

## Coelacanth

Coelacanth comes from the Greek word meaning “hollow spine”. It is the common name for an order of fish that includes the oldest living lineage of jawed fish known to date. Coelacanths were thought to have been extinct since the late Cretaceous period, approximately 65 million years ago. In 1938, off the Chalumna River in South Africa, the first specimen of *Latimeria* was found. Since 1938, *Latimeria chalumnae* have been found off the Comoras Islands, Kenya, Tanzania, Mozambique, Madagascar and in Greater St. Lucia Wetland Park in South Africa. A second species, *L. menadoensis*, was described from waters off Sulawesi, Indonesia in 1999.

They first appear in the fossil record in the middle of the Devonian, approximately 410 million years ago. Although now represented by only two living species, the coelacanths were once very successful with many genera and species that left an abundant fossil record from the Devonian to the end of the Cretaceous period, at which point they apparently suffered a nearly complete extinction. No fossils dated after then have been found. The reason for the gap is that the coelacanths most likely became extinct in shallow waters. Deep-water fossils are rarely lifted to levels where paleontologists can recover them, making deep-water taxa rare in the fossil record. This situation is still under investigation by scientists.

### *Latimeria* – The Modern Coelacanth

Coelacanths (*Latimeria chalumnae*) currently live in the West Indian Ocean. Their average weight is 176 pounds and can reach up to 6.5 feet. They can swim as deep as 2,300 ft, but are normally found at depths of 300 to 650 feet. Their eyes are very light sensitive, and have *tapetum lucidum*. This is a layer immediately behind the retina of the eye, that reflects light back to the retina, increasing the quantity of light caught by the retina. It improves vision in low light conditions. Coelacanths are opportunistic predators. They eat cuttlefish, squid, snipe eels and small sharks. They are able to swim head down, backwards and belly up to locate their prey items, utilizing their rostral gland, a large, jelly-filled cavity in the center of the snout that is thought to be an electro-sensory device for detecting weak electrical impulses given off by prey. In accordance with CITES the coelacanth was listed as a Critically Endangered species in 1989. In 1998, the population of coelacanths was estimated to be 500 or fewer fish.

