds for sperm whales, the giant squid's number one predator. For years whalers had reported finding large numbers of squid beaks in the stomachs of sperm whales. The beaks are indigestible and collect in the whale's stomach until they are coated with a waxy substance called ambergris and excreted. Scientists had conducted in-depth observation of whales in the hopes of collecting data on their prey.

Theorizing that the shy giants were scared away by larger boats and noise, the scientists waited patiently for the squid to come to them. From 2002 to 2004, Tsunemi Kubodera of the National Science Museum in Tokyo and Kyoichi Mori of the Ogasawara Whale Watching Association cruised a five-ton fishing boat with only two crewmembers in the North Pacific Ocean in search of their elusive prey. On their third visit to a spot 600 miles south of Tokyo, they dropped their 3000-foot line into the water and waited. Attached to the line were a camera, a depth recorder and a weighted jig to snag the squid. They used common squid and shrimp as bait.

In waters 2950 feet deep, the camera snapped 550 images of the giant squid that took the bait. After more than 20 attempts that day, a 26-foot giant squid attacked the lure. As the squid wrapped its long tentacles around the bait, one of them got snagged on the jig. For four hours and 13 minutes the squid struggled to free itself and the camera continued capturing images.

When the squid finally escaped, it left behind a severed tentacle attached to the line. The retrieved portion was 18 feet in length and DNA testing confirmed that it belonged to Architeuthis. The tentacle was still moving when it was hauled aboard and repeatedly latched onto the boat deck and the researchers' fingers.

## More to Come?

The images already seem to dispel a long-held belief that giant squid were inactive, opportunistic predators who used their tentacles like fishing lures to snag whatever happened by. Kubodera and Mori's images show an aggressive hunting pattern and an impressive display of speed and power while it tried to free itself from the line.

As expected, scientists from around the world are excited about the images. They believe that much can be learned about the squid's behavior by analyzing the photos. And now that they have a better idea of where to look for the giant squid and how to attract them, they anticipate that more footage will unveil a whole new understanding of this mysterious creature.

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