



Dow Jones & Reuters

The Straits Times

THE SINGAPORE FREE PRESS

Back from the dead.

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709 words
4 October 2003
Straits Times
English
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Fish long thought extinct still around... and it may well outlive humans

IT IS a standing joke among scientists that the three researchers responsible for stumbling upon the first **coelacanth** fish outside Africa are shrimp men by training.

But like all who came into contact with the prehistoric creature, they were soon hooked.

The fish, considered a living fossil, was thought to be extinct for 70 million years, till fishermen caught the first specimen off East Africa in 1938.

Since then, it has largely eluded scientists and fishermen, apart from a handful of rare captures and sightings.

But in 1997, one specimen was spotted by biologist Mark Erdmann at a Manado fish market in Indonesia, the first time it had been seen outside East African waters.

Together with his mentors, Indonesian mantis shrimp expert Mohammad Kassim Moosa and American scientist Roy Caldwell, Dr Erdmann announced the discovery of the **coelacanth** in the prestigious scientific journal Nature.

DNA testing later revealed that it was a separate species, genetically different from the African one.

Not content with a dead specimen, however, he, Dr Moosa and other scientists used a deep-water submersible to search for the creature in Sulawesi.

'After 40 dives at depths of close to 300m, the scientists had to leave,' said Dr Moosa.

But the engineer manning the submersible made a few extra undersea trips, and chanced on a pair of the fish in a cave 145m deep.

The sluggish, steel-blue fish has special bones and blocks of muscles at the base of its fins that make the fins look almost like legs.

It is believed to be related to the fish that first stepped out of the water onto land 350 million years ago.

The largest specimen of **coelacanth** recorded has been 1.8m long and 80kg in weight. The females, which have eggs the size of oranges, give birth to live babies, which have never before been seen.

Not sought after for food, its excessively oily flesh is said to have a laxative effect.

Dr Moosa has been campaigning actively to conserve the fish and was instrumental in persuading the Indonesian government to protect it.

The 66-year-old, who has yet to see a live **coelacanth** in the wild, has spent the last three years searching

for more of the creatures in waters off Indonesia.

Said the director of the Raffles Museum of Biodiversity Research, Associate Professor Peter Ng: 'Finding the **coelacanth** so close to home was as surprising news as coming face to face with a dinosaur in the forests of Malaysia.'

The fish lives in caves in a 'no man's land' between 100m and 700m deep, which is too deep for divers to reach, he explained. This zone also tends to be ignored by submersibles, which are usually used to explore deeper waters. The **coelacanth** may be an antique, but it's definitely not a failure or obsolete.

'It and its kind have been around for 400 million years, and I'm willing to bet that it will still swim the seas when we are long gone and forgotten,' he said.

Dr Moosa will be giving a public talk on the fish at 2.30pm today at the National University of Singapore's science auditorium.

Those who want more information can look up rmbr.nus.edu.sg or call 6874-5082.

Elusive and glamorous

BECAUSE of its legacy as a walking dinosaur, and because so little is known about the **coelacanth**, it is seen as one of the most glamorous and prestigious fish for scientists to be associated with.

This has caused some black-sheep researchers to go to great lengths to be associated with it, to the extent of using others' material unethically and faking evidence.

Three years ago, for example, scientists who claimed to have a photograph of a live **coelacanth** taken off southern Java were exposed as frauds when it was found that they had merely taken a photo by scientist Mark Erdmann and digitally altered it.

In another case, a French scientist took some tissue samples of the fish, and without the permission of the people who found it, published a paper naming the new species of Indonesian **coelacanth**.

Document STIMES0020031004dza40001k

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